OCEANOGRAPHY MISCELLANEOUS—PART 1

HEARINGS

BEFORE THE

SUBCOMMITTEE ON OCEANOGRAPHY

OF THE

COMMITTEE ON MERCHANT MARINE AND FISHERIES HOUSE OF REPRESENTATIVES

NINETY-SEVENTH CONGRESS

FIRST SESSION

ON

NACOA AUTHORIZATION—H.R. 2448

MARCH 5, 1981

MARINE SANCTUARIES REAUTHORIZATION—H.R. 2449

MARCH 12, 1981

NATIONAL SEA GRANT PROGRAM PROPOSED BUDGET

MARCH 30, 1981

COASTAL ZONE MANAGEMENT BUDGET CUTS

MARCH 31, 1981

LAW OF THE SEA—10TH SESSION

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NACOA AUTHORIZATION

THURSDAY, MARCH 5, 1981

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON OCEANOGRAPHY
OF THE COMMITTEE ON MERCHANT MARINE AND FISHERIES,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:04 a.m., in room 1334, Longworth House Office Building, Hon. Norman E. D'Amours (chairman of the subcommittee) presiding.

Present: Representatives D'Amours, Dyson, Hughes, Pritchard, Snyder, Carney, and Schneider.

Staff present: Howard Gaines and Curt Marshall.

Mr. D'AMOURS. The subcommittee will come to order.

If the witnesses would approach the witness table, we would appreciate it. Ladies and gentlemen, good morning. We are meeting today to receive testimony concerning the reauthorization of the National Advisory Committee on Oceans and Atmosphere, NACOA.

We are happy to have with us today two individuals who play a key role in administering NACOA. Mr. Belsky is detained at another hearing and is on his way. He will be with us soon. He is the Assistant Administrator for Policy and Planning in NOAA. Dr. John A. Knauss is Acting Chairman, National Advisory Committee on Oceans and Atmosphere.

NACOA was established in 1971 by Public Law 92-125 to continuously review the Nation's marine science and service programs, report to the President and the Congress annually, and advise the Secretary of Commerce with respect to the National Oceanic and Atmospheric Administration's execution of its activities and programs. This act provided for an authorization of $200,000 for fiscal year 1972 and each succeeding fiscal year to carry out the purposes of the act. In 1977, because of congressional discontent about the caliber of the NOAA appointees and the quality of their work, NACOA was reexamined and reestablished by Public Law 95-63, which repealed the 1971 act.

The main changes of the new law, the 1977 law, were to reduce the number of members of NACOA from 25 to 18, establish specific qualifications, professional qualifications for NACOA members, and modify NACOA's duties to allow the committee to concentrate more of its efforts on specific issues, reporting on a selective basis as distinguished from emphasizing their annual reports.

Public Law 95-63 provided an authorization of $520,000 for fiscal year 1978. In the succeeding years NACOA was authorized at levels of $572,000, $565,000, and $600,000 for fiscal year 1979, 1980, and 1981, respectively.

I am confident that, through the course of this hearing, the subcommittee will be positioned to ascertain in detail the projected needs of NACOA for fiscal year 1982 and justifications for the funds requested to carry out NACOA's programs.

[The bill and executive communication follow:]

[H.R. 2448, 97th Congress, 1st session]

A BILL To authorize appropriations to carry out the National Advisory Committee on Oceans and Atmosphere Act of 1977 during fiscal years 1982, 1983, and 1984, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the National Advisory Committee on Oceans and Atmosphere Act of 1977 (33 U.S.C. 857 13-18) is amended—

(1) by striking out ", or until 90 days after such date, whichever is earlier." in the third sentence of section 3(b)(2) and inserting in lieu thereof a period;

(2) by striking out "$100" in section 5 and inserting in lieu thereof "an amount not to exceed the daily rate for a GS-18"; and

(3) by amending the first sentence of section 8 to read as follows: "There are authorized to be appropriated for purposes of carrying out the provisions of this Act not to exceed $555,000 for fiscal year 1982, and such sums as may be necessary for each of fiscal year 1983 and 1984.".

[Executive Communication No. 1078]

THE SECRETARY OF COMMERCE,
Washington, D.C., April 8, 1981.

Hon. THOMAS P. O'NEILL, Jr.,
Speaker of the House of Representatives,
Washington, D.C.

DEAR MR. SPEAKER: Enclosed are six copies of a draft bill "To amend the National Advisory Committee on Oceans and Atmosphere Act of 1977 to authorize appropriations to carry out the provisions of such Act for fiscal year 1982, and for other purposes," together with a statement of purpose and need in support thereof.

We have been advised by the Office of Management and Budget that there is no objection to the submission of this legislation to the Congress and that its enactment would be in accord with the program of the President.

Sincerely,

MALCOLM BALDRIGE,
Secretary of Commerce.

Enclosure.

A BILL to amend the National Advisory Committee on Oceans and Atmosphere Act of 1977 to authorize appropriations to carry out the provisions of such act for fiscal year 1982, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the National Advisory Committee on Oceans and Atmosphere Act of 1977 (33 U.S.C. §§ 857-13—857-18) is amended—

(1) By striking out ", or until ninety days after such date, whichever is earlier." in the third sentence of section 3(b)(2) and inserting in lieu thereof a period after "office";

(2) By striking out "$100" where it appears in section 5, and inserting in lieu thereof "not exceed the daily rate for a GS-18";

(3) By striking out the words "$520,000 for the fiscal year ending September 30, 1978, $572,000 for the fiscal year ending September 20, 1979, $565,000 for the fiscal year ending September 30, 1980, and $600,000 for the fiscal year ending September 30, 1981.", where they appear in section 8, and inserting in lieu thereof "$600,000 for the fiscal year ending September 30, 1981, $555,000 for the fiscal year ending September 30, 1982, and such sums as may be necessary for the fiscal years ending September 30, 1983, and September 30, 1984. Such sums as may be appropriated under this section shall remain available until expended.".

STATEMENT OF PURPOSE AND NEED

This legislation, which the Department is proposing on behalf of the National Advisory Committee on Oceans and Atmosphere, would provide for a three year extension of authorizations for appropriations for NACOA.

NACOA was originally established by Public Law 92-125 of August 16, 1971, to consist of 25 non-federal members having an interest and expertise in oceanic and atmospheric affairs. Public Law 95-63 of July 5, 1977 repealed the Act of August 16, 1971 and established a new committee of 18 members. NACOA's mission is to (1) undertake a continuing review, on a selective basis, of national ocean policy, coastal zone management, and the status of the marine and atmospheric science and service programs of the United States; and (2) advise the Secretary of Commerce with respect to the carrying out the program administered by the National Oceanic and Atmospheric Administration. NACOA submits an annual report to the President and to the Congress and submits such other reports as may from time to time be requested by the President or the Congress.

NACOA has been recognized as one of the Federal advisory committees that provides effective and timely advice both to the Executive Branch and to the Congress. Enactment of this legislation would provide authorizations for appropriations for fiscal years 1982, 1983 and 1984.

The legislation would also amend the Act in two technical ways. Section 3(b)(2) of the Act would be amended to permit members to serve beyond their terms until the appointment of replacements, and section 5 of the Act is amended to raise the maximum daily compensation for which Committee members are eligible (the existing limit has remained unchanged since enactment in 1971).

Each of these changes will permit NACOA more effectively to fulfill its mandate.

Mr. D'AMOURS. Our actions as a result of today's hearings are intended to provide guidance to the House Commerce, Justice, State, and the Judiciary Appropriations Subcommittee, which will meet in the coming months to decide NACOA's exact appropriation. Our subcommittee schedule calls for a very early markup of this authorizing legislation, that is on March 17. So, we hope that any supplemental data that is requested today would be submitted as soon as possible.

Our distinguished ranking minority member, Congressman Pritchard, is present today. At this time I would like to recognize Congressman Pritchard for any opening remarks he may have.

Mr. PRITCHARD. I think people in the audience here are not aware that this is a historic moment. This is the first time that a subcommittee in this building has ever started on time. And I said, if that was the policy of the chairman, I was delighted with it and I would do everything I could to be here on time. I think we started at about 4 minutes after 10. I think that augers well for the future. I hope all committees will take this habit because we are chronic late starters in Washington, D.C. It does not help anyone. It certainly is a burden to witnesses that come from far off and then come into the rooms and sit for 20 minutes or a half hour waiting for the members to straggle in. I am delighted with the chairman, and I want to support him in this effort.

I also want to welcome Dr. Knauss. I see Mr. Belsky has arrived. I also want to note that Bob White, who is one of this country's really fine public servants and has contributed so much, is in the audience also. He has done so much for NOAA and our ocean programs. I am happy to welcome you all.

Mr. D'AMOURS. Dr. Knauss, since Mr. Belsky is here and I think has had a chance to catch his breath, why do we not revert to our original order of witnesses. You can stay right there, and Mr. Belsky can sit next to you. Please proceed, Mr. Belsky.

Mr. BELSKY. Thank you. I apologize for being late. I was testifying in front of another committee, and they went a little bit over their expected termination time.

STATEMENT OF MARTIN H. BELSKY, ASSISTANT ADMINISTRATOR FOR POLICY AND PLANNING, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, DEPARTMENT OF COMMERCE

Mr. BELSKY. Mr. Chairman, Mr. Pritchard, members of the committee, I appreciate the opportunity today to appear before this subcommittee to review the activities of NACOA, the National Advisory Committee on Oceans and Atmosphere, and to request your support for its reauthorization.

I am sure you are familiar with NACOA and its history, but perhaps a brief summary for the record would be in order. NACOA was originally established in 1971 following the recommendations of the Stratton Commission that an independent advisory committee of private citizens was needed to help give Federal policy and action a push. The legislation that gave NACOA its current structure and mandate provides for 18 members to be appointed by the President. It is NACOA's duty to advise the President and the Congress on national policy concerning the oceans and the atmosphere and the status of the various Federal programs relating to the oceans and the atmosphere.

If I could just interject for a second, one of the concerns that is often raised about advisory organizations is their validity. It has often been said that advice is often considered offensive because it shows that we are known to others as well as we are known to ourselves. The advice that NACOA has given to NOAA and other Federal agencies, I believe, has been demonstrated to be of great value. I will touch on that a little bit later. I am sure that Dr. Knauss can give some specifics.

As you know, NACOA's legislation authorizes it to provide its recommendations directly to the President and to the Congress. Another significant provision which insures that its voice will be heard is that the agencies to which NACOA directs its policies and programs must comment or respond to that advice through the Secretary of Commerce, to the President, and to the Congress. The issues and subject areas that NACOA selects for its attention are often in response to those expressed by you and by other Federal agencies.

NACOA develops recommendations on its own initiative when its members with their specialized experience or vantage points indicate and believe that some particular matter should be brought to the attention of Federal policymakers to maintain the vitality of our ocean and atmospheric programs and therefore to support the national interest.

I am indicating our strong support for the reauthorization of NACOA. I would like to now summarize my testimony and be responsive to questions and request the Chair to put in the record my formal submission.

Mr. D'AMOURS. Without objection, that will be ordered.

[The following was received for the record:]

STATEMENT BY MARTIN H. BELSKY, ASSISTANT ADMINISTRATOR FOR POLICY / PLANNING, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Mr. Chairman and members of the committee, I appreciate the opportun: testify before this subcommittee today on the authorization of appropriatior fiscal years 1982, 1983, and 1984 for the National Advisory Committee on O and Atmosphere (NACOA).

As you know, Mr. Chairman, NACOA was orginally established in 1971 i sponse to a recommendation from the Stratton Commission. NACOA was re lihed under new legislation in 1977 by Public Law 95-63. The new legisl reduced the number of members from 25 to 18 and is more specific, rega qualifications for membership.

NACOA is charged with the responsibility to undertake a continuing revi the nation's oceanic and atmospheric programs, to report annually to the Pres and Congress on the state of United States marine and atmospheric activiti advise the Secretary of Commerce regarding programs of NOAA, and to provid other reports on these matters that are commissioned by either the Preside Congress. This enabling legislation also tasks the Secretary of Commerce making available to NACOA such staff, information, personnel and administr services and assistance as is necessary. These support functions, including b administration, are normally coordinated through the Office of the Administrat NOAA.

The Department is proposing two technical changes to the enabling legisl First, Section 5 of the Act is amended to allow for the maximum daily compens to be increased up to the daily rate for a GS-18. The present $100 per day limi remained unchanged since NACOA was originally established in 1971. The limit is the maximum compensation allowed for other advisory committees similar bodies, which currently is $192.72.

Second, Section 3(b) (2) of the Act would be amended to permit members to beyond their terms until appointment of replacements.

NACOA's members are appointed for three year terms, with six appointn being made each year. Nominations for membership in NACOA are solicited the Congress, industry, academia and the general public. Many of you previ received a letter from me soliciting your recommendations. These recommenda are discussed with NACOA to obtain the views of its members. The Secreta Commerce forwards a recommended slate of nominees to the President afte necessary administrative clearances are obtained and the President appoint new members.

The terms of the six new members should commence on July 1 of each . However, due to administrative delays in the appointment process, several posi on NACOA remained vacant for several months. This restricted the Committ completing its work. The technical amendment we propose would allow Comm members to continue to serve after their term had expired on July 1 if no member had been appointed. This will facilitate the Committee in conductin work if there are unforeseen delays in the appointment process.

Since January of this year, I have taken personal responsibility for NO interactions with NACOA and I believe the working relationship and rappo excellent. One of the problems which has plagued NACOA in the past is that i been perceived by some to be an adjunct of NOAA. I can assure you we at NOA not view it as such. NACOA advises the President and Congress on all oceans atmosphere programs, and NOAA has only one part of this government's resp bility for that program. It should be the responsibility of all federal agenci supply information and contribute personnel and time to NACOA in order that erroneous perception might be changed.

From a more narrow perspective, NOAA values NACOA's contributions in pr ing advice and guidance relating to those programs specifically administere NOAA. I will cite a few recent examples:

NACOA provided guidance to NOAA in the preparation of the "Federal Pla Ocean Pollution Research, Development, and Monitoring—Fiscal Years 1979- This guidance has been further amplified by NACOA's recent report on "The of the Oceans in a Waste Management Strategy".

In the area of fisheries development, NACOA provided policy guidance and d tion in a statement of findings and recommendations regarding the Admini tion's U.S. Fisheries Development Policy.

NOAA's National Climate Program Office recently prepared a five-year plan National Climate Program. NACOA's recommendations were extremely valuab preparing this plan. Further, NACOA's comments on the final plan and t supporting testimony before the Senate Subcommittee on Science, Technology Space strengthened the program.

Due largely to recommendations and efforts by NACOA, Congress enacted the "National Weather Modification Act" in 1976, which called for the Secretary of Commerce to conduct a comprehensive study of weather modification and to develop a national policy and program. The assistance of NACOA in preparing the plan was invaluable. The "National Weather Modification Policies and Programs" report was submitted to the President and Congress in November 1979.

NACOA's most recent contribution in terms of impact on NOAA programs is the NACOA report on Services to Ocean Operations which is one part of NACOA's effort to define national goals and objectives for ocean use and management over the next decade. The ocean services report is a list of goals and objectives for services to support ocean operations. The goals and objectives for ocean services cover the areas of Ocean Observation and Prediction, Navigation and Positioning, Mapping, Charting and Surveying, Ocean Data and Information, Pollution Monitoring, Ocean Research Capabilities, and Arctic and Antarctic Operations. Many of the recommendations in this report have a direct impact on NOAA programs. The report has only recently been published and we are in the process of studying it now.

In summary, we strongly suport proposed legislation to provide authorization for fiscal year 1982 at the level of $555K and authorization for fiscal years 1983 and 1984 for such sums as may be necessary.

The Administration recognizes that $555K is below the amount that had been authorized for previous years. However, the fiscal and economic climate necessitate that all parts of the Government, including Advisory Committees, keep their expenditure levels to the minium level necessary. NACOA may have to meet less often to stay within this level of authorization or may have to meet as smaller working groups. Nevertheless, I am confident it will be able to provide valuable advice to Federal agencies and Departments as we design our programs in the oceanic, atmospheric and coastal areas.

Mr. Chairman, I would like to conclude my remarks by stating that NOAA looks forward to working with NACOA during this coming year and to benefiting from its advice and counsel.

Mr. BELSKY. Mr. Chairman, since January of this year, I have taken personal responsibility as the Assistant Administrator for Policy and Planning for NOAA's interactions with NACOA. I believe the working relationships with NACOA is now excellent. One of the problems that has plagued NACOA in the past is that it is perceived to be an adjunct of NOAA. I can assure you that we at NOAA do not believe it to be such.

NACOA advises the President, as I have indicated, and the Congress—that is, you and other members of the subcommittee and of the full committee—on all oceans and atmospheric programs. NOAA only has one part, although a large part, of the Government's responsibility is for those programs.

In addition, NOAA has an obligation—and I believe we have done so in the past—to accept and listen to NACOA's recommendations. A few examples are included in my testimony. Of my office's particular responsibilities, two examples of such advice have been with regard to the national pollution program and the national climate program.

I just left a hearing in which the reauthorization for the national climate program was discussed. One of the issues raised was, whether there should be amendments to that statute. Obviously, NACOA, with their broad experience in various areas, could serve to indicate what amendments should be necessary to that statute to make it more responsive to perceived needs.

NACOA has given a great deal of information to the various Federal agencies on the value and utility of their programs. As part of their national goals and objectives study, which has been undertaken over the last year, NACOA came out with a report on services to ocean operations. As Mr. Pritchard indicated, Bob White

is in the audience. It is through him, as chairman of that subpanel, and others working with him that we received a great deal of information about the value, utility, and cost-effectiveness of some of our programs such as ocean observing and prediction, navigation and positioning, mapping, charting, and surveying ocean data and information.

NACOA should be supported in its request for authorization. The authorization request we are asking for is for $555,000 for 1981 and for such sums as necessary in 1983 and 1984. The Administration recognizes that $555,000 is below the amount that was requested in the past and has been authorized for previous years. However, as I am sure everyone is aware, the fiscal and economic climate present in our society necessitate that all parts of the Government including advisory committees keep their expenditure levels to the minimum level necessary.

NACOA may have to meet less often to stay within this level of authorization or may have to meet with smaller working groups. Nevertheless, I am confident we will be able to provide valuable advice to the various Federal agencies and departments as we design our program in the oceanic, atmospheric, and coastal areas.

There is one technical amendment that I would also like to suggest, which is a change in our request for the various per diem responsibilities which are really contracting fees. In the official statute that has been submitted we were asking that members of NACOA be given a per diem at the rate of a GS-18. This would make them consistent with the various other advisory committees that are existing now and will be existing in the future.

Another amendment which I am proposing for the committee's consideration is to make a technical change to the statute to provide for members to stay in place until new members are appointed. The original intent of limiting holdovers to 90 days was very valuable and, I think, very important by Congress. It was to force the executive branch to make necessary appointments and reappointments. Unfortunately, it did not work. The reason it did not work is because of the very difficult clearance process involved in going through, first, NOAA then the Department of Commerce then the White House.

In the meantime I believe—maybe Dr. Knauss will indicate—for a long period of time NACOA had some great difficulties in meeting its responsibilities because it was member-short. To make this technical amendment would allow them to continue with a full membership until new people are appointed or existing members are reappointed.

Mr. Chairman, Mr. Pritchard, members of the subcommittee, I thank you again for the opportunity to present my testimony. I am certainly willing to answer any and all questions you have about our relationship to NACOA. I leave any specific questions about NACOA to Dr. Knauss, who is here on their behalf.

Mr. D'AMOURS. Thank you, Mr. Belsky. I assume that you consulted, with NACOA in the submission and preparation of your budgetary recommendation.

Mr. BELSKY. We consulted with them. They provided information on the number of people, the number of meetings, et cetera. That submission then was formally prepared by my office, submitted

through NOAA to the Department of Commerce, finally to the Office of Management and Budget. A series of cuts that were made were general governmentwide cuts such as the cut on travel, the cut on consulting fees. Those cuts that were made generally by the President immediately after he was inaugurated were applied to NACOA. But that took about 5 to 6 percent off our request right away.

Mr. D'AMOURS. Excuse me, but you are aware that, as Dr. Knauss is going to testify, NACOA had an average appointed membership of about 12 for fiscal year 1980. As I understand it, they started that year at an all-time low of eight. Of course, they are beginning this year with virtually a full complement, I think 17.

Where do you suppose they can make the adjustment to continue the level of services they are now providing, absorb that increased staff, absorb inflationary pressures generally, and get by with almost fully $150,000 less than they are recommending, which in percentage terms is very high?

Mr. BELSKY. Mr. Chairman, I cannot and I would not indicate to NACOA what they should do. I can only give you what I think possible budget changes could be prepared. Obviously, they are going to have to cut down, I think, on personnel, as all of the Federal Government most likely is going to have to do after March 10. In addition we——

Mr. D'AMOURS. Can you tell me what level staffing then you think might be desirable? They employed 10 full-time permanent and 2 full-time, nonpermanent.

Mr. BELSKY. I think they would perhaps have to reduce it by one or two, but I think there is an alternative. I think one of the problems with the perception of NACOA as being an arm of NOAA is that the money and the people come from NOAA. Besides being selfish about the budget that we have to be responsible for, I also think it is inappropriate. It seems to me that there are other Federal agencies involved in the oceans and atmosphere that have as much an interest in an independent advisory committee, as I quoted, critiquing them and their programs, as does NOAA. They might want to supply the people and the dollars to NACOA to work as part of their staff.

As it presently exists, the entire staff of NACOA is part of the staffing within NOAA. The budget is part of the budget that is submitted through NOAA. As you can see, that is why I am here and that is why it is part of our line item.

As you will hear Dr. Knauss testify, we want them to be independent. They are going to come in today with a different budget recommendation. Fortunately or unfortunately, no matter what they come in with as an authorization, the request is still going to have to go through the NOAA budget process. Whether they were in NOAA, directly related to NOAA, or out somewhere else—GSA, which was a proposal that was being tossed about—it would still have to go through the Government budget process. That means that whatever is authorized, it would still have to be appropriated. I cannot predict what that figure would be no matter what comes out of this subcommittee.

We have tried to help out NACOA. We have done that, for example, in the past by taking discretionary moneys and giving

them to NACOA to handle some of their special projects. But we can only do that to a certain point. The question is what is going to happen.

Another proposal is reduction of meetings. It has been calculated it costs about $19,000 for each meeting for NACOA. If they have to cut their budget, one possibility might be, as other advisory committees have done, to meet less often but have subpanels meet in alternate months. For example, instead of having 9 or 10 meetings, you would have 5 or 6 meetings; but then subpanels would meet on the opposite months or an executive committee would meet.

I do not say this is the preferred alternative. Please do not get me wrong. I am merely saying this is one of the options that might be considered.

Mr. D'AMOURS. I appreciate that.

I agree with you, I think as you know, on the point from other agencies.

Failing this help that you think ought to be forthcoming—would you still recommend the $555,000 level?

Mr. BELSKY. I think it is a question of priorities governmentwide. I think the recommendation that will be made is going to have to be $555,000.

Mr. D'AMOURS. OK, thank you.

I have one final quick question. There are two amendments you are recommending. One of them increases per diem from $100 to $190 per day. Is the purpose of that in fact to defray expenses? Or is the purpose to compensate otherwise perhaps for the rather rigid $555,000 authorization you are asking for?

Mr. BELSKY. This is money in addition to expenses. They get their travel expenses plus a per diem. This is a consultant fee.

That is why, as I have indicated, they got cut because, as you know, the President cut consultant fees recently. This is a consultant fee, and it is not their expenses. I agree with you, as anybody who works for the Government might, that perhaps the expense account they get per diem will not cover their expenses. But, be that as it may, this is supposed to be above their expenses, travel and otherwise, and not just be part of their per diem. So, it is more than expense. It is an attempt to compensate them for their time.

Mr. D'AMOURS. Thank you. I have no further questions. Mr. Pritchard?

Mr. PRITCHARD. Let me just pursue that a little bit. We always get down to sort of a philosophical discussion of, can people serve on prestigious committees and commissions in their field of interest and often their field of endeavor, and it always becomes a question of should they be compensated or just paid for their expenses of the trip. I must say I take kind of a hard attitude that most members like to participate in a national commission in the field of their endeavor. In some ways it does not do them any harm in their professional standing.

Now, I do not think it is out of line for people who serve on these commissions to, as we say, serve their country and be paid back for their out-of-pocket expenses. However, I do not think it is necessary that we compensate them much beyond the amount.

I know there is a difference of opinion here. I think that is just part of serving in your country. I think that it is a legitimate thing

and that most people will serve. We get in the habit of paying them some fee if we contract with them for something special. That's fine. But I think that it is just part of your dues in this country. For those people who have special talents and abilities I think you ask a little more from them. If that sounds a little tough and hard, why, I guess that is the way I feel.

I do not know if you want to comment on that attitude or not.

Mr. BELSKY. I think, Mr. Pritchard, the people who should respond to that might be Dr. Knauss and the other members of the advisory committee rather than myself.

Mr. D'AMOURS. Mr. Carney, do you have any questions?

Mr. CARNEY. Thank you, Mr. Chairman.

Mr. Belsky, you just left a committee hearing in Science and Technology which I happened to be at. I walked in and counsel here informs me that the Carter administration had for you $573,000 in the budget and the Reagan administration—we have some numbers on it at this committee hearing—$555,000. Given——

Mr. BELSKY. It is between $550,000 here and possibly $26 million for climate. I think the administration was able to handle $555,000—at this point you are talking about a much more massive budget with climate.

Mr. CARNEY. Right.

Mr. BELSKY. You are dealing with the climate program. I could not give you a figure there other than the original proposal from the Carter administration which is now under revision.

Mr. CARNEY. I understand that. I am not asking that question. But, given the climate of the meeting on the climate, I was just wondering. Do you think you might want to tip your hat and leave? I mean, with the numbers that you are getting here, that would indicate to me that the Reagan administration has not cut you as much as we anticipate other cuts throughout the Government. I was just wondering, could we have your comment on that? Are you somewhat relieved?

Mr. BELSKY. I do not know if relieved is an appropriate word, Mr. Carney. All I can say is that it could have been a lot worse.

I think that the difference here—and I think it is an appropriate difference—is that it is convincing the Government that it is wise to have outside groups to look at and coordinate what is going on. I think this is a good example.

One of the things NACOA does is to look at the Government programs and say: this is good, this is bad, this is cost-effective, this is not cost-effective. We should cooperate more and coordinate that. Anybody who is interested in Government efficiency, I therefore believe, could support an advisory committee such as NACOA. I think that is why we are here for reauthorization.

At the same time, other advisory committees I know are not being supported to the degree that NACOA is. But I am not completely unhappy with the support given by the Reagan administration to NACOA. I think you will find that they would like more. I think you will hear that testimony soon. But again, considering the climate of the times, I think that we came out pretty well on this.

Mr. CARNEY. I have one other question to ask you, Mr. Belsky. Do you have any other meetings today?

Mr. BELSKY. Yes, I do, as a matter of fact.

Mr. CARNEY. You are going to have to have thick skin by the time you finish your day on the Hill. Thank you very much, Mr. Chairman.

Mr. D'AMOURS. Mrs. Schneider, do you have any questions of Mr. Belsky?

Mrs. SCHNEIDER. No questions at this time. I will be seeing Mr. Belsky all day today, too.

Mr. D'AMOURS. Any other questions will be submitted in writing to you, Mr. Belsky. If you can, I would appreciate your staying around until Dr. Knauss has testified. Dr. Knauss, we would be pleased to hear from you at this time.

STATEMENT OF JOHN A. KNAUSS, ACTING CHAIRMAN, NATIONAL ADVISORY COMMITTEE ON OCEANS AND ATMOSPHERE, DEPARTMENT OF COMMERCE, ACCOMPANIED BY STEVEN N. ANASTASION, EXECUTIVE DIRECTOR, NATIONAL ADVISORY COMMITTEE ON OCEANS AND ATMOSPHERE

Mr. KNAUSS. Thank you, Mr. Chairman and members of Congress. I have with me the Executive Director of NACOA, Steven Anastasion, who can help in answering some of the more detailed questions at a later time if necessary.

I appreciate the opportunity to appear before the subcommittee to review the activities and plans of the National Advisory Committee on Oceans and Atmosphere and to request your support for its reauthorization.

As you know, NACOA was originally established, as Mr. Belsky said, in 1971 following a strong recommendation by the Stratton Commission that an independent advisory committee of private citizens was needed to help guide Federal policy and action concerning the oceans and the atmosphere. The legislation which gave NACOA its current structure and mandate provides for 18 members to be appointed by the President.

As Mr. Belsky has noted, NACOA's legislation authorizes it to provide its recommendations directly to the President and to the Congress.

May I add parenthetically that I suppose, with all the commissions and committees in this town, that there is probably another one that also has this dual mandate of providing recommendations simultaneously to the President and Congress, but I do not know of it; nor does our staff.

Another significant provision which insures that our voice will be heard is that the agencies to which NACOA directs its policy and program advice must comment or respond to that advice through the Secretary of Commerce to the President and to the Congress. They may not accept our advice but they cannot ignore it.

The issues and subject areas that NACOA selects for its attention are often in response to the expressed interests and requests of the Congress or the Federal agencies. NACOA also develops recommendations on its own initiative when its members determine from their own specialized experience or vantage points that some particular matter should be brought to the attention of the Federal

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policymakers and managers to maintain the vitality of our oceanic and atmospheric programs in the national interest.

Thus, our efforts are something of a mix of short-term responses to specific requests or to NACOA-recognized issues, and longer term reviews which often lead to formal and detailed reports. Our views have often been delivered in the form of testimony at congressional hearings.

NACOA has during the past few years addressed itself to a wide variety of important issues such as the OCS Lands Act Amendments, fisheries management, Federal organization for oceanic and atmospheric responsibilities, coastal zone, and oil spill liability and compensation. It has addressed national climate activities, weather services, weather modification, and provided its advice on support for oceanic and atmospheric research. Very recently, we provided our views on an organic act for NOAA, on the inadequacies of the Coast Guard's research and development budget to provide for the increased productivity and capability needed to support its growing menu of responsibilities, and on the need for coordination in the use of aircraft research facilities supported by the Federal Government.

In Mr. Belsky's prepared statement he also lists a number of other areas where we have given specific advice to NOAA directly.

These subjects and others are summarized in NACOA's annual reports and are important to the broad and comprehensive look which must be given to our Nation's vital interest in its oceans and atmospheric assets. NACOA has provided this broad and comprehensive focus of attention in the past and continues to do so.

Public awareness of the oceans has grown remarkably over the past 10 years, and it continues to grow. One expression of this awareness has been the remarkable amount of significant legislation enacted in recent years which has recognized the legitimate public concern for environmental values, as in the case of legislation concerning ocean dumping, clean water, coastal zone, and clean air. And there is recognition of the ocean's resource values in laws such as those on extended fisheries jurisdiction, deepwater ports, oil and gas from the Outer Continental Shelf, ocean thermal energy conversion, and deep seabed minerals. Climate, too, is now being viewed with increasing interest as a major consideration in agricultural planning, in energy distribution, and in water resource management.

This ocean awareness is still evolving, and I believe that the way our Nation will view the oceans and the atmosphere in the future will be different than it is today.

From a personal point of view I should note that the oceans are much more important, or appear much more important to us now than they did 35 years ago when I first got into this business. I fully expect that, by the time I retire from this business, maybe around the year 2000, the oceans will still be considered more important at that time than they are now.

Our increasing dependence on imported oil, the potential shortage or lack of assured resources of certain minerals, the rising cost of protein have all made us feel less secure than we have in decades. It is causing us to look more than ever to the resources of

the ocean and to ways of increasing our use of the oceans while at the same time retaining our concern for the environment.

We are all becoming more broadly aware of how interdependent our development activities and our economic needs are, of how important it is not only to be concerned for the possible effects of increased offshore oil activities on the productivity of fishing areas, for example, but also to strike a reasonable balance among such competing interests and between immediate and long-term benefits.

It is my personal view and the view of NACOA, and indeed it is the view of a growing segment of the public, that technology and the efficient development of resources that technology makes possible is about to be readmitted to respectability along with the valid and important concern for our environment.

This striving to achieve a working balance among competing interests is not new. But now, after many years of basically a no-risk bias, there appears to be a growing recognition that some risk—carefully considered and measured, reduced to a minimum by careful study and the judicious application of new technology—that some risk must be taken if our cultural and economic life style is to continue reasonably as it has in the past. It is here that NACOA has a special and unique role to play because of its varied expertise, its position as a forum for open discussion, and its independence to express the results of its deliberations.

Because this is a time of change in how we view risk, as our national decisions and our national policy about the resources of the oceans are being made at a time of economic stress, it is more important than ever for Congress and the executive branch to have independent advice from those of us from the private and the non-Federal Government sectors who have the needed knowledge, experience, and insight to provide a balanced view of the tough issues that must be faced.

I believe that NACOA's role as an instrument of Federal policy development concerning the oceans and the atmosphere is especially critical now, when it seems clear that a readjustment in how we view the risks and costs of resource development must be faced by all of us.

Mr. Chairman, in my prepared testimony I describe two signficant reviews that NACOA has just completed. Rather than read to you what you have before you—although I hope it will be part of the record—let me briefly summarize the first of those reports, the Role of the Ocean in a Waste Management Strategy.

Mr. D'AMOURS. We will insert your entire statement.

[The following was received for the record:]

STATEMENT BY DR. JOHN A. KNAUSS, ACTING CHAIRMAN, NATIONAL ADVISORY COMMITTEE ON OCEANS AND ATMOSPHERE

Mr. Chairman, I appreciate the opportunity to appear before this subcommittee to review the activities and plans of the National Advisory Committee on Oceans and Atmosphere (NACOA), and to request your support for its reauthorization.

Although I am sure you are familiar with NACOA and its history, perhaps a brief summary for the record would be in order. NACOA was originally established in 1971 following a strong recommendation by the Stratton Commission that an independent advisory committee of private citizens was needed to help guide Federal policy and action concerning the oceans and the atmosphere. The legislation that gave NACOA its current structure and mandate provides for 18 members to be appointed by the President. It is NACOA's duty to advise the President and the

Congress on national policy concerning the oceans and the atmosphere, coastal zone management, and the status of the various Federal programs relating to the oceans and the atmosphere. In addition, NACOA provides advice to the Secretary of Commerce specifically concerning the programs of the National Oceanic and Atmospheric Administration.

As you know, Mr. Chairman, NACOA's legislation authorizes it to provide its recommendations directly to the President and to the Congress. Another significant provision which ensures that our voice will be heard is that the agencies to which NACOA directs its policy and program advice must comment or respond to that advice through the Secretary of Commerce to the President and to the Congress.

The issues and subject areas that NACOA selects for its attention are often in response to the expressed interests and requests of the Congress or the Federal agencies. NACOA also develops recommendations on its own initiative when its members determine from their own specialized experience or vantage points that some particular matter should be brought to the attention of Federal policymakers and managers to maintain the vitality of our oceanic and atmospheric programs in the national interest.

Our efforts are a mix of short-term responses to specific requests or to NACOA recognized issues, and longer-term reviews that often lead to formal and detailed reports. Our views also have been delivered in the form of testimony at Congressional hearings.

During the past few years, NACOA has addressed a wide variety of important issues, such as OCS lands act amendments, fisheries management, Federal organization for oceanic and atmospheric responsibilities, coastal zone management, and oil spill liability and compensation. It has addressed national climate activities, weather services, weather modification, and provided its advice on support for oceanic and atmospheric research. Very recently, we provided our views on an organic act for NOAA, on the inadequacies of the Coast Guard's research and development budget to provide the increased productivity and capability needed to support its growing menu of responsibilities, and on the need for coordination in the use of aircraft research facilities supported by the Federal Government.

These subjects and others, which are summarized in NACOA's annual reports, are important to the broad and comprehensive look that must be given to our Nation's vital interests in its oceanic and atmospheric assets. NACOA has provided this broad and comprehensive focus of attention in the past and continues to do so.

For example, NACOA is now reviewing the effectiveness of the Nation's present and planned hydrological services to provide the best river and flood forecasting that can be achieved, the future capability of the country's scientific community to maintain important progress in atmospheric research, and the status and future of U.S. fisheries and marine transportation.

Public awareness of the oceans has grown remarkably over the past 10 years and will continue to grow. There has been a remarkable amount of significant legislation enacted in recent years which has recognized legitimate public concern for environmental values—as in the case of legislation concerning ocean dumping, clean water, coastal zone management, and clean air. And there is recognition of the ocean's resource values in laws such as those on extended fisheries jurisdiction, deep-water ports, oil and gas from the outer continental shelf, ocean thermal energy conversion, and deep seabed minerals. Climate, too, is now being viewed with increased interest as a major consideration in agricultural planning, in energy distribution, and in water resource management.

But this ocean awareness is still evolving, and I believe that the way our Nation will view the oceans and the atmosphere in the future will be different than it is today. Our increasing dependence on imported oil, the potential shortage or lack of assured sources of certain minerals, and the rising cost of protein have made us all feel far less secure than we have in decades. It is causing us to look more than ever to the resources of the oceans and to ways of increasing our use of the oceans while at the same time retaining our concern for the environment. We are all becoming more broadly aware of how interdependent our development activities and our economic needs are, of how important it is not only to be concerned for the possible effects of increased offshore oil activities on the productivity of fishing areas, for example, but also to strike a reasonable balance among such competing interests and between immediate and long-term benefits.

It is my personal view and the view of NACOA, and indeed, it is the view of a growing segment of the public, that technology, and the efficient development of resources that technology makes possible, is about to be readmitted to respectability along with the valid and laudable concern for our environment.

This striving to achieve a working balance among competing interests is not new. But now, after many years of a basically no-risk bias, there is a growing recognition

that some risk—carefully considered and measured, reduced to a minimum by careful study and the judicious application of new technology—that some risk must be taken if our cultural and economic life style is to continue reasonably as it has in the past. It is here that NACOA has a special and unique role to play—because of its varied expertise, its position as a forum for open discussion, and its independence to express the results of its deliberations.

Because this is a time of change in how we must view risk, as our national decisions and our national policy about the resources of the oceans are being made at a time of economic stress, it is more important than ever for the Congress and the Executive Branch to have independent advice from those of us from the private and the non-Federal Government sectors who have the needed knowledge, experience, and insight to provide a balanced view of the tough issues that must be faced.

I believe that NACOA's role as an instrument of Federal policy development concerning the oceans and the atmosphere is especially critical now, when it seems clear that a readjustment in how we view the risks and costs of resource development must be faced by all of us.

I would like to tell you briefly about two significant reviews that NACOA has just completed. I believe that they illustrate how NACOA is contributing in a significant way to reassessing the old problem of retaining environmental care while facing the realistic needs of an advanced, technology-based society. One review concerns the use of the oceans in a national waste management strategy. The other review concerns the economic value of the oceans and what needs to be done so that the United States can reap greater benefit from them.

THE ROLE OF THE OCEANS IN A WASTE MANAGEMENT STRATEGY

The disposal of waste materials has become one of the most critical problems facing our Nation today. Vast quantities of wastes are generated that must either be recycled into useful products or disposed of somewhere. Problems such as Love Canal in upper New York State, the explosion at the abandoned chemical control facility in New Jersey, and the contamination of groundwater nationwide, have sensitized this country to the consequences of unsafe disposal practices that can damage the environment and affect human health.

NACOA has just completed a 2-year study of waste management policies and laws and presented its conclusions in a report entitiled, "The Role of the Ocean in a Waste Management Strategy." It is one of NACOA's special reports to the President and the Congress, and, I believe, one of the most significant reports that NACOA has produced. I have draft copies of the report with me and I will leave them with you.

In the early 1970's the Nation became suddenly and acutely aware of problems, both real and possible, caused by the dumping of wastes in the oceans. We became alarmed at what was presented as a fragile ocean environment, and at our lack of knowledge of the effects of ocean-waste disposal on the ocean's biology and, ultimately, on human health. The result was a vigorous but disjointed reaction to curtail practices that seemed too risky in the light or our uncertain knowledge.

However, it was impossible to implement all of our environmental statutes simultaneously. The implementation of each new law has shifted the burden of receiving society's waste products to the medium least regulated at that moment.

An industry or municipality faced with the problem of what to do with its wastes may well find that the Clean Air Act effectively prohibits incineration; the Federal Water Pollution Control Act similarly limits disposal at sea through a pipe, or, in internal waters, by any means; the Marine Protection, Research, and Sanctuaries Act prohibits disposal at sea via barging; and the Resource Conservation and Recovery Act and the Safe Drinking Water Act effectively prohibit land disposal or deep-well injection.

NACOA is concerned that this medium-by-medium approach may have produced groups of regulations whose primary objective is to exclude a particular medium from its use as a waste disposal medium, without any regard for the impact of these regulations on other media.

A major argument against ocean-waste disposal has been that our knowledge of oceanic chemical and biological processes is severely limited and that the long-term effects of ocean-waste disposal may be adverse. This argument was of greater validity in 1970, when we were only beginning to understand the effects of specific waste disposal practices on marine life and human health, than it is today.

Research into ocean-waste disposal now indicates that some of our earlier concerns were overstated. Therefore, we should reconsider the oceans as a waste disposal medium for certain wastes under certain circumstances. We must consider each waste management problem on its own merits, and all reasonable disposal options must be given equal consideration.

Thus, one of NACOA's principal reommendations is that the United States adopt an integrated approach to waste management. This requires modification of the existing medium-by-medium approach to waste disposal. Wastes should be disposed of in a manner and in a medium which minimizes the risk to human health and the environment, but at a price that this Nation is prepared to pay. To accomplish this, it will be necessary to change the present policy that no ocean dumping is permitted when land-based alternatives exist.

NACOA believes that economics should play a more significant role in waste management decisions especially when the environmental and human health risks of waste disposal options are comparable. Even If the risk were somewhat greater for ocean disposal, greatly disproportionate costs could justify the granting of an ocean dumping permit, depending on the nature of the risk involved. The reports, as you will see, goes on to recommend specific changes in present law, shows clearly where present laws and regulations are in conflict with each other, assesses the various options for waste disposal, and recommends certain administrative changes.

We are not advocating a return to unregulated or indiscriminate dumping. On the contrary, we advocate applying the increased understanding gained through research in recent years to more discriminating choices of control practices, choices that take economic costs and benefits into account.

THE OCEANS AS AN ECONOMIC RESOURCE

Just as new information has affected our view of the oceans as a medium for waste disposal, so also will information be needed to make sound policy judgments about other uses of the oceans, for the protection of human health and safety in the use and development of the oceans, and for increased productivity for the capital that we will be investing.

NACOA has just completed an extensive review to determine the kinds of information and services that will be needed over the next 10-15 years to ensure that the oceans are efficiently and safely used for the benefit of the Nation.

To carry out this review, NACOA had to first look carefully at what the Nation's ocean future was likey to be and at what the oceans can do for this country.

NACOA finds that there is tremendous potential for the oceans to help our Nation rebuild a healthy economy, maintain its standard of living, and provide job opportunities.

A number of driving forces will accelerate our economic development of the oceans. Among these driving forces are the Nation's energy needs, the need to develop our fisheries and new sources of minerals, the growth of our population and its shifting concentration toward the coastal areas, and the powerful and pervasive impact of scientific and technological developments.

Much of the force for greater ocean activity, however, derives from the social and economic needs of the Nation. These inevitably produce great pressure for development, as well as increased concern for protection from pollution. The pressures and the concerns will be great, because the new economic uses of the oceans are likely to be as enormous as the ocean-based oil and gas industry have already become.

No issue will so dominate our uses of the ocean as will energy. Extraction and transport of energy resources interact with other uses of the ocean and the bordering coastal zone, raising issues of conflicting use. And the need to develop energy resources in harsh environments, such as the polar regions, raises special problems. The positioning of facilities in less benign seas will be subject to new types of environmental hazards and conditions. As a result of these new activities, there will be a great need for supporting services: observations of the ocean environment are needed; pollution needs to be monitored; and impacts need to be understood.

In the U.S. fishing industry, the largest single change that NACOA expects to take place will be the development of the capability to use the enormous resources along the Alaska shelf. The nature of these resources, the distance from shore-processing facilities, and the remoteness of the area will require new kinds of equipment and procedures, including larger vessels capable of taking and processing the fish catch inside the Alaskan waters.

Our fishery management systems will require more responsive environmental, ecological, and fishery catch and effort data. These data will be obtained in part through new observational techniques.

Population growth and the concentration of population on the coasts of the United States and its consequences are the major socioeconomic factors affecting the oceans in the 1980's Crowding the coastal zone increases the vulnerability of life and property to violent storms and increases the problems of waste disposal, shoreline use and misuse, and makes environmental protection even more significant.

As our coastlines become crowded, the oceans may have to be used for conducting certain activities, such as ocean power plants, use of cooling water, fish processing

plants, offshore ports, offshore incineration, deep-water storage of liquified natural gas, all of which, for one reason or another, become unacceptable as land-based activities. It is reasonable to forecast increasing effort in the future to move many of these activities to offshore areas where they can be handled in a more benign manner. Here again it will be necessary to provide planners and managers with the information and services they will need to solve new and difficult problems.

Science and technology represent a different kind of driving force, with opportunities for the more efficient use of capital, increased productivity, new benefits to mankind. I am speaking now of satellite platforms and remote sensing technology and of our enormously expanded ability to store and access vast pools of data and information in economical and responsive fashion. It is also our increased understanding of the geological structure of the seabed, which in turn leads to new frameworks for ocean resource exploration and development. It is the new understanding of the total ocean ecological system on which living resources depend and which set the framework for managing not only our fisheries but our coastal areas as well.

Increased productivity from the oceans, the ability to operate at sea in a safe and more predictable fashion—these will be the ultimate benefits from the new understanding and the new methods that science and technology will offer. For example, navigational satellites will allow ships to know their position with much greater accuracy, so that equipment can be placed and retrieved dependably. The consequence will be huge dollar savings in oil exploration and development, in ocean mining, and in fishing—dollar savings that will in turn encourage private industry to venture even further into ocean development than it has already.

So we must look ahead in our policy and program planning, because it is unavoidable that the oceans and the atmosphere will grow in economic importance for our national well-being.

NACOA has taken its own measure of the future, and has determined the kinds of services that will be needed to make the most effective and efficient use of this value. Its findings are included in this report, which I will leave with you today.

Because of the economic pressures already upon us, the Nation's policymakers and mangers will need this guidance even more in the future, not only to deal with current needs but also to be sure that future opportunities are not foreclosed. NACOA is ready to provide this guidance in the future as it has in the past.

FUTURE PLANS

There are, of course, many other areas of oceanic and atmospheric affairs that will require a continuing critical oversight in the future, which NACOA is able to provide. Perhaps one of the most challenging—for the entire Nation—will be the eventual emergence of a Law of the Sea (LOS) Treaty.

The way our Nation chooses to view and to deal with all aspects of its ocean heritage will be altered by a new body of international law. NACOA has given considerable attention already to some elements of the LOS negotiations and has already made significant recommendations to those concerned with the treaty.

In 1972, NACOA urged that, while waiting for a satisfactory treaty, the United States should prepare interim arangements that would protect its interests but could mesh with international agreements that would eventually emerge. In 1974, NACOA repeated this view, particularly for unilateral U.S. action with respect to our coastal fisheries. NACOA then gave strong support to the Fishery Conservation and Management Act, which followed in 1976. And in 1977, NACOA urged the President and the Congress to support domestic deep seabed mining legislation.

NACOA will keep its sights on the continuing LOS process and will continue to offer to the President and to the Congress its recommendations on what seems certain to be the most important oceanic development of the century.

NACOA is also concerned with a variety of extremely important issues involving the atmosphere as well: the development of a national policy and programs in weather modification, the implementation of the National Climate Program, the effects of increased atmospheric carbon dioxide and acid rain, for example.

Mr. Chairman, I want to assure you that NACOA is mindful of the current economic situation in our Nation, and of the President's efforts to reduce expenditures. We strongly endorse actions that will restore confidence and stability to our economic future. Even so, it will be necessary to maintain an overview of broad scope, so that development opportunities remain available and are judged both in terms of our need and our ability financially to advance them.

Specifically, it is our intention to look at the several budgetary actions taken in the oceanic and atmospheric areas, to gauge their overall impact, and to provide our assessments to the President and to the Congress. We are not aware that assessments of the collective effects are available; certainly it is a difficult task. Yet,

NACOA feels it is an important and priority task and intends to make such assessments during the coming months.

LEGISLATION

I will turn briefly now, Mr. Chairman, to the legislation under which NACOA functions and to NACOA's resource requirements for fiscal year 1982.

In the recent past, NACOA's authorization levels have been $520,000 for fiscal year 1979, $565,000 fiscal year 1980, and $600,000 for fiscal year 1981. Our fiscal year 1980 expenditures totalled $530,200 despite increasing costs, because NACOA had an average appointed membership of about 12 for the year, and an all-time low of 8 at the start of fiscal year 1980. NACOA began fiscal year 1981, however, with a nearly full complement of 17 appointed members.

We have made reasonable estimates of our resource requirements to continue the work of our Committee in fiscal year 1982 and beyond. A budget of $648,000 for fiscal year 1982 will povide us with the resources necessary to carry on an activity level of 9 meetings plus a few separate panel meetings. It provides, however, little flexibility to accommodate mandated cost increases or to undertake special projects that may be requested.

I request, therefore, your conideration of reauthorization that starts at a level of $700,000 for fiscal year 1982 to provide needed flexibility to our operations.

We request that you give consideration to one other change in NACOA's reauthorization legislation, one that we believe is of considerable importance. The current legislation states that a member may continue to serve for an additional period of only 90 days after expiration of his or her term of office in case a successor has not been appointed. This section of the legislation, a change from the original 1971 Act which allowed a member to remain until a successor took office, was instituted in order to put pressure on the Administration to expedite the member appointment process. Clearly, as shown by the events of the past few years, it has not worked.

Our committee has important work to do. In the past, a number of activities were deferred because of delays in the appointment process which left the Committee with too few members, and for that reason, with a lack of specific expertise among the members. Consequently, Mr. Chairman, we would prefer to go back to go back to the language of the 1971 legislation—to retain members until they are replaced by appointed successors.

CONCLUSION

It was stated some years ago that:

"The Nation's stake in the uses of the sea is synonymous with the promise and threat of tomorrow. The promise lies in the economic opportunities the sea offers, in the great stimulus to business, industry, and employment that new and expanded sea-related industries can produce * * * in making available new reserves of important minerals and in ensuring new sources of food.

"The threat lies in the potential destruction of large parts of the coastal environment and in the further deterioration of economically important ports, recreational facilities, coastal shellfisheries, and fisheries on the high seas."

Mr. Chairman, that quotation was from the report of the Stratton Commission in 1969. The words apply even more strongly today than when first written. We believe that the value of NACOA in providing a broad focus and oversight in these areas, as initially recommended by that Commission, is also more important now than ever before.

It is for these reasons that I recommend that you support the continuance of NACOA for another 3 years.

Mr. Chairman, this concludes my prepared statement, and I will be pleased to answer any questions that you may have.

Mr. KNAUSS. NACOA believes it is time for this Nation to reassess present waste management regulation, to consider all media—land, air, ocean, internal waters—as possible waste disposal sites. We should not tax one medium at the expense of others because of legislation and regulations.

For any given waste material, all media should be considered. Under some circumstances the ocean may be the preferable option.

The second report, "Ocean Services for the Nation," reviews the services that Government and industry will need and can provide during the decade ahead as we expand future use of oceans and

coastal areas. It reviews industry needs for a wide range of services, vastly improved navigational ability, and improved weather services.

One report has just been published. In fact, I saw it for the first time today: "Ocean Services for the Nation." Bob White, a member of NACOA, was chairman of the subcommittee that put that report together. The other, the "Role of the Ocean in a Waste Management Strategy," is in draft form. We expect to go to press a week from tomorrow. I have draft copies of this. I will leave both reports with you.

Among our future plans, a review of the law of the sea activity, an area we have had under continuing review since 1972; fisheries; weather modifications; and implementation of climate program.

Mr. Chairman, I want to assure you that NACOA is mindful of the current economic situation in our Nation and of the President's efforts to reduce expenditures. We strongly endorse actions that will restore confidence and stability to our economic future. Even so, we believe it will be necessary to maintain an overview of broad scope so that development opportunities remain available and are judged both in terms of our need and our ability financially to advance them.

Specifically, it is our intention over the next few months to look at the several budgetary actions taken and being proposed in the oceanic and atmospheric areas and to attempt to gauge their overall impact and to provide our assessments to the President and to the Congress. We are not aware that assessments of the collective effects are available. Certainly it is a difficult task. Yet, NACOA feels it is an important and priority task and intends to make such assessments during the coming months.

Let me now turn briefly, Mr. Chairman, to the legislation under which NACOA functions and to NACOA's resource requirements for fiscal year 1982.

You have already noted that in the past NACOA's authorization levels began at around $520,000 for fiscal 1979 and were up to $600,000 for fiscal 1981. Our expenditures in fiscal 1980 were $530,200 despite increasing costs, in large part because NACOA had to function with an average membership of about 12, and an all-time low in its appointed membership of eight at the start of fiscal 1980. As you have noted, Mr. Chairman, NACOA begins fiscal 1981, however, with a nearly full complement of 17 appointed members.

We have made reasonable estimates of our resource requirements to continue the work of our committee in fiscal 1982 and beyond. A budget of $648,000 for fiscal 1982 will provide us with the resources necessary to carry on an activity level of nine meetings plus a few separate panel meetings. It provides, however, little flexibility to accommodate mandated cost increases or to undertake special projects that may be requested or which, because of changing circumstances, may become urgent.

I would like, therefore, Mr. Chairman, to request your consideration of reauthorization that starts at a level of $700,000 for fiscal year 1982 to provide needed flexibility in our operations.

There is one other change in NACOA's authorization legislation we request you give consideration to, one that Mr. Belsky also

brought up. The current legislation states that a member may continue to serve for an additional period of only 90 days after expiration of his or her term of office in case a successor has not been appointed. This section of the legislation is a change from the original 1971 act which allowed a member to remain until a successor took office and was instituted in order to put pressure on the administration to expedite the member appointment process. It did not work, as the evidence of the past events over 4 years have shown. NACOA has often had to function with less than its full complement of members, and this has been a problem.

Our committees have important work to do. In the past, a number of activities were deferred because of delays in the appointment process which left the committee with too few members or with a lack of specific expertise among the members. Consequently, Mr. Chairman, we would prefer to go back to the language of the 1971 legislation: to retain members until they are replaced by an appointed successor.

Finally, Mr. Chairman, it was stated some years ago, and I quote:

> The Nation's stake in the uses of the sea is synonymous with the promise and threat of tomorrow. The promise lies in the economic opportunities the sea offers, in the great stimulus to business, industry, and employment that new and expanded sea-related industries can produce, in making available new reserves of important minerals and in ensuring new sources of food.
>
> The threat lies in the potential destruction of large parts of the coastal environment and in the further deterioration of economically important ports, recreational facilities, coastal shellfisheries, and fisheries on the high seas.

That quotation was from the report of the Stratton Commission in 1969, a commission which I was fortunate enough to be a member of. The words apply even more strongly today than when first written. We believe that the value of NACOA in providing a broad focus and oversight in these areas, as initially recommended by that Commission, is also more important now than ever before.

It is for these reasons that I recommend that you support the continuance of NACOA for another 3 years.

Mr. Chairman, that concludes my prepared statement. I will be pleased to answer any questions you may have. Thank you.

Mr. D'AMOURS. Thank you, Dr. Knauss. The subcommittee will proceed to question both you and Mr. Belsky. I would like subcommittee members to stick rather closely to the 5-minute rule. That will apply to me also.

First off, I note, Dr. Knauss, that you did not recommend the amendment to the 1977 law that would increase per diem from $100 to $190, as did Mr. Belsky. I am wondering why.

Mr. KNAUSS. Well, I guess, Mr. Chairman, it is something that NACOA as a group has never really discussed. Speaking personally, I guess I am somewhat of the view of Mr. Pritchard. As long as I do not lose money being an adviser to the Government, I think that I am going to do so. The $100 essentially covers the difference between what the Government allows for per diem for travel to this city and what it actually costs. I do not do very much private consulting, but when I do I can assure you that I do it at more than either the $100 or the $190 a day that is being proposed.

So, I think for me personally and, I think, for most members of NACOA it is a labor of love. The amount of money we get is not all that critical.

Mr. D'AMOURS. Thank you.

Mr. KNAUSS. I cannot argue that it would not be nice to have it, but I do not think that it is a very important issue as to whether one serves on NACOA or does not serve on NACOA.

Mr. D'AMOURS. I very much appreciate that attitude. I am sure the other members of the subcommittee do.

I have one last question on that question of per diem. Maybe Mr. Belsky would want to answer, but I would like first of all to hear if you have a response, Dr. Knauss.

In the proposed amendment, striking out $100, it inserts in lieu thereof "not to exceed the daily rate for a GS-18." That "not to exceed," does that mean that somebody within NACOA or within Commerce or somewhere would have the authority in any given case to decide where, from zero to $190 per day, the amount should be set?

Mr. BELSKY. Mr. Chairman, I asked that precise question of OMB. They did not give me a direct answer. The reason they put the language in like that, they indicated, is that the money would grow as the GS-18 level, would grow. I think what they mean by that is the GS-18 level rather than not to exceed GS-18. They——

Mr. D'AMOURS. They mean at the GS-18 level rather than——

Mr. BELSKY. That is correct.

Mr. D'AMOURS. Dr. Knauss, do you have anything to add to that?

Mr. KNAUSS. I do not know anything about it——

Mr. D'AMOURS. Fine. Dr. Knauss, it is quite a difference between the $700,000 that you begin with in fiscal year 1982 and the $555,000 that Commerce is suggesting. How do you see this inhibiting your operations at NACOA? How much would it do so? What would you have to cut back? What services that you are currently providing would you no longer be able to provide?

Mr. KNAUSS. I discussed this briefly with Mr. Anastasion, our staff director. Maybe he can provide some of the more detailed estimates of what this would cost. But, quite clearly, it seems that it would require as a minimum a reduction of our staff and probably—well, clearly, a reduction in the number of meetings.

I happen to think, Mr. Chairman—I suppose all of us who are involved in this business think that what we are doing is particularly important. But I happen to believe that during the next year or so, when almost a revolution is going on with respect to what is happening to the support of ocean programs and atmosphere programs, the role of NACOA is going to be even more important in trying to provide broad oversight in these areas than it has been in the past.

We are an independent voice that can look at not only what is going on in this city but, because of our membership and our experience, we have some idea of what the impact is in industry, in the States, and so forth. Our membership does represent these areas. I think in some ways we may be more useful to Congress and the administration than we have in the past because we are going to see a rapid change in the way things are done, at least with respect to Federal support of ocean and atmospheric programs.

In a committee such as NACOA we are volunteers. It is really no better than the staff is. We can only do so much as individuals. We

need the staff support to continue to help us with our work. We have a good staff. The amount of work we turn out is somewhat proportional to the quality of the staff and the quantity of the staff.

I also think—and I say this after serving on NACOA for almost 3 years now—that you gain a certain momentum in these advisory groups by meeting on a somewhat regular basis. We all go home. We have a full-time job or more than a full-time job. Then suddenly you realize, well, you've got another NACOA meeting that is coming up and you have to think about it. If there is too much of a gap between these meetings, you lose the continuity and you lose the momentum. I think the nine meetings a year is important. There was a while when we had 11 or 12 meetings a year. That got to be a bit of a burden on the staff as well as a burden on NACOA members. But I think nine meetings a year is about the right amount.

That is my personal view. As to the details of what it would take—of how we would live with that budget, I would refer to Mr. Anastasion.

Mr. D'AMOURS. We will perhaps have a chance to get to that later. My time has expired. I will now recognize Mr. Pritchard.

Mr. PRITCHARD. I welcome you here. You have done a lot of good work over the years.

What you are saying is that, if this budget holds, why, you will probably have to cut—what have you got, about 10 people on the staff?

Mr. KNAUSS. We have five professionals. We have 10 full-time people; that is right.

Mr. PRITCHARD. How many part-time people?

Mr. KNAUSS. Two part-time people.

Mr. PRITCHARD. That sounds like about 11 full-time slots. Well, that means you are going to be cutting two, three, or four out of your staff. You are going to go from about nine meetings a year, probably back to somewhere around five meetings a year.

That would be my rough figuring. It sounds to me like that is the kind of cutting you are going to have to do to maintain unless you come up with some new creative ways of attacking these problems.

I can appreciate the fact that it is not going to help the work of NACOA. I think people on this panel would like to get you a little more money. I think there is a good chance that we may recommend some more money.

As you are painfully aware, what we recommend and what you get is not always the same. It may not even be close.

We are really talking about five meetings a year and about—there is no way that you can meet nine times a year in a budget of $555,000, is there?

Mr. KNAUSS. I think you are right, sir.

Mr. PRITCHARD. And there is not anyway that you would be able to maintain 10 full- and 2 part-time people on a budget like that.

OK, well, we understand the parameters.

I have one other unrelated question. Are you people going to come in with some comments on the Law of the Sea negotiations, especially the new administration position dealing with the Law of the Sea Conference?

Mr. KNAUSS. During our last NACOA meeting, which you were so kind to attend and address, we tried to rethink our priorities as to what we should do over the next few months. We decided that for the near term—that is over the next 2 to 3 months—we would not make any recommendations or not do the staff work and the NACOA work necessary to make recommendations on the Law of the Sea Conference.

For reasons that I think you probably well understand, it looks like the administration is also rethinking where it is going on the Law of the Sea. I gather meetings are going to start March 9. My contacts tell me that as of the moment the State Department does not even have instructions from the President on the matter of what to do, whether it is going to be in a holding pattern. So, we thought we could be in a holding pattern also with respect to recommendations on Law of the Sea.

We think that the question of the impact on the proposed cuts or changes in the Federal direction on the oceans and the atmosphere is the most critical issue which NACOA can respond to in the next few months. Except for those programs which are ongoing—we have two or three which we want to bring to completion—we are going to devote almost all of our time to that effort. We did say that each month we will review that decision. But as of the moment, no, we are not planning to come in with any recommendations on the Law of the Sea in the next 3 or 4 months.

Mr. PRITCHARD. Thank you.

Mr. D'AMOURS. Mr. Dyson, do you have any questions of either of our panelists?

Mr. DYSON. Thank you, Mr. Chairman. I have a quick question. I think, in response to one of the chairman's questions, you indicated your independent nature. How do you operate and function with groups, such as in the State of Maryland, an area that I represent, that has a coastal management committee and functions within the State, in light of questions like ocean dumping? I notice, that you said in part of the statement: Research into ocean waste disposal now indicates that some of our earlier concerns were overstated; it probably will be necessary to change the present policy that no ocean dumping be permitted when land-based alternatives exist.

What role do you play with the States in that, particularly in Maryland?

Mr. KNAUSS. I do not think we have played any particular role with respect to Maryland. Let me tell you a little bit about how NACOA operates and how we think we have some sense of what the States——

Mr. DYSON. If I can interrupt, Maryland has faced just that sort of question with Philadelphia's dumping off the coast of Ocean City—I guess off the coast of Ocean City, N.J., too. My colleague from New Jersey is concerned about that.

Mr. KNAUSS. Well, let me go back to the coastal zone, and then I will take the ocean dumping, if I could, sir.

We have as members of NACOA, for example, State Senator Waddell from South Carolina, who represents the State of South Carolina. He is very much involved in coastal zone management problems. We have Sharon Stewart from Texas, a private citizen

who has been very much involved with coastal zone management in Texas.

We think, because of members like that in NACOA, we have some sense of the States' needs and the public's perceptions of needs with respect to problems of coastal zone management. So, we do address the problems of Maryland per se, but we like to think we can address the problems of coastal zone management and Federal legislation, the perceptions of the States with respect to Federal legislation and so forth. We try to do it in that way rather than going at it State by State.

Concerning ocean dumping, as you will see in our report when it comes out, NACOA does take the view that there are times when continuing to dump material in the ocean may be preferable to other forms of disposal. We have not taken a specific view either with respect to the Philadelphia dump site or the Boston dump site or the Los Angeles dump site or the New York dump site. But we do argue—we argue strongly, and I believe in this personally—that it is time that this country rethink its present policy, which is: Thou shalt not put anything in the oceans. The alternatives are not very practical either. There are times when it appears to us that the oceans—properly managed, properly done, picking your site correctly—are a proper place to put waste material.

Mr. DYSON. It is time I left.

If I can pursue that, again, reading the statement, I become convinced that there is tremendous unknowns you are dealing with when you are talking about ocean dumping. Right at the end of page 7 it hits me. Notwithstanding all of that, you are saying that maybe our concerns have been—we have become too concerned about that. It has been maybe overstated, and it seems to be a reversal.

I, quite frankly, saw some inconsistency there.

Mr. KNAUSS. Well, it may be in my statement; I hope it is not in our report. The report gives a rather lengthy review of all that is known at the present from the scientist's point of view, engineer's point of view with respect to ocean dumping. We admit that there are certain things we do not know. But we are also convinced that, on the basis of questions of human health, and also with respect to ecological change, that there are times when putting material in the ocean is probably a lesser problem than the various other possibilities such as incineration, landfills, hazardous waste disposal sites, and these things.

Mr. D'AMOURS. Mrs. Schneider, do you have any questions?

Mrs. SCHNEIDER. Yes, Mr. Chairman.

I wonder if you could please explain to me what you feel the level of response has been to your advisory committee, Mr. Knauss. One often judges how effective an advisory committee is based on those parties that take or do not take the advice. Has the President taken your recommendations and has this Congress taken your recommendations on various programs?

Mr. KNAUSS. That is a tough question. I thought a little bit about it. As so often happens, the answer is sort of yes and no.

For example, with respect to the Coast Guard recommendations we made on research and development, they have taken at least some of our advice. They thought enough of it that they have come

back and are going to ask us to look at their entire array of problems and needs. Hopefully, we will be able to help address those problems of the Coast Guard.

With respect to the superfund bill, for example, at least some of our recommendations were taken almost word for word in the legislation that was passed.

Sharon Stewart of NACOA is going to be testifying here next week before one of the other subcommittees of the House Merchant Marine and Fisheries Committee, the one that Congressman Studds is chairman of the Coast Guard Committee—with respect to oil compensation liability. We have made specific recommendations with respect to language in that legislation which we like to think will be accepted. It was generally accepted last year during the last Congress.

We made recommendations to the coastal zone management bill which were accepted at this level. They were taken out in the full House.

I think I could find a number of other examples.

We have also failed sometimes. I should not suggest otherwise.

On the other hand, we have had some influence. For example, at the behest of this group, several years ago we went to a great deal of trouble to look at the question of reorganization within the Federal Government with respect to where NOAA should be. We made some strong recommendations on this matter. About the same time, President Carter came forward and suggested there should be a new department of natural resources, which NOAA should be a part of.

Mr. Carter did not get that department of natural resources. I have been told anyway that at least one of the reasons why was because of the strong effort that NOAA had made and the background effort that NOAA had made with respect to the arguments for why NOAA should be maintained as a separate thing. I do not know whether you call that advice being taken or not.

Also at the behest of this committee, we did a lot of effort with respect to a NOAA organic bill. For reasons internal to Congress, the NOAA organic bill did not go forward in the last Congress. But I think it is all ready to go. I believe the recommendations we have made will be useful when and if this session of Congress decides to move forward on the NOAA organic bill.

Mr. BELSKY. Congressman, if I could add just one thing——

Mrs. SCHNEIDER. Hurry. I just have 5 minutes.

Mr. BELSKY. In view of the fact that NOAA has to report, as does other Federal agencies, to NACOA, get our act together, come before them, and Congress cannot do it as often as they can, it is a very important instrument of Congress and I think is very constructive. It forces us to get together. That itself, I think, is very important.

Mrs. SCHNEIDER. I just have another minor question related to that. I have two questions, so I will ask both of them at one time so you can determine how long you want to take in answering them.

The first one relates to what kind of advice would you give this Congress in reference to the ocean dumping of sewage sludge from New York City, the termination of that ocean dumping.

The second question is unrelated, but I am interested in your point of view as to the success or failure of the sea grant program.

Mr. KNAUSS. First with respect to ocean dumping and the New York Bight. I believe, and our forthcoming report suggests, that EPA should rethink this question about demanding absolute end in 1981 to the dumping of material off New York Bight. We go into this in some detail in our report which will be available shortly.

With respect to sea grant, NACOA has made recommendations a number of times. In fact, in our report, "Ocean Services for the Nation," we also make some recommendations for the continued involvement of sea grant advisory services.

Clearly, NACOA is going to look at the broad implications of all things that are happening in the Federal Government with respect to the reauthorizations. Sea grant will be one of the things we will be looking at.

Speaking personally, if I could for a moment, I am deeply disturbed with what appears to be happening with respect to sea grant. I have been involved in sea grant from the very beginning. I helped organize the first meeting on sea grant in 1965, before the legislation was passed. I worked with Senator Pell closely with respect to sea grant legislation. I ran the sea grant program at the University of Rhode Island until it got sea grant college status. I am full of bias, perhaps, for the program.

I also note that the Heritage Foundation, from which President Reagan presumably gets much of his philosophical advice as to where he is going to go and so forth, also recommends that sea grant should be increased at a rate of 10 percent a year in real dollars for the next 5 years, a doubling of the program.

I have some understanding, although I may not agree, with what the President is doing with respect to ocean programs. But I do not understand where he is coming from with respect to sea grant. I mean, if you are looking at trying to increase the productivity with respect to the oceans, if you are looking to kind of the balance between the oceans, between the Federal activities and the industry and so forth, it seems to me that he is clearly on the wrong track completely with respect to sea grant.

I think it should be supported. I think it should be supported strongly.

Mrs. SCHNEIDER. Sir, considering your involvement in a broad spectrum of various Federal programs and advisory commissions, would it be your point of view that sea grant ranks right up at the top as one of your personal highest priorities in terms of dollars invested and returns that come out of those dollars invested? I mean if you were to do a cost-benefit analysis.

Mr. KNAUSS. Yes. I have got to separate my NACOA hat. But, from my personal point of view, yes, I think sea grant ranks way up at the top.

Mrs. SCHNEIDER. My time has expired. Thank you very much.

Mr. D'AMOURS. The gentlelady from Rhode Island was given extra time because of the special relationship between the witness and herself.

Mrs. SCHNEIDER. Do we need to clarify that for the record? [Laughter.]

I am most honored to have Dr. Knauss, who is probably one of the most well respected—not only in the State of Rhode Island but also nationwide and internationally as one of the foremost advisers in the area of ocean concerns. So, I am very honored to have the opportunity to grill him.

Mr. KNAUSS. Thank you.

Mr. D'AMOURS. Mr. Carney?

Mr. CARNEY. Thank you, Mr. Chairman.

Your study, Dr. Knauss, on the role of oceans in waste management, when did that start?

Mr. KNAUSS. I think about 18 months ago, maybe almost 2 years ago. It has been going on for a long time, sir.

Mr. CARNEY. Sometimes we run into problems. Back in 1977 I was not a Member of this distinguished body. But, if memory serves me, Congress was pretty much emphatic about stopping ocean dumping in 1977. This action received an awful lot of support.

I do remember as a member of the Merchant Marine and Fisheries Committee and of this subcommittee and of the Subcommittee on Fish and Wildlife in the 96th Congress we were again absolutely emphatic that we will stop ocean dumping December 31, 1981. The chairman of the committee at that time, Mr. Murphy, was a gentleman who could almost at will get his way in full committee and in any subcommittee. He tried very, very hard to reverse that, and it was not reversed. To me, that was an even greater indication of congressional intent to stop ocean dumping.

I am wondering why did you continue with the study in view of the clear lack of support from Congress?

Mr. KNAUSS. I happen to chair the NACOA panel that did the work. I got myself involved, Mr. Carney, in the following way. It was clear to me that the RCRA regulations were coming down the pike. RCRA regulations, you may know, concern the questions of where you can put the material on land.

It looked to me, as a scientist and environmentalist, that we now were going to have, essentially, legislation which controls what you could put in the ocean, what you could put in internal waters, what you could burn or put in the air and now, finally, what you could dispose by deep-well injection and what you could put on land.

If you read those regulations it looked like there was no place to put anything. My concern was that, when this country began to look at what they had done to themselves, that they were going to go back and say, from a point of human health and economics, let us rethink the question of putting things back into the ocean. Since the adoption of rules with respect to no ocean dumping, we have had Love Canal; we have had the chemical explosions in New Jersey; we have had all the other kinds of environmental insults.

So, almost 2 years ago I began to get concerned that there was going to be a tremendous backlash of the public which eventually would reach the Congress with respect to what one would do with respect to reopening the ocean dumping question. So, I thought it was time to put together, as best we could, a review of what we knew scientifically about the matters of what one could or should do—what were the actual effects of putting sewage sludge, various

kinds of things in the ocean. And we did this. It took us a lot longer to do once we got into it than I thought it was going to take.

Our report, I hope, sir, is reasonably evenhanded. The only thing we are suggesting is that once you look at the various alternatives, we think the present regulation with respect to thou shalt not put anything in the oceans is too strong and should be looked at again.

Mr. CARNEY. This is the problem I continually have. It is a philosophical problem. We have an elected body that runs the Nation, or at least we think we do. Sometimes the bureaucracy has a different opinion.

It has been clearly stated time and again that we want to stop December 31, 1981. The bill in 1972 sets out a couple of parameters or tests for what we are talking about, the Marine Protection, Research, and Sanctuaries Act. It calls for, when there is an endanger of human health, marine environment or fishing and, second, such degradation has to be considered unreasonable. I would only invite you to come swim in Southampton anytime when our beaches are closed for 2 months because of the New York bight. And then you tell me if I am wrong that that is an unreasonable endangerment of health and a degradation to the ocean and what the yield of the ocean is.

Mr. KNAUSS. Mr. Carney, this report to Congress and to EPA does not change anything; the laws are still on the book. All I am suggesting is that, hopefully, after you have read the report, perhaps it would be reasonable to reopen the issue. I think it is going to be reopened anyway. I believe that the RCRA regulations are such that it is continuing to put pressure on those communities that have questions about where they are going to put the material, and the cost of where they are going to put the material. I cannot help but believe it is going to be reopened. All we tried to do was to put together a report which you and Congress and EPA can use in helping to make the decisions that will have to be made in the future.

Mr. CARNEY. My time has expired. I appreciate your appearing before our committee. I am sure we will see more of you on this issue.

Mr. KNAUSS. I expect we will, sir.

Mr. D'AMOURS. Dr. Knauss, have you reviewed the various budget cuts that the administration is proposing? You mentioned in reaction to Mrs. Schneider's question sea grant. Have you reviewed the various other ocean and marine programs within NOAA that are being cut?

Mr. KNAUSS. No, Mr. Chairman. What I tried to say was that this is what NACOA has decided to take as its high priority mandate over the next few months, to look at these in totality; and we plan to do this. We have not looked at sea grant. I was just giving my own personal opinion with respect to sea grant.

We made that decision at our meeting just last week. This is what we are going to put a high priority on over the next few months.

Mr. D'AMOURS. Hopefully, accelerated, if you can, because I am wondering if NACOA will review these proposed cuts and analyze their implications and make recommendations to the President and

to us regarding the cuts in time, perhaps, to change the course of action and flow of events.

Can we expect anything that timely?

Mr. KNAUSS. We can try, sir.

Mr. D'AMOURS. CZM and CEIP are already scheduled for the 25th of this month.

We will discuss this further. I do not mean to impose an unfair burden upon you, but I was thinking more of your exercising that advisory function vis-a-vis the administration, quite frankly. I would wonder if maybe you intend to get any input there before perhaps these decisions are irrevocably made, if that has not already been done.

Mr. BELSKY. If I can interrupt, Mr. Chairman, for one second, I have sat down with NACOA people and indicated to them that, after March 10, I am going to put together for them a package of the cuts in NOAA for their review.

I am also wearing another hat, which is the Executive Director of the Interagency Committee on Atmosphere and Oceans. I am going to ask the other leading people in the other Federal agencies to do a similar exercise. Dr. Knauss sent a letter immediately after my conversation with him formally requesting that kind of consultation and advice, to be followed up by Steve Anastasion. We hope to use that as a kicker to force this information to be generated, presented it at an open meeting in front of NACOA so that they can come back on a quick turnaround. It might not be a formal, fancy document—that can wait until later—but to come around in a quick document and say to you: This is good, this is bad, we agree with this one, we don't agree with this one.

Mr. D'AMOURS. That will be fine, frankly.

By the way, compared to the 1970 budget outlays and given inflation, are we spending more on these programs today than we were 10 years ago or less? Or do you have any figures on that?

Mr. KNAUSS. I think it is less. One of the problems is that inflation is different. Air travel and hotel costs have gone up more than some of the other kinds of costs.

Mr. D'AMOURS. I am thinking of NACOA.

Quite frankly, I asked the question from a biased position. I suspect that we are not spending any more, certainly, than we were 10 years ago when all of this began, and maybe less with the adjustment.

Mr. KNAUSS. In real dollars I think you are right, sir.

Mr. D'AMOURS. I did not mean to answer my own question, but thank you for agreeing with me. I think we call it leading the witness.

I have just one final point. That is I do not think the record would be complete without hearing from Mr. Anastasion in response to the question I asked earlier and at which time you referred me to him. That was, as you remember, Mr. Anastasion, where your agency would lose effectiveness, ability to operate if the figure came in as low as Commerce has suggested. I wonder if you could give us some details on that at this time.

Mr. ANASTASION. I can give considerable details to the staff later. I do not want to burden you with it now, but I would like to say a few things.

One of the things I would say is we are very gratified that the administration is supporting the committee. We are very happy that we are being supported as a committee even at the 555 level.

My concern is not that we cannot adjust to the 555. Certainly, we will have to take a look at what happens. Our planning is based on an average member attendance over some period of time. If the average changes, the expenses change.

A main concern I would like to offer to the committee for its consideration is not that the budget level per se is going to be 555. But, as Mr. Belsky pointed out, the legislation may be changed to come in with a compensation level at the GS-18 level. As he said, this was put in there so compensation could grow with salary increases. If the authorization level stays at 555 and the GS-18 salary level increases, it means that there is really not much planning that we can do for a stable annual activity as costs increase within a fixed and reduced authorization level.

Mr. D'AMOURS. Thank you very much. I have used up my second 5 minutes. Mr. Hughes indicated he would like to ask questions.

Mr. HUGHES. Thank you, Mr. Chairman. Thank you, Doctor and members of your panel. Dr. Belsky, it is good to see you again.

As I understand it—and excuse me for having to leave the room, but I had to go to the floor for something. If it has already been covered, I apologize. When I was in attendance for much of your testimony, I understood that any cuts, any reduction to the $555,000 level, would be absorbed, first of all, in reducing the number of meetings from nine to five, I believe it was, and also some trimming of staff.

My question is this. Will it also mean a refocusing of issues, either a prioritizing of issues, perhaps even eliminating some that you might not be able to reach, reducing the amount of research perhaps that you do on particular issues? Is that also a part of the plan?

Mr. KNAUSS. Absolutely, sir.

Mr. HUGHES. Pardon me?

Mr. KNAUSS. Absolutely. There is no way with a reduced staff and a reduced number of meetings that we can do as much work as we have done in the past.

Mr. HUGHES. That usually follows.

Mr. KNAUSS. As I indicated previously, it is essentially a volunteer organization. We are heavily dependent upon our staff. The amount of work we do is in large part based upon the quality and the quantity of the staff that we have. We are very much dependent upon them.

I also indicated that there is a certain momentum that continues with NACOA. We all have other, more-than-full-time jobs. If we do not meet regularly, if we do not continue that kind of continuing effort, we will just naturally do less. I do not see any way otherwise, sir.

Mr. HUGHES. Well, I suspected that. Yet, I do not think that that point was at least very clearly made when I was present.

That opens up another perspective. You know, I understand your attitude, which is hat in hand: We will take what we can get, given present economic constraints and the climate, when you do not know from one day to the next which list you are going to end up

on and whether or not we are going to find a need for an additional $6 billion in cuts. I understand that. But, if in fact it is going to mean constraints vis-a-vis the work that you are doing, then that is something else that we ought to have on the table and examine.

I also noted with tremendous interest, Doctor, your reference in the statement to the need to change our policy relative to ocean dumping, one of my very pet subjects. It is in my backyard that they dump. As a result, it has become an interest that has been with me, at least for the 6 years that I have been in the Congress.

I was fascinated with your statement that we are going to have to reexamine policy because there is just some dumping that should be permitted. I thought that was policy at the present time. Correct me if I am wrong. I thought that the EPA did a fairly decent job in trying to determine what, first of all, degrades the ocean environment and what doesn't and that EPA permits that which doesn't degrade and doesn't permit, pursuant to congressional policy, that which degrades the ocean.

I realize that this is not an oversight hearing, but I cannot let that go by without challenging it.

Mr. KNAUSS. The legislation which Congress passed does indeed give EPA a great deal of—well, at least some—latitude. The Federal regulations which EPA established, however, have reduced that latitude for ocean dumping considerably. One of the results of that is that—I am not sure whether this is in the regulation or is now in the legislation—but there is a mandate that says that ocean dumping will stop as of December 31, 1981.

Mr. HUGHES. That is correct. I am the author of the amendment.

Mr. KNAUSS. You are the author of the amendment. Clearly, NACOA is not going to get reauthorized, I am afraid, on the basis on this report——

Mr. HUGHES. Only that dumping, however, which unreasonably degrades the ocean environment. Now, you know, it may very well be we could argue as to whether EPA's standards are realistic. Perhaps as we secure more scientific data we can do a better job of trying to determine what, if anything, is good for the ocean, what is not so good for the ocean, what really doesn't make any difference to the ocean environment.

But, really, Mr. Dyson made a very important point, although I am sure you are very much aware of it. It is one that we should stress. There is not very much we can do once we begin to damage the ocean. We cannot retrieve easily things that we dump in the ocean. That is not always the case with land-based alternatives. Nobody has ever suggested that we should not be dumping things in the ocean that might enhance the marine environment, for instance. There is some suggestion that some of the things that are dumped might be nutritious. Nobody has ever suggested that.

I just hope that we are not retreating from what I think is a very good policy.

The ocean was always looked upon as the place of last resort. When we cannot figure out what else to do with anything, we dump it. Now that judgment day has arrived and communities have to start developing good management programs for their solid waste and their sludge, once again pressure is on. We are beginning to see some slippage.

I just hope that this is not the opening volley of that pressure which is mounting in New York City and other communities so that we can go back to the old out-of-sight, out-of-mind syndrome that existed in this country for so many years.

Mr. D'AMOURS. Would you limit your answer to a few seconds, Dr. Knauss?

Mr. KNAUSS. I will be very quick, sir.

Mr. D'AMOURS. I said that in jest. Take all the time you need.

Mr. KNAUSS. I have been an ocean scientist for 35 years. I like to think I have the same kind of concerns about the ocean as you do. However, it is also quite true to ask that, if you put things on land and elsewhere, can you retrieve your mistakes? What we have seen happen with respect to groundwater contamination, drinking water contamination over the last few years and various kinds of dumping is clearly something—you know, we are not going to solve the drinking water problem in some 37 States where there have been major problems——

Mr. HUGHES. Let me interrupt you. That is because we have not contained it. We have the capacity to contain it. We just dumped it.

Mr. KNAUSS. I am no expert in hydrology, but my impression from those people I have talked to suggests that the uncertainties about what happens when one tries to contain this material—even under the best of circumstances—mistakes can get made. There are uncertainties of our knowledge and so forth. So, it is not all that clear. That is point one.

Point two is that there are at least certain kinds of material which one puts in the ocean, various kinds of heavy metals and so forth, sulfuric acid, these kinds of things, that the ocean can accept almost unlimited amounts of. They are better put in the oceans than on land.

Mr. Carney asked me about the problem about swimming in Southampton. I have a sister-in-law from that area. I know the problem.

Nothing in our report or our recommendations, it seems to me, specifically addresses that kind of a problem. We agree that it should not happen, and there is no need for it to happen. But we are suggesting that, under some circumstances, properly done, this particular rule that we now have which says we essentially should eliminate all ocean dumping—that the policy should be relooked at.

Mr. D'AMOURS. I would like to assure my good friend and colleague from New Jersey that this subcommittee will be talking with Dr. Knauss again in oversight hearing and getting into this subject matter in considerable detail. I would like to, as a matter of fact, delve into it in much more detail than we have today. Mr. Carney expressed himself to that issue a little bit earlier. So, just to provide some kind of a limitation on today's hearing, I can assure you, Mr. Hughes, I share your concern. We will be having other opportunities in the not too far distant future to get into this in considerable detail as to the wisdom of the policy as suggested by Dr. Knauss.

I do not mean to inhibit your asking of questions today. I have no further questions to ask of any of the witnesses. Mr. Carney has no further questions to ask. I, therefore, do not want to call the 5-

minute clock on you. So, with those statements, I would like you to continue if you would like.

Mr. HUGHES. I look forward to working with you, Mr. Chairman.

Mr. D'AMOURS. Did you have any further questions, Mr. Hughes?

Mr. HUGHES. I would like to yield back the balance of my time and reserve it for when we have our oversight hearing.

Mr. D'AMOURS. We will protect it carefully.

Thank you both, Mr. Belsky and Dr. Knauss, for coming today. I think we have had a very productive hearing.

The subcommittee now stands adjourned.

[The following was received for the record:]

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON MERCHANT MARINE AND FISHERIES,
Washington, D.C., March 10, 1981.

Mr. STEVEN N. ANASTASION,
Executive Director, National Advisory Committee on Oceans and Atmosphere, Washington, D.C.

DEAR MR. ANASTASION: Thank you for appearing before the Subcommittee on Oceanography on Thursday, March 5, 1981, during the Subcommitee's hearing on the reauthorization of the National Advisory Committee on Oceans and Atmosphere.

After careful review of the hearing it has become evident that there are two issues that need further clarification before the Subcommittee can continue its consideration of the NACOA authorization legislation. Your response, for the record, will be greatly appreciated by Friday, March 13, 1981, for the following questions.

What effect will the increase in NACOA members' per diem from the present level of $100 to the daily rate of a GS-18, as requested by the administration in its proposed bill, have on the administration of the remainder of NACOA's budget, if it is authorized at the level of $555,000 in fiscal year 1982?

Are there any expenses incurred by members, while engaging in NACOA business, that are covered by the allotted per diem rather than the travel budget?

Once again, thank you for the support you extended to the Subcommittee on Oceanography in the preparation of the NACOA reauthorization hearing.

Sincerely,

NORMAN E. D'AMOURS,
Chairman, Subcommittee on Oceanography.

NATIONAL ADVISORY COMMITTEE ON OCEANS AND ATMOSPHERE,
Washington, D.C., March 12, 1981.

Hon. NORMAN E. D'AMOURS,
Chairman, Subcommittee on Oceanography, Committee on Merchant Marine and Fisheries, Washington, D.C.

DEAR MR. D'AMOURS: I am pleased to provide the additional clarification in consideration of the NACOA reauthorization as requested in your March 10, 1981 letter to our Executive Director, Steven N. Anastasion.

Question 1. What effect will the increase in NACOA members' per diem from the present level of $100 to the daily rate of a GS-18, as requested by the administration in its proposed bill, have on the administration of the remainder of NACOA's budget, if it is authorized at the level of $555,000 in fiscal year 1981?

Response 1. The current rate of daily pay for a GS-18 is $192.73. NACOA budget projections which would be effected by an increase in daily compensation from $100.00 to $192.73 are based on the following parameters:

Number of scheduled two-day meetings per year	9
Estimated number of members attending	13
Average number of compensation days per member per meeting	2.7
Estimated number of one day special panel meetings:	6
Estimated number of members attending:	4
Average number of compensation days per member per meeting:	1.7
Estimated number of special trips for Congressional testimony, et cetera	5
Number of members attending	1
Average number of compensation days per member per trip	1.7

On the basis of the above, an increase in the daily compensation rate which, by law includes travel time, would add $34K to the cost of Committee operations.

A NACOA authorization level of $555K which also mandates a daily compensation rate of a GS-18 will effect NACOA operations. Using the current GS-18 daily rate, the estimated total cost for each of NACOA's scheduled meetings (including compensation, travel fare, and per diem expenses) would be $17.3K. Assuming that adjustments are made to reduce NACOA activities to $555K from the $648K recommended at the hearings by the NACOA Acting Chairman, the $34K cost increase due to the GS-18 rate could be offset by elimination of two additional NACOA meetings. One other effect is also relevant although not as easily quantified. Since the GS-18 rate is subject to future increase (as are also other expenses such as staff salaries, air fare, etc.) there would be aditional committe operation adjustments with each increase as it is absorbed within the fixed authorization limit.

Question 2. Are there any expenses incurred by members, while engaging in NACOA business, that are covered by the allotted per diem rather than the travel budget?

Response 2. The "compensation" paid to members, presently at the rate of $100 per day for participation and travel time, is solely a "salary" and not intended to cover any expenses.

The expenses incurred by the member while engaged in NACOA business are separately reimbursed from the travel budget for transportation, per diem expenses for room and meals, and other costs authorized by the travel regulations.

I will be pleased to provide any additional information that you may need in advancing the NACOA reauthorization.

Sincerely,

JOHN A. KNAUSS,
Acting Chairman.

[Whereupon, at 11:33 a.m., the subcommittee was adjourned.]

MARINE SANCTUARIES REATHORIZATION

THURSDAY, MARCH 12, 1981

HOUSE OF REPRESENTATIVES, SUBCOMMITTEE ON OCEANOGRAPHY AND THE SUBCOMMITTEE ON FISHERIES AND WILDLIFE CONSERVATION AND THE ENVIRONMENT OF THE COMMITTEE ON MERCHANT MARINE AND FISHERIES,

Washington, D.C.

The subcommittees met, pursuant to notice, at 10:05 a.m., in room 1334, Longworth House Office Building, Hon. Norman E. D'Amours, chairman of the Subcommittee on Oceanography presiding.

Present: Representatives D'Amours, Pritchard, Forsythe, Carney, Dyson, Breaux, and Studds.

Also present: Darrell Brown, Howard Gaines, Wayne Smith, Curt Marshall and Ted Kronmiller.

Mr. D'AMOURS. The subcommittees will come to order.

We have a very ambitious schedule of witnesses today, and just to take some testimony is going to take some time, so we are going to start immediately.

This joint hearing of the Subcommittee on Oceanography and the Subcommittee on Fisheries and Wildlife Conservation and the Environment concerns the reauthorization of the marine santuaries program, title III of the Marine Protection, Research and Sanctuaries Act. Today's witnesses have been active participants in various aspects of the marine santuaries program and will provide valuable advice on the scope, management, and philosophy of the program.

The marine sanctuaries program was created in 1972 to preserve or restore distinctive marine areas for their conservation, recreational, ecological or esthetic values. Sanctuary values are protected by insuring that activities within a sanctuary are consistent with the purposes for which the sanctuary was established. Two sanctuaries were established in 1975. Four sites were recently approved by President Carter and will become effective this spring.

Two recent reports have indicated that the marine santuaries program is a valuable program for protecting unique marine resources. The Congressional Research Service concluded that:

> A generalized benefit of the MPRSA sanctuary program is its apparent position as the only Federal authority for comprehensive regulation, planning and management * * *.

The GAO also stated that the program—

> provides environmental protection where "gaps" exist in the coverage provided by other Federal regulatory authorities.

I am certain that most everyone will agree that as we expand our resource development activities on the Outer Continental Shelf, we must simultaneously move to protect distinctive marine areas from harm. The comprehensive management scheme offered by the marine sanctuaries program allows us to manage important

marine areas for their natural and cultural values and still proceed with development activities.

[The bill and departmental reports follow:]

[H.R. 2449, 97th Congress, 1st session]

A BILL To amend title III of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, to authorize appropriation for such title for fiscal years 1982, 1983, and 1984, and for other purposes

Be it enactd by the Senate and House of Representatives of the United States of America in Congress assembled, That section 304 of the Marine Protection, Research, and Sanctuaries Act of 1972 (16 U.S.C. 1434) is amended—

(1) by striking out "and" immediately after "fiscal year 1978" and inserting a comma; and

(2) by adding immediately after "fiscal year 1981" the following ", not to exceed $2,250,000 for fiscal year 1982, and such sum as may be necessary for fiscal years 1983 and 1984,".

THE SECRETARY OF COMMERCE,
Washington, D.C., April 19, 1981.

Hon. WALTER JONES,
Chairman, Committee on Merchant Marine and Fisheries,
House of Representatives Washington, D.C.

DEAR MR. CHAIRMAN: Enclosed is one copy of a draft bill "To amend Title III of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, to authorize appropriations for such title for fiscal years 1982 and 1983 and for other purposes," together with a statement of purpose and need in support thereof.

We have been advised by the Office of Management and Budget that there is no objection to the submission of this legislation to the Congress and that its enactment would be in accord with the program of the President.

Sincerely,

MALCOLM BALDRIGE,
Secretary of Commerce.

Enclosure.

A BILL To amend Title III of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, to authorize appropriations for such title for fiscal years 1982 and 1983 and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 304 of the Marine Protection, Research, and Sanctuaries Act of 1972 (16 U.S.C. 1434) is amended—

(1) by striking out "and" immediately after "fiscal year 1978";

(2) by inserting a "," between "1978" and "not"; and

(3) by adding immediately after "fiscal year 1981" the following: ", and not to exceed $2,235,000 for the fiscal year ending September 30, 1982 and such sums as may be necessary for the fiscal year ending September 30, 1983.".

STATEMENT OF PURPOSE AND NEED

Title III of the Marine Protection, Research, and Sanctuaries Act of 1972, 16 U.S.C. §§ 1431-1434, as recently amended by Public Law 96-332, authorizes the Secretary of Commerce, after consultation with all interested Federal agencies and after obtaining the approval of the President, to designate as marine sanctuaries ocean areas as far seaward as the outer edge of the Continental Shelf, other coastal waters where the tide ebbs and flows, and areas of the Great Lakes which have conservation, recreational, ecological or esthetic value. Six marine sanctuaries have been designated to date: the U.S.S. Monitor Marine Sanctuary off the coast of North Carolina; the Key Largo Coral Reef Marine Sanctuary off the Coast of Florida; the Channel Islands National Marine Sanctuary off the coast of California; Gray's Reef National Marine Sanctuary off the coast of Georgia; Point Reyes/Farallon Islands National Marine Sanctuary off the California coast; and Looe Key National Marine Sanctuary off the coast of Florida.

Section 304 of the Act presently authorizes $2,250,000 to be appropriated for fiscal year 1981. Reauthorization is proposed for an additional 2 years at a level of $2,250,000 for fiscal year 1982, and such sums as may be necessary for fiscal year 1983.

U.S. ENVIRONMENTAL PROTECTION AGENCY,
Washington, D.C., April 20, 1981.

Hon. WALTER B. JONES,
Chairman, Committee on Merchant Marine and Fisheries,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This is in response to your request for the views of the Environmental Protection Agency on H.R. 2449, to reauthorize title III of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended.

The Environmental Protection Agency supports the reauthorization of title III, which establishes the Marine Sanctuaries Program under the National Oceanic and Atmospheric Adminstration (NOAA). This program provides a comprehensive management approach to preservation and protection of selected habitats and other ecologically important marine areas.

The bill now before the Committee for consideration includes a one-year reauthorization. We understand that, although the Administration plans to review the program in the context of the 1983 budget and may propose amendments, the Administration has recommended a two-year reauthorization of the Program. We support the Administration's proposal and recommend the Committee amend the pending bill to provide a two-year reauthorization period.

The Office of Management and Budget has advised that there is no objection to the presentation of this report from the standpoint of the Administration's program.

Sincerely yours,

WALTER C. BARBER, Jr.
Acting Administrator.

Mr. D'AMOURS. During the course of today's hearing, I look forward to our witnesses' views on the contributions this program has made, changes which may be needed and long-term objectives which need to be met.

All the witnesses, I believe, have already been instructed that because of the number of witnesses to submit their testimony for the record, and to summarize that testimony in approximately 5 minutes.

The subcommittees would be most appreciative of your sticking as close as you can to that suggestion.

Mr. Pritchard is on his way, and his aide has informed me that he will be just a little bit delayed. Therefore, I call upon the chairman of the Fisheries and Wildlife Subcommittee, Mr. Breaux, for any statements he may have.

Mr. BREAUX. Thank you, Mr. Chairman. I will be very brief.

I think it is important to note, of course, that in the Fisheries and Wildlife Conservation and the Environment Subcommittee, Mr. Forsythe is also our ranking minority member, we share joint jurisdiction over this program.

My views have been consistent. In essence, it is very simple. I think we have enough other existing Federal statutes, rules, and regulations to address the type of issues that we see the marine sanctuaries program being applied to.

I also think it is important to note that there is little disagreement over whether or not the marine sanctuaries program was ever created as a management type of a program. I think the initial intent of the Congress in establishing this program was to: identify certain specific ocean areas, keep them small in geographic size, and establish a sanctuary as needed to protect that area when other programs that the Congress had created as management tools were not available.

I have seen a movement in the focus of this program that is not, I think, consistent with this intent of the Congress. The sanctuaries program does not serve the purposes that we initially intended it to serve.

Last year, I made an effort to try and do away with the marine sanctuaries program even though I supported the original intent of the act. I remember when administration witnesses came before this body and suggested that the *Monitor* was an area that should be considered as a marine sanctuary because of the value of the Civil War vessel that had been sunk there. They felt we needed a sanctuary program to protect it.

I said, fine, and other members agreed.

Then we saw a side proposal consisting of 8,000 square miles that "needed" to be managed. This program is not a management program, and that is the position I have taken, Mr. Chairman. I hope that as we develop the testimony today and hear from the witnesses, we can try to bring out from them the things that the marine sanctuaries program accomplishes that can and cannot be accomplished by other existing Federal programs.

Thank you, Mr. Chairman.

Mr. D'AMOURS. Thank you, Mr. Chairman.

Mr. Forsythe, do you have an opening statement?

Mr. FORSYTHE. I have just a very few remarks, Mr. Chairman. Thank you for recognizing me.

In many respects I share the concerns expressed by the chairman of the Fish and Wildlife Subcommittee. I fully support what I believe was the legislative intent of the Marine Sanctuaries Title, but I am concerned about the change in the use of this title, and hope that this will be discussed in the course of these hearings.

I welcome the hearings, and I thank you, Mr. Chairman.

Mr. D'AMOURS. Thank you, Mr. Forsythe.

Our first witness this morning is Mr. Robert W. Knecht, the Acting Administrator for Coastal Zone Management.

Will you come up to the table.

STATEMENT OF ROBERT W. KNECHT, ACTING ASSISTANT ADMINISTRATOR, COASTAL ZONE MANAGEMENT, NOAA, DEPARTMENT OF COMMERCE; ACCOMPANIED BY DALLAS MINER, DIRECTOR, SANCTUARY PROGRAMS OFFICE, OFFICE OF COASTAL ZONE MANAGEMENT, NOAA.

Mr. KNECHT. Thank you, Mr. Chairman.

I have with me at my right Mr. Dallas Miner, Director of the Sanctuary Programs Office.

I have submitted a statement for the record; I would like to quote from several portions of it, though, and try to highlight what I think the major features are, as you requested.

Mr. D'AMOURS. We appreciate that.

Mr. KNECHT. Approximately 1 year ago, our agency appeared before this committee to discuss the Marine Sanctuaries Act of 1972. Since that time, several new sites have been added to the national system. The administration will be submitting draft legislation to reauthorize this program shortly.

I would like to concentrate on two aspects: to first say something about the aspect of the program in the last year and, then, to describe several of the refinements that we believe will improve the operation of the program, especially in connection with the site designation process.

First, the activities, and let me just restate the goals of the sanctuaries program from the standpoint of our office. The goals of the marine sanctuary program are:

To enhance resource protection through the implementation of comprehensive, long-term management plans tailored to the resources of special marine areas.

To promote and to coordinate research to expand scientific knowledge of significant marine resources and improve management decisionmaking.

To enhance public awareness, understanding, and wise use of the marine environment through public awareness, understanding, and wise use of the marine environment through public educational and recreational programs; and

To provide maximum public and private use of special marine areas.

Let me mention in passing, the four sanctuaries that have been designated during the last year:

First, the Channel Islands National Marine Sanctuary encompasses waters within 6 nautical miles of the 6 Northern Channel Islands off the coast of California. It is an area exceptionally productive, providing feeding and breeding grounds for one of the largest and most varied assemblages of seals and sea lions in the world. The Sanctuary is also one of the richest resource areas in the United States for marine birds, including the endangered brown pelican. The opportunities for research, educational and public use of the Sanctuary are numerous, and where consistent with protection of the resources of the Sanctuary, will be encouraged.

Second, the Point Reyes-Farallon Islands National Marine Sanctuary encompasses waters off the north-central California coast, including those around the Farallon Islands and between the islands and the mainland. The Sanctuary area supports some of the largest seabird rookeries in the United States, including 12 of the 16 species known to breed on the west coast, virtually the entire world population of the ashy storm petrel, the world's largest colony of western gulls, and the endangered brown pelican and peregrine falcon. The area also provides habitat for 23 species of marine mammals. Although management of the Sanctuary will emphasize resource protection, because of the close proximity of urban populations' research, educational, and public use will also be encouraged.

Three, the Looe Key National Marine Sanctuary is an area approximately 6.5 nautical miles off Big Pine Key in the Lower Florida Keys. The Sanctuary will provide protective management for a small, highly used segment of the Florida reef tract, including a spectacular "spur and groove" coral formation that supports a diverse marine community.

Fourth, Gray's Reef National Marine Sanctuary is located 17.5 nautical miles east of Sapelo Island, Ga. Gray's Reef is a naturally occurring live bottom outcrop on the otherwise flat, sandy, and sparsely populated South Atlantic Continental Shelf.

The designation of these four brings to six the total designated sanctuaries. We believe these represent a solid foundation for the program.

Let me move to refinements that have been made during the past year and that continue to be under study to improve the program.

We have in rough draft form a document that we call, and we may change the name, "A Program Development Plan," which is typically used in our agency to describe the administrative, policy and operational features of a program that is important to the organization.

We have in draft form the Program Development Plan for the marine sanctuaries program and will shortly make it available for review and discussion. In that document, we propose a number of changes which we think will improve operation of the program. First, we propose to eliminate the list of recommended areas, the so-called LRA, which has been an aspect of the program so far which we think has not worked very well. The LRA was established as a means of advising the public at large on what sites had been recommended and of soliciting information on those sites. Nevertheless, from the beginning, the LRA has caused substantial confusion and concern over the status of areas on the list.

The LRA list was longer, far longer, than any realistic list of sanctuaries that would ever be designated, because the result is from nominations alone, nominations in effect as they were submitted from a wide range of interests.

It resulted, we think, in unnecessary controversy, and left the door open for nominations which though marginally acceptable, were, on balance, inappropriate for further consideration.

We propose, rather, to institute a different process, an active process, and with a set of clear site selection criteria which will assist in the early identification of high quality sites and the early elimination of poor candidates. I won't go into that refinement in more detail, but I would be happy to answer questions on it.

We propose to institute a new procedure which would identify sites involving the use of regional resource evaluation teams, and a much more rigorous analysis procedure. We think this will assure a pool of sites which are composed only of high quality areas with a good chance of eventual designation.

Another refinement that I would just refer to in passing is an increased emphasis on management aspects of sanctuary designation. We intend to emphasize the benefits derived from fostering research, promoting public education, and coordinating management of these sensitive marine areas.

Therefore, we are incorporating what we call a site management plan into our early designation process, specifically in the environmental impact statement describing the proposed designation.

By preparing a management site plan as a part of the EIS process, we believe the public and private sectors will have a much more complete proposal on which to comment and a clearer picture of the purposes and effects of an ultimate sanctuary designation.

In summary, then, we propose the following program requirements. First, to evaluate the human use values of the site, and the management and regulatory authorities. We will promulgate new regulations only if immediately necessary and establish monitoring programs to assess various impacts on the resources. We plan to solicit public comment in the near future on the refinements I

referred to and a number of other refinements that will be contained in the program development plan. We believe we can, with these modifications, simplify and improve the effectiveness of the marine sanctuary program.

In conclusion, I would like to make the following observations. The sanctuary program has not been without controversy. Few other programs within our agency have stimulated the kind of dialog with other departments in the executive branch, Members of Congress, industry, and concerned groups. In our judgment, with few exceptions, the basic purposes of title III have not been called into issue. Rather, it is the specific application of the program to specific sites that has usually raised the controversy. Probably some controversy is inevitable in this kind of program.

On balance, I think we have done a reasonable job. We think the program refinements will further improve the program and strengthen it, and we believe that a better program will result.

I would simply conclude with the point I started on. The administration will be submitting draft legislation to reauthorize the program very shortly.

Thank you.

[The prepared statement follows:]

STATEMENT OF ROBERT W. KNECHT, ACTING ASSISTANT ADMINISTRATION OF COASTAL ZONE MANAGEMENT, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE

Approximately one year ago, our agency appeared before this Committee to discuss reauthorization of Title III of the Marine Pollution, Research and Sanctuaries Act of 1972. In the intervening year significant steps have been taken to refine the operational aspects of the program and new sites have been added to the national system. I am pleased to be here today to testify again on the reauthorization of the program. The Administration will be submitting draft legislation to reauthorize this program shortly.

I will first describe the program's activities during the past year, and then describe the refinements we have developed in the site designation process.

I. ACTIVITIES DURING THE PAST YEAR

The goals of the marine sanctuary program are:

To enhance resource protection through the implementation of comprehensive, long-term management plans tailored to the resources of special marine areas;

To promote and coordinate research to expand scientific knowledge of significant marine resources and improve management decisionmaking;

To enhance public awareness, understanding, and wise use of the marine environment through public awareness, understanding, and wise use of the marine environment through public educational and recreational programs; and

To provide maximum public and private use of special marine areas.

With these goals in mind, we have designated four new sanctuaries during this past year. I will describe each of them briefly and note the benefits which each provides.

(1) The Channel Islands National Marine Sanctuary encompasses the waters within six nautical miles of the Northern Channel Islands (San Miguel, Santa Rosa, Santa Cruz, and the Anacapa) and Santa Barbara Island off the coast of Southern California. The Sanctuary area is exceptionally productive, providing feeding and breeding grounds for one of the largest and most varied assemblages of seals and sea lions in the world. The Sanctuary is also one of the richest resource areas in the United States for marine birds, including the endangered brown pelican. The opportunities for research, educational, and public use of the Sanctuary are numerous, and where consistent with protection of the resources of the Sanctuary, will be encouraged.

(2) The Point Reyes-Farallon Islands National Marine Sanctuary encompasses waters off the north-central California coast, including those around the Farallon Islands and between the islands and the mainland. The Sanctuary area supports

some of the largest seabird rookeries in the United States, including 12 of the 16 species known to breed in the west coast, virtually the entire world population of the ashy storm petrel, the world's largest colony of western gulls, and the endangered brown pelican and peregrine falcon. The area also provides habitat for 23 species of marine mammals. Although management of the Sanctuary will emphasize resource protection, because of the close proximity of urban populations research, educational and public use will also be encouraged.

(3) The Looe Key National Marine Sanctuary is an area approximately 6.5 nautical miles off Big Pine Key in the Lower Florida Keys. The Sanctuary will provide protective management for a small, highly used segment of the Florida reef tract, including a spectacular "spar and groove" coral formation that supports a diverse marine community. While most public use of the Sanctuary will continue to be permitted, the fragility of the coral reef resources will require that less emphasis be placed on attracting additonal visitors than will be the case in other sanctuaries.

(4) The Gray's Reef National Marine Sanctuary is located 17.5 nautical miles east of Sapelo Island, Georgia. Gray's Reef is a naturally occurring live bottom outcrop on the otherwise flat, sandy and sparsely populated South Atlantic Continental Shelf. Gray's Reef is one of the largest nearshore hard bottom reefs in the South Atlantic and supports a diverse array of both temperature and tropical species, including the threatened loggerhead turtle. Management of the Sanctuary will stress all four program goals, with initial emphasis given to research and assessment activities.

Included as appendices to this testimony are detailed descriptions of the four new sanctuaries. I will be happy to discuss with you in further detail any of these sites.

These designated sites, when added to the two previously existing sanctuaries—the U.S.S. Monitor and the Key Largo Coral Reef National Marine Sanctuary—bring to six the number of sanctuaries in the program. This represents, in our view, a solid foundation for the Marine Sanctuary Program. The six sites are diverse in the types of resources encompassed and, correspondingly, in the manner in which the resources are managed.

II. REFINEMENTS TO DESIGNATION PROCESS

We have gained important experience over the past several years in the process of designating new sanctuaries. Through this experience, we have been able to develop several policy and programmatic refinements which we believe will resolve much of the confusion and controversy that has surrounded the program and which will result in a more predictable, productive process for the establishment of future sites. We are describing these changes in a Program Development Plan, now in its final drafting stage. The members of this Committee will be provided with copies of the documents as soon as it is available. I would like to share with you today the highlights of these refinements.

1. Eliminate the list of recommended areas

The List of Recommended Areas (LRA) is a list of all recommended sites which have met minimal screening criteria. Under our present regulations, listing on the LRA is a prerequisite for sanctuary designation but does not imply that designation will ever occur.

The LRA was established as a means of advising the public at large of what sites has been recommended, and of soliciting information on those sites. Nevertheless, since its inception the LRA has caused substantial confusion and concern over the status of areas on the list, the likelihood of further action on the sites, and the overall emphasis of the program. Even though the vast majority of the listed sites will never become active candidates, the LRA is often perceived as the blueprint for the sanctuary program. This led to concern over the future size of the program, particularly since recommendations are placed on the LRA as submitteed to NOAA—in some instances sites on the list cover thousands of square nautical miles of Outer Continental Shelf waters.

The LRA has resulted in unnecessary controversy and has left an open door for nominations which, although marginally acceptable, are on balance inappropriate for further consideration. Accordingly, we are proposing to eliminate the LRA.

2. Institute an effective, active process and clear site selection criteria which will assist in early identification of high quality sites and elimination of poor candidates

The current site selection process is essentially reactive. NOAA receives recommendations to be evaluated for placement on the LRA. Under the current system recommendations may be forwarded by anyone and are usually accompained by minimal data. The staff is bound by the program regulations to react to each and

every submission. This process has resulted to each and every submission. This process has resulted in an extraordinary range of site nominations with little substantive information, most of which will never be suitable for sanctuary status. In addition, LRA criteria are much too broad to ensure effective screening.

We are proposing to initiate a rigorous procedure for the identification of sites suitable for active candidacy using regional resource teams. By actively seeking appropriate sites based upon sound resource data and early public input through a network of regional resource evaluation teams, we will eliminate unrealistic nominations and those which fail to advance the goals of the marine sanctuary program.

We are proposing to provide the regional resource evaluation teams with clear site selection criteria that will assure that rigorous analysis results in recommendation of only those sites with exceptional resource values. This process will assure that the pool of sites we have to work with is composed only of high quality areas with a good chance of designation.

3. Emphasize management aspects of sanctuary designation

We intend to emphasize the benefits derived from fostering research, promoting public education, and coordinating management. Therefore, we are now incorporating the site Management Plan (which will include regulations as necessary) into the EIS. By preparing a site Management Plan as part of the EIS process, the public and private sectors will have a much more complete proposal on which to comment and a much clearer picture of the purposes and effects of sanctuary designation.

In sum, we propose the following program refinements. First, we will evaluate the resource and human use values of a potential site and assess the adequacy of existing management and regulatory authorities. We will promulgate new regulations only if immediately necessary and establish research and monitoring programs to assess various potential impacts on the resources. If we find evidence of resource deterioration, additional steps will be recommended to strengthen management of the Sanctuary. These steps will start first with further improving the effectiveness of existing authorities and programs and, as a last resort, may involve new regulations.

We plan to solicit public comment in the near future on these refinements in the program and will propose and adopt such changes in the program regulations as appear appropriate in view of the comments we receive. It is our belief that the modifications I have outlined will simplify and improve the effectiveness of the Marine Sanctuary Program.

CONCLUSION

By way of conclusion, I would like to make the following observations. The Marine Sanctuary Program has not been without controversy. In fact, few other programs in our agency have stimulated as much intense dialogue with other Departments of the Executive Branch, Members of Congress, industry, and concerned citizens. With a few exceptions, the basic purposes and mertis of Title III are not called to issue; rather it is the specific application of the program to individual sites that give rise to controversy. It is likely that some level of controversy will always accompany sanctuary designations. We have tried to balance the many interests and concerns while bearing in mind the basic mission given us by the Congress. On balance, I think we have done a good job and the program refinements we are preparing will further improve our ability to serve the intent of this law.

Mr. D'AMOURS. Thank you, Mr. Knecht.

In connection with your last statement, are you aware of what the nature of the administration's reauthorization bill is going to be? Are they going to make any substantial changes in the program, or do you think they will keep the dollar amount in the budget as it is in the submitted budget?

Mr. KNECHT. The fiscal 1982 budget package?

Mr. D'AMOURS. Yes.

Mr. KNECHT. I know of no proposals to change the budget for fiscal year 1982. I cannot answer with respect to the details of the legislation to be submitted. That is still under study.

Mr. D'AMOURS. All right. I was delighted to hear of your plans to do something about the LRA listing, and I agree that the LRA has been an unnecessary complication of this selection process, because it engendered more opposition than has been really required.

Are you familiar with the GAO report that I referred to in my opening statement, of March 4?

Mr. KNECHT. I am familiar with some of its recommendations. I haven't had a chance to study it yet, but I have reviewed it briefly, yes.

Mr. D'AMOURS. As I noted, the GAO report, for those who haven't seen it yet, finds that the Marine Sanctuaries program provides comprehensive regulation, site specific regulation and planning, and also offers environmental protection where gaps exist in other laws.

Of course, the report pretty much stresses the regulatory and doesn't spend much time on the nonregulatory aspects of the program, which you have touched on in your testimony, and which I appreciate. I wonder if you have any comments in general on the GAO report while we have you here.

Mr. KNECHT. I simply read the summary and conclusions of the report, and they seem to support the position that the program office has taken with regard to the role to be played by a marine sanctuaries program.

We were pleased to see the conclusions, which I understand are consistent with the conclusions of an earlier Congressional Research Service report, that concluded along the same lines.

We believe there is a role to be played in filling gaps between programs and providing an affirmative program in its own right to try to identify and manage and protect very unique, sensitive marine resource areas.

Mr. D'AMOURS. Fine. I have just one last question, and that is with regard to testimony that is going to be offered later by a Mr. Jackson, representing Exxon Corp. He notes that the Marine Sanctuaries Program Office should be required to distinguish between those threats to marine resources which are mere possibilities and those for which there is a reasonable expectation of occurrence.

He is concerned with the hydrocarbon regulations, primarily, of the west coast.

That argument would seem to have some appeal. Do you have any comments on that?

Mr. KNECHT. I haven't seen the testimony of Mr. Jackson, but I think that is a reasonable position, and a position that I would support. I don't think we have the resources or the person-power to uniformly identify and protect all areas without regard to threats, so to speak. I think you only really need to put in place an additional program of regulation or management when indeed a resource is endangered. I support that idea.

Mr. D'AMOURS. Thank you.

I have just been advised that my 5 minutes—and we are going to follow the 5-minute rule—you might be surprised at this point to learn that my 5 minutes have expired.

So now we will go to Mr. Pritchard.

Mr. PRITCHARD. Mr. Chairman, I am sorry I came out of another meeting, and I will not question at this time.

Mr. D'AMOURS. Mr. Breaux, do you have any questions?

Mr. BREAUX. Funny you asked. [Laughter.]

Thank you, Mr. Chairman.

Bob, I have a great deal of respect, obviously, for all of your work in the Federal Government through several administrations. You are very talented and you are a very able public servant who does a good job. Unfortunately, sometimes you have to run programs that perhaps have a lot of encumberances placed upon them.

So my questions are in no way reflective of any criticism on you personally, but basically go to the program, which I disagree with.

I read the Congressional Research Service study on marine sanctuaries, and they provided the following alternative authorities for protection of the marine environment. I would ask that this be made part of the record.

Among others, they identified the National Environmental Policy Act, the Coastal Zone Act, the Rivers and Harbors Act, the Oil Production Act, the Deep Water Port Act, Ocean Dumping Act; title I, Port and Tanker Safety Act; the Fisheries Conservation and Management Act.

Can you name one aspect, or one concern that the marine sanctuaries program takes care of that cannot be addressed by these existing Federal laws?

[The study referred to was received for the record.]

U.S. House of Representatives
Committee on
Merchant Marine and Fisheries
Room 1334, Longworth House Office Building
Washington, D.C. 20515

February 13, 1980

Mr. Gilbert Gude
Director
Congressional Research Service
Library of Congress
Washington, D.C. 20540

Dear Mr. Gude:

Thank you for the two-part marine sanctuaries study prepared at my request by the American Law Division and the Environment and Resource Policy Division. I have carefully reviewed the study, the second part of which I received several days ago.

Before I comment specifically on the report, I was surprised to see published press reports concerning the results of the study which I requested before my staff or I had reviewed the final report from the Congressional Research Service. As a matter of courtesy to Members requesting your services I would hope you would discourage this in the future.

The study does contain some very useful observations. There is confirmation that the intent of Congress in establishing the marine sanctuaries program was that multiple uses be permitted and not that essentially wilderness areas be established for the marine environment. Pertinent legislative history is cited. There is a clear exposition of the numerous, substantial overlaps of other regulatory authorities with the marine sanctuaries program. More than fifteen Federal statutes and several international agreements providing for protection of the marine environment and marine resources are described. It is demonstrated by detailed analysis, although the conclusion of the study fails to state, that every significant activity constituting a possible threat to the marine environment and marine resources is addressed by Federal and international law, without regard to Title III of the Ocean Dumping Act. Indeed, more than fifteen such activities, notably including fishing, marine transportation, oil and gas development, and dumping, are subject to Federal regulation pursuant to an

impressive array of carefully drawn statutes and, in some cases, agreed international rules.

I believe that the foregoing elements of the study provide very persuasive support to my case for repeal of the marine sanctuaries program. Other aspects of the study are somewhat troubling, as they appear to be misconceived for reasons of law, policy and fact.

The study is quite simply wrong, where it states that the marine sanctuaries program provides for "comprehensive management of sensitive marine areas." International law limits Federal authority in many significant respects, by no means the least of which relate to wrecks on the continental shelf beyond the limits of the territorial sea and to discharges from, and navigation practices of, foreign flag vessels. Indeed, Title III of the Ocean Dumping Act recognizes this limitation, by providing that:

> The regulations . . . shall be applied in accordance with recognized principles of international law, including treaties, conventions, and other agreements to which the United States is signatory. Unless the application of the regulations is in accordance with such principles or is otherwise authorized by an agreement between the United States and the foreign State of which the affected person is a citizen or, in the case of the crew of a foreign vessel, between the United States and flag State of the vessel, no regulation applicable to ocean waters outside the territorial jurisdiction of the United States shall be applied to a person not a citizen of the United States. (16 U.S.C. 1432(g)).

Nor can comprehensive management authority, as it is apparently viewed by CRS, be reconciled with the basic charter of the program. The controlling provision of Title III states that marine sanctuaries are to be established where "necessary for the purpose of preserving or restoring . . . areas for their conservation, recreational, ecological or esthetic values," and in such areas, regulations are to be "necessary and reasonable . . . to control any activities permitted within the designated marine sanctuary . . . ." (16 U.S.C. 1432(a),(f)). Clearly, management authority is limited to certain purposes and may only extend so far as is <u>necessary</u> to achieve them. Areas and activities that fall outside these parameters thus are not subject to the authority of Title III. In short, management authority is not comprehensive.

The study seriously overstates the role of the program in potentially filling perceived "gaps" in Federal regulatory authority. Most of those "gaps" are not filled by the program, nor can they be, for reasons of international law and due to the limits imposed by the program charter described in the Act. Foreign flag vessels navigating on the high seas may not be regulated by the marine sanctuaries program, except in accordance with rules of international law. I note that the generally applicable regime is set out in the 1958 Geneva Convention on the High Seas, which is in force for the United States and virtually every State that registers vessels to fly its flag. That Convention is also generally expressive of universal principles of international law. Specific international rules provide whatever jurisdiction may be exercised by the United States with respect to foreign flag vessels; the marine sanctuaries program can go no further and Federal agencies other than the Department of Commerce can go quite far enough through port entry requirements. Thus, the "gap" that exists in this regard must -- and I believe should, to protect legitimate navigation interests -- remain unfilled. Similarly, wrecks on the continental shelf beyond the territorial sea are not owned by the United States, according to international law. The 1958 Geneva Convention on the Continental Shelf provides the applicable rule, from which the marine sanctuaries program may not deviate. Only U.S. citizens and U.S. flag vessels may be reached by U.S. law in this regard. It is unfortunate that this and other international legal considerations were not taken into account.

Other identified "gaps" in your report relate to areas or activities that are of very little significance and, in my opinion, do not justify the layer of bureaucracy and overriding regulatory authority that the marine sanctuaries program involves. Further, I question whether the authority established by Title III can support the designation as sanctuaries of areas that are of marginal interest or can provide the basis for the regulation of activities that amount to merely arguable or de minimis threats. I believe that any marine area can be protected by the proper implementation and careful coordination of the many other authorities to regulate activities in the oceans. To the extent that littering and anchoring, for example, might be regarded as incompatible with reasonable environmental protection, other ways of regulating those activities than the general program established by Title III are appropriate, and are to a great extent, already utilized. Again, however, international law provides overriding limits to what can be done.

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The study is somewhat misleading where it suggests that prospective threats can be reached by the marine sanctuaries program, but not by other authorities. Title III does not allow regulation or prohibition of activities, where unnecessary to protect the specifically identified values. If, for example, spearfishing cannot be shown to be a threat to recreational or other values set out in Title III, that activity may not be subjected to the regulatory authority of the marine sanctuaries program. This is a function of the concept of multiple use. Title III was not intended to convey carte blanche to bureaucrats to build paper empires and unnecessarily deprive the people of legitimate opportunities for recreation and economic development.

I strongly disagree that there is any "gap" with respect to fisheries that can and should be filled by the marine sanctuaries program. In my opinion, the Congress would not for one moment stand for the regulation by the sanctuaries program of fisheries that are subject to the authority of the Fishery Conservation and Management Act. To imply the possibility of a different result is completely unrealistic.

I note that CRS largely failed to make use of the extensive interagency correspondence and written public comments relating to the policies and administrative actions of the marine sanctuaries program. Such documents have great value in assessing what the program cannot and should not attempt to do. Among the agencies that have found fault with certain policies and administrative actions of the program are the Environmental Protection Agency, Interior Department, and Energy Department. Organizations of user groups that have criticized the program include, the National Fisheries Institute, California Seafood Institute, National Ocean Industries Association, Western Oil and Gas Association, American Petroleum Institute, and Transportation Institute. In my opinion, CRS could not have made informed judgments about the program, nor could it provide a truly substantial contribution on the subject for my review, without a careful analysis of the foregoing documents.

In sum, the study has assisted me in further determining that the marine sanctuaries program is unnecessary. The study has provided substantial supporting evidence for my position that the program should be repealed. Where arguable benefits of the program are pointed out, the analysis is very deficient. Moreover, the difficulties identified by interested agencies and user groups do not appear to be addressed significantly.

Again, thank you for providing assistance to me in response to my request.

With best regards,

Sincerely,

John

JOHN B. BREAUX
Chairman
Subcommittee on Fisheries
and Wildlife Conservation
and the Environment

Congressional Research Service
The Library of Congress

Washington, D.C. 20540

January 22, 1980

TO: Honorable John Breaux

FROM: Jeffrey Zinn
Analyst
Environment and Natural Resource Policy Division

SUBJECT: Marine Sanctuaries

You requested the Congressional Research Service explore the possibility of redundancy between Title III of the Marine Protection, Research and Sanctuaries Act, the sanctuary provision, and other programs that are designed to protect the marine environment. The Service's American Law Division has prepared a memorandum that describes the principal statutes designed to protect the ocean environment. They have compared those statutes to the salient features of the marine sanctuary program. In addition to the legal analysis, you asked that we examine the following question:

"To the extent, if any, that Title III is not redundant, does it reflect sound policy in light of the objectives of other relevant programs or does it tend to frustrate those policies and lead to delay, excessive taxpayer and user group expense and layering of bureaucracy?"

This memorandum examines the question of redundancy and draws, in part, from the result of the legal analysis. It is limited to a discussion of the role of this provision within the Federal array of natural resources protection legislation. This analysis is also limited to the policy issue stated in your question. The Service can not draw judgmental conclusions of the type posed in the second part of your question, but this analysis contains information that should help you reach those conclusions. This memorandum does not discuss the program's administration, which is presently being reviewed by the General Accounting Office.

The legal analysis concluded that the marine sanctuaries provision has some redundancy with many laws, but also offers some unique specific benefits for the protection of marine areas with special resources. A significant distinguishing feature of this provision is its comprehensive approach to area management. Other marine protection laws are more limited, addressing certain activities, certain species, or certain impacts. This provision is also unusual because sanctuaries can be designated in anticipation of possible conflicts between anticipated uses and special site values.

Sanctuary Concepts

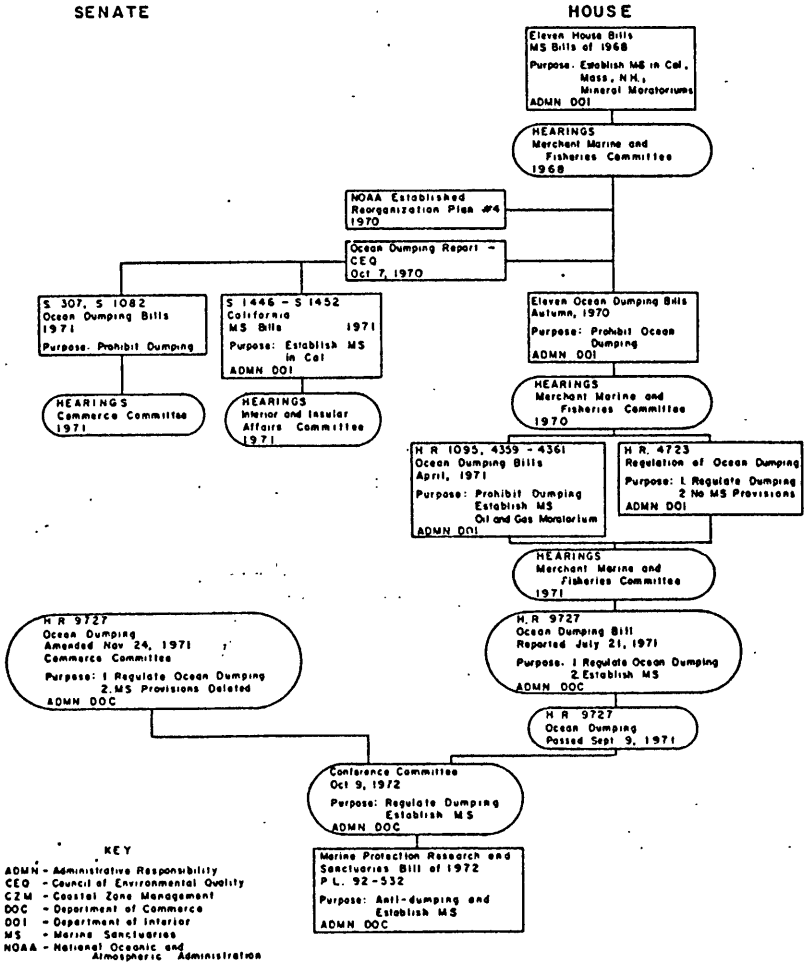
Some introductory comments on the history of the marine sanctuary legislation, and key difference between terrestrial and marine ecosystems are in order. The legislative history leading to passage of the Marine Protection, Research and Sanctuaries Act of 1972 is summarized in the figure on the next page. Antecedent bills and drafts of this legislation focused on control of ocean dumping. The sanctuary concept drifted in and out of the numerous ocean protection bills. The Senate deleted the Sanctuary provision in the bill it passed (S. 9727), but the provision, passed by the House, was inserted back into the bill by the Conference committee. One analyst discussed the change in philosophy that occurred during the several years of debate on this issue:

"The objectives of the legislation were negative, that is to stop the specific action. However, from the introduction of the first sanctuary bill in 1968 until the passage of the Marine Protection, Research, and Sanctuaries Act of 1972, a key conceptual transition took place. This was a reversal from the thrust of the early bills oriented to prevent actions such as dredging and oil drilling back to the concept that areas of the ocean and coastal waters had values vital to a balanced use of the resources of the ocean which should be protected and/or restored for their own merits. While this may be a subtle difference, it represents the difference between a negative and a positive philosophy". (Robert Keifer, "NOAA's Marine Sanctuary Program." Coastal Zone Management Journal, Vol 2, no. 2, p 177.)

FIGURE 1:

MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT OF 1972

LEGISLATIVE HISTORY



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The term "sanctuary" was somewhat of a misnomer to some Congressmen who debated the sanctuary bill. The floor debate on the House bill contains clarifying explanation by members on what the term really means.

For example:

"I must admit that the word sanctuaries carries a misleading connotation. It implies a restriction and a permanency not provided in the title itself. Title III simply provides for an orderly review of the activities on our Continental Shelf. Its purpose is to assure the preservation of our coastal areas and fisheries... (Congressman Hastings Keith, R-Mass.)

"Let me reemphasize the fact that marine sanctuaries as proposed in Title III of this legislation are not intended to prevent legitimate uses of the sea. They are intended to protect unique areas of the ocean bordering our country... A sanctuary is not meant to be a marine wilderness where man will not enter. Its designation will insure very simply a balance between uses. (Congressman Thomas Pelly, R-Wash.)

The key concept is protection of identified areas--not by prohibiting all uses, but rather by controlling the mix of uses to maintain the recognized values of the site.

Protecting marine areas, for any of the purposes of the Act, has very different management requirements from protecting terrestrial sites. Most sanctuaries are likely to be designated to protect ecosystems or critical ecosystem components, but marine ecosystems have different properties than terrestrial systems. Several of these were noted in a 1973 workshop on estuarine and marine sanctuaries.

"1. Aquatic and terrestrial ecosystems differ in the nature of their boundaries. The sea is not homogeneous. Its texture varies internally with eddies, circulation cells, upwelling, salinity and temperature differences.

2. Aquatic ecosystems are large, on a scale that confounds thinking based on land-derived models. The mobility of whole fractions of ecosystems can be very great and large organisms move vast distances.

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3. Life exists on land as a thin surface skin surrounded by an atmosphere containing no life permanently. In aquatic systems there is a benthic skin as well, but the encompassing medium is a hydrosphere which contains most of the life on this planet.

4. Most aquatic life is in physiological continuum with the hydrosphere, not "sealed off" as terrestrial animals largely are, by virtue of their relatively impervious skin, Thus, foreign substances and nutrients alike enter aquatic organisms with great facility, quickly to be incorporated in the trophic structure and concentrated in successive levels up that structure.

5. On land, much productivity is locked into the "bottleneck of ecosystems," namely cellulose, and is relatively slowly degraded and recycled. For that reason, plants, the primary producers, comprise the greatest biomass of any trophic level. In the sea, the primary producers are not usually the level of greatest biomass. Their productivity is great, but they are quickly incorporated into the higher trophic levels." (Marine and Estuarine Sanctuaries Workshop Proceedings (hereafter: Proceedings) 1973. Washington, D.C. p. 168.)

These qualities of the marine environment, pose very different management problems for marine systems. Most sites in terrestrial areas are protected with a linear boundary that effectively separate a site from undesirable adjacent influences. Air pollution and noise can permeate those boundaries, but most sources of potential disturbance can be minimized to an acceptable level if the boundaries are properly located. In aquatic areas, larger sites may be needed, and large buffer areas in an intermediate category of protection may be established if the resource is to be truly protected. The marine site requires particular attention in locating boundaries or buffer zones based on water movement patterns.

The American Law Division review of existing statutes divided pertinent authorities into two groups: activity-oriented statutes and effect-oriented statutes. Implementation of most laws in both catogories are ' er-the-fact; they are implemented to respond to problems that already exist, and attempt to limit future problems by limiting the causal activities or undesirable

effects. The sanctuaries program can be used to anticipate adverse damage and to protect a site for the four purposes defined in the law. In this sense, it is similar to terrestrial protection legislation, such as the wilderness statute, with one most important exception-this provision is designed for multiple use rather than single-purpose use. Each sanctuary is designed, through site boundaries and regulations, to protect the values for which it is designated. This provision has regulatory flexibility that is not found in many terrestrial protection laws, such as the wilderness Act (16 U.S.C. 1131-1136) and the Wild and Scenic Rivers Act (16 U.S.C. 1271-1287.)

Given this rationale for protecting sites, what is the degree of protection required? The scientific panel at a 1973 sanctuary workshop recommended:

> "That the primary and controlling purposes of each sanctuary be clearly identified, since every decision on size, on prohibited or permitted activities, duration of protection, and on management should be guided by those purposes." (Proceedings, p. 204.)

No other marine environmental program has this degree of flexibility for protecting a site. In some designations, such as protection of the Monitor shipwreck, many activities are restricted, but in a small area. When sanctuaries are designated for ecological purposes, on the other hand, effective protection may require restrictions of many marine activities over a larger area. Many of the limited-purpose statutes do not have such flexibility. The amount of protection, such as under the provisions of the Endangered Species Act, for designated species and their habitat, is inflexible. Under the sanctuaries provision, the degree and type of protection is to be guided by the reasons for designation.

1973 Workshop

A brief review of the Proceedings from the November 1973 workshop on estuarine and marine sanctuaries is useful because this meeting has the only gathering of scientific experts, legal scholars and federal agency representatives held to date that addresses all aspects of the sanctuary program. The workshop was held during the formative phase of the program, when management concepts and principles were evolving. The participants addressed six questions.

"1. What was the impetus for inclusion of these provisions in the respective Acts?
2. What are the various attitudes and concepts of sanctuaries in the public and private sectors?
3. What existing public and private programs appear to have similar or overlapping sanctuary-like provisions?
4. How well are these programs meeting the need expressed by their own charters and/or the charter expressed in the sanctuary provisions of P.L. 92-583 and P.L. 92-532?

Once these questions have been answered, it becomes necessary to consider two additional issues:

1. The need for marine and estuarine sanctuaries.
2. How this need can be met." (Proceedings, p.4.)

The answers from the workshop, especially to questions 3 and 4, provide an earlier analysis of questions similiar to those you pose. The responses to question 3 and 4 are less forthcoming. Several laws to protect the marine environment have been enacted since 1973. The operation of almost all marine environmental protection laws have been affected by experience, court decisions, and regulations since 1973. An analysis of any of these questions in 1979, such as the American Law Division review, focused on them in a way that was impossible in 1973. A lengthy section of the Proceedings reviewed complementary and potentially duplicating federal and state programs. The review concluded duplication was minimal. But in another discussion, the legal group did recognize, "probably the most difficult matter would be the relationship between the marine sanctuary provision...and other United States federal law". (Proceedings, p. 156.)

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Since 1973

One impetus for concern about the role of the marine sanctuaries program in ocean management is the rapidly increasing demand for ocean space. The recent U.S. Department of Commerce report, U.S. Ocean Policy in the 1970's, is one of several documents that outlines many of these issues. The report documents the growth in interest, use, law, and regulation affecting oceans, especially in nearshore areas, during the 70's. Although the sanctuary provision has been in place since 1972, pressure to implement it more rapidly is recent. President Carter's 1977 environmental message called for increased effort in the sanctuary program. The initial sanctuary, the site of the Monitor sinking, wasn't designated until 1975. Now, two sites have been designated as sanctuaries (both in 1975), and seven are under consideration. This recent increase in effort to implement the sanctuary provision can be viewed as a response to increasing pressures on the marine environment. The sanctuary provision provides a mechanism to protect many sites from incompatible pressures.

The marine sanctuary provision has exhibited some potential as a tool in stopping other uses. The attempt to apply the sanctuary provision on Georges Bank, using it as a lever to delay or halt the lease sale, has received considerable attention. The sanctuary provision is seen as a preventative tool by some--a mechanism to protect valued ecosystems from incompatible uses. Others have maintained that other programs offer adequate protection to the marine environment while allowing greater flexibility in marine use and development. This argument can best be illustrated by your concern with the Flower Gardens proposal. You stated on July 31 (Congressional Record, H 6980) that the

activities to be restricted by the creation of the Flower Gardens Sanctuary can already be provided by other law. None of these other laws has, as a primary purpose, protection of sites for conservation or ecological reasons. The environmental protection offered by these other laws is inherently different, and potentially not as effective. For example, the OCS Lands Act Amendments (PL 95-372) call for a wide range of environmental safeguards in conjunction with the offshore oil and gas leasing program. The purpose of this program is offshore energy development, and environmental protection is discussed in terms of what is possible within the context of offshore energy development. Under the sanctuary provision, the relationship between environmental protection and marine development and use is reversed. The stated purpose of this law is to protect certain environmental conditions and to allow any uses that do have any not recognized affect upon the designated resources of the sanctuary.

The letter from James Joseph, Acting Secretary of the Interior, to then Secretary of Commerce Juanita Kreps on the Georges Bank sanctuary proposal (8/31/79) is instructive on this point of alternative approaches. Joseph believed the Department of the Interior program of environmental safeguards in lease areas to be sufficiently safe and well-regulated to limit the risk or threat to the marine ecology to an acceptable level.

By pursuing the Sanctuary designation, NOAA disagreed. In this case, the issue was relative level of protection rather than program duplication. A sanctuary designation would offer additional ecological protection, not available through the operating orders controlling oil and gas activities. The basic question, then, was: do these operating orders offer a sufficient level of protection?

The Georges Bank lease sale operating orders contain a stipulation on biological populations and habitats as follows:

> "If biological populations or habitats which may require additional protection are identified by the Supervisor in the leasing area, the Supervisor will require the lessee to conduct environmental surveys or studies, including sampling as, approved by the Supervisor, to

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characterize existing environmental conditions in an identified zone prior to oil and gas operations, and to determine the extent and composition of biological populations or habitats, and the effects of proposed or existing operations on the populations or habitats which might require additional protective measures. The Supervisor shall provide written notice to the lessee of his decision to require such surveys or studies. The nature and extent of any surveys or studies will be determined by the Supervisor on a case-by-case basis.

Based on any surveys or studies which the Supervisor may require of the lessee, the Supervisor may require the lessee to: (1) relocate the site of operations so as not to affect adversely the significant biological populations or habitats deserving protection; (2) modify operations in such a way as not to affect adversely the significant biological populations or habitats deserving protection; or (3) establish to the satisfaction of the Supervisor that such operations will not adversely affect the significant biological populations or habitats deserving protection. Based on any surveys or studies which the Supervisor may also require of the lessee, the Supervisor may require the lessee to provide for periodic sampling of environmental conditions during operations.

The lessee shall submit all data obtained in the course of such surveys or studies to the Supervisor, with the locational information for drilling or other activity. The lessee may take no action that might result in any effect on the biological populations or habitats surveyed, until the Supervisor provides written directions to the lessee, with regard to permissible actions.

In the event that important biological populations or habitats are identified subsequent to commencement of operations, the lessee shall make every reasonable effort to preserve and protect all biological populations and habitats within the lease area, until the Supervisor provides written instructions to the lessee with regard to the biological populations or habitats identified." (Final Supplement to Environmental Statement, OCS Sale No. 42, p. 170.)

One way to compare these alternative approaches to protection is to look at the level of risk to the Georges Bank ecosystem. A sanctuary designation can minimize the risk, if it is backed by the array of supporting federal protective statutes and regulations, although potential risks to the ecosystem will remain. The question for the decision-maker is whether the reduction of risk is more desirable than the potential adverse economic impact of unexploited resources. If the area is leased (as it has been), then environmental protection is controlled by the Supervisor, who is not a scientist and whose who's prime

responsibility is exploration for oil and gas within the constraints of federal law. His perspective on how to search out and respond to changing environmental conditions as called for in the operating orders will be different from an individual who is responsible for managing a sanctuary. This debate may have no "right" answer, but in light of our limited knowledge about the marine environment many scientists, such as Eugene Cronin and Joel Hedgepeth, have concluded that the long term viability of marine systems will benefit most from a conservative approach that maximizes use options in the future. Even so, the demand for petroleum in the United States may become so acute as to force the the rapid exploitation of oil and gas at some potential expense to the environment.

The sanctuaries provision already calls for balancing, or a multiple use approach. The presentation by Keith Hay (American Petroleum Institute Conservation Director) at the 1973 workshop explored the question of multiple use. His final recommendation was.

> "We do not support the blanket designation of extensive marine sanctuaries for the sole, specific purpose of prohibiting resource development or use, unless such designation is based upon overriding safety or irreplaceable ecological conditions." (Proceedings, p. 192.)

This position, which remains relatively unchanged in more recent pronouncements by ocean users, is not too far from some of the earlier Congressional interpretations cited. But the relative merits of development versus protection has certainly changed since 1972. As use pressures increase, the need to protect the most valuable resources also increases. One need only review the federal analysis of increasing use, and past and potential degradation of estuaries as presented in the National Estuary Study and the National Estuarine Pollution Study more than a decade ago. The federal response includes a number of indirect protection approaches, such as the Clean Water Act and the Ports and Waterways Safety Act. The direct management approach of estuarine sanctuaries was also enacted as a provision of the Coastal Zone Management Act of 1972.

This program for estuarine protection was designed to protect relatively undeveloped sites as locations for research and education before they become irreversibly altered. Use and alteration of the marine environment has increased since 1972. One scientist at the 1973 workshop noted,

> "The other element that I do want to emphasize as a scientist is I think a great deal of the reason that we don't place emphasis as a group upon these marine sanctuaries is that there aren't many oxen being gored at the moment in that area. And I might say if this conference were meeting 25 years ago, we wouldn't be concerned about estuarine sanctuaries. I hope we won't let the fact we are not yet in trouble in the oceans let us assume we can back off from that. We need action now." (Proceedings, p. 204.)

The management of estuaries has benefited from a sanctuary program during the past decade according to many estuarine scientists. Some most notably Jacques Cousteau, have repeatedly reported on the adverse effects of increased activity on the quality of marine ecosystems and the marine environment. The sanctuary provision offers the only direct approach to protecting recognized marine sites.

Summary

The marine sanctuaries provision is an environmental protection law that has considerable overlap with other laws, but offers a unique approach to protection of marine areas of recognized importance. It is a multiple-use provision designed to protect a site, rather than stop certain activities or eliminate adverse impacts. As demands on the marine environment increase, the need to protect highly valued sites will also increase. One need only examine the problems associated with attempting to locate viable estuarine sanctuary and wildlife refuge sites along our heavily used, altered coast to appreciate the potential for adverse ecological disturbances offshore. Without the sanctuary provision, sites could only be protected indirectly (and probably

less completely) through the maze of federal programs described in the American Law Division review. After one examines the mixed record of protection at terrestrial sites, one could easily conclude that the long-term protection or restoration of marine sites for conservation, recreational, ecological or esthetic values without the direct approach of a sanctuary program is likely to be more difficult. A key to maintaining the integrity of a valuable site is identification and designation. Programs that serve other purposes may help protect the site, but they might also lead to unanticipated problems in the future.

THE LIBRARY OF CONGRESS
Congressional Research Service

WASHINGTON, D.C. 20540

December 5, 1979

TO : Honorable John Breaux

FROM : American Law Division

SUBJECT: Whether the Marine Sanctuaries Provisions of the Marine Protection, Research, and Sanctuaries Act Confer Environmental Protection Authority Beyond That Contained in Other Federal Statutes

This memorandum is furnished in response to your request for analysis of the issue described above. Your concern, as stated in your letter, was whether the numerous environmental statutes enacted before and since the Marine Protection, Research, and Sanctuaries Act of 1972 (MPRSA) have rendered the marine sanctuaries program created by that Act redundant, tending to unnecessarily complicate implementation of other Federal statutes.

The discussion below outlines the salient features of the marine sanctuaries program, then describes the principal other statutes affording authority to protect the ocean environment. On the basis of this, areas where the marine sanctuaries authority arguably provides unduplicated coverage are suggested. Whether the breadth of this unduplicated coverage is sufficient to warrant continuation of the sanctuaries program as a separate stratum of administrative review, with the resource commitment that entails, will be addressed in a separate memorandum to your office from the Environment and Natural Resources Policy Division of CRS. No attempt at such evaluation is made here.

TITLE III OF THE MPRSA

Language and Legislative History

The marine sanctuaries program is established by Title III of the MPRSA, codified at 16 U.S.C. 1431 et seq. As you correctly observed, Title III provides little in the way of criteria governing the designation of sanctuaries, stating only that the Secretary of Commerce may designate those ocean areas --

> which he determines necessary for the purpose of preserving or restoring such areas for their conservation, recreational, ecological, or aesthetic values.1/

Statements in the committee reports accompanying MPRSA enactment provide only minimal illumination. The House report 2/ noted the need for a mechanism to protect certain ocean areas from "intrusive activities by man," deriving from threats to either "scenic resources, natural resources, or living organisms." The sanctuaries program, states the report, would allow such areas to be "insulated from the various types of 'development' which can destroy them." As of its July, 1971 release date, the report observed that this need for protection of certain ocean areas was "not met by any legislation now on the books." Though the Senate report 3/ rejected

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1/ 16 U.S.C. 1432(a).

2/ House Report No. 361, 92d Cong., 1st Sess. (1971).

3/ Senate Report No. 451, 92d Cong., 1st Sess. (1971).

the proposed Title III in the House-passsed bill for reasons of international law and policy, the report expressed fundamental agreement with the objectives of the House in authorizing sanctuaries:

> The [Senate Commerce] Committee believes that the establishment of marine sanctuaries is appropriate where it is desirable to set aside areas of the seabed and the superjacent waters for scientific study, to preserve unique, rare, or characteristic features of the oceans, coastal and other waters, and their total ecosystems. In this we agree with the members of the House of Representatives. Particularly with respect to scientific investigation, marine sanctuaries would permit baseline ecological studies that would yield greater knowledge of these preserved areas both in their natural state and in their altered state as natural and manmade phenomena effected change.

Extensive discussion of Title III of the MPRSA occurred during House floor debate. Though these remarks do not show a totally consistent view of Title III's purposes, there was clearly a consensus that sanctuaries should not be marine versions of landside wilderness areas, but rather should allow other uses (including oil and gas production) to the extent such uses did not interfere with the purpose for which the sanctuary was established. A sampler of remarks occurring during the House floor debate:

> What is needed is an expeditious means of protecting important values immediately, and this Title III will do. 117 Cong. Rec. 30853 (Sept. 8, 1971) (remarks of Cong. Dingell).

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> The [House Report] makes it abundantly clear the designation of a marine sanctuary is not intended to rule out multiple use of the sea surface, water column, or seabed. 117 Cong. Rec. 30855 (Sept. 8, 1971) (remarks of Cong. Mosher).

> [Title III] would in effect provide for rational decisions on competing uses in the offshore waters. 117 Cong. Rec. 30857 (Sept. 8, 1971) (remarks of Cong. Lennon).

> Title III simply provides for an orderly review of the activities on our Continental Shelf. Its purpose is to assure the preservation of our coastal area and fisheries . . . and at the same time assuring such industrial and commercial development as may be necessary in the national interest. 117 Cong. Rec. 30858 (Sept. 8, 1971) (remarks of Cong. Keith).

Interpretive Regulations

Recently revised regulations of the National Oceanic and Atmospheric Administration (NOAA) provide the detailed criteria for sanctuary designation that Title III and its legislative history fail to provide.[4/] Briefly summarized, the new regulations set out minimum standards for inclusion of an area on NOAA's "List of Recommended Areas" (such as importance of habitat, exceptional biological productivity, or distinctive ecological features) and somewhat more particularized standards for selection of a listed area as an "Active Candidate" for consideration as a sanctuary.

4/ 44 Fed. Reg. 44831 (July 31, 1979), 15 C.F.R. part 922.

Scattered throughout the Title III regulations and the explanatory preamble are statements indicating NOAA's intention to carefully coordinate use of Title III with the administration of other statutes protective of the marine environment. Section 922.1(e) of the new regulations states:

> The marine sanctuaries program will be conducted also in close cooperation with other related Federal and State programs, including those of the Regional Fishery Management Councils under the Fishery Conservation and Management Act, . . . programs . . . under the Marine Mammal Protection Act and the Endangered Species Act, leasing programs . . . under the Outer Continental Shelf Lands Act, relevant programs of the Department of Energy; and the . . . programs of the United States Coast Guard.

See also section 922.1(d) (coordination with the coastal zone management and estuarine sanctuaries programs). One factor to be considered in selecting Active Candidates for sanctuary designation is that of section 922.23(a)(3)(ii):

> The ability of existing regulatory mechanisms to protect the values of the sanctuary and the likelihood that sufficient effort will be devoted to accomplishing those objectives without creating a sanctuary.

The Designation Document described in section 922.26(b) of the regulations is viewed by NOAA as the effective device "for ensuring for each sanctuary that only appropriate activities are regulated and that other activities are excluded from regulation."[5/]

5/ 44 Fed. Reg. 44832 (July 31, 1979).

PRINCIPAL AUTHORITIES FOR RESTRICTING ACTIVITIES THAT THREATEN THE MARINE ENVIRONMENT OTHER THAN MPRSA TITLE III

Federal statutes protecting the marine environment divide readily into two groups. Effect-oriented statutes are those designed to regulate specified environmental effects regardless of the cause, such as the Endangered Species Act. Activity-oriented statutes aim at control of specified activities, such as the Outer Continental Shelf Lands Act. The full panoply of authorities useful in addressing the environmental effects of a given activity is the sum of pertinent statutes in both of these categories.

Within each category, this section lists those statutory authorities which arguably overlap to some degree with MPRSA Title III and which, given probable and forseeable uses of the ocean in the future, are likely to be applicable. Administrative regulations implementing these statutes are cited only where they do more than merely paraphrase language in the statute and, additionally, appear to be significant.

Category I: Effect-Oriented Statutes

Environment Generally

The Federal Government's ubiquitous environmental charter, the National Environmental Policy Act (NEPA), makes it the Government's "continuing responsibility . . . to use all practicable means, consistent with other essential considerations of national policy" to ensure that Federal programs are environmentally sound. Sec. 101. Toward that end, the Act contains specific "action-forcing" directives, most notably

the requirements that all Federal agencies consider environmental values along with economic and technical factors in reaching decisions, and that environmental impact statements be prepared in connection with "major Federal actions significantly affecting the quality of the human environment." Sec. 102. While reordering agency priorities, however, NEPA is not usually viewed as constituting independent authorization for agency action protective of the environment, marine or otherwise. That is, while NEPA compels awareness of environmental impacts as to actions undertaken, it does not seem to require (or authorize) affirmative environmentally-protective measures independent of such action.

Wildlife

The Endangered Species Act (16 U.S.C. 1531) empowers the Secretaries of Commerce and the Interior to designate any animal or plant "species" as either "endangered" (in danger of extinction) or "threatened" (likely to become endangered), and to specify "critical habitat" necessary for the preservation of the species. "Species" includes subspecies and distinct vertebrate populations which interbreed. Sec. 3(16). Once a species is designated, it is unlawful for persons subject to U.S. jurisdiction (including Federal agencies) to in any way harm, hunt, or capture such species in U.S. territorial waters or on the high seas. Secs. 9(a)(1), 3(19). Moreover, Federal agencies must insure that actions which they authorize, fund, or carry out do not jeopardize the species or its critical habitat. Sec. 7(a). A cabinet-level Endangered Species Committee may grant exemptions to this requirement -- that is, may permit Federal action despite adverse effect on a species -- where the benefits of

the action "clearly outweigh" protecting the species. Sec. 7(h)(1). Additionally, an area may be excluded from critical habitat designation on grounds of economic impact. Sec. 4 (b)(4).

The Act may impose an affirmative duty upon Federal agencies to restore endangered and threatened species, not merely to avoid contributing to their elimination.[6/]

The Marine Mammal Protection Act (16 U.S.C. 1361) directs that, among other things, "efforts . . . be made to protect the rookeries, mating grounds, and areas of similar significance for each species of marine mammal . . . ." Sec. 2(2). It is made unlawful, without a permit, for any person to harass, hunt, or capture a marine mammal within 200 nautical miles off U.S. shores, or for persons subject to U.S. jurisdiction to do so anywhere on the high seas. Secs. 102(a), 3(15). Included in this prohibition is "the negligent or intentional operation of an aircraft or vessel, or the doing of any other negligent or intentional acts which result in the disturbing or molesting of a marine mammal." 50 C.F.R. 216.3. Regulations governing the taking of marine mammals may include restriction as to "locations in which animals may be taken, and similarly permits for the taking of marine mammals must specify "the location . . . in which they may be taken . . . ." Secs. 103(c)(4), 104(b)(2)(B). Should new information suggest the desirability of curtailing takings in a

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6/ Defenders of Wildlife v. Andrus, 9 ERC 1889, 1891 (D.D.C. 1976). See 6 Hofstra L. Rev. 1067 (1978).

particular area, the Act allows periodic revision of the above regulations and modification of permits to incorporate such revisions. Secs. 103(e), 104(e)(1)(A).

In the event of overlap with the Endangered Species Act, any more restrictive provisions in the MMPA must prevail. ESA sec. 17.

Numerous other Federal statutes exist that strengthen the Government's hand in managing wildlife but do not appear to authorize area-protective management such as MPRSA Title III and the statutes discussed above. For example, the Lacey Act (18 U.S.C. 43) prohibits any person from transporting or selling wildlife taken, transported, or sold in violation of Federal (or State or foreign) law. The Black Bass Act (16 U.S.C. 851) provides similar protection for all types of fish.

Coastal Zone

The Coastal Zone Management Act (16 U.S.C. 1451) lays out a comprehensive program of Federal assistance to encourage States to —

> exercise effectively their responsibilities in the coastal zone through . . . management programs to achieve wise use of the land and water resources of the coastal zone giving full consideration to ecological, cultural, historic, and esthetic values as well as to needs for economic development . . . .

Sec. 303. The term "coastal zone" is defined to extend seaward to the international boundary in the Great Lakes and to the outer limit of the U.S.

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territorial sea elsewhere. Sec. 304(1). The State management program must include, as a precondition to receiving Federal financial assistance, "[a]n inventory and designation of areas of particular concern within the coastal zone." Sec. 305(b)(3). Once the program is Federally approved, activities conducted or supported by Federal agencies (to the maximum extent practicable), or conducted under Federal permits, must be consistent with the program. Secs. 307(c)(1), 307(c)(3)(A).

Also under the Coastal Zone Management Act, Federal grants not to exceed 50 per cent of costs may be made for the acquiring and operating of "estuarine sanctuaries" and for the "preservation of islands." Sec. 315. Estuarine sanctuaries are intended "to serve as natural field laboratories" for scientific study. Sec. 315(1).

Marine Antiquities

The question whether there is substantive Federal law, other than admiralty salvage, applicable to marine antiquities appears to have been answered in the negative by the recent court decision in Treasure Salvors, Inc. v. Abandoned Sailing Vessel, 569 F.2d 330 (5th Cir. 1978). There, the United States claimed title and possession to an abandoned 17th century Spanish vessel lying on the OCS outside territorial waters, citing (a) the Antiquities Act (16 U.S.C. 431) and (b) sovereign Federal rights to goods abandoned at sea and found by U.S. citizens.

Under the Antiquities Act, no person may "appropriate . . . any object of antiquity situated on lands owned or controlled by the Government of the United States" without a permit (emphasis added). Sec. 1. The Treasure Salvors court rejected the Federal Government's contention that the OCSLA represents such an extension of U.S. ownership and control over the OCS, concluding that that Act was intended as only a limited extension of jurisdiction for purposes of mineral and natural resource exploitation. In so concluding, reliance was placed in part on an explication of the 1958 Convention on the Continental Shelf by its institutional author:

> It is clearly understood that the rights [of coastal Nations over appurtenant OCS lands] do not cover objects such as wrecked ships and their cargoes (including bullion) lying on the seabed or covered by the sand of the subsoil.7/

Hence, the Antiquities Act was held by the court not to constitute a basis for Federal title or possession of the wrecked vessel.

Under the sovereign rights theory, the United States claimed the treasure as successor to the prerogative rights of the King of England. This approach the court also rejected, first on the ground that there is no such right inherent in Federal sovereignty and second because "[w]hile

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7/ 11 U.S. GAOR, Supp. 9 at 42, U.N. Doc. A/3159 (1956), quoted in Treasure Salvors, supra at 340.

it may be within the constitutional power of Congress to take control of wrecked and abandoned property brought to shore by American citizens . . ., legislation to that effect has never been enacted."[8/] The Government's claim that the Abandoned Property Act (40 U.S.C. 310) was such legislation was dismissed. That Act authorizes GSA to protect governmental interests in wrecked, abandoned, or derelict property "being within the jurisdiction of the United States and which ought to come to the United States." The vessel in the instant case, being situated on the OCS, was held not to be within U.S. jurisdiction,[9/] and the facts attending its sinking were not seen to raise any equitable claim on the part of the U.S. to ownership.

Thus, in the absence of any legislative assertion of rights over marine antiquities, courts continue to apply traditional maritime law principles of finder and salvage. Under this law, a finder is traditionally entitled to exclusive ownership and possession of the abandoned property. Thus, the focus is on adjudicating possession, not promoting preservation.

8/ Id. at 341.

9/ The holding that the OCS is not within the jurisdiction of the United States for antiquities preservation purposes also suggests that Executive Order 11593 (May 13, 1971) would be inapplicable. That order requires, among other things, that all Federal agencies "initiate measures necessary to direct their policies, plans and programs in such a way that federally owned sites, structures, and objects of historical, architectural or archaeogical signifiance are preserved, restored, and maintained . . . ." Sec. 1(2).

Unique Marine Ecosystems

Research fails to reveal any statutes (other than MPRSA Title III) that authorize environmental protection of unique or threatened OCS ecosystems *per se*. An example of such an ecosystem might be the Flower Garden Banks, currently under consideration for marine sanctuary designation because of its status as the only truly tropical coral reef in the northwestern Gulf of Mexico.[10/]

A recent effort to base generalized coral-system protection authority on the OCSLA proved unsuccessful. In *United States* v. *Alexander*, Civ. No. 78-5676 (5th Cir. Sept. 24, 1979), the court addressed a conviction for damaging a coral community during vessel salvage operations in violation of an OCSLA regulation. The regulation stated:

> No person shall engage in any operation which directly causes damage or injury to a viable coral community that is located on the Outer Continental Shelf without having obtained a permit for said operations.[11/]

In invalidating this regulation and reversing the conviction, the court held that while the OCSLA authorizes regulations, including conservationist ones, in connection with OCS mineral lease activities, it does not allow conservationist measures applicable to activities having nothing to do with mineral leases.

10/ DEIS Prepared on the Proposed East and West Flower Gardens Marine Sanctuary C-1 (1979).

11/ 43 C.F.R. 6224.1-1.

Category II: Activity-Oriented Statutes

In this category, we concentrate on statutory provisions declaring policy goals of evident consistency or inconsistency with environmental protection and on statutory provisions defining the particular manner in which marine-environment impacts of the regulated activity are to be considered.

Oil and Gas Exploration and Production

The Outer Continental Shelf Lands Act (OCSLA), as amended in 1978, decrees that the OCS "should be made available for expeditious and orderly development, subject to environmental safeguards." Sec. 3(3). As restated elsewhere in the Act, its purpose is "to balance orderly energy resource development with protection of the . . . marine . . . environment . . . ." On the other hand, another purpose is "to make such resources available to meet the Nation's energy needs as rapidly as possible." OCSLA amendments, sec. 102(2).

Safeguards set forth in the Act appear to be thorough. The oil and gas leasing program required to be developed by the Secretary of the Interior must consider environmental values and the choice of production sites must be based in part on other potential uses of the area and the "relative environmental sensitivity and marine productivity of different areas of the OCS." Sec. 18(a). Environmental studies are mandated in

order to furnish information needed for "management of environmental impacts." Sec. 20. Regulations governing leaseholders must include provision for the suspension or temporary prohibition of any lease activity where there is serious threat to the marine environment, and for the cancellation of any lease if continued activity thereunder would probably harm the marine environment, the threat will not decrease over time, and the advantages of cancellation outweigh the benefit of continuing the lease in force. Sec. 5(a). Development and production on leases issued after September, 1978 (outside the Gulf of Mexico) must follow a development and production plan containing "environmental safeguards." Sec. 25 (c)(3).

Pipeline rights-of-way over OCS seabed may be granted subject to regulations "assuring maximum environmental protection by utilization of the best available and safest technologies, including the safest practices for pipeline burial . . . ." Sec. 5(e). Geophysical exploration in the OCS is authorized only where "not unduly harmful to aquatic life . . . .," sec. 11(a)(1), and when conducted pursuant to a lease must be in accordance with an approved exploration plan, sec. 11(e)(2).

Present regulations of the Geological Survey governing suspensions and prohibitions of lease activities are due to be amended shortly to accomodate changes in the OCSLA made by the 1978 amendments. Proposed

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regulations appear at 44 Fed. Reg. 13527 (March 12, 1979). Updated Survey regulations require the submission of an Environmental Report with a lessee's development and production plan, except where the Director exempts leases in the Gulf of Mexico and in certain other instances. Required contents of the Environmental Report appear to be exhaustive and are specified in great detail. 30 C.F.R. 250.34-3(b), 44 Fed. Reg. 53699 (Sept. 14, 1979). Updated BLM regulations require the holder of an OCS pipeline right-of-way to "comply with all stipulations which the authorized officer attaches to the right-of-way grant for the purpose of assuring maximum environmental protection." The statutory requirement that pipelines use "the best available and safest technologies" is qualified in the regulations, however, by a requirement of economic feasibility. Pipeline operations must be suspended where continued operation threatens serious harm to the marine environment. 43 C.F.R. 3340.1(a), 44 Fed. Reg. 38286 (June 29, 1979). Finally, as to exploration, updated Survey regulations require submission of an Environmental Report along with the applicant's Exploration Plan. Again, required contents of the report are set out in detail. 30 C.F.R. 250.34-1, 44 Fed. Reg. 53693 (Sept. 14, 1979).

Exploration and production under the OCSLA must, to the extent it affects any State's coastal zone, be conducted in a manner consistent with the State's coastal zone management plan. CZMA sec. 307(c)(3)(B).

The Natural Gas Pipeline Safety Act (49 U.S.C. 1671) would not seem pertinent here as its principal focus is the safety of pipelines rather than the environmental impacts thereof.

Oil and Hazardous Substance Pollution

Section 311 of the Clean Water Act (33 U.S.C. 1251) prohibits the discharge of oil or designated hazardous substances in harmful quantities (a) into the territorial sea and contiguous zone, (b) in connection with activities under the OCSLA or Deepwater Port Act, or (c) which may affect natural resources under the exclusive management authority of the United States (such as fisheries in the 200-mile "economic zone"). Exceptions to the prohibition are carved out for discharges pursuant to NPDES permits and for discharges permitted under the International Convention for the Prevention of Pollution of the Sea by Oil. Beyond the contiguous zone, the prohibition applies only to U.S. citizens, U.S.-flag vessels, and as provided for in international agreements. But regardless of whether the discharger is domestic or foreign, the U.S. is authorized to undertake cleanup operations, inside or outside the contiguous zone.

Prior to the 1978 amendments, language in section 311 did require EPA to consider the "locations . . . and circumstances" of the discharge in fixing what quantity of discharge would be deemed "harmful."

This potential mechanism for consideration of special environmental sensitivities in certain areas was eliminated from the Act in 1978, to bypass a court decision invalidating EPA hazardous substance regulations on the ground that such special circumstances had not been considered.[12/]

Discharges into the territorial seas without an NPDES permit would also violate section 13 of the Rivers and Harbors Act of 1899 (33 U.S.C. 407), better known as the Refuse Act.

Discharges permitted under the International Convention for the Prevention of the Sea by Oil, referred to above, are spelled out in the Oil Pollution Act (33 U.S.C. 1001). The treaty and the implementing act are aimed at operational rather than accidental discharges from vessels. Discharge of oil from American vessels is prohibited unless the vessel is proceeding en route and the rate of discharge does not exceed sixty liters per mile. Sec. 3. For non-tankers, the discharge must be "as far as practicable from the nearest land;" for tankers, the discharge must be more than fifty miles from the nearest land. Sec. 3. Excluded from operation of the act are smaller ships and tankers, whaling boats, naval ships, and all foreign vessels. Sec. 2(i). No special prohibitions for environmentally sensitive areas are authorized.

12/ Manufacturing Chemists Ass'n v. Costle, 455 F. Supp. 968 (W.D. La. 1978).

Deepwater Ports

The Deepwater Port Act of 1974 (33 U.S.C. 1501) states among its purposes the minimizing of adverse environmental impacts from such ports, and prohibits their construction or operation except in accordance with a federally-issued license. Secs. 2(a)(2), 4(a). The law of the United States and the nearest coastal State are made applicable to deepwater ports, and the Secretary of Transportation may not issue a license unless he determines that the applicant will comply with such laws. Secs. 19(a)(1), 19(a)(2)(b), 4(c)(2). A variety of "environmental review criteria" must be used in evaluating a deepwater port application. Sec. 6(a). Conditions may be written into any license to carry out the Act or as otherwise required by any Federal agency. Sec. 4(e)(1).

Bonding requirements may be employed to assure that, upon the revocation or termination of any license, the licensee will remove all components of the deepwater port. Sec. 4(e)(3).

Modifying a Navigable Water

Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) makes it unlawful to "excavate or fill, or in any manner to alter or modify the course, location, condition, or capacity" of any navigable water of the United States without a permit from the Corps of Engineers. Rejection of a permit on the ground of unacceptable environmental impacts

of the proposed waterway modification has been held authorized pursuant to NEPA.[13/] However, this Corps jurisdiction under the Rivers and Harbors Act appears to extend seaward to a distance of only three nautical miles. 33 C.F.R. 329.12(a).

Obstructions Generally

Section 10 of the Rivers and Harbors Act of 1899, noted above, also makes it unlawful to build piers, bulkheads, or any other type of structure within U.S. territorial waters without a Corps of Engineers permit. Section 4(e) of the OCSLA extends this authority of the Corps to all fixed structures in waters of the OCS. (The language of section 4(e) read literally confines this extension of authority to OCS structures involved in resource exploitation. However, legislative history and, we are informed, communications between appropriate committes and the Corps make clear that an unrestricted extension of jurisdiction was contemplated.) It would seem that NEPA authorizes consideration of environmental impacts for OCS structures generally. Where the OCS structure is authorized pursuant to a BLM oil and/or gas lease, the Corps reports that environmental considerations are left to BLM while the Corps restricts itself to navigational and national security factors.

13/ Zabel v. Tabb, 430 F.2d 199 (5th Cir. 1970).

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Specific types of obstructions may be regulable as well under special statutes: OCS drilling platforms under the OCS Lands Act, deepwater ports under the Deepwater Port Act, etc. See other sections of this discussion.

Disposal of Dredged or Fill Material

In U.S. territorial waters, the disposal of dredged or fill material is regulated by a permit program administered by the Corps under section 404 of the Clean Water Act (33 U.S.C. 1344). A discharge of dredged materials includes both the dumping of material at an offshore disposal site and the runoff or overflow from a contained land or water disposal area. 33 C.F.R. 323.2(k). Importantly here, the EPA Administrator is authorized to prohibit the designation of any defined area as a disposal site whenever he determines that disposal there would have an unacceptable effect on " . . . shellfish beds and fishery areas . . . , wildlife, or recreational areas." Sec. 404(c).

The transportation of dredged material by vessel for the purpose of dumping into the ocean, including the territorial seas, at a dump site approved by the Corps is regulated by section 103 of the MPRSA, discussed in the following section. 33 C.F.R. 323.2(a)(1).

Ocean Dumping

Title I of the MPRSA (33 U.S.C. 1401) prohibits outright the ocean dumping of radiological, chemical, and biological warfare agents, and high-level radioactive waste. Sec. 102(a). Otherwise, permits are allowed for (1) the transportation of any material from the U.S. for the purpose of dumping into ocean waters, including the territorial sea, (2) the dumping of any material transported from outside the U.S. into the territorial sea or contiguous zone, and (3) the transporting of any material by a U.S. agency or U.S.-registered vessel from outside the U.S. for the purpose of dumping into the ocean. Sec. 101(a). EPA criteria for reviewing permit applications must consider the full gamut of environmental impacts. Sec. 102(a). Based on these criteria, EPA must, if necessary to protect "critical areas," designate sites within which certain materials may not be dumped. Sec. 102(c). In all cases an ocean dumping permit must specify "the location where such transport for dumping will be terminated or where such dumping will occur." Sec. 104(a).

Where the material to be dumped is dredged material, the permit and site approval come from the Corps of Engineers. Sec. 103. The Corps must, to the extent feasible, use recommended sites designated by EPA. In disagreements between EPA and the Corps as to use of EPA-designated critical areas, the determination of EPA prevails. Sec. 103(c). A waiver from critical-area restrictions may be granted only where no alternative sites

are economical and where EPA, upon second consideration of the matter, finds that the adverse environmental impact of the proposed dumping is acceptable. Sec. 103(d).

Vessel Traffic

The Ports and Waterways Safety Act, as amended by the Port and Tanker Safety Act of 1978 (33 U.S.C. 1221), confers a variety of vessel traffic control authorities upon the Coast Guard. Most pertinent here, the Coast Guard is empowered to "designate necessary fairways and traffic separation schemes" in order to provide safe routes for vessels proceeding to and from U.S. ports. Sec. 4(c)(1).

In the territorial sea such measures may be made mandatory for certain categories of U.S. and foreign vessels; in high seas approaches, only for vessels of the United States. Sec. 4(c)(5)(B). Prior to making a designation of fairways or traffic separation schemes, the Coast Guard must conduct a study of the potential traffic density in the area and consider all other uses of the area, including "the establishment or operation of marine or estuarine sanctuaries." Sec. 4(c)(3). Also to be considered is "environmental factors." Sec. 5(a)(6) and NEPA.

In the navigable waters, the Coast Guard may impose "measures for limited, controlled, or conditional access and activity when necessary for the protection of any . . . waters, or shore area . . . ." Sec. 6(a)(2)(C).

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Specialized statutes permit Federal regulation of vessel traffic in the vicinity of deepwater ports (Deepwater Port Act, sec. 10(a)) and in connection with operations on OCS oil and gas leases (OCSLA).

Also worthy of mention is Resolution A.378 of the Tenth Assembly of the Intergovernmental Maritime Consultative Organization (IMCO), adopted November 14, 1977. That resolution establishes a procedure by which a government may submit for IMCO approval a vessel routing scheme. The purpose of such schemes is, states the resolution, "to improve the safety of navigation in converging areas and in areas where the density of traffic is great or where the freedom of movement of shipping is inhibited . . . ." An element of such vessel routing schemes may be designation of "areas to be avoided," defined as areas in which "it is exceptionally important to avoid casualties and which should be avoided by all ships, or certain classes of ship." The resolution does not, however, authorize sanctions for violations of the routing system, as would MPRSA Title III in the event a sanctuary was established and traffic prohibitions promulgated.

Salvage Operations

See discussion under "Marine Antiquities" and under "Unique Marine Ecosystems."

Commercial and Recreational Fishing

The Fishery Conservation and Management Act establishes a comprehensive scheme of coastal fisheries management by establishing a 200-mile fishery conservation zone within which the United States claims exclusive authority over most fish. The findings and purposes section of the Act make clear that its principal aim is the avoidance of food shortage and economic dislocation caused by overfishing of certain species. Sec. 2. Some environmental-protection authority may be conferred by section 303(b)(2), which states that fishery management plans may --

> designate zones where . . . fishing shall be limited, or shall not be permitted, or shall be permitted only by specified types of fishing vessels or with specified types and quantities of fishing gear.

Implementing regulations, however, specify that such area restrictions "must be related to the management objectives of the plan," which are not easily described as environmental. 50 C.F.R. 602.3(b)(13)(ii). Regulations also provide that a fishery management plan may include measures to "preserve, protect, and restore habitat determined to be necessary for the life functions of the stock(s)." 50 C.F.R. 602.3(b)(13)(vii).

Restrictions contained in fishery management plans apply to foreign fishing vessels in the 200-mile zone as well as to domestic vessels. Sec. 204 (b)(7)(A).

"Littering"

While the discharge of oil and designated hazardous substances into the marine environment is prohibited by section 311 of the Clean Water Act, and the discharge of any substance brought to ocean waters for the purpose of dumping is regulated by Title I of the MPRSA, no statute would appear to restrict the disposal into such waters of substances falling into none of these categories. An example of such a substance might be litter or garbage tossed from fishing craft. (Annex 5 of the International Convention for the Prevention of Pollution from Ships does require acceding nations to prohibit marine disposal of plastics from ships and to require that disposal of other types of garbage (including food wastes, glass, and bottles) be as far as practical from the nearest land but in no event less than 12 nautical miles. However, this Convention has not yet been ratified by the Senate, and is not self-executing. Moreover, Annex 5 is one of several "optional annexes" that the signatory nation need not accept. Another optional annex is Annex 4, dealing with marine disposal of sewage.)

Anchoring

A variety of Federal statutes authorize Coast Guard regulation of vessel anchoring, but all appear to derive from concern over navigation

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and commerce rather than the environment, and all appear to expire at the seaward limit of U.S. territorial waters.[14/] Several of these statutes deal with purely incidental aspects of anchoring, such as proper night lighting when at anchor.

An international mechanism for control of vessel anchorage in OCS waters may be provided in Resolution A378 of the Tenth Assembly of IMCO, discussed above under "Vessel Traffic." Again, however, the priorities of this resolution are more oriented to vessel safety than environmental protection, and no sanctions are authorized.

UNIQUE BENEFITS OF THE MARINE SANCTUARIES PROGRAM

On the basis of the foregoing discussion outlining the scope of MPRSA Title III and the scope of other Federal statutes regulating use of ocean waters, there appear to be several respects in which the marine sanctuaries authority is unique. These unique benefits divide into (a) coverage of specific environmental impacts not directly regulable under other authority, and (b) other benefits. It must be emphasized, however,

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14/ See, e.g., 33 U.S.C. 471: "The Secretary of Transportation is . . . directed to . . . establish anchorage grounds for vessels in . . . navigable waters of the United States whenever it is manifest . . . that the maritime or commercial interests of the United States require such anchorage grounds for safe navigation . . . ."

that the difficulty of determining how expansively or aggressively an agency pursues its mission after even a close reading of its regulations suggests that the following discussion be regarded as tentative guidance for further investigation.

Environmental Impacts Regulable Through the Marine Sanctuaries Program But Not Under Other Federal Law

The headings below follow the order in the preceding discussion.

Wildlife. The Endangered Species Act reaches only endangered and threatened species (and associated habitat), hence does not afford protection over plant/animal communities that lack such species. Ecosystems may possess characteristics worthy of protection or study even in the absence of rare component members. Moreover, it is at least arguable that the catalogue of acts expressly prohibited in the statute — generally those of an immediately harmful or harassing nature — would not extend to acts whose adverse impact upon marine organisms is only an unintended incidental result. Such might be the case with pollution.

The Marine Mammal Protection Act contains authority for area-oriented protection as regards marine mammals, but the Act would appear vulnerable to the same argument as to incomplete coverage mentioned in the preceding paragraph.

Coastal Zone. The Coastal Zone Management Act appears to provide adequate Federal support for State protection of antiquities or sensitive areas within territorial waters, with the exception that estuarine sanctuaries cannot be established for as broad a range of purposes as can marine sanctuaries. The former, recall, are for scientific study and education; the latter are to protect "conservation, recreational, ecological, or aesthetic values." State law, however, may fill in some of the gaps in coverage.

Marine Antiquities. With the Antiquities Act and Abandoned Property Act eliminated by court decision as authorities for OCS antiquities protection, the traditional law of admiralty salvage appears to govern rights of finders. As noted, this body of law focusses on adjudicating possession and control rather than on the MPRSA goals of preservation, public access, and scientific study.

Unique Marine Ecosystems. As noted earlier, it would seem that certain biological communities may possess scientific, ecological, or recreational characteristics worthy of preservation despite containing no species protectible under the Endangered Species Act, Marine Mammal Protection Act, or other legislation. An example might be a marine area with abundant fish life located near a coastal population center, arguably deserving of protection for its recreational fishing possibilities.

Impacts from Oil and Gas Exploration and Production. The Outer Continental Shelf Lands Act does balance exploration and production objectives with an impressive array of environmental safeguards. A judicial observer, however, has noted that the objectives of the OCSLA and MPRSA are rather different:

> [W]hile under the Marine Sanctuaries Act the landuse options of the Secretary of Commerce are much the same as those of the Secretary of the Interior under the [OCSLA], the management objectives are different. It is thus possible that different environmental hazards would result depending on which program was invoked. Under the latter Act, the emphasis is upon exploitation of oil, gas, and other minerals, with, to be sure, all necessary protective controls. Under the Sanctuaries Act, the prime management objectives are conservation, recreation, or ecological or aesthetic values. . . . The marked different in priorities could lead to different administrative decisions as to whether particular parcels are suitable for oil and gas operations.15/

Depending on the particular ordering of priorities adopted by Interior under the OCSLA, therefore, the marine sanctuaries program may or may not provide additional protective authority. As a policy matter, it is arguable that this ambiguity as to which priorities govern, existing in an area of paramount national interest, should be legislatively remedied.

15/ Commonwealth of Massachusetts v. Andrus, 12 ERC 1801, 1812 (1st Cir. 1979).

Impacts from Oil and Hazardous Substance Pollution. Statutes restricting such impacts, particularly section 311 of the Clean Water Act, do provide a considerable measure of protection, but gaps in coverage exist. Section 311, for example, only bars the discharge of hazardous substances that have formally been designated as such by the EPA Administrator (to date, there are 297). On the other hand, the marine sanctuaries authority may itself be of limited value in protecting environmentally-sensitive areas from water-borne pollution in that such pollutants may be introduced into ocean waters at a point very distant from the area ultimately affected. MPRSA Title III does not appear to grant the agency administering a marine sanctuary the authority to extend its regulatory controls beyond the geographic limits of the sanctuary. Sec. 302(f).

Impacts from Deepwater Ports. The Deepwater Port Act sets out an apparently thorough set of environmental safeguards. Though the Act does not reach deepwater ports situated within State territorial waters, these close-in ports are presumably covered by other Federal acts, such as the Rivers and Harbors Act of 1899 and the Clean Water Act.

Impacts from Modifying a Navigable Water. Such impacts seem fully covered under statutes other than MPRSA Title III.

Impacts from Obstructions Generally. Complete authority to consider the environmental effects of marine obstructions (such as drilling platforms) is conferred by the Rivers and Harbors Act of 1899 as extended over the OCS by the OCSLA.

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Impacts from Disposal of Dredged or Fill Material. Coverage under statutes other than MPRSA Title III would appear to be complete.

Impacts from Ocean Dumping. Title I of the MPRSA appears to render Title III of that Act unnecessary to the extent that impacts on potential sanctuaries derive from ocean dumping.

Impacts from Vessel Traffic. Though the Ports and Waterways Safety Act, as amended, does mandate consideration of environmental factors, the priorities of that Act (avoidance of vessel collisions) are clearly different from those of MPRSA Title III (preservation for conservation, recreational, ecological, or aesthetic values). Thus, the Coast Guard might have sound basis for refusing to deflect vessel traffic around a very large marine sanctuary (such as the now-withdrawn Georges Bank proposal). Moreover, implementation of the Ports and Waterways Safety Act has thus far proceeded by promulgation of comprehensive vessel traffic schemes for given ports, 33 C.F.R. parts 160-164, rather than for a given environmentally-sensitive area. For these reasons, the marine sanctuaries title of the MPRSA seems to be nonduplicative in installing environmental impacts as an important and unequivocally independent ground for action regulating vessel movement. IMCO Resolution A.378 states vessel routing priorities similar to those of the Ports and Waterways Safety Act, and, as noted, does not authorize the imposition of sanctions on violators as does Title III of the MPRSA.

Impacts from Salvage Operations. The governing body of law, that of admiralty salvage, is concerned more with resolving rights of possession and control of the salvaged object than in ensuring its protection. Additionally, research reveals nothing in salvage law that restricts adverse impacts on surrounding areas arising in the course of salvage operations. In these regards, MPRSA Title III would provide nonduplicative regulatory authority.

Impacts from Commercial and Recreational Fishing. Like the Ports and Waterways Safety Act, the Fishery Conservation and Management Act is a statute that authorizes environmental protection in certain circumstances, but whose principal focus is clearly elsewhere. Thus, the marine sanctuaries title would seem to be nonduplicative as to regulation of fishing activity in being more readily available than the fisheries act where environmental protection is the principal reason for the regulation.

Impacts from Litter. The dumping from a vessel of any substance that is not (a) oil, (b) a designated hazardous substance, or (c) brought to ocean waters with the intent of being dumped, seems to be outside the scope of existing Federal law or international agreements presently in force for the United States. MPRSA Title III authorizes action against dumping of any substance, without restriction, where that substance is damaging to the values for which the sanctuary is established.

Impacts from Anchoring. Research reveals no Federal or international authority for regulating vessel anchoring, other than sanctuary designation, that accords a significant priority to environmental protection.

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Other Benefits of the Marine Sanctuaries Program

The marine sanctuaries authority of MPRSA Title III permits a holistic approach to management of defined marine areas that is not readily attainable through resort to statutes focussing on specific environmental impacts. If one imagines a fragile coral community threatened by (a) oil leakage from a nearby drilling platform, (b) turbulence generated by vessel traffic, (c) anchoring of recreational fishing vessels, and (d) the construction of a second structure in the immediate area of the coral, one supposes that the blanket protection against all these threats made possible by sanctuary designation would be quicker and less costly in the aggregate of agency resources than piecemeal protective actions through each of the statutes governing the above activities.

Section 102 of NEPA does, to be sure, command Federal agencies to use an "interdisciplinary approach" in evaluating proposed agency action. The focus, however, remains the specific action under consideration, and thus is fundamentally different from the perspective of the marine sanctuaries authority, which focusses instead on a specific area and looks at the impacts of all probable actions (Federal or otherwise).

Summary

Research reveals a variety of respects in which the marine sanctuaries act appears to offer environmental protection benefits not directly achievable through other Federal statutory authorities.

The Act confers authority for protection of species not covered under specialized wildlife statutes, antiquities (such as shipwrecks), and ecosystems having some unique attribute or recreational/aesthetic value. Focussing instead on the activities creating the environmental threat, it would seem that MPRSA Title III provides nonduplicative authority for regulation of vessel traffic not in the vicinity of a congested port (international controls appearing to be weak), activities of marine salvors, commercial and recreational fishing, discharge of substances not falling under other statutes (chiefly, those that are not oil, not designated as hazardous, and not brought to the discharge site with the intention to dump), and anchoring. Depending upon how OCSLA program priorities evolve, sanctuaries may be valuable in shielding sensitive areas from oil and gas activity.

A generalized benefit of the MPRSA sanctuary program is its apparent position as the only Federal authority for comprehensive management of sensitive marine areas, an approach that is arguably superior to seriatim response to environmental threats as they materialize. Finally, the unqualified nature of Title III coverage as to activities occuring within a sanctuary raises the possibility of its future utility in dealing with some environmental threat not envisioned by existing environmental-protection law.

Robert Meltz
Legislative Attorney

Mr. KNECHT. Thank you, Mr. Breaux.

That, of course, is a central question and a very important question, and obviously, it is relevant to the question of reauthorization, the question of the needs for this kind of program.

It seems to me the central difference is that all those pieces of legislation have as their principal purpose a different objective. The Deep Water Port Act would not seem to me to be aimed at protecting certain marine areas. It is aimed at licensing deep water port facilities of the coast of the United States.

Every other law you mentioned has other primary purposes.

Mr. BREAUX. Obviously, it doesn't protect seaweed. It is not intended to. But are there not existing Federal laws aside from the marine sanctuaries law, which can protect the same concerns? What I would like to know is, what aspect of the marine environment needs protection that is not already covered? Give me an example of something that is not or cannot be covered by other existing Federal programs?

Mr. KNECHT. None of these laws have as the affirmed purpose identification or protection of unique marine areas. It seems to me a parallel might be as follows, in the energy area, and I hope this isn't confusing.

It seems to me in our effort to try to move toward energy self-sufficiency, we do a lot of peripheral things, and important things at the same time; the 55-mile an hour speed limit, or incentives to move toward solar heating, are things that move in the direction of conservation. But in addition to that, those things alone will not solve the problem. We also need an affirmative program——

Mr. BREAUX. Are you telling me that the marine sanctuaries program increases energy?

Mr. KNECHT. No, Mr. Breaux, I am trying to draw a parallel.

Mr. BREAUX. I don't want to unnecessarily prolong this discussion. What area cannot be protected; is it seaweed, overflight of air space, dumping of oil?

Mr. KNECHT. I think the habitat in the coral reef situation cannot be protected.

Mr. BREAUX. What about the FCMA and coral reefs?

Mr. KNECHT. They deal only with the coral heads, the coral animals, and the coral structure itself. They do not deal with the surrounding area, the entire ecosystem. They deal solely from a harvestable standpoint, which is not the goal of the program in any event, with the coral itself, the hard structure and the living animals at the end of it.

Mr. BREAUX. I differ with that. I think it could.

Mr. KNECHT. It doesn't at the moment.

Mr. BREAUX. All right, what else?

Mr. KNECHT. The identification, protection, and management of an area like the resting place of the U.S.S. *Monitor* is another example. I think that is an asset—there won't be many situations like that—but, I think that was a unique case.

Mr. BREAUX. I agree with that. A sunken boat. All right, that might be two.

Mr. KNECHT. Then take the situation like the Channel Islands, where you have a large assemblage of the natural assets that need protection as a whole, as an ecosystem, as an area. You are not

aiming at the birds or mammals or the water quality, but all of these taken together as a living, functioning, natural ecosystem. No other law will protect that entire assemblage.

Mr. BREAUX. You talk as if it was a management program.

Mr. KNECHT. It is.

Mr. BREAUX. It is? Please refer me to some legislative history that indicates that it was intended to be a comprehensive management program.

Mr. KNECHT. It seems to me the law calls for, and authorizes regulations to achieve, the goals of particular areas that are designated. Now, it seems to me the application of regulations to achieve specific goals is by my definition a management system. That is what management is, the use of regulations and other devices to achieve specific goals for which one sets out.

Mr. BREAUX. Why couldn't all these other laws be coordinated and handled to accomplish the same things that you are really trying to do with the marine sanctuaries program?

Mr. KNECHT. I believe we can do better than we have, Mr. Breaux, in relying on existing authorities where they do come into play in a particular marine sanctuary area, relying on those in the first instance and only going beyond them and adding special regulations when needed. I believe we can do more of that, and it would be our intention to do more of that.

Mr. BREAUX. A final question. I know my time is out, Mr. Chairman.

We hear that the program is not costly, and of course, I would hope that it is not; but in the study that was done on the Channel Islands designation, NOAA referred to a study that was commissioned by NOAA, which said that the sanctuary regulations would not be expected to have an effect greater than $30 million on the economy as a whole during any 1 year.

That is kind of costly, isn't it, up to $30 million in 1 year?

Mr. KNECHT. Well, I am not sure—

Mr. BREAUX. The program might not be costly to administer, but the effect on the economy, at least in this instance, is a pretty big effect, isn't it?

To refresh your memory, the study talked about the potential loss of oil and gas development, which would have peaked in 1992.

So when we look at the cost, we also have to look at the value of what might be produced from the area and what might, therefore, be lost to the economy as a whole.

Mr. KNECHT. Yes, indeed.

Mr. BREAUX. You think it is not costly?

Mr. KNECHT. I think $30 million is a lot of money. If that is an honest assessment of what the economic impact in that case would be—

Mr. BREAUX. I appreciate that, but to say it is not very costly is not quite accurate.

Thank you, Mr. Chairman.

Mr. D'AMOURS. Mr. Forsythe?

Mr. FORSYTHE. Thank you, Mr. Chairman.

Welcome, Bob.

Mr. KNECHT. Thank you.

Mr. FORSYTHE. Bob, doesn't the NEPA-EIS procedure force the various agencies with jurisdiction over activities in these areas to address any environmental problems that might occur?

Mr. KNECHT. That is a pickup from the earlier line of questioning, and I am glad you have raised it.

All the laws mentioned by Mr. Breaux include environmental requirements, and that is good. I think it is a measure of where we have come in the last decade and a half in terms of environmental sensitivity. Every oceanic development law has its environmental requirements.

But to rely on a statement associated with an oceanic development activity, to hang all the baggage on that, to identify the unique ocean areas, and then funding that, it seems to me that is above and beyond what NEPA has called for.

Mr. FORSYTHE. You have added two areas that may not be covered under other acts—education and public awareness—which, in my view, are important considerations. However, it seems to me that the EIS program should be mandated to look at all of these problems.

However, I think the coordination of all the other laws and regulations is what we should be addressing. In this world today, where regulations have throttled our Nation in so many ways, we must try and find some way to reduce environmental impacts and see if we can do this by utilizing the existing authorities of these other overlapping agencies.

Mr. KNECHT. Mr. Forsythe, in that connection, I think you are aware that the new administration has called for a much more careful review of all regulations with regard to their economic impact, and, of course, the most recent sanctuary designations, including the two California designations, these will be reviewed again in connection with the new economic impact analyses procedures called for by a recent Executive order.

So we will be looking again at the question of the economic impact of the proposed regulations, especially on hydrocarbon activities, before those regulations become final.

Mr. FORSYTHE. Would you agree that in view of the new administration's thrust, and other criticisms that have been made, that the marine sanctuary program has, in the past gone beyond the original intent of the legislation?

You seem to allude to that in your testimony.

Mr. KNECHT. I don't think the program as it has evolved, with the six sites that are currently designated, differs very widely from our interpretation of the legislative intent when title III was passed, and it seems to us that the recent reports by the General Accounting Office and CRS confirm that. So I can't agree with that part of your statement.

I will agree that the new administration set the balance differently in terms of some of the factors that go into the marine sanctuary program.

We are, as I said, in the context of the review of the pending regulations the two California sanctuaries, we are looking again at the cost versus the benefit, especially as they affect hydrocarbons. We are looking at the program to try to streamline and make more understandable and predictable the workings of the program.

Mr. FORSYTHE. Well, those are good words.

Thank you.

Mr. D'AMOURS. Mr. Breaux?

I am sorry, Mr. Studds. I can't tell you apart anymore. [Laughter.]

Mr. STUDDS. Do I understand that the new administration does not yet have a policy in this area?

Mr. KNECHT. The new administration intends to submit legislation on the programs.

Mr. STUDDS. You are sure about that?

Mr. KNECHT. I am.

Mr. STUDDS. How did they miss it?

Mr. KNECHT. Is that a serious question?

Mr. STUDDS. Very. I understand the Secretary of the Interior was very excited yesterday, going about the office trying to do his damage. I understand there are still scars on your testimony.

I would have given anything to have heard the conversation between the Secretary and the Director of the Office of Management and Budget.

So you say you don't know how you are going to amend the legislation which Mr. D'Amours has introduced to continue the program. All it does is add a number for the new fiscal year. There is a rumored intention that the administration will provide for the specifics for the year 1982.

Now, either you agree with that, or you come in and discuss to lower the number, or I can only assume by what you have said that you are thinking of other amendments to the act rather than simple reauthorization of funding; is that correct?

Mr. KNECHT. I am not aware of any work going on downtown to suggest specific amendments to the act in the administration's request. I would anticipate that the request would be a simple extension of the authorization. I don't know that for a fact.

Mr. STUDDS. Would you anticipate that it would be at the same figure of $2,250,000?

Mr. KNECHT. I don't know anything different from that. I just cannot make a prediction.

Mr. STUDDS. I know. Let me just say that in the event that some of the other areas in which the administration has managed to devise a policy, for example, the elimination of the coastal zone management program, the virtual elimination of the sea grant program, dramatic reductions in ocean research funding in the EPA, and dramatic reductions for some funding for the National Science Foundation; some of these concerns about duplicating statutes will be rendered moot, will they not? [Laughter.]

The administration, although it may have overlooked your modest program, has certainly made abundantly clear its commitment to the sanctity of the environment.

I don't see why we are having so much trouble defending a simple Republican program like this. The original idea came from my Republican predecessor, and it is also interesting to see where the opposition comes from. It was originally proposed to stop imminent sand and gravel excavation of the Cape Cod National Seashore.

You can imagine that the objections came from the sand and gravel industry. I see representatives of the you-know-what industry behind you. So I think no one is fooled by the possible implications of what has been suggested.

Is it safe to assume, given what you have said, that the administration would oppose my colleague from Louisiana to abolish the program?

Mr. KNECHT. Based on the information I have now, the administration has taken the position that the authorization should be extended, so it would oppose the repeal.

Mr. STUDDS. Do you give up? [Laughter.]

Can the Chairman tell the difference now? [Laughter.]

Mr. BREAUX. If you would yield on that point, I think it is important. Is the administration going to undertake a review of this program as they have done on other programs, or is that something that cannot be expected?

Mr. KNECHT. I think it is fair to say, Mr. Breaux, that a number of aspects of the program will be reviewed. I think the question of the future existence of the program is not one of them. I can say with some certainty that there will be a request for authorization, but what is being reviewed and will be reviewed are three aspects, it seems to me:

One, I mentioned the sanctuary regulations that are now pending are part of the regulatory impact analysis called for under the Executive order. So we are looking in more detail at the economic impact of those two pending California sanctuaries, and we will get to the question of hydrocarbon prohibition in sanctuaries.

So that is one review on the orientation of the program vis-a-vis hydrocarbons.

A second review is one we are initiating on the mechanics of the program, and I told you about the review we intend to have ongoing in the next 3 months.

The third review is the budget process which will occur over the next 6 months.

Mr. STUDDS. I believe I would like to ask you one more question. As you are well aware, because of a settlement of a court case involving the Conservation Law Foundation and the attorney general of the State, NOAA must reevaluate the proposal of a marine sanctuary in Georges Bank. Can you tell me whether that review is seriously being considered?

Mr. KNECHT. We are about to begin that work. We have not yet started it.

Mr. STUDDS. Let the record reflect that I for one would fight to the death on behalf of the Reagan administration, when we think it is right. As I understand it, your position at this moment is that they are likely to prove to be right on this question—not Georges Bank, but the whole program.

Mr. KNECHT. Could you restate the question?

Mr. STUDDS. I thought if I stated it in that fashion, I might get an unequivocal yes. I let it stand that way. I am sure the chairman of the Oceanography Subcommittee will stand in defense of the new administration when it defends this program, inconsistent though that may be with the rest of its program.

Mr. D'AMOURS. If the witness won't answer yes, Mr. Studds, I will.

Mr. STUDDS. Thank you.

Mr. D'AMOURS. Mr. Carney.

Mr. CARNEY. Thank you, Mr. Chairman. It is obvious where the administration is, but the program is under attack by my colleague from the other side of the aisle. Mr. Studds is a little confused here.

At any rate, you are requesting $2.2 million. That is what the Carter administration's budget asked for, and that is what the Reagan administration's budget is asking for.

So we don't have any problem there. Is that a fair assumption?

Mr. KNECHT. That is correct. There were no changes in the budgets of Carter and Reagan for 1982.

Mr. CARNEY. I note you are looking for $1,250,000 for the management of the program. Could you give me a rundown as to what you consider management, please?

Mr. KNECHT. I would like to ask Mr. Miner, who manages the program, to answer the question.

Mr. MINER. The $1.2 million is used for, essentially, program administration, for staff salaries, normal overhead, telephones, rent, et cetera. A good deal of that money is used for contractual services which we utilize to complete, for example, the resource analysis of areas that we have under consideration, in development of our draft and final environmental impact statements that are done on each proposed site, and other related activities that are tied in with the designation process that we undertake.

Mr. CARNEY. In your shop, how many people are federally employed?

Mr. MINER. Sixteen.

Mr. CARNEY. So basically, most of the man-hours are contractual man-hours?

Mr. MINER. A fair amount are on specific sites, yes, and then, of course, we have for existing sanctuaries on-site management services. Normally, those are State agencies, such as in the case of the California and Florida sanctuaries.

Mr. CARNEY. Do you anticipate any cuts in Federal employees?

Mr. MINER. I must amend that. The 16 includes the staff of estuarine sanctuary programs. I have to reduce that number by five for marine sanctuaries. There are no proposed cuts in the estuarine sanctuary staff this fiscal year, nor are there any currently scheduled for the next fiscal year.

Mr. CARNEY. What is the cost of enforcement in a marine sanctuary. We designate an area and say "This is prohibited, and that is prohibited." How much does it cost us to enforce these prohibitions in a marine sanctuary?

Mr. MINER. It varies from site to site, but on an average we budget about $60,000 a year for enforcement. In many instances, that money will go to State agencies that have the authority to enforce Federal regulations. In other cases, it will go to the U.S. Coast Guard, which is our principal enforcement arm.

Mr. CARNEY. $60,000 is a very small amount. You have six sanctuaries, several of them in excess of a thousand square miles of ocean. Do you feel your enforcement program is adequate?

Mr. MINER. We haven't actually begun enforcing anything in the four recent sanctuaries. We have under negotiation with the Coast Guard for enforcement in the sanctuary off the Georgia coast, and in Florida as well, and the California Fish and Game Agency and, again, the Coast Guard with respect to the California sites. We are not sure how much those sites will cost for enforcement because we haven't completed those negotiations. Again, it will vary.

In the California circumstance, the Coast Guard tells us it has an adequate enforcement presence there. Therefore, the additional cost that we may bear with the Coast Guard will be minimal. On the other hand, the fact that we are very likely to be involved with enforcement, particularly in State waters, the State of California would probably seek a higher level of financial support to increase their patrolling activity.

Mr. CARNEY. With respect to fiscal year 1983 and fiscal year 1984 moneys, do you feel you have adequate funds in the fiscal year 1982 budget for the present two sanctuaries and in addition the four new ones?

Mr. MINER. Yes, we think we can make it.

Mr. CARNEY. Would you please explain to me the difference between an estuarine sanctuary and a marine sanctuary.

Mr. MINER. Yes. Actually, there are two programs. The marine sanctuary program is under title III of the Marine Protection, Research, and Sanctuaries Act. The estuarine sanctuaries is under section 315 of the Coastal Zone Management Act. It is to provide matching funds to State governments to acquire estuarine systems to be set aside for education and research purposes.

Mr. CARNEY. Now, can I ask a question? I hate to get parochial, but I have a grave concern over a targeted site that unfortunately was lost last year because of a lack of commitment from New York State. The Peconic River Estuarine Sanctuary, could that be resurrected?

Mr. MINER. Sure. [Laughter.]

Mr. CARNEY. I am very sorry that my colleague from Massachusetts is not listening to me. I am trying to get an estuarine sanctuary funded and resurrected, and I hope I can call upon my colleague, Mr. Studds for assistance.

Mr. STUDDS. The gentleman is calling for both funding and resurrection? [Laughter.]

Mr. KNECHT. Mr. Carney, we were very sorry to see that proposal on Long Island Sound lost. It seemed a good proposition, and apparently the homework was not done with regard to the local situation.

Mr. CARNEY. My next question was handed to me. It says "Excuse me, your 5-minute time limitation has expired."

Mr. D'AMOURS. Mr. Dyson, do you have any questions?

Mr. DYSON. Of course.

I don't particularly care which of you would like to answer this question, but an important element, I understand, refers to the education program.

To date, what has been done in that regard? What do you plan for the future, as well?

Mr. KNECHT. I would like to ask Mr. Miner to tell about that as well.

Mr. MINER. We approach each sanctuary on a site specific basis. The *Monitor* sanctuary has some very specific, what we call management-related, research needs associated with it. For example, examining and measuring the integrity of the hull to answer a question that was at one time a burning question: should the *Monitor* be raised? The integrity of the hull has been tested. We have continuing testing and monitoring. That research answers management questions which are important to us in terms of how we handle the sanctuary.

In the case of Key Largo there have been environmental quality-related studies done to measure the water quality and other elements in the ecosystem.

Basically, when we think of sanctuaries they are multiple-use areas. All of them are available for public recreational use in many forms.

Mr. DYSON. If I may interrupt, wouldn't one of the primary functions and purposes of having sanctuaries be for research?

Mr. MINER. Yes.

Mr. DYSON. How else would you, you know, conduct studies except on site?

Mr. MINER. That is correct. Our intention is to set up management-related research to help us maintain the integrity of the area for the stated purposes of the sanctuary. All of the areas we would have in sanctuaries are special areas for one reason or another. They are, then, logically good places to conduct environmental research.

Mr. DYSON. How are your findings reported.

Mr. MINER. The findings of the research?

Mr. DYSON. Yes. I am certain that an individual scientist or environmentalist who was involved would have it, but for the general public, for us?

Mr. MINER. We started what we call a technical publication series to publish results of all the research conducted in any of the sanctuaries. That will be available through NOAA and other sources as well.

Mr. DYSON. I will switch horses now.

Is there a sanctuary in Maryland?

Mr. MINER. Currently, we are working with the State of Maryland on an estuarine sanctuary proposal.

Mr. DYSON. That was part of the four I think you referred to in my colleague's questioning, four new ones?

Mr. MINER. No. We are working with the State of Maryland to develop a multisite estuarine sanctuary on Chesapeake Bay.

Mr. DYSON. That is the largest inland body of water in the country; where is it?

Mr. MINER. The Rhode River and Monie Bay are two locations to be considered.

Mr. DYSON. Do most of the States support the programs? What role does the State legislature play in it? Who gives the approval to you on that, for instance, in the State of Maryland?

Mr. MINER. Considering there are two different programs, in the case of the estuarine sanctuary——

Mr. DYSON. Well, we only have one in Maryland, right?

Mr. MINER. Yes. In this case, since there is a matching program of land acquisition, the State government would have to commit to 50 percent of the costs involved for acquiring land, and in some cases that money has to be appropriated by the legislature, and in others it comes out of State agencies. In all cases, the Governor of the State is asked to concur with the action being taken.

Mr. DYSON. We have an open spaces fund in Maryland, and part of the transfer tax goes into that. Is that where you get your money?

Mr. MINER. I don't know. Where do the funds of the estuarine sanctuary program come from?

The STAFF. They could come from the fund you mentioned.

Mr. MINER. In the California sites, the Governor of the State has to approve the sanctuary, much like the President of the United States has to approve the designation.

Mr. DYSON. I have received one of these cards anonymously, "Excuse me, your 5 minutes is over."

Mr. D'AMOURS. I will claim credit as the author of that card if the anonymity bothers you.

Mrs. Schneider?

Ms. SCHNEIDER. I am the one who is beneficiary of everyone going overtime and asking all my questions.

But I do have a question. Considering the marine sanctuaries program has been far more controversial than the estuarine program, do you think it is perhaps due to the actual administration and implementation of those two separate programs, or do you think it may have something to do with the narrow restriction of the estuarine program as it relates strictly to research and education?

Mr. KNECHT. I think you are right. The estuarine sanctuary program in general is more restrictive. It involves a land and water acquisition program. Funds are made available to acquire land, usually through a willing sale. So eminent domain is not usually used. It is seen by everyone in a positive light. Willing sellers and local interests are usually in favor, as is the State and as is the Federal Government, and a beneficial result occurs.

In the marine sanctuary area, the proposed designation of an area is seen by certain ocean users as affecting their ability to continue to use that piece of ocean space. Therefore, it is more controversial.

Ms. SCHNEIDER. Because of the site itself, and not because of administration?

Mr. KNECHT. I think so.

Ms. SCHNEIDER. Another question I have relates to the overall management of marine sanctuaries. Do you see a possibility of the States and local agencies of government assuming responsibility in the management areas?

Mr. KNECHT. For the marine sanctuary programs?

Ms. SCHNEIDER. Yes.

Mr. KNECHT. In many cases it would be appropriate. We have used our funds in some cases to carry on local management. It is true in Florida, and will be true in certain other places such as California.

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In well, offshore areas, it would be less appropriate and less feasible, I think.

Ms. SCHNEIDER. When there is a shift in this administration of responsibility from the Federal Government to the State governments, what goes in that shift as well is the responsibilities for dollars for management. Might this not be one of those programs that, if the State is given the responsibility to pay for the management process, might choose not to even get involved, and, therefore, the entire marine sanctuary program will suffer if the Federal Government does not continue to be involved in it?

Mr. KNECHT. Well, I would think many States would not—if the areas to be protected are well offshore—see the larger national interest in setting up management programs and protection programs for the resources at issue.

In other cases, where they are close in, for example, as in the coral reef off the coast of Florida, those reefs are within 10 or 12 miles of the shoreline, and in that case the protection of the reef systems just beyond 3 miles are seen as important by the State, just as important as those just within the 3 miles.

Ms. SCHNEIDER. So it is important that we attempt to maintain Federal funding if we want to maintain the program?

Mr. KNECHT. I believe so.

Ms. SCHNEIDER. Thank you.

Thank you, Mr. Chairman.

Mr. D'AMOURS. Thank you, Mrs. Schneider.

And Mr. Knecht, thank you very, very much.

Mr. BREAUX. Will the chairman allow me one question?

Mr. D'AMOURS. Of course.

Mr. BREAUX. Thank you, Mr. Chairman.

Bob, I am concerned, as I know many associations are, about the impact on fishing, commercial and sport fishing, of these sanctuary regulations. For example, in the Gray's Reef area off Georgia, the statement by NOAA indicates that the proposed area is a biologically productive live bottom reef, including seaweeds, vertebrates, fish and turtles, which I am sure are very important to protect. But I am concerned that some of the things that are going to be regulated is wire trap fishing, bottom trawling, and the like.

Similarly, in the Looe Key off Florida, the proposed regulations would include regulations on spear fishing, wire trap fishing, and lobster potting, among others. My concern is that the marine sanctuary program, here, is getting into areas and regulating things that I think should be regulated by other acts.

I would like to carefully examine how commercial and sport fishing are addressed in these regulations. I think the fishing industry has a valid concern about this area of the regulations; that is, about where they can fish.

Mr. KNECHT. I agree with your implied point that the marine sanctuary device should not be seen as a piggyback. It should not be seen as a way to manage oil or gas, or constrain recreational and commercial fishing activity. I am told and I believe the impact of the regulations you cited is absolutely nominal on commercial fishing in the two areas.

How are we trying to insure that that is the case? We have had a number of public hearings, a number of draft statements of proposed regulations that have been commented on by the interests.

Mr. BREAUX. There is no question that the Florida fishing industry adopted a resolution opposing the regulations.

Mr. KNECHT. But I don't think they have made a case that their interests have been curtailed by the Looe Key area.

Mr. BREAUX. I think it could be taken care of by the Fisheries Management Act.

Thank you, Mr. Chairman.

Thank you, Bob.

Mr. D'AMOURS. Thank you, Mr. Knecht.

The next group of witnesses represent State governments: Gary Magnuson from California, assistant director for resources in their Washington office; Dr. Elton Gissendanner of Florida, the executive director of the Department of Natural Resources; and Ed Reilly—where else but from Massachusetts—assistant secretary of environmental affairs.

Gentlemen, if you would come up to the table, you may sit as a panel.

PANEL OF STATE REPRESENTATIVES CONSISTING OF: GARY MAGNUSON, ASSISTANT DIRECTOR FOR RESOURCES, WASHINGTON OFFICE OF GOV. EDMUND G. BROWN, JR., OF CALIFORNIA; AND DR. ELTON GISSENDANNER, EXECUTIVE DIRECTOR, DEPARTMENT OF NATURAL RESOURCES OF THE STATE OF FLORIDA; AND ED REILLY, ASSISTANT SECRETARY OF ENVIRONMENTAL AFFAIRS OF THE STATE OF MASSACHUSETTS

Mr. MAGNUSON. Good morning, Mr. Chairman.

Mr. D'AMOURS. Good morning.

Is Mr. Reilly with us?

I will repeat, as I said before the meeting, gentlemen, that we would appreciate it very much if you could submit your statements for the record, where they will be printed, and try to limit your summaries to approximately 5 minutes. We would very much appreciate that.

Mr. MAGNUSON. Good morning, Mr. Chairman, and other members of the committee. My name is Gary Magnuson.

As the assistant director for resources of California, Governor Brown's Washington office, I appreciate the opportunity to appear before you on behalf of the Governor and the California Coastal Commission in support of legislation to reauthorize title III of the Marine Research and Sanctuaries Act.

At this time, I respectfully request that my prepared statement and attachments be made part of the hearing record. The statement indicates our support for the continuation of the National Marine Sanctuary program, provides details on the two California marine sanctuaries, and presents justifications for the exclusion of hydrocarbon development within such designated sanctuaries.

As you requested, Mr. Chairman, I will highlight our concerns.

[The prepared statement of Mr. Magnuson follows.]

Statement by R. Gary Magnuson, Assistant Director for Resources, State of California, Washington Office

INTRODUCTION

On behalf of California Governor Edmund G. Brown, Jr. and the California Coastal Commission, I appreciate the opportunity to appear before you today to present the views of the State of California with respect to the reauthorization of Title III of the Marine Protection, Research, and Sanctuaries Act of 1972 and more specifically, the continuation of the National Marine Sanctuary Program.

The State of Calfornia has been working closely with the National Oceanic and Atmospheric Administration (NOAA) to establish marine sanctuaries in three areas offshore of California. The marine sanctuary program offers this State, as well as the rest of the Nation, an opportunity to set aside unique marine areas for the enjoyment and education of future generations, much as the National Park System does on land. No other statute or program has as its primary objectives the comprehensive long-term protection of unique marine environments. Therefore, I strongly urge reauthorization of Title III of the Marine Protection Research and Sanctuaries Act of 1972, as amended.

Rather than comment on Title III section by section, I would like to briefly describe the contribution of the National Marine Sanctuary Program to California and to highlight the benefits we feel can be accrued from the continuation of the program. Also included as attachments to my statement are narratives providing details on the marine sanctuary program in California and the issue of excluding future oil and gas development within California's two marine sanctuaries.

As you are aware, two sanctuaries have recently been designated offshore of California. Both are unique and nationally significant marine areas, which complement adjacent National Park or wilderness areas on land. The Santa Barbara Channel Islands Marine Sanctuary, designated September 21, 1980, surrounds the new Channel Islands National Park. The Point Reyes-Farallon Islands Marine Sanctuary, designated January 16, 1981, ties together a pristine marine area bounded on the landward side by the Pt. Reyes National Seashore and on the seaward side by the Farallon Islands, a National Wildlife Refuge.

Widespread public support for designation resulted not only from recognition of the need to set aside and comprehensively manage these ocean areas, but also as a result of NOAA's exemplary outreach program for public and agency participation in the designation process during the past three years. Two issues which were raised very early in the designation process were need for the program and cost. Initial concern that the program might duplicate existing Federal programs was dispelled by findings on the part of several State agencies which found no other Federal or State program or statute which provided both for comprehensive management and long-term protection of a geographically-specific marine area.

It has become clear that the multiple agency approach to regulation is inadequate as development pressures build. No agency now coordinates the diverse permitting and regulatory authorities of the many agencies which have some responsibility in these areas. In addition, funds for enforcement of existing regulations are inadequate. A major benefit of the marine sanctuary program is the coordination of the various regulatory authorities and additional funds for enforcement.

This directly relates to the cost of the program, which will be minimal as a direct result of reliance on existing regulatory agencies for management and enforcement, with a coordinator role performed by a single santuary manager to avoid unnecessary duplication of responsibility.

In the past, the need for the National Marine Sanctuary Program was not apparent in California as activity around the Santa Barbara Channel Islands and between Pt. Reyes and the Farallons was relatively sparse and posed no serious threat to the preservation of either area's marine resources. The remoteness of the Islands, the generally rough offshore water conditions throughout these areas and the mainland coast's dominant recreational/wilderness character all discouraged intensive development. But this is changing as coastal access improves, tanker traffic increases from Alaskan oil transhipment, and California OCS lease sales are planned with increasing frequency.

The California coastline is visited each year by people of the State, the Nation, and numerous other countries, as well. Their interest in the marine environment is evidenced by severely overburdened recreational and interpretive facilities which allow them access to, and inform them about marine life. The need for additional interpretive facilities is particularly acute in the area encompassed by the proposed Monterey-Big Sur Marine Sanctuary. Each dey the California Department of Parks and Recreation has to turn away visitors from its Pt. Lobos underwater Park and

from its facility at Ano Nuevo Island which allows the public to observe breeding colonies of seals and sea lions.

It is our sincere hope that reauthorization of Title III will result in adequate funding support for NOAA to continue its exemplary public outreach program in the development of management and interpretive programs for the Santa Barbara Channel Islands and Pt. Reyes-Farallons National Marine Sanctuaries.

The State of California is blessed with unique, sensitive, and bountiful marine resources within its ocean waters including: sea otters, seals and sea lions, six pinniped species listed as endangered or threatened under provisions of the Endangered Species Act of 1973, the endangered blue, fin, and humpback whales, and the endangered brown pelican. The marine sanctuary program for California has been a success, not only because it has obvious benefits to the state's resource management and protection programs, but also because of the opportunity it has provided for positive public action in behalf of resource protection.

In sum, the State of California supports legislation to reauthorize the marine sanctuary program. As we rely more and more on the Nation's nearshore ocean waters for food, energy, transportation, recreation and numerous other uses, we must set aside a few representative marine areas to be preserved in their natural state for the enjoyment and education of future generations.

ATTACHMENT 1

THE MARINE SANCTUARY PROGRAM IN CALIFORNIA

In his 1977 Environmental Message to Congress, President Carter included reference to the Marine Sanctuaries Program. He stated that "Existing legislation allows the Secretary of Commerce to protect certain estuarine and ocean resources from the ill effects of development. I am, therefore, instructing the Secretary of Commerce to identify possible sanctuaries in areas where development appears imminent."

The program was thus billed as general compensation to the coastal states for the increasing industrial development occurring off their coastline, especially offshore oil development. This gave impetus to the program which had been dormant since its inception in 1972 with the passage of the Marine Protection, Research and Sanctuaries Act. OCZM was delegated the responsibility for administering the program for NOAA, and with a fresh directive from the President, they proceeded rapidly to develop an extensive list of suitable candidate sites.

The State became involved in late 1977 when OCZM requested nominations of suitable sites from all interested parties. In response, State agency staff members developed a list of ten candidate sites using criteria developed by OCZM. The California Coastal Commission staff submitted the list to NOAA on behalf of the Resources Agency. After analyzing the merits of the numerous sites recommended by Federal and State agencies, local authorities and private interests, five sites were selected by NOAA for further study. In order to solicit early public response to the program and gather information about the sites, NOAA held workshops in April 1978 jointly with the California Coastal Commission to consider possible sanctuaries offshore San Diego, Tanner and Cortes Banks, the Santa Barbara Channel and Islands, Monterey Bay, and Point Reyes/Farallon Island. After the workshops were held, NOAA gathered and analyzed the data on each of the sites, with the objective of distributing a White Paper on five sites. The White Papers were intended to stimulate further discussion and public comment on the desirability of marine sanctuaries at these various sites, after which the feasibility of each site would be reviewed.

NOAA's experience with the White Paper on the Flower Garden Banks offshore Louisiana and Texas in the summer of 1978 dictated a change in approach. The White Paper was too detailed in its description of possible regulations without including the necessary supporting information, which would be equivalent to that of a Draft Environmental Impact Statement.

NOAA therefore decided that the first formal document on a possible marine sanctuary site should be a DEIS. However, the State requested written materials describing the candidate areas and a range of alternative regulatory approaches upon which the California Coastal Commission could hold public hearings.

In Decemer 1978, NOAA published an Issue Paper on Possible California Marine Sanctuary Sites. This was the culmination of a long series of communications between the Coastal Commission, as state lead agency for the marine sanctuary program, the NOAA's Office of Coastal Zone Management. The NOAA issue paper, which was sent to over 2,000 interested parties, responded to California's request for early public and state participation in the process for marine sanctuary site selection and designation.

The three areas selected by NOAA as active marine sanctuary candidates were the waters around the northern Channel Islands and Santa Barbara Island; the Point Reyes/Farallon Island area; and the Monterey Bay area. After March and April public hearings on the NOAA Issue Paper in 1979, the Coastal Commission, as State lead agency for the program, recommended that NOAA proceed with the designation process by preparing a DEIS for all three candidate areas.

THE SANTA BARBARA CHANNEL ISLANDS MARINE SANCTUARY

In their formal recommendation to NOAA to proceed with designation in three offshore areas, the Coastal Commission urged that the Channel Islands candidate be given priority because the Interior Department was considering leasing tracts around the Islands for oil and gas development in Outer Continental Shelf (OCS) Lease Sale #48. The State of California, which had consistently recommended against leasing of tracts adjacent to the Channel Islands, wanted the D.O.I. to be aware of the states continuing interest in setting aside these areas for their recreational and wildlife values.

In June 1979 NOAA held informal public meetings in Santa Barbara and Ventura, California, to discuss preliminary drafts of certain chapters of the DEIS on the Channel Islands site. Strong public sentiment against the industrialization of the waters surrounding the Islands came out of these meetings. On the basis of public testimony and research conducted for the DEIS, both NOAA and the State requested deletion of tracts immediately around the Northern Channel Islands. Secretary of Interior Andrus deleted 24 tracts around the Islands from the sale in recognition of strong public support for the proposed Marine Sanctuary.

In November 1979, NOAA issued proposed regulations and the DEIS for public review. NOAA held public hearings on the DEIS in Ventura and Santa Barbara on January 10 and January 11, 1980, and accepted written comments until January 23. The comment period was extended to February 4, 1980, and again to March 7, 1980, to assure receipt and consideration of comments from the maximum number of interest parties. On January 9, 1980 the Coastal Commission adopted a preliminary position on the proposed Channel Island Marine Sanctuary which favored a 12 nmi boundary rather than NOAA's 6 mile boundary around the islands and inclusion of the entire Santa Barbara Channel within the sanctuary to give recognition to the important interrelated marine resources of the area. Despite this recommendation for larger boundaries; NOAA published a FEIS for the proposed sanctuary which adhered to their original 6 nmi buffer zone around the islands, which was favord by the largest number of commenters.

Governor Brown wrote OCZM on May 22, 1980 pledging his support for inclusion of the marine areas under state jurisdiction within the proposed sanctuary.

On June 19, 1980, the California Coastal Commission resolved to strongly support Presidential designation of the Marine Sanctuary for the waters around the four northern Santa Barbara Channel Islands. In their resolution they noted that these islands and their surrounding waters are one of the last areas offshore California where marine mammals and seabirds can breed, feed and rest with little disturbance from human activity. They further endorsed the basic purposes of the proposed Sanctuary to prohibit industrial activity such as oil and gas development near the islands to enhance enforcement of existing wildlife protection regulations; and to coordinate and highlight research and education activities.

The Commission noted that Governor Edmund G. Brown, Jr. had already stated his support for the Sanctuary and for inclusion of marine areas in the State's jurisdiction within it and the Commission urged President Carter to join with Governor Brown in establishing the Channel Islands Marine Sanctuary.

On September 21, 1980, the President did approve the designation of the Channel Islands National Marine Sanctuary including the waters within six nautical miles of the northern Channel Islands (San Miguel, Santa Rosa, Santa Cruz, and the Anacapas) and Santa Barbara Island off the coast of Southern California: a total area of approximately 1252 square nautical miles.

The state is now working closely with NOAA and other interested Federal agencies to plan for management, research and educational activities in the sanctuary.

THE POINT REYES-FARALLON ISLANDS MARINE SANCTUARY

In response to the Commission's April 3, 1979 recommendation to NOAA to proceed with the designation process for the Pt. Reyes-Farallons Sanctuary Proposal, preliminary drafts of the major DEIS Chapters were distributed to interested parties. Representatives of the Sanctuary Program Office within NOAA held a public meeting in Point Reyes Station, California, on November 5, 1979, to discuss these chapters and answer questions about the program. The DEIS for the Point

Reyes/Farallon Island areas was distributed in March 1980. Public hearings were held on May 13, 1980, in San Francisco and Point Reyes, California.

Concurrently, the California Coastal Commission, as part of its regularly scheduled meeting held a public hearing. As a result of favorable public testimony and their staff recommendation, the Commission adopted a position on the Draft Environmental Impact Statement on the Proposed Point Reyes-Farallon Islands Marine Sanctuary which strongly supported the objectives of the National Oceanic and Atmospheric Administration's Marine Sanctuary Program for California, and the Point Reyes-Farallon Islands Marine Sanctuary which was proposed as part of the Program. The Commission also commended NOAA for the execellent quality of the DEIS which constituted the most thorough and up-to-date catalogue of resources and resource uses ever published for the area. On May 22, 1980, Governor Edmund G. Brown, Jr. wrote Mr. Michael Glazer, Assistant Administrator for NOAA in support of both the Point Reyes-Farallon Islands Marine Sanctuary and the Santa Barbara Channel Islands Marine Sanctuary, noting that "Establishment of these two sanctuaries will provide the needed, overall management that will insure protection of the abundant seabirds, whales, and other marine life that inhabit these unique areas."

Extension of the comment period on the DEIS delayed publication of the Final Environmental Impact Statement until September 26, 1980. The FEIS incorporated several changes suggested in both state and federal level hearings during the extended comment period. Following the comment period on the FEIS, consultation with affected Federal agencies and approval by the Secretary of Commerce, it was forwarded to the President.

On January 16, 1981 the long cooperative process between NOAA and the State of California culminated in Presidential approval of the designation of the Point Reyes-Farallon Islands National Marine Sanctuary. The sanctuary boundaries encompass a 948 square nautical mile area off the California Coast between the marineland shore just North of San Francisco and the Farallon Islands, twenty miles to the west.

The waters off Point Reyes and around the Farallon Islands are especially noteworthy for the seabird and marine mammal populations thrive there. The Farallon Island support the largest seabird rookeries in the contiguous United States, including 12 of the 16 known species of seabirds found on the West coast. The waters also provide substantial recreational and commerical fishing opportunities.

THE OIL AND GAS DEVELOPMENT ISSUE

While a prohibition on future oil and gas development may not be appropriate for all sanctuaries, it is crucial in both California sanctuaries.

SANTA BARBARA CHANNEL ISLANDS SANCTUARY

The Resources Agency of the State of California recommended consideration of the Santa Barbara Channel Islands as a marine sanctuary based on strong evidence of need presented in an extensive analysis of the effects of offshore oil and gas development on Southern California published by the Governor's Office of Planning and Research in 1977, the Environmental Impact Statements for OCS Lease Sale 35 and several of the "baseline studies" carried out for the Lease Sales. These reports all document that many important species found in the Southern California Bight are sensitive to petroleum development activities as well as to oil spills resulting from these activities. Marine mammals and seabirds breeding on the Channel Islands and foraging in surrounding waters are especially vulnerable, because the California mainland has become almost totally inhospitable to the breeding, feeding and resting of marine mammals and many kinds of seabirds. The Channel Island and adjacent waters offer the last relatively undisturbed natural areas in the Southern California region for such marine life to flourish or regenerate. According to the findings of BLM's baseline studies, many seabird populations are already in jeopardy. An oil spill during the nesting season could devastate those populations.

The DEIS and FEIS for the Santa Barbara Channel Islands Sanctuary thoroughly discussed the advantages of keeping such development beyond six nautical miles of the islands. These advantages included provision of a buffer area to increase response time for oil spill cleanup efforts and provision of a buffer area between noise and visual disturbances and important marine life habitats. Therefore, the State of California strongly supports the sanctuary policy of prohibiting new Interior Department leasing of OCS tracts within six nautical miles of the islands. Secretary Andrus deleted 24 tracts north of the Channel Islands from OCS Lease Sale 48, in recognition of the wildlife value of the Islands and adjacent waters. But the Interior

Department has recently incuded tracts within six nautical miles of the south sides of the Islands for consideration in Lease Sales 68 and 73.

Only Presidential designation of this sanctuary assured that these specifc water areas would never be leased for petroleum development. This kind of assurance, that the most valuable marine resources areas will never be leased, is needed for OCS petroleum development to proceed in an orderly and balanced manner under the OCS Lands Act Amendments of 1978.

POINT REYES-FARALLON ISLAND MARINE SANCTUARY

The prohibition on oil and gas activities in the Point Reyes-Farallon Island Sanctuary also establishes this marine area as a buffer between possible oil spills occuring outside the sanctuary as a result of Lease Sale 53 or future sales, and the highly sensitive island and mainland coastal and intertidal habitats. These habitats range from protected marsh areas to unprotected coastal rocks, and are vital to the rich bird, fish, marine mammal, and intertidal populations in the area. Particularly vulnerable are the Farallon Islands which support the largest seabird rookeries in the contiguous United States.

The existence of a buffer zone ensures that in the event of an oil spill, the oil would have to undergo a minimum amount of weathering before reaching more sensitive nearshore and intertidal areas. The weathering process would allow the more toxic fractions of the petroleum to evaporate and would permit some natural dispersion to occur. Also, San Francisco Bay-based contingency crews would have more time to reach the spill site and deploy containment equipment either at sea or around entrances to highly vulnerable lagoons and estuaries.

The prohibition on future oil and gas development within the sanctuary complements the existing oil and gas prohibition on Federal OCS leasing within 15 miles of the Pt. Reyes Wilderness. This prohibition excludes the major portion of sanctuary waters. Leasing in the remainder of the sanctuary would not be consistent with the intent of the OCS Land Act Amendments which recognize the uncomparable scenic and wildlife values of the area.

Permanent inclusion of these waters in the sanctuary is considered to be the only way to assure the marine mammal and seabird colonies of the area are given permanent federal protection from industrial development in adjacent waters.

While the prohibition on future oil and gas development could represent a loss of potentially recoverable hydrocarbon reserves, all available data indicates that the resources are not significant. None of the tracts selected for consideration for Lease Sale 53 fall entirely within the marine sanctuary, however, two tracts fall partially within the sanctuary. Since the resources underlying these two tracts would almost certainly be at least partially recoverable by means of directional drillings, this prohibition would have little impact on the amount of hydrocarbons extracted from Federal leases in the area.

Mr. MAGNUSON. As Mr. Knecht noted, two sanctuaries have recently been designated offshore in California. Both are unique and nationally significant marine areas which complement adjacent National Park or wilderness areas on land. The Santa Barbara Channel Islands Marine Sanctuary, designated September 21, 1980, surrounds the new Channel Islands National Park. The Point Reyes-Farallon Islands Marine Sanctuary, designated January 16, 1981, ties together a pristine marine area bounded on the landward side by the Point Reyes National Seashore and on the seaward side by the Farallon Islands, a National Wildlife Refuge.

In the past, the need for the national marine sanctuary program was not apparent in California as activity around the Santa Barbara Channel Islands and between Point Reyes and the Farallons was relatively sparse and posed no serious threat to the preservation of either area's marine resources. The remoteness of the Islands, the generally rough offshore water conditions throughout these areas, and the mainland coast's dominant recreational/wilderness character all discouraged intensive development. But this is changing as coastal access improves, tanker traffic increases from Alaskan oil transhipment, and the California OCS lease sales are planned with increasing frequency.

California is proud of its recently designated sanctuaries. The designation of the Channel Islands and Point Reyes Marine Sanctuaries was the result of the State's continuing working relationship with NOAA and the Department of the Interior in the proper management, protection, and development of California's offshore resources.

The designations were also the culmination of nearly unanimous local endorsements, widespread public support and the act of backing of the California congressional delegation and Governor Brown. I might also add, Mr. Chairman, that the support of the members of this committee, particularly Mr. Studds, Mr. Bonker, Mr. AuCoin, Mr. Bonior, Mr. Lowrey, and others were key to the designation of the Channel Islands Marine Sanctuary last year.

We believe NOAA activities under the program supplement other related statutory authorities to offer a total management umbrella to preserve distinct marine resource areas.

The State of California enthusiastically looks forward to working with NOAA, the National Park Service, and others to provide interpretative programs for the sanctuaries. To this end, we urge the members of the committee to seek adequate funding support for the program.

I might add that we were also pleased to learn that Mr. Reagan included money in his budget for the continuation of this program.

The State of California has sought a balance between protecting its distinct and valuable offshore marine resources and the need to develop California OCS oil and gas resources. It has been determined that in order to protect the particularly vulnerable and significant sea bird rookeries, marine mammals and their breeding grounds, commercial and sport fisheries, and marine recreational resources, regulations for the two sanctuaries propose that oil and gas development within the sanctuaries be prohibited.

It should be emphasized, however, that the State will continue to work with the Department of the Interior and private enterprise for the safe and beneficial development of the OCS.

In sum, Mr. Chairman, the State of California supports legislation to reauthorize the marine sanctuaries program. As we rely more and more on the Nation's near-shore ocean waters for food, energy, transportation, and recreation and numerous other uses, we must set aside a few marine areas to be preserved in their natural state for the enjoyment by future generations.

Thank you.

Mr. D'AMOURS. Thank you, Mr. Magnuson.

We will now hear from Dr. Gissendanner.

Mr. GISSENDANNER. Good morning, Mr. Chairman. My name is Elton Gissendanner.

The State of Florida appreciates this opportunity to appear before you to present its views on the national marine sanctuary program, and its administration by the National Oceanic and Atmospheric Administration.

I have submitted a statement.

[The prepared statement of Dr. Gissendanner follows:]

STATEMENT OF DR. ELTON J. GISSENDANNER, EXECUTIVE DIRECTOR, FLORIDA DEPARTMENT OF NATURAL RESOURCES

Good morning, Chairman Breaux, Chairman D'Amours and members of the subcommittes. I am Elton J. Gissendanner, Executive Director of the Florida Department of Natural Resources.

The State of Florida appreciates this opportunity to appear before you to present its views on the National Marine Sanctuary program, and its administration by the National Oceanic and Atmospheric Administration.

The Florida Keys are paralleled by a magnificent living coral reef. This unique geological configuration combined with its pleasant weather make the Keys a haven for tourists and winter residents. Tourism is a major industry in the Keys where the clear warm water and beautiful coral formations attract thousands for swimming, boating, fishing, skin diving and sight seeing. But the reef tract already shows signs of damage. South Florida is one of the fastest growing urban areas of the country. While the effects on the reef from dredging and filling, channelization, industrial discharges and air pollution associated with this growth are unclear, the impact on the reef tract of 400,000 visitors a year is visible: broken and overturned corals, discarded beverage containers and fishing line, and scarred patches on grassy areas all attest to improper operation of boats and carelessness or ignorance on the part of some visitors.

Corals are delicate structures and are vulnerable to abuse from divers. Even a small scrape from divers standing or rubbing on coral is enough to cause terminal infection of the coral by blue-green algae. Coral collection and wreck hunting damages the reef as do anchorings and boat surroundings.

The coral reefs are actually the skeletal deposit produced by billions of invertebrate life forms over thousands of year. While this history suggests durability, the reef itself is a fragile and vulnerable structure. Without careful attention to the coral reef's environmental needs, it continued healthy existence will be threatened.

Protection and management of these valuable and beautiful coral reefs is made especially difficult because portions of the reef are in State waters while major portions of the main reef tract are in Federal waters.

The national Marine Sanctuary program provides a unique service to the State of Florida. Through this program, the State can look forward to the long-term protection and management of some of the most outstanding areas of this important resource.

Unlike other programs, the Marine Sanctuary designation allows protection of the entire habitat and ecosystem. Such protection is critical to a coral reef which is a highly integrated and interdependent living system.

Florida is fortunate to have two marine sanctuaries near its waters: Key Largo Marine Sanctuary in the upper Keys and Looe Key Marine Sanctuary in the lower Keys.

Key Largo Marine Sanctuary is adjacent to the John Pennekamp Coral Reef State Park. The State Park was established by the State of Florida in 1961 to insure protection of coral reefs in State waters. In 1972, Congress enacted the Marine Protection, Research and Sanctuaries Act, and the reef system off Key Largo adjacent to the State Park was nominated for marine sanctuary status to protect and preserve the coral reef ecosystem in its natural state, oversee activities within the sanctuary, insure the health and well being of the coral and associated flora and fauna, and guarantee the continuance of the areas aesthetic and recreational appeal. The Florida Department of Natural Resources received its first NOAA grant for the Sanctuary in 1976–77.

The Key Largo Coral Reef National Marine Sanctuary, encompassing 100 square miles of submerged coral architecture, is part of the most extensive living coral reef system in the continental United States.

The Sanctuary extends from the three-mile offshore boundary of the adjacent John Pennekamp Coral Reef State Park to the 300-foot depth line, some eight miles at sea. Its length stretches along 20 miles of clear tropical waters.

The structure and color of the coral formations are breathtaking and lure more than 400,000 visitors a year who come for the abundant sport fishing or spectacular snorkeling and scuba diving opportunities in the diverse marine ecosystem.

Not only important for its beauty, however, the reef acts as a self-repairing breakwater that shelters the land against the violence of ocean storms and hurricanes. The reef also offers food and habitat to more than 500 species of fish. Reef areas are the most biologically productive and diverse of all the natural marine communities thus making the sanctuary a living research laboratory. Rarely are such varied species of fish, crustaceans, mollusks and other marine organisms found within such easy reach. Scientists from all over the world have conducted research at the sanctuary.

Protection of the coral reef resources cannot be accomplished without effective surveillance of the area and enforcement of the regulations. These functions are handled by the Florida Department of Natural Resources and the U.S. Coast Guard. Currently, only the Coast Guard personnel have enforcement authority because, until recently, it was not possible to delegate Federal enforcement authority to State law enforcement officers. We have now requested NOAA to assist us in seeking a delegation of authority from the Coast Guard in order to achieve greater protection of the resource which can be provided because State employees are able to be present in the areas daily.

Our grant request for the Key Largo National Marine Sanctuary for 1981-82 includes continuation of a biologist to continue the current level of management of the sanctuary and the addition of a marine mechanic so that there will be an adequate level of maintenance for patrol and work boats necessary to sanctuary management. Other funding involves improving the level of resource monitoring, data collections and resource management consistent with the objectives outlined in the Sanctuary Management Plan.

The second national marine sanctuary, Looe Key, has only recently been designated. The 5.5 square mile national sanctuary is small but includes a beautiful and important area of the reef tract, including the main reef and associated patch reef and reef flat areas. The area includes all the major communities associated with the Florida Keys coral reef.

The State, in cooperation with NOAA, is now underway with developing management plans and locating a site for the sanctuary headquarters and visitors' center. Educational and national resources groups and local citizens have shown considerable interest in the sanctuary. We believe that the designation of Looe Key as a National Marine Sanctuary has already begun to serve as a catalyst for Federal, State and local cooperative efforts.

If funding for the Marine Sanctuaries Program were to be abolished, this one-of-a-kind resource would not receive the same level of management, protection or interpretation. Research on how to manage this unique system would be discontinued, or reduced. Without NOAA management, protection of the reef in Federal waters—where, as I have mentioned, the most important coral formation occur—would significantly diminish. The elimination of funding would suspend NOAA's research on water quality in the sanctuary. Recent scientific studies by NOAA have turned up a discovery of an additional deep area and have provided baseline date on all reefs within the sanctuary.

Before closing, I would like to take the opportunity to acknowledge the work of NOAA and its Office of Coastal Zone Management. Their work has always been helpful and has continually been cooperative in blending their program with the interests and goals of the state of Florida.

Finally, the State of Florida believes that it must protect and respect the vital resources of the State which are the amenities which bring it new residents and which encourage its visitors to return again and again to enjoy the Sunshine State. The Marine Sanctuary Program has proven to be a useful program in meeting these goals.

We urge you to re-authorize this program, and we look forward to continued good relations with NOAA and the Office of Coastal Zone Management.

Thank you.

Mr. GISSENDANNER. Florida is fortunate to have two marine sanctuaries near its waters, Key Largo Marine Sanctuary in the upper keys and Looe Key Marine Sanctuary in the lower keys.

Key Largo Marine Sanctuary is adjacent to the John Pennekamp Coral Reef State Park. The State park was established by the State of Florida in 1961 to insure protection of coral reefs in State waters.

In 1972, Congress enacted the Marine Protection, Research, and Sanctuaries Act, and the reef system off Key Largo adjacent to the State park was nominated for marine sanctuary status to protect and preserve the coral reef ecosystem in its natural state, oversee activities within the sanctuary, insure the health and well-being of the coral and associated flora and fauna, and guarantee the continuance of the areas esthetic and recreational appeal. The Florida Department of Natural Resources received its first NOAA grant for the sanctuary in 1976-77.

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The structure and color of the coral formations are breathtaking, and lure more than 400,000 visitors a year who come for the abundant sport fishing or spectacular snorkeling and scuba diving opportunities in the diverse marine ecosystem.

Not only important for its beauty, however, the reef acts as a self-repairing breakwater that shelters the land against the violence of ocean storms and hurricanes. The reef also offers food and habitat to more than 500 species of fish. Reef areas are the most biologically productive and diverse of all of the natural marine communities, thus making the sanctuary a living research laboratory.

Protection of the coral reef resources cannot be accomplished without effective surveillance of the area and enforcement of the regulations. These functions are handled by the Florida Department of Natural Resources and the U.S. Coast Guard.

The second national marine sanctuary, Looe Key, has only recently been designated. The five point or 5½ square mile national sanctuary is small, but includes a beautiful and important area of the reef tract, including the main reef and associated patch reef and reef flat areas. The area includes all the major communities associated with the Florida keys coral reef.

I might mention that we believe the fisheries impact of these sanctuaries has not, and will not, negatively affect the commercial fisheries in the State of Florida. We also believe there will be no detriment or no hindrance to the recovery of energy resources that might be present under these reefs, which could be recovered by slant drilling.

Finally, the State of Florida believes that it must protect and respect the vital resources of the State which are the amenities which bring it new residents and which encourage its visitors to return again and again to enjoy the Sunshine State. The marine sanctuary program has proven to be a useful program in meeting these goals.

I have a wire service report that in Palm Beach County 3 days ago, citizens formed themselves into an organization called the Reef Rangers. They have formed a chapter of the Coral Reef Society, which is an international organization, and while the Marine Patrol, which I direct in Florida, welcomes all the support we can get, we feel the resources of this area are so important that they should not be left to citizen enforcement, or what might deteriorate into some vigilante action, and they might run across smuggling, and somebody could get hurt.

We urge you to reauthorize this program, and we look forward to continued good relations with NOAA and the Office of Coastal Zone Management.

Mr. D'AMOURS. Thank you, Dr. Gissendanner. I have a few brief questions.

Mr. Breaux referred earlier to—I am sorry. I did not notice the entrance of Mr. Reilly from the State of Massachusetts. Mr. Reilly, you may not have been here earlier when I suggested that any written testimony may be submitted and made part of the record, and that you confine your remarks to a summary of your testimony, approximately 5 minutes.

We would appreciate that very much.

Mr. REILLY. Thank you very much.

I am Ed Reilly, here representing the Governor of Massachusetts, Edward J. King. I would like to express our strong support for the marine sanctuaries program (title III of the Marine Protection, Research and Sanctuaries Act).

The coastal and marine waters of this country have a special and historic importance. They are used in a variety of ways—for fishing, transportation, recreation, and industrial and commercial development.

These, as well as other demands on the oceans will only increase in the future. It becomes essential then that we not only retain but improve our ability to wisely manage this important resource. Ocean management programs are vital. They provide the opportunity to insure careful management of marine resources, especially through the cooperative efforts of State and Federal governments.

We believe the marine sanctuary program is a unique ocean management tool. Unlike many other laws, title III is designed to provide safeguards for areas, resources, and ecosystems of a special or unusual nature rather than being directed toward specific activities, impacts or species. This flexibility allows for a wide variety of management techniques for particular resources.

For example, only relatively small areas may be needed to protect historic sites or the habitats for certain threatened or endangered species. However, large natural or recreational areas or even an entire ecosystem can be managed if required. This is accomplished through the sanctuaries program without using broad prohibitions. Instead, a comprehensive management plan can be carefully tailored for each situation, site and resource to allow environmental, economic, and recreational interests to coexist under one protective umbrella.

In Massachusetts, we are not interested in seeing the sanctuaries concept used to obstruct or confuse existing State or Federal agencies dealing with marine resources. Rather, the sanctuaries program should be used to complement State and local efforts to protect these recources.

The program allows States to work cooperatively with the Federal Government to establish a management program. These programs can be dovetailed with existing State and local programs. For example, protecting the water quality or certain unique natural sites can be crucial to maintaining a strong and viable local or regional tourist or fishing economy. The State can also direct or share in the management of a marine sanctuary. We feel this is an important aspect of the program.

Other features of the marine sanctuaries program are well designed to support this management concept. A monitoring system

allows for a survey of existing knowledge of the area. This includes natural resources, environmental parameters, and human interactions and the development of an agenda for a research program to fill the gaps in that knowledge.

Additional information gathered and new perspectives gained will help in the future fine tuning of the management plan, making it more realistic, and responsive to the interests being protected.

Research of this type also provides for surveillance and enforcement, traditionally a weak point of environmental legislation. The marine sanctuaries designation also calls for an education or interpretation program, developed to make the public aware of the resources, their values and their interrelationships with other systems, including human activities.

We also feel the marine sanctuaries program compliments our State coastal zone management program and our Ocean Sanctuaries Act. In each case there is the common theme of protection through management and planning. As you may know, we are presently moving through the evaluation process of the sanctuaries program leading, we hope, to the designation of the central portion of Nantucket Sound.

Within the past week, this area was placed on the list of recommended areas. The designation of this area will allow the same level of protection that our state legislature has applied to more coastal areas. A comprehensive plan will be generated for the protection of a single geological and ecological entity presently overlain by artificial political boundaries. We look forward to the ability to mesh these State and Federal systems.

As we have noted in the Nantucket Sound process, there is considerable opportunity for citizens, interest groups and various levels of Government agencies to provide information, comments and opinions to aid in shaping the management plan. This public participation is vital for the development of a responsible and responsive program.

In Massachusetts, we have had considerable experience with the marine sanctuaries program. In fact, we have established State ocean sanctuaries in several areas off our coast that parallel the Federal program. All citizens, not just Massachusetts residents, benefit from the results of these management efforts, especially when they are coupled with the significant results of the Massachusetts coastal zone management program.

Consequently, we heartily endorse the reauthorization of the marine sanctuaries program, title III, as an important segment of this cooperative effort to protect the natural heritage of the oceans.

Mr. D'AMOURS. Thank you. Your written statement will be made part of the record at this point.

[The prepared statement of Mr. Reilly follows:]

STATEMENT BY EDWARD J. REILLY, EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS, ON BEHALF OF GOV. EDWARD J. KING OF THE COMMONWEALTH OF MASSACHUSETTS

On behalf of the Governor of Massachusetts, Edward J. King, I would like to express our strong support for the Marine Sanctuaries Program (Title III of the Marine Protection, Research and Sanctuaries Act).

The coastal and marine waters of this country have a special and historic importance. They are used in a variety of ways—for fishing, transportation, recreation

and industrial and commercial development. These, as well as other demands on the oceans will only increase in the future. It becomes essential then that we not only retain but improve our ability to wisely manage this important resource. Ocean management programs are vital. They provide the opportunity to ensure careful management of marine resources, especially through the cooperative efforts of state and federal government.

We believe the Marine Sanctuaries Program is a unique ocean management tool. Unlike many other laws, Title III is designed to provide safeguards for areas, resources, and ecosystems of a special or unusual nature rather than being directed toward specific activities, impacts or species. This flexibility allows for a wide variety of management techniques for particular resources. For example, only relatively small areas may be needed to protect historic sites or the habitats for certain threatened or endangered species. However, large natural or recreational areas or even an entire ecosystem can be managed if required. This is accomplished through the Sanctuaries Program without using broad prohibitions. Instead, a comprehensive management plan can be carefully tailored for each situation, site and resource to allow environmental, economic and recreational interests to co-exist under one protective umbrella.

In Massachusetts, we are not interested in seeing the Sanctuaries concept used to obstruct or confuse existing state or federal agencies dealing with marine resources. Rather, the Sanctuaries Program should be used to complement state and local efforts to protect these resources. The program allows states to work cooperatively with the federal government to establish a management program. These programs can be "dovetailed" with existing state and local programs. For example, protecting the water quality or certain unique natural sites can be crucial to maintaining a strong and viable local or regional tourist or fishing economy. The state can also direct or share in the management of a marine sanctuary. We feel this is an important aspect of the program.

Other features of the Marine Sanctuaries Program are well designed to support this management concept. A monitoring system allows for a survey of existing knowledge of the area. This includes natural resources, environmental paramters and human interactions and the development of an agenda for a research program to fill the gaps in that knowledge. Additional information gathered and new perspectives gained will help in the future "fine-tuning" of the management plan, making it more realistic, and responsive, to the interests being protected. Research of this type also provides the ability for noting changes in the quality and nature of the area. There are provisions for surveillance and enforcement, traditionally a weak point of environmental legislation. The Marine Sanctuaries Designation also calls for an education or interpretation program, developed to make the public aware of the resources, their values and their interrelationships with other systems including human activities.

We also feel the Marine Sanctuaries Program compliments our state Coastal Zone Management Program and our Ocean Sanctuaries Act; in each case there is the common theme of protection through management and planning. As you may know, we are presently moving through the evaluation process of the Sanctuaries Program leading, we hope, to the designation of the central portion of Nantucket Sound. Within the past week, this area was placed on the list of Recommended Areas. The designation of this area will allow the same level of protection that our State legislature has applied to more coastal areas. A comprehensive plan will be generated for the protection of a single geolgical and ecological entity presently overlain by artificial political boundaries. We look forward to the ability to mesh these state and federal systems.

As we have noted in the Nantucket Sound process, there is considerable opportunity for citizens, interest groups and various levels of government agencies, to provide information, comments, and opinions to aid in shaping the managemnt plan. This public participation is vital for the development of a responsible, and responsive, program.

In Massachusetts, we have had considerable experience with the Marine Sanctuaries program. In fact, we have established state ocean sanctuaries in several areas off our coast that parallel the federal program. All citizens, not just Massachusetts residents, benefit from the results of these management efforts, especially when they are coupled with the significant results of the Massachusetts Coastal Zone Management program.

Consequently, we heartily endorse the reauthorization of the Marine Sanctuaries Program, Title III, as an important segment of this cooperative effort to protect the natural heritage of the oceans.

Mr. D'AMOURS. I have a few questions.

Mr. Breaux mentioned that the battle was not only over hydrocarbons, but that the fishing industry had problems with it.

Since we have the Pacific coast represented here, and the northern and southern parts of the Atlantic coast, can you gentlemen bring the committee up to date as to whether or not there has been any recent opposition voiced by any of the fishing industry representatives?

Mr. MAGNUSON. Mr. Chairman, if I might respond for the west coast, we are fortunate, if my memory serves me correctly, that when the regulations were developed for the Channel Islands and the Point Reyes-Farallons Islands, that one of the restrictions that was not included in the regulations was for commercial and sport fishing.

So, fortunately, we do not have that controversy.

Mr. GISSENDANNER. In Florida, we do. I think I would characterize it as it relates to both sanctuaries. In the Key Largo Sanctuary, we do not allow any commercial fishing, except lobster pots. We do allow hook and line, if they want to do it.

We do allow, of course, all kinds of sports fishing, except spear fishing, if you want to call that a sport. We do not allow that at Key Largo.

That sanctuary has been in existence for a very long time, and whatever struggle existed over the establishment of that sanctuary with the interests you mentioned has been resolved years ago, and there is no attempt to reenter that area by commercial fishermen.

In the case of Looe, this area is totally in the Federal zone. They did suggest only 1 square mile of sanctuary. Your staff CZM had recommended considerably more than that. It was finally compromised instead of an area of 1 mile by 1 mile, an area of approximately 2½ by 2 miles.

The local fishing organization of the state, obviously, are opposed to any sanctuary, because they consider it a foot in the door rather than a quantative or substantive thing at this time.

In that area of the Florida Keys, we have an excess of 1 million lobster traps every season. So a 5.05-square-mile area excluded from lobster fishing is not a very great impact.

We do not allow fish traps at either location, and the landings of the commercial fishermen in Florida has not been impacted by the designation of the sanctuaries, and it will not be.

Mr. D'AMOURS. Mr. Reilly, I am familiar with most of the developments in Massachusetts. When Georges Bank was indicated as a potential sanctuary site, most of the fishermen in my State, and I was also contacted by fishermen from Massachusetts, were in favor of Georges Bank receiving a sanctuary designation.

I assume that would reflect your experience, and I would like to know if it does not, but has there been any recent reaction from the fishing industry to this program?

Mr. REILLY. As the Georges Bank Marine Sanctuary, which as negotiated would have called for the Regional Fishing Council to be the primary management of it, it received broad support from the fishing industry in New England.

Under the present proposal, it is not clear who the management would be, and the fishing industry is concerned about the final management. I think it is fair to say that they are in favor of the

program in that it protects their livelihood, but are concerned about the final management.

For that reason, they are involved in that process.

Mr. D'AMOURS. Thank you very much.

Mr. Pritchard, do you have any questions?

Mr. PRITCHARD. Thank you, Mr. Chairman.

Let me ask the gentleman from California, Mr. Magnuson: If I remember correctly, the administration came out with a large number of potential areas several years ago, and that raised a hassle with a variety of people all over the country. There were 120-odd areas.

Some of those areas undoubtedly were in California. You have three areas, now, that are designated.

Mr. MAGNUSON. We have two areas designated, one last December, the Channel Islands, and in early January, the Point Reyes-Farallons Islands. The Monterey Bay Sanctuary is still under consideration.

Mr. PRITCHARD. The Monterey Bay Sanctuary is still under consideration. I see. How many additional sanctuaries do you see coming on line in California in, say, the next 10 years?

Mr. MAGNUSON. It is my understanding that Monterey Bay is still being considered seriously. There were others nominated.

I do not have those with me, or on the tip of my tongue right now, but I believe the proposed Monterey Bay Sanctuary would be the next one if there is to be another California Marine Sanctuary. I do not know of any others that are seriously being considered.

Mr. PRITCHARD. I think, in all honesty, that there are those who are opposed to sanctuaries, just flat out. Then there are those who say, "Well, if we just had a few, it would be one thing, but is this going to be a continuing process, on and on and on?"

Then they take a different look.

Is it your feeling that if you get three or four that this would be what you would want in the State, or would you want this process to continue?

Mr. MAGNUSON. I think you raise a good point. I am sure testimony was given in California during our hearings about the cumulative effect, especially in California, on marine sanctuaries and the restrictions on oil and gas development.

These are ecological units, which are highly vulnerable to accidental happenings in hydrocarbon development.

It has to be taken on a case-by-case basis. In California, we feel the areas that we sought to have designated are justified.

Mr. PRITCHARD. I think that is all.

Mr. D'AMOURS. Mr. Studds?

Mr. STUDDS. Thank you, Mr. Chairman.

With the three of you here and the areas you represent, you remind me of how miserable it is to have to spend time in and work in Washington.

As you know, I have been to the Point Reyes area, the Key Largo area, and spent a great deal of time in a helicopter.

Let me just point out, and I don't know if you were here for the testimony of the administration, but for reasons that are not clear to anyone, possibly including the administration, they are going to

support the continuation of this program, and nonetheless, my support remains strong. [Laughter.]

We are going to take a careful look at it, though, to see if they have seen something in it that we have not. Apparently, as of this morning, they are supporting the level of funding sought by the preceding administration. I am not sure if that will remain the position of the administration, but at the moment it is.

Early this morning, the gentlelady from Rhode Island in her questioning was talking about esturine sanctuary programs as well as the marine sanctuary programs.

I regret to point out that the esturine program, if this administration has its way, as is all the rest of the coastal zone management program in its entirety, is finished. You may recall that the States here suggested the importance of coordination between marine sanctuary programs and the rest of the coastal zone management program.

I wish it were, as Mrs. Schneider suggested, a question of possibly shifting the responsibility to the States. I am sure with respect to Massachusetts, the states would be happy to manage the waters of Nantucket Sound, but the Government claims they are Federal waters.

A State has no jurisdiction beyond 3 miles. The State of Texas claims something else, of course.

Members of the Congress have said, "By golly, I wish you would give more power to the States and stop emphasizing the National Government."

I am willing to listen to those arguments these days. I think there are responsibilities that in the next 4 years, anyhow, can be safely shifted to the States. But folks who were arguing that way seem to have changed their tune.

It is a most remarkable shift in political philosophy that has occurred.

Let me urge you, Mr. Chairman, if you can, to take advantage of what I did in your place in the last Congress, to get out whenever possible from this wretched city and see and visit the areas represented by these people and others, that is, in the meantime if we don't cut our travel budget so badly that it becomes an impossibility.

Let me urge you three, to do what you can to convey your message to your own congressional delegations. Particularly, I should say the States of California and Florida. I think the State of Massachusetts is OK on this one, but it will make a very big difference.

We are going to be in an effort, as you know, to defend almost any program that is not administered by the Department of Defense. We are going to be fighting an uphill battle, and I am not yet prepared to suggest that the marine sanctuary program be shifted to the Department of Defense, although with respect to the *Monitor*, maybe that is not totally out of the question. [Laughter.]

Mr. STUDDS. So we are going to need your help, and I appreciate what you have said. I appreciate the courtesy and the hospitality extended to me and other members of this committee in past years, and I hope the area about which you are testifying and which your

open programs and departments and agencies are dedicated to preserving will survive all of us.

Thank you.

That was not a question. [Laughter.]

Mr. D'AMOURS. Mr. Forsythe?

Mr. FORSYTHE. No questions.

Mr. D'AMOURS. Mr. Carney, do you have any questions of this panel?

Mr. CARNEY. Yes, I have several questions. I will have to ask them very, very quickly.

The gentleman from California, as well as others, refers to the term "hydrocarbon development." I would like an explanation of that.

Mr. MAGNUSON. If you are directing the question to me, it is my understanding——

Mr. CARNEY. You used it in your testimony.

Mr. MAGNUSON. It is synonymous to oil and gas development in the OCS.

Mr. CARNEY. Why don't we say that? Why are we using a buzz word? Are we afraid of becoming independent of the Arabs, or that the public will not know what we are talking about?

Mr. MAGNUSON. I used both terms.

Mr. CARNEY. I will go to the next gentleman now, the gentleman from Florida, you believe, you said, the fish catch would not be adversely affected.

Mr. GISSENDANNER. It has not, and will not be.

Mr. CARNEY. I am glad to hear that.

Next, you say that you believe you would not interfere with the ability to gain natural resources from the coral areas. Is that correct?

Mr. GISSENDANNER. I intended to say oil and gas, if I did not say it.

Mr. CARNEY. All right. Oil and gas. Do you know of a technique that we could use to get oil and gas without drilling for it?

Mr. GISSENDANNER. I said slant drilling.

Mr. CARNEY. That clarifies that.

Mr. Reilly, you said that the New England Fisheries Management Council would be involved in the Georges Bank sanctuary. Is that correct?

Mr. REILLY. The Georges Bank nomination has been developed from the active list, and is not currently under consideration, but the proposal that was put forward by various groups in Massachusetts suggested that the New England Regional Fisheries Council would be the management if designated.

Mr. CARNEY. That puts a red flag in front of me. The fisheries councils are something I support very much. Their job, to me, is to protect the fishery, one, and to protect the industry under the Fisheries Management Conservation Act of 1976. I am not really sure, but I believe there could be some sort of conflict there. As a matter of record, I would like to state that I think there might be some conflict in having a fisheries management council, no matter which one it might be, involved in the management of a sanctuary.

I think this is something we should look into and, you know, I am not addressing that to you as much as I am addressing it to the committee and putting myself on record in that regard.

With respect to the coastal zone thing, that is only involved with 3 miles for State jurisdiction. Is that right?

Mr. GISSENDANNER. In Florida, we have 10.5 miles on the Gulf side, and 3 miles on the east coast, in our State territorial waters.

Mr. CARNEY. That further confuses me. Is Florida something like Texas?

Mr. GISSENDANNER. In the gulf.

Mr. CARNEY. If it does not go beyond the 3-mile limit as far as the Federal jurisdiction is concerned, we are talking about section 306, and I would like to clarify this. The idea was to turn 306, the funding of the CZM, over to the States. My State has not signed the CZM. However, we qualified for an esturine sanctuary.

I do not think we would lose esturine sanctuaries if the CZM were turned over to the States, and were continued. I think that should be clarified.

Mr. Chairman, I will yield back the balance of my time.

Mr. D'AMOURS. Thank you. That is very generous of you, Mr. Carney. I appreciate it.

Mrs. Schneider, do you have any questions of the witnesses?

Mrs. SCHNEIDER. No. Thank you.

Mr. D'AMOURS. Thank you. I have a question of Mr. Magnuson.

One of the witnesses later on, a representative of Chevron, is going to testify that, in the Farallons Islands-Point Reyes area, the designation of sanctuaries is very difficult to justify on scientific grounds, the risks have been overstated, and the idea is to inflate the risk to justify the prohibition of hydrocarbon production in that area.

I wonder, does California have any reason to want to inhibit oil and gas development just for the sake of doing so?

Mr. MAGNUSON. Mr. D'Amours, I appreciate the question, and I hope I can add clarity to that point, which I tried to raise in my testimony.

As I said before, the State of California, as well as a number of local governments up and down the coast, are seeking a balance. We remain active, an equal participant, under the OCS Land Act amendments and the Coastal Zone Management Act in commenting and giving testimony and participating under the various mechanisms to determine the extent of OCS development in our offshore areas.

The only possible conflict at this time with respect to the Point Reyes-Farallons Islands is proposed OCS lease sale 53. Lease sale No. 53, which is under a new review by the present Interior Secretary, although former Interior Secretary Andrus made a decision on that last year, overlaps only a very small part of two tracts, with the sanctuary.

It is our feeling that the impact or restriction on oil and gas development with respect to lease sale 53 and the sanctuary for Point Reyes-Farallons Islands would be very minimal.

But I must go back to my point that I made earlier. The marine resources, sea birds and so forth, in Point Reyes-Farallons Islands, and also the Channel Islands, are unique ecological units, particu-

larly vulnerable to mishaps that could occur in oil and gas development in adjacent areas.

But, again, to answer your question specifically: No, California is not against oil and gas development. We are seeking the safe production of such resources, and we are seeking to work closely with the Department of the Interior and private enterprise to seek a balance to meet our Nation's energy needs.

Mr. D'AMOURS. Thank you very much.

Mr. CARNEY. Mr. Chairman?

Mr. D'AMOURS. Yes.

Mr. CARNEY. If I might, I have another question or two.

Mr. D'AMOURS. If nobody else has any questions, you are free to proceed.

Mr. CARNEY. I would like to get a clarification on some funding that I am concerned about.

I notice that Dallas Miner is still here in the audience. My understanding is that section 315 of the CZMA, which would have taken the funding of estuarine sanctuaries away, is still continuing. May I ask that of Mr. Miner?

Mr. MINER. The administration's budget has funds in for section 315, estuarine sanctuaries; yes.

Mr. CARNEY. Thank you very much. I wanted to clarify that.

Mr. STUDDS. If the gentleman would yield, that is not our understanding of the revised budget. Our understanding is zero funding for all CZM.

Mr. CARNEY. No.

Mr. STUDDS. It is no wonder we are confused, given the variations on the budget theme.

Mr. CARNEY. I didn't hear the dialog between you and staff.

Mr. STUDDS. It may be that the administration has removed one or more sections and put them somewhere else.

Mr. MINER. The budget figures we saw include a lump sum for the Coastal Zone Management Office for fiscal year 1982, and in that lump sum is $3 million dollars, normally appropriated for estuarine sanctuaries. That is still there.

Mr. STUDDS. How much is the administration requesting in total?

Mr. MINER. $8.4 million, which includes the two sanctuary programs, and the program administration fund.

Mr. STUDDS. Is that all out of CZM?

Mr. MINER. Yes.

Mr. STUDDS. So that reduction gives you a general feeling. Thank you.

Mr. D'AMOURS. Thank you, Mr. Reilly, Dr. Gissendanner, and Mr. Magnuson. We appreciate the important contribution you have made on this subject. We will now hear from our next panel of witnesses, Mr. Sharood and Ms. Wilcox.

Would you come up to the table, please?

STATEMENTS OF RICHARD SHAROOD, FORMER MINORITY COUNSEL, MERCHANT MARINE AND FISHERIES COMMITTEE, AND EVELYN WILCOX, ENVIRONMENTAL MANAGEMENT CONSULTANT, WILCOX & ASSOCIATES

Mr. SHAROOD. Good morning.

Mr. STUDDS [presiding]. Good morning. You are under the 5-minute rule. You are going to make reference to my predecessor in the testimony, aren't you?

Mr. SHAROOD. Yes.

Mr. STUDDS. Which one will go first?

Mr. SHAROOD. I will go first, Mr. Chairman.

The first statement I would like to make is that the sanctuary program is a Republican program. I hope we can get that message across to the administration.

Mr. STUDDS. I have said that often.

Mr. SHAROOD. I think it was originally designed by several predecessors in this committee, Mr. Hastings Keith, who originally was concerned about sand and gravel excavation in Nantucket Sound off Cape Cod, and Mr. Lou Frey of Florida, who was concerned about the preservation of some of the reef areas in Florida, and when the Council on Environmental Quality report on ocean dumping came out in 1970, we took their bills and, in a process of markup on the ocean dumping legislation, expanded it to include the sanctuary concept.

The point I think I want to make here simply is that I believe over the past 4 or 5 years there has been—I suppose perversion is the best word—of the intent of Congress in setting up the sanctuary program.

The misconceptions have aroused people predominantly in the oil and gas exploration area, and the fishermen, each of whom, I think, have harbored misconceptions of what was intended.

The oil and gas people tend to view the sanctuary program as an attempt to block their activity. The fishermen, on the other hand, while some have viewed the program as a means of attempting to put what I think were reasonable regulations on oil and gas regulations, particularly in the Georges Bank area, a lot of other fishermen in other parts of the country have feared the sanctuary program as a back-door device to engage in economic management of the fisheries outside the scope of the FCMA.

I think in the early days of the Carter administration people listened to some of the rhetoric that came out of some of the earlier appointees in NOAA and perhaps legitimately feared that the sanctuary program was going to be used as a means of unilaterally regulating fisheries and debasing the regional fishery management councils in the process.

Mr. STUDDS. You will recall that that led to amendment of the act. It was a great concern.

Mr. SHAROOD. Yes. Today I hope the fishermen realize that that fear has been resolved and that they need not any longer be concerned that the sanctuary program, if handled properly, is going to usurp the proper function of the FCMA on the regional management councils.

The other issue, I think, on the oil and gas side, there is, again, the concern that this is a dagger aimed at their throats, and that those who oppose oil and gas exploration and discovery will use the sanctuary program as a means of blocking them.

The most, I guess, highlighted example of this perhaps has been the effort to establish the Georges Bank Marine Sanctuary.

I have a copy of the nomination for Georges Bank as a sanctuary with me today, and if the committee would permit me, I would like to offer it for the record, because I think it is important that everybody understand that the designation of Georges Bank as a sanctuary was not in fact, or the recommendation to designate it, was not in fact an effort to block oil and gas drilling and exploration.

It was in fact viewed as a means of providing the statutory authority to insure that the oil and gas activity on Georges Bank would be conducted in the most environmentally sound manner possible.

The proponents of that sanctuary, very clearly in their nomination, did not view this as a means of blocking totally the lease sales on Georges Bank.

It has been argued that BLM has full authority under the OCS Act to do all necessary to protect Georges Bank and other areas.

In my testimony, I refer to a case decided in the Fifth Circuit Court of Appeals in New Orleans, which has not been appealed by the Government, which ruled that under the OCS Act they only have authority in the Interior Department to regulate the licensee and those in a contractual relationship with the licensee, and activities on the OCS cannot be regulated by others.

If that is applied in the Gulf of Mexico, it cannot be reached through the BLM-OCS authority.

I don't think the drafting of the legislation was intended to be used to manage vast ocean areas.

The Georges Bank area was 20,000 square miles. While I think the Georges Bank tract is unique and a good argument could be made for an exception there, as a general proposition I don't think these vast ocean areas, for example off Alaska, are really amenable to management under the marine sanctuary program.

I think the sanctuaries that have been established that are in very discrete areas in terms of geographical size and the uniqueness of the area, and the uniqueness of the resources in the area, such as the *Monitor,* and Point Reyes and others, these fall within what I think Congress had in mind when they set the sanctuary program up in the first place.

When you start talking about vast ocean areas of the Bering Sea or the Gulf of Alaska, you are in a different situation. I think they now understand that back in NOAA.

Back in the mid-1970's perhaps they in an abundance of enthusiasm viewed the sanctuary program as something other than what Congress had in mind.

I think they have got the message now, and hopefully both the fishermen and the oil people can accept the sanctuary program with a little less concern than it is meant them out of business.

I hope the Congress will refund the program and resolve the issue of whether or not the administration did or did not intend to put it in the blue book this time, or whether it is going to go into the blue book next year.

I hope they will get the message downtown to the people who originally conceived this were members of the same party, and had legitimate reasons for pushing it back in 1970, and those reasons still pertain today.

BEST COPY AVAILABLE

Thank you.

[The prepared statement of Mr. Sharood follows:]

STATEMENT OF RICHARD N. SHAROOD

Chairman D'Amours, Chairman Breaux and Members of the subcommittee, it is a pleasure to testify, together with my fellow panelist, Mrs. Evelyn Wilcox, in support of reauthorization of the Marine Sanctuaries Program, Title III of the "Ocean Dumping" act.

Prior to reentering private law practice in 1976 I was as some of you may recall Minority Counsel to the Merchant Marine Committee and its subcommittees.

In that capacity I was asked in 1969 or 1970 to draft legislation to protect the area seaward of the Cape Code National Seashore from then rumored sand and gravel excavation. Congressman Hastings Keith who represented the Cape Code area introduced the first marine sanctuary bill as a result of the threat to the Cape Cod coastline.

Subsequently Congressman Lou Fry of Florida became concerned over activities adjacent to his coastal district as well as nationally, and we drafted a more comprehensive marine sanctuary bill.

The Oceanography Subcommittee under Chairman Alton Lennon conducted extensive hearings into the disposal of nerve gas at sea off the Carolina coast in 1970 which lead directly to the Nixon Administration review of federal disposal policies, particularly those of the Armed Services, but also Corps of Engineers and the newly established EPA.

This review in turn resulted in the publication of the Ocean Dumping report of the Council on Environmental Quality in October 1970. The Administration's ocean dumping legislation became Title I of the Marine Protection, Research and Sanctuaries Act.

The linkage between regulation of ocean dumping and the protection of unique ocean areas from any form of dumping activity became apparent as we progressed through hearings into markup. In the process of markup the Administration proposal evolved into a three title integrated bill including Congressman Fry's sanctuary proposal.

Opposition to this linkage came exclusively from the sand and gravel industry which, because of the earlier Keith bill, was sensitive to regulation. Until the bill was reported and scheduled for floor action there was little or no concern or awareness on the part of the petroleum industry. Concern on the part of the fishing industry did not surface until 1976-1977 when NOAA personnel indicated a desire to use the sanctuary title as a backdoor means of regulating commercial fishing as an adjunct to the Fishery Conservation and Management Act.

The floor debate on Title III made it abundantly clear that the sanctuary concept was not intended to be a means of blocking otherwise desirable and necessary commercial activity in the oceans adjacent to the United States with one narrow exception.

In general the purpose of Title III is to provide a statutory basis for regulating activity to insure a multiplicity of uses, both traditional such as fishing, and nontraditional such as mineral extraction, in such a manner that there will be minimal interference between activities and minimal adverse impact on the ocean environment. It is fundamental that Title III must relate to an ocean area of unique value within the statutory framework.

Title III was not intended to be a tool to arbitrarily block petroleum extraction as some in the petroleum industry as well as the fishing industry may think. Nor was it intended to be a device to impose broad economic regulation on the fishing industry prior to enactment of the FCMA, or now as an adjunct to the FCMA, as others in that industry may think.

Insofar as the fears of the fishing industry are concerned it is clear that the exception to the general concept does apply. Clearly it would be incompatible to allow bottom trawling over the site of the U.S.S. *Monitor*. Equally clearly it would be incompatible to allow such activity as well as unrestrained recreational fishing, anchoring, etc. over the Looe Key coral formations. In such discrete areas fishing activity should be closely regulated and certain types of gear even prohibited.

In large areas such as Georges Bank it would be a perversion of Title III to employ this Act as a means of imposing unilateral federal regulations on traditional fishing activities.

Similarly the petroleum industry should be precluded from activity near such sensitive and narrowly defined areas as the *Monitor* site or Looe Key.

As you know, a coalition of fishery organizations sought establishment of a Marine Sanctuary on Georges Bank in 1979. While widely misinterpreted, it was not

intended that the sanctuary designation block all petroleum activity, but rather that the Act be used as Congress intended—to insure minimal conflict between multiple uses and to preserve the ocean environment from degredation to the exent that it is possible at the same time allowing legitimate multiple uses.

The sanctuary proposal was rejected by Commerce, but had the salutory effect of causing the Interior Department to take more seriously the concerns of the fishing industy.

Interior and the oil industry have maintained that the OCS Act gives Interior all the authority needed to insure that petroleum extraction will be compatible with fishing. Yet it is recognized that the old Atomic Energy Commission could not be an effective promoter as well as regulatory of the nuclear power industry. Can Interior effectively regulate and promote where others could not achieve these often conflicting roles?

The sanctuaries program is a useful tool in appropriate circumstances to insure that the promoter-regulatory maintans a proper balance between these roles.

I don't believe the drafters of Title III envisioned its employment generally in broad ocean areas such as Georges Bank or the vast areas off Alaska now often suggested. The Act is manageable when dealing with discrete areas—even then the difficulties are serious—particularly enforcement.

The recent report of the GAO clearly identified the perspective in which we should view Title III. It is a tool, a source of authority nowhere else vested, to protect unique and sensitive areas. We should not allow the issue of petroleum extraction, or the concerns of fishermen that Title III is aimed at them, to becloud the real purpose and proper role of the sanctuary program.

Finally, on the issue of Interior Department authority through the OCS Act, a recent Court of Appeals decision in the 5th Circuit, not appealed by the government, holds that only activity of a leasee and those in a contractual relationship to leasees can be regulated under the OCS Act. Interior had held that the OCS Act gave it broad authority on the continental shelf. This is not so. There is therefore a gap in the federal authority which the Sanctuaries title fills. The case is *United States* v. *Alexander*, decided September 24, 1979.

I therefore urge you to reauthorize the Sanctuaries program and at the same time, through your report and debate clarify the proper application of this title which has become confused due to events over the past four years.

Ms. WILCOX. Mr. Chairman and members of the subcommittee, I want to express my appreciation for your invitation to appear today. I have submitted a written statement, and will try to confine my remarks to 5 minutes.

[The prepared statement of Ms. Wilcox follows:]

STATEMENT OF EVELYN S. WILCOX, WILCOX & ASSOCIATES

My name is Evelyn Wilcox. I am an environmental management consultant; formerly a partner in the firm of Sager, Gardiner, Wilcox (SGW) and now the principal in the firm of Wilcox and Associates. I have a Master's degree in Environmental Systems Management from the Center for Technology of The American University and specialize in the environmental impact analysis of both U.S. and foreign coastal and marine area development.

I began my association with the Marine Sanctuaries Program in 1978, less than a year after President Carter initiated a new move towards implementation of the Program. During this period, NOAA was considering more than 170 site recommendations.

As a consultant, first to the Office of Ocean Management in 1978, and then to the Sanctuaries Program Office in 1979 and 1980, I have:

Provided consultation of Federal, State environmental laws and regulations and their application to ocean and coastal management responsibilities;

Assisted in the development of an environmental assessment approach to the preparation of issue papers for marine sanctuaries;

Prepared preliminary issue papers on the Alaskan sanctuary nominations for Bristol Bay, Kodiak Banks and Shelf Break, Lower Cook Inlet, Beaufort Sea, Prince William Sound and the Bering Straits;

Written two comprehensive environmental assessments on marine sanctuary proposals in Alaskan waters: "Options for Marine Sanctuary Designation within the S.E. Bering Sea" and "Options for Marine Sanctuary Designation within the Beaufort Sea;" and

Acted as project manager for the Florida Looe Key Marine Sanctuary Environmental Impact Assessment (EIA) and advised on the Final Environmental Impact Statement for the Looe Key proposal.

As on individual who has worked closely with the Sanctuaries Program for three years, I support the reauthorization legislation and respectively urge that the Program be properly funded.

The concept of multiple use marine sanctuaries, where comprehensive planning and management offer long term protection to uniquely qualified areas, is timely and appropriate.

During our field work, countless interviews and surveys with affected residents and commerical and recreational interests indicated general agreement with the intent of Congress to set aside marine sanctuaries. Opposition to sanctuary designation largely stemmed from criticism of the management of the Program and fear of Federal government intervention.

There were certainly difficulties with the administration of the Program at the outset which concerned the public. I believe, however, that several important refinements in the Program's current nomination and designation process will streamline selection procedures and immeasurably improve the effectiveness of the Program.

A new site evaluation process will eliminate the List of Recommended Areas (LRA) which has caused substantial confusion and unproductive staff work in the past. According to the new Program Development Plan of the National Marine Sanctuary Program, NOAA will, as a substitute for LRA, develop a base pool of suitable sites with the help of eight regional resource evaluation teams. Public workshops will be conducted in each of the regions to discuss the sites before a final selection is made. Following a review by NOAA, deserving sites may become active candidates.

In addition to simplifying the site selection process, NOAA has made one other significant procedural change in the administration of the Program. This change will afford directly affected public and private sectors greater participation in the management planning process.

The site Management Plan is now scheduled for development during the preparation of the Environmental Impact Statement (EIS) phase. In the past, the Management Plan for the sanctuary was prepared following the EIS phase and after designation. This awkward procedure presented major problems to almost everyone, including NOAA staff. State governments, other Federal agencies, commerical-recreational-industrial users and private citizens working for the protection of the environment, all anxious to comment on the management of the resource before final designation, were denied the chance to testify on the Management Plan. This new procedure will allow individuals and organizations with a direct, local interest in the management of the resource an opportunity to offer their suggestions and to review the Management Plan before final action.

Developing the Management Plan concurrently with the Draft Environmental Impact Statement (DEIS) will also ensure, I believe, the most efficient use of the data collected and provide a more coherent and complete statement for public review.

NOAA has also begun to emphasize and appreciate the nonregulatory benefits of the Sanctuaries Program. Our studies, during the preparation of issue papers and EIA's, revealed the pressing need for greater public awareness of renewable resource value of marine resources and the steady degradation of prime marine habitat occurring throughout the coastal and marine waters of the U.S.

Public knowledge of marine ecosystems appeared to be quite limited, compared with knowledge of terrestrial systems. Regulation of human activity, however, in these marine ecosystems is comparatively more difficult than in similar land park situations.

NOAA is proposing to bring educational interpretive services to the public sector, including schools, universities, adult education programs, tourists and the general public as part of a sanctuary's Management Plan. I believe that, if encouraged by the Congress and allowed to fully develop by the Department of Commerce and NOAA, this may well become the most significant contribution to the marine environment by the Sanctuary Program.

The Marine Sanctuaries Program also fits in beautifully with worldwide concern for protection of significant marine areas and provides a solid basis for U.S. involvement within the international environmental community. According to respected organizations like the World Bank, most responsible nations of the world now believe that an urgency exists to protect marine areas of critical importance to man and the global system before their value is lost forever. Continued population growth with corresponding pressures for energy (offshore oil development, etc.); minerals for industrialization (manganese, etc.); recreational areas (boating, swim-

ming, snorkling, etc.); ocean and estuarine disposal sites for toxics, construction, sewage wastes and short term commercial fishing, have diminished resources and exploited much ocean space.

Since many special marine resources within U.S. jurisdiction have international scientific or cultural significance, I believe the Sanctuaries Program has the obligation to foster the establishment and management of international marine parks.

Finally, I believe that the Marine Sanctuaries Program is and can continue to be a very useful, practical way to conserve prime marine habitat for long-term renewable resource use by man and the marine environment. It offers unique legislative authority for the protection of marine habitat, unduplicated by other Federal environmental legislation.

During our legal research for the Alaskan Options Papers in 1978, we reviewed major Federal laws and regulations relating to the marine environment. Our study revealed that, with the exception of the Endangered Species Act, now drastically amended, the marine habitat protection function was specifically provided for only in Title III of the Marine Protection Research Sanctuaries Act. Furthermore, other laws and regulations protecting certain elements of the marine environment had certain legislative responsibilities to conflicting interests which precluded the appropriate administering agencies from taking an active advocacy role in the protection of significant renewable resources. Examples, in table form, taken from the Alaskan papers of these conflicting interests, are presented as an attachment to this statement.

Title III regulations, although requiring consideration of multiple use within sanctuary boundaries, give NOAA a clear mandate to protect areas for conservation, recreational, ecological and/or esthetic values. This authority becomes increasingly important as natural marine areas decline both in size and quality due to increased population use and offshore industrial development.

The report on the Marine Sanctuaries Program by the Comptroller General on March 4, 1981, entitled "Marine Sanctuaries Program Offers Environmental Protection and Benefits Other Laws Do Not," has stated the benefits more eloquently than I can:

"The sanctuaries program offers a unique Federal mechanism to focus on particular geographically defined areas and provide comprehensive regulation, planning and management (within the limits of international law) to assure long-term preservation of all the resources that require protection in those areas."

Examples from: Options for Marine Sanctuary Designation Within the Beaufort Sea (Evelyn S. Wilcox, 1/26/79).

APPENDIX VIII

Laws with major authority for renewable resource management (fish, mammals, birds, habitat)

1. Fisheries Conservation and Management Act.

Purposes

To establish a 200 mile fishery conservation zone with exclusive U.S. fishery management authority over all fish except highly migratory species and exclusive U.S. fishery management authority beyond the zone over certain anadromous species and Continental Shelf fishery resources.

Support and encourage the implementation and enforcement of international fishery agreements for the conservation and management of highly migratory species.

Promote domestic, commercial and recreational fishing under sound conservation and management principles.

Provide for the preparation and implementation, in accordance with national standards, of fishery management plans to achieve and maintain optimum yield from each fishery.

Establish Regional Fishery Management Councils to prepare, monitor, and revise plans to enable the States, the fishing industry, consumer and environmental organizations and other interested persons to participate and advise in the preparation of the management plans.

Encourage the development of fisheries currently under utilized or not utilized by U.S. fishermen, including the bottom fishery off Alaska.

Jurisdiction	Constituency	Responsibility
Seaward from 3 mile territorial sea boundary to 200 miles	Fishermen Processors State Fish and Game Agencies	Manage fish stocks for optimum utilization Expand U.S. Fishing Industry Issue permits Comment on permits

Habitat Protection Function

Implied under Section 3

Under Sec. 3 Definitions of the Act, "conservation and management" refers to all measures required to rebuild, restore or maintain or which are useful in rebuilding, restoring or maintaining any fishery resource and the marine environment and measures designed to assure that a supply of food and other products may be taken, recreational benefits obtained on a continuing basis, irreversible or long-term adverse effects of fishery resources and the marine environment avoided, and multiple options available for future resource use.

2. Marine Mammal Protection Act

Purposes

To provide that certain species and population stocks of marine mammals in danger of extinction or depletion as a result of man's activities, not be permitted to diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part, (not be permitted to diminish below their optimum sustainable population).

Take action to replenish any species or population stock which has already diminish below that population.

Protect rookeries, mating grounds, and areas of similar significance for each species of marine mammal from the adverse effect of man's actions.

Encourage the development of international arrangements for research and conservation of all marine mammals.

Protect and conserve marine mammals that move in interstate commerce and their marine ecosystems.

Enforcement is carried out by agreements with other agencies.

Jurisdiction	Constituency	Responsibility
Territorial sea and the fisheries zone established by the Fisheries Act 1976 (out to 200 miles) and the high seas	Animal Welfare Conservation Groups Sport Hunters Subsistance and Commercial Harvesters Research Scientists Environmentalists State Fish and Game Agencies	Issuance and enforcement of regulations in the taking of marine mammals Comment on other Federal permits

Habitat Protection Function

Not expressed in the legislation. Habitat management and concern, although implied in Sec. 2.(2) can only be tied to advisory comments on specific action such as Corps of Engineer permits or Fisheries Plans. This results in piece-meal management of marine mammals.

3. Endangered Species Act

Purposes

Under this Act, the Departments of Commerce and Interior identify threatened and endangered species and their critical habitats, promulgate and enforce regulations to protect threatened species, and enforce the provisions of the Act prohibiting the taking, or importation of endangered species. The Department of Commerce (NOAA/National Marine Fisheries Service) is responsible for predominatly marine species and Department of Interior (FWS) for predominantly land based species, including birds. Enforcement is carried out by the lead agencies, Treasury Department (Customs), Coast Guard, or any other Federal or State agency which may be utilized under agreement.

Jurisdiction	Constituency	Responsibility
Any Federal action Worldwide jurisdiction involving both private and public actions	Animal Welfare, Conservation Groups Environmentalists Scientists State Fish and Game Agencies	Identify threatened and endangered species and their critical habitats Enforce regulations prohibiting the taking of these species

Habitat Protection Function

Expressed in the Act, FWS/NMFS can require additional information on "critical habitat" for endangered or threatened species in the event of a Federal action affecting that habitat. Rule making on designation of critical habitat can also establish "critical habitat." No critical habitat for endangered marine mammals in the S.E. Bering Sea has been designated or is in the process of being designated.

4. Fish and Wildlife Coordination Act

Purposes

To assure that wildlife conservation receives equal consideration with other features of water resource development and other programs or activities which control or modify U.S. navigable waters. Federal construction and permitting agencies are required to consult with FWS/Interior and/or NMFS (for marine, estuarine and anadromous fisheries resources and certain marine mammals) before taking any action which would affect fish and wildlife habitats.

Jurisdiction	Constituency	Responsibility
U.S. navigable waters	Animal Welfare Conservation Groups Environmentalists Sport hunters and fishermen State Fish and Game Agencies U.S. State Park Services Wildlife refuges	Comment on permit applications for activities in or adjacent to navigable waters

Habitat Protection Function

Habitat management and concern ties to comments on specific actions such as COE, BLM, DOT, Forest Service, U.S.G.S. permits applications. No opportunity for regional management planning or evaluation of cumulative impacts.

5. Migratory Bird Treaty, Migratory Bird Conservation Act

Purpose

Preserve, distribute, introduce and restore game birds and other wild birds, and to regulate migratory birds protected by international treaty.

Jurisdiction	Constituency	Responsibility
U.S. and territories	Foreign Nations with whom U.S. has treaties Animal Welfare Conservation Groups Environmentalists Sport hunters and fishermen State Fish and Game Agencies U.S. State Park Services and Wildlife Refuges	Protect migratory birds

Selected Laws Which Regulate Specific Coastal and Ocean Uses

6. OCS Lands Act and Amendments of 1978

Purposes

a. To ensure orderly development of marine mineral resources to meet the energy demands of the nation;

b. To provide for protection of the environment concommitant with mineral resource development, and;

c. To provide for receipt of fair market value for the leased mineral resources.

Jurisdiction	Constituency	BLM Responsibilities
Seaward from the 3 mile territorial sea out to 200 miles with the exception of Texas and the Gulf Coast of Florida where jurisdiction begins seaward of 9 miles	Oil/gas industry American Consumers	Economic, environmental social planning for orderly development of marine mineral resource development. Conduct of sale of leases to oil industries U.S.G.S. Responsibilities Issue permits for exploration and development. Regulate and enforce OCS operations once leased.

Habitat Protection Function

BLM, in particular, considers habitat destruction and modification, both onshore and offshore, in their decisions to lease offshore areas for the purposes of oil development in accordance with NEPA. However, decisions are guided by their main responsibility to plan for oil development. Long range affects of oil development, cumulative impacts, although considered, are not primarily addressed.

7. Federal Water Pollution Control Act

To restore and maintain the chemical physical, biological integrity of the nation's waters.

Jurisdiction	Constituency	Responsibilities
U.S. Navigable waters	U.S. citizens	Control pollutant point source discharges. Regulate discharge hazardous substances and disposal of dredge spoils. Develop ocean discharge criteria.

Habitat Protection Function

Species habitats and the ecological system are protected by controlling the discharge of pollutants into navigable waters.

8. Marine Protection Research Sanctuaries Act, Title 1 Ocean Dumping

Purposes

Prevent or strictly limit adverse impacts of the dumping of all types of materials into ocean waters on human health and/or the marine environment.

Jurisdiction	Constituency	Responsibility
High seas seaward of 3 mile territorial sea boundary	U.S. citizens	Regulate ocean dumping

Habitat Protection Function

Protects the marine environment by controlling and preventing discharge of pollutants into ocean waters.

9. Ports and Waterways Safety Act

Purposes

Protection of navigable waters from environmental harm. Prevention of damage to vessels, bridges and other structures.

Jurisdiction	Constituency	Responsibility
U.S. navigable waters	Maritime Industry U.S. citizens	Regulate shipping, vessel traffic

Habitat Protection Function

Protects marine ecological system by requiring vessel traffic safety procedures.

10. Tanker and Vessel Safety Act (Amendments to the Ports and Waterways Safety Act)

Purposes

To reduce hazardous cargo spills into ocean waters

Jurisdiction	Constituency	Responsibility
U.S. navigable waters	Marine environment	Regulate construction and operation of tankers and other vessels

Habitat Protection Function

Protect the marine environment by requiring safer vessel construction and operation procedures.

11. Deepwater Port Act

Purposes

Evaluates, authorizes, regulates, the location, ownership, construction and operation of deepwater ports in Federal waters.

Provide for the protection of the marine and coastal environment to prevent or minimize any adverse impact as a consequency of deepwater port development.

Protect the interest of the U.S. and those of adjacent coastal states

Protect the rights and responsibilities of States and communities to regulate growth, determine land use.

Jurisdiction	Constituency	Responsibility
High seas seaward of the territorial seas boundary	Affected States Shipping interests Environmentalists	To evaluate and regulate deepwater port development

Habitat Protection Function

Protects the marine and coastal environment by evaluating deepwater port development in terms of the impact on the marine environment and coastal areas from offshore/onshore development resulting from port development.

12. Coastal Zone Management Act

Purpose

Promote effective management beneficial use, protection and development of the coastal zone.

Jurisdiction	Constituency	Responsibility
Coastal zone as defined by each State in its Coastal Zone Management Program out to the territorial sea boundary	States Coastal User groups	Assist states in developing and administering State Coastal Zone Management programs

Habitat Protection Function

This habitat protection function is by far the most important to the success of the marine sanctuary program. Fish, shellfish, marine mammals and birds and their food organisms vitally depend upon the intertidal subtidal areas protected by coastal zone management planning for their continued success as an ecological system.

Ms. WILCOX. I am an environmental management consultant, specializing in the environmental impact analysis of coastal and marine area development. As a consultant, first to the Office of Ocean Management in 1978 and then to the Sanctuaries Program Office in 1979 and 1980, my work has ranged from preparing issue papers, preliminary issue papers, for marine sanctuary recommendations in all the major areas of Alaska, to working as a project manager for the Florida Reef Looe Key Marine Sanctuary Environmental Impact Assessment, an area just recently designated as a marine sanctuary.

I might add that I was very encouraged by Dr. Gissendanner's remarks on the Looe Key Sanctuary.

As one individual who has worked closely with the program for 3 years, I support the reorganization legislation, and respectfully urge that the program be properly funded.

The concept of multiple use marine sanctuaries where comprehensive management and planning offer long-term protection to uniquely qualified areas is timely and appropriate.

During our field work, we had to arrange for countless interviews and surveys with the affected residents, commercial and recreational interests, and largely, those interviewed indicated general agreement with the intent of Congress to set aside sanctuaries.

Opposition to sanctuary designation largely stemmed from criticism of the management of the program. I might say here that in the early days, as Dick has mentioned, there were a lot of conflicting demands on the program, but I believe now that the program has been refined to the extent where it is extremely effective, and can move forward now to the next phase.

There are several important refinements that I would like to mention today.

First of all, NOAA has initiated a new site evaluation process which will eliminate the list of recommended areas which caused substantial confusion and unproductive staff work in the past.

According to the current program development plan, NOAA, as a substitute for this list, will develop a base pool of suitable sites with the help of eight regional resource evaluation teams.

This will really encourage public participation at an early level, because there will be public workshops to discuss the sites before a final selection is made, and it is placed on an active candidate list.

In addition to simplifying the site selection process, NOAA has made one other significant procedural change. This change will afford directly affected public and private sectors greater participation in the management planning process. The site management plan is now scheduled for development during the EIS preparation stage.

In the past, the plan for the sanctuary was planned following designation, which became a very awkward procedure, and presented major problems to almost everyone, including the staff.

State governments, other Federal agencies, commercial recreational, industrial users and private citizens anxious to comment on the management of the resource that they knew so well before final designation were denied an opportunity to testify on the management plan.

This new procedure will allow individuals and organizations with a direct, local, intense interest in the management of the resource an opportunity to offer their suggestions and to review the plan before final action.

NOAA has also begun to emphasize and appreciate the nonregulatory benefits of the sanctuaries program. Our study during the preparation of issue papers and EIA's, (environmental assessments) revealed the pressing need for greater public awareness of renewable resource value of these marine sanctuaries, or sources, and the steady degradation of prime marine habitat occurring throughout the coastal and marine waters of the United States. Public knowledge of marine ecosystems appeared to us to be quite limited compared with knowledge of terrestrial systems, and yet regulation of human activity in marine waters, as you may know, or may surmise, is much more difficult than in a traditional park system, (land park system).

Another refinement which will stimulate and strenghten the program is the increased interest of NOAA to bring educational interpretative services to the public sector, including schools, universities, adult education programs, tourists, and the general public, as part of the management program, for the sanctuary.

I believe that, if encouraged by Congress and by NOAA, this may well become the most significant contribution to the marine environment by the sanctuary program.

The marine sanctuaries program fits in beautifully with worldwide concern for the protection of marine areas, and provides a solid base for U.S. involvement within the international environmental community.

I have had a project recently in Haiti, and have worked with other world organizations such as the World Bank, and believe that an urgency does exist among responsible nations to protect marine areas of critical importance to men, and the global system, before their value is lost forever.

Continued population growth and corresponding pressures for energy, minerals for industrialization, recreational areas, ocean and esturine disposal sites for toxic and sewage wastes, have diminished the resources and exploited much of our ocean space.

Since many of these resources within U.S. jurisdiction have international, scientific, or cultural significance, the program can foster, and has the obligation to foster, the establishment and management of international marine parks.

Finally, I believe that the sanctuaries program is, and can continue to be, a very useful, practical way to conserve prime marine habitat for long-term renewable resource use by men and by the marine environment.

It offers unique legislative authority for the protection of marine habitat, unduplicated by other Federal environmental legislation.

When we did our research in Alaska for the Alaskan option papers, we did review the major Federal laws and regulations relating to the environment, and we also went through the same process with the sanctuary proposal for Looe Key.

Our study revealed that, with the exception of the Endangered Species Act, the marine habitat protection function was expressly

provided for only in title III of the Marine Protection Research Sanctuaries Act.

Furthermore, other laws and regulations protecting certain elements of the marine environment had certain legislative responsibilities to conflicting interests which precluded the appropriate administering agencies from taking an active advocacy role in the protection of these renewable resources.

Title III regulations, although requiring consideration of multiple use within the boundaries of the sanctuaries, offers a clear mandate to protect areas for conservation and other values.

This becomes increasingly important as natural marine areas decline, both in size and quality, due to increased population use and off-shore industrial development.

I might conclude by saying I certainly concur with the Comptroller General's report on March 4, 1981, entitled "Marine Sanctuaries Program Offers Environmental Protection and Benefits That Other Laws Do Not."

In fact, I was quite vindicated when I read it. It just seems to me that the general acceptance by the American public of the marine sanctuary concept and their interest in it, and the fact that NOAA has developed an effective program, merits your vote of confidence and your vote for reauthorization.

Thank you.

Mr. D'AMOURS [presiding]. Thank you, Ms. Wilcox. I have only one question to Mr. Sharood. I am sorry I was called out of the room. It is nice to see you again, and we appreciate your giving your time to us.

As a matter of fact, my question relates to your expertise and your having been here in 1972, when all this came about.

There is going to be testimony presented later by members of the oil and gas industry which refer to the original intent of this legislation. They quote Mr. Dingel in the Florida papers, and Mr. Aspinall and others, to establish the proposition, as they see it, that it was originally claimed that this act would not have any impact upon development, I am wondering if you could help me with an understanding of what the original purposes were and the extent to which you think we may have strayed from this original purpose, if indeed we have.

Mr. SHAROOD. I think to some extent, Mr. Chairman, the arguments of the oil industry are somewhat chasing a ghost that never really was there.

The rhetoric has kind of developed to the point where it is hard to get down to what are the true facts.

Clearly, when the legislation was going to the floor, and I recall very distinctly the day we had the full committee markup, Chairman Dingel and Ed Everett and a number of other members had a meeting out here in the chief counsel's office with a couple of representatives of the sand and gravel people, and there was a lot of last minute discussion, and suddenly the oil industry discovered there was a bill coming to the floor, and what was this all about, and very definite clear statements were made on the floor of the House that this legislation was not intended to be a device to try to block, you know, the exploration of the Outer Continental Shelf, and I think that was absolutely, crystal clear.

But that does not really address the issue, and the issue is, is the marine sanctuary device a legitimate tool to assure that the oil and gas drilling that does go on is conducted in the most environmentally sound manner possible.

I think the answer to that is yes, indeed, the Sanctuary Act title is a legitimate tool to insure that while that activity does go forward, we are not going to be faced with, or we are going to minimize, let's say, the risk of a disaster happening on Georges Bank, for example.

In this case, the nomination was declined by the Commerce Department, but I think in the process of considering the nomination a lot of salutary work was done between the Interior Department and the Commerce Department that did strengthen the regulations that have been promulgated, whatever does occur on Georges Bank in the future.

But very definitely, I would say that it was not the intent, as I understood it at the time, and I drafted a few of the statements that went into the record on that, that the legislation was ever going to be a means of just simply blocking further development of the Outer Continental Shelf. I think there was a very clear commitment made that that was not going to be the case.

But there was no commitment made, I don't think, that the sanctuary program could not be used as a tool, as I have said, to help insure that what does occur does not have a long-term adverse effect upon the ocean environment.

How you balance that out in the real world, of course, is a very difficult proposition.

Mr. D'AMOURS. I would assume there was nothing said during the consideration of this bill, either in the committee or on the floor, to indicate that there should not be any cases where oil and gas exploration could not be stopped by the operation of this statute.

Mr. SHAROOD. That is the problem. The kind of sanctuaries that have been established, and take, for example, the *Monitor* site, which was the first one. As I mentioned in my testimony, it would be inappropriate to allow bottom dragging by fishing trawlers across the wreck of the *Monitor*. So to prohibit that seems entirely reasonable.

If oil and gas were found in the vicinity of that site, I would say, hopefully, we would think that site is worth preserving, and we would not allow oil and gas drilling within that site, because there we are dealing with an archaeological situation. We are dealing with the preservation of an object, and the same is essentially true in the Florida Keys, where we are trying to preserve the coral, which is a very fragile object.

But when we are talking about a 27,000 square mile area of the open ocean that has nothing in it of an archaeological or aesthetic value from the standpoint of physical damage occurring, and the issue is regulating activity that is not necessarily in and of itself incompatible, and oil and gas drilling, I would say, is not inherently incompatible; it is a question, then, of reasonable regulation rather than prohibition.

Mr. D'AMOURS. Right, but just to push that point one little bit further, there was never any feeling, was there, when this legisla-

tion was passed that oil and gas exploration should somehow take precedence?

Mr. SHAROOD. I don't think any judgment of that sort was made. I think the judgment that was made and the commitment that was made was that the legislation was not going to be used as an arbitrary tool to simply block it just for blocking itself sake.

Mr. D'AMOURS. My time has expired.

Mr. Pritchard?

Mr. PRITCHARD. I think it is very important when we are looking over legislation that we have passed that we bring in someone such as Mr. Sharood who was terribly important in the writing of that bill and the original testimony.

I guess we all come back to this business of balance and reasonableness. Of course, everybody is balanced in their own view.

What seemed to get us off track was the handling of the marine sanctuary program by the last administration when they published nominations of those 120 areas. That scared the daylights out of everybody that the program was going to be used by people in a manner not intended in the legislation.

So your testimony is saying that if this legislation is properly managed, it is a very acceptable law for the United States, and can be helpful and won't be a bar to almost all of the oil and gas exploration on our Continental Shelf.

Mr. SHAROOD. I think that is what I am saying, yes.

Ms. WILCOX. I think that is basically what I have said, too. Managed as it is now, it is an effective tool to do something very important for the country.

Mr. PRITCHARD. Let me ask you, Ms. Wilcox, we only have five or six designated sanctuaries now, right?

Ms. WILCOX. Right.

Mr. PRITCHARD. What do you think would be a reasonable rate that we should be adding to these sanctuaries? There must be quite a number of areas that you could think of. What do you think would be an appropriate rate?

Ms. WILCOX. It really should be approached, I think, a little differently, and that is to approach it the way the program would like to approach it; to go into various regions, eight regions of the country, look at the recommendations by the citizens, by organizations, by the States, and out of that pool of recommendations, come up with a viable sanctuary for that particular area.

Mr. PRITCHARD. In other words, you are saying that you would go to a region and arrive at those areas that should be included. You don't think this is an on-going process?

Ms. WILCOX. Yes, this is, but the way NOAA is planning now is, instead of looking at individual recommendations as they come in, NOAA plans to go out to a region, for example, the Florida Keys area, or the southeast Bering Sea area, or some area where there have been many ideas and many recommendations proposed to select an outstanding candidate for sanctuary consideration.

There will be public workshops, and out of those recommendations will come one which is so much better than the others, or encompasses the needs of those that have been recommended.

If the sanctuaries office proceeds that way, I would say that there would have to be quite a bit of negotiation, and probably the

program would proceed more slowly, perhaps more slowly than it is proceeding now. I don't know.

At least there will be more opportunities to reflect on what is being proposed by a number of different groups in a more comprehensive way.

Mr. PRITCHARD. I guess what I am trying to grasp is where are we headed with this program 15 or 20 years from now?

Because, you know, we will have some good management at times, and we will have some other management. I gather, from your approach, that you are a strong supporter of this bill. You represent people who feel very strongly about marine sanctuaries, and I am trying to get you to tell me where you hope to be in the next 15 or 20 years.

Ms. WILCOX. I am a proponent of the NEPA process, and I believe that by analyzing, by taking all sides, the opposing sides and the proponents of the program, we can come up with a good marine sanctuary. I can't tell you how long, or how many sanctuaries will result from that process, but I think that there are sanctuaries, there are marine areas out there which need protection, and we should continue the program, and we should continue to evaluate which sanctuaries are deserving, which marine areas are deserving to be sanctuaries. However it is very hard to predict how many areas will finally result from this process.

Mr. PRITCHARD. Thank you, Mr. Chairman.

Mr. D'AMOURS. Thank you, Mr. Pritchard.

Mr. Forsythe, do you have any questions of the witness?

Mr. FORSYTHE. Yes, Mr. Chairman. Thank you.

We welcome both of you and your testimony.

Dick, I don't think I can quarrel with you at all in your definition of the intent of the legislation, and most particularly regarding the sanctuaries that are unique, and confined. However do you think the Channel Islands Sauctuary meets those qualifications?

Mr. SHAROOD. I don't have definitive knowledge of that particular sanctuary, Mr. Forsythe, and I am really not in a very good position to comment on it.

Where you draw the line, my problem is that when you get up to these massive areas, and I can't say whether 1,200 square miles is too big or too small, but I think my problem is when we are talking about a very large area, as I said in Alaska, some of them are in the tens of thousands of square miles, and I think it just goes beyond whatever Congress had in mind.

Mr. FORSYTHE. We certainly are in agreement there.

Mr. SHAROOD. You get down to very narrow definitions of a reasonable size of the sanctuary, and I don't know where you draw the line. It depends on the circumstances, clearly, I think, as to how much territory it has to encompass to preserve whatever it is within that area that is legitimately in need of preservation.

Mr. FORSYTHE. There were amendments to the OCS Lands Act subsequent to this legislation. Weren't they intended to alleviate many of the same environmental concerns as have been addressed by you with regard to the Marine Sanctuaries Act?

I'll agree there shouldn't be dredging around the *Monitor,* but aren't we duplicating efforts in environmental protection when the

marine sanctuaries program regulates areas that do not contain clearly unique and isolated resources?

Mr. SHAROOD. I think the problem areas, and I used the analogy in my statement of the Atomic Energy Commission, can BLM be both the promoters and the regulator? Can it effectively wear two hats? And if a hard decision faces it, can it really make an unbiased judgment to know how tough to make the regulations?

That is the problem, and Congress decided the old Atomic Energy Commission could do the job with nuclear power regulation and promotion. I am not certain that BLM can do the job, not necessarily in general. Yes, it can, there. But when the sanctuaries legislation comes into play, and when you get down to the really tough regulatory decisions, and I think that is where the nomination on Georges Bank came into play. It made BLM go back and make some of the tough decisions that it otherwise apparently was not going to make, in favor of protection of the fisheries in the Georges Bank.

Mr. FORSYTHE. Certainly there were enough interests working on that.

Mr. SHAROOD. As a general proposition, I think what you say is correct, that probably the BLM can do the job, and certainly has plenty of authority in terms of drilling activity to publish all the regulations that conceivably are needed to preserve the marine environment.

Mr. FORSYTHE. Of course, the Department of Interior is involved.

Mr. SHAROOD. It is not bad to have something else who has a mandate on the preservation of the ocean environment to be there looking over the shoulder of the BLM at the same time.

Mr. FORSYTHE. Could CEQ perform this function?

Mr. SHAROOD. We don't know where it is going at this point. CEQ is alive, but it is not breathing very well.

Mr. FORSYTHE. Thank you very much.

Thank you, Mr. Chairman.

Mr. D'AMOURS. Mr. Carney?

Mr. CARNEY. Thank you, Mr. Chairman.

I would like to address a question to Mr. Sharood.

In two recent court decisions, one concerning Georges Bank and others concerning the State and Federal boundaries dispute in Nantucket Sound, the court directed NOAA to consider whether the areas affected should be designated as marine sanctuaries.

Do you feel it is appropriate to involve the sanctuary program in a settlement of court disputes?

Mr. SHAROOD. Well, I think it is entirely appropriate for the court, if it had doubts on whether the nomination had been given fair consideration, and there are people who doubt that, to direct the agency to go back and take another look and tell the court to the court's satisfaction why the decision they made was made, and why the decision was not to go the other way, that is, establish a sanctuary.

I think it is legitimate for the court to answer those questions.

Mr. CARNEY. You are talking now of the Georges Bank case.

Mr. SHAROOD. Which case are you talking about?

Mr. CARNEY. I would like to zero in on Georges Bank, if I may.

Do you think it is consistent with the intent of the legislation that we be involved with something of this nature? It is my understanding that we evaluated Georges Bank as a candidate for a sanctuary and subsequently decided against such a determination. Then later down the line the consideration for oil leases was made.

Mr. SHAROOD. The Georges Bank case is parochially, I have to say, perhaps an exception to what I would postulate as a rule in terms of the area of a sanctuary, and I think if you look out at that nice piece of work that came out of the SS *United States* out here in the outer office, it shows the confluence of the Gulf Stream with the cold water coming down through the Baffin Straits and the Laborador Current, and so on, and you have a unique area of mixing warm and cold water, an area where the larvae of most of the fish, except the herring float on the surface for many months of the year and are uniquely susceptible to destruction.

The BLM in their own environmental impact statement acknowledged that if they did have a massive spill on Georges Bank it could easily wipe out several classes of larvae of haddock and yellowtail flounder, and cod, and so on.

So you do have an extremely unique environmental system there in Georges Bank, which probably—I am not aware of any other place under U.S. jurisdiction where there is such a unique fishery area.

I think that case was appropriately nominated for consideration, and should have been established as a marine sanctuary given the uniqueness of the resources and the type of fish you are dealing with, the way they propagate, and the susceptability of their larvae to oil, which I don't think necessarily applies in the Gulf of Mexico.

You have an entirely different situation down there, with other fisheries, perhaps. I don't know, but I think Georges Bank is unique.

Mr. CARNEY. I appreciate the merit of the individual case, but that is not the question I am asking you. Is it consistent with the legislation to have the judicial branch come and tell NOAA or any other branch to come and reconsider a sanctuary?

Mr. SHAROOD. Whether it is this legislation or any other legislation, if the law requires an agency to consider an input, and in this case we are dealing with a nomination of this, and the court feels——

Mr. CARNEY. What law requires a consideration of nomination?

Mr. SHAROOD. In terms of the sanctuary program, not a law per se, but the way the program has been administered, they have entertained nominations of sanctuaries, and having entertained the nomination of sanctuaries, if that decision were not fairly made, shall we say, or if it was decided on grounds other than the issue that is to be considered under the law of the Sanctuaries Act, then I think it would be legitimate to probe into the manner in which the decision was made.

The same is true with the National Environmental Policy Act, and the courts have certainly looked beyond the decisions and analyzed in great detail how the decisions were made and were they arbitrary and capricious, or were they done with the full——

Mr. CARNEY. Do you believe that was the intent of Congress when they passed this law to have the courts do that?

Mr. SHAROOD. I don't think that issue was ever really considered, whether or not the courts would review the nominations. I don't think that issue ever came up.

Mr. CARNEY. Again, I was handed a note that my 5 minutes are limited. I would like to pursue it further.

Mr. SHAROOD. I don't think I could help you on that one. I just don't think it was considered.

Mr. D'AMOURS. Thank you both, Mr. Sharood and Ms. Wilcox. I appreciate the enlightenment you gave us.

Mr. SHAROOD. Thank you.

Ms. WILCOX. Thank you.

Mr. D'AMOURS. I think for the benefit of the witnesses who still remain, I ought to give you some idea of where we are going from here. It is the Chair's intention with the concurrence of the minority that we finish this matter rather than breaking for lunch.

I hope that doesn't disadvantage anybody. If there are any hardship cases out there, I will be glad to hear about them and see what we can work out.

The next panel is Mr. Jackson and Mr. Ghylin from Chevron. Would you come to the table.

STATEMENT OF J. R. JACKSON, JR., EXXON CO., ON BEHALF OF AMERICAN PETROLEUM INSTITUTE; AND CLAIR GHYLIN, CHEVRON CO., ON BEHALF OF WESTERN OIL & GAS ASSOCIATION

Mr. JACKSON. Good afternoon.

My name is J. R. Jackson, Jr. I am manager of exploration regulatory affairs for Exxon Co., U.S.A. My statement today is presented on behalf of the American Petroleum Institute, a national trade association representing some 350 companies and 7,000 individuals engaged in all sectors of the petroleum industry, including Outer Continental Shelf oil and gas development. For the past 2 years I have served as the industry chairman of the API National Coastal Zone Management Steering Committee.

The petroleum industry supports the basic concept and objective of the marine sanctuaries program as originally conceived by Congress. However, we do not believe the sanctuaries program should be reauthorized if it is to continue to be used as a mechanism for obstructing lease sales and unnecessarily prohibiting or regulating off-shore hydrocarbon operations and the use of existing marine transportation corridors.

In this regard, we believe that sanctuaries should be limited to discrete areas of unique or significant ecological value which are not already adequately protected by existing Federal and State authorities.

In addition, the regulation of activities within and in the vicinity of a designated sanctuary should be limited to those required to adequately protect the marine resource values of concern. Unnecessary prohibitions of activities in such areas should be strictly avoided.

During the past 4 years, considerable controversy has centered around several recommended sanctuaries which have been nominated in direct response to President Carter's environmental message of May 1977. A principal result of this has been to prohibit or

severely restrict petroleum development in promising ocean areas scheduled for oil and gas leasing.

While there has been some midcourse correction for sanctuary nominations of inordinate size and political and management infeasibility, such as the Georges Bank and Flower Garden Banks sanctuary proposals, other sanctuaries were designated by the Carter administration which were very difficult to justify on logical or scientific grounds.

Here I am specifically referring to the Channel Islands and Point. Reyes/Farallon Islands National Marine Sanctuaries, 1,252 and 948 square nautical miles, respectively.

The regulations implementing both of these sanctuaries effect an absolute prohibition of future hydrocarbon operations even though other economic uses of the oceans are not so severely treated. Categorical exclusions of energy development in such vast ocean areas cannot be justified on any objective criteria. This is especially true given the environmentally safe manner in which oil and gas activities are conducted under programs administered by other agencies of the Federal Government.

If huge sanctuaries are deemed appropriate by the administration for withdrawal from mineral leasing activities, then Congress should be the branch of government to designate major "marine wilderness" areas. Given the national interest implications of marine sanctuary designations which carry with them the prohibition of oil and gas activities, we view Congress limited power of disapproval under the present act as far too small a check on agency discretion. Instead, Congress might retain absolute authority for designation of marine sanctuaries of, for example, over 5,000 acres. Such a procedure would require an amendment to section 302(b)(2)(B).

If these subcommittees and the Congress determine that simple reauthorization of the program is all that is required, we urge that the sanctuary program office be required to:

Limit its regulation of marine sanctuaries to the management of real problems that pose a significant risk of harm to valuable marine resources instead of reacting to perceived problems; and,

Develop regulations that are in proportion to the real and significant risks of harm. This sense of proportion can be achieved by appropriate limitations on sanctuary size, and avoidance of categorical prohibitions of resource development activity, particularly those prohibitions limited to some activities and not others.

Our industry is anxious to work with Congress and the administration to approach the management of marine sanctuaries with the best experience and technology we can muster.

We note with optimism NOAA's promulgation of a draft program development plan, outlining a new course for the sanctuaries program. The apparent new direction identifies the program's primary role as a comprehensive, site-specific marine management program, rather than a strictly regulatory program. We think such a positive initiative is much more responsive to the act's legislative history, and will promote more manageable sanctuaries and a broader constituency for the program. We urge your subcommittees to participate in the review and implementation of the program development plan. This oversight would lend some important con-

gressional direction which the marine sanctuaries program has been lacking over the past several years.

We appreciate this opportunity to present the American Petroleum Institute's views and will be pleased to respond to any questions.

[The prepared statement follows:]

STATEMENT BY J. R. JACKSON, JR., MANAGER, EXPLORATION REGULATORY AFFAIRS, EXXON COMPANY, U.S.A. ON BEHALF OF THE AMERICAN PETROLEUM INSTITUTE

My name is J. R. Jackson, Jr. I am manager of Exploration Regulatory Affairs for Exxon Company, U.S.A. My statement today is presented on behalf of the American Petroleum Institute, a national trade association representing some 350 companies and 7,000 individuals engaged in all sectors of the petroleum industry including Outer Continental Shelf oil and gas development. For the past two years I have served as the industry Chairman of the API National Coastal Zone Management Steering Committee.

The petroleum industry supports the basic concept and objective of the Marine Sanctuaries Program as originally conceived by Congress. However, we do not believe the Sanctuaries Program should be reauthorized if it is to continue to be used as a mechanism for obstructing lease sales and unnecessarily prohibiting or regulating offshore hydrocarbon operations and the use of existing marine transportation corridors. In this regard, we believe that Sanctuaries should be limited to discrete areas of unique or significant ecological value which are not already adequately protected by existing federal and state authorities. In addition, regulations of activities within and in the vicinity of a designated sanctuary should be limited to those required to adequately protect the marine resource values of concern. Unnecessary prohibitions of activities in such areas should be strictly avoided.

During the past four years, considerable controversy has centered around several recommended sanctuaries which have been nominated in direct response to President Carter's Environmental Message of May 1977. A principal result of this has been to prohibit or severely restrict petroleum development in promising ocean areas scheduled for oil and gas leasing.

While there has been some mid-course correction for sanctuary nominations of inordinate size and political and management infeasibility, such as the Georges Bank and Flower Garden Banks sanctuary proposals, other sanctuaries were designated by the Carter Administration which were very difficult to justify on logical or scientific grounds. Here I am specifically referring to the Channel Islands and Pt. Reyes/Farallon Islands National Marine Sanctuaries, 1,252 and 948 square nautical miles, respectively. The regulations implementing both of these sanctuaries effect an absolute prohibition of future hydrocarbon operations even though other economic uses of the oceans are not so severely treated. Categorical exclusions of energy development in such vast ocean areas cannot be justified on any objective criteria. This is especially true given the environmentally safe manner in which oil and gas activities are conducted under programs administered by other agencies of the federal government.

The environmental impact statement for the Pt. Reyes/Farallon Islands sanctuary aptly illustrates our concern with the overreaching administration of the Marine Sanctuary Program by the National Oceanic and Atmospheric Administration's Sanctuary Program Office. Notwithstanding the number and coverage of existing laws and regulations—such as the Clean Water Act, the Endangered Species Act, the Marine Mammal Protection Act, the Fisheries Conservation and Management Act, the Coastal Zone Management Act, and the OCS Lands Act Amendments—NOAA concludes in its environmental impact statement that the: "extraordinary diversity of natural resources concentrated in the study area *warrant additional protection* beyond that provided by the present institutional structure. Although certain activities in the area *do not threaten* resource quality at present, they could have more significant impact *if and when* they intensify. The current multitude of regulatory authorities, most of which have differing mandates in varying jurisdictions, could bring about *policy conflicts* and, thereby, diminish overall management effectiveness as use pressures mount." (Emphasis added.)

Stated more simply, NOAA has unduly inflated the risk of harm from certain activities which may or may not ever occur, and unilaterally discounted the tiers of protections provided by the myriad of existing regulations. The result is a program of sanctuaries management out of proportion to the probable or demonstrated risks to the marine environment. This application of the Act, we submit, is in conflict with the intent and language of the statute.

Indeed, some members of Congress anticipated this possible use of the 1972 law during debate on passage of the bill. During House discussion, Congressman Aspinall moved to strike Title III (the Sanctuaries Act) because he believed it would impair the mineral leasing program. He stated: "* * * the enactment of this title could result in unnecessarily locking up offshore resources. * * *" Congressman Pelly, a sponsor of the bill, replied: "* * * the fear is groundless. Let me assure the distinguished Chairman of the Itnerior Committee that it has never been our intention to stop the development of these vast resources. * * *" Congressman Dingell, also responding to Congressman Aspinall, said: "* * * this legislation is not * * * going to halt oil drilling."

Notwitdstanding this philosophy, the implementation of the Act has become a mechanism for NOAA to halt future oil and gas drilling altogether. An example is the September 22, 1980, designation of the Santa Barbara Channel Islands Marine Sanctuary, where all future oil and gas operations are probibited on unsold lease tracts. In effect, NOAA is designating "marine wilderness" areas of inordiante size in regions highly favorable for the discovery of hydrocarbon resources.

If your Subcommittees are to recommend reauthorization of Title III, and continued appropriations for the Marine Sanctuaries Program, then we hope you will direct a change in direction for the Program. With respect to the regulation of hydrocarbon operations in large OCS areas, former Interior Secretary Andrus and Secretary Watt have opposed categorical prohibition and/or unnecessary regulation. Instead, they favor the existing permitting system of case-by-case project review which has been adequate for the protection of senstive marine resources.

If huge sanctuaries are deemed appropriate by the Administration for withdrawal from mineral leasing activities, then Congress should be the branch of government to designate major "marine wilderness" areas. Given the national interest implications for marine sanctuary designations which carry with them the prohibition of oil and gas activities, we view Congress' limited power of disapproval under the present Act as far too small a check on agency discretion. Instead, Congress might retain absolute authority for designation of marine sanctuaries of, for example, over 5,000 acres. Such a procedure would require an amendment to Section 302(b)(2)(B).

If these Subcommittees and the Congress determine that simple reauthorization of the Program is all that is required, we urge that the Sanctuary Program Office be required to:

Distinguish between alleged threats to the specific marine resources under consideration for protection which area a mere possiblity and those threats for which there is a reasonable expectation of occurrence;

As a precondition for designation or prohibition of oil and gas activity, demonstrate that there is a significant risk of harm to the specific marine resources under consideration, taking into account the assimilative capacity of the resources;

Require scientifically derived protective measures only for those impacts which cannot be assimilated. The burden for these measures should be the responsibility of all users and not fall only on one industry. Moreover, performance standards are preferable to specific technology requirements; and

Encourage a high degree of management and protection to specific resources within reasonably limited geographic areas. This approach is muh preferred over either lower degrees of management over large areas, or management of competing activities. Under either approach, the boundary of a sanctuary should be no larger than proven necessary for the protection of the resources for which the sanctuary is proposed.

Our industry is anxious to work with Congress and the Administration to approach the management of marine sanctuaries with the best experience and technology we can muster.

We note with optimism NOAA's promulgation of a drat "Program Development Plan" outlining a new course for the Sancturaries Program. The apparent new direction identifies the Program's primary role as a comprehensive, site specific marine management program, rather than a strictly regulatory program. We think such a positive initiative is much more responsive to the Act's legislative history, and will promote more manageable sanctuaries and a broader constituency for the program. We urge your subcommittees to participate in the review and implementation of the Program Development Plan. This oversight would lend some important congressional direction which the Marine Sanctuaries Program has been lacking over the past several years.

We appreciate this opportunity to present the American Petroleum Institute's views and will be pleased to respond to any questions.

Mr. D'AMOURS. Thank you, Mr. Jackson.

Mr. Ghylin.

Mr. GHYLIN. Mr. Chairman, my name is Clair Ghylin. I am general manager of Land for the Western Region, Chevron USA, Inc., headquartered in San Francisco, Calif. I am appearing today as chairman of the Public Lands Committee of the Western Oil and Gas Association, a trade association representing companies which explore for, develop and market petroleum and petroleum products in the Western United States.

In summary, WOGA members have no objection to the marine sanctuaries program as it was originally adopted by Congress. WOGA members object strongly, however, to the implementation of the marine sanctuaries program offshore California. It is not being used to protect areas of special and unique significance, as contemplated by the statute. Rather, it is being used to stop oil and gas development from Federal lands offshore. In our view, the thrust of the program should be changed or the program should be abolished.

I would like to just focus on the Channel Islands Marine Sanctuary and our view of the creation of that sanctuary.

The prohibition of oil and gas development on new leases covers an area of almost 1 million acres of ocean in an area that is presently a petroleum producing area.

In addition to establishing a ban on new oil and gas activity, the regulations make no changes of permissible uses of the Channel Islands' environment.

As you heard Governor Brown's representative state, there are no restrictions on commercial or sports fishing activity. If such a large portion of the Santa Barbara Channel is made unavailable for oil and gas production, there is a virtual certainty that the result will be a significant loss in the amount of petroleum available to the United States.

Twenty-one agencies already regulate the proposed sanctuary area, and we feel that such a level of regulatory control is adequate.

Operations on existing leases have been conducted in the sanctuary area, without any adverse environmental effects.

Finally, NOAA failed to take into account the national interest in continued exploration for production of oil and gas, the cumulative effects of prohibiting oil and gas development in other areas designated as marine sanctuaries, and the adverse environmental impact of forcing the Nation to rely on alternative energy sources to make up for the shortfall.

Despite this, the implementation of regulations prohibiting oil and gas development were adopted by NOAA.

In the Santa Barbara Channel Area, over 900 wells have already been drilled, and 436 million barrels of oil and gas have been produced. In fact, the Santa Barbara Channel is presently the richest off-shore oil producing province in the Western United States.

Further, it is simply unnecessary to prohibit oil and gas operations on the grounds of environmental protection. Safeguards in the Outer Continental Shelf Lands Act and implementation of regulations of the Department of the Interior as well as 20 other regulating agencies are designed directly to answer this concern.

Environmental studies are required by the Federal Government before any exploration or developmental activities are allowed. The Secretary of the Interior has authority to suspend or prohibit lease activities if pursuit of such activities poses a serious threat to the marine environment.

The Outer Continental Shelf remains one of our last great frontiers for finding new domestic supplies. At the present time, our OCS equals an area approximately three times the size of Texas. We have about 2 percent of it under lease for oil and gas exploration. In the remainder of the free world, 40 percent of the OCS is under exploration or production.

No attempt has been made by the Department of Commerce in the administration of the marine sanctuaries program to evaluate the impact of the loss of oil and gas and oil and gas shortage on this country. In view of our national energy concern, we feel we should take a comprehensive look at the cumulative effect on energy on the sanctuaries proposed and implemented before reauthorizing this legislation.

If I may just mention Alaska in connection with the Western Oil and Gas Association, there has been proposed or identified as possible sanctuary areas off-shore Alaska, 19 different areas. They total in size over 350,000 square miles.

The U.S. Geologic Survey has estimated that the oil and gas reserves in the OCS of the entire United States is about 25 billion barrels. In Alaska alone, 17.6 billion barrels are estimated in the OCS.

If you overlay the proposed marine sanctuaries over the oil and gas potentially bearing parts of the OCS, you will see that at least two-thirds of the Alaska OCS reserves will be included in proposed sanctuary boundaries, and if those undefined sanctuaries are identified as the Santa Barbara Channel was, with prohibitions, we will have left untouched an amount greater than one-half of our proven reserves.

[The prepared statement follows:]

STATEMENT BY CLAIR GHYLIN, GENERAL MANAGER OF LAND FOR THE WESTERN REGION, CHEVRON, USA, INC., ON BEHALF OF THE WESTERN OIL & GAS ASSOCIATION

1. INTRODUCTION

My name is Clair Ghylin. I am General Manager of Land for the Western Region, Chevron USA, Inc., headquartered in San Franscisco, California. I am appearing today as Chairman of the Public Lands Committee of the Western Oil and Gas Association, a trade association representing companies which explore for, develop and market petroleum and petroleum products in the Western United States. In summary, WOGA members have no objection to the marine sanctuaries program as it was originially adopted by Congress. WOGA members object strongly, however, to the implementation of the marine sanctuaries program offshore California. It is not being used to protect areas of special and unique significance, as contemplated by the statute. Rather, it is being used to stop oil and gas development from federal lands offshore. In our view, the thrust of the program should be changed or the program should be abolished.

Under the Marine Sanctuaries Act, in order to designate as area as a marine sanctuary, the designation must be ". . . necessary for the purpose of preserving or restoring such areas for their conservation, recreational, ecological or aesthetic values." (16 U.S. Code 1432).

Legislative history shows that use of the term "necessary" was no accident. Marine sanctuaries legislation was at one time opposed on the floor of the House on the ground that it would result in the "unnecessary locking up" of offshore re-

sources, particularly oil. (Cong. Rec. House, Sept. 9, 1971, p. 31134). The sanctuaries legislation was defended by Congress Lennon, the bill's sponsore, on the basis that: "The Secretary must find that oil exploration or extraction cannot be conducted consistent with the purpose for which the sanctuary was established."

Congressman Dingel emphasized: "This legislation is not going to halt oil drilling." (page 31136). The stated intent of Congress at the time it enacted the legislation was to protect unique ocean areas, and only to interfere with energy development when it was demonstrably inconsistent with the purpose of the sanctuary. A perfect example of a sanctuary which fulfills this purpose is the Marine Sanctuary to protect the historic USS Monitor.

The federal government's implementation of the marine sanctuaries program on the West Coast has been in direct conflict with this stated purpose. On September 22, 1980, President Carter approved the Channel Islands Marine Sanctuary. More recently, on January 16, 1981, the President approved the Point Reyes/Farallon Islands Marine Sanctuary. The geographic areas are separate, but the designations have one major aspect in common. The regulations proposed by the Department of Commerce to implement both sanctuaries prohibit oil and gas operations on all new leases within the sanctuary area. (45 Fed. Reg. 65198, October 2, 1980; 46 Fed. Reg. 7936, Jan. 26, 1981). At the same time, all other existing uses within the sanctuaries would still be allowed.

2. THE CHANNEL ISLANDS MARINE SANCTUARY

Let me focus for a moment on the Channel Islands Marine Sanctuary. The final governmental impact statement ("EIS") for the sanctuary describes the project in some detail. It shows that there are only two major differences between regulations of the Channel Islands and Santa Barbara Island as a sanctuary and without that status. The first is that the sanctuary designation adds an additional layer of bureaucracy to the already approximately eighteen federal agencies, implementing twenty-one statutes and other authorities in the area.

The EIS gives a chart of the agencies which have authority over the sanctuary area. They include, among others, the Marine Mammal Commission, the National Marine Fishery Service, the U.S. Geological Survey, the Fish and Wildlife Service, the United States Coast Guard and the Historic Resources Commission. Further, at the time of sanctuary designation, a three-nautical mile state oil and gas sanctuary already existed around the islands, and the Channel Islands National Park had been created shortly before the sanctuary designation was approved. Finally, the California Coastal Commission was emplowered by the Commerce Department with consistency review and veto over all activities in the coastal zone. It is beyond our understanding why a sanctuary is needed with all these other agencies already exerting major responsibilities, especially where most of the agencies are oriented wholly or in large part to environmental protection. The EIS acknowledges that there are quite a number of agencies with regulatory authority, but finds that yet another is needed to preserve the Islands' resources.

The EIS says in this regard:

"Maintaining the status quo and failing to designate a marine sanctuary in the vicinity of the northern Channel Islands and Santa Barbara Island will eliminate the potential for positive management of this rich marine area. In the absence of a sanctuary, there will be less ecosystem research, no new education or public awareness programs directed at users of the area, and no institutional mechanism to focus on long term planning and coordination issues for this particularly valuable geographic area.

* * * * * * *

"Presently, 11 Federal, 7 State, and a multitude of regional and local government agencies are vested with some regulatory authority over certain activities within the area. These authorities provide a considerable degree of protection for marine resources in general; the Channel Islands National Park and the Ecological Reserves around San Miguel, Santa Barbara, and Anacapa Islands protect the resources within these areas in particular. In general, however, each of the statutes described above and the agencies administering them are directed at a single purpose, region or activity. No entity looks to the welfare of all the living resources or the ecosystem of this marine area. Cumulative impacts on the resources, arising from various activities subject to the jurisdiction of separate agencies, may escape the attention of any agency.

* * * * * * *

"Although certain uses of the area do not now seriously threaten resource quality here, they could have more significant impact if and when activity intensities grow. The current multitude of regulatory authorities, many of which have different

objectives and jurisdictions, may not be able to respond on the basis of ecosystem issues to future activities. Furthermore, some agencies suffer from limited enforcement resources. Because these waters contain so many valuable resources which in turn support so many beneficial uses, they require the special acknowledgement and study possible in a marine sanctuary to ensure that they are used and preserved in the future as effectively as possible." (Final EIS, pp. F-50—F-52).

Research and public awareness programs and the unquantified threat of harm from possible future activities are not sufficient reason for the need for a sanctuary altogether.

As I mentioned a few moments ago, sanctuary status for the Channel Islands area will have a second major impact: a prohibition on oil and gas exploration and development on new leases within the sanctuary. The Department of Commerce never assessed the significance of this impact and it is considerable. In the Santa Barbara Channel area, over 900 wells have already been drilled and 436,000,000 barrels of oil and gas have been produced. In fact, the Santa Barbara Channel, adjacent to and in part occupied by the proposed sanctuary, is presently the richest offshore oil producing province in the western United States. The potential in the Channel area may amount to about 5% of our total daily domestic production.

It is simply no excuse to prohibit oil and gas operations on the grounds of environmental protection. Safeguards in the Outer Continental Shelf Lands Act and implementing regulations of the Department of the Interior are designed directly to answer this concern. Environmental studies are required by the federal government before any exploration, development and production activities are allowed. The Interior Secretary has authority to suspend or prohibit lease activities if pursuit of such activities poses a serious threat to the marine environment.

In sharp contrast to Carter's call for sacrifice, President Reagan has made it clear that his administration will emphasize energy production rather then conservation. Echoing this view, new Secretary of Energy Edwards said recently that: "Most Americans now agree that we must increase production of our own energy resources . . . by the private sector." (1981 Congressional Quarterly, January 30, 1981)

The Outer Continental Shelf still remains one of our last great frontiers for finding new domestic supplies. No attempt has been made by the Department of Commerce to evaluate the impact of the marine sanctuaries program on the oil and gas shortage in this country. In view of this national energy policy, we recommend the following:

3. RECOMMENDATIONS

First, we recommend that these subcommittees take a comprehenisve look at the individual and cumulative effect on energy of the sanctuaries proposed and implemented by NOAA before reauthorizing this legislation.

Second, we recommend that wherever a sanctuary designation will have an impact on oil and gas activities that the Department of Interior must review and affirmatively find the regulations do not duplicate and are not in conflict with its own regulations before they are approved.

Third, we urge that the Channel Islands Marine Sanctuary be rescinded on the grounds that the area does not qualify for sanctuary status.

Fourth and finally, we recommend that if there is to be a Channel Islands Marine Sanctuary that the regulations proposed for the sanctuary be renoticed and readopted in a form which does not include a blanket prohibition of oil and gas operations on OCS leases. Perhaps a short explanation is in order. The Channel Islands Marine Sanctuary does not itself regulate permitted and prohibited activities within the designated area. Rather, implementing regulations do this. Regulations which ban oil and gas development will become effective on or about March 26, 1981 if no further action is taken by the Commerce Department. We strongly request that these subcommittees recommend to the Commerce Department that proposed regulations not be issued.

Let me end on this note. As you all know, the Office of Management and Budget has proposed drastic cuts in the budgets of almost every agency. These cuts are being made despite cries that they will affect necessary programs and needed services. In view of this situation we respectfully request that if the marine sanctuaries program is maintained that it be restored to its original purpose: preservation of unique treasures.

Thank you for listening to and considering these comments.

Mr. D'AMOURS. Thank you, gentlemen.

Mr. Ghylin, did I understand you to say that the Santa Barbara Channel could potentially provide 5 percent of our daily national production?

Mr. GHYLIN. Yes, sir, that is an estimate that has been published.

Mr. D'AMOURS. How much of that 5 percent is affected by the sanctuary designations today?

Mr. GHYLIN. The marine sanctuary encompasses 1 million acres. Some of the acreages inside of the marine sanctuary boundaries is presently under lease.

Mr. D'AMOURS. I would like you to compare oil with oil, not oil with acres. You said 5 percent of our oil production. How much of that 5 percent would be affected by the prohibition in the designated areas?

Mr. GHYLIN. I don't have an accurate estimate of the reserves by any—by say USGS. I don't know the estimate, however, I'll attempt to get it for you.

Mr. D'AMOURS. I appreciate that. It would be helpful information if we could have it though.

There is testimony that is going to be given by Mr. Weber later today that states that sanctuary prohibitions on oil drilling involve one-tenth of 1 percent of the total OCS, just over 2 percent of the total area offered since 1954 in oil and gas lease sales, and under 5 percent of the total area of the OCS which has been bid and leased.

Have you reviewed that testimony, or do you have reason to doubt those figures?

Mr. GHYLIN. I have not reviewed it but I have a comment. If perhaps the comment is based on existing OCS leases then I would accept those statistics, because only 2 percent of our OCS is under lease. But we do have under the Department of the Interior an approved 5-year leasing program approved by Congress which includes in it most of the west coast areas. Many of the areas for sale within the next 5-year leasing schedule are also overlayed by a proposed marine sanctuary.

Mr. D'AMOURS. You are talking about the list of proposed sanctuaries?

Mr. GHYLIN. The proposed list of sanctuaries and the approved 5-year leasing schedule. I am talking about the future, sir, the next 5 years.

Mr. D'AMOURS. I will have to go further into that with Mr. Weber because I have some questions about what he means by that.

Is it true that a few of the tracts within the Point Reyes/Farallon Islands and Channel Islands Sanctuaries are close to the boundaries of the sanctuaries, and if so, could some slant drilling resolve your problem?

Mr. GHYLIN. I think we are speaking only of the tracts that have been announced for sale, 53, in an area that was withdrawn by Secretary Andrus and now is being considered again by Secretary Watt. That area was opposed by Governor Brown, both the portions inside and outside of the proposed sites.

As to slant drilling, there is nothing to prevent slant drilling and production of energy from inside the sanctuaries from a location outside of it except the physical nature of drilling.

If the oil-bearing structures are shallow then—the distance that you can reach by slant drilling is limited. What I am saying is that the physics of slant drilling limits you as to how far you can reach away from your platform. If you locate your platform outside the sanctuary you would be limited to maybe 1 mile inside the sanctuary. There are sanctuaries that are 8 or 10 miles wide and 20 or 30 miles long. So there is no way you can recover reserves from all the sanctuary by slant drilling.

Mr. D'AMOURS. OK. Just to understand your general position, can you envision a situation where environmental considerations should outweigh any oil and gas exploration activity?

Mr. GHYLIN. I have difficulty with that. Certainly the U.S.S. *Monitor* would be one. A limited area would be one. There are probably environmental areas that are so unique that they require protection, but I can't believe that there is off of the California shore a unique environmental area 20 miles wide and 40 miles long.

Mr. D'AMOURS. You heard Mr. Sharood's testimony about the Georges Bank?

Mr. GHYLIN. Yes.

Mr. D'AMOURS. The dangers of exploration, the ravishing of that area that an oil spill could cause, was quite well expressed by him. How do you reconcile the environmental and industrial interest in that case?

Mr. GHYLIN. Well, I think first you have to evaluate the risk. The offshore American oil industry has a very good record. We have drilled over 24,000 offshore wells in the last 40 years. Of those, only 4 major leaks occurred, only one of which reached shore. That was in Santa Barbara, which is in view of the Santa Barbara Marine Sanctuary.

Mr. D'AMOURS. But only one spill in the Georges Bank would, according to Mr. Sharood, cause irreversible or nearly irreversible devastation. Isn't that a true statement?

Mr. GHYLIN. If that was the evidence, then I would think that would be a unique situation where oil and gas development should be prohibited.

I think it would be——

Mr. D'AMOURS. I think Mr. Sharood did say it was a unique situation.

Mr. GHYLIN. But I think you need to weigh the risk and you need to evaluate the risk which I consider to be rather slight in view of our industry's record, against what it is you are leaving, against what it is you are losing which is the energy source for the Nation. And you are losing the income that derives from that energy source.

Our objection to the NOAA program to date is that there was no evaluation of risk. NOAA did not consider the fact that we were locking up energy, that we were depriving the Nation of energy, and that we were going to have to develop some other alternate energy source such as nuclear energy or coal which might cause greater environmental problems.

NOAA did not consider any of that.

Mr. D'AMOURS. I appreciate what you are saying. By the way, basically both your and Mr. Jackson's underlying support for such

a program as you both clearly expressed in your testimony, is appreciated. You are paying attention to the need for this kind of program. I think NOAA, Department of Commerce and Office of Coastal Zone Management people are quick to admit that they have in the past conducted this program in ways that could have been improved.

I asked this question earlier and I would like to ask both you and Mr. Jackson to respond. In both your testimonies you indicated that people are using this program to stop oil and gas exploration. Why would anybody want to do that? Just for the principal of it? Why would anyone want to stop oil and gas exploration?

Mr. JACKSON. Mr. Chairman, there are apparently a number of reasons why people would do that. Some people are quite opposed to the oil industry. They do not particularly like our operations. They like to use scare tactics as to damage that we will create.

Georges Bank is a very excellent example of this. After President Carter decided to go to oil and gas leasing in 1977, NOAA immediately received a large number of nominations for sanctuary considerations, and among them was Georges Bank. Georges Bank was nominated purely and solely as a device to prevent any oil and gas exploration from taking place in that area, but the conservation——

Mr. D'AMOURS. Don't you think that the people had an overriding interest that may have been unwise or ill-considered, but the overriding interest was concern for environmental protection? Does it have to be something beyond that, like an attempt to stop oil and gas exploration just for the sake of stopping it?

Mr. JACKSON. I think that is part of it. I think part of it is a desire to change the lifestyle of this country, to go to solar or to renewable energy systems. And we have no quarrel with that, but we think that is far down the road. We don't see it happening for many, many years. We think we are largely dependent on oil and gas and coal until some time out in the early part of the next century. In the meantime, we have to use oil and gas as a bridge to get to that point in time where we can have those other energy sources. Oil and gas today produces 65 or 70 percent of our total energy needs. It is declining rapidly. Oil production is declining, gas production is declining, we are working as hard as we can, and we have over 3,500 rigs in operation today which is the largest number we have had ever in our business.

Mr. D'AMOURS. I appreciate that.

Mr. JACKSON. Yes.

Mr. D'AMOURS. I appreciate that but I wanted to not get into the oil industry per se. I would rather keep it on the track of continental shelf oil development and environmental protection and the like.

You see this as an attempt by the solar lobby to advance its cause, is that correct?

Mr. JACKSON. I think that is partially it. I think part of it is a perceived fear by the fishing industry that they are going to suffer greatly by any oil and gas operations that take place.

We strongly disagree with that. We think our operations throughout the world—California, Alaska, all of the Gulf of Mexico, the North Sea, everywhere—indicates that these activities

can be carried on in a satisfactory and acceptable environmental mode. But we have had a difficult time trying to convince environmentalists that we can do this and do it acceptably.

Mr. D'AMOURS. Can you guarantee to me—one who lives not too far from the Massachusetts-New Hampshire shoreline—that there will be no spill at Georges Bank?

Mr. JACKSON. No, sir, I can't. The Good Lord is the only one——

Mr. D'AMOURS. Then can you understand the concern of a person who lives where I do and whose constituents are fishermen, that an oil spill could happen?.

Mr. JACKSON. I do understand that. I think we all understand that but I think we have the weight of scientific evidence that proves that massive oil spills are most unlikely to occur. We have successful operations all over the world, and there is no reason why Georges Bank can't be handled as well as anywhere else in the world. You get the advantage now of all of the technology that has been invented and developed over the last 30-odd years.

Mr. D'AMOURS. I appreciate that there is a relative risk involved. I think it is conditioned upon the amount of energy that is developed. What we do in Congress is constantly balance relative risk. As you move from area to area, the risks vary. There may be one risk at Georges Bank, and another at Point Reyes or somewhere else. We have to move on and I just have one last question and then I will turn it over to the minority for a question.

How much oil are we going after in Point Reyes and in the Santa Barbara Channel Islands in terms of our national production that will be affected by these sanctuary designations?

I know I asked that question before of Mr. Ghylin, and as I recall, you said 5 percent of our national daily production. But when I asked how much would be affected by the sanctuary designations the answer was less clear. I would like you to get back to that if you could, because if it is a large percentage that may be one thing. But if it isn't, then we have to seriously consider whether even with all of our modern scientific knowledge we want to irrevocably risk destroying valuable ecosystems and the like, and that we ought to be as conservative as possible in preserving these systems for our children and their children. This is not really a question, it's more like a closing statement, I suppose. But if you could get that information for me I would appreciate it, because without some idea of whether or not we are talking about significant amounts of oil and energy, it would be difficult to do anything but decide favorably for the designations of those areas as sanctuaries.

Mr. GHYLIN. If I could comment, I will get to the committee the USGS estimates for the areas included in the Santa Barbara Sanctuary area. Let me comment, too, though on the validity of those estimates.

These are estimates in an inexact science.

Mr. D'AMOURS. Do you have them now?

Mr. GHYLIN. I will get them to you. They are U.S. Government estimates.

[Information referred to follows:]

Chevron

Chevron USA Inc
575 Market Street, San Francisco, CA 94105

Clair Ghylin
General Manager Land
Western Region

March 26, 1981

Subcommittee on Oceanography
Subcommittee on Fisheries and
Wildlife Conservation and the
Environment
Marine Sanctuaries Program
Reorganization Hearing
Thursday, March 12, 1981

Hon. Congressman Norman E. D'Amours
U.S. House of Representatives
Committee on Merchant Marine and Fisheries
Room 1334, Longworth House
Office Building
Washington, D.C. 20515

Dear Congressman D'Amours:

During your hearing you asked me for the government's figures on oil and gas resources in the unleased federal lands within the Channel Islands Marine Sanctuary.

The United States Geological Survey has estimated the resources within the 24 tracts within the Sanctuary area that were deleted from OCS Sale 48, but not for all unleased lands in the Sanctuary. NOAA's contractor, Sterling Hobe Corporation, which prepared the Analysis of the Economic Impacts of the Proposed Channel Islands Sanctuary Regulations, credited the unleased federal lands with economically recoverable reserves of 11.4 million barrels of oil and 17.8 billion cubic feet of gas. They developed these reserve figures by doubling the United States Geological Survey's estimates for the 24 tracts in OCS Sale 48. To my knowledge, no other branch of the government has published reserve estimates for the unleased federal lands within the Channel Islands Marine Sanctuary.

At that hearing you and I also discussed a letter from Secretary Andrus which was published in the Washington Post on October 9, 1979. A copy of that article is also attached.

I hope this information is helpful; please let me know if I can be of further assistance.

Yours very truly,

Clair Ghylin

CG:md
Enclosure

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Mr. GHYLIN. Those estimates are made, this is an inexact science, made by the same professionals that once estimated there was no oil in the North Sea, and no oil at Prudhoe Bay and no oil in the Disturbed Belt. Keep that in mind.

Second, in a frontier area, one of the reasons we need to explore and drill wells is so that we have more evidence available upon which to base these estimates and the estimates in the Point Reyes/Farallon Islands area is categorized as a frontier undeveloped area. The estimates are based on a minimal amount of real evidence so the estimates are probably not worth a lot in this kind of a judgment when you are weighing risk.

Mr. D'AMOURS. Why even bother sending them to us then if they are not worth anything?

Mr. GHYLIN. I would only suggest on this same issue that Secretary Andrus had a letter published in the Washington Post on October 9, 1979 when this same sort of question was asked about the Georges Bank sale, and he said that the argument that the 150 million barrels of estimated reserve in the tracts proposed for leasing only equals 8 days of current U.S. consumption is misleading. If one were to use this approach to present the other perspectives—that is to the problem—it could also be argued that the total protein value of all the fish on Georges Bank would provide only four meals for every American.

This kind of argument proves nothing. I would only add to that that if——

Mr. D'AMOURS. Four meals for every American. Is that from now to the end of the world?

Mr. GHYLIN. No, just 4 meals.

Mr. D'AMOURS. All of the present and future fish?

Mr. GHYLIN. I am merely quoting Secretary Andrus in the Washington Post.

[Text of newspaper article referred to follows:]

[From the Washington Post, Oct. 9, 1979]

(By Cecil D. Andrus)

FISH, YES—AND OIL, TOO

The Washington Post editorial of Sept. 23 ["No to Georges Bank"] must be responded to for two reasons: it contains factual errors, and it does not adequately state the public policy issues before the Department of the Interior in deciding to hold a lease sale on the Georges Bank.

The Post stated that the Georges Bank brings in "well over $1 billion in revenue a year—every year—from commercial fishing alone." In 1978, the total catch from the Georges Bank was 126,434 tons, valued at $168 million, of which 83,187 tons were landed in the United States, with a value of $82 million.

The Post indicated that the U.S. Geological Survey's projected "most probable find" equals 150 million barrels of oil. While these figures do represent the USGS estimates they are just that—estimates. These figures are derived from seismic and stratigraphic information and are indicators of probability. Further, they represent estimates for the tracts included in Lease Sale No. 42 and not the entire Georges Bank. One of the results of the lease sale in frontier area such as Georges Bank will be the gain in knowledge and information that can only be derived from actual drilling.

The Post's argument that the 150 million barrels of "estimated" reserve in the tracts proposed for leasing equals 9.5 hours of U.S. energy needs every year for 20 years or eight days of current U.S. consumption is misleading.

If one were to use this approach to present the other perspectives, it could also be argued that the total protein value of all the fish on the Georges Bank would provide only four meals for every American. This kind of argument proves nothing.

The oil and gas in the area being leased could provide the energy equivalent of nearly $7 billion worth of oil imports at today's prices. This is not small potaotes—or, forgive me, even Idaho potatoes. The reality of the contemporary American Energy situation is that we are too heavily dependent on foreign sources of oil.

Finally, the Post agonizes over the spill in the Bay of Campeche and the potential for a similar spill in the Georges Bank. The record of U.S. drilling shows a consistent decrease in the number of accidents and the amount of oil spilled. Since 1956, more than 16,000 wells have been drilled on the Outer Continental Shelf. Studies to date indicate no long-term ecological damage resulting from these operations. Currently, there are more than 2,400 fixed structures on the OCS. In 1978, they produced more than 292 million barrels of oil, or 9.3 percent of U.S. domestic oil, and nearly 4.4 trillion cubic feet of natural gas, or 222.4 percent of U.S. domestic gas. Yet, there were only two oil spills last year of more than 50 barrels, the larger one being only 135 barrels.

Since 1971, there have been only six spills of more than 1,000 barrels, all in the Gulf of Mexico and none from exploratory drilling operations. And the number of small spills, averaging only one or two barrels, has declined over the last eight years.

The most serious error in the Post editorial is the assumption that the Department of the Interior is motivated by some bureaucratic pikue and is responding to apparent "symbolism." In 1978, the Congress passed Outer Continental Shelf Lands Act Amendments. This legislative action followed several years of hearings, debate and discussion. The amendments to the existing legislation were substantial and some new sections establish landmark changes in the federal decision-making process.

I am charged with an absolute responsibilty to weigh the effects on the fisheries resources in the decision to hold a lease sale. That was done for the Georges Bank.

I am charged with the responsibility to consult with state governors on the size, timing and location of the sale. That was done for the Georges Bank, and the affected state governors who commented on the proposed sale notice are in favor of proceeding with the sale. In fact, through this process we have designed special stipulations that tailor this sale to the unique ecology of the Georges Bank.

Many fishermen recognize that much progress has been made in recent years to strengthen their industry through establishment of a 200-mile economic zone, the Oil Spill Pollution Liability Fund (under OCSLAA) and the Fishermen's Contingency Fund (under OCSLAA).

I would submit that environmental safeguards and economic protections have been adequately afforded and that we can proceed with this sale and not jeopardize the fisheries resources for the fishing industry.

The ability of the oil and gas industry and the fishing industry not only to coexist, but also to thrive is evident in the Gulf of Mexico and the North Sea. With the special protective measures in place for the upcoming sale, there is no reason these two vital industries cannot do the same in the Georges Bank as well.

Mr. D'AMOURS. And that is what he said?

Mr. GHYLIN. That is how he is quoted in the Washington Post.

Mr. D'AMOURS. That the current and future yields from now to the end of the world would feed all Americans four meals?

Mr. GHYLIN. I assumed that he meant all the fish presently there.

Mr. D'AMOURS. All the fish presently there. But that is a big difference.

Mr. GHYLIN. We are talking about all the oil presently in the Santa Barbara Sanctuary and I will get you a reserve number, but I think it is an estimate we can not weigh that heavily on is what I am saying.

Oil is where we find it. What we are asking for is the right to look for it and find it and not be prohibited by massive withdrawals of lands.

Mr. D'AMOURS. Thank you very much. That concludes my questioning. Mr. Carney, do you have questions?

Mr. CARNEY. Thank you very much, Mr. Chairman.

I would like to pursue the question that you just asked on the quote of the Secretary. I was wondering, does oil propogate? You

are talking about a finite and an infinite resource, so I don't think we can compare apples and oranges in that case.

Mr. GHYLIN. Oil is not produced at the same rate as fish are produced, no.

Mr. CARNEY. Thank you very much.

If I might, I would like to address this question to Mr. Jackson; I believe, Mr. Jackson, you stated that Congress should have the final approval over the large sanctuary designations. Is that correct?

Mr. JACKSON. Yes, sir.

Mr. CARNEY. Given that thought, no doubt we should have the final approval over large oil and gas leases, too?

Mr. JACKSON. Well now—[laughter].

Mr. JACKSON. You know, there is maybe one or two sanctuaries designated a year; there are literally thousands of oil and gas leases. I don't believe Congress would have the time to do that and to do it effectively. No, sir.

Mr. CARNEY. We will move right along. I think you answered that question rather well. Are you an attorney?

Mr. JACKSON. No, sir, I am not. I'm a geologist.

Mr. CARNEY. I see.

Mr. JACKSON. I would like to reinforce what Mr. Ghylin said, that there have been many estimates of the amount of oil and gas on Georges Bank. For instance, the current mean estimate on a probability curve the mean of which is 900 million barrels of oil and 4.4 trillion cubic feet of natural gas.

The only thing we are really sure of about that estimate is that it is wrong. We do not know what it is. There is no way of knowing. We have to drill wells. You can have a hundred estimates on how much oil there is in the marine sanctuary in the Santa Barbara Channel, but the only way to really find out is to drill wells. We do not have accurate estimates of those at all.

Mr. CARNEY. Can you suggest criteria that might be used in distinguishing between the threat least likely to occur to marine resources, and those threats which there is a reasonable expection of occurring?

Mr. JACKSON. Yes, I think a perceived threat is one that an oilspill is going to wipe out an entire ecosystem. I think that is not a practical thing to consider. I don't think it's reasonable or logical. I think if you had a large spill on Georges Bank for instance it would not wipe out the resources of the Bank. It might not do much damage.

The larvae float on Georges Bank and about 95 percent of them dying of natural causes; and it is very unlikely that we would kill the other 5 percent.

There have been studies made at MIT that have clearly shown that the risk is minimal of an oilspill on Georges Bank wiping out a year class of any species of fish that might exist on the banks. There was one spill, the *Argo Merchant,* which was a transportation spill. It was heavy oil, bunker fuel, a refined product rather than crude, but the studies made after that have not shown any damage, nor have virtually any of the scientific studies that have been made following oilspills in the past.

Mr. CARNEY. I don't think you answered the question though. You have suggested criteria. Does the American Petroleum Institute have any suggested criteria which we can use in distinguishing the two? You gave me a specific example in the case of Georges Bank regarding a transportation spill, but what criteria do you suggest we utilize in making these evaluations?

Mr. JACKSON. We have not tried to develop that set of criteria but we would be happy to work the problem and see if we can come up with criteria and advise you in writing.

Mr. CARNEY. All right.

[Information follows:]

EXAMPLES OF CRITERIA USED IN DISTINGUISHING THREATS

Examples of sound scientific criteria that might be used in distinguishing between alleged threats to specific marine resources which are a mere possibility and those threats for which there is a reasonable expectation of occurrence include:

State-of-the-art oil spill trajectory models would assess the real world risk of an actual spill eventually reaching the resource or habitat under consideration;

State-of-the-art oil spill risk analysis models applying real world spill statistics in the OCS region being considered for sanctuary designation, if exploration and development operations have already occurred or the extrapolation of spill statistics from similar ocean environments in frontier OCS regions;

Evaluation of the wide diversity of scientific literature available regarding the fate and effect of spilled oil on the marine environment would provide an objective basis for assessing the short and long term impacts that could be expected if an oil spill should occur and if it should reach the resources of concern; and

Assessment of the assimilative capacity of the identified resources for the types of pollutants or impacts being regulated. Again, this type of criteria must be developed from an evaluation of the literature available regarding the resiliency of the resources to certain types of natural and man made impacts.

Mr. CARNEY. In the designations of marine sanctuaries that have been approved to date and in evaluation and review processes for proposed sanctuary sites, has the oil and gas industry been given sufficient timely opportunity to present its comments, objections, and suggestions concerning sanctuary designations and regulations?

Mr. JACKSON. Yes, sir, we have commented extensively on each of these.

Mr. CARNEY. Have the comments and suggestions put forth by the oil and gas industry been given reasonable consideration?

Mr. JACKSON. I don't know what "reasonable consideration" is, Mr. Chairman.

Mr. CARNEY. In view of the industry perspective?

Mr. JACKSON. We don't see that they have had any effect, no, sir.

Mr. CARNEY. Excuse me?

Mr. JACKSON. We don't see that they have had any effect, but I am sure they have been read and looked at, but our comments have not resulted in a great deal of change.

Mr. CARNEY. You say you don't feel they have had any effect? Would you say you've probably won a few and lost a few?

Mr. JACKSON. Well, I can't name the ones we have won. I think we have lost quite a few, but I don't think we have won any.

Mr. CARNEY. You have never won?

Mr. JACKSON. The only one, I guess you could say, that we may have had a voice in Georges Bank and we won. We certainly objected and that turned out to be a nominated sanctuary that was not designated.

Whether that was due to our efforts or due to the efforts of the fishermen or some other group, I could not say. But we were certainly opposed to having Georges Bank designated as a marine sanctuary.

Mr. CARNEY. If you have not won any, and you have lost several, could you tell me if any of them have been rained out?

Mr. JACKSON. We did not oppose all of them. We have not opposed Looe Key. We have not opposed the ones which we perceive as not having hydrocarbon potential—oil and gas potential.

But we have objected strenuously to the Flower Garden Banks, Farallon Islands, and to the Santa Barbara Channel and the Georges Bank.

We are greatly concerned about the large number of nominations that have been made in almost every potentially productive basin that has hydrocarbon potential on the entire OCS of the United States; and virtually all of them have been nominated and given time they will all be nominated.

Mr. D'AMOURS. You heard Mr. Knecht testify earlier that this nomination process is too easily accepted as tantamount to selection and that NOAA is going to change the nomination process. The new process will be far from it.

Mr. JACKSON. We are delighted to hear that.

Mr. D'AMOURS. Thank you very much, gentlemen. We appreciate your coming here You have made a valuable contribution to our hearings. Thank you for taking the time to come in and present your testimony.

We have 2 panels remaining, and I appreciate the patience and tenacity of everybody sitting out there. The next panel is Mr. Weber and Ms. Coleman. Mr. Weber is from the Center for Environmental Education and Ms. Coleman is a marine issues specialist for Defenders of Wildlife.

STATEMENTS OF SHERRARD COLEMAN, MARINE ISSUES SPECIALIST OF DEFENDERS OF WILDLIFE; AND MICHAEL WEBER, CENTER FOR ENVIRONMENTAL EDUCATION

Ms. COLEMAN. I would like to precede Mr. Weber as I will be giving an overview of the program and he will address some of the more specific problems.

Mr. D'AMOURS. Excellent. You were here earlier when we did point out that because of time constraints we would appreciate summaries of your statements.

Ms. COLEMAN. I will try.

Mr. D'AMOURS. Thank you.

Ms. COLEMAN. My name is Sherrard Coleman; I am a marine issues specialist with the Defenders of Wildlife here in Washington. I appreciate this opportunity to appear before the committee in regard to reauthorization of title III of the Marine Protection, Research and Sanctuaries Act of 1972.

Title III, as we all know by now, established the national marine sanctuary program, and resulted from the introduction of 11 separate bills in the House of Representatives during 1968. These bills expressed a growing concern over the increasing evidence of degradation of the marine environment. The resulting title III reflected the firm belief that certain ocean areas of particular conservation,

recreational, ecological, or esthetic values must be protected from the adverse effects of coastal and offshore development. But title III then and now represents much more than an effort to prevent environmental degradation of ocean areas. The national marine sanctuary program also provides the opportunity for comprehensive planning and management of such areas, and for needed research and educational efforts to insure their long-term protection and enjoyment. It is concerning these specific opportunities that Defenders of Wildlife strongly believes two things: (1) the program embodies a concept whose time has clearly come; and, (2) the program has not, unfortunately, been given the chance to adequately implement this concept.

It is estimated that by 1990, 75 percent of this Nation's population will be residing within the coastal zone. Millions of persons in addition will annually visit our seashores' warm beaches or rocky shorelines. They will actively enjoy swimming, boating, diving, fishing, or simply breathing the salt air. By that same time, of course, the diversified pressures on coastal waters will also be greatly increased. These pressures include a real need to develop domestic energy resources on the Outer Continental Shelf; an increased demand on commercial fisheries development; and increased shipping traffic attendant to these and other activities.

These commercial and recreational activities and their potential effects on the marine environment speak to an element of the NMSP program which has not as yet received the attention it deserves.

It is perhaps this element which makes title III unique among a myriad of other environmental legislation. The NMSP is designed to comprehensively manage and preserve for future generations distinctive ocean ecosystems. In doing so, the program fills existing holes in the protective coverage offered by other laws. Achieving these objectives does not mean closing off special areas to all commercial and recreational uses. Rather, the program identifies anticipated detrimental activities in such areas; recognizes the changing needs of such areas; and finally remains sensitive to local States' interests in such areas. The result is a program whose purpose is both the comprehensive protection of distinct ecosystems, and the active encouragement of their wise use and enjoyment.

The value of this all-encompassing consideration of marine environmental protection has been recognized by a number of studies, including those of the U.S. General Accounting Office and the Congressional Research Service. The Center for Natural Areas found that:

> Title III . . . became the first, to date the only broad-based, comprehensive federal legislation capable of striking a balance between the need to develop and utilize and the need to protect and conserve the nation's marine resources.

This country's past efforts to protect the marine environment have resulted in a series of regulatory authorities which are primarily single-purpose in nature. Among them are the Fishery Conservation and Management Act; the Outer Continental Shelf Lands Act Amendments of 1978, the Federal Water Pollution Control Act Amendments of 1972, the Port and Tanker Safety Act, and the Deepwater Port Act.

Moreover, although well-intentioned, these laws sadly tend to emerge only after the occurrence of some environmental catastrophe—such as the oil rig blowout at Santa Barbara, Calif. in 1969, as a result of which over 1 million gallons of oil were lost into the ocean and over 30 miles of beaches were subsequently fouled.

Sometimes, especially when viewed from the perspective of achieving a particular or singular objective, the purposes of these laws come into apparent conflict.

This perceived conflict in a large sense has been a major stumbling block to the smooth and timely implementation of the national marine sanctuary program's objectives. Defenders of Wildlife steadfastly believes that conflicts in these areas need not exist. With proper management, all reasonable uses of the ocean can be accommodated without sacrificing the integrity of areas critically important to marine species and to human livelihoods and enjoyment. With responsible leadership, the various statutes affecting control and marine activities can be implemented in a complementary fashion, without overlap or conflict.

Although the NMSP program was established in late 1972, no marine sanctuaries were designated until 1975. During that year, two areas were set aside: A 1-square-nautical-mile area surrounding the *Monitor*, a Civil War ironclad warship sunk in 1862 off the coast of Cape Hatteras, N.C.; and a 20-mile long section of coral reef off the southern Florida coast. In both cases, the sanctuaries were rather limited in scope due primarily to the nature of the resources being preserved.

The NMSP received little or no attention until 1977, when the Carter administration committed itself to a more vigorous pursuit of marine sanctuary designations. In response to a call for nomination from States and the public of possible candidates for marine sanctuary status, the program received more than 100 such nominations. The initial list was soon reduced to approximately 70 possibilities, of which the program may now realistically consider 25 to 30 to be real candidates.

During 1978, the NMSP proposed for designation a biologically unique coral system known as the Flower Garden Banks off the coasts of Louisiana and Texas in the Gulf of Mexico. The nomination was originally offered in 1973 and was later submitted by Texas State Senator A. R. Schwartz in conjunction with the Texas Coastal and Marine Council. The Flower Garden Banks coral reefs are well-known and admired by sport divers, but little understood scientifically. They are the only well-developed, tropical coral reefs in the northwest Gulf of Mexico. They are additionally among the last relatively pristine reefs remaining in U.S. waters due to their distance from shore.

The marine sanctuary proposal to provide protection for these fragile resources envisions approximately 173-square-nautical miles.

Almost from its inception, however, progress on the proposal was stymied by intense objections from oil and gas development interests. Although numerous concessions were made to accommodate these interests, including that of allowing hydrocarbon operations in the area, regulatory conflicts emerged which have yet to be resolved. In the meantime, the Flower Garden Banks coral system

lies unprotected by sanctuary designation as OCS development activities begin to proceed nearby.

The effect of these conflicts surrounding the Flower Gardens proposal unfortunately, was to cloud the future of other proposed designations during 1980.

Two program proposals during that year involved areas off the California coast which were of some interest to the oil and gas industry: The Channel Islands ecosystem off the coast of Santa Barbara, and the Point Reyes/Farallon Islands ecosystem off the coast of San Francisco.

Both of these areas are of tremendous importance to a variety of marine species, including migratory great whales, seals, sea otters, and hundreds of nesting sea bird species.

The waters are biologically rich, providing shelter and food to the many fish species which in turn sustain bird and marine mammal populations, as well as supporting a healthy commercial fishing industry.

Both proposals included restrictions on oil and gas development activities within sanctuary boundaries. At this point, the future of the program itself became seriously threatened not only by the demands of the oil and gas industry, which claimed hugh portions of the OCS would be locked up by sanctuary designation, but also by the Department of the Interior which claimed exclusive jurisdiction of and regulation over the OCS.

However, due primarily to massive public, State, and congressional support the two California sanctuaries were designated by President Carter with the prohibitions on oil and gas development operations intact. Presidential designation, however, did not resolve arguments that the program is duplicative and unduly restrictive in nature. Nor has the oil and gas industry relented in its unfounded claims that large areas of the OCS will be closed off by future sanctuary designations.

As discussed earlier, Defenders of Wildlife firmly believes the NMSP is not duplicative because of its multiple-use, ecosystem approach to management and protection.

Further, the Outer Continental Shelf is not about to be closed off to all, or even significant, development. An area proposed for sanctuary designation will not necessarily prohibit all oil and gas activities. Moreover, the potential for oil and gas resources in an area is among the potential uses examined by the program before that area is seriously considered for sanctuary designation.

Two additional national marine sanctuaries were designated during 1980: A 5-square-nautucal-mile section of the spectacular coral reef system at Looe Key, Fla; and a 16.68-square-nautical-mile area around the live bottom reef system at Gray's Reef, Ga.

Both areas will be the subject of research and monitoring efforts, which will answer many questions about the complexities of reef systems and the habitats they provide. The public will continue to enjoy these areas for their extensive diving and photography opportunities; and in the case of Gray's Reef, for its fishing opportunities.

It is important to note that all of these proposals evolved from the desires of State governments, who understand the benefits to

the State and to local communities of national marine sanctuary designation.

The day-to-day management of a sanctuary is a cooperative on-site venture usually planned through the State department of natural resources.

In total, there are now six national marine sanctuaries designated, four of which await completion of final review periods by State Governors and Congress, as well as the current Presidential freeze on regulation. The program will now turn much of its efforts to managing the designated sanctuaries.

In considering the future of the national marine sanctuary program, the following points should be remembered. The program has the ability to accomplish its objectives, which include systems protection and multiple-use management.

Those objectives can not be achieved by any other existing authority.

There is an overriding need, expressed through public and State support, for this Government to be informed and sensitive to preserving the integrity of marine ecosystems for the future use and enjoyment of all citizens, particularly as industrial and commercial uses of these areas increase.

It is therefore critically important that the program be reauthorized with no amendments to title III. The current law is a good one, and should now be given the chance to work. A reauthorization for a minimum of 3 years will enable the NMSP to implement the benefits of its designated areas.

Finally, we believe the program should be funded at levels at least equal to its 1981 budget which is $2.25 million.

[The following statement was submitted for the record:]

STATEMENT OF SHERRARD COLEMAN ON BEHALF OF DEFENDERS OF WILDLIFE

In response to the invitation of the Subcommittees on Oceanography and on Fisheries, Wildlife Conservation and the Environment, Defenders of Wildlife ("Defenders")[1] is pleased to submit the following statement regarding reauthorization of Title III of the Marine Protection, Research and Sanctuaries Act of 1972 (the "Act").

I. INTRODUCTION

Title III, which established the National Marine Sanctuary Program (NMSP), resulted from the introduction of eleven separate bills in the House of Representatives during 1968.[2] These bills expressed a growing concern over the increasing evidence of degradation of the marine environment. The resulting Title III reflected the firm belief that certain ocean areas of particular "conservation, recreational, ecological, or esthetic" values must be protected from the adverse effects of coastal and offshore development. But Title III then and now represents much more than an effort to prevent environmental degradation of ocean areas. The National Marine Sanctuary Program also provides the opportunity for comprehensive planning and management of such areas, and for needed research and educational efforts to ensure their long-term protection and enjoyment. It is concerning these specific opportunities that Defenders of Wildlife strongly believes two things: (1) The NMSP embodies a concept whose time has clearly come; and (2) the NMSP has not, unfortunately, been given the chance to adequately implement this concept.

[1] Defenders of Wildlife is a national, non-profit, tax-exempt organization with a membership of over 50,000 citizens nationwide, and is dedicated to the protection of the nation's wildlife resources and the natural environment.

[2] Center for Natural Areas, "An Assessment of the Need for a National Marine Sanctuaries Program, Phase I of: Study of the Framework of the Marine Sanctuaries Program," Contract No. CNA/OCZM 7-35118, April 11, 1977, p. 32.

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II. NATIONAL MARINE SANCTUARY PROGRAM BENEFITS

By 1990, 75 percent of this nation's population will be residing within the coastal zone (up to 50 miles inland).[3] Millions of persons in addition will annually visit our seashores' warm beaches or rocky shorelines. They will actively enjoy swimming, boating, diving, fishing, or simply "breathing the salt air." By that same time, of course, the diversified pressures on coastal waters will also be greatly increased. These pressures include a real need to develop domestic energy resources on the Outer Continental Shelf; an increased demand on commercial fisheries development; and increased shipping traffic attendant to these and other activities. These commercial and recreational activities and their potential effects on the marine environment speak to an element of the NMSP which has not as yet received the attention it deserves.

It is perhaps this element which makes Title III unique among a myriad of other environmental legislation. The NMSP is designed to comprehensively manage and preserve for future generations distinctive ocean ecosystems. In doing so, the Program fills existing "holes" in the protective coverage offered by other laws. Achieving these objectives does not mean closing off special areas to all commercial and recreational uses. Rather, the Program identifies anticipated detrimental activities in such areas; recognizes the changing needs of such areas; and remains sensitive to local states' interests in such areas. The result is a Program whose purpose is both the comprehensive protection of distinct ecosystems, and the active encouragement of their wise use and enjoyment.

The value of this all-encompassing consideration of marine environmental protection has been recognized by a number of studies. For instance, the Center for Natural Areas found that:

"Title III . . . became the first, to date the only broad-based, comprehensive federal legislation capable of striking a balance between the need to develop and utilize and the need to protect and conserve the nation's marine resources."[4]

These findings are also echoed in two additional analyses of the NMSP:

"The marine sanctuaries provision is an environmental protection law that has offers [*sic*] a positive approach to protection of marine areas of recognized importance. It is a multiple-use provision that was designed to protect a site, rather than stop certain activities or eliminate adverse impacts."

"Without the sanctuary provision, sites could only be protected indirectly (and probably less completely) through a maze of federal programs. . . . the long-term protection or restoration of marine sites for conservation, recreational, ecological or esthetic values without the direct approach of a sanctuary program is likely to be . . . difficult."[5]

And, most recently:

"Title III authorizes the only Federal program to comprehensively manage and protect marine areas as units, . . ."

". . . if comprehensive protection of the marine environment is desired in selected areas; that is, if certain areas merit special treatment, whether due to unique characteristics or recreational value or some other pertinent factor, Title III would seem to be an appropriate way to provide it to accomplish the basic objectives the Congress envisioned in establishing an effective marine sanctuaries program."[6]

This country's past efforts to protect the marine environment have resulted in a series of regulatory authorities which are primarily single-purpose in nature. Among these are:

The Fishery Conservation and Management Act of 1976, which is designed to conserve and manage commercial and sport fishery resources. Regional fishery management councils are established to accomplish these objectives through regulations. The Act does not, however, extend to non-commercial resources.

The Outer Continental Shelf Lands Act Amendments of 1978 limits its environmentally protective measures to oil and gas-related activities at individual sites. It does not cover oil and gas-related spills resulting from tanker collisions, for instance.

The Federal Water Pollution Control Act Amendments of 1972 regulates the discharge of pollutants (including oil and other hazardous substances) into state waters, the "contiguous" zone (from state waters, or 3 miles, outward to 12 miles

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[3] Natural Resources Defense Council, "Paving the Way for Coastal Development: Resource Management and Waste of Tax Dollars," October, 1980, p. 9.

[4] Center for Natural Areas, p. 37.

[5] Congressional Research Service, "The Contributions of Marine Sanctuaries Provision to Environmental Management," February 14, 1980, pp. 12-13.

[6] General Accounting Office, "Marine Sanctuaries Program Offers Environmental Protection and benefits Other Laws Do Not," CED-81-37, March 4, 1981, pp. 12, 22-23.

from the U.S. coastline), and the ocean beyond. However, the Act applies only to discharges into navigable waters that can additionally be proven an imminent and significant danger to public health and welfare. It does not consider the health and welfare of specific marine ecosystems.

The Port and Tanker Safety Act of 1978 mandates the Coast Guard to reduce tanker and tank barge pollution through improved design and construction standards.

The Deepwater Port Act of 1974 provides for protection of marine and coastal environments only to the extent of preventing or minimizing possible adverse impacts of deepwater port development activities.

Moreover, although well-intentioned, these laws sadly tend to emerge only after the occurrence of some environmental catastrophe—such as the oil rig blowout at Santa Barbara, California in 1969, as a result of which over one million gallons of oil were lost into the ocean and over 30 miles of beaches were subsequently fouled.[7] Sometimes—especially when viewed from the perspective of achieving a particular or singular objective—the purpose of these laws come into apparent conflict. This perceived conflict in a large sense has been a major stumbling block to the smooth and timely implementation of the National Marine Sanctuary Program's objectives. Defenders of Wildlife steadfastly believe that conflicts in these areas need not exist. With proper management, all reasonable uses of the ocean can be accommodated without sacrificing the integrity of areas critically important to marine species and to human livelihoods and enjoyment. With responsible leadership, the various statutes affecting control and marine activities can be implemented in a complementary fashion, without overlap or conflict.

III. PROGRAM IMPLEMENTATION AND ITS PROBLEMS

Although the NMSP was established in late 1972, no marine sanctuaries were designated unitl 1975. During that year, two areas were set aside: a one-square-nautical-mile area surrounding the *Monitor*, a Civil War ironclad warship sunk in 1862 off the coast of Cape Hatteras, North Carolina; and a 20-mile-long section of coral reef off the southern Florida Coast. In both cases, the sanctuaries were rather limited in scope due primarily to the nature of the resources being preserved.

The NMSP received little or no attention until 1977, when the Carter Administration committed itself to a more vigorous pursuit of marine sanctuary designations. In response to a call for nominations from states and the public of possible candidates for marine sanctuary status, the Program received over 100 such nominations. The initial list was sooon reduced to approximatley 70 possibilities, of which the NMSP may now realistically consider 25 to 30 to be real candidates.[8]

In 1978, the NMSP proposed for desination a biologically unique coral system known as the Flower Garden Banks, off the coasts of Louisiana and Texas, in the Gulf of Mexico. The nomination was originally offered in 1973, and later submitted, (in 1977) by Texas State enator A.R. ("Babe") Schwartz in conjuction with the Texas Coastal and Marine Council. The Flower Garden Banks coral reefs are well-known and admired by sport divers, but little understood scientifically. They are the only well-developed, tropical coral reefs are well-know and admired by sport divers, but little understood scientifically. They are the only well-developed, tropical coral reefs reamining in U.S. waters due to their distance from shore (approx. 110 n.m. SSE of Galveston). Their special qualities have been noted by the Council on Environmental quality:

"About 350 species are known from the the Flower Gardens but closer examination would likely triple the number. Many of the species occur nowhere else within hundreds of miles, some may occur nowhere else, and at least one species new to science was first collected at the Flower Gardens. Many of the invertebrates belong to groups which produce organic chemicals of special interest as potential anticancer, antiviral and antihypertensive drugs. Red and vermillion snappers are fished commercially, and hundreds of divers visit the Banks annually."[9]

The marine sanctuary proposal to provide protection for these fragile resources envisions approximately 173 square nautical miles.

Almost from its inception, however, progress on the proposal was stymied by intense objections from oil and gas development interests. Although numerous concessions were made to accommodate these interests, including that of allowing hydrocarbon operations in the area, regulatory conflicts emerged which have yet to

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[7] Natural Resources Defense Council, "Offshore Leasing," October, 1980, p. 14.

[8] General Accounting Office, "Impact of regulation—after Federal Leasing—On Outer Continental Shell Oil and Gas Development," EMD-81-48, February 27, 1981, p. 32.

[9] Letter from Gus Speth, Council on Environmental Quality to Douglas Costle, Environmental Protection Agency, February 13, 1980, p. 1.

be resolved. In the meantime, the Flower Garden Banks coral system lies unprotected by sanctuary designation as OCS development activities begin to proceed nearby.

The effect of these conflicts surrounding the Flower Gardens proposal unfortunately, was to cloud the future of other proposed designations during 1980. Two Program proposals during that year involved areas off the California coast which were of some interest to the oil and gas industry: the Channel Islands ecosystem, off the coast of Santa Barbara, and the Point Reyes/Farallon Islands ecosystem, off of San Francisco.

Both of these areas are of tremendous importance to a variety of marine species, including migratory great whales, seals, sea otters, and hundreds of nesting sea bird species. The waters are biologically rich, providing shelter and food to the many fish species which in turn sustain bird and marine mammal populations, as well as supporting a healthy commercial fishing industry.

Both proposals included restrictions on oil and gas development activities within sanctuary boundaries. At this point, the future of the Program itself became seriously threatened not only by the demands of the oil and gas industry, which claimed huge portions of the OCS would be "locked up" by sanctuary designations, but also by the Department of the Interior (DOI), which claimed exclusive jurisdiction of and regulation over the OCS.

Due primarily to massive public, state, and Congressional support, the two California sanctuaries were designated by President Carter with the prohibitions on oil and gas development operations intact. Presidential designation, however, did not resolve arguments that the Program is duplicative and unduly restrictive in nature. Nor has the oil and gas industry relented in its unfounded claims that large areas of the OCS will be closed off by future sanctuary designations.

As discussed earlier, Defenders of Wildlife firmly believes the NMSP is not duplicative, because of its multiple-use, ecosystem approach to management and protection. The General Accounting Office, in fact, makes a similar conclusion:

> ". . . the marine sanctuaries program . . . is providing, or has the potential to provide, marine environmental protection over and above that which is or can be provided under other Federal Statutory authorities." [10]

Further, the Outer Continental Shelf is not about to be closed off to all, or even significant, development. An area proposed for sanctuary designation will not necessarily prohibit all oil and gas activities. Moreover, the potential for oil and gas resources in an area is among the potential "uses" of an area examined by the Program before that area is seriously considered for sanctuary designation.[11]

Two additional National Marine Sanctuaries were designated during 1980: a five-square-nautical mile section of the spectacular coral reef system at Looe Key, Florida; and a 16.68-square-nautical mile area around the "live bottom" reef system at Gray's Reef, Georgia. Both areas will be the subject of research and monitoring efforts, which will answer many questions about the complexities of reef systems and the habitats they provide. The public will continue to enjoy these areas for their extensive diving and photography opportunities; and in the case of Gray's Reef, for its fishing opportunities.

It is important to note that all of these proposals evolved from the desires of State governments, who understand the benefits to the state and local communities of National Marine Sanctuary designation. The day-to-day management of a sanctuary is a cooperative, on-site venture, usually planned through the state department of natural resources.

In total, there are now six National Marine Sanctuaries designated, four of which await completion of final review periods by State Governors and Congress, as well as the current Presidential "freeze" on regulations. The Program will now turn much of its efforts to managing the designated sanctuaries.

IV. THE FUTURE

In considering the future of the National Marine Sanctuary Program, the following points should be remembered:

The Program has the ability to accomplish its objectives, which include systems protection and multiple-use management;

Those objectives cannot be achieved by any other existing authority; and

There is an overriding need, expressed through public and state support, for this government to be informed and sensitive to preserving the integrity of marine ecosystems for the future use and enjoyment of all citizens, particularly as industrial and commercial uses of these areas increase.

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[10] General Accounting Office, Marine Sanctuaries program report, CED-81-37, p. 1.

[11] General Accounting Office, Outer Continental Shelf report, EMD-81-48, p. 32.

It is therefore critically important that the Program be reauthorized with no amendments to Title III. The current law is a good one, and should now be given the chance to work. A reauthorization for a minimum of three years will enable the NMSP to implement the benefits of its designated areas. Finally, the Program should be funded at levels at least equal to its 1981 budget, which is $2.25 million.

Mr. D'AMOURS. Thank you, Ms. Coleman.

Mr. Weber.

Mr. WEBER. Thank you.

STATEMENT OF MICHAEL WEBER, MARINE HABITAT COORDINATOR, CENTER FOR ENVIRONMENTAL EDUCATION

Mr. WEBER. I wish to emphasize at the outset that we believe the marine sanctuaries program is an indispensible element of our Nation's oceans policy. In an era of increasing development both within and along our coasts, a sound oceans policy must be able to avail itself of a variety of management tools. These tools must range from being primarily protective to being primarily exploitative. Such a range reflects the variety of values attributed to——

Mr. D'AMOURS. Mr. Weber, please forgive me for interrupting. I notice you are reading your statement. It is 17 pages long.

Mr. WEBER. I am not going to read the whole statement. I hope to delete a lot of it.

Mr. D'AMOURS. We appreciate that very much.

Mr. WEBER. Such a range reflects the variety of values attributed to our coastal waters, including economic, esthetic, recreational, scientific or ecological values. A balance between these values is often difficult to strike. Rather than assuming that an appropriate mix can be achieved in every area, we should seek to provide an appropriate mix among areas, insofar as this is possible.

The Nation has set aside certain land areas, such as our national parks, primarily for recreation and preservation. Other areas have been set aside for intensive development, such as the many valleys flooded by dams. Our national park system represents a recognition that a proper overall balance of land uses requires the setting aside of certain unique areas primarily for preservation and recreation. The marine sanctuaries program continues this sound tradition into our coastal waters. Years and years of experience have shown that our national parks have been a wise investment. We are confident that years of experience will demonstrate the same to be true of the sanctuaries program.

There are a number of sanctuary proposals that are coming under consideration. Those include the Virgin Island sanctuary off St. Thomas Island, probably the only sanctuary that is likely to be designated during 1981.

Another sanctuary concerns the humpback whale in Hawaiian waters.

Monterey Bay will be considered for a marine sanctuary.

Something that I think needs to be emphasized in light of previous remarks is that all of these proposals must still undergo considerable review, not only by the sanctuaries program itself, but also by other Federal and State agencies, by industry and by the general public. This process takes time. Indeed, as a supporter of the sanctuaries idea, I have many times found myself impatient with the deliberateness of the program. Most of this deliberateness, however, has been due to the care the program takes in consider-

ing the input of other Federal offices, State and local officials, industry people, and the public. In this respect, the program is quite refreshing, as Federal programs go. This results, I believe, from a clear understanding that marine sanctuaries must accommodate different values to as great an extent as is possible, while maintaining national objectives.

Who shall derive benefits from the marine sanctuaries program? First and foremost, the millions and millions of Americans who live along our coasts will have the opportunity to learn about and enjoy for years to come the many aspects of our coastal waters. Teachers will be able to avail themselves of a living classroom, in which their students may learn about marine mammals, sea turtles, coral reefs, fish, and, most importantly, the ways in which all of these creatures and plants build a community. The interested citizen will be able to learn about the importance of coastal ecosystems in food production, what potential these areas hold for supplying our needs, and how human use of such areas might be managed to insure long-term productivity.

The scuba or skin diver can spend hours among coral gardens and come away refreshed for having spent time in another world. Other citizens will continue to line the shoreline in California intently searching for brown pelicans, or gray whales, or sea otters. Fishermen will be able to seek out their favorite fishing grounds and spend hours of pleasure upon sanctuary waters. Commercial fishermen will be able to continue reaping the bounty of the sea, knowing that important nurseries and shelter areas for fish receive appropriate protection. Scientists will be able to avail themselves of living laboratories, representing very different types of marine ecosystems, as they seek to understand the complex basis of the ocean's productivity.

Policymakers will gain substantial benefit from the development of management tools for marine ecosystems.

Sanctuary research programs will also benefit the consideration of various development plans, including oil and gas development. The Channel Islands Sanctuary is especially important in this regard, since the research conducted there will be better able to assess over the long run the impact of routine oil drilling on surrounding waters. In the end, this should help expedite reasonable consideration of oil development plans.

For the reasons stated above, we strongly support reauthorization of title III of the Marine Protection, Research and Sanctuaries Act of 1972. Furthermore, we urge Congress to approve a 3-year reauthorization. In order to capitalize fully upon the recent marine sanctuary designations, it is important that the sanctuaries program be provided a period in which to develop management, research, and education plans for these sanctuaries. Only when these plans have had time to operate will we truly be in a position to assess the success and impact of the program. Anything less than a 3-year reauthorization at this time will only lead to inefficiency in administration by creating uncertainty as to the program's future.

As mentioned above, we believe the program must be allowed to consolidate its advances. Amendment of the authorizing act will only make implementation that much more difficult. The program has already had to deal with amendments passed last year; these

amendments and the program itself should be allowed to operate before consideration of further amendments.

I believe that my written testimony demonstrates that the program will not run away with our coastal waters in the meantime.

Finally, the program should receive adequate funding, that is, at least $2.25 million annually. While we realize that the Nation has entered a period of budget austerity, we believe that the requested amount is quite modest. Anything less could well turn the program into little more than good intentions not acted upon.

Thank you again for allowing me to testify in support of the marine sanctuaries program.

Mr. D'AMOURS. Thank you, too, Mr. Weber and Ms. Coleman.

[The following was submitted for the record:]

STATEMENT OF MICHAEL WEBER, MARINE HABITAT COORDINATOR, CENTER FOR ENVIRONMENTAL EDUCATION

My name is Michael Weber. I am the Marine Habitat Coordinator for the Center for Environmental Education. I wish to thank the committees for the opportunity to testify in support of the reauthorization of Title III of the Marine Protection, Research and Sanctuaries Act of 1972.

The Center for Environmental Education has over 300,000 supporters around the United States. A primary focus of the Center's public education program is the protection of marine ecosystems. In the past year, the Center has actively supported the designation of marine sanctuaries at the Channel Islands and Pt. Reyes/Farallon Islands areas off the California coast, at Looe Key off Florida, and at Gray's Reef off Georgia. Our efforts in support of this program complement other efforts to protect endangered species of marine animals and their habitats.

THE MARINE SANCTUARIES PROGRAM: AN IMPORTANT ELEMENT OF U.S. OCEANS POLICY

I wish to emphasize at the outset that we believe the marine sanctuaries program is an indispensible element of our Nation's oceans policy. In an era of increasing development both within and along our coasts, a sound oceans policy must be able to avail itself of a variety of management tools. These tools must range from being primarily protective to being primarily exploitative. Such a range reflects the variety of values attributed to our coastal waters, including economic, esthetic, recreational, scientific or ecological values. A balance between these values is often difficult to strike. Rather than assuming that an appropriate mix can be achieved in every area, we should seek to provide an appropriate mix among areas, insofar as this is possible.

The Nation has set aside certain land areas, such as our National Parks, primarily for recreation and preservation. Other areas have been set aside for intensive development, such as the many valleys flooded by dams. Our National Park System represents a recognition that a proper overall balance of land uses requires the setting aside of certain unique areas primarily for preservation and recreation. The marine sanctuaries program continues this sound tradition into our coastal waters. Years and years of experience have shown that our national parks have been a wise investment. We are confident that years of experience will demonstrate the same to be true of the sanctuaries program.

EARLY HISTORY OF THE SANCTUARIES PROGRAM

Congress considered more than ten sanctuaries bills before passing the Marine Protection, Research and Sanctuaries Act in 1972. Although there is no doubt that the Act envisions multiple use of sanctuaries, the Act also differs from other statutes in placing the emphasis of the program upon the preservation or restoration of sanctuary areas. This feature makes the marine sanctuaries program substantively different from other statutory authorities relating to the protection of our coastal waters. In addition, this emphasis reflects four years of Congressional consideration of the competing values regarding our coastal waters.

The implementation of Title III of the Act has been labored, to say the least. By 1980, only two sanctuaries had been designated: a one square mile area off Cape Hatteras protecting the wreck of the *Monitor*, and a 100-square mile area off Florida protecting the Key Largo coral reefs. It is important to note here that until sanctu-

ary designation in 1975, the federal government had no authority to comprehensively protect either the *Monitor* or the Key Largo coral reefs from a variety of threats.

Soon after President Jimmy Carter announced plans for accelerated development of outer continental shelf (OCS) oil and gas resources in 1977, the President also called for vigorous implementation of the marine sanctuary program. The President recognized that the sanctuary program offered an important means of balancing development with conservation of distinctive marine areas. The marine sanctuary program issued a call for nominations of areas for marine sanctuary designation and received well over 100 recommendations from federal agencies, state governments and citizens. Most of these recommendations were not pursued because they did not meet criteria established by the program. After review, some seventy sites remained for further consideration. Of these seventy, only seven have been actively considered and only four have been designated to date. In the case of every nomination, which has led to designation, the original proposal has been revised and refined through a lengthy process of review by the marine sanctuary program itself, other federal and state agencies, by industry and by the public.

THE SANCTUARIES PROGRAM AND OCS PETROLEUM DEVELOPMENT

Some ocean users, in particular the oil and gas industry, have maintained that this brief history of the marine sanctuary program indicates a program run amuck, which threatens to lock up significant oil reserves on the OCS. A careful analysis of the program, however, reveals something quite different.

Much of the concern regarding the marine sanctuaries program's impact upon future development of OCS petroleum reserves was generated by consideration of marine sanctuary proposals for the Beaufort Sea, the Flower Garden Banks, and the Georges Bank. I wish to emphasize at this point that these sanctuary proposals all reflected genuine concern about unique and/or endangered biological resources in areas slated for offshore oil development. Neither the proposals themselves nor the sanctuaries program's consideration of them was capricious, nor were these proposals intended to stop oil development just as a matter of principle. Rather, the coral reefs at the Flower Garden Banks, the endangered bowhead whale and other marine mammals in the Beaufort Sea, and the unusually valuable fisheries of the Georges Bank were always uppermost in the minds of the supporters of the sanctuary proposals.

Have these proposals tied up oil development? Definitely not. The Beaufort Sea sanctuary proposal was dropped and an oil lease sale held. The Flower Garden Banks proposal has been deferred until a variety of issues can be adequately addressed in a final environmental impact statement. The Georges Bank proposal was dropped and an oil lease sale held. It is interesting to note here that a recent settlement among the Interior Department, the State of Massachusetts and the Conservation Law foundation calls for the Secretary of Commerce to consider "whether a site or sites on all or parts of the Georges Bank area should be placed on the list of active candidates for marine sanctuary designation." [1] It should be clear that any sanctuary at the Georges Bank will be conditioned by the planned oil development rather than the other way around. Any sanctuary proposal for this area would have to undergo over two years of review after selection as an active candidate, if that should happen, before a sanctuary could be designated. In the meantime, of course, industry should have well underway its drilling program in the area.

Even the sanctuary which is most advanced in the designation process—the Channel Islands Sanctuary which was approved by President Carter in September of 1980—is not in effect. Under the 1980 amendments to the Act, any proposed sanctuary or sanctuary regulation may be deleted by the passage of a concurrent resolution of Congress within 60 days of continuous session after transmittal of the designation documents to Congress. Even when this sanctuary becomes effective, the prohibition on hydrocarbon operations will apply only to future lease sales. Drilling tracts already leased will not be affected. Resources estimates for those tracts affected by the hydrocarbon operations are very low: perhaps, one percent of the petroleum resources estimated for the whole Santa Barbara Channel.

Some have seen an inconsistency in this partial prohibition on hydrocarbon operations. To me, it is an indication of the sanctuaries program's willingness to deal fairly with the oil companies and to recognize our Nation's need to develop our energy resources that the program did not sacrifice investments in leases, equipment and personnel for total protection of the area. More importantly, perhaps, the partial prohibition will allow for a long-term research and monitoring program on

[1] Coastal Zone Management Newsletter, January 14, 1981. Page 2. Nautilus Press. Washington, D.C.

the effects of routine oil drilling on surrounding waters. A recent report of the General Accounting Office concludes that no other federal agency as yet been able to carry on such a monitoring program.[2]

Of the six sanctuaries which have been approved, only the Channel Island and the Pt. Reyes/Farallon Islands sanctuaries impose any limitations on hydrocarbon operations. The impact of these prohibitions is miniscule. I have included with this written testimony a report based upon figures available from the U.S. Geological Survey, the Bureau of Land Management, and the sanctuaries Program Office. This report compares the size of areas in which hydrocarbon operations are prohibited by sanctuary designation to the total area of the OCS, that portion of the OCS which has been offered for sale, has been bid upon, or has been leased. These figures show that sanctuary prohibitions on oil drilling involve just one-tenth of one percent of the total OCS, just over two percent of the total area offered since 1954 in oil and gas lease sales, and under five percent of the total area on the OCS which has been bid upon or leased. In light of the fact that many leased tracts have yet to see a drill rig, sanctuary regulations can hardly be accused of tying up oil reserves. What is more, the area of the OCS which is leased will increase at a rate far beyond the rate at which the sanctuary program will increase. In 1981 alone, millions of acres of the OCS will be leased, while the Santuaries Program Office expects to recommend designation of only one marine sanctuary in the Virgin Islands. Even that sanctuary area is not of interest to the oil and gas industry.

THE FOUR RECENTLY APPROVED SANCTUARIES

Each of the four marine sanctuary proposals which were approved in the last year are distinctive marine areas, which will benefit from the comprehensive management, research and education programs which the marine sanctuaries program offers.

The Santa Barbara Channel is a biogeographical boundary between northern and southern biological regimes. Here one can find an unusual mixture of northern and southern marine species. The area is also noted for its high biological productivity, which is generated largely by the meeting of northerly and southerly flowing ocean currents. Some thirty species of marine mammals have been observed in the area. San Miguel Island provides breeding and pupping areas for five species of pinnipeds, making this area unique in U.S. waters. Kelp beds, among the most extensive in the world, provide nursery and feeding areas and shelter for hundreds of species of fish. The waters offshore of the islands also support surprisingly rich reef communities. Seabirds frequent the area and rely upon the waters' biological richness for their sustenance. Like the marine mammals, many of these seabird species have been driven from traditional mainland nesting areas by coastal development; the islands represent a last chance.

At the same time, the Channel Islands and the surrounding waters provide thousands of citizens with opportunities for recreation, whether that be fishing, boating, scuba diving or wildlife watching. Through its educational program, the sancutaries program will be able to help these people increase their enjoyment of the area. Through its management and research programs the sanctuaries program will help insure that the area remains a source of enjoyment and learning.

The Pt. Reyes/Farallon Islands sanctuary was one of three approved by President Carter on January 16 of this year. This area is home to more than half of California's nesting seabirds. Twenty-three species of marine mammals have been observed in the area. Several species of pinnipeds use the islands and the beaches of the Pt. Reyes National Seashore for hauling out and pupping; these same species feed with other creatures upon the unusually productive waters of the Gulf of the Farallons. The world's entire gray whale population passes through these waters twice each year, providing many of the 1.5 million visitors to the Pt. Reyes National Seashore with a rare opportunity to observe these amazing creatures each year. Designation of this sanctuary will provide, as do others, a living laboratory for the study of marine ecosystems and for the development of management tools which will be invaluable not only for these waters but for other coastal waters of the United States.

Looe Key is one of Florida's most spectacular coral reefs. Amateur skin divers and scuba divers come to this reef to view the hundreds of fish species which inhabit these coral gardens. Increasing recreational use of the area, together with the use of fish traps which not only damage coral but can quickly deplete reef communities of their fish stocks, threatened to send this reef down the same road of degradation which so many of Florida's reefs have already gone down. Sanctuary designation

[2] General Accounting Office, "Impact of Regulations—After Federal Leasing—on Outer Continental Shelf Oil and Gas Development," EMD-81-48, February 27, 1981.

will provide for research into the complex web of interdependencies upon which coral reefs depend, while increasing recreational enjoyment and protection of the reefs.

Gray's Reef is perhaps the largest natural live-bottom reef along the southeastern coast of the United States. Limestone outcroppings provide homes for coral and other benthic organisms and shelter and forage areas for fish and sea turtles. Research on the use of such areas by the loggerhead sea turtle will aid in the recovery of this threatened species. At the same time, the designation of this sancutary will provide a unique opportunity to study the impact of spearfishing and line fishing on reef communities. By cooperating with both types of fishermen, the sanctuaries program may be able to devise new means of insuring the long-term opportunity to engage in recreational fishing in such areas.

1980 was a very productive year for the sanctuaries program. Although we do not anticipate such a number of sanctuaries being designated in the next several years, this year's efforts have brought the program out of the bureaucratic backwaters and into prominence as an important contributor to the use and enjoyment of our Nation's coastal waters.

FUTURE CANDIDATES FOR SANCTUARY DESIGNATION

The marine sanctuaries program has under consideration now several proposals. The Department of Conservation and Cultural Affairs of the Virgin Islands has proposed designating waters off St. Thomas Island as a marine sanctuary. Besides having the most extensive stand of mangroves in the Virgin Islands, this area also contains coral reef communities, a variety of commercial and recreational fish habitats, and nesting and feeding areas for endangered sea turtle species and bird species. A variety of threats jeopardize the continued recreational use of the area, including sewage pollution from boats and other sources, disturbance of mangrove habitats by bulkheading, dumping and landfill, and destruction of coral and other benthic communities by anchoring. As a result of these pressures, the very attributes which make this area so popular for tourists and thus aid the local economy could well be jeopardized in the near future. This proposal is the only one at all likely to be designated a marine sanctuary in 1981.

A large portion of the North Pacific population of the endangered humpback whale winters in Hawaiian waters. Maintaining those characteristics which make this area a vital calving area would be but one object of sanctuary designation. Research into the biology, behavior and habitat needs of this species in a comprehensive manner would benefit not only Hawaiian humpbacks, but humpbacks in other areas of the world. An educational program regarding the humpbacks would aid in the enforcement of current National Marine Fisheries Service regulations regarding harassment of humpbacks. Simply put, the more individuals know about these animals, the more likely they are to avoid harassing them. This can only aid federal efforts to prevent harassment through regulations. Finally, by proceeding with a humpback whale sanctuary, the United States would join Mexico, Argentina, and the International Whaling Commission in designating certain critical areas as cetacean sanctuaries. A Hawaiian humpback sanctuary would thus be of international significance. All of this, of course, would aid tourism in the Islands.

Monterey Bay provides habitat for a tremendous variety of marine animals. Many species of marine mammals are found in this area, including some who venture close to shore in very few other places, such as the sperm whale. In addition, the threatened southern sea otter rafts in the waters of the Bay and southwards. Anno Nuevo Island, which might form the northern boundary of such a sanctuary, is an important pupping and breeding area for elephant seals and sea lions. Monterey Bay is also the site of considerable recreational activity, including boating, fishing and wildlife watching. The beauty of the coast draws millions every year to this region, as does its wildlife. A Monterey Bay sanctuary will complement the adjacent Elkhorn Slough Estuarine Sanctuary by providing an opportunity for research and educational programs on a complete estuary/bay ecosystem.

Finally, Puerto Rico's Department of Natural Resources has proposed designating certain waters off some of the islands a marine sanctuary. The waters surrounding Mona Island alone are distinctive, since they contain some of the most extensive and unusual sea caves in the entire world. Mona Island is also a major nesting area for the critically endangered hawksbill sea turtle. The endangered green and leatherback sea turtles and the threatened loggerhead sea turtle are all found in the proposed sanctuary's waters. Areas landward of the proposed sanctuary have been proposed for designation as critical habitat for the hawksbill by the Department of the Interior, since they serve as nesting beaches. Marine sanctuary designation would complement this effort by providing greater protection for the turtles while they are in their offshore feeding and staging areas. Like most of the other sanctu-

aries and sanctuary proposals, sanctuary designation of these waters will help insure the long-term attractiveness of these waters for tourists and others. This, in turn, will only help the local economy. The alternative may well be degradation of this important contributor to Puerto Rico's economy and the well-being of Puerto Ricans.

I must emphasize that all of these proposals must still undergo considerable review, not only by the sanctuaries program itself, but also by other federal and state agencies, by industry and by the general public. This process takes time. Indeed, as a supporter of the sanctuaries idea, I have many times found myself impatient with the deliberateness of the program. Most of this deliberateness, however, has been due to the care the program takes in considering the input of other federal offices, state and local officials, industry people, and the public. In this respect, the program is quite refreshing, as federal programs go. This care results, I believe, from a clear understanding that marine sanctuaries must accommodate different values to as great an extent as is possible, while maintaining national objectives.

UNIQUE CAPABILITIES OF THE SANCTUARIES PROGRAM

The recently released General Accounting Office report, titled "Marine Sanctuaries Program Offers Environmental Protection and Benefits Other Laws Do Not," concludes that the sanctuaries program can make a substantial contribution to our Nation's efforts to insure the long-term productivity and enjoyment of our coastal waters. I do not wish to reiterate all of the points made in this report, although I couldn't agree more with them. I do wish, however, to emphasize some points.

Much has been made, in some quarters, of the many laws and agencies which might conceivably be called upon to protect the resources of various marine areas considered for sanctuary designation. In the Channel Islands area, for instance, there are 22 federal and state authorities, implemented by 18 agencies. The very number of such authorities indicates to me that none of these laws or programs are directed at the Channel Island area as an ecosystem. Rather, these authorities have either single purposes, such as insuring water quality, or have environmental protection as a secondary objective of a development program. The State of California, which is responsible for a number of these programs, recognized that the Channel Islands area deserved something more than a piecemeal, hodge-podge of protective authorities, and not only proposed the area for marine sanctuary designation but vigorously supported the designation.

Many of these same authorities are designed only to react to a situation of deteriorating environmental quality, and are thus crisis-oriented. By their very nature, they are after the fact. The benefit of marine sanctuary designation is that attention is directed to maintaining environmental quality positively and preventing degradation before it occurs. In addition, the sanctuary program looks at the ecosystem as a whole, as a habitat for various species of plants and animals. Probably the greatest cause for species extinction in the coming years will be degradation of habitat, whether the habitat be tropical forest or coral reefs.[3] Protection of habitat is crucial to the protection of species. Once a species is threatened with extinction by habitat degradation and is placed on the endangered species list, it is obvious that one can only hope for the recovery of the species. Beyond preventing endangerment of species, a number of the areas which have been designated marine sanctuaries are important commercial and recreational fishing areas. Maintenance of habitat is crucial to the long-term productivity of these fisheries.

Ecosystem management has for too long been little more than a desirable goal, reflected in a variety of statutes such as the Endangered Species Act and the Marine Mammal Protection Act. The marine sanctuaries program is uniquely qualified to breathe some life into this crucial goal by focusing research on the development of management tools for marine ecosystems. Such tools will be valuable, as I have noted before, in all areas of our coastal waters. If our Nation is to insure long-term use of these coastal waters, such management tools are badly needed.

Last but not least, I wish to stress the flexibility of the marine sanctuaries program's regulatory role. The program does not use blanket regulations affecting all sanctuaries. Rather, regulations are tailored to specific sanctuaries, taking into account the resources and threats in the area and the capabilities of other authorities. The sanctuaries program can therefore be uniquely responsive to local issues, while maintaining national objectives.

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[3] Council on Environmental Quality, Environmental Quality: The Eleventh Annual Report of the Council on Environmental Quality, December, 1980. Pages 43ff.

SANCTUARIES IN OTHER AREAS OF THE WORLD

The United States is not alone in recognizing the need to establish marine sanctuaries. In 1971, the President of Mexico declared one of the lagoons in which gray whales calve a sanctuary. The lagoon, Guerrero Negro, is one of six such lagoons in Baja, California, where gray whales spend the winter.

In December of 1974, the Gulf of San Jose off Argentina was designated a sanctuary to protect the remnant population of right whales which breed and calve there. The reserve also provides protection for killer whales, elephant seals, and other marine mammals and birds.

In 1979, the International Whaling Commission set aside the Indian Ocean (above 55° south latitude) as a whale sanctuary in which no species of whale is to be hunted. An ambitious program of research has been undertaken by a number of nations ringing the Indian Ocean in order to assess the use of these waters by whales and other marine species.

In October of 1980, twelve Mediterranean Nations agreed to establish fifteen marine parks, reserves and other restricted areas in order to protect species such as the endangered monk seal and loggerhead and green sea turtles which are threatened by degradation of nesting and feeding areas. At the conclusion of the conference which saw the establishment of these areas, Mr. Aldo Manos, an Italian environmental program official, stated: "In the final analysis our network is not just for birds and beasts, fish and plants, but especially for the people who live and visit the Mediterranean area."[4] Eventually, the conference's action plan calls for the creation of 100 such sites in the Mediterranean.

Finally, the Soviet Union recently designated its first marine sanctuary around the rocky islands of the Rimski-Korsakov archipelago in the Sea of Japan. This sanctuary will support research on the sea's biological productivity. Aquaculture experiments are planned. The public will be allowed to visit the area's beautiful waters. Depending upon the success of this first sanctuary, a complete system of such sanctuaries will emerge over the years.

A variety of international conferences, stretching back to the turn of the century, have called for the establishment of a network of marine sanctuaries around the world in recognition of the importance of habitat protection to the survival of marine animal and plant species. The very productivity of the oceans, upon which we shall all depend even more in the coming years, makes the establishment of such reserves of great importance. The U.S. marine sanctuaries program has a contribution to make, therefore, not only to the Nation, but also to the world community, who continue to look to us for direction in environmental management. To reneg on this program would only weaken U.S. prestige abroad.

WHO SHALL BENEFIT FROM THE PROGRAM

Who shall derive benefits from the marine sanctuaries program? First and foremost, the millions and millions of Americans who live along our coasts will have the opportunity to learn about and enjoy for years to come the many aspects of our coastal waters. Teachers will be able to avail themselves of a living classroom, in which their students may learn about marine mammals, sea turtles, coral reefs, fish, and, most importantly, the ways in which all of these creatures and plants build a community. The interested citizen will be able to learn about the importance of coastal ecosystems in food production, what potential these areas hold for supplying our needs, and how human use of such areas might be managed to insure long-term productivity. The scuba or skin diver can spend hours among coral gardens and come away refreshed for having spent time in another world. Other citizens will continue to line the shoreline in California intently searching for brown pelicans, or gray whales, or sea otters. Fishermen will be able to seek out their favorite fishing grounds and spend hours of pleasure upon sanctuary waters. Commercial fishermen will be able to continue reaping the bounty of the sea, knowing that important nurseries and shelter areas for fish receive appropriate protection. Scientists will be able to avail themselves of living laboratories, representing very different types of marine ecosystems, as they seek to understand the complex basis of the ocean's productivity. Policymakers will gain substantial benefit from the development of management tools for marine ecosystems. Sanctuary research programs will also benefit the consideration of various development plans, including oil and gas development. The Channel Islands Sanctuary is especially important in this regard, since the research conducted there will better be able to assess over the long run the

[4] New York Times, "Twelve Mediterranean States Plan Refuge Areas for Marine Life." October 20, 1980.

impact of routine oil drilling on surrounding waters, In the end, this should help expedite reasonable consideration of oil development plans.

The marine sanctuaries program will provide a range of benefits, not otherwise available in one program, to an audience much broader than any audience addressed by any current program. The marine sanctuaries program is a small investment for such a substantial return.

The sanctuaries program is entering a period of consolidation. The last year has seen the creation of four additional sanctuaries. President Carter's designation of these areas as sanctuaries only marks the beginning of the process of making them fulfill their potential. Each sanctuary requires a management plan which will insure the attainment of the objectives of sanctuary designation. Research and education programs must be designed and initiated. In order to achieve these objectives, however, the program must be reauthorized and properly funded.

REAUTHORIZATION

For the reasons stated above, we strongly support reauthorization of Title III of the Marine Protection, Research and Sanctuaries Act of 1972. Furthermore, we urge Congress to approve a three-year reauthorization. In order to capitalize fully upon the recent marine sanctuary designations, it is important that the sanctuaries program be provided a period in which to develop management, research, and education plans for these sanctuaries. Only when these plans have had time to operate will we truly be in a position to assess the success and impact of the program. Anything less than a three-year reauthorization at this time will only lead to inefficiency in administration by creating uncertainty as to the program's future.

As mentioned above, we believe the program must be allowed to consolidate its advances. Amendment of the authorizing Act will only make implementation that much more difficult. The program has already had to deal with amendments passed last year; these amendments and the program itself should be allowed to operate before consideration of further amendments. I believe that my testimony, my written testimony, demonstrates that the program will not run away with our coastal waters in the meantime.

Finally, the program should receive adequate funding, that is, at least $2.25 million annually. While we realize that the Nation has entered a period of budget austerity, we believe that the requested amount is quite modest. Anything less could well turn the program into little more than good intentions not acted upon.

In closing, we only wish to note that the marine sanctuaries program, alone of all federal programs, can insure that certain unique areas of our coastal waters are preserved for the use and enjoyment of future generations of Americans. I urge members of this committee to bear this in mind when considering reauthorization of Title III of the Act.

Thank you again for allowing me to testify in support of the marine sanctuaries program.

The Outer Continental Shelf, O.C.S. Oil and Gas Leasing, and Marine Sanctuaries: A Comparison of Areas

INTRODUCTION

The Outer Continental Shelf of the United States is a vast area of approximately 770 million acres. This area accommodates a variety of uses including fisheries, oil and gas production, recreation and shipping. The Outer Continental Shelf Lands Act of 1954, 43 U.S.C. 1331 *et seq.* and the Outer Continental Shelf Lands Act Amendment of 1978, P.L. 95-372 govern the production of oil and gas in the OCS region. The Marine Protection, Research, and Sanctuaries Act of 1972, 16 U.S.C. 1431-1434, authorizes the designation of ocean areas with distinctive conservation, recreational, ecological or aesthetic values as marine sanctuaries.

The recent designation of two marine sanctuaries with prohibition of hydrocarbon operations within the boundaries of the sanctuaries has caused controversy. Specifically, certain organizations and individuals are concerned that the hydrocarbon prohibition represents an unreasonable barrier to energy development on the OCS. Others fear that allowing hydrocarbon operations within the sanctuaries would expose the distinctive features of the sanctuaries (e.g., marine mammals, reefs, historic artifacts) to unwarranted dangers.

This paper is intended to address one aspect of the controversy by examining the scope of the marine sanctuary program relative to the OCS in general and the OCS oil and gas leasing program in particular.

THE AREA OF OUTER CONTINENTAL SHELF

The Outer Continental Shelf has been estimated to have an area equivalent to one-third that of the United States (House Report No. 95-510, Aug. 29, 1977, p. 65). The area of the United States is 3,615,123 square miles (Hammond World Atlas, 1977, p. 189). One third of this area is 1,205,041 square miles or 771,226,240 acres. Since this is an approximation, the figure has been rounded for the purposes of this report to 770 million acres.

As used here, the term Outer Continental Shelf means the submerged area between the outer edge of state waters and the break between the continental shelf and the continental slope. This is generally consistent with common usage. It specifically does not include the areas of the continental slope or the deep seabed. Neither does it include the continental shelf lands under the jurisdiction of the states.

MARINE SANCTUARIES

To date, six marine sanctuaries have been proposed for designation. These six sanctuaries cover a total area of 1,965,026 acres, of which 1,097,340 acres were closed to hydrocarbon operations before the sanctuaries were proposed. Some of the remaining area, 846,160 acres, represents the area which will be closed to hydrocarbon operations as a result of the designations. Table I summarizes this data.

TABLE I.—AREA OF MARINE SANCTUARIES

Name of sanctuary	Total acreage [1]	Acreage closed to oil and gas development prior to designation	Acreage closed to oil and gas development due to designation
Channel Islands	1,057,940	[2] 449,000	608,940
Point Reyes-Farallon	801,060	[3] 563,840	237,220
Key Largo	84,500	[4] 84,500	0
Gray's Reef [5]	14,365	0	0
Looe Key [5]	4,495	0	0
Monitor [5]	666	0	0
Total	1,963,026	1,097,340	846,160

[1] Source: Department of Commerce. Office of Coastal Zone Management.

[2] Derived from estimates of John Cassell, senior staff geologist for Chevron USA, Inc.—Declaration of John Cassell supporting motion for preliminary injunction, *Western Oil & Gas Association* v. *Frank*, Docket No. 80-03038 TJH (TX), (U.S. District Court, Central District of California, filed July 11, 1980) (area within State waters).

[3] Derived from estimates of D. T. Magee, vice president, Western Region, Chevron USA, Inc.—Letter comments on draft environmental impact statement for proposed Pt. Reyes-Farallon Islands Marine Sanctuary, May 14, 1980, final environmental impact statement for proposed Pt. Reyes-Farallon Islands Marine Sanctuary, vol. 2, no page (area within State waters plus area excluded from hydrocarbon development by sec. 206(2)(H) for the Outer Continental Shelf Lands Act Amendment of 1978, Public Law 95-372).

[4] This area was withdrawn from consideration for future oil and gas leasing by the Department of the Interior.

[5] These sanctuaries impose no prohibitions on hydrocarbon operations.

OCS OIL AND GAS LEASING

The areas involved in the OCS oil and gas leasing program are set out in Table II. This table covers all leasing from the inception of the program in 1954 through the most recent sale, Number 62, on November 18, 1980.

During this period, fifty-one sales have been held. Bids were received on over 53 percent of the acreage offered, resulting in the leasing of almost 47 percent of the offered acreage (some high bids were rejected or otherwise failed to result in leases). Stated in other terms, despite the opportunity to develop over 38 million acreas of the OCS for oil and gas, the oil and gas companies chose to actively pursue only 53.33 percent of that area. The remainder of the areas offered for bidding were rejected.

Seven sales are scheduled for 1981. These seven are: No. 53, offshore California, to be held in May; No. RSI, reoffering tracts from No. 55, to be held in June; No. A66, offshore Gulf of Mexico, to be held in July; No. 56, offshore South Atlantic, to be held in August; No. 60, offshore Alaska (Cook Inlet), to be held in September; No. 66, offshore Gulf of Mexico, to be held in October; and No. 59, offshore Mid-Atlantic, to be held in December.

These sales will significantly increase the acreage offered, bid on, and leased under the OCS oil and gas leasing program.

TABLE II.—*Total area of OCS oil and gas lease sales, Oct. 13, 1954-Mar. 12, 1981*

Area offered in acres	38,025,095
Percent of area offered	100
Area bid on in acres	20,290,385
Percent of area offered	53.36
Area leased in acres	17,734,710
Percent of area offered	46.64

Source: U.S. Department of the Interior, Bureau of Land Management, New Orleans Office, Outer Continental Shelf Statistical Summary 1954-1972, 1973-1975, 1976-1978, 1979-1981; U.S. Department of the Interior, Bureau of Land Management, New Orleans, OCS Office, Sale-Specific Data Series 1, No. 1, Dec. 17, 1980.

DISCUSSION

The Outer Continental Shelf is a huge area, only a very small part of which has been offered for leasing for oil and gas development. A much smaller area yet has been proposed for designation as marine sanctuaries. Table III illustrates the relationship between the total area of the designated marine sanctuaries and the total area of the OSC. This table also shows the relationship between the area of the sanctuaries and the areas offered, bid on, and leased for oil and gas development in the OCS.

Just one-fourth of one percent of the OCS has been covered by proposed marine sanctuary designations. The equivalent of just over five percent of the area offered for oil and gas development has been proposed for designation as marine sanctuaries. This figure is equivalent to less than one-eighth of the acreage offered for oil and gas developoment and subsequently rejected by the oil and gas companies.

These very small areas proposed for marine sanctuaries, as the figures show, are insignificant when viewed within the context of the total OCS and the OCS oil and gas leasing program. Moreover, as the oil and gas leasing program progress, the significance of the marine sanctuaries within that particular context will decline and continue to do so. For example, during the remainder of 1981, seven lease sales are scheduled to occur. Two of these sales, number 66 and A66, may result in the offering of a total of 1,979,794 acres, an area larger than the combined areas of all the designated marine sanctuaries.

Table IV presents similar data but there are the following differences: (1) the table excludes the areas closed to hydrocarbon development by other authorities or not subject to hydrocarbon prohibitions at all, and (2) it relates the area to be closed to oil and gas development solely as a result of the designations the net area of the marine sanctuaries as opposed to the total area to the other key OCS indicators. Significantly, the net area of the sanctuaries represents only eleven one-hundredths of one percent of the total OCS and the equivalent of less than two and one-half percent of the total area offered in oil and gas sales on the OCS. Stated another way, nearly forty-four times as much acreage has been offered for oil and gas development to data would be closed to oil and gas development by the proposed designations.

As these figures show, the marine sanctuary program and the designated sanctuaries affects only the tiniest part of the OCS and its potential for oil and gas production.

TABLE III.—*Total area of marine sanctuaries compared to other OCS indicators*

Indicator:	*Ratio*
Total of OCS	0.0025
Total area offered in O. & G. sales	.0516
Total area bid on in O. & G. sales	.0967
Total area leased in O. & G. sales	.1107

TABLE IV.—*Area of marine sanctuaries closed to hydrocarbon operations compared to other OCS indicators*

Indicator:	*Ratio*
Total area of OCS	00.0011
Total area offered in O. & G. sales	.0222
Total area bid on in O. & G. sales	.0417
Total area leased in O. & G. sales	.0477

Mr. D'AMOURS. Mr. Weber, in my colloquy with Mr. Ghylin, and perhaps Mr. Jackson, the question of your figures on page 6 of your

original testimony came up. I have a bit of confusion in my own mind on the figures.

The sanctuary prohibitions on oil drilling you say involve one-tenth of 1 percent of the total OCS.

Mr. WEBER. Yes.

Mr. D'AMOURS. Do you mean total OCS leases or the total OCS period?

Mr. WEBER. The total OCS period.

I might refer to a report that is appended to my testimony from which these figures were compiled and in which the figures are laid out in more detail.

All of these are based upon figures which we obtained from the Bureau of Land Management, the U.S. Geological Survey and the Marine Sanctuaries Program Office.

Mr. D'AMOURS. Thank you for clearing that up.

I have one other question and either of you can answer.

Within this country's long history of protecting land-based sanctuaries, wildlife sanctuaries, wilderness, and the like, why are we running into so much controversy when we try to do the same thing in the oceans?

In your experience, can you help me to answer that question?

Mr. WEBER. I think there was considerable controversy surrounding Yellowstone National Park when it was first created.

Mr. D'AMOURS. No, I mean the idea. Why is the very idea of creating marine sanctuaries resisted?

Mr. WEBER. I think a lot of it is due to citizens not really understanding much about our coastal waters.

Most citizens look out over the Channel Islands and see little more than the surface of the ocean and don't realize the complexity and the amount of life that is below there.

So, I think it is a question of experience. I think that will change over the years as more and more people avail themselves of our coastal waters.

The reason I brought up Yellowstone National Park is that our national park system did not begin with an idea for a system. It developed basically, as you know, when we needed to save the Yellowstone area from development.

Nevertheless, they are two very similar sorts programs because they basically view a given area as being important for conservation reasons or for recreational reasons and they are given special protection for that and that level of protection means, for instance, you do not try to tap the geysers for energy.

At that time there might have well been people who wanted to tap the geyers for energy. They were certainly looking at all the trees.

Any time you have resources that can be exploited and another group comes and looks and says no, I think we ought to set this aside, there is going to be conflict.

Mr. D'AMOURS. Will the educational program which both of you discussed become a very important part of this process?

Ms. COLEMAN. Absolutely. If I could expand on that.

If you will notice in title III it does speak to areas being preserved for their recreational value. In my mind, anyway, preserving recreational values of a designated area mandates an educa-

tional process. People should be aware of what it is they are enjoying and how one goes about making sure it is going to be there tomorrow and next year and in the next century.

I think that speaks to education.

Mr. D'AMOURS. Thank you. I appreciate that.

Mr. Carney, do you have any questions?

Mr. CARNEY. Yes. If I may, Ms. Coleman.

On page 8 of your testimony in reference to the Channel Islands Sanctuary and Point Reyes/Farallon Islands you say that both proposals include restrictions on oil and gas development activity.

Ms. COLEMAN. That is correct.

Mr. CARNEY. What are the restrictions?

Ms. COLEMAN. They are slightly different. With respect to the channel islands sanctuary area, which consists of waters within 6 nautical miles of the Island, no new oil and gas development will be allowed. Hydrocarbon and gas development will continue in the Santa Barbara channel which is not part of the sanctuary.

With respect to the Point Reyes/Farallon Islands sanctuary that sanctuary, does include restrictions on any oil and gas development activity. Other witnesses have touched on the issue of Lease Sale 53. If the Santa Cruz Basin, in the southern part of that Lease Sale, goes forward, there would be portions of two tracts which would fall within what is now designated a sanctuary.

Other than that—correct me if I am wrong, Michael—I am not aware of any other pending OCS development within what is now designated as the Farallon Islands sanctuary.

Mr. CARNEY. In that area, what you are saying is a prohibition, not a restriction.

Mr. WEBER. At Point Reyes there is a prohibition on oil drilling within the sanctuary boundaries.

I would like to point out that an Act was passed several years ago creating a national wilderness within 15 miles of Point Reyes wilderness area that provides for no oil drilling within that 15-mile radius.

That area takes up about three-fourths of the sanctuary waters. We are talking about an addition of another quarter, let's say, the area in which there is a prohibition on hydrocarbon operations.

In that particular sanctuary there are parts of two tracts in Lease Sale 53 in the Santa Cruz Basin which slightly overlap.

Mr. CARNEY. They are still prohibited from going in there.

Mr. WEBER. They couldn't set a drill rig but they could drill.

Mr. CARNEY. They are prohibited from going on.

Mr. WEBER. Yes.

Mr. CARNEY. They are prohibited in the Channel Islands from any further drilling.

Mr. WEBER. They can drill on those leases they now hold.

Mr. CARNEY. Right.

A better choice of words probably would be prohibition. That is the point I am trying to bring out.

Mr. WEBER. That is generally how I have referred to it. You would call it a prohibition.

In the case of the Channel Islands I would call it a partial prohibition.

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Mr. CARNEY. It is obvious that you and I disagree. They can't go in any further with their activity before they become sanctuaries. They are prohibited from going into the area, correct?

Mr. WEBER. Fair enough.

Mr. CARNEY. I think prohibition would be a better choice of words.

Ms. COLEMAN. We stand corrected.

Mr. CARNEY. It was unclear in my mind.

The word comprehensive has been used in your testimony, Ms. Coleman, in describing how the marine sanctuary program differs from other programs.

Can you be more specific in describing what is meant by comprehensive management and protection?

Ms. COLEMAN. I was dealing with the fact that a number of environmental protective laws exist. These laws all have as an aim some aspect of marine environmental protection, but they have been rather single-purpose in their nature.

The sanctuaries program offers an opportunity, as far as it has gotten along, for a comprehensive look at whatever area you are considering.

You are looking at distinct ecosystems, in deciding on boundaries. The idea is to consider in a comprehensive kind of way.

You decide these resources, there is a need to have these resources continue, and decisions are made in conjunction and in cooperation with other Federal agencies and local governments and citizens.

The sanctuary planners will also derive knowledge of what kind of activities, both commercial and industrial, are planned to be ongoing in that area, and then the program identifies which of those activities could be detrimental to the resources within these areas.

I don't know if I have answered your questions or not.

The sanctuary program was previously described by a witness as being somewhat of an umbrella program, and I think that is probably not an inaccurate statement. I believe it is a unique program in that it does consider all aspects of what is going on, both human activity and biological activity in an area. The program is an effort to preserve that which makes an area so great to begin with for all the human use of that area ecosystem.

Mr. CARNEY. Maybe I can compare it to the Corps of Engineers role and say a dredging project, where all Federal agencies sign off on a dredging project, but the Corps of Engineers signs a permit. They seem to act as an umbrella Federal agency on a project.

I just got the question handed to me: It is 30 times today.

Ms. COLEMAN. And a waste of paper, too.

Mr. CARNEY. Could we utilize this in an umbrella type of agency to eliminate having to go to every other Federal agency to make a determination in the management of the sanctuary?

Ms. COLEMAN. I think, given proper management within a particular sanctuary, that would be a prime function of that management. You would have onsite, at that location a working knowledge of everything that is occurring, in the sense of activities and what requirements exist for allowing certain of those activities to go

forward, or what prohibitions exist on other activities identified as detrimental to the sanctuary.

So, in that sense, the onsite management of the sanctuary could, in fact, serve as a clearinghouse, if you will, of what is going on, what is prohibited and what one needs to participate in these activities.

Does that help?

Mr. CARNEY. I think so.

I know it is very difficult to come and speak for 50,000 members, but would you, personally, think that your organization would support that type of umbrella agency?

Ms. COLEMAN. Yes, I would.

Mr. CARNEY. I would like to address this question to Mr. Jackson.

Would your industry, given the fact that this group is intact, find it easier to deal with one agency, one umbrella agency?

Mr. JACKSON. You are talking about one agency to oversee all permits in the sanctuary.

Mr. CARNEY. Only within the sanctuary, after it is designated a sanctuary.

Now, we have a management agency, one agency, with the normal checkoffs like the Army Corps of Engineers, the example I gave before.

Mr. JACKSON. If there was not an absolute prohibition against oil and gas, yes, we would like one-stop shopping where you could go to one place and get clearance and a permit to do something. That would be fine.

Mr. CARNEY. That is the point I am trying to bring out. Maybe this is something we have to do on both sides of this argument.

I do not mean to infer that Ms. Coleman and yourself are on any particular side on the issue.

This might make it easier for everyone to deal with the management of the marine sanctuary program.

Mr. JACKSON. We do not know of any place with one-stop shopping. Each agency wants to do their own thing and sign off. It is a good concept but it is a very difficult concept.

Mr. CARNEY. You would support it.

Mr. JACKSON. Yes.

Mr. CARNEY. And you would support it.

Ms. COLEMAN. Yes.

Mr. CARNEY. I think we have an area where we can perhaps get better management techniques, given the fact it is their position and your position.

Ms. COLEMAN. If I might add, I do believe that management and so forth could be made simpler and less cumbersome in many cases. But I would not go along with Mr. Jackson that oil and gas activities should, in any case, be permitted in certain areas.

I do think that on the basis of various studies and decisions, oil and gas development simply is not a proven technology. I would be the first to admit that we need to develop areas of OCS, but I also believe there are areas of OCS that must be exempt from those activities.

Mr. CARNEY. I am not arguing the merits of any activity or any prohibition of activity.

I am trying to establish "one-stop shopping" as Mr. Jackson said, which would be better for all parties involved. I would like to determine how the chips may fall on individual issues, and how each party would have to live with that as it is currently done.

But with every agency in the world putting their 2 cents in; I am trying to look at the bureaucratic aspects and not the individual issues.

I think the question has been answered. I thank you very much.

Mr. WEBER. May I make a remark about the comprehensive management: I understand what you were trying to get at and I think it is an idea that may be worth pursuing.

I think another idea that needs to be studied is development of tools for a managing ecosystem. This type of management is a requirement of several Federal laws, including the Endangered Species Act and the Marine Mammals Act.

We do know very little about marine ecosystems and hopefully the marine sanctuaries program would be able to find out how they operate over time and devise comprehensive tools that would take into account the ecosystem.

I think the notion of comprehensiveness has to be expanded to include that.

Mr. D'AMOURS. Thank you, again, Mr. Weber and Ms. Coleman for coming here to give us your very valuable testimony.

The next and last panel is a panel of scientific representatives:

STATEMENT OF PANEL CONSISTING OF DR. G. CARLETON RAY, UNIVERSITY OF VIRGINIA; DR. SYLVIA EARLE, CALIFORNIA ACADEMY OF SCIENCE; AND DR. WALTER H. ADEY, DIRECTOR, MARINE SYSTEMS LABORATORY, SMITHSONIAN INSTITUTION

Mr. D'AMOURS. Gentlemen and Madam, if you will approach the table.

Dr. Earle, Dr. Ray, and Dr. Adey, first of all, I thank you very sincerely for your patience that you have shown while waiting here all this time and perhaps, as I did, skipping lunch to do it. I apologize because we were not able to get to you sooner. The meeting had to be set up as it was.

If you will proceed with your testimony, keeping in mind the earlier admonition.

I have Dr. Ray starting, but if you want to change that order, go ahead.

Dr. RAY. I feel more comfortable with ladies first.

Dr. EARLE. Mr. Chairman, Members of the Committee, I am Sylvia Earle, a resident of California, research biologist at the California Academy of Sciences and program director for the Ocean Trust Foundation.

About a century ago, two events occurred that have special relevance to my remarks concerning the Marine Protection, Research, and Sanctuaries Act. The second event I shall save for later, but the first is the establishment of the first national park in the United States, marking the beginning of a significant new awareness of the need to consciously maintain certain desired environmental features against impending change.

Then on the land as now also in the sea, natural systems, species, and the overall quality of the environment had been maintained by default, not by conscious effort.

Only when it became clear that human activity could cause permanent damage with costly and unpleasant consequences to the land—and indirectly, to human beings—did policies for protection come about. We now have the opportunity to apply to the sea the wisdom that we should have gained from mistakes made on the land. Or we can take this opportunity to have the perverse pleasure of making the same mistakes all over again, and with the added incentive that this time, the consequences will be more grave.

It is becoming generally known that the sea is the source of much of the oxygen in the atmosphere, and is the place where enormous amounts of carbon dioxide are absorbed. The ocean shapes climate and weather, and increasingly serves as a buffer against the drastic changes that have occurred on land, especially during the last century. More changes have occurred both on the land and in the sea during the past century that have diminished resources and threatened the fundamental character of the earth's life support system, then during all preceding human history.

The marine sanctuaries program is viewed by many as a logical counterpart of national parks, preserves, seashores, and wildlife refuges. There is good reason to believe that the program may serve a broader and even more significant role by becoming the focal point for ocean policy that acknowledges the vital importance of the sea to human survival, and the need to maintain the living systems of the oceans as an act of fundamental importance to maintaining the planet's basic life processes.

The challenge of the Marine Sanctuaries program seems to be to come up with policies that at least in some measure will enable everyone to win.

I am a little concerned about the knee jerk reaction, if you will, on the part of certain representatives of business and industry and also on the other side, representatives of environmental interests, that the establishment of protective areas in the sea is necessarily inconsistent with such things as oil and gas development.

New technology is now being developed that will make drilling and recovery of oil less hazardous and it is reasonable to expect continued improvement along these lines so perhaps in the future you can anticipate near zero chances of some of the problems that do concern quite legitimately both sides.

An "everybody wins" approach is the objective of the newly released "World Conservation Strategy," developed by a coalition of scientists, conservationists, businessmen, leaders in industry and Government, lawyers, and others working for several years under the auspices of the world wildlife fund, the international union for the conservation of Nature and UNEP to bring development and conservation interests together as allies, not adversaries.

The marine sanctuaries program relates directly to the three basic recommendations that are the core of the World Conservation Strategy: Protection for the planet's life support systems, protection of species and ecosystem diversity, and sustainability of natu-

ral systems and processes, especially those of direct economic importance.

The marine sanctuaries program has the potential for being a vital key in an overall plan that could be likened to a tried and true economic policy, whereas in this case the sea is treated as a capital investment that we guard and protect, enjoying—as we always have—the interest yielded. Some view the ocean as a golden goose that will continue to produce a steady supply of golden eggs as long as we do not ruffle her feathers, poison her grain, or worse—do as some are proposing—cook her and eat her all at one sitting.

Carl Sisskind refers to America's underwater parks as:

> Glittering gems in our inventory of priceless natural treasures . . . tangible expressions of our respect for the profound mysteries of the natural world . . . our gift to the future.

But, in fact, these protected areas are, as well, our gift to ourselves. We cannot afford not to be more generous than we have been thus far.

Protected areas are not to be regarded simply as beautiful curios but rather as areas vital to the health of the golden goose, and thus with continuing benefits for all. I have been following with considerable interest the proposal for a sanctuary for the singing, hump back whales in Hawaii and have worked with the whales in that area for the past 5 years.

The situation illustrates some of the benefits and some of the complexities involved with protecting the sea.

The waters of Maui County were designated as a whale park in 1979 by local officials to provide protection for the humpbacks that congregate during winter months and give birth to their young—and provide a boost for the local economy as visitors come to look and share in the "whale mania" that seasonally strikes the islands. Not just local policies are involved with the whales; State, Federal, and international laws and agreements overlap and sometimes confuse efforts to achieve what superficially seem to be quite compatible goals.

Efforts are under way to designate the area as part of the marine sanctuaries program, with special emphasis on research and education.

As described in Dr. Knecht's testimony this morning, the rationale is sound.

A whale sanctuary is, after all, not primarily for whales. The whales will, if left alone, do what they have always done—take care of themselves. A whale sanctuary thus is mostly a place where guidelines are established to govern the behavior of people in a way that will benefit the whales that, in turn, benefit people, as well.

There have been a number of attempts to try to look at such things such as, "What is the minimum critical size of an area necessary to protect species and ecosystems?" (Please see the appended study by Dr. Tom Lovejoy.)

[The following was received for the record:]

[From the Sport Diver]

THE LIVING SEA—AMERICA'S UNDERWATER PARKS

(By Carl Sisskind)

"An underwater park? Where is it, in downtown Atlantis?"

That kind of reaction has been painfully common during the more than ten years I have been involved with underwater parks. In its infancy during the 1960s, the concept of submerged parks was generally viewed as a little impractical, if not downright weird. But like most sound ideas, the time for this one has come.

Although the very first national parks in the U.S. were designated about 100 years ago, specific reference to marine and coastal systems was not included. Several national parks and monuments with coastal boundaries were established in the early 1900s (Olympic, 1909; Glacier Bay, 1910; Acadia, 1916; Katamai, 1918), but shoreline and marine resources, at least initially were not a primary rationale for a park's existence. The first definitive acknowledgement of the importance of marine environments came in 1934 with the establishment of Everglades National Park in south Florida. The park today includes some 370,000 acres of productive marine waters and wetlands.

Later additions of marine, lake and coastal areas into the national park system reflect the growing realization that submerged lands and associated waters may have tremendous biological significance for contiguous parks. It is now obvious that there are vital reciprocal ties between aquatic systems and the terrestrial watersheds that nourish them. In setting park boundaries and. management policies, these ties are now being recognized so that the continued health and integrity of existing parks can be assured. The total number of national parks with significant island, marine, lakeshore or seashore resources has now passed 30.

The essential purpose of any park, upland or underwater, is to preserve that small portion of the natural environment. But more than that, there is often a need to re-establish ecosystems in those areas of proposed parks where man's impact has seriously degraded nature's handiwork. So it was with Florida's John Pennekamp Coral Reef State Park and California's San Diego/La Jolla Underwater Park—both typical of the modern park from inception to daily operation.

Pennekamp, the oldest of this country's true underwater parks, had suffered most. Spoilers came and they plundered. By plane, boat, car or pogo stick they descended upon the Florida Keys and sacked one of our great national treasures—North America's only living coral reef.

Coral "collectors" attacked the beautiful formations with everything from crowbars to hydraulic hoists, yanking from their beds exquisite structures which had taken nature centuries to create. Soon chunks of coral, bleached to an unnatural white color, jammed the shelves of countless curio shops and private patios. Commercial shell collectors tore the reefs apart as they hunted rare specimens. Tropical fish habitats were looted for aquarium pets. Florida's conch populations were exhausted long before the thirst for them, so shells were imported from the Bahamas to satisfy the curio trade.

By 1957, concern for the situation coalesced at a biological conference held in the Everglades National Park. Dr. Gilbert Voss of the University of Miami proposed the reef be protected, if for no other reason than in the name of science. He was joined at once by Charles Brookfield of the National Audubon Society and Dan Beard, then superintendent of the Everglades park. On the spot, a motion was introduced requesting that the U.S. Department of the Interior and the National Park Service be petitioned to save the area.

Seldom has a rescue operation gained such momentum and met with so little bureaucratic resistance. Assisted by dedicated conservationists, some high-powered legislation and a presidential proclamation, a unique recreation area was finally created and the only undersea park in the United States became a reality on December 10, 1960. The park was dedicated to John Pennekamp, then the editor of the Miami *Herald*, who had played a major role in conservation causes and worked tirelessly in behalf of the underwater park.

Covering about 75 square miles of ocean waters, the park protects the northernmost portion of a chain of coral reefs that stretches 220 miles southwest to the Dry Tortugas. The actual park is 21 miles long by three-and-a-half miles wide. Only 55 freeway miles south of the Miami megalopolis, Pennekamp's coral forests and spectacular marine canyons are accessible from many points along the beach. The most popular access is park headquarters at Key Largo. Scuba diving and underwater photography are encouraged, but the removal or destruction of any marine life is prohibited. Spearfishing is taboo, yet some quirk in management thinking permits hook-and-line fishing. Anglers look for trout and bonefish in the flats, snapper and

snook in the many creeks and grouper, snapper and mackerel on the reefs. Pleasant accommodations are available at the park's landside for camping and picnicking, while additional facilities exist for almost all marine services including boat rental.

For those who manage to resist the urge to plunge into the warm (70 to high 80s), blue-green waters, there is no need to miss the stunning beauty of Pennekamp's reefs. Glass-bottom tour boats offer visitors the option of one- or two-hour trips to inner and outer reefs.

Visibility is usually 60 feet, often better, and those who dive the park soon succumb to the peaceful attitudes of the fish—they are simply unafraid of divers. Some make a point of leaving their dens to greet bubble-blowing visitors. Tiny marine tropicals, dressed in their gaudiest array, have brazenly posed and preened within inches of my faceplate. Bigger folks like grouper, spadefish, snapper and parrotfish are almost as docile, moving slowly from my path rather than darting away as in other ocean areas. Each time I visit Penekamp I can't help but think that this kind of rapport is the way it was intended to be.

A continent away lies the San Diego/La Jolla Underwater Park. In a community so closely oriented to the sea it is mildly surprising that some sort of ocean preservation program took so long to evolve here. What ultimately became the San Diego/La Jolla Park had its beginnings in casual conversations among members of the Bottom Scratchers—the first diving club in the U.S.—and a few diver/scientists at Scripps Institution of Oceanography in La Jolla. These otherwise sincere people, during the initial planning in the early 1960s, believed the creation of a park to be a simple matter: Just announce a plan, point a finger at the spot and the public should rally to the cause. This unfortunate error in judgment was not resolved for 12 years.

The early planners made the mistake of talking largely to each other rather than organizing a practical approach to government. In 1969 the California Advisory Board on Underwater Parks selected the same site as its intial effort to create an underwater parks system for the state.

A survey of the area was made, boundaries were drawn and a written proposal, including an inventory of marine life, was prepared. Like a long-dormant flower, the idea burst on city planners who took two actions simultaneously: The city rejected the proposed *state* park plan and announced plans to designate the area a *municipal* park.

The city ordinance not only created the park but established a seven-member Underwater Parks Board to oversee operation and set policy. The board appointed as its first chairman Dr. William A. Nierenberg, director of the Scripps Institution of Oceanography.

The San Diego/La Jolla Underwater Park is today perhaps the most active underwater park in California. It extends from Point La Jolla northward for some seven miles, from shore to about a mile offshore, for a total park area of just under 3,500 acres.

Significantly, an ecological reserve was incorporated within the park. This look-but-don't-touch area embraces the southern one-sixth of the park and is marked by five buoys. The removal of anything from this reserve is prohibited, and the rule is strictly enforced.

When the park was dedicated in 1970, scattered beds of giant kelp were being decimated by indiscriminate boat use and other stresses. Today there is a healthy and flourishing kelp bed in the reserve area and another near the northern boundary. These kelp canopies provide a habitat for marine life and are, in themselves, a worthwhile sight.

Early in 1971 the City Parks Advisory Committee decided the barren north end of the park needed more marine life. Scientists from Scripps volunteered a study, and later recommended implantation of an artificial reef. Not only would the reef enhance the natural attributes of the immediate environment, but it would provide a new and productive spot for recreational fishermen since the reef would be located well outside the ecological reserve area.

The committee at once rejected the idea of dumping old tires or used trolley cars into the sea. Instead, natural rock was agreed upon. After two years of public hearings and painstaking assessment, Catalina Island quarry rock was selected. Two more years dragged by while layers of mindless resistance were peeled away and a seemingly endless parade of bureaucratic requirements were finally fulfilled.

Finally in April of 1975 some 3000 tons of rock was barged to the site and dumped on the sea floor at a depth of 40 feet. A buoy was set to mark the location for divers and fishermen.

Within weeks small plants began to appear on the reef. In the years since, more and greater plant life, fish and crustaceans have come to inhabit the place, thus verifying not only the theory but the purpose for which the reef was intended. More

than 200 species of fish and crustaceans have been identified in what is now the park area. Starfish in great variety, jellyfish in equal distribution, lobster and abalone can be found. Pods of California gray whales pass through the park during their annual migrations to warm southern waters.

The park contains two unusual geological features, the Scripps and La Jolla Canyons. These two canyon heads are actually branches of a very large submarine canyon which splits two miles offshore. Each of the canyon heads is within swimming distance of the beach and begins at about 50 feet. They form spectacular gorges that slice through a terrace formed 14,000 years ago when the sea level was much lower. The deep canyons are ideal natural laboratories for studying sea floor processes, as shallow-water sediments slowly creep into deeper waters, the same way glaciers glide down mountain sides to the valleys below.

From March through September, park visitors can witness one of the most remarkable life cycles in the sea—California grunion coming ashore to spawn. Unlike any other fish, grunion leave the water completely to lay their eggs in wet sand. As if this behavior weren't strange enough, grunion make these excursions only on particular nights, depending on the tide, with such regularity that their arrival can be predicted a year in advance. Shortly after high tide on certain nights, particular sections of the beach are covered with thousands of grunion performing their mating rituals.

Grunion are between five and six inches long with bluish-green backs and silvery sides and bellies. Females ride a long reaching wave onto the beach accompanied by as many as eight males. In their presence, she literally drills herself into the sand, tail first. Often, only her head remains exposed. The males curl themselves around her with their vents close to or touching her body. The female twists in her hole, emitting her eggs two or three inches below the surface.

After the milt is discharged, the male swim back to the sea. Shortly thereafter, with a violent, jerking motion, the female frees herself and takes the next available wave back out. The entire episode takes about 30 seconds, although individual fish may remain on the beach for several minutes.

Early in 1971 an underwater TV camera was placed permanently in the park. Located 2,000 feet offshore, north of the ecological reserve, the camera is anchored to the sea floor at a depth of about 40 feet. A monitor located in the Scripps Aquarium forms the centerpiece of an imaginative display. It is, perhaps, the only such live television display in the world that focuses on the daily activities of an underwater park.

As the decade of the 1970s matured, the concept of preserving and protecting near-shore marine environments gained greater acceptance. In California alone there are now eight underwater recreation areas, and the idea has begun to take hold elsewhere.

Among the most famous underwater parks is Buck Island off St. Croix in the Virgin Islands. This tiny underwater park is guarded by a spectacular reef. The water is warm and clear. Access to the island is by boat—regular charters run from Christiansted to the island, a distance of about six miles. No tanks are permitted in the park, a wise precaution against destruction of the fragile corals. No spearfishing, either. A delightful help to snorkelers is the presence of brass plaques affixed to the bottom at strategic places to explain the sights or give simple directions. And since the water is barely 25 feet deep in the park, nearly anyone who can survive a bathtub can enjoy its special beauty.

Japan, Australia, Norway, Israel, Canada and Mexico have also created wet parks. Japanese parks are largely organized on a national system, and prohibit swimming and diving. Look-see is accomplished by entering a silo at the end of a pier. The visitor descends into the silo to a depth of about 30 feet and can observe the underwater panorama through a series of portholes set in the walls.

Wreck diving and cold water typify Canadian parks. Well-managed Canadian parks such as Fathom Five Provincial Park in Ontario show clearly that freshwater environments can be made into tourist attractions by emphasizing their own special characteristics.

In the past two years the Mexican government has taken bold steps toward creating not just a single underwater park but an entire system. Perhaps the most spectacular of these is one embracing Palancar Reef on the leeward side of tiny Cozumel Island. It is a gorgeous wall covered with holes and caves, pinnacles and seamounts, abounding in color beyond description. To many divers, Palancar Reef is the eighth wonder of the world—it must be seen to be believed.

On a survey prior to creation of Palancar Park, some 79 species of fish were identified over an eight-day period along with nearly two dozen different kinds of invertebrates and a plethora of coral species. French and queen angelfish, barracuda, cardinalfish, electric rays, parrotfish and even a glimpse of the rare frogfish

delighted our survey team. At few other places on earth can a diver exhilarate in what he sees and senses more than at Plancar.

Overlooked by too many underwater park enthusiasts is the reality that there are more non-divers than divers. If the concept is to maintain its momentum, non-divers have to be turned on to what we see through our faceplates. To that end, some imaginative strides have been taken and exciting plans made.

San Diego's underwater TV provides shirtsleeve visitors a chance to enjoy the ocean deep, even if vicariously. Glass-bottom boats at Pennekamp and Catalina are another means of invovling the non-diver. Even movies portraying rarely seen white sharks have a certain value. Certainly the Cousteau documentaries have established monumental support for preserving the marine ecology.

In my lifetime, I fully expect to see street-clothed people walking along the floor of the ocean. They'll move through an acrylic tunnel, ten to 12 feet in diameter, with its entrance located on the beach above the high-tide line. In places, the walkway will be tethered several feet above the sea floor, permitting visitors to look down at the ongoing life beneath their feet.

Silos and even tourist submarines are not far off. There are plans, well beyond the pipe-dream stage, for underwater restaurants entered above from a fixed off-shore platform. Imagine watching your main course swim by as you sip your cocktail.

Don't laugh too loudly—think of those who giggled at the exploits of the Wright brothers.

Underwater parks are created to preserve the "now" in all its splendid characteristics, to enhance and protect these fragile seascapes so that future visitors may see and understand the ocean and its direct relationship to the way we live. These parks are the glittering gems in our inventory of pricelss natural treasures, and must be nurtured and protected with care—they are tangible expression's of our respect for the profound mysteries of the natural world. We must be conscientious caretakers—they are our gift to the future.

[From Parks, vol. 5, No. 2, July-September 1980]

Discontinuous Wilderness: Minimum Areas for Conservation

(By Thomas E. Lovejoy)

Most if not all the remaining opportunities to establish national parks and similar protected natural areas will occur in the final two decades of this century, particularly during the decade already underway. Soaring human population growth and dwindling biological resources inevitably will generate increasing pressure on remaining wild lands for conversion to agriculture and like uses, despite their marginal nature. It is an exciting time to be working in conservation because so much can be saved and so much can be lost.

One of the major differences affecting design and management of national parks today, in contrast to Theodore Roosevelt's time when a park was likely to be part of continuous wilderness, is that there is considerably more likelihood a national park will be an isolated fragment of the once continuous habitat. The isolation of that fragment is of considerable importance in that the biological community in question will be deprived in many instances of animals and plants which normally disperse widely and frequently in continuous habitat. Not all species of animals and plants will necessarily be so affected, for some are champion dispersers regardless of habitat, but it is a large problem to be dealt with in national park design and relates to the fundamental design question: How large?

Naturalists have been aware since the 1830s that the larger the area involved the greater the number of species it would contain. This taken just by itself does not help all that much, for the option of including all the land of the planet in one gigantic biosphere reserve or park simply does not exist. It does however imply that no matter what size an isolated habitat fragment might be it is likely to lose some species after isolation. This is because, whatever the size, some of the species included will be represented only by single individuals or population units too small or inappropriate in age structure to be reproductively viable over the long term.

That is basically the status of the problem as it is now known. Isolated habitat fragments are known to lose species after isolation, but at rates and by processes largely unknown. The process might be thought of as decay of an ecosystem, rather as radioactive minerals lose minute particles in decaying to new lower and more stable states. If care is not taken to understand this problem of species loss from habitat fragments, many species, the protection of which had been considered taken care of, may be lost, and many parks and reserves will end up being less than they were intended to be.

To date much of the effort to investigate this species loss problem has been based on islands. Land bridge islands (those once continuous with continental mainlands) generally have more species than oceanic islands of similar size, but fewer species than areas of similar size on the mainland. This is presumably because the land bridge islands have lost some of the species they originally contained at the moment they were isolated by rising sea levels, when they were equivalent in species richness to the mainland. Presumably too, the land bridge islands have not had time to lose all of the species they are destined to if they are ultimately to reach an equilibrium number approximately that of similarly sized oceanic islands. Much of such analyses has been closely tied to the theory of island biogeography, a theory which is particularly attractive in this instance because it includes the dispersal problem: the theory asserts that the number of species on an island is a consequence of both extinction rate (loss of species from the islands) and immigration rate (dispersal to the island).

It has been difficult to take this approach to the problem very far mainly because it is hard to make tight statements and comparisons about which species actually existed on islands at the moment of isolation. Similar kinds of problems arise when comparing censuses of remnant forest patches; in all too many instances the initial species compositions of the forest patches have to be assumed. Were it not for the propensity of the bird watching public to make censuses, often there would be no information about such forest patches other than present day enumerations, and the analyses would be all that much more shaky. Nonetheless the sorts of analyses which are being made on forest patches in the vicinity of Washington, D.C., in the New Jersey piedmont, and by Britain's Nature Conservancy Council are worthwhile efforts to gain some insight into the problem and processes.

Probably the best known situation is that of Barro Colorado Island, a Panamanian hilltop gradually made an island in 1910-1914 by the rising waters of Lake Gatun, created for the Panama Canal. Although the avifauna was not tabulated prior to isolation, the island was censused soon after and at a number of intervals subsequently. By 1970, 45 species of breeding birds, about 22 percent of the original census, were gone. Edwin O. Willis, in analyzing this situation, distinguished between species lost as the island's second growth forest matured and those presumably lost because the island's 15.6 square kilometers were simply insufficient to support them. The number lost from the area effect was determined to be 13—very close to the number which was predicted from studies based on island biogeographic theory. Lacking even in this situation is sufficiently continuous study of the bird populations over the half century involved to gain real understanding of the problems encountered by these species. It is interesting that when experimentally reintroduced by Eugene S. Morton, a species of wren supposedly lost because of the area effect immediately took up residence in one of the few remaining areas of second growth on the island.

Clearly a major research attack on this problem of attrition of species from habitat fragments is needed if the charge to protect a representative series of the world's ecosystems and their species is ever to be responsibly met. One effort to do so is currently being undertaken as a joint Brazilian-American enterprise two hours' drive by field vehicle north of Manaus in the Brazilian Amazon. There the local authorities have agreed to help this effort conducted by the World Wildlife Fund and Brazil's National Institute for Research on Amazonia (Instituto Nacional de Pesquisas da Amazonia = INPA). The geometry of land areas which local cattle raisers are required by law to leave in forest is being adjusted to provide a series of forest patches varying in size from one hectare to the 7,500-10,000 ha range. There will be replicates in almost all size classes in order to gain a measure of how predictable is the order in which species might be lost and how similar is final species composition and number for a given size of forest patch. Currently Brazilian and American biologists are studying in still continuous forest in plots marked off for protection when forest clearing takes place. The forest is remarkably undisturbed at this point prior to fragmentation and includes large mammals such as jaguar, puma, giant anteater and tapir. In a large tree in the buffer zone around one of the one-hectare plots a pair of crested eagles, second only to the harpy in size in South America, is nesting. How well the pair will be able to manage when the forest is fragmented is part of the problem to be studied. Various groups of plants and animals are being inventoried in the study areas to provide baseline data against which the effects of clearing and the effects of species interactions subsequent to isolation can be compared (Fig. 1). It is a major undertaking which may run for 20 years or more, and which so far the U.S. National Park Service, the Man and the Biosphere Program with support from the Agency for International Development, and a private foundation have helped to launch.

These forests are particularly good for such a study in that the amount of geographic relief is small so that large differences in species composition are not introduced by altitudinal gradients. Also, almost none of the animals, including the birds, are migratory, so there is no problem of dealing with possible effects from the time when individuals would be absent. In addition, species loss from interdepending species complexes will be clearly pronounced because of the high frequency of interlocking biologies of species in these forests. One interesting example to be examined is that of how many colonies of army ants are necessary so that enough colonies are in swarm on any given day to provide support for the bird species which habitually follow the colonies and live by snitching the ants' prey as they flee before the swarms. Another interesting sort of question will involve the area necessary for the number of trees of different species necessary to support all year long a pollinator such as the only bee capable of pollinating the Brasil nut.

A great deal of basic information about these forests as well as information about the effects of fragmentation will emerge from these efforts. One would only wish that such information was *already* available to aid the nations of the Amazon basin in the design and management of national parks. Some information will emerge relatively rapidly, however (which is why some really small patches are included). Also, it should be possible to hedge on the question of size by bordering national parks with watershed forests or forests of other purposes so that boundary increases can be made if necessary later on.

It is hoped that the project will yield generalities about park size and management techniques to reduce the species loss problem that could be useful around the world. It is nonetheless true that each ecosystem and each geographical region is likely to have its own ecological peculiarities and own particular minimum size to reduce shedding of species. Consequently it would be very desirable if similar sorts of research programs could be initiated in other areas of the World. Even in ones where most if not all choice of national parks has already been made, the chance to study species loss can aid in better management.

It is important to remember that the notion of minimum size, while important conceptually, is likely, in the dynamics of the real biological world, to produce only an approximate fuzzy measure of minimum size for a given ecosystem. It may never be possible to know what is the minimum area necessary for a minimum population of a top predator in an ecosystem; in the last analysis reintroduction programs of top predators may perforce become the only solution to a problem that is somewhat intractable to study. It is critical to keep in mind that the ultimate goal is to protect ecosystems at as close as possible to their original and characteristic diversity: both today and a millenium hence, a given forest reserve should have the same number of tree and other species per unit area.

Also it is important to bear in mind that the goal of conservation is not only to protect fauna and flora, but to protect it in representative ecosystems as close as possible to those which occurred naturally when wild habitats were generally continuous around the globe. This protects both ecosystem structures and ecological processes which are also of great value in the management of the biosphere in support of people. Sometimes, for political or other reasons, those processes can only be protected in small reserves which should not be scorned; small can be beautiful in fulfilling the goals of conservation too. Also, it should not be forgotten that all biological systems, including ecosystems, are dynamic, and that an equilibrium endpoint for a forest fragment, whether at natural equilibrium or at a more species-rich managed equilibrium, is subject to change. Species composition is likely to change a bit from arrival of species good at dispersing; the management of a reserve must consciously take this into account.

There is a lot to be learned about ecosystems by studying their decay and partial disintegration. One can well rue the need to study ecosystems as they fall apart, but more and better conservation should result.

Dr. EARLE. It is conceivable that the "minimum critical size" of the habitat for humpback whales might stretch from Hawaii to Alaska or beyond. During a single season year, the same individual, humpbacks have been shown to travel between two such distant points, between breeding and feeding grounds. Clearly, even though the whales are not being actively killed, and even though the breeding areas are protected, if protection is not also afforded the northern ecosystem that generates the krill and small fish that the whales need to replenish their big bodies after months of fasting, protection elsewhere along the line becomes worthless.

So, it is necessary in the context of the marine sanctuaries program to look at the ecosystem, as well as the sites, as well as the places.

Never before has a generation been faced with questions such as "Shall there are shall there not be any great whales, anymore? Never before, perhaps, have we had the kind of perspective that makes it possible for us to see the relevance of whale survival to human survival, that the earth is, in fact, a single interacting ecosystem of which we humans are a part. Ten-year-olds take for granted the view given us through the eyes of astronauts—earth as a single, mostly blue and white sphere, a view that makes it clear that we are a part of, not apart from the rest of the living systems that are unique to our planet.

This brings me to the second one-century-ago event that I alluded to at the beginning of this presentation. As a biologist, I am keenly aware that only about 100 years ago the first scientific exploitation of the sea began when the *Challenger* set out from England on a 4-year exploratory voyage in the oceans of the world.

Dredges, nets, grabs, and thermometers on a wire were used then that are not very different from some presently in use by modern oceanographers. Such techniques may be likened to flying over Washington or New York or London with a net dangled from a plane several thousand feet overhead, blindly groping, scooping up whatever can be fortuitously caught on the streets below. Perhaps, with a little bit of luck you might come back with a few bushes or a mailbox or a puzzled pedestrian. As a sometimes resident of Washington and New York and London, I find it difficult enough to try to figure out what is going on—living there—let alone trying to piece together the action by employing even the most sophisticated oceanographic techniques.

Yet, we are making once-and-never-more decisions about the fate of the oceans based on information so obtained. Some of the devices created in recent decades that have provided new access to the sea, especially the deep sea, only reinforce the concern about the magnitude of our ignorance. It is the old story about "the more we know, the more we know we do not know."

Since the mid-1940's, scuba has provided unprecedented access and much new insight into the nature of the sea, at least in depths to 200 feet or so. Saturation diving is presently used by a few people in depths to more than 1,000 feet for days and even weeks underwater, especially in connection with work on offshore oil wells. One atmosphere diving systems such as "Jim" and "Wasp" and "Mantis" make it possible to go to 2,000 feet for several hours of working time. A few submarines such as Woods Hole Oceanographic Institution's *Alvin* can travel to 12,000 feet, but only one—the *Trieste*—has ventured to the ocean's greatest depths, 7 miles down. Don Walsh and Jacques Piccard spent 20 minutes at that depth, 21 years ago, but no one has been there since.

As a direct result of increased access to the sea through new technology, more has been learned about the sea since the mid-1940's than during all preceding human history—the same era that has been characterized by unprecedented and accelerating change. Considering the methods used for exploration, and the relatively brief times spent underwater overall, the wonder is not that we

know so little about the sea, but rather, that we know as much as we do considering the limitations.

Technological developments are proceeding rapidly, however, mostly in response to commercial needs, especially for offshore oil exploitation and the promise of other mineral resources.

Buckminster Fuller has looked at the history of science and notes that Magellan in 1519 took 3 years to circle the globe in a wooden sailing ship. A steel steamship circled the globe in 2 months 350 years later. An aluminum plane made the trip in 2 weeks 75 years later—the first time—and 35 years later, a rocket with a man inside traveled around the world in a little more than an hour.

Underwater, we are somewhere between the wooden sailing ship era and the steamship area, but with the potential for bypassing intermediate stages and making application of space age technology to the sea.

It seems ironic that more men have walked on the face of the moon than the bottom of the sea one-quarter of a mile underwater. In fact, no one has yet touched the sea floor at 1,500 feet, except within the confines of a submarine. Babies fly 35,000 feet overhead, but only two people have been that deep in the sea.

The consequences of new access to the sea, particularly the deep sea, bring us to the edge of perhaps the greatest era of new learning about the planet in all of history. About 90 percent of life on the planet lives in the ocean. All of the major divisions of animals and plants known occur in aquatic habitats; only about half are also terrestrial.

Why support the Marine Protection, Research, and Sanctuaries Act? Given the level of ignorance about the sea, the rapid changes that are occurring, and the certainty that the sea is vital to our survival, it would seem to be one of the best investments this generation can make. If for no other reason than that protected areas provide a hedge against the unknown consequences of changes already set in motion years aqo, the marine sanctuaries program should be supported. It would be in our best interests to initiate and support international agreements that relate to wide-ranging species such as the whale, tuna fish, and ultimately wide-ranging communities, and perhaps even wide-ranging phenomena, such as currents. Support for protected areas in international waters, such as deep sea "stable reference areas" mandated by the United States deep sea mining legislation should be encouraged.

It is possible to have a magnified positive effect on the future of the sea and the future of civilization through wise decisions at this pivotal point in history. At the same time, there is the potential for magnified loss if decisons are taken by default, or if wrong policies that have only near-sighted returns are initiated. One positive decision that could have magnified benefits in both the short and the long term would be to take care of the goose, look out for the working capital that the sea represents, to protect our ocean legacy. We have a clear opportunity to do so through support of the Marine Protection, Research, and Sanctuaries Act. I join those who would urge you to do so.

Thank you.

Mr. D'AMOURS. Thank you for your statement, Dr. Earle.

Have you decided who is going next, Dr. Ray or Dr. Adey?

I would like to repeat that given the lateness of the hour and the fact that your statement will be included in the record as submitted, I would appreciate it if you would summarize rather than read your testimony.

Dr. RAY. I would like to emphasize at the outset a few observations based on this morning's testimony.

First, I heard the point of view of Congressman Breaux and some others, with a little bit of difficulty.

In the first place, it has to be pointed out, again and again, that protected areas, sanctuaries, or whatever you wish to call them, are all forms of management.

Second, there certainly appear to be no replacement for the marine sanctuaries program. There is nothing quite like it, as has been pointed out by the Congressional Research Service and others.

There have also been exhibited today some rather profound misconceptions.

First, it seems that the positive aspects of protected areas have not been mentioned nearly enough. The concept is emerging very fast, even in the developing nations, that protected areas enhance living resources and thus enhance living resource development.

The second misconception is that marine resource protection is simplistic; rather, it requires a very large scope of actions of large scope and we need them all.

The situation is very critical on the east coast of the United States and elsewhere, and particularly with regard to living marine resources.

Practically all our commercial fishery resources have been seriously depleted.

Another misconception is that marine protected areas involve some sort of lock up. It does involve looking at the most sensitive resources of an area, namely, the living ones, first, and then if a way can be found to get to the others, that is entirely permissible.

No lock up is involved, except in very special instances.

Another misconception is that renewable and nonrenewable resources are equivalent and can be traded off. This is not so.

To turn to my testimony, I have a few highlights.

It is currently the case that oil and gas are valuable resources. About a third of the estimated oil and gas remaining in the Outer Continent Shelf lies under the areas where many walruses and polar bears and fisheries are located. Attesting to the fact we do not have the technology to get to those oil and gas fields is that our largest ice-breaker, the *Polar Sea*, is right now adrift in that area. Sooner or later we may have the technology to get to the oil and gas or even to explore the seas even though there will be a conflict in any case.

I am of the firm belief that our need for protected areas cannot result from other than a careful analysis of the need. Otherwise we are going to continue ad hoc nominations and we have heard testimony of how unsatisfactory these sorts of decisions can be.

An example of the sort of analysis needed is a study recently performed for the NDAA Ofice of Ocean Resources Coordination and Assessment. My testimony contains some maps of a portion of the Atlas we produced.

It is absolutely obvious that the east coast is very richly endowed with living resources of great value and these living resources are of value to the entire community of people on the east coast.

It is also true that a huge portion of the east coast has been closed off from shellfishing, for example, due to pollution.

It is also true, equally, that the U.S. population requires other uses of the east coast—oil and gas and others—but there are virtually no equivalents to "national forests" in the sea, at least none that I know of, for multiple-use management of areas.

The maps of our east coast show there are areas discreet in time and space that may be called "areas of biological importance" and will require some sort of "special management status."

You can call that status what you will, but it involves something like a sanctuary. The need for sanctuaries is just as important for the sea as it is for the land. It would be unthinkable not to have rather large protected areas on the land, but it seems rather undesirable to some to have these in the sea. Some reasons for this are that the sea is "out of mind," as one of the former persons testifying said. Nobody lives out there. There is no person sitting that can watch what is going on. So, we have a different concept of the sea than on the land.

One of the mistakes that I think is made in trying to make trade-offs is cost-benefit analysis. Some who propose this I think forget that the root of economics—oikos—means "management of our house" and has nothing to do with money. It comes from the same root as ecology.

What I am arguing is that the conservation and economic development are really part of the same coin. I believe it is good sense, good politics and very good economics in a broad sense to endorse and, in fact, expand such concepts and programs as the marine sanctuaries program. And it would be foolish, I think, at this stage not to consider enhancing resources to recover some of our coast's lost productivity, just as it is equally foolish to lock up areas from kinds of development which may be compatible with living resources in the future.

[The following statement was received for the record:]

The Need for Marine Protected Areas

Testimony for

Subcommittee on Oceanography

Subcommittee on Fisheries and Wildlife Conservation

of the

House Committee on Merchant Marine and Fisheries

by

Dr. G. Carleton Ray
Research Professor
Department of Environmental Sciences
University of Virginia
Charlottesville, VA 22903

March 12, 1981

80-338 O - 81 pt.1 - 14

This testimony makes a case for "marine sanctuaries," herein called by the more inclusive and perhaps more appropriate term "marine protected areas." In order to examine the case for specially protected areas along coasts and in the sea, several questions deserve increased consideration. What is the need for marine protected areas? What are their functions? How does one select areas for designation? What forms should marine protected areas take, not already provided for by other management means? And, what are the procedural and management implications? The Marine Sanctuaries Program has addressed these questions, but it seems to me that they need further substantive attention at this time of reauthorization of the Program. This brief testimony can only outline what is involved in the broadest terms.

An Example - the U.S. East Coast

The Council on Environmental Quality and the Office of Ocean Resources Coordination and Assessment (ORCA) of NOAA recently published an Eastern United States Coastal and Ocean Zones Data Atlas as the first product of an East Coast Strategic Assessment Project. A major purpose of this project was to identify areas that should be further analyzed for possible special protection status, because of their biological and ecological importance. From the outset, the project fully recognized the importance of certain development requirements, particularly related to oil and gas, and sought to shed light on strategies for resolution of possible conflicts among living and non-living resource conservation and development. It also recognized that living resources are of great economic and esthetic value and, as the most sensitive components of the marine environment, deserve special protection. The maps contained in this testimony are drawn from the Data Atlas.

Examining the maps appended here reveals several important factors directly relevant to marine protected areas. First, the east coast is richly endowed with marine living resources of great value (Figures 3.1 - 3.64) which have become important components of east coast economies and tradition. Second, some species migrate widely through both oceanic and estuarine waters, and from Georges Bank to the mid-Atlantic. Third, some such as the white marlin (Figure 3.25) and whales (Figure 3.64), migrate even more widely and have "critical habitats" within east coast waters; that is, east coast habitats may be essential for the species to maintain their populations.

Turning to economic considerations, the east coast, as we all know, is very heavily populated (Figure 4.1). A not insignificant number of people depend upon marine living resources for livelihood (Figure 4.8) and a vast number enjoy

these resources, either as commercial products or recreationally, However, the consequence of high population is very often a high level of pollutant discharges. Along the east coast pollutant discharges are significant in many locations (Figures 4.9, 4.11, 4.16). For example, a large portion of our living resources cannot be used due to pollution, as shown by the huge portion of the east coast included as shellfish closure areas (Figure 4.29).

The U.S. population also requires the sea-for other than fisheries purposes. There is oil and gas along this coast (Figure 4.20). There are a multitude of ocean dumping sites of several different kinds (Figure 4.27). It is obvious that some of these uses conflict. Terrestrially, resource use conflicts are very often handled by means of establishing special protection areas, some of which are called management areas, some sanctuaries, or by a multitude of other titles. However, Federal, State, and private protected areas are very few along our coasts and in our waters (Figures 5.8, 5.9, 5.10). There are virtually no equivalents to "national forests" or "agricultural experimental areas," and there are hardly any "sanctuaries" in the sea. It would appear that some sort of mental block effects our thinking about protected areas; it would be unthinkable not to have them on the land, but it seems almost undoable to have them in the sea.

The Need for Marine Protected Areas

Analysis of the maps of the Data Atlas clearly shows that there are "areas of special biological importance" which require special protection status to ensure resource sustainability. A report detailing this will be completed by ORCA in June 1981. I will give only one example of the need for marine protected areas here. This relates to "critical habitat," used here in a wider sense than in the case of the Endangered Species Act. Critical habitat analysis applies to all species and involves the collection and synthesis of the following information:

(a) biologically-significant habitats, in particular those important to the survival of species, e.g., as breeding, feeding or courtship areas, or as sites along migration routes;

(b) support systems and ecological processes which are important to the survival of species of biological, ecological or economic value; and

(c) socio-economic factors affecting the biology or ecology of rare or economically-important species.

Permit me to relate this concept to an historically familiar case of human health; this is the virtual elimination of yellow fever near the turn of the 20th century. This disease ceased to be a threat when means were found to limit the disease-bearing mosquito by striking at its ecological jugular--its "critical habitat" of breeding sites. Indeed, this effort was far more successful than our recent attempts to control insects by highly uncritical use of pesticides. The same sort of concept is required for species protection. That is, we must find the ecological and biological jugulars and protect them. This approach will often result in determining discrete times and places when or where the species is most sensitive and when and where it requires specific protection. Of course, this is often a difficult matter, but it is soluble and offers some resolution to the problem of seemingly indiscriminate proposals for protection.

However, some realities must be faced. Some protected area requirements may be large and a few may require some development sacrifice. Nevertheless, in combination with certain overall environmental devices, such as pollution control and abatement, the critical habitat method for selecting protected areas does offer a tool for resolving how protected areas may better serve societies' need to integrate conservation with development and also to:

- preserve economic resource sustainability
- preserve genetic diversity
- preserve essential ecological processes.

Ecological processes, I must emphasize, are especially important. They provide the "free services" of nature through biotic regulation--such things as cleaner water, stable biological productivity, and the like. To replace these free services by artificial means is either impossible or horribly expensive.

Considering protected areas as a mere "setting aside" from development is neither good management nor good ecology. Rather, it involves the integration of many activities together. A "protectionist" philosophy often ignores ecological linkages between areas inside and outside of reserves; a developmental philosophy most often seeks proof of ill-effects before showing restraint. In my view, the burden of proof is a two-way street, both on development and conservation. Unfortunately, some developers show little sympathy for accepting a fair share. For example, we often read in draft environmental impact statements that certain

actions may have "no significant effect" and thus, development may proceed. This determination has more to do with our ability to detect effects than with the effects themselves. It also neglects the strong possibility that ecosystems probably do not degrade evenly, but in steps. Performing vast ecological experiments on unjustified assumptions, without incorporating matching or baseline protected areas into a suite of management tools, is clearly not in the category of wise development. It reminds me of how fast my childhood fish tank became filthy with algae, seemingly overnight. Actually, my pollution of the tank through overfeeding the fish was having its effect all along; I just could not recognize it until the day of reckoning--often also the time of the death of my fish.

Protected Area Functions and Selection

The Marine Sanctuaries Program has determined need for several protected area types:

- habitat areas for ecosystem protection;
- species areas for species protection;
- recreational and esthetic areas;
- research areas to serve as ecological baselines; and
- unique areas, from ecological to historic.

This list agrees well with accepted protected area types agreed to by various international organizations, most notably the International Union for the Conservation of Nature (IUCN). Perhaps it does not stress enough the important concept of multiple use. It also does not specify that conservation and development are really only reverse sides of the same coin. It is becoming increasingly realized that development without resource conservation is a short-range delusion. In this respect, a new strategy of "conservation for development" is emerging, particularly in developing nations where severe resource constraints are more clear than to us.

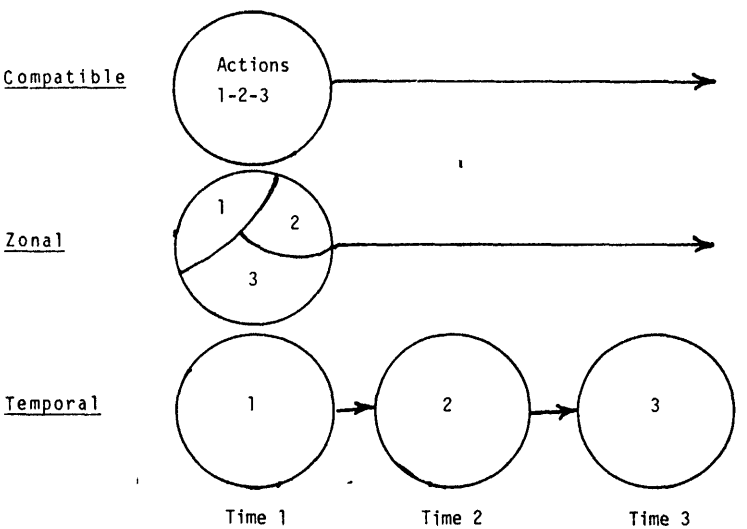
Protected areas are clearly an important investment in the future. Their selection, at an early stage, is critical and I am pleased to note that the March 1981 Draft Program Development Plan of the Marine Sanctuary Program includes much improved criteria for site selection.

Somewhat different criteria are included in the Report to the Intergovernmental Meeting on Mediterranean Specially Protected Areas. The Report is a part of the UNEP Mediterranean Action Plan and is the result of an Intergovernmental Meeting on Specially Protected Areas held at Athens, Greece, in October 1980. The criteria, developed by IUCN, delineated how judgements may be made about choice of marine protected areas. They also indicate protected area functions as well as selection on both a quantitative and qualitative basis. In some respects, this list is a refinement of our own U.S. efforts.

Forms of Protected Areas

Much attention has recently been given to multiple use of protected areas. There has, of course, been some criticism of this concept as a compromise with development. Nevertheless, the wide distributions of most marine species, their variability, and their distribution over time and space according to environmental variables, means that for the sea, multiple use has valuable application.

There are three forms of multiple use, "compatible," "zonal," and "temporal." These are best illustrated by a diagram:



The compatible type involves determining, within a management area which uses are not damaging inter alia. The zonal type separates incompatible uses in space, but great care must be taken to avoid ecologically damaging effects from one area to another. The temporal type is illustrated by the case of migratory species such as whales which may be present in the area for only a portion of the time; for them, certain activities may need to be curtailed only part of the year.

Let us take a controversial example--Georges Bank. Who would deny the need for very careful management over the whole bank? Are we not faced there with a multiple use question of the most challenging nature? Further, is it not obvious that this is an area requiring "special protection status"? The outstanding question becomes: what sort of status shall this be?

Procedural and Management Implications

The need for and use of protected areas is just as important for the sea as for the land. Few realize, in fact, how depleted the seas already are. For every species shown here, over-utilization, habitat destruction, and pollution has severely depleted their populations. This is no time to speak of more of the same sort of incautious development as in the past. Rather, this is the time to call for new approaches and much better environmental management, wherein valuable living resources may be restored to their former values. Nevertheless, overcoming the reluctance in some quarters for their establishment by sea appears to loom as an important impediment. A part of this problem is that too often "sanctuaries" are proposed not as a result of an analysis of resource requirements or as a result of application of criteria, but as a counter measure to some other, usually developmental, action.

A failing of many protected area programs is an overwhelming emphasis on designation processes without appropriate attention to selection processess and careful evolution of management regimes which take both protection and sustainable use into account. Too often, we see nominations without adequate ecological rationale, just as we see development schemes with almost no ecological cognizance. Even worse, those who would develop ecologically sensitive areas often call upon monetarily focused "cost-benefit analyses" that are doomed to fail simply because there are so many values not subject to dollar analyses. It is as if the proponents forgot their Greek, that "economics" is not a monetary term, but means "management of the house"--an entirely ecologic concept from the same etymological base.

Therefore, the first consequence of marine protected area concepts is that ecology and economics are indeed part of the same conservation-development coin. The second is that marine protected areas are essential, but they have their own particular role--that of protecting important space--not to be applied where other measures, already in place, will suffice. For example, pollution abatement is not really a protected area function; downstream effects and ecological links mean that pollution abatement must be applied everywhere. Protection of an area is a special management technique, and is to be applied only as a means to ends that it can meet.

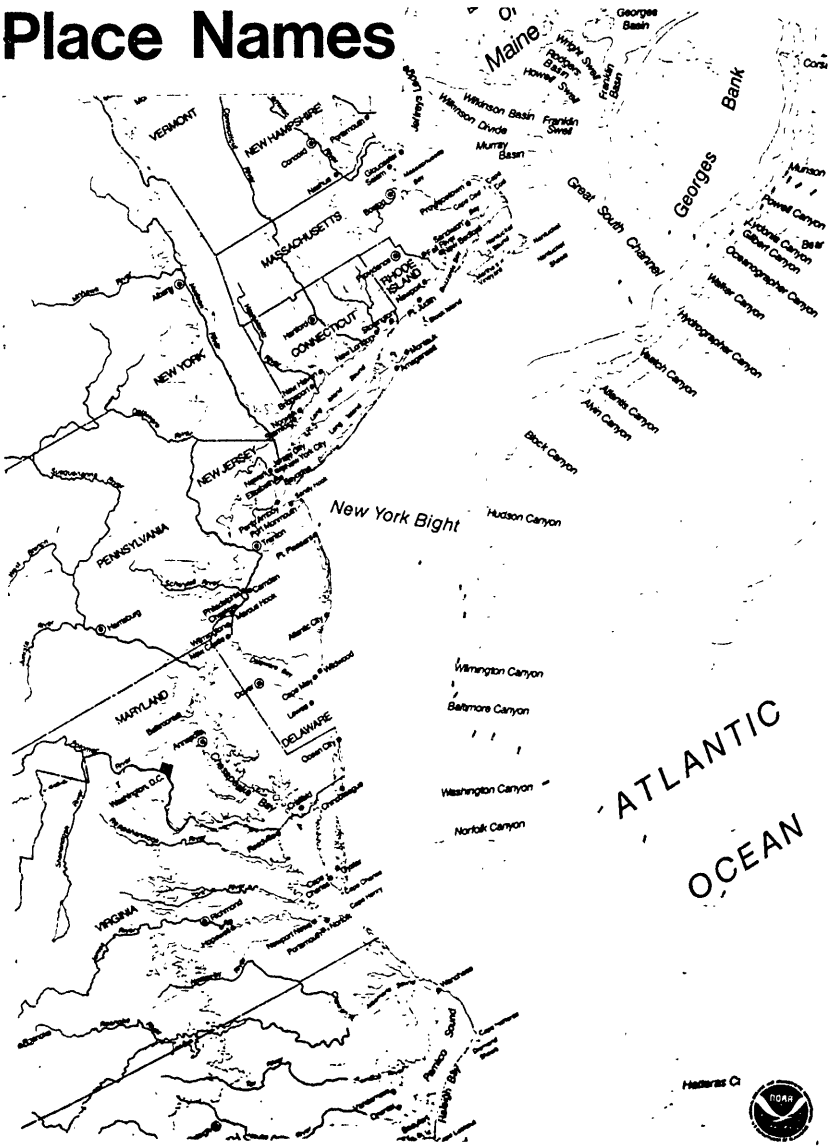
Third, the critical habitat technique needs more application in order to determine priorities for protected area selection. The first level of application should be strategic, as exemplified by the East Coast Project mentioned here. A second, tactical level, should look into specific cases where protected area status appears to be required. In this regard, huge sums have been spent trying to understand the sea and its resources. True, we do not know very much yet about many of man's impacts. But we do know enough to take the first steps in establishing protected management areas--some large and some small--along coasts and in our seas in order to use the knowledge that we already do possess. Such knowledge assures us that productive habitats are already severely depleted, that many species need to recover, that research and monitoring zones are fundamental to our knowledge of the effect of man's actions, and that expanses of undeveloped sea have esthetic values that are as real as they are unmeasurable.

CONCLUSION

The costs will be large for doing nothing or for cancelling the Marine Sanctuary Program. It is very good economics and also good politics to endorse marine protected areas and to establish a more cautionary approach towards development of the already much utilized sea.

The Congress must be impressed by the critical state of many of our most valuable marine living resources. The Marine Sanctuaries Program offers essential tools for recovery and reestablishment of these resources. It also provides for the establishment of sites for research and monitoring of species and their support systems, and to determine the consequences of man's activities and how to resolve resourceuse conflicts. There is no substitute for this Program, as it focuses on geographically-defined marine areas. I strongly support its re-authorization and even its expansion, as a matter of considerable urgency.

Place Names



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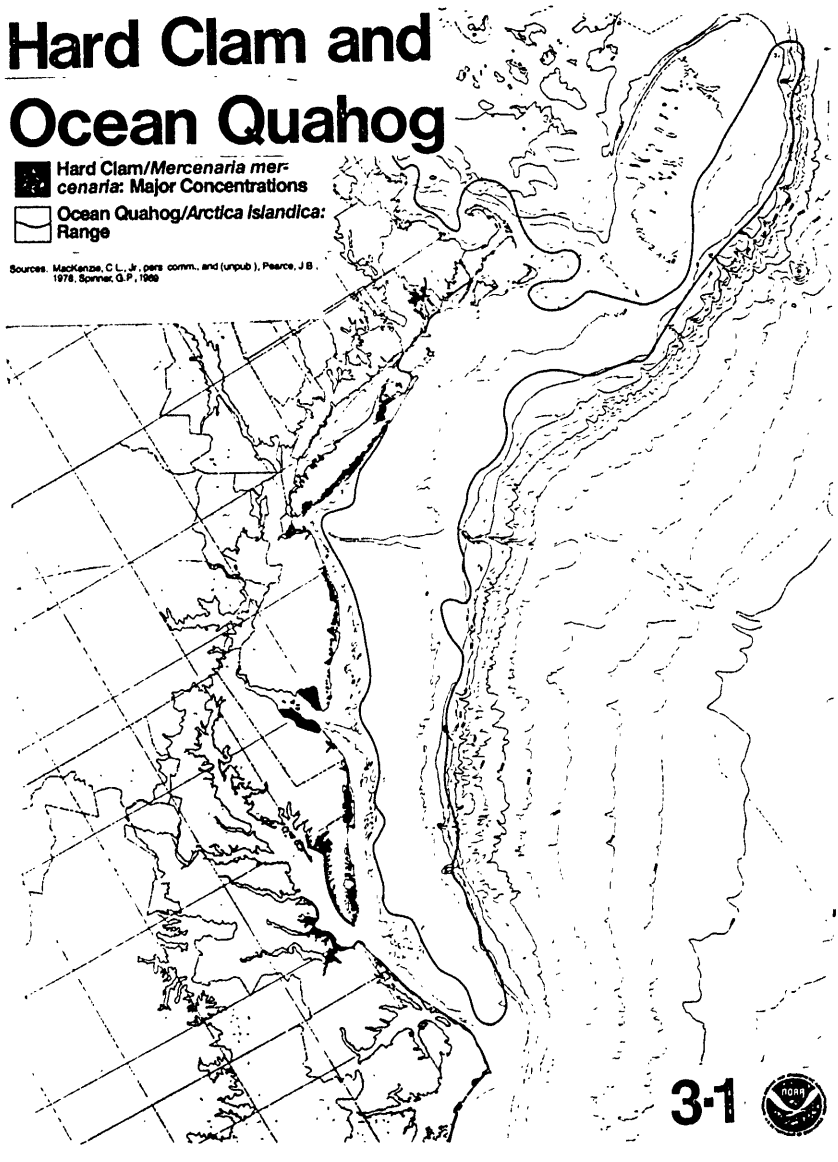

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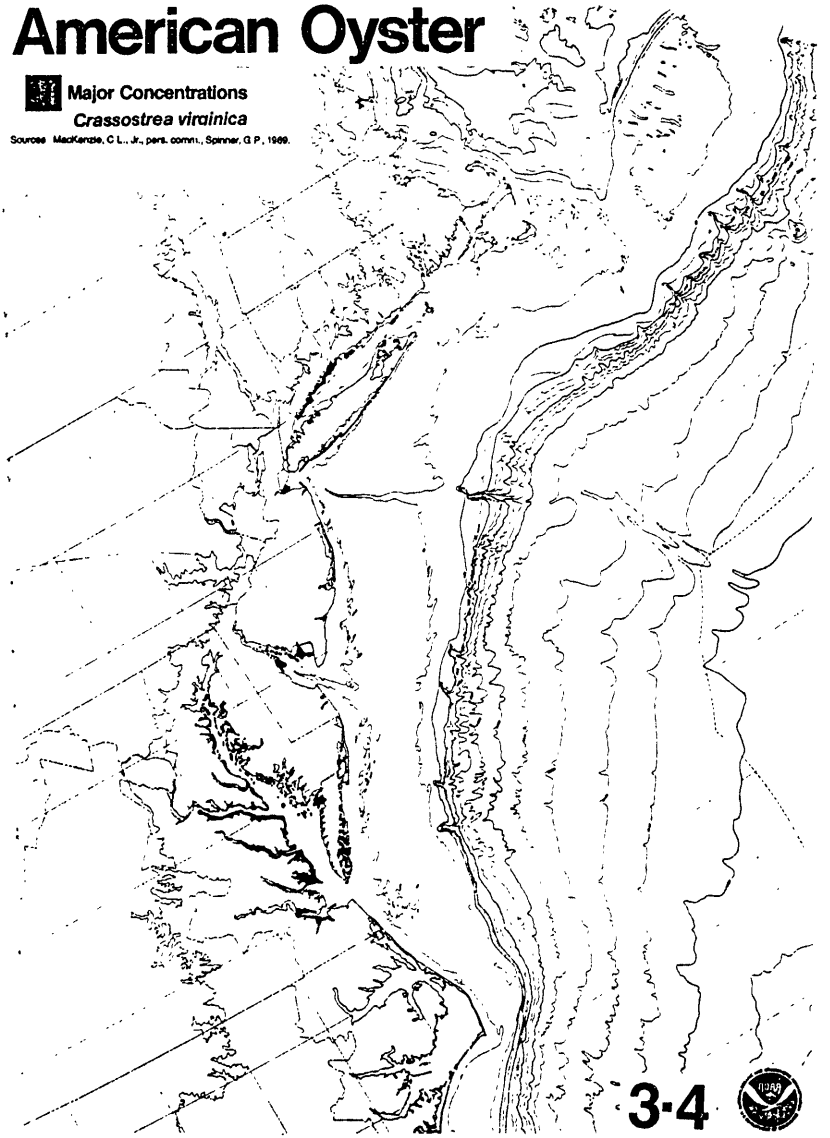

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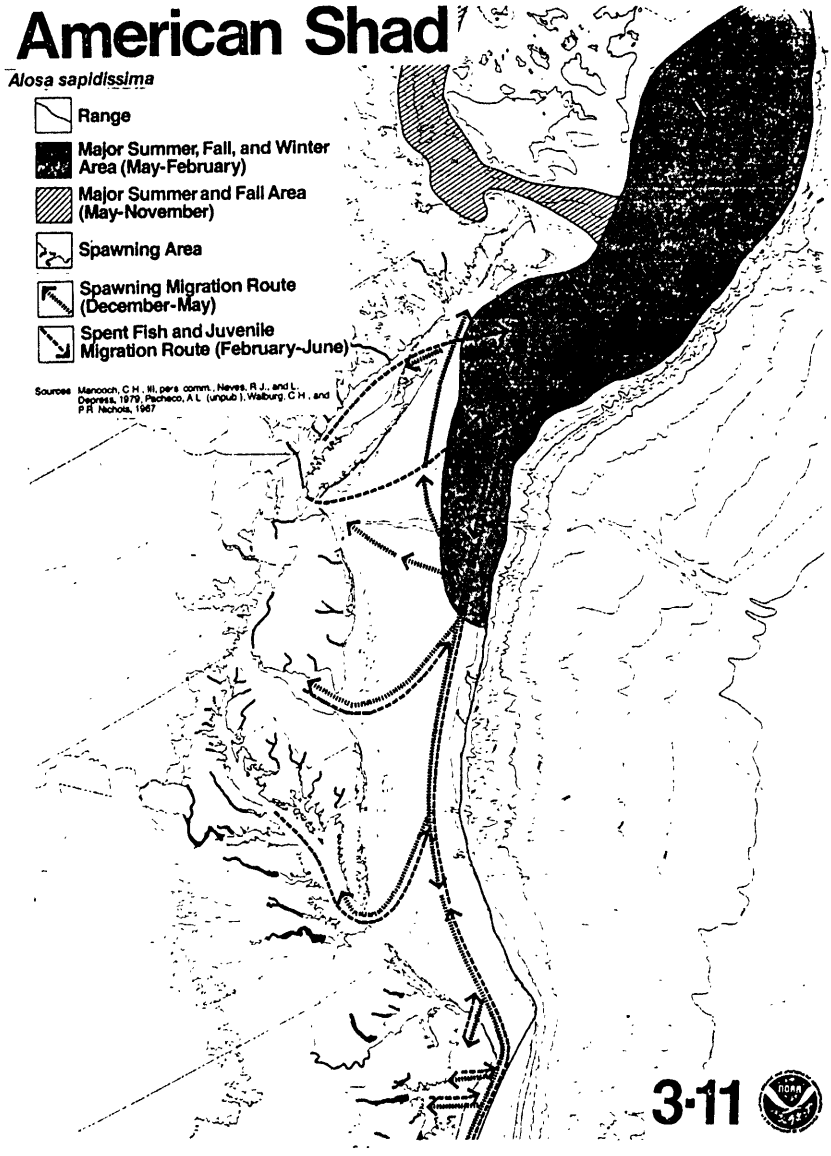

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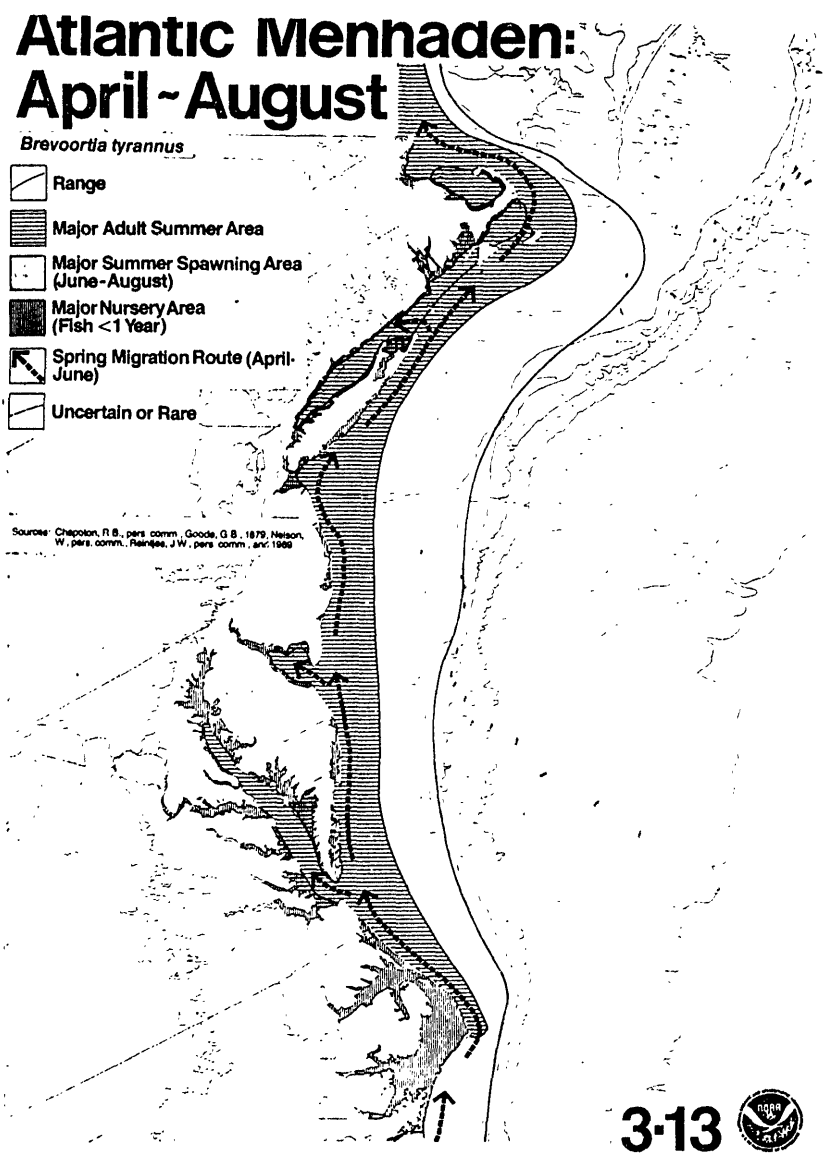

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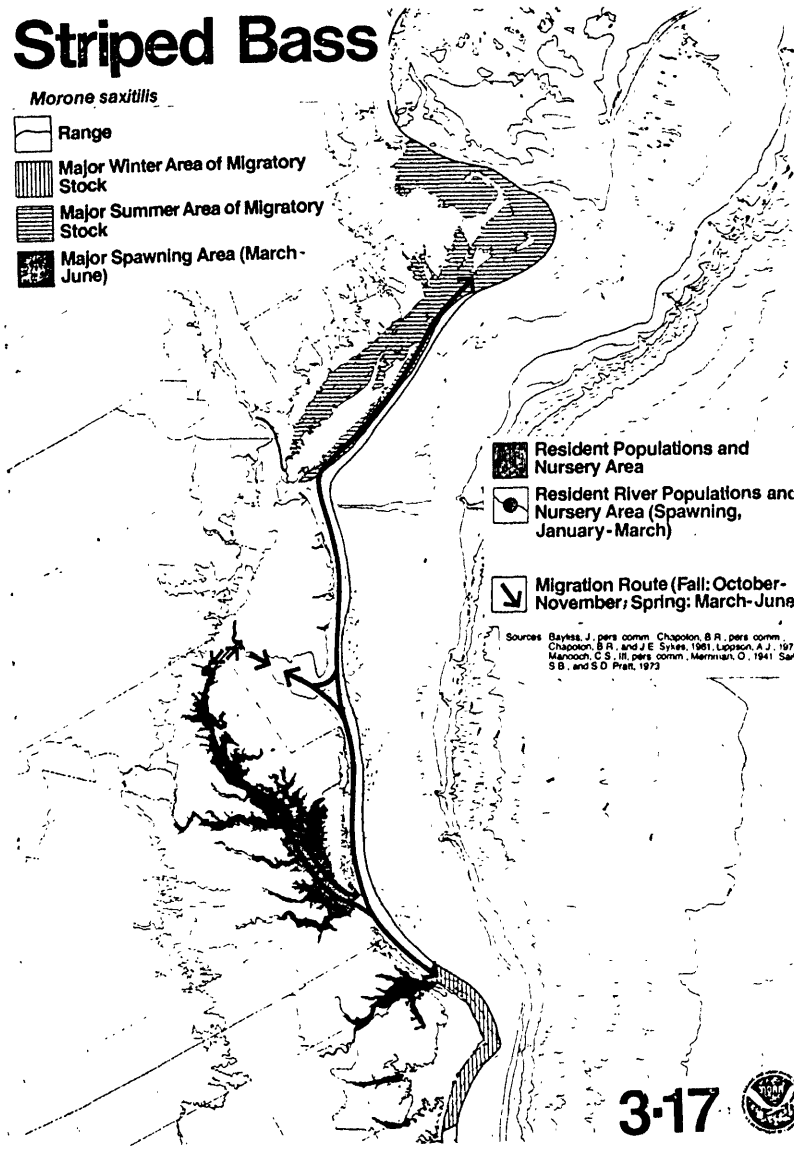

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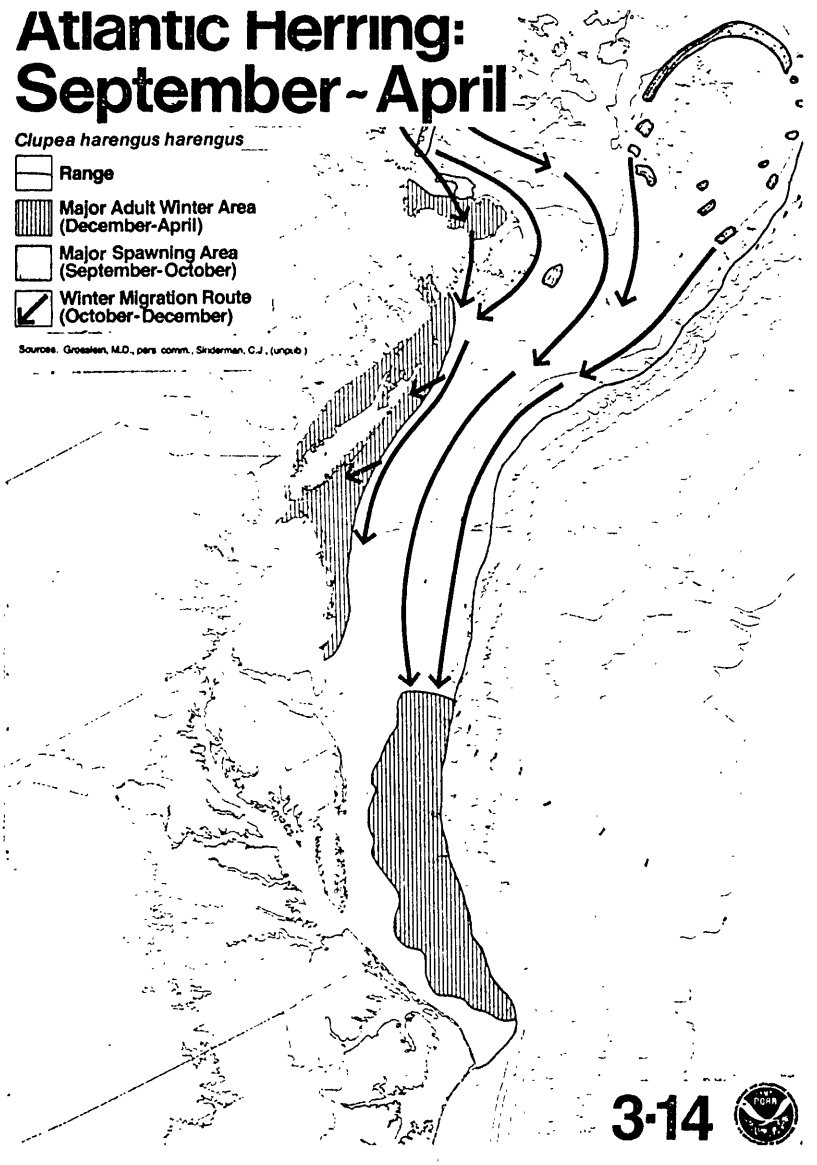

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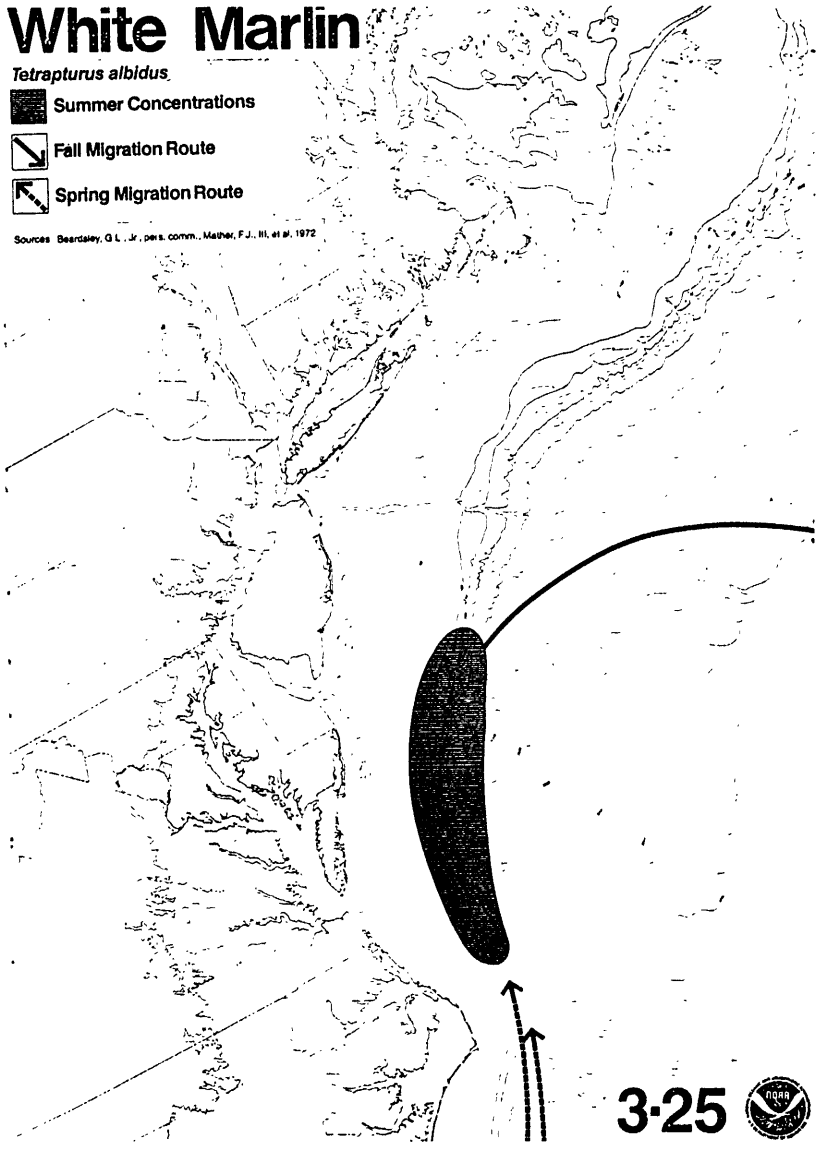

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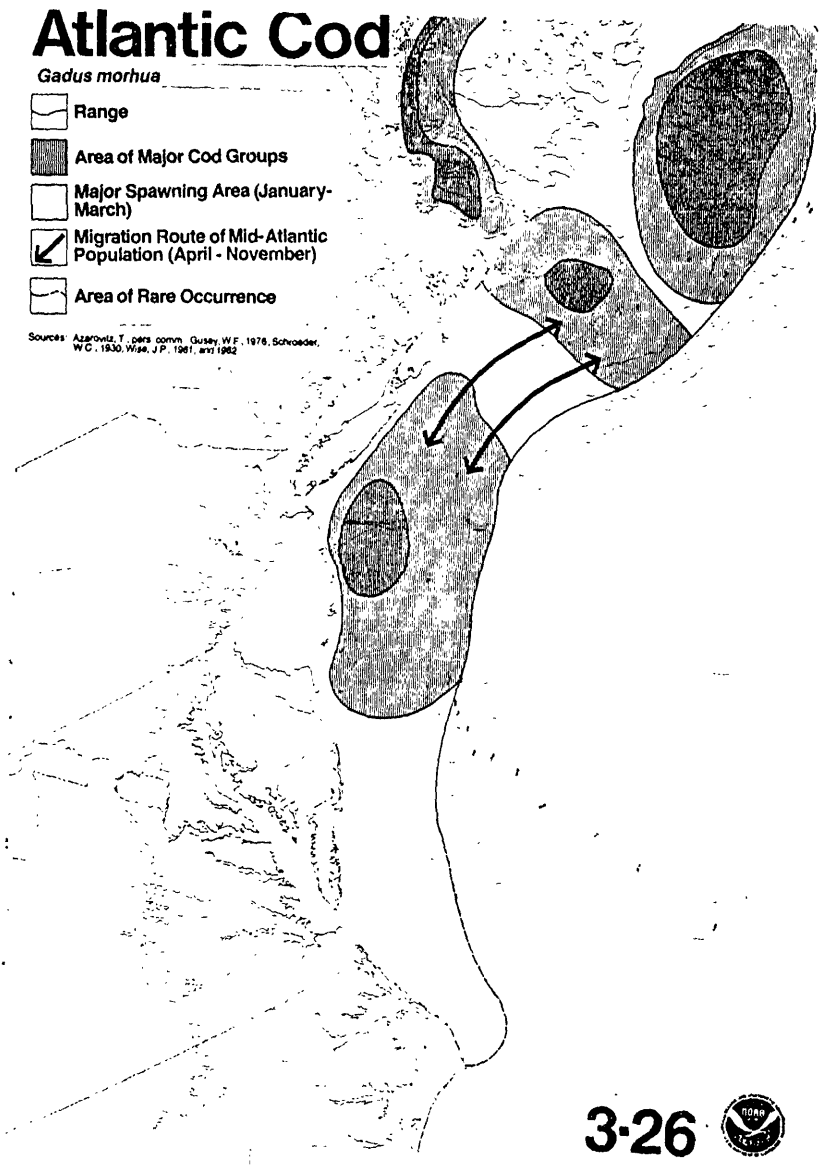

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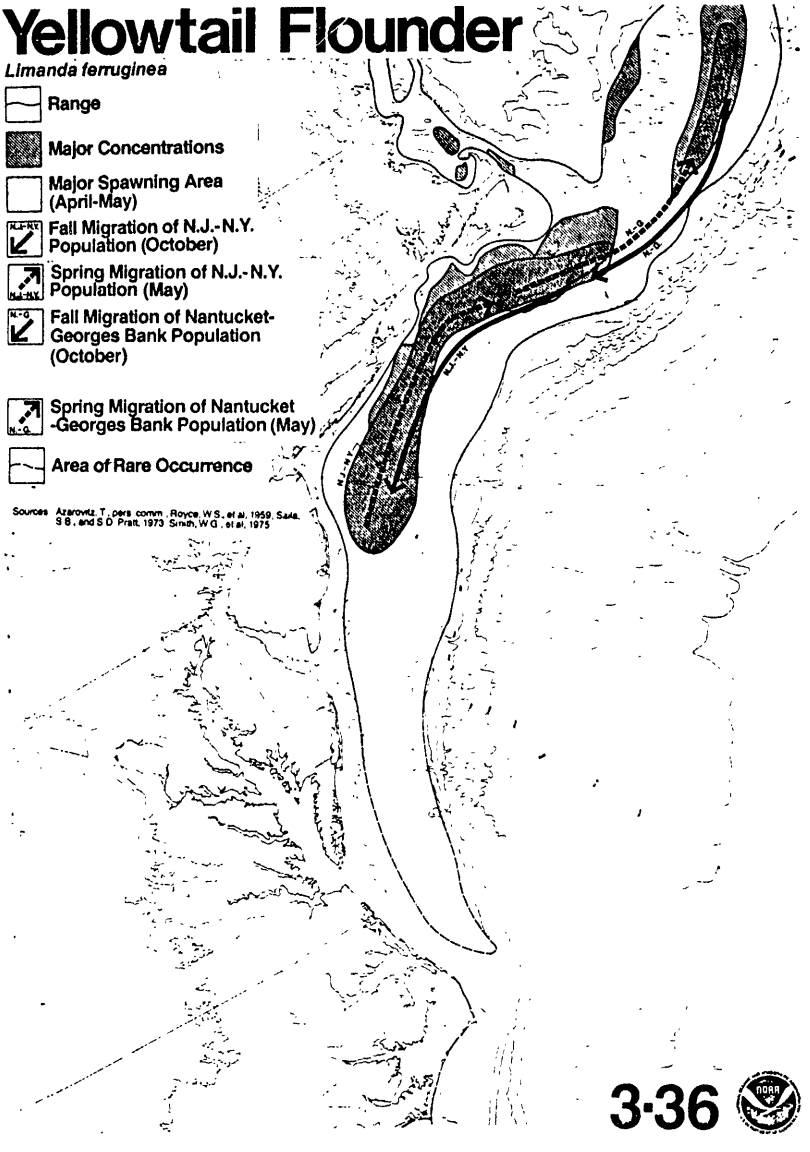
Yellowtail Flounder

Limanda ferruginea



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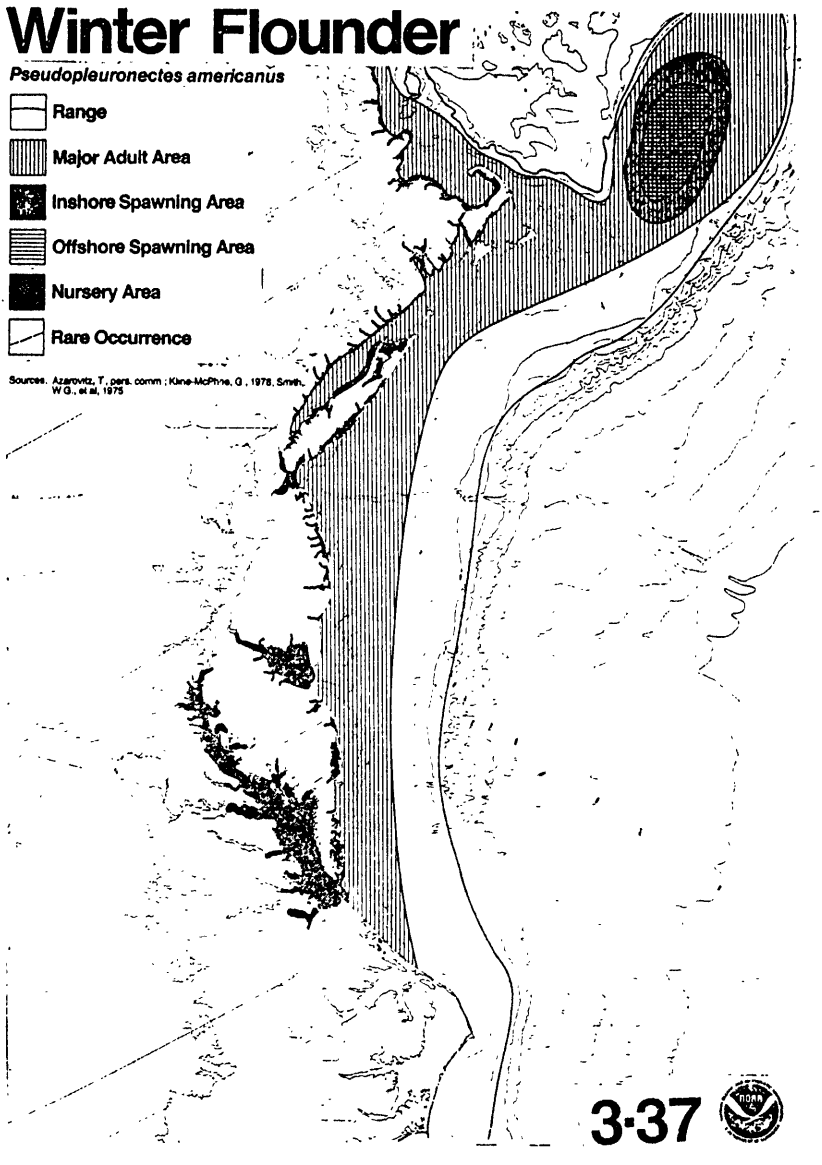

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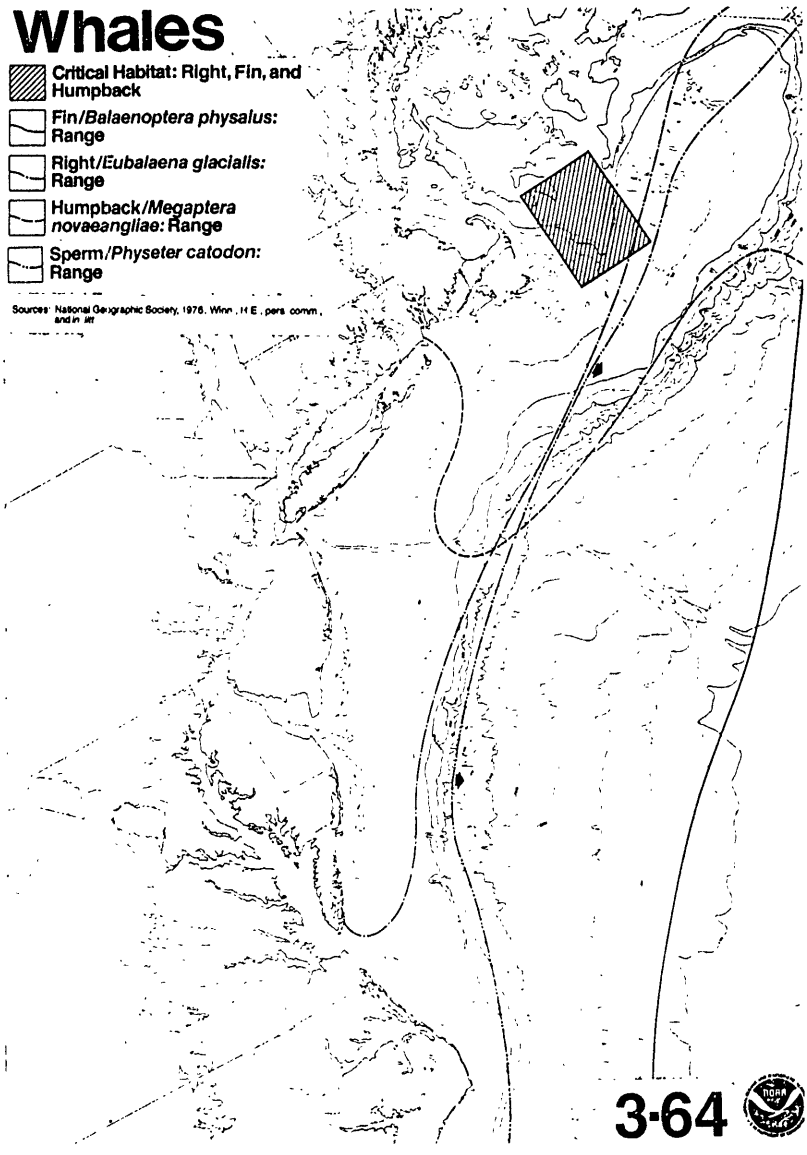

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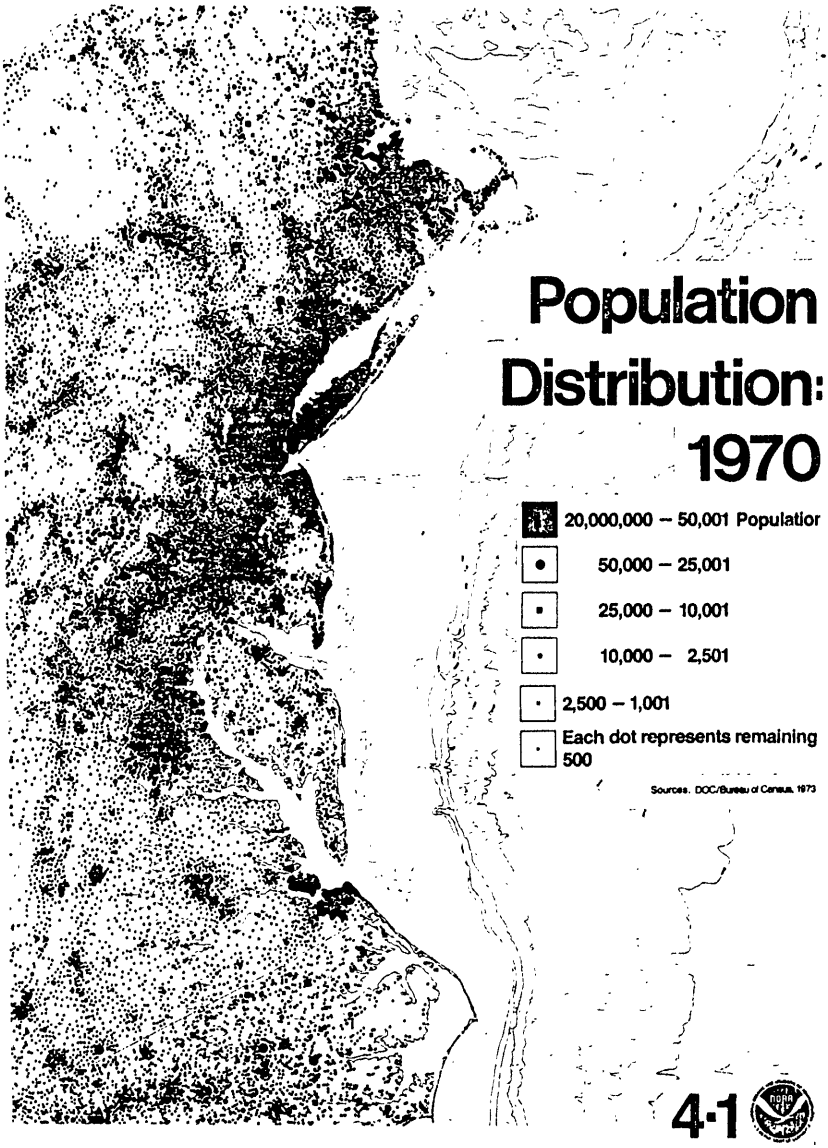

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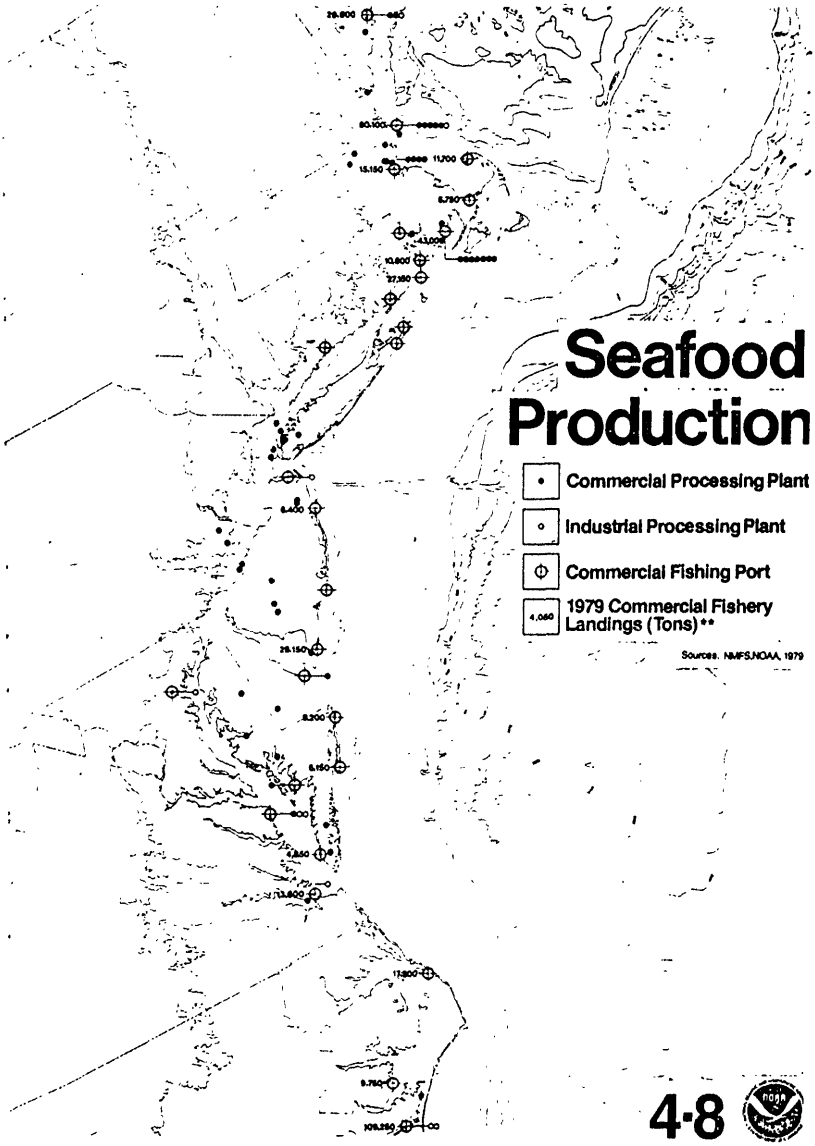

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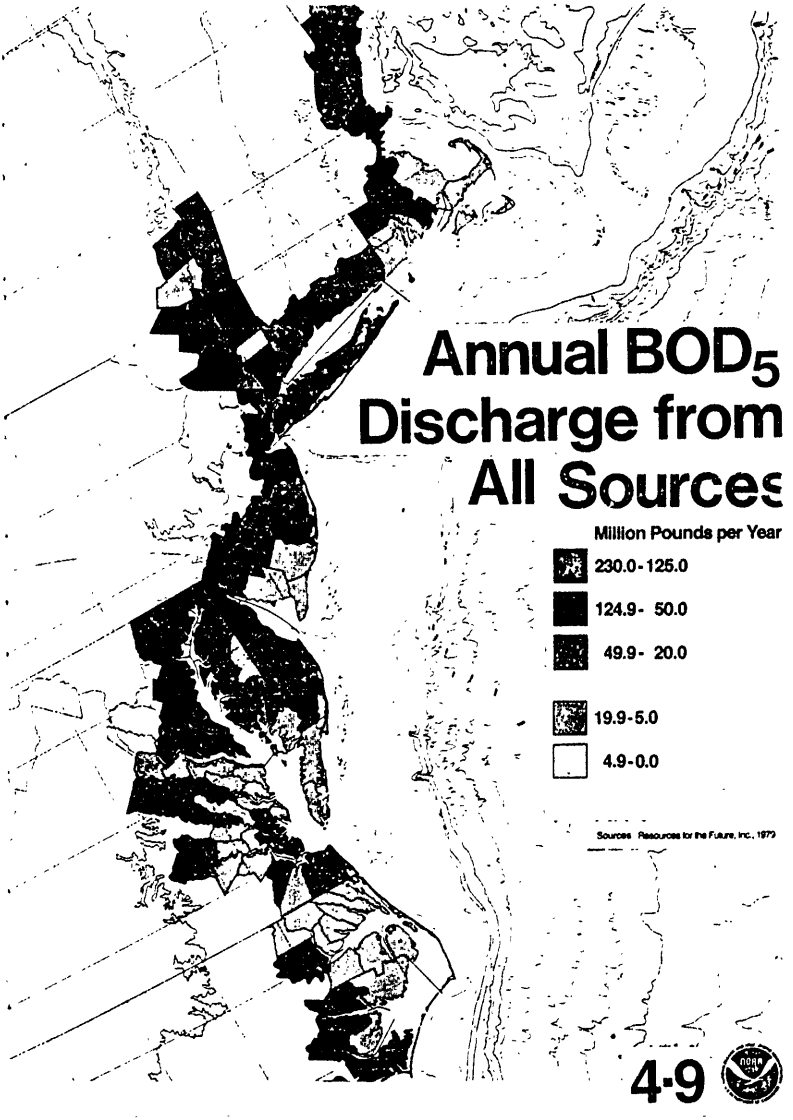

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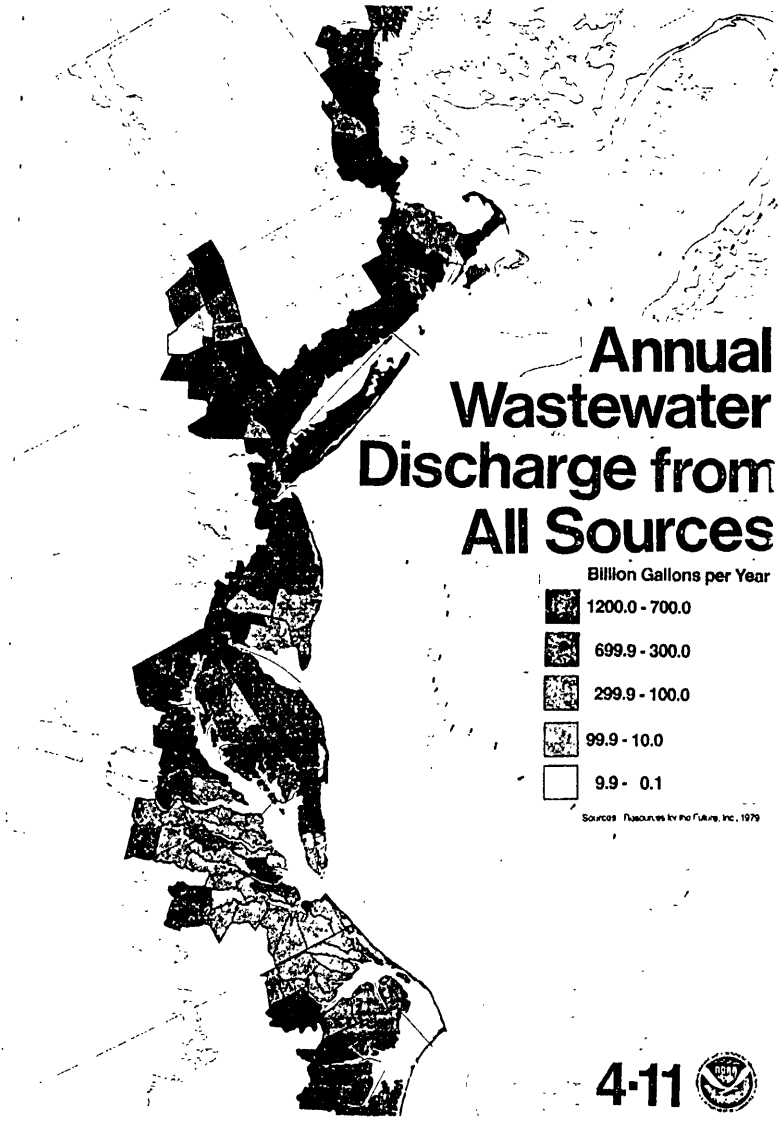

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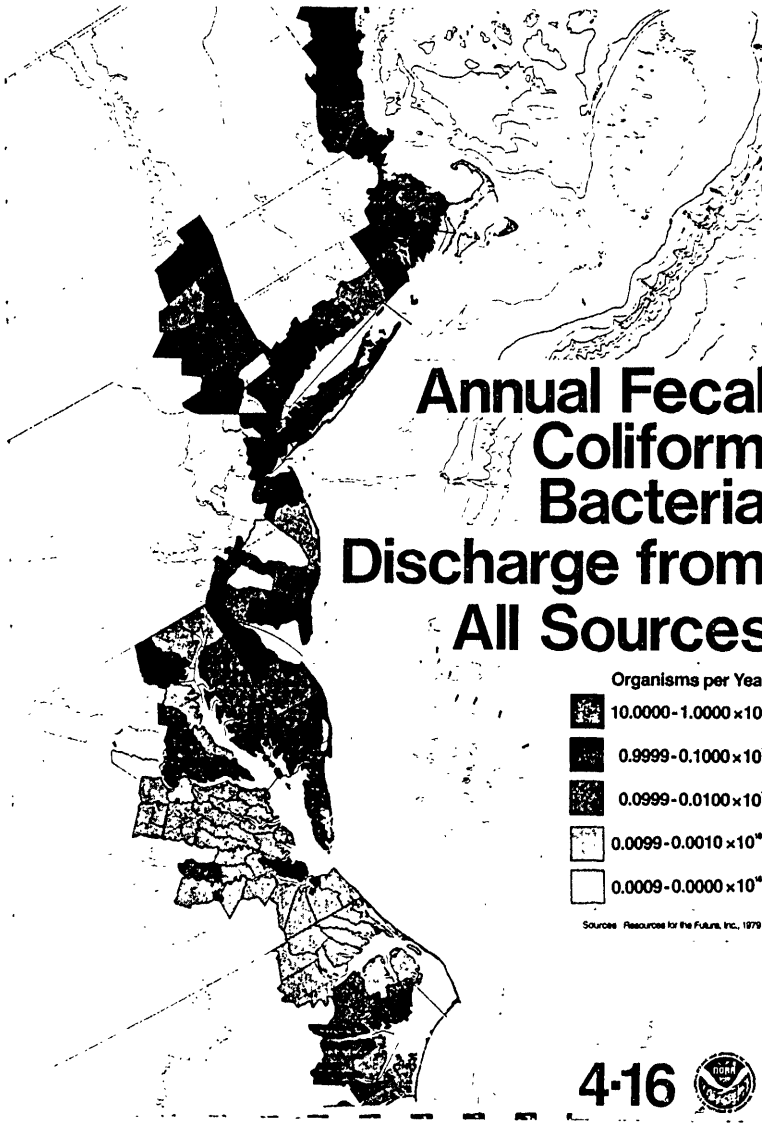

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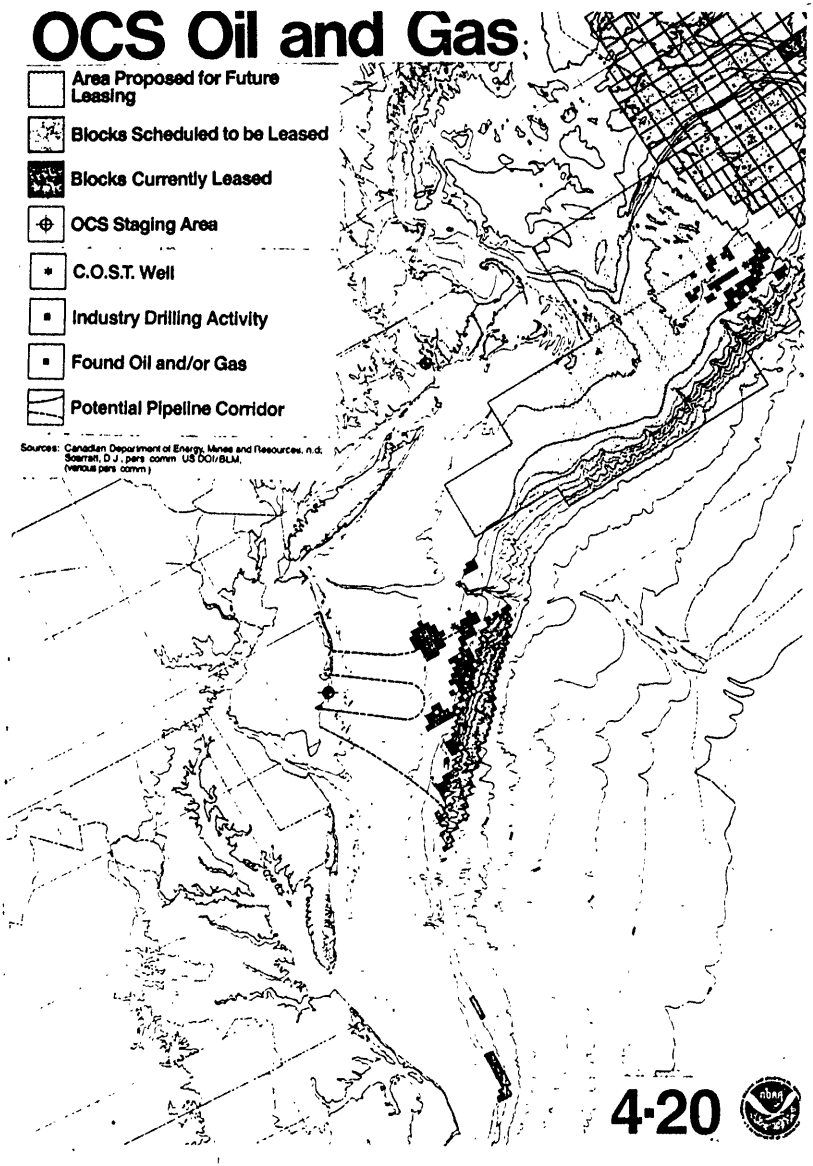

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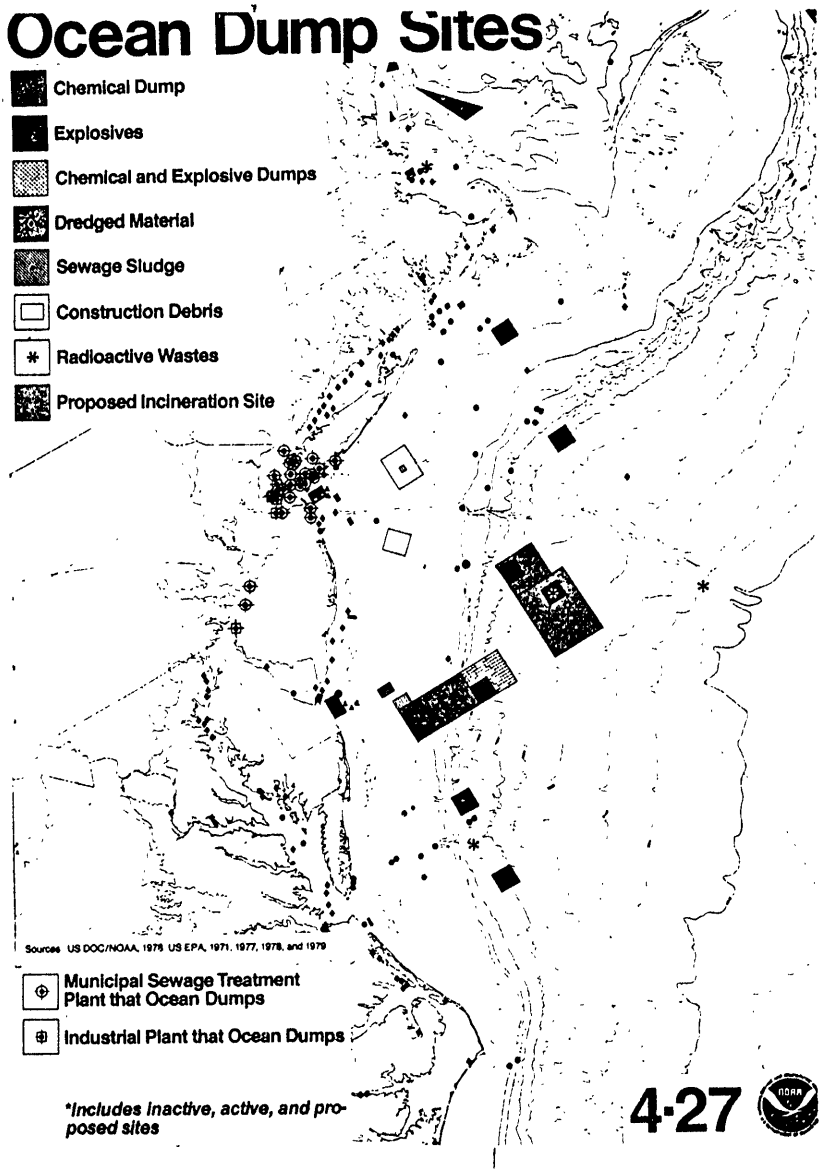

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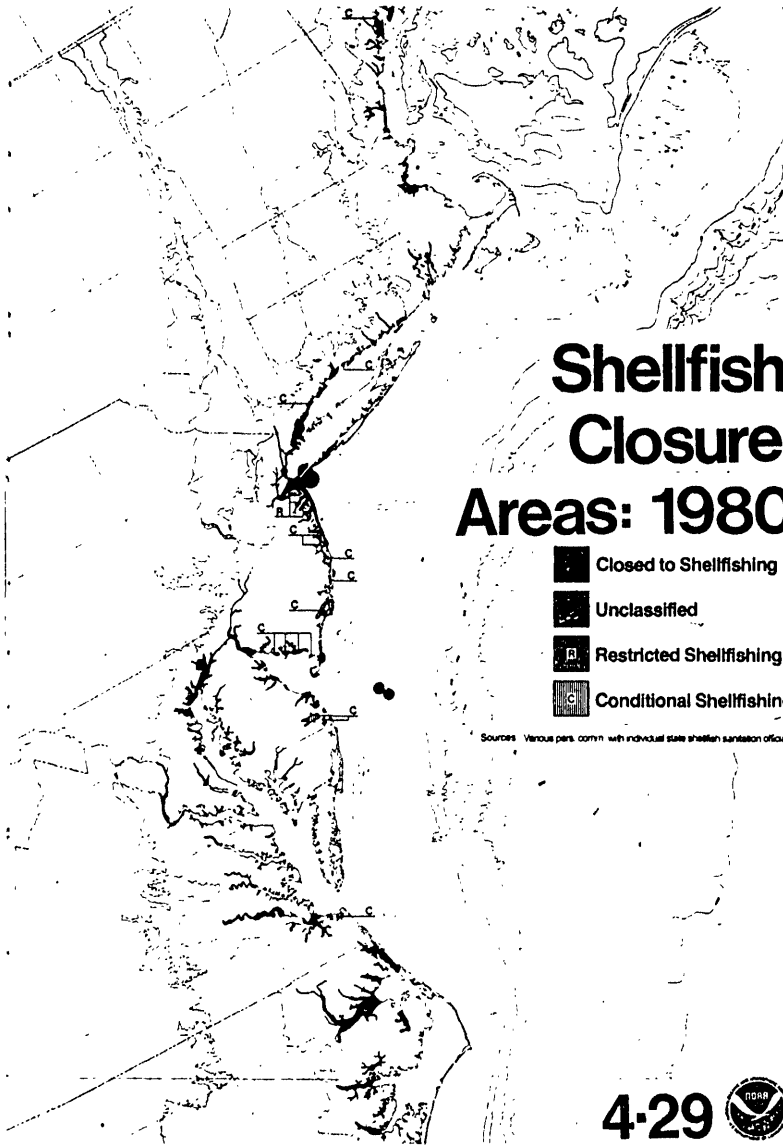

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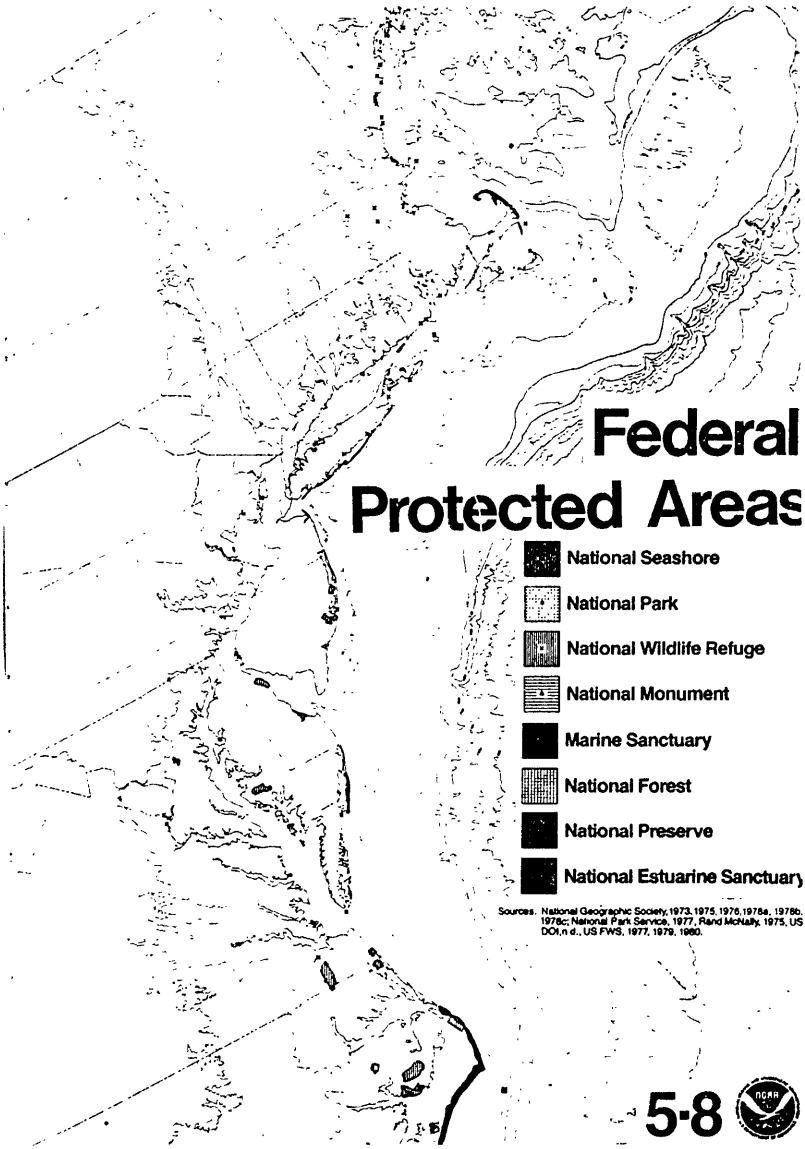

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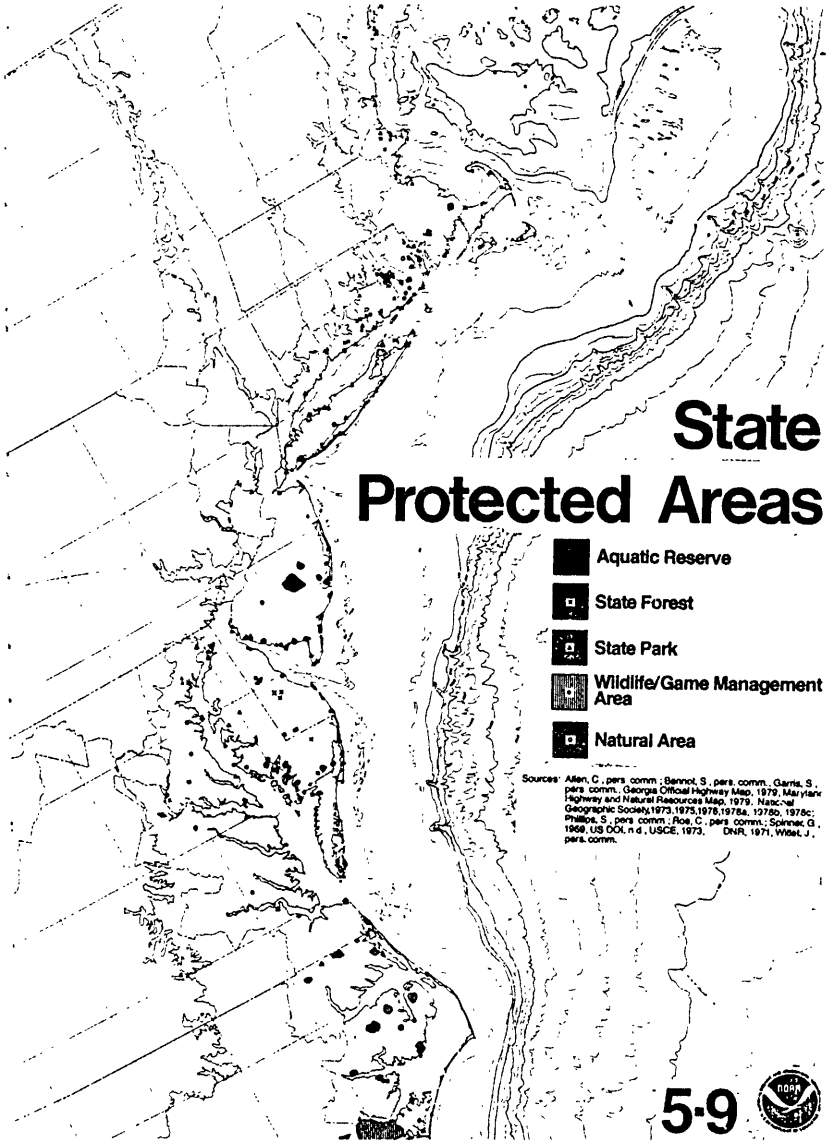

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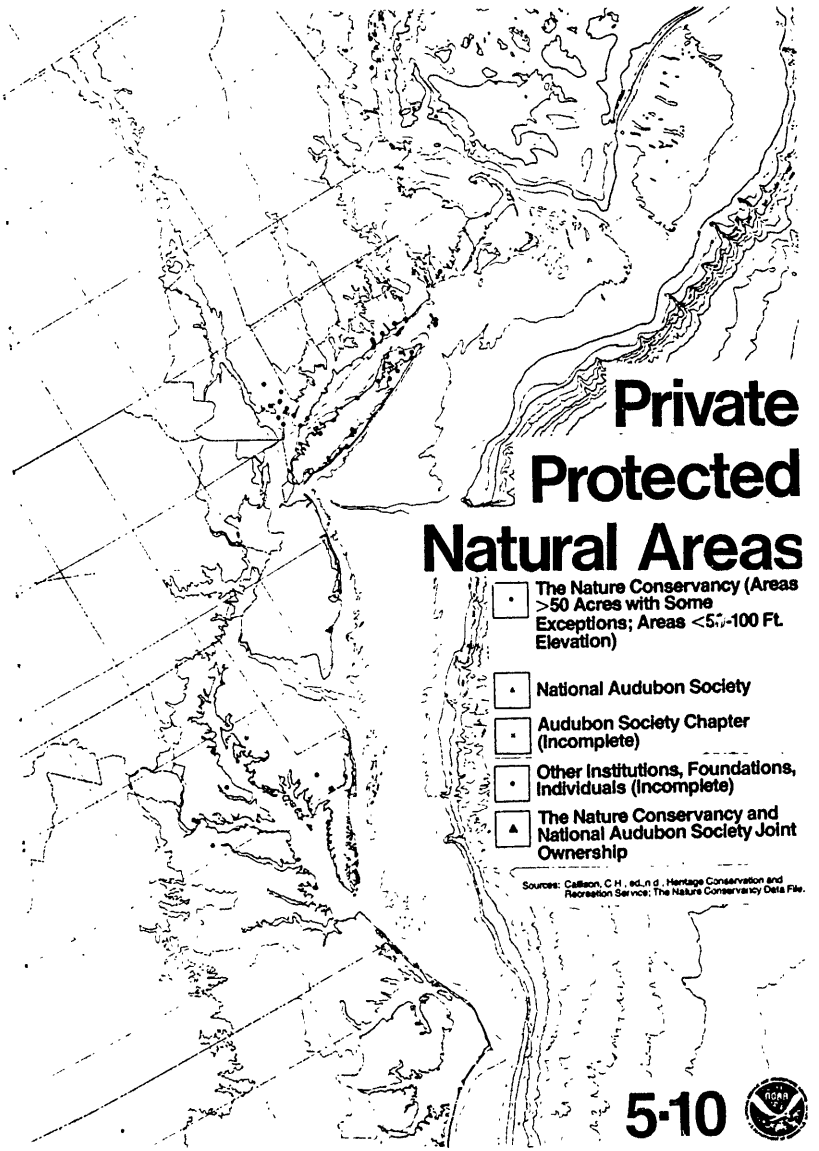

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Mr. D'AMOURS. Thank you.

Dr. Adey.

Dr. ADEY. Mr. Chairman, for about 22 years I have been a marine scientist, roughly 8 of those, a geologist and the rest as a biologist.

I have operated my own vessels for quite a few years and have worked from the tropics to the arctic in the North Atlantic. In the last few years at the Smithsonian Institution I have been in the process of developing living marine systems in closed tanks. (Perhaps some of you have seen our living coral reef in recent months.) I am a rather hands on kind of marine researcher. and a good part of my time is spent in the field, perhaps half of it in the last 22 years.

There is probably no scientist that chafes more at regulation than I. In a odd sort of way I think the activities I have been working on provide even greater logistic difficulties than the oil companies face in having to carry out their work at sea.

In spite of that, I would like to support the sanctuaries program in the strongest kind of way.

Early on in the testimony there seemed to be some feeling by the witnesses that, after all, the sanctuaries program has become more limited in recent years. Since it has been cut back, and its conflicts with other activities have became more limited, it is all right, let it continue.

I think the scantuary programs, both marine and estuarine, need to be greatly expanded, not cut back at all.

Rather than read my testimony, let me run through rather quickly what I think the important points are.

I am going to repeat what has been said before me, especially among the last two groups of witnesses, as to some of the difficulties of working with the ocean. When you go to sea, particularly when you stay there for several weeks and wind up in a storm, it is easy to feel that the ocean is something none of us can affect. It is beyond us. We certainly do not need to worry about our affects on the ocean. We know now that is not true at all.

But even more important, that is particularly not true of the coastal areas. Of the vast majority of the marine area that is spread over 70 percent of the Earth much of the marine biota is concentrated in a very narrow portion of the ocean that is our coastline. The marine biota is jammed into an area a good deal smaller than what exists on the continent, and it is the most accessible area to human activity.

Two centuries ago, when the central part of our continent was a remote and unknown area, a wilderness, our coast areas were being heavily used. Of course that is more so today. Some of you perhaps saw the National Geographic special last night on TV which covered our national parks. The establishment of those parks, began almost a century ago. Yet today we have no really equivalent park areas along our coastline. This is not only most unfortunate, it is very dangerous for all of us.

Another aspect that we have been talking about along the way is the problem of conflict between competing interests. I would like to come back to the obvious conflict with the oil and gas industry. I do not think there needs to be a conflict at all. I do not think there

is any need, with perhaps a few exceptions, for sanctuaries to be established in areas where oil and gas development is under way.

But another area that has come up previously which is associated with what we are talking about is biological resources. Most fishermen who think about this problem at all realize very well their catch effectiveness has been going down for years. It is taking more and more effort to come up with the same harvest. Fishermen, as a whole, will support this program in the strongest sort of way. Given a minimal amount of education, that support will be forthcoming.

Another point we have heard over and over again is the matter of how we look at our environment. At this point, I think we get to the real problem in preexisting legislation that supposedly overlaps so heavily with the sanctuary legislation and that we have repeatedly heard at this table.

All agree that we need to be looking at our coastal areas and ecosystem, as a broad reflection of the biota. We cannot look at individual organisms. We cannot look at a whale species, a particular fish, or we will not understand the process of management of what is going on in the system or the biological community as a whole.

We can protect a particular fish, but no matter how carefully we work at it, if we do not manage our environment, our biological community and our ecosystem, as well, we will not truly protect the biota.

What we are looking at along our coastline as a whole is a set of rather discreet regions, as they are called in the literature. These are called biogeographic regions in which because of the pattern of climate over the last several million years, organisms have evolved in rather distinct packets. While we might get some argument just where these packets are, that is precisely where the boundary lines are, most marine researchers would agree on the nature of those packets.

What I think we should be concerned with in the sanctuaries program is protection and management of those biogeographic packets.

There is a subarctic region in the North Atlantic which extends north from Cape Ann in Massachusetts. Some researches might drop it down to Cape Cod.

If what we really want to do is preserve that subarctic biota and the ecosystem involved and to provide research that will help the management of that biota, what we are interested in is preservation and management of sanctuaries within the area of the subarctic biologic region.

There is no reason to pick particular areas for sanctuaries. There are many areas, many zones, if you will, that could be set aside within the subarctic region to perform the function of preserving of the biota.

If, for example, there was any drilling, any other coastal economic development in that region, there is probably no reason for an overlap. I think that this is what we really need to do, to put our heads together, industry, scientists, and environmentalists alike, to work out how we should set up sanctuaries.

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We should not even think of stopping and limiting the sanctuary program in any way because of potential conflicts of use exist. We are very late already in the process of setting up these sanctuaries. We cannot go back.

Let me summarize.

The marine and estuarine sanctuary programs are badly needed to manage our coastal biota and communities in a regional sense. There is no other existing legislation capable of handling this need, and the sanctuaries program as written, is particularly suitable because of the inclusion of research and public education components.

Thank you very much.

[The following statement was submitted for the record:]

STATEMENT BY WALTER H. ADEY, DIRECTOR, MARINE SYSTEMS LABORATORY, SMITHSONIAN INSTITUTION

The marine and estuarine sanctuary programs were established to designate specific coastal areas where a balance in man's multiple uses of coastal environments could be managed and the biotic communities therein protected from specific excesses that would destroy general utility. Inherent in the concept was management for esthetic and recreational usage, as well as the development of programs of research and education which would lead to greater understanding of biological community function.

This is a time of necessary belt tightening, and it is becoming increasingly difficult to develop trade-offs between esthetic and recreational needs and the more utilitarian requirements for energy production, productivity increase, and economic stability. The esthetic and recreational needs of our population are important. However, this provision in the sanctuary regulations was only a facet of the sanctuary concept. I would like to emphasize the extremely critical need for the sancturay programs with regard to future development of the biological resources of the ocean. It would be disastrous indeed if we were to lose our sanctuary programs as a result of the on-going retrenchment. This coastal management process will have far more bearing on our future ability to successfully produce feeded food, fuel and other resources from the ocean on a long-term basis, while at the same time preserving coastal biological communities, than all of the previously existing protective and management measures combined. If we lose these programs now, critical decades will likely elapse before they are most certainly reinstated.

It is clear that we are going to have to rely increasingly and in a more sophisticated way on the resources of the ocean. As terrestrial agriculture was developed from hunting-gathering millenia ago, so will we have to develop the techniques of aquaculture, not just for food, but for a wide variety of natural products and perhaps even for biomass energy. The success of this process will lean very heavily on our ability to manipulate the available genetic pools in existing organisms both in the classic sense of improvement through breeding and undoubtedly also in the newer genetic engineering sense. Protection of the existing marine biota is essential if we are to depend upon the ocean for our future needs.

As we all know, the oceans are enormous, 70 percent of the earth's surface, and anyone who has spent days or weeks out of sight of land on a storm-tossed sea may find it incredulous that human activities can ever be more than a streak of flotsam. However, in a wide variety of ways we are beginning to see that even the open ocean is beginning to feel the effects of our activities. More important, the vast majority of our marine biota lives along a very narrow stretch of coastline and shelf. These often highly productive areas are also those most easily and drastically affected by our activities.

The environmental movement, not without some justification, has tended to operate with a disaster scenario—the last chance to save a nearly extinct species or a patch of woodland. However, I am very concerned that this scenario and the inevitable conflict with those who feel more direct concern with economic and developmental issues is ultimately more dangerous to the ocean's biota, and therefore to our human population, than the industrial use of disputed sites or perhaps even the loss of some species due to development.

It is easy for us to identify directly with some larger organisms—marine mammals, for example—or the harvest organism of a fishery. Aslo, it is easy to identify with particular sites in an esthetic or recreational way, particularly if they are in

our own back yard. However, organisms do not live in a vacuum. They carry out their activities in biological communities in a functioning ecosystem. Indeed, particularly in the marine realm, it is at best difficult and usually impossible to keep an organism separate from its ecology. In our concern for, and our intense focus on, saving particularly interesting organisms and sites, it may very well be that we are jeopardizing the continued existence of whole biological communities.

Kelp is hardly endangered when overgrazed by an urchin explosion resulting from excessive lobster harvest. And yet, in such a case overall community productivity (and our potential harvest) would be lowered and numerous secondary species relying on the kelp in a variety of ways may very well be lost. Also, who is going to worry about a 2 mm-long amphipod, and yet without this creature, small filamentous algae would win in the space struggle against the larger macro algae. Yet, it is these larger algae that provide complex organic chemistries that our pharmaceutical industry finds so interesting. In this case, rather than being concerned directly with the lobster, which we harvest, or with the seal that swims around the kelp feeding on the fish fauna, or even with the kelp, we need to think of the entire community, its environment, and the unit as a functioning ecosystem.

Protecting reef communities on our shorelines is an extremely important task for the sanctuary programs, and we should be certain that within our tropical shorelines a selection of the best reefs are securely managed. In this regard, and in an esthetic and recreational sense, the Flower Gardens reef perhaps needs some attention. However, does it make sense to invest so much of our time and energy fighting to save a particular northernmost reef outpost when some of the finest reefs in the Caribbean on American territory in the Virgin Islands remain unprotected? In this case, those who are directly concerned with protection of this isolated site should perhaps be working directly with BLM authorities who have the responsibility for environmental management in this case. Sanctuaries protection and management should be applied only if such an area is regarded as critical in a broad regional sense.

The coastal and shelf waters of the United States can be divided up into about a dozen biogeographic regions.

These are more or less concise areas of characteristic water climate that have existed for at least several million years and have developed a distinctive biota. Their definition has both a theoretical and an empirical basis. Although perhaps a dozen major habitats exist within most of these biogeographic regions, many habitats could be more or less easily included in sanctuaries of 10-50 square miles. Some dispute among scientists would exist as to how large sanctuary areas should be and how many should occur within each region so as to maximize species diversity. However, theory relating species diversity to area does exist and further research can certainly be carried out in this field. It is likely that reasonable agreement could be obtained on this matter and that the vast majority of our coastal ecosystems, communities and biotas could be protected by rationally established sanctuaries. In most cases major conflict among competing interests over sanctuary establishment need not exist. Of numerous possible sites within regions, only a moderate number would need designation. Rarely would a specific site needed for development also be the only possible sanctuary site.

In summary, the marine and estuarine sanctuary programs are badly needed to manage our coastal biota and communities in a regional sense. There is no other existing legislation capable of handling this need, and the sanctuaries program as written is particularly suitable because of the inclusion of research and public education components. Because of the intense conflict between the uses to which specific sites can be put, we are perhaps in danger of losing the program. It would be better to let the war between esthetic and recreational needs and economic needs be fought on another doorstep and to leave the sanctuaries program to proceed with a process that is unquestionably needed by all of us.

Mr. D'AMOURS. Thank you very much Dr. Adey.

I have a few questions for the panel, and perhaps Mr. Carney does also.

In view of the hour, I will try to be briefer than I think I would otherwise be.

Dr. Adey, Dr. Ray, and Dr. Earle have stressed the possibility of resolving or eliminating conflict between the producing interest and the people more concerned with the environmental quality of the ecosystem.

What would you have done in the Georges Bank area to resolve the conflict or what would you have done in these other west coast areas to resolve the conflict?

Dr. ADEY. You seem to be looking at me.

Mr. D'AMOURS. Either of you, or perhaps all of you.

Dr. ADEY. Since my concentration in the last several years has been with reefs in the tropics, let me speak to that particular case and not talk about the Georges Bank situation, which I don't know nearly so well.

There are a number of American territories that possess well-developed reef communities; the Flower Gardens reef is a northernmost outpost of reefs, and if we are interested in preservation of the "first-class" reef ecosystem, we shouldn't be looking at the Flower Gardens Bank at all.

In the Virgin Islands on the island of St. Croix, we have one of the best developed reefs in the world. A very small part of that reef is a national park. The vast majority is not protected. It is on private land and there is a great potential in the not-too-distant future for shore development and reef degradation.

I think we have been wasting our time in fighting over the Flower Gardens. In terms of the sanctuary program which ought to be in the process of preserving communities and the ecosystems in a regional sort of way. The Flower Gardens is a local problem. It is a problem of the people of the State of Texas, who should be working with the existing legislation relating to the Bureau of Land Management. The sanctuaries program should be working with the major reefs. The management and protection of which will be so much more important to the tropical reef biota.

Mr. D'AMOURS. What happens when the oil industry wants to drill precisely in the same place?

Dr. ADEY. The oil industry will never be drilling on St. Croix. That will not be a conflict, and the sanctuaries program had better be protecting these reefs and leave the oil industry and the BLM in Texas to look at the Flower Gardens as a recreational facility in need of protection.

Mr. D'AMOURS. Dr. Earle, do you want to contribute anything?

Dr. EARLE. I think in the near future, there will be new technology that will alleviate some of the concerns that are presently in the minds of the likes of me about the problems that are involved with drilling for offshore oil.

Mr. D'AMOURS. It is a question, as Dr. Ray pointed out, of prioritizing this and going ahead with the sanctuaries. Then when and if technology develops, more advanced technology, will provide us with relative security, if not total security.

Is that what you are saying?

Dr. EARLE. In areas where we know so little, my tendency is to proceed with caution. It seems likely that we will find more environmentally sound methods for recovering oil from the sea in the near future than is presently possible. Given existing techniques, we should perhaps consider different kinds of protected areas.

Critical areas that may be especially sensitive to the effects of offshore oil drilling operations should be fully protected. Less sensitive areas may be designated as "protected" but with drilling operations allowed. Precedent exists on the land in terms of critical

wilderness areas, national parks, and managed national forests. Different levels of protection are involved.

Mr. D'AMOURS. Thank you.

Dr. Ray, do you want to add any comments in that area? You have already covered much in your testimony, but I am offering you the opportunity, if you want.

Dr. RAY. You asked a rough question. All of us have our own points of view.

One point of view that I don't care too much for is the strategy that we chose between, for example two reefs; let them have one and we will have the other. I don't quite go along with that, for the simple reason that the areas are not equivalent.

On the other hand, I wouldn't suggest protecting them all. I am firmly convinced with the right kind of safeguards and with due caution, we can have our cake and partially eat it, at least.

There may be places where development is totally inappropriate. The vast majority of areas can be developed by taking a little more care, having a little more knowledge.

In Georges Bank particularly, I think that problem is resolvable. I don't think oil and gas is the chief whipping boy. I think overfishing, particularly dredging, has been more damaging and will continue to be so for Georges Bank than oil and gas development.

Mr. D'AMOURS. Thank you.

Dr. Adey, when you were talking—and I know you covered this in more detail—in the subarctic, that is essentially what you were selecting; that we do pick and choose among areas, protect some totally and let others go to drawing activity?

Dr. ADEY. The coast of the United States, including all habitats, could be reasonable and rationally divided into about 8 to 12 regions. You would then have something on the order of a dozen major habitats in each region.

In any major site, you could include some of the habitats on a single site. There is some dispute about the size an area has to be to keep species numbers up. I think what we are talking about is for the Maine coast of the North Atlantic subarctic, perhaps two or three sanctuaries on the order of 10, 20, 30 square miles.

This is off the top of my head, but it would probably preserve the major part of the biota. In most cases, there are many sites, perhaps 50, 60 or even 100 sites on the main coast from which 6 or 8 could be chosen that would accomplish that. No one site or two sites are likely to be critical.

I hope I haven't carried this to the point where there is the feeling that I think a recreational site or a site that is important esthetically, or even a site that happens to have a particular breeding of population of the gannet, for example, needs to be thrown away. I am not saying that at all.

I am saying that the sanctuaries program has more important things to do, important things that will have a bearing on us as a culture centuries down the road.

There are other mechanisms, some of which we have talked about, some of which confused the committee and all of us. We should not damage the sanctuaries program by getting into a fight with industry over the Flower Gardens, to my mind, which is ridiculous.

Mr. D'AMOURS. Thank you very much, Dr. Adey.

Mr. Carney.

Mr. CARNEY. I would like to thank this panel for having so much patience, and I would like to compliment the chairman for having such a mixed panel at this meeting, all the interests were certainly served today.

I would like to compliment Dr. Adey for the coral reef tanks at the Museum of Natural History.

For the record, I would like to clarify the status of section 315, which will be funded at $3 million under coastal zone management.

I believe the chairman was very smart in picking March 17 to mark up this bill, because I think that with the good luck of St. Patrick we will have an area of the budget funded for at least another year.

Mr. D'AMOURS. I share those sentiments with regard to your patience and all of the witnesses who have stayed through this rather torturous activity.

Therefore, this meeting stands adjourned until the call of the Chair.

[Whereupon, at 2:30 p.m., the subcommittee adjourned, to reconvene subject to the call of the Chair.]

[The following material was received for the record:]

STATEMENT OF HON. ROY DYSON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MARYLAND

Mr. Chairman, I would like to speak for a moment this morning in support of the marine sanctuaries program. This program, ably administered by the National Oceanic and Atmospheric Administration, preserves unique ocean habitats for their conservation, recreational, ecological, and esthetic values. The sanctuary program offers an important means of balancing development with conservation of these distinctive marine areas.

Although the program does overlap with other Federal laws that protect the marine environment, I believe that the recent studies by the Congressional Research Service and the General Accounting Office conclusively demonstrate that the Marine Sanctuaries Program compliments their authority by offering benefits other laws do not.

The program offers comprehensive regulation, planning, and management to assure long-term preservation of all the resources that require protection; offers environmental protection where gaps exist in the coverage of other laws; and encourages and supports research and public awareness of sanctuary resources.

These benefits truly make this a worthwhile program and one which I wholeheartedly support.

CONGRESS OF THE UNITED STATES,
HOUSE OF REPRESENTATIVES,
Washington, D.C., March 12, 1981.

Hon. NORMAN E. D'AMOURS,
Chairman, Subcommittee on Oceanography,
Washington, D.C.

DEAR MR. CHAIRMAN: It is my understanding that your Subcommittee is considering the reauthorization of Title 3 of the Marine Protection Research and Sanctuaries Act. I would like to express my support of the reauthorization.

My specific interest is the Marine Sanctuaries Program which I believe represents a great opportunity for the Congress to both protect and enhance our ocean resources. As the Representative for the entire Georgia coast, I have been most impressed with the prospects that the program presents in the development of our vital seafood industry through enhanced research and other activities.

In addition, officials of the Georgia Department of Natural Resources have advised me that the federal officials who administer this program have done an outstanding job in coordinating and working with state officials in a genuine spirit

of intergovernment cooperation. I would, therefore, appreciate your consideration in seeing that this fine program is continued.

Thank you again for your consideration of this request, and with kindest personal regards, I am

Sincerely,

BO GINN.

CONGRESS OF THE UNITED STATES,
HOUSE OF REPRESENTATIVES,
Washington, D.C. March 12, 1981.

Hon. NORMAN D'AMOURS,
Chairman, Oceanography Subcommittee,
House Merchant Marine and Fisheries Committee, Washington, D.C.

DEAR MR. CHAIRMAN: As your Subcommittee considers the reauthorization of Title III to the Marine Protection, Research and Sanctuaries Act of 1972, I would very much like to take the opportunity to express my views on the future of this important program. The National Marine Sanctuary Program serves the diverse needs of many human activities, in addition to preserving, for the future, the resources of carefully defined marine ecosystems. This flexible, yet comprehensive, coverage provides a program uniquely suited to long-range protection and management of distinctive ocean areas.

A prime example of the program's efforts is the Point Reyes-Farallon Islands National Marine Sanctuary, which was approved by President Carter in January of this year. Like many Californians, I am particularly concerned that the final regulations implementing this sanctuary remain as approved by the President. These regulations include, among other things, a prohibition on oil and gas development activities within sanctuary boundaries.

As you may be aware, the oil and gas industry is currently pressuring the Department of Commerce to lift these restrictions. In addition, the Department of the Interior has indicated a disregard for the overwhelming national support given to the Point Reyes-Farallon Islands sanctuary by reconsidering the sale of two tracts in Outer Continental Shelf Lease Sale 53 which conflict with sanctuary boundaries.

The richly productive, and as yet relatively undisturbed, character of the Point Reyes-Farallon Islands area has the longstanding recognition and respect of Californians and visitors alike. The Farallon Islands provide nesting areas for more than half of California's seabird populations, as well as haul-out and feeding areas for hundreds of seals and sea lions. These and other esthetically unique values are also reflected by the 1909 designation of the Farallon Islands as a National Wildlife Refuge.

In summary, this area demands the kind of comprehensive management, protection, research and education which marine sanctuary designation provides. On December 15 of last year, 28 other members of the California delegation joined with me in expressing their support for the Point Reyes-Farallon Islands sanctuary, including the prohibition on oil and gas operations. The state, many local and county governments, citizens groups and individuals also expressed their support.

I strongly urge the Subcommittee to reauthorize Title III of the Marine Protection, Research and Sanctuaries Act of 1972 for three years with no amendments and with a funding level of at least $2.25 million annually.

Thanking you for your consideration of my views, I am

Sincerely,

JOHN L. BURTON, *Member of Congress.*

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-118370

The Honorable John B. Breaux
Chairman, Subcommittee on Fisheries
and Wildlife Conservation and the
Environment
Committee on Merchant Marine and
Fisheries
House of Representatives

Dear Mr. Chairman:

This report discusses the benefits of the National Oceanic and Atmospheric Administration's marine sanctuaries program. In response to your request and discussions with your office, we focused our review on determining whether the program is providing, or has the potential to provide, marine environmental protection over and above that which is or can be provided under other Federal statutory authorities.

We are sending copies of this report to the Director, Office of Management and Budget; the Secretaries of Commerce, Energy, and the Interior; the Administrator, Environmental Protection Agency; appropriate House and Senate committees; Members of Congress; and other interested parties.

Sincerely yours,

Comptroller General
of the United States

COMPTROLLER GENERAL'S
REPORT TO THE SUBCOMMITTEE
ON FISHERIES AND WILDLIFE
CONSERVATION AND THE
ENVIRONMENT, COMMITTEE ON
MERCHANT MARINE AND FISHERIES
HOUSE OF REPRESENTATIVES

MARINE SANCTUARIES PROGRAM OFFERS ENVIRONMENTAL PROTECTION AND BENEFITS OTHER LAWS DO NOT

D I G E S T

Certain ocean areas are designated as marine sanctuaries to preserve or restore the areas for their conservation, recreational, ecological, or esthetic values.

Two sanctuaries were established in 1975. Four others were recently approved by President Carter and are expected to become effective in the spring of 1981. Three other ocean areas are being considered for sanctuary designation.

Appropriations for the marine sanctuaries program increased from $500,000 for fiscal year 1979 to $1.75 million for fiscal year 1980. The 1981 appropriations request is for $2.25 million.

GAO determined that the marine sanctuaries program, administered by the Department of Commerce's National Oceanic and Atmospheric Administration, is providing, or has the potential to provide, marine environmental protection over and above that which is or can be provided under other Federal statutory authorities.

Many Federal and State laws and international agreements provide authority to protect various elements of the marine environment. Although title III of the Marine Protection, Research, and Sanctuaries Act of 1972 overlaps to some extent with these other laws, it complements their authority by offering certain benefits the other laws do not provide. (See p. 6.)

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Tear Sheet. Upon removal, the report cover date should be noted hereon.

An important criterion in selecting ocean areas for review as possible sanctuaries recognizes the ability of existing regulatory mechanisms to protect the values of the area's resources and the likelihood that sufficient effort will be devoted to providing such protection without creating a sanctuary.

PROGRAM BENEFITS

The sanctuaries program offers a unique Federal mechanism to focus on particular geographically defined marine areas and provide comprehensive regulation, planning, and management (within the limits of international law) to assure long-term preservation of all the resources that require protection in those areas. Other pertinent Federal laws and regulatory programs that affect ocean areas do not provide for this type of comprehensive approach to area management. They are generally directed at accomplishing a single purpose, managing a single resource, or regulating a specific activity. In many cases, resource protection is an ancillary objective or goal to regulating an activity. (See p. 6.)

Congressional debate leading to title III's passage emphasized that sanctuaries should allow multiple uses to the extent such uses do not interfere with the purposes for which the sanctuaries are established.

The program also provides environmental protection where "gaps" exist in the coverage provided by other Federal regulatory authorities. For example:

--The wreck of the U.S.S. Monitor was designated a marine sanctuary because it could not be adequately protected under other Federal laws. The other laws that offer some protection for historically important sites (including shipwrecks and marine artifacts) either do not apply to State or private actions and/or do not apply beyond the 3-mile territorial sea (State waters).

--The Outer Continental Shelf Lands Act requires the Secretary of the Interior to protect the

natural resources and environment in any area of the Outer Continental Shelf where oil and gas activities are to occur. A recent court ruling held that this act does not authorize the Secretary to prescribe environmental protection measures regulating activities on the Outer Continental Shelf which do not relate to mineral leases. The Secretary, therefore, cannot protect coral and coral resources from being damaged or disturbed by marine salvage activities, anchoring by vessels, or other activities not related to offshore energy development.

--The Fishery Conservation and Management Act can protect coral from threats posed by fishing activities. However, the act cannot provide protection against anchoring and other activities by nonfishing vessels. Also, marine life and habitat (ecosystems) may not be as effectively protected under that act as they could be under the sanctuaries program.

While some may argue that such gaps or limitations in the protection provided under other laws relate to areas of little concern or to activities that pose little threat to the marine resources and environment, these gaps nevertheless represent potential threats that title III's protection could minimize. Such protection is subject, however, to international law which provides overriding limits regarding the regulation of foreign flag vessels. (See p. 15.)

NONREGULATORY PROGRAM BENEFITS

The National Oceanic and Atmospheric Administration considers certain nonregulatory program benefits to be important. The program encourages and supports research and monitoring of the condition of sanctuary resources, which permits an assessment of the cumulative impacts of all activities affecting the resources. The program also provides an educational and informational service to increase public awareness and appreciation of the value of resources and the potential for harm. These functions are intended to help assure long-term protection, as well as maximum safe use

and enjoyment, of the special resources and areas. (See p. 19.)

CONCLUSIONS

GAO believes coverage of the gaps in other laws and the other benefits title III affords make the program useful in protecting designated sanctuaries.

GAO also believes that the marine sanctuaries program is somewhat analogous to the Department of the Interior's wildlife refuge program. There, too, other laws protect our Nation's wildlife, but that does not diminish the need for a statutory wildlife refuge program. If comprehensive wildlife protection in selected areas is desired, wildlife refuges would seem to be the best way to provide it. Similarly, if comprehensive protection of the marine environment is desired in certain areas that merit special treatment, whether due to unique characteristics or recreational value or some other pertinent factor, title III would seem to be an appropriate way to provide it to accomplish the basic objectives the Congress envisioned in establishing an effective marine sanctuaries program. (See p. 22.)

AGENCY COMMENTS

The Department of Commerce agreed with GAO's conclusions and said that the report accurately represents the marine sanctuaries program's goals and objectives. Commerce also agreed with GAO's assessment of the program's regulatory benefits but stressed that it considers nonregulatory benefits equally important. It has begun to place greater emphasis on nonregulatory goals and objectives. (See p. 23.)

Commerce believes that international law constraints on sanctuary regulations do not undercut the program's usefulness.

GAO also discussed its report with officials of the Departments of the Interior and Energy

and the Environmental Protection Agency who are concerned with the program's administration and management. They expressed the general agreement of their agencies with the information presented. (See p. 24.)

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ABBREVIATIONS

CRS	Congressional Research Service
EIS	environmental impact statement
EPA	Environmental Protection Agency
FCMA	Fishery Conservation and Management Act
FWS	Fish and Wildlife Service
GAO	General Accounting Office
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OCS	Outer Continental Shelf
OCSLA	Outer Continental Shelf Lands Act

CHAPTER 1

INTRODUCTION

During the past decade a number of laws were enacted or amended to deal with the competing pressures and demands placed on the Nation's natural resources and environment. Many of these laws were directed at better management and protection of the marine resources and environment.

At the request of the Chairman, Subcommittee on Fisheries and Wildlife Conservation and the Environment, House Committee on Merchant Marine and Fisheries, we reviewed certain issues (see p. 5) concerning the marine sanctuaries program authorized by title III of the Marine Protection, Research, and Sanctuaries Act of 1972 (16 U.S.C. 1431 et seq.). This statute authorizes the Secretary of Commerce, with Presidential approval, to designate areas of the ocean and certain other waters as marine sanctuaries for the purpose of "preserving or restoring such areas for their conservation, recreational, ecological, or esthetic values." Marine sanctuaries may be designated as far seaward as the outer edge of the Continental Shelf, in other coastal waters where the tide ebbs and flows, or in the Great Lakes and their connecting waters. Title III also authorizes the Secretary to issue "necessary and reasonable regulations" to control activities permitted within designated sanctuaries. The program is administered by the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA).

PROGRAM STATUS

From title III's enactment in 1972 until August 1980, only two sanctuaries, both relatively noncontroversial, had been established. One is the Monitor Marine Sanctuary which protects the wreck of the U.S.S. Monitor, a Civil War naval vessel. It is located southeast of Cape Hatteras, North Carolina, and covers an area 1 mile in diameter. The other is the Key Largo Coral Reef Marine Sanctuary which provides protective management of a 100-square mile coral reef area south of Miami. Both sanctuaries were established in 1975.

Four other sanctuaries were recently approved by President Carter. One extends in a 6-nautical mile zone surrounding Santa Barbara Island and the Northern Channel Islands off the California coast. The others include waters around Point Reyes-Farallon Islands off the California coast, waters at Looe Key in the lower Florida Keys, and waters at Gray's Reef off the Georgia coast. NOAA estimated that these sanctuary designations will become effective in the spring of 1981 unless both Houses of Congress adopt a concurrent resolution disapproving the designations or any of their terms. (See p. 4.)

No funds were appropriated or requested to be appropriated for the marine sanctuaries program before fiscal year 1979. The program operated with funds reprogramed from other NOAA activities. The appropriations for fiscal years 1979 and 1980 were $500,000 and $1.75 million, respectively. The administration requested $2.25 million for the program for fiscal year 1981.

The program was given increased visibility as a result of the President's May 1977 environmental message to the Congress which stressed the need to protect certain ocean areas and marine resources from the conflicting and potentially harmful effects of various types of development, particularly sensitive areas scheduled for oil and gas leasing sales. The President singled out title III as a means of providing such protection and instructed the Secretary of Commerce

> "* * * to identify possible marine sanctuaries in areas where development appears imminent, and to begin collecting the data necessary to designate them as such under the law."

NOAA responded to this directive by publicizing draft site selection criteria and requesting Federal, State, and local agencies and the public to recommend appropriate sites for NOAA to consider. By February 1978, about 170 nominations had been received from public and private sources. After NOAA had taken a preliminary look at the suggested sites and eliminated duplicate nominations, it reduced to about 100 sites the number of areas which were to receive further consideration.

NOAA issued revised regulations in July 1979 to clarify and formalize the policies and objectives of the marine sanctuaries program and the criteria and procedures for nominating, evaluating, and designating areas as sanctuaries. The revised regulations established a process involving several levels of review--each successive step requiring more extensive evaluation; consultation and coordination with various Federal, State, and local agencies; and public participation.

DESIGNATION PROCESS

The new procedures require NOAA to review each site that is recommended for sanctuary designation, within 3 months after receiving the nomination, to determine whether it should be placed on NOAA's list of recommended areas to be given further consideration. This list, which is to be published twice a year in the Federal Register, is intended to provide public notice of sites that might be looked at more closely because they meet one or more of the following broad resource criteria set forth in the regulations.

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--Area contains important habitat on which rare, endangered, threatened, or valuable species depend.

--Area contains a marine ecosystem 1/ of exceptional productivity.

--Area provides exceptional recreational opportunity and values.

--Area contains historic or cultural artifacts of widespread public interest.

--Area contains distinctive or fragile ecological or geologic features of exceptional scientific research or educational value.

NOAA's initial list of recommended areas was published in the October 31, 1979, Federal Register and included all (about 70) of the sites that had been suggested to NOAA to date that met one or more of the above criteria. Sites that did not meet such criteria were not included. Notice of sites added to the list is also published in the Federal Register.

NOAA's next step in the designation process is to select sites from the list of recommended areas as "active candidates" for further evaluation as possible sanctuaries. The criteria for selecting an active candidate is more specific and recognizes such factors as

--the severity and imminence of existing or potential threats to the resources, including the cumulative effect of various human activities that individually may be insignificant;

--the ability of existing regulatory mechanisms to protect the values of the area's resources and the likelihood that sufficient effort will be devoted to accomplishing those objectives without creating a sanctuary;

--the esthetic qualities of the area;

--the type and estimated economic value of the natural resources and human uses in the area which may be foregone if a sanctuary were established; and

--the economic benefits to be derived from protecting or enhancing the resources within the proposed sanctuary area.

1/A community of marine organisms and their environment functioning interrelatedly as a unit of nature.

After selecting an active candidate, NOAA will distribute an "issue paper" which reviews the area's resources and possible boundary and regulatory alternatives. Public workshops are then held in areas most affected by the selection to discuss the issue paper and obtain public views on the desirability of establishing a sanctuary.

If the information gathered to this point indicates that the site deserves further evaluation, NOAA will prepare and distribute a draft environmental impact statement (EIS) which analyzes and assesses the impact of the proposed designation and regulations and the other alternatives considered. Formal public hearings will also be held in the affected coastal area. Public comments presented at these hearings, or submitted to NOAA in response to the draft EIS, and proposed regulations are to be considered by NOAA in preparing the final EIS. NOAA will then undertake the final statutorily required consultations with designated Federal agencies, and the comments of these agencies will be transmitted to the President when a marine sanctuary proposal is submitted for approval. The sanctuary designation becomes effective after Presidential approval unless one of the following actions takes place.

--If a sanctuary includes State waters 1/ and is deemed unacceptable by the Governor, the Governor may nullify the designation of all or part of the State waters or certain terms or regulations affecting the State waters.

--Both Houses of Congress may adopt a concurrent resolution which disapproves the designation or any of its terms. This two-house congressional veto provision was added as an amendment to title III when the program was reauthorized for fiscal year 1981 (Public Law 96-332, approved August 29, 1980).

As of January 1981, NOAA had three areas under consideration as active candidates for marine sanctuary designation. These included Flower Garden Banks in the Gulf of Mexico; Monterey Bay off the coast of California; and waters southeast of St. Thomas, Virgin Islands. Public workshops had been held on each of the proposed sanctuaries, and public hearings had been held on one (Flower Garden Banks). The final EIS was being prepared for this proposed sanctuary, and draft EISs were being prepared for the other two.

1/State waters generally extend outward 3 miles from the coastline. This zone is generally referred to as the territorial sea.

OBJECTIVES, SCOPE, AND METHODOLOGY

In accordance with discussions with the subcommittee chairman's office, we focused our review on determining whether the marine sanctuaries program is providing, or has the potential to provide, marine environmental protection over and above that which is or can be provided under other Federal statutory authorities.

In making this determination, we analyzed the statutory authority for the marine sanctuaries program; its legislative history; pertinent features of other Federal laws that protect the marine environment; relevant studies on the program; and pertinent NOAA policies, objectives, regulations, reports, and administrative procedures. We met with NOAA and other Federal officials from the Departments of Commerce, Energy, Interior, State, and Transportation; the Congressional Research Service (CRS); and the Environmental Protection Agency (EPA). We also met with representatives of environmental and conservation groups and the oil and gas and fishing industries to obtain their views on the need for and benefits of the program and how it affects their activities and concerns. We also analyzed interagency correspondence and written public comments, particularly from organizations of marine user groups, relating to program policies and administrative actions.

We coordinated our work with CRS which the subcommittee chairman had requested to address certain policy aspects of the marine sanctuaries program and to provide information on the protection of the marine environment provided by Federal statutory and regulatory authorities (see p. 20).

We did not evaluate the program's effectiveness or examine its activities to determine whether they were efficiently conducted.

CHAPTER 2

MARINE SANCTUARIES LEGISLATION AFFORDS ENVIRONMENTAL PROTECTION AND OTHER BENEFITS BEYOND THAT OF OTHER FEDERAL LAWS

We believe the legislative intent of the marine sanctuaries statute was to provide a Federal mechanism for identifying special marine areas with unique conservation, recreational, ecological, or esthetic values and establishing comprehensive planning and management frameworks to assure the long-term protection of such areas and their distinctive resources. The intent also was to allow and coordinate multiple uses which are compatible with the sanctuaries' purposes. Many other Federal and State laws and international agreements also provide authority to protect various elements of the marine environment. Although title III of the Marine Protection, Research, and Sanctuaries Act overlaps to some extent these other laws, it complements their authority by offering certain environmental protection benefits not provided under such laws.

The marine sanctuaries program offers a unique mechanism to focus on particular geographically defined marine areas and provide comprehensive regulation, planning, and management (within the limits of international law) 1/ to preserve all the resources that require protection in those areas. Other pertinent Federal laws that affect ocean areas do not provide for this type of comprehensive approach to area management. They are generally directed at accomplishing a single purpose, managing a single resource, or regulating a specific activity. In many cases, resource protection is an ancillary objective or goal.

Congressional debate leading to title III's passage emphasized that sanctuaries should not be set aside as marine wilderness areas, but rather should allow other uses (including oil and gas production) to the extent such uses did not interfere with the purposes for which the sanctuaries were established. The program was designed to address multiple-use conflicts and regulate other uses in a designated sanctuary

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1/Because international law limits Federal authority on the high seas, the marine sanctuaries statute (like most other Federal statutes affecting the ocean) cannot regulate foreign flag vessels navigating on the high seas, except in accordance with rules and principles of international law.

only to the extent necessary to maintain the recognized values of the area's marine resources and environment.

The marine sanctuaries program also fills "gaps" in Federal regulatory authority affecting the protection of marine resources; that is, it can offer benefits not available under other Federal laws. These include:

--Protecting shipwrecks, marine artifacts, and underwater historical landmarks beyond the territorial sea (such as the U.S.S. Monitor which has been designated as a marine sanctuary since January 1975).

--Protecting coral and coral resources from damage or disturbance (such as might be caused by recreational vessels anchoring on coral reefs).

--Protecting marine life or habitat not protected under wildlife protection laws but, because of their unique characteristics or locations, may be deemed worthy of special treatment.

--Protecting ocean waters beyond the territorial sea from the dumping of common trash and other substances not regulated under other laws.

The marine sanctuaries program also provides for research and monitoring of the overall condition of the resources in sanctuaries. This nonregulatory program benefit permits an assessment of the cumulative impacts of all activities affecting the resources. Certain other laws may provide for evaluation of the impact from the specific activity they regulate but do not provide for evaluation of the overall impact from all activities in a particular area. Another nonregulatory program benefit provides an educational and informational service to increase public awareness and appreciation of the value and importance of marine resources. These program functions are intended not only to help assure long-term protection of specific areas, but also to maximize safe use and enjoyment of the resources.

HOW THE MARINE SANCTUARIES LEGISLATION EVOLVED

To address the basic question as to what statutory benefits are provided under title III, it is important to understand the congressional intent leading to title III's passage. The legislative history clearly conveys the concept that the legislation was to permit multiple uses of marine resources while protecting such resources and their environment.

The legislative history of the marine sanctuaries program dates back to 1968 when several bills were introduced in the 90th Congress to establish marine sanctuaries off the coasts of California and certain other areas. These bills were largely the result of strong public reaction and concern over the degradation of popular marine recreation areas from oilspills and increased dumping of waste materials into coastal waters. Because the bills were also directed at instituting moratoria on mineral exploration in areas which would be considered for sanctuary designation, they encountered strong industry opposition. They were not reported out of the House Committee on Merchant Marine and Fisheries.

A number of bills were introduced in the 91st and 92nd Congress to prohibit ocean dumping. Some of these bills, along with several other bills introduced in those Congresses, also called for establishing marine sanctuaries. Hearings were held in both the House and Senate on the proposed legislation.

In July 1971, the House Committee on Merchant Marine and Fisheries reported out a bill which provided for the regulation of ocean dumping and, among other things, included a provision (title III) for establishing marine sanctuaries. The House report 1/ accompanying the bill explained the need for sanctuaries legislation as follows:

> "Title III deals with an issue which has been of great concern to the Committee for many years: the need to create a mechanism for protecting certain important areas of the coastal zone from intrusive activities by man. This need may stem from the desire to protect scenic resources, natural resources or living organisms; but it is not met by any legislation now on the books. This title will permit the Secretary of Commerce, acting through NOAA, to designate certain areas up to the edge of the Continental Shelf as marine sanctuaries, subject only to the powers of the Governors of the coastal states to approve or disapprove such portions of the proposed sanctuaries as may lie within the boundaries of those states' territorial jurisdiction. It also provides adequate sanctions to permit the Secretary to regulate these sanctuaries."

This bill (H.R. 9727) passed the House in September 1971.

1/H. Rept. 361, 92d Cong., 1st Sess. 15 (1971).

Remarks made during the floor debate on the House bill clearly demonstrated that the congressional intent in establishing marine sanctuaries was not to prohibit multiple uses, but to assure that all uses were compatible with the sanctuaries' purposes. For example, one Congressman said that the House report

> "* * * makes it abundantly clear that the designation of a marine sanctuary is not intended to rule out multiple use of the sea surface, water column or sea bed. Any proposed activity must, however, be consistent with the overall purpose of this title. An inconsistent use, in my opinion, would be one which negates the fundamental purpose for which a specific sanctuary may be established."

Another said that:

> "Title III in this bill is the result of 4 years of in-depth inquiry and consultation with all pertinent departments and agencies of the executive branch. Throughout this protracted period of investigation and consideration, the original marine sanctuaries concept has been changed from one which would have called for a complete oil drilling moratorium to one which would permit drilling within the purposes of this title."

After considering the House-passed bill, the Senate Committee on Commerce reported an amended version which the Senate passed in November 1971. The Senate report 1/ explained that the amended bill omitted the sanctuaries provision for the following reasons.

--The committee pointed out that control over the superjacent water column outside the limits of the territorial sea and the contiguous zone was beyond U.S. jurisdiction. It believed that legislation authorizing sanctuaries in such areas would be ineffective unless international agreements were executed to establish sanctuaries and regulate sanctuary activities.

--The committee believed that, if the purpose of proponents of marine sanctuaries was to control or prohibit the exploitation of seabed and subsoil resources, such authority already existed under the Outer Continental Shelf Lands Act.

1/S. Rept. 451, 92d Cong., 1st Sess. 15 (1971).

A conference committee was convened to resolve differences between the House and Senate versions of H.R. 9727. On October 9, 1972, it agreed to a compromise bill which included the title III marine sanctuaries provision passed by the House with certain modifications affecting the title's applicability to foreign citizens. In explaining the modifications, 1/ the conference committee stated:

> "The committee on conference adopted the House approach, but modified the language in some respects to make it clear that the regulations and enforcement activities under the title would apply to non-citizens of the United States only to the extent that such persons were subject to U.S. jurisdiction, either by virtue of accepted principles of International law, or as a result of specific intergovernmental agreements."

The proposed legislation (cited as the Marine Protection, Research, and Sanctuaries Act) was signed into law on October 23, 1972.

In a 1977 study 2/ of the marine sanctuaries program, the Center for Natural Areas analyzed the program's legislative history and concluded that title III is a broad-based comprehensive Federal statute capable of striking a balance between the pressures to develop and exploit marine areas for their resources and the need to protect and conserve important marine areas and resources for their distinctive values.

OTHER FEDERAL LAWS PROTECTING THE MARINE ENVIRONMENT

There are numerous Federal laws designed to protect elements of the marine environment. Many have been passed or amended since the marine sanctuaries statute was enacted. Examples are mentioned below and discussed in greater detail in appendix I to the extent they might affect title III's usefulness.

1/H. Rept. 1546, 92d Cong., 2d Sess. 18 (1972).

2/"An Assessment of the Need for a National Marine Sanctuaries Program," a study prepared for NOAA by the Center for Natural Areas--a nonprofit research corporation specializing in environmental management, Apr. 1977.

A few Federal laws authorize protection to the marine environment by imposing requirements on Federal activities which significantly impact on the environment, whether on land or in ocean and/or coastal waters. For example, the National Environmental Policy Act of 1969 requires Federal agencies to consider environmental values in making decisions on proposed actions and to take steps necessary to preserve the environment. It also requires that EISs be prepared.

A number of other laws offer protection of the marine environment by regulating specific activities that are conducted in ocean and/or coastal waters. Two examples are the Fishery Conservation and Management Act of 1976 (FCMA), which regulates fishing, and the Outer Continental Shelf Lands Act (OCSLA), which regulates mineral exploration and development. Other laws regulate such activities as vessel traffic and the construction and operation of deepwater ports.

Some laws protect the marine environment by prohibiting or restricting discharges and dumping into ocean, coastal, and certain other waters. Two examples are the Federal Water Pollution Control Act, as amended, (commonly referred to as the Clean Water Act) and title I of the Marine Protection, Research, and Sanctuaries Act (commonly called the Ocean Dumping Act). The Clean Water Act regulates the discharge of pollutants, such as oil and hazardous substances, from point sources (including vessels) into State waters, the contiguous zone, 1/ and the ocean beyond; while the Ocean Dumping Act regulates the dumping of materials that are on board a vessel or aircraft for the express purpose of dumping into ocean and coastal waters.

Other laws provide for the conservation and protection of certain species of wildlife and prohibit or restrict human actions that would cause them to be threatened or harmed. One example is the Endangered Species Act of 1973, which protects fish, wildlife, and plant species that the Secretaries of Commerce or the Interior designate as endangered or threatened. Another example is the Marine Mammal Protection Act of 1972, which places a moratorium on taking any marine mammal without a permit from the Departments of Commerce or the Interior, depending on the species involved.

A few laws, such as the Antiquities Act, protect historical landmarks (including shipwrecks and other marine artifacts).

1/The contiguous zone extends from 3 to 12 miles outward from the U.S. coastline, bordering on the outward edge of the territorial sea.

PROGRAM BENEFITS

While it is apparent that title III has some redundancy with many of these and other Federal laws (see app. I), its comprehensive approach to area management and protection distinguish it from the other laws. Title III authorizes the only Federal program to comprehensively manage and protect marine areas as units, and it provides certain other "protection" not available under other laws.

Only under title III may an area of the ocean or other coastal waters be set aside for preservation and the activities in the area be limited to those that are consistent with and compatible to the basic preservation purpose. For example, the Key Largo Coral Reef Marine Sanctuary is being managed to protect the coral reefs and ecosystems, as well as the numerous shipwrecks, and to preserve the special recreational and esthetic values of the area. Several activities are allowed as long as they are conducted in a manner consistent with preserving the marine environment. These include: recreational boating and fishing, snorkeling and scuba diving, commercial transport, fisheries activities, and scientific endeavors.

The following activities are prohibited in the Key Largo Sanctuary: spearfishing or removal or destruction of coral and other natural marine features; dredging, filling, excavating, and building activities; discharge of refuse and polluting substances; and removal or tampering with shipwrecks and other archeological or historical resources. Special anchoring procedures are also required to avoid damage to coral formations. While some of these activities would be prohibited or restricted under other laws, it is not likely that the other laws would be enforced in a coordinated manner, as discussed below, to accomplish the marine sanctuaries program's comprehensive environmental preservation objectives in the absence of a sanctuary.

The Key Largo Coral Reef was permanently withdrawn from Outer Continental Shelf (OCS) mineral leasing and designated a preserve by a Presidential proclamation issued on March 17, 1960, under the authority of the OCSLA. The Department of the Interior issued regulations in September 1960 designed to regulate activities and protect and conserve the coral and other resources of the seabed in the preserve. A NOAA official who was a former marine sanctuaries coordinator told us that the Federal regulations were never enforced and that Interior later determined that it did not have the authority under the OCSLA to promulgate regulations affecting living marine resources in the Key Largo Coral Reef area. The NOAA official also said that after title III was enacted, NOAA, Interior,

and the State of Florida worked out arrangements to designate the Key Largo Reef as a marine sanctuary to ensure preservation of the coral and other living marine resources in the area.

In its 1977 report on the marine sanctuaries program (see p. 10), the Center for Natural Areas stated that:

> "While the President possesses authority [under the OCSLA] to permanently withdraw specific tracts from OCS leasing, such action has been taken only twice in the past 24 years. These two areas are the Key Largo Coral Reef Reserve and the Santa Barbara Ecological Preserve and Buffer Zone * * *. There exists, moreover, no program-wide regulations or guidelines for these permanent withdrawals. And, since they are made on an ad hoc and infrequent basis, it is difficult to predict those activities which might be restricted in these areas * * *."
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> "* * * While the establishment of the [Key Largo] preserve ensured that the area would not be leased for mineral exploration, it did not comprehensively assure the reef's protection. Consequently, the area was nominated and subsequently established as the nation's second marine sanctuary."

An article 1/ in the March 1978 Environmental Law Reporter expressed title III's usefulness in the following way when comparing it to other legislation affecting marine resources.

> "While each of these legislative responses [other than title III] concerns a particularly pressing marine resource allocation problem, collectively they have not brought the nation perceptively closer to the establishment of a balanced and comprehensive approach to the protection and use of marine resources. Moreover, because these federal actions have primarily been reactions to initiatives proposed by private entities, they cannot plan for and manage marine activities in a positive manner, a crucial element in developing a viable national marine policy. The marine sanctuaries program, on the other hand, is not limited to regulating particular marine-related activities and thus has the potential to provide a

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1/Blumm and Blumstein, "The Marine Sanctuaries Program: A Framework for Critical Areas Management in the Sea," Environmental Law Reporter, 8 ELR 50016 (1978).

critically needed positive link in the ongoing efforts to develop a balanced and comprehensive marine policy.

"Under Title III * * *, areas of important conservation, recreation, ecological, or esthetic value in ocean, estuarine, or Great Lakes waters can be officially designated and managed to foster such values. While certain uses within these areas will be regulated, marine sanctuary designation does not serve to preclude all uses. Central to the program's potential role as an important link in the nation's efforts to formulate a balanced approach to marine management is its policy of permitting all uses compatible with a sanctuary's primary purpose."

The major purposes and management objectives of each of the other laws that provides some protection to the marine environment differ from those of title III. The U.S. Court of Appeals for the First Circuit discussed this distinction, relative to the OCSLA, 1/ in reviewing a lower court's injunction against a proposed oil and gas lease sale in the Georges Bank area off the New England coast. The appeals court said that:

"* * * while under the Marine Sanctuaries Act the land-use options of the Secretary of Commerce are much the same as those of the Secretary of the Interior under the Outer Continental Shelf Lands Act, the management objectives are different. It is thus possible that different environmental hazards would result depending on which program was invoked. Under the latter Act, the emphasis is upon exploitation of oil, gas and other minerals, with, to be sure, all necessary protective controls. Under the Sanctuaries Act, the prime management objectives are conservation, recreation, or ecological or esthetic values. * * * Drilling and mining may be allowed, but the primary emphasis remains upon the other objects. The marked differences in priorities could lead to different administrative decisions as to whether particular parcels are suitable for oil and gas operations. And should there be particular areas of Georges Bank that are uniquely important to the fishery, for example, a key breeding area or the like, management by the Secretary of Commerce, the administrator of the Fishery Act, rather than by the Secretary of the Interior might be advantageous."

1/Massachusetts v. Andrus, 594 F. 2d 872, 885 (1st. Cir. 1979).

PROGRAM FILLS GAPS IN ENVIRONMENTAL PROTECTION COVERAGE OTHER FEDERAL STATUTES PROVIDE

The marine sanctuaries program provides environmental protection where gaps exist in the coverage other Federal regulatory authorities provide. While some may argue that these gaps relate to areas of little concern or to activities that pose little threat to the marine resources and environment, they nevertheless represent potential threats that title III's protection could minimize. Such protection is subject, however, to international law which provides overriding limits regarding the regulation of foreign flag vessels.

The limitations in the environmental protection coverage provided under certain Federal laws are discussed below.

Limitations in laws that protect shipwrecks and other underwater landmarks

The wreck of the U.S.S. Monitor was designated a marine sanctuary because it could not be adequately protected under other Federal laws. The laws that offer some protection for historically important sites (including shipwrecks) are limited.

For example, the National Historic Preservation Act of 1966 authorizes the Secretary of the Interior to maintain a national register of sites, buildings, structures, and objects which are considered to be significant in American history, architecture, archeology, and culture. Once a site or structure is listed, it can be protected from Federal or federally supported activities which would change its historic, architectural, archeological, or cultural character. However, this act does not apply to State or private actions.

Another Federal law--the Antiquities Act--authorizes the Secretary of the Interior to protect certain landmarks, structures, and objects of historic or scientific interest by designating them as national monuments. However, this act is limited to those items located on lands "owned or controlled by the United States." In a 1978 court decision, 1/ the U.S. Court of Appeals for the Fifth Circuit determined that Interior's authority for such action does not apply to marine antiquities (such as ancient wrecked vessels) located on the OCS seabed beyond the territorial sea. The United States had appealed a

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1/Treasure Salvors, Inc. v. Unidentified Wrecked and Abandoned Sailing Vessel, 569 F. 2d 330 (5th Cir. 1978).

lower court's decision which denied it the right to possess an old unidentified vessel and its cargo which had been found on the OCS seabed and claimed by two Florida corporations. The Government's claim to the vessel and cargo was based partly on the assertion that the Antiquities Act applied because the OCSLA demonstrated congressional intent to extend U.S. jurisdiction and control to the OCS. However, the appeals court held that the Antiquities Act did not apply because the OCSLA limits Federal jurisdiction beyond territorial waters to that necessary to control exploration and exploitation of the OCS's natural resources.

In this court case, the United States also cited the Abandoned Property Act as a basis for its claim to the sunken Spanish vessel and cargo. This act authorizes the United States, through the General Services Administration, to protect the interests of the Government in wrecked, abandoned, or derelict property "being within the jurisdiction of the United States and which ought to come to the United States." The appeals court held this act also inapplicable, among other reasons, because the wreck was not located "within the jurisdiction of the United States."

According to the former Director of the marine sanctuaries program, at the time the U.S.S. Monitor was being considered for designation as a sanctuary--even before the abovementioned court case--an interagency committee had reviewed the Abandoned Property Act and determined that it was not a solid basis for protecting that historical sunken vessel. The former Director also said that title III provided the only vehicle for promulgating regulations to assure that neither deliberate salvage nor inadvertent anchoring or other operations harm the Monitor wreck.

Under international law, shipwrecks on the OCS beyond the territorial sea are not owned by the United States. A NOAA sanctuaries program official told us that when the Monitor Marine Sanctuary was established NOAA sent information concerning the sanctuary to international councils representing many different countries and requested that those countries respect the sanctuary regulations. This official also said that the United States has not entered into any international agreements to protect the Monitor. Therefore, the Federal regulations protecting the Monitor (which is located beyond the territorial sea) cannot be enforced against foreign flag vessels operating from foreign ports.

Limitations in laws that protect coral and marine ecosystems

Under the OCSLA, the Secretary of the Interior is required to insure the protection of the natural resources and environment in any area of the OCS where oil and gas activities are to occur (see p. 27). The limit of the OCSLA in protecting the marine environment was demonstrated in a recent decision of the U.S. Court of Appeals for the Fifth Circuit--United States v. Alexander, No. 78-5676, September 24, 1979. In that case, the appeals court reversed a lower court's decision which had convicted a marine salvor of violating an Interior regulation prohibiting anyone from engaging in any activity that damages a viable coral community on the OCS without first obtaining a permit. The appeals court said that, while the OCSLA could give the Secretary authority to promulgate regulations prohibiting coral damage by OCS lessees or by others engaged in mineral related activities, it does not authorize the Secretary to prescribe conservationist or environmental protection measures regulating activities on the OCS which do not relate to mineral leases.

The FCMA provides for comprehensive regulation of domestic and foreign fishing activities within a 200-mile fishery conservation zone to protect designated fishery resources (fish, shellfish, coral, sponges, and certain other forms of plant or animal life) from being overharvested. Regional fishery management councils have been established to develop and administer regional plans for the particular fishery stocks that require management. These plans may include measures to protect spawning grounds, nurseries, migratory routes, and other habitat areas which are determined to be critical and necessary to the life cycle of those fishery stocks. Regulatory measures governing such habitat areas of particular concern are limited, however, to cover only fishing and other activities which directly affect the particular fishery resources being managed.

Responding by letter to questions raised at a February 1980 hearing on the reauthorization of title III, 1/ NOAA's Deputy Administrator pointed out that ecosystem protection may not be as effectively accomplished under the FCMA as it could under title III in certain circumstances. He said that regional fishery management councils

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1/Hearings before the Subcommittees on Fisheries and Wildlife Conservation and the Environment and Oceanography, House Committee on Merchant Marine and Fisheries, 96th Cong., 2nd Sess., Feb. 20, 1980.

are under substantial pressure to develop management plans for certain fishery stocks and that such plans will focus only on particular areas of significance to the entire stock in providing habitat protection. He noted that there may be particular marine areas whose degradation would not affect the full range of a fishery stock but which merit protection for the entire array of fish and other resources in the area. He concluded that, in these circumstances, the marine sanctuaries program offers protection unlikely to be afforded by the FCMA.

The Deputy Administrator referred to the protection of coral to illustrate the complementary relationship between the FCMA and title III. He said that

> "Under the FCMA coral can be protected from any threat posed by 'fishing,' but there are a wide variety of threats to coral, including anchoring by all types of vessels, dredging, discharges by vessels, and other pollution. Whatever the theoretical range of protection, against these threats under the FCMA, coral plans--or other fishery management plans--will not address the broad range of ecosystem threats, at least in the short term."

The Deputy Administrator also mentioned the limitation of the OCSLA in providing regulatory protection for coral. He concluded that "only the Marine Sanctuaries Act provides a resolution mechanism to ensure timely, comprehensive protection for special coral areas."

Limitations in wildlife protection laws

Certain species of plants, fish, and wildlife found in ocean and coastal waters can be protected under the Endangered Species Act provided they are designated as endangered (in danger of extinction throughout all or a significant portion of their ranges) or threatened (likely to become endangered within the foreseeable future). This act also protects the designated critical habitats of endangered or threatened species against Federal actions (but not State or private actions) which would destroy or adversely modify such habitats. Also, marine mammals and their habitats can be protected under the Marine Mammal Protection Act (see p. 31). However, there may be certain biological communities or forms of marine life or habitat that cannot be protected under these or other wildlife laws but--because of their unique characteristics or locations--may be deemed worthy of the special preservation treatment that can be provided under the marine sanctuaries program.

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Limitation in regulating refuse disposal

Although several laws protect the marine environment by regulating discharges and dumping into ocean and coastal waters (see pp. 11 and 29), apparently no authority exists (outside of title III) that prohibits the overboard disposal of refuse matter, such as common trash and litter, into ocean waters beyond the territorial sea. The discharge of refuse matter from vessels into U.S. territorial waters is regulated by section 13 of the Rivers and Harbors Act of 1899 (commonly referred to as the Refuse Act).

In its draft EIS on the proposed Point Reyes-Farallon Islands marine sanctuary, NOAA pointed out that the discharge of litter may reduce overall water quality, lessen the esthetic appeal of an area, and harm marine mammals that sometimes ingest or become entangled in such litter. A NOAA sanctuaries program official said that such discharges could also be potentially harmful to the coral and recreational value of an area, such as the Flower Garden coral reef banks in the Gulf of Mexico.

NONREGULATORY PROGRAM BENEFITS

NOAA considers certain nonregulatory aspects of the marine sanctuaries program to be important program benefits. The program encourages and supports research, assessment, and monitoring of the condition of the distinctive and valuable resources in marine sanctuaries. It also provides an educational and informational service to increase public awareness and appreciation of the value of the resources and the potential for harm. NOAA believes these program functions will help assure the long-term protection, as well as the maximum safe use and enjoyment, of the special resources and areas.

NOAA has been heavily involved in research and assessment efforts at the Key Largo Coral Reef Marine Sanctuary. For example, it sponsored a major survey of the sanctuary's deep-water resources, where scientists got a good look at the resource composition of the area and located and mapped an extensive deepwater reef. NOAA also contracted for a geological baseline assessment, a biological inventory and reef health assessment, and a water quality inventory of the sanctuary. Additional scientific studies and efforts are planned to, among other things, document the extent of coral damage and disease (and associated causes) and set up underwater monitoring stations. A NOAA sanctuaries program official told us that the Florida Department of Natural Resources, which provides onsite management of the sanctuary under a cooperative agreement with NOAA, had recently employed a full-time biologist to monitor environmental conditions within the sanctuary.

NOAA has also encouraged research to provide long-term management and protection of the Monitor Marine Sanctuary. A major scientific expedition jointly sponsored by NOAA, the State of North Carolina, and the Harbor Branch Foundation, Inc., (a nonprofit research organization that specializes in marine research) was successful in recovering many artifacts and obtaining extensive photographic and other records of the Monitor. NOAA believes that the results of such research will help determine the structural integrity of the vessel, assist in future artifact recovery, enhance understanding of the vessel's role in naval and engineering history, and assist decisionmakers as they evaluate the best method of preserving the wreck.

CRS STUDY CONCLUDES THAT SANCTUARIES PROGRAM OFFERS UNIQUE BENEFITS

In a recent study, 1/ the Congressional Research Service explored the possibility of overlap between the marine sanctuaries provision and other Federal laws designed to protect the marine environment. CRS concluded that although the marine sanctuaries provision does overlap other laws, it offers environmental protection benefits "not directly achievable through other Federal statutory authorities." The study divided these benefits into two categories: (1) coverage of gaps in the protection other laws provide and (2) comprehensive management of marine areas.

Under the first category, CRS noted several instances where the marine sanctuaries provision affords otherwise unavailable protection for marine wildlife, antiquities, and unique or particularly valuable ecosystems. CRS said that the provision confers

> "* * * nonduplicative authority for regulation of vessel traffic not in the vicinity of a congested port (international controls appearing to be weak), activities of marine salvors, commercial and recreational fishing, discharge of substances not falling under other statutes (chiefly, those that are not oil, not designated as hazardous, and not brought to the discharge site with the intention to dump), and anchoring."

1/The study was conducted at the request of the Chairman, Subcommittee on Fisheries and Wildlife Conservation and the Environment, House Committee on Merchant Marine and Fisheries. It was delivered in two segments: December 5, 1979, and January 22, 1980.

Under the second category, CRS emphasized that the marine sanctuaries provision "offers a unique approach to protection of marine areas of recognized importance." According to the CRS study, no other law "has, as a primary purpose, protection of sites for conservation or ecological reasons." CRS further suggested that the environmental protection offered by other laws is "inherently different, and potentially not as effective" as the marine sanctuaries provision. For example, under the OCSLA, environmental protection safeguards are "discussed in terms of what is possible within the context of offshore energy development." Under the sanctuaries provision, "the relationship between environmental protection and marine development and use is reversed." In other words, the sanctuaries provision emphasizes environmental protection rather than marine development and "calls for balancing, or a multiple use approach" for activities that do not adversely affect the resources within designated sanctuaries.

In CRS's opinion, title III "permits a holistic approach to management of defined marine areas that is not readily attainable through resort to statutes focusing on specific environmental impacts." By focusing on all factors affecting a specific site, the comprehensive management approach affords "blanket protection" which would be "quicker and less costly * * * than piecemeal protective actions through [other laws] * * *." CRS concluded that "Without the sanctuary provision, sites could only be protected indirectly (and probably less completely) * * *." Thus, CRS believes that

> "* * * the long-term protection or restoration of marine sites for conservation, recreational, ecological, or esthetic values without the direct approach of a sanctuary program is likely to be more difficult."

In his February 13, 1980, response to the CRS study, the subcommittee chairman expressed two major concerns. First, he questioned CRS's conclusion that the sanctuaries provision fills certain gaps in Federal regulatory authority. In the chairman's opinion, such gaps either can be covered "by the proper implementation and careful coordination of the many other authorities to regulate activities in the oceans" or they relate to areas or activities that are "of very little significance * * *." Second, he raised doubts that the sanctuaries provision could, in fact, offer comprehensive management of marine sites. Noting that "International law limits Federal authority in many significant respects," the chairman concluded that it was therefore misleading to describe the program's management authority as comprehensive. The chairman indicated that CRS did not sufficiently consider the constraints of international law in its analysis. He also remained unconvinced that comprehensive management authority could be "reconciled with the basic

charter of the program." In short, the chairman believed the sanctuaries program to be more limited than CRS had indicated.

Responding to the chairman's comments, the Director, CRS, in a February 29, 1980, letter, stated that CRS believed its two-part study was a proper and objective analysis of the questions posed.

PRIVATE SECTOR VIEWS

Representatives of the oil and gas industry, whom we met with during our review, generally supported the program concept and believed sanctuaries could serve a useful purpose in unique ocean areas where they would not conflict with oil and gas development. They were generally concerned, however, that certain proposed sanctuaries and regulations would place additional constraints on offshore energy activities. They believed that sufficient safeguards were available under the OCSLA to adequately protect marine resources and the environment from the effects of such activities.

Representatives of environmental and conservation groups generally believed the program was needed in unique areas to help resolve conflicting demands on resources and to provide environmental protection not readily available under other programs.

CONCLUSIONS

We have pointed out that some overlapping and/or duplication exists between title III and other Federal laws and regulations. Nevertheless, on balance and considering the program's legislative history, it is apparent that title III provides certain benefits not provided under other Federal laws. We believe coverage of the gaps in other laws and the other benefits title III affords make the program useful in protecting designated sanctuaries.

The marine sanctuaries program is somewhat analogous to Interior's wildlife refuge program. There, too, many other laws protect our Nation's wildlife, but that does not diminish the need for a statutory wildlife refuge program. If comprehensive wildlife protection in selected areas is desired, wildlife refuges would seem to be the best way to provide it. Similarly, if comprehensive protection of the marine environment is desired in selected areas; that is, if certain areas merit special treatment, whether due to unique characteristics or recreational value or some other pertinent factor, title III would seem to be an appropriate way to provide it to accomplish the

basic objectives the Congress envisioned in establishing an effective marine sanctuaries program.

AGENCY COMMENTS

The Department of Commerce agreed with our conclusions and said that our report accurately represents the marine sanctuaries program's goals and objectives. Commerce also agreed with our assessment of the program's regulatory benefits but stressed that it considers nonregulatory benefits equally important. (See app. II.)

In describing the increased emphasis on nonregulatory goals and objectives, Commerce said that the program's focus is on providing coordinated management-related research programs to implement existing management tools more effectively or to design new tools as necessary, broadening public understanding of an area's marine resources and impacts affecting such resources, and providing other onsite recreational and educational opportunities. According to Commerce:

--A 5-year research plan will be developed for each sanctuary. The research will be directed at generating information to promote effective management decisions and to better understand marine ecosystems. It will address the potential effects of human activities on the resources and the means to mitigate such impacts.

--NOAA is seeking to enhance existing surveillance and enforcement activities and, if necessary, will institute additional arrangements to ensure that sanctuary regulations are enforced. Existing authorities' activities will be monitored over time to assess their potential impact on sanctuary resources. If monitoring/surveillance efforts indicate that an activity or a proposed activity is inconsistent with sanctuary purposes, or that an existing authority is not adequately protecting the resources, NOAA may provide additional regulations in designated sanctuaries.

--Sanctuary designation may be appropriate in some cases even if additional regulations are not necessary. The decision regarding the appropriate mix of management tools will be made in the context of the management plan to be developed for each sanctuary.

Commerce also said that, in its opinion, international law constraints on sanctuary regulations do not undercut the program's usefulness. It noted that title III provides for the Secretary of State to negotiate agreements with foreign governments where

international protection is appropriate. Also, the approval of the International Maritime Consultative Organization can be sought for considering a sanctuary an "area to be avoided" by international shipping. However, approval by that organization of an "area to be avoided" does not authorize sanctions for violations.

In December 1980 we discussed a draft of this report with officials of the Interior, EPA, and Department of Energy who are concerned with the marine sanctuaries program's administration and management.

The Director of Interior's Office of OCS Program Coordination said that Interior agreed that the marine sanctuaries program has certain benefits and is a unique management tool for special resources where other tools are unavailable. He said that Interior has generally supported the program but Interior's experience has shown that the number of areas where the program would be applicable are limited. He added that, in Interior's opinion, some of the current sanctuary proposals are aimed principally at regulating oil and gas activities and pointed out that Interior already has broad authority under the OCSLA to protect the environment from the adverse effects of oil and gas development. He said that the authority results in balanced decisions on whether or not oil and gas operations should be allowed, and controls operations when they are allowed. He also said that NOAA would have a difficult time enforcing regulations to cover some of the gaps in the environmental protection other Federal laws provide, such as controls over littering.

We recognize that certain regulatory requirements may be difficult to enforce, however, we believe that appropriate regulations act as a deterrent to discourage potential violators. In commenting on our report, Commerce said that law enforcement officials believe that regulations alone--if effectively communicated to the public--will result in substantial public compliance.

An official in EPA's Ocean Programs office said that EPA agreed with our assessment and conclusions concerning the program's goals, objectives, and benefits. He indicated, however, that EPA would like to see NOAA exert more authority and effort to "push" for stronger environmental protection measures in certain ocean areas consistent with balanced use of the areas' resources.

An official in the Department of Energy's Office of Leasing Policy Development said that the Department concurred with the information in our report. He indicated, however, that the

Department would like to see NOAA place more emphasis on certifying the adequacy of existing regulations that protect marine resources and the environment and place less emphasis on issuing additional regulations. He also said that the Department concurred with Interior's views that some of the current sanctuary proposals are directed at placing constraints on oil and gas activities.

FEDERAL LAWS THAT PROTECT THE MARINE ENVIRONMENT

The relevant features of the principal Federal laws that protect the marine environment are summarized below.

Regulation of most Federal activities

Two Federal laws protect the marine environment by imposing requirements on most Federal activities which affect the environment in ocean and/or coastal waters. These laws also apply to land activities affecting the environment.

--The National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) requires Federal agencies to consider environmental values in making decisions on proposed actions that would affect the environment, and regarding such actions, to take the necessary steps to preserve the environment. It also requires that EISs be prepared setting forth alternative considerations for major Federal actions that would significantly affect the environment.

--The Coastal Zone Management Act of 1972 (16 U.S.C. 1451 et seq.) established a program that provides Federal grants to States to help develop and administer programs to manage their coastal lands and waters. It requires that Federal and federally assisted activities significantly affecting the coastal zone be conducted, to the maximum extent practicable, in a manner consistent with federally approved State programs. Federal licenses and permits required to conduct activities that affect uses of coastal lands or waters must be consistent with the way the particular State is managing the area and protecting the resources.

Regulation of specific activities

A number of other laws protect the marine environment by regulating specific activities that are conducted in ocean and/ or coastal waters. The major laws are: the Fishery Conservation and Management Act of 1976 (16 U.S.C. 1801 et seq.), which regulates fishing; the Outer Continental Shelf Lands Act, 1953, (43 U.S.C. 1331 et seq.), as amended in 1978 (Public Law 95-372, 92 Stat. 629), which regulates mineral exploration and development; the Ports and Waterways Safety Act, 1972, (33 U.S.C. 1221 et seq.), as amended by the Port and Tanker

Safety Act of 1978 (Public Law 95-474, 92 Stat. 1471), which regulates vessel traffic; and the Deepwater Port Act of 1974 (33 U.S.C. 1501 et seq.), which regulates construction and operation of deepwater ports.

The Fishery Conservation and Management Act established a 200-mile fishery conservation zone within which the United States has exclusive management authority over most fish and other fishery resources. The act, which is to be carried out through a series of regional fishery management plans to be developed and administered by regional fishery management councils, provides a mechanism for comprehensively regulating domestic and foreign fishing activities to protect designated fishery resources from being overharvested.

The Outer Continental Shelf Lands Act established a leasing program for exploring, developing, and producing OCS mineral resources, subject to environmental safeguards. The Secretary of the Interior has primary responsibility for managing OCS mineral resources and has delegated this authority to two of Interior's bureaus. The Bureau of Land Management has overall responsibility for leasing OCS lands, imposing special lease stipulations (which have been used in some potential marine sanctuary areas), and approving applications for pipeline rights-of-way. The U.S. Geological Survey is charged with approving plans for exploratory drilling and development, issuing supplemental regulations for particular regions, supervising OCS operations from both a technical and an environmental standpoint, and enforcing regulations and stipulations applicable to specific leases.

This law was substantially amended in 1978 to, among other things, strengthen environmental safeguards relating to OCS oil and gas activities. The amendments statutorily direct the Secretary to take a number of specific measures to insure the protection of the natural resources and environment in any area of the OCS where oil and gas activities are to occur. Some of the measures require that

--the Secretary conduct studies to assess and manage the environmental impacts of oil and gas activities on the human, marine, and coastal environments;

--lessees include a description of the environmental safeguards to be implemented, and an explanation of how they will be implemented, in the development and production plan they submit to the Secretary for approval; and

--the Secretary prescribe regulations providing for the suspension and cancellation of leases where continued activity would seriously or irreparably harm life, property, or the environment.

The Ports and Waterways Safety Act, which also was amended in 1978, in part to improve environmental protection, authorizes the Secretary of Transportation to control vessel traffic on the Nation's waters as necessary to promote navigation and vessel safety and to protect the marine environment. This authority is delegated to the Coast Guard and empowers it to establish safe shipping routes (traffic separation schemes and obstacle-free fairways) for vessels to use in proceeding to, from, and between U.S. ports. The Coast Guard also issues regulations governing the design, construction, and operation of tankers using U.S. ports to transfer oil and hazardous materials.

The Deepwater Port Act establishes Federal control over the location, ownership, construction, and operation of deepwater ports (structures for use as ports or terminals for loading or unloading and further handling of oil for transportation to any State, including pipelines, pumping stations, service platforms, etc.) in waters beyond the territorial limits of the United States, in part, to protect the marine environment. The act directs the Secretary of Transportation to prescribe regulations governing deepwater ports (and vessel operations within their vicinity) to prevent pollution of the marine environment, to clean up any pollutants that may be discharged, and to otherwise prevent or minimize any adverse environmental impact from the construction and operation of deepwater ports.

The main objective of another law--the Rivers and Harbors Act of 1899--is to protect navigation and maintain the navigable capacity of the Nation's waterways. Section 10 of this act (33 U.S.C. 403) makes it unlawful to build piers, bulkheads, or other types of structures or to do excavation, dredging, or fill work in the territorial sea and other U.S. waters without a permit from the Army Corps of Engineers. The Corps' authority was extended (by section 4(e) of the OCSLA) to also cover artificial islands, installations, or other devices

and structures attached to the OCS seabed. On lands leased under the OCSLA, the Corps leaves environmental considerations to Interior and issues permits based on an evaluation of the impact of the proposed construction work and structures on navigation and national security. The Corps is primarily concerned that OCS structures such as pipelines, platforms, drill ships, and semi-submersibles do not obstruct navigation or national security.

Regulation of discharges and dumping

Some laws protect the marine environment by prohibiting or restricting discharges and dumping into ocean and coastal waters and certain other waters. The oldest, section 13 of the Rivers and Harbors Act (33 U.S.C. 407), prohibits the discharge of refuse matter into U.S. navigable waters without a permit but does not apply to the ocean beyond the territorial sea. This provision is monitored by the Coast Guard. The more significant contemporary laws are discussed below.

The Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq.), commonly referred to as the Clean Water Act, established a program to restore and maintain the quality of the Nation's waters by regulating the discharge of pollutants from point sources (including vessels) into State waters, the contiguous zone, and the ocean beyond. The act established the National Pollutant Discharge Elimination System as the primary mechanism for regulating all pollutants except material transported for the express purpose of dumping at sea which is regulated by another law discussed below. This program, which requires a permit for discharges, is administered by EPA.

This act prohibits the discharge of harmful quantities of oil and hazardous substances, except for discharges outside the territorial sea permitted by the 1954 International Convention for the Prevention of Pollution of the Sea by Oil. When such discharges do occur, the National Contingency Plan for the removal and clean up of oil and hazardous substance discharges takes effect. The Coast Guard, in cooperation with EPA, administers the Plan which applies to discharges in the contiguous zone and activities under the OCSLA.

Title I of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1401 et seq.), regulates the dumping of materials by vessels and aircraft into ocean and coastal waters. This statute, commonly referred to as the Ocean Dumping Act,

applies only to materials that are on board a vessel or aircraft for the express purpose of dumping at sea. It specifically prohibits the dumping of radiological, chemical, or biological warfare agents and high-level radioactive wastes, and requires a Federal permit

--to transport any other material from the United States for the purpose of dumping into the territorial sea, contiguous zone, or ocean beyond and

--to dump any other material transported from outside the United States into the territorial sea or contiguous zone.

EPA is responsible for promulgating ocean dumping regulations, establishing criteria for reviewing and evaluating permit applications, issuing permits, and designating sites where materials (other than dredged materials) can be transported and dumped. The criteria must consider the full gamut of environmental impacts. The Corps is responsible for granting permits and approving sites where dredged materials can be transported and dumped. The Corps must apply EPA's criteria and, to the extent feasible, use EPA's recommended sites.

Some laws regulate specific types of discharges. For example, the Oil Pollution Act, 1961, (33 U.S.C. 1001 et seq.), which implements the agreements of the 1954 International Convention for the Prevention of Pollution of the Sea by Oil, restricts the amount of oil or oily mixtures allowed to be discharged from large vessels (tankers of 150 or more gross tons and other vessels of 500 or more gross tons) into the sea. This act also imposes certain construction standards upon tankers to protect against oil loss. Another example is the 1978 amendments to the OCSLA which contain a provision prohibiting oil discharges from offshore facilities or vessels in harmful quantities.

Regulation of wildlife taking

Some laws provide for the conservation and protection of certain species of wildlife and prohibit or restrict human actions that would cause them to be threatened or harmed. For example, the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) prohibits taking fish, wildlife, and plant species that the Secretaries of Commerce or the Interior designate

as endangered or threatened. The act defines the term "take" to mean harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in such conduct. Commerce's National Marine Fisheries Service (NMFS) is responsible, with certain exceptions, for determining which marine species need protection and Interior's Fish and Wildlife Service (FWS) is responsible for all other species. FWS maintains and publishes an official list of endangered and threatened species; species are added to the list or are delisted or reclassified when their statuses change.

Section 7 of this act also provides for the protection of endangered and threatened species and their designated critical habitats against actions involving Federal agencies. Before 1978, Federal agencies were precluded from authorizing, funding, or carrying out actions which would jeopardize the continued existence of endangered or threatened species or destroy or adversely modify their critical habitats. The act was amended in 1978 to establish a cabinet level committee with authority to grant an exemption from the section 7 protective provisions if it determines that the benefits of a Federal action outweigh the benefits of conserving a species or its critical habitat and that no reasonable and prudent alternatives to the Federal action exist. Section 7's protective provisions do not apply to State and private actions which might jeopardize endangered or threatened species or their critical habitats.

Another example is the Marine Mammal Protection Act of 1972 (16 U.S.C. 1361 et seq.), which places a moratorium on taking (harassing, hunting, capturing, or killing) any marine mammal without a permit from the Departments of Commerce or the Interior, depending on the species involved. Commerce's NMFS is responsible for the management and protection of whales, porpoises, dolphins, and pinnipeds other than walruses; Interior's FWS is responsible for walruses, otters, manatees, and other marine mammals. Special permits may be issued under certain circumstances, such as for taking mammals for scientific research or public display or for taking them incidentally during commercial fishing operations within the 200-mile fishery conservation zone.

This act calls for efforts to restore and maintain marine mammal populations at optimum sustainable population levels. The Secretaries of Commerce and the Interior may waive the moratorium on taking for particular species or populations of marine mammals under their jurisdiction provided that the species or population is at or above its determined optimum sustainable population.

Although there is no specific provision under the Marine Mammal Protection Act for protecting the habitats of marine mammals, section 1361 of the act calls for efforts to be made to protect the rookeries, mating grounds, and areas of similar significance for each species and states that the primary objective of marine mammal management should be to maintain the health and stability of the marine ecosystem. Since section 1373(a) directs the responsible Secretary to prescribe regulations consistent with section 1361's purposes and policies, it would appear that there is adequate authority under the act to promulgate regulations to protect mammal habitats.

The Fur Seal Act of 1966 (16 U.S.C. 1151 et seq.) is a third example of a wildlife protection law. This act restricts taking or possessing fur seals in the North Pacific Ocean or on lands or waters under the jurisdiction of the United States and taking sea otters on the high seas beyond U.S. territorial waters, except under certain circumstances as provided in the act or by regulations promulgated by the Secretary of Commerce.

UNITED STATES DEPARTMENT OF COMMERCE
Office of Inspector General
Washington, D.C. 20230

JAN 29 1981

Mr. Henry Eschwege
Director, Community and Economic
Development Division
U. S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Eschwege:

This is in reply to your letter of December 5, 1980, requesting comments on the draft report entitled "The Marine Sanctuaries Program -- A Useful Program For Protecting Designated Sanctuaries.

We have received the enclosed comments of the Administrator, National Oceanic and Atmospheric Administration for the Department of Commerce and believe they are responsive to the matters discussed in the report.

Sincerely,

Frederic A. Heim, Jr.
Acting Inspector General

Enclosure

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Washington, D.C. 20230

OFFICE OF THE ADMINISTRATOR

January 15, 1981

Mr. Henry Eschwege
Director
Community and Economic
Development Division
United States General
Accounting Office
Washington, D.C. 20548

Dear Mr. Eschwege:

I am pleased to submit the comments of the National Oceanic and Atmospheric Administration (NOAA) on the draft GAO report, "The Marine Sanctuaries Program--A Useful Program For Protecting Designated Sanctuaries." We believe the draft report accurately represents the goals and purposes of the national marine sanctuary program and correctly concludes that the program is a useful element of the Federal oceans program. In addition, we offer the following comments.

First, the draft report focuses on the regulatory benefits of the marine sanctuary program and concludes correctly that the program offers substantial, nonduplicative benefits in this area. We agree with the report's assessment in this point, but would like to stress what are in our view the equally important non-regulatory benefits of the program. These benefits include management-related monitoring and assessment, long-term research, public education, and increased surveillance and enforcement.

The goals and objectives for each sanctuary are tailored to ensure the long-term protection of the resources and to reflect the mission and goals of the sanctuary program. Sanctuary designation emphasizes the national importance of the area's resources. The program's focus is on providing coordinated management-related research programs which will lead to more effective implementation of existing management tools or design of new tools as may be necessary, broadening public understanding of the area's marine resources and impacts to those resources, and other onsite recreational and educational/interpretive opportunities. Techniques such as brochures and pamphlets, slide shows, and other informational aids describing the sanctuary are to be readily available. Where the resources permit, interpretive programs will be established with the aim of broadening the public's awareness and understanding of the marine resource values. The types of interpretive and recreational activities will be based on an analysis of the character of the natural resources and the public use value of the area.

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Long-term research and assessment is an essential function of comprehensive long-term sanctuary management. A five-year research plan, including short- and long-term research, will be developed for each sanctuary with appropriate public and government agency input. The research will be oriented toward generating information geared to promoting effective management decisions, as well as increasing our general understanding of marine ecosystems. NOAA intends to implement the research plan by providing funding, as possible, and by encouraging other funding sources to support related proposals. Designated sanctuaries provide excellent laboratories in which needed research--basic and management-related--can be encouraged. In particular, management-related research will be designed to address the potential effects of human activities on the resources with the aim of developing means of mitigating such impacts.

NOAA also seeks to enhance existing surveillance and enforcement activities and if necessary will institute additional enforcement efforts. Arrangements will be made to ensure effective enforcement. For example, in the proposed Looe Key Sanctuary, NOAA has initiated consultation at headquarters level with the U.S. Coast Guard to arrange for special surveillance attention to this high use site. An onsite enforcement presence will be provided. Surveillance activities will be designed on a site-specific basis to ensure adequate enforcement of sanctuary regulations even though consultations with law enforcement officials indicate that existence of a regulation alone--if effectively communicated to the public--will result in substantial public compliance. Activities subject to existing authorities, will be monitored to ensure they are consistent with sanctuary purposes. Activity use levels will be monitored over time to assess potential impacts on sanctuary resources. If monitoring/surveillance efforts indicate that an activity or a proposed activity is inconsistent with sanctuary purposes, or that an existing authority is not adequately protecting the resources, options up to and including NOAA regulation are available.

These non-regulatory aspects of the sanctuary program are essential elements of a comprehensive management framework and can themselves go a long way toward assuring long-term protection for special ocean resources. Indeed, in some cases sanctuary designation may be appropriate even if additional regulations are not necessary. The decision about the appropriate mix of management tools will be made in the context of individual management plans developed for each sanctuary.

In this respect designated sanctuaries under the national marine sanctuary program provide comprehensive management in a manner similar to that provided by the Department of the Interior's National Wildlife Refuge System. While within national wildlife refuges many laws protect our Nation's wildlife, the program provides for multiple use where compatible with the resources. Multiple uses within national

wildlife refuges include hunting, public grazing, picnicking, swimming, waterskiing, and commercial trapping. Within designated sanctuaries, compatible uses such as scuba and skin diving, recreational boating, certain types of recreational and commercial fishing, and various educational/interpretive programs are also allowed.

Second, the report notes in several places the potential limitation on sanctuary regulations posed by international law, but does not indicate that mechanisms are available to address this limitation should it be important in particular cases. In particular, section 302(c) of the Marine Protection, Research and Sanctuaries Act expressly provides for the Secretary of State to negotiate agreements with foreign governments where international protection is appropriate. In addition, existing international mechanisms can provide needed complementary protection for marine sanctuary sites. Approval of the International Maritime Consultative Organization (IMCO), for example, can be sought for considering the sanctuary an "area to be avoided" by international shipping under its Resolution A.378(x). We therefore do not believe that international law undercuts the utility of the marine sanctuaries program. Indeed, the marine sanctuaries program fits very well with growing international interest in programs designed to protect marine resources. NOAA has cooperated with several other countries with interest in or established programs similar to the marine sanctuaries program. We expect to continue efforts to work with other nations on protection and management of special marine areas.

Thank you for the opportunity to review this draft report. I trust these comments will be useful.

Sincerely yours,

George S. Benton
Associate Administrator

(082092)

REAUTHORIZATION OF TITLE III

MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT

MARINE SANCTUARIES PROGRAM

Written Testimony Presented by Mark J. Palmer, Regional Vice President for the Sierra Club for Northern California and Nevada

House Subcommittee on Oceanography
3577 House Annex 2
Washington, D.C. 20515

March 12, 1981

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REAUTHORIZATION OF TITLE III, MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT OF 1972; THE MARINE SANCTUARIES PROGRAM

by Mark J. Palmer, Regional Vice President
Sierra Club

History of the Marine Sanctuaries Program

I'd like to direct my remarks to the needs of the Program, in relation to the history of the Program -- a history of lack of funding, and now, when adequately funded, a history of opposition by special interests.

Since its inception in 1972, the Marine Sanctuaries' Program has been plagued by a lack of funds. The most noticiable deficiency of the Program has been the inadequacey of Sanctuary designations. Until 1981, almost eight years since the program's authorization, only two, relatively obscure Marine Sanctuaries were designated -- the historical iron-clad Monitor and a small coral reef off the coast of Florida. The Program was not fulfilling its congressional mandate because of a lack of funding.

Significant progress was made in 1981 with the designation of five new Marine Sanctuaries of significant resource value. Two off California -- The Channel Islands and the Point Reyes/Farallon Islands Marine Sanctuaries -- were controversial largely due to the bans on offshore oil development activities within the Sanctuary boundaries. Now these same oil development interests are attacking the Marine Sanctuaries Program in order to do away with the Program entirely or, at least, remove the existing and potential bans on oil activities within Sanctuaries.

It is critical that Congress (1) reaffirm their commitment to the Marine Sanctuaries Program by reauthorizing Title III of the Marine Protection, Research and Santuaries Act of 1972 without amendments; (2) adequately fund the Program; and (3) avoid any restrictions in the designation process, such as exempting oil and gas activities from the Marine Sanctuary designation and management process.

A Case In Point: The Point Reyes/Farallon Islands Marine Sanctuary

Just before leaving office, President Carter designated the waters offshore of Point Reyes National Seashore and encompassing the Farallon Islands National Wildlife Refuge as the Point Reyes/ Farallon Islands Marine Sanctuary. This action followed several years of study, public hearings, and environmental review by the Office of Marine Sanctuaries, which recommended the designation to the President. Opposition from oil companies was strong.

This unique oceanic ecosystem, lying north of the Golden

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Gate entrance to San Francisco Bay, possesses a rich abundance of marine life and scenic beauty, as well as development pressures necessitating the over-all management approach provided by the Marine Sanctuary designation.

The resource values can be summarized:

BIRDS:

-- Largest seabird nesting colonies in the contiguous United States.

-- Over half of all California's nesting seabirds.

-- Virtually entire world's population of Ashy Storm Petrel.

-- Largest single colony of Western Gull.

-- Habitat for endangered Peregrine Falcon and Brown Pelican.

MARINE MAMMALS:

-- 23 species of marine mammals use these waters, including 17 species of whales and dolphins.

-- World's entire population of the endangered Gray Whale transits these waters twice each year.

-- Endangered Blue and Humpback Whales sighted in area.

-- Elephant Seals, California Sea Lions, Stellar Sea Lions, and Harbor Seals use the islands and mainland.

-- Former habitat for the California Sea Otter.

FISH AND FISHERIES:

-- Area provides 100% of Bay Area's oyster catch.

-- Area provides 50% of Bay Area's salmon catch.

-- Area provides 40% of Bay Area's crab catch.

-- Bottom fishing, crab fishing, salmon trolling, albacore trolling, and pelagic fishing for anchovy and herring available for our local commercial fishing industry.

-- Sport and commercial fishing for Salmon, Northern Anchovy, Rockfish, and Flatfish.

-- Shellfish harvests include Oyster, Crab, Mud and Ghost Shrimp, Clams, and Mussels.

-- Mariculture for shellfish is common.

-- Nursery grounds for the Great White Shark.

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WILD LANDSCAPES

-- The rugged islands of the Farallons, a common goal of chartered cruises.

-- The spectacular cliffs and quiet bays of Point Reyes National Seashore.

Safe-guarding of these resources from pollution, scenic eye-sores, sea-bed construction, noise disturbance, and vessel traffic requires a number of intiatives which, without Marine Sanctuary status, are either absent or at best uncoordinated.

Protections afforded by Marine Sanctuary status include:

-- A program of integrated management including research, assessment, monitoring, education, long-term planning, coordination and regulation.

-- A prohibition on oil exploration and exploitation within Sanctuary boundaries.

-- Control over the laying of pipelines, including a 2 nautical mile buffer around certain sensitive areas (such as bird rookeries, etc.).

-- A prohibition on discharges, such as oil and chemicals, with exceptions for marine sanitation device effluents, vessel cooling waters, exhaust, deck wash, certain galley wastes, fish cleaning wastes, and chumming material (bait).

-- A prohibition on construction on or alteration of the seabed, with exceptions for specific dredging and other construction (by permit).

-- Operation of certain commercial vessels would be prohibited within 2 nautical miles of important wildlife habitats (Farallon Islands, Bolinas Lagoon, and Areas of Special Biological Significance). Exceptions include fishing, recreation, research, enforcement, or transportation of persons or supplies to the islands.

-- A prohibition on overflights lower than 1000 feet over sensitive bird and marine mammal colonies.

-- Sport and commercial fishing is encouraged -- Sanctuary regulations will protect the marine environment while management of fisheries will be left to traditional state and federal agencies.

-- The state of California, through the California Department of Fish and Game, will have responsibility for implementing the Marine Sanctuary management program and regulations.

From an over-all perspective, the Point Reyes/Farallon Islands area will benefit from protective regulations which will ensure the fishing industry, tourism, scenic beauty and the marine environment

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receive adequate consideration compatible with traditional economic uses of the waters of the Marine Sanctuary.

OIL DRILLING -- INCOMPATIBLE WITH THE POINT REYES/FARALLON ISLANDS MARINE SANCTUARY

Offshore oil drilling is simply incompatible with many of the resources Marine Sanctuaries are designed to protect. While a prohibition on oil drilling is not mandatory within Marine Sanctuaries (all regulations are recommended and implemented for Marine Sanctuaries on a case by case basis),in certain cases, such as the Point Reyes/ Farallon Islands Marine Sanctuary, the resources (as outlined on page 2 and 3) are clearly of superior value to the public and the existing local economies as compared to the relatively low value of oil extraction.

The Sierra Club has advocated the use of conservation and renewable energy resources as alternatives to destructive exploitation of fossil, non-renewable energy sources.

The inadequacey of the Bureau of Land Management's OCS leasing program in safe-guarding oceanic resources is now evident in the renewed consideration of the tracts of Lease Sale #53 off the northern California coast. Two of the Lease Sale #53 tracts lie partially within the boundary of the Point Reyes/Farallon Islands Marine Sanctuary. Secretary of Interior James Watt's capricious action in re-opening consideration of these tracts, which had been deleted from the Lease sale by former Secretary Andrus, illustrates the abuse possible in BLM's OCS program. Lease Sale #53 threatens the local fishing and tourism economies of Northern California; opposition by local legislators, the state of California, the public, and environmentalists is rampant; the ecology of this marine ecosystem may be seriously harmed -- yet, the Interior Department continues to move towards leasing in this sensitive area. The Marine Sanctuary program provides a balanced, reasoned approach to marine resource management in contrast to the single-purpose leasing program of the Department of the Interior.

In conclusion, it seems terribly short-sighted for Congress to actively dismantle the Marine Sanctuaries Program just at the time that this program is beginning to work to safe-guard our oceanic riches while providing for long-term economic benefits.

I urge Congress to:

-- REAUTHORIZE TITLE III OF THE MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT OF 1972 WITHOUT AMENDMENTS.

-- ENSURE CONTINUED AND ADEQUATE FUNDING FOR THE MARINE SANCTUARIES PROGRAM.

-- CONTINUE THE RESTRICTIONS, WHERE APPROPRIATE, ON OIL EXPLORATION AND DRILLING ACTIVITIES IN MARINE SANCTUARIES.

Thank you for your consideration.

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Testimony of Hideto Kono, Director
Department of Planning and Economic Development, State of Hawaii

on the

Reauthorization of Title III
of the
Marine Research, Protection and Sanctuaries Act of 1972

before the

Subcommittee on Oceanography

and the

Subcommittee on Fisheries and Wildlife Conservation and the Environment

of the

House Merchant Marine and Fisheries Committee
U.S. House of Representatives

March 12, 1981

Chairmen D'Amours and Breaux and Members of the Committees, on behalf of the State of Hawaii, I wish to thank you for this opportunity to testify on the Marine Sanctuaries Program which is administered by the National Oceanic and Atmospheric Administration's (NOAA) Office of Coastal Zone Management (OCZM).

The Marine Sanctuaries Program, authorized under Title III of the Marine Protection, Research and Sanctuaries Act of 1972, as amended, as passed by Congress for the purpose of preserving or restoring the conservational, recreational, ecological or aesthetic values of designated oceanic waters is a worthy objective of the Congress. To date, NOAA has designated six marine sanctuaries with another seven sites, including a nomination for Hawaii in the active candidate stage.

This is a significant accomplishment to date and the OCZM is to be commended for its efforts in carrying out the objectives set forth by the Congressional concern to protect our nation's marine environment and resources. Moreover, in working with the State to implement this program, the flexibility afforded by OCZM in terms of developing "tailor-made" management programs to meet the protective, research and/or educational needs for each individual sanctuary has enhanced the integrity of the Marine Sanctuaries Program in the eyes of the affected States.

As previously mentioned, the OCZM is currently reviewing a marine sanctuary nomination for Hawaii. The purpose of this particular proposal is for the protection and preservation of the endangered humpback whale. It has received a great deal of publicity and public support from all over the world. Inasmuch as such a sanctuary would include waters which are under the jurisdiction of the State of Hawaii, this proposal therefore, is, of course, under close State, County and public scrutiny.

During our preliminary deliberations on this matter, concerns have been expressed on additional rules and regulations which may interfere with existing boating and fishing activities. In addition, on-going and proposed activities such as harbor development and expansion, possible waterborne interisland transportation services, OTEC energy installations, and fish aggregating buoys are also seen as potentail conflicts with a marine sanctuary.

In response to these concerns, OCZM has indicated that additional rules and regulations would not be instituted as part of the proposed National Marine Sanctuary. The designation and management regime would be based upon existing laws (anti-harassment regulations) which are now being enforced by the National Marine Fisheries Services (NMFS) and therefore,

on-going and proposed activities should not be adversely affected by a sanctuary designation. OCZM believes that the establishment of such a sanctuary would serve to focus on the educational, research, and public awareness components of this important management program.

In view of these approaches and considerations by OCZM, we are encouraged by the feeling that the sanctuaries program will emphasize a strong Federal-State partnership with maximum State participation. We are cautiously optimistic that a mutually agreeable National Marine Sanctuary can be established which will better enhance the preservation and awareness of the humpback whale. And if the State should be assigned any monitoring or enforcement functions of the proposed sanctuary, we believe the State should be reimbursed for the expenses incurred. Although the State of Hawaii has not as yet taken a formal position on the proposal until documents of existing sanctuaries are reviewed and all foreseeable management options are further analyzed and clearly understood, we look forward to continuing to work with OCZM in arriving at a mutually acceptable solution which maximizes the protection of this important endangered species within such a framework as the Marine Sanctuaries program.

In conclusion, we recognize the national significance of the reauthorization of Title III of the Marine Protection, Research and Sanctuaries Act, and believe that the National Marine Sanctuaries Program is deserving of full and continuing Congressional support.

NATIONAL FISHERIES INSTITUTE, INC.

1101 CONNECTICUT AVENUE, N W ■ WASHINGTON D C 20036 ■ (202) 857-1110

March 10, 1981

Honorable Norman D'Amours
3577 House Office Building
Annex II
Washington, D.C. 20515

Dear Mr. Chairman:

The National Fisheries Institute, a National Trade Association representing more than 1,000 member companies which harvest, process and distribute fish, seafood and marine products, is pleased to provide comments on pending legislation to extend Title III of the Marine Protection, Research and Sanctuaries Act of 1972 (16 U.S.C. 1432 as amended). The Institute testified last year before the Subcommittees and expressed concern with the role of the Marine Sanctuary program, with particular emphasis on the ability of the sanctuary managers to supercede professional fisheries management by the states or the regional fishery management councils.

As I indicated in our earlier testimony the legislative history of the Marine Sanctuaries Act is limited. It was passed at the time when other statutes dealing with the protection of the marine environment and wildlife resources had not been enacted of if enacted, the regulatory regimes had not been permanently established. In view of this sketchy legislative history, the Institute is concerned that increased activity under the previous Administration had resulted in an environmental focus for the program. This focus makes it easier to visualize a regime under which other ocean uses will not be easily accommodated. In view of the extensive regulatory authority granted the Federal government under the Marine Sanctuary Act, the Institute believes that NOAA should be required to carefully analyze whether other Federal law and regulations provide a basis for the coordinated management, conservation and development of ocean resources.

For this reason, the Institute supported in concept, an amendment which would require the Secretary to determine the relative values of specific criteria to be considered prior to the designation of a sanctuary. The amendment further provided that the Secretary shall not designate any such area if he determines that the coordination

of existing regulatory authorities will provide protection for such area commensurate with that available under a sanctuary designation. We believe the adoption of such an amendment would define the scope of the marine sanctuary program and encourage the more affective administration of existing Federal and state programs.

Amendments adopted by the Congress last year limit Federal regulations within a sanctuary to activities listed in the designation document and the committee report provides guidance to the Secretary that his office "in exercising the authority under Title III shall avoid duplicative authority and additional layers of beaucracy where existing law and regulations provide sufficient protection." Unfortunately, subsequent to the Congressional action, the Office of Coastal Zone Management issued the designation and final regulations for the Looe Key Marine Sanctuary which specifically provides for the regulation of fishing in a manner different than proposed by regional councils under the Magnuson Fishery Conservation and Management Act. It would appear that with adequate coordination between the components of NOAA responsible for implementing the Fishery Conservation and Management Act and the Marine Sanctuary Act, it should have been possible to defer to the councils with respect to the regulation of fishing activities.

Mr. Chairman, recent actions by the Reagan Administration with respect to regulatory reform and budgetary constraints provides hope that the Administration will carefully review the Marine Sanctuaries program and chart a course which will prevent the use of the Marine Sanctuary concept as a tool for regulating activties for which it was not intended.

Mr. Chairman, I've appreciated the opportunity to transmit the Institute's concern regarding the administration of the Marine Sanctuary program. Your consideration of our position is appreciated.

Sincerely,

Gustave Fritschie
Director of Government
Relations

cc: Rep. John Breaux
Rep. Edwin Forsythe
Rep. Joel Pritchard

FRIENDS OF THE EARTH

530 7TH STREET, S.E., WASHINGTON, D.C. 20003
(202) 543-4313

STATEMENT BY FRIENDS OF THE EARTH
ON REAUTHORIZATION OF
THE MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT
March 16, 1981
PRESENTED TO THE SUBCOMMITTEES ON
OCEANOGRAPHY AND FISHERIES AND WILDLIFE

BY ELIZABETH KAPLAN
LEGISLATIVE DIRECTOR

Friends of the Earth herewith submits comments on the reauthorization of the Marine Protection, Research and Sanctuaries Act of 1972. Friends of the Earth is a national and international conservation organization with approximately 25,000 members in the United States. The marine sanctuaries program has been an extremely important environmental program in recent years, and we strongly endorse its reauthorization with no amendments.

Nine years ago the Congress passed the Marine Sanctuaries Act because of serious concerns about the rapid deterioration of the quality of our oceans due to increased uses by human beings. Increased discharges of oil, sewage and toxic wastes into the oceans was causing problems of alarming proportions in some off-shore areas. The long-held belief that the ocean is an inexhaustible, self-cleaning receptacle for human waste was recognized as a fallacy, and the Congress passed the Marine Sanctuaries Act to provide some measure protection for the great source of all life on earth.

We support all three titles of this Act, but we are most concerned about the political controversy that has arisen over Title III, the sanctuaries title of the Act. When Congress passed this title, it did so with the view that some areas of the ocean are so unique, so biologically important, so fragile and vulnerable that they need special management. It gave the Executive branch discretion over what should be managed and how in each chosen area. This Title was passed with the same concerns that gave birth to the system of national parks and wildlife refuges that we are so proud of. It is difficult to imagine that human activities have grown so vast that even the oceans need to be protected from us, but by 1972 the evidence was in--some areas of the ocean were dying of pollution, some were being robbed of unique coral and fish species, and something had to be done.

Not until the Carter Administration did the program begin to fulfill the intent of Congress. During the first eight years of its existence, only two small sanctuaries were designated. But under the Cater Administration for the first time the program developed a process for evaluating sanctuary nominations, setting priorities, gathering sufficient scientific information to evaluate areas, and working closely with state and local jurisdictions as well as public interest groups. Four nominations completed this process during the Carter years and were given final designation during the last year of his Administration.

Rightfully criticized some years ago for failing to develop a justifiable process for sanctuary designations, the program has made remarkable progress during the last four years in this areas. A rational system is in place for evaluating nominations now, and although some refinements are needed, the system is working remarkably well. The important fact is that this program has matured under the Carter Administration with a careful scientific analysis done on each of the four designations to evaluate its appropriateness for inclusion in the sanctuary system. In addition this program has become a model among federal programs for successful federal, state and citizen cooperation.

What appears to be happening is that the program is coming under attack for doing its job too well. Overwhelming state and local support for the two California sanctuaries at Point Reyes and Santa Barbara interfered with the energy industry's desire to retain unlimited access to the Outer Continental Shelf. We question whether any national priority, even one as undeniably important as attainment of greater energy self-sufficiency, can be blindly pursued at the expense of other very important values. We question whether a serious case can be made for risking the future viability of some of the West Coast's most critical wildlife and fish habitat for admittedly very poor to mediocre energy supplies in a tiny fraction of the sanctuary area.

The energy industry is exaggerating the dangers of the sanctuary program. It has not "Locked up" the oceans, nor did the Carter Administration make any moves to do so. We can expect that the Reagan Administration will move even more cautiously in designating sanctuaries. Two sanctuary nominations under Carter that conservationists view as extremely important to the survival

of uniquely valuable habitats were never pursued by his Administration, the proposals for the Beaufort Sea and Georges Bank. This failure was due to the Carter Administration's priority on energy development, which conflicted with the other values in these areas.

The real question is whether we are willing to sacrifice any area of the ocean to potentially catastrophic oil spills no matter how rich the other natural resources of the area are. The Carter Administration came very close to endorsing this concept when it proposed leasing the entire coast of Alaska for exploration in the next five years despite the incredible weather conditions and lack of technology to deal with shifting ice in many of these areas.

We suggest that the energy companies first explore and develop the areas for which leases have been given before we establish the principle that energy exploration takes precedent over protecting valuable areas on the OCS. We challenge the industry to show that it has the capacity to develop its present leases. Former Secretary Andrus expressed considerable irritation at the energy companies' tendency to demand more and more areas to lease when they had done so little to explore the leases they hold.

In the meantime, we urge this Committee to reauthorize the Marine Sanctuary Act as a vitally needed law dedicated to protecting those ocean areas which are so special that we cannot afford to destroy them.

STATEMENT

of

Rezneat M. Darnell, Ph.D.
900 Gilchrist
College Station, TX 77840

to the

Subcommittee on Oceanography

and the

Subcommittee on Fisheries and Wildlife Conservation and the Environment

of the

House Committee on Merchant Marine and Fisheries

concerning reauthorization of the

MARINE SANCTUARIES PROGRAM,

Title III of the MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT

80-338 O - 81 pt.1 - 20

Introduction

My authority to address the issue of Marine Sanctuaries stems from graduate degrees in both genetics and ecology, from the experience of thirty years of university teaching and research in environmental areas, and from specific familiarity with the continental shelves of the Nation. It also derives from twenty years of experience in the identification and preservation of critical environmental areas. For several years I served as Director of the Scientific Areas Preservation Council of the State of Wisconsin, and under the aegis of the National Academy of Sciences, I served as Chairman of the Conservation of Ecosystems Program (of the U.S. International Biological Program) dedicated to the location and preservation of critical environmental areas throughout the United States. I have been in close touch with the Marine Sanctuaries Program since its inception, and I was co-nominator of the Key Largo Coral Reef Marine Sanctuary.

The thrust of my argument is twofold: a) Marine sanctuaries are essential to the long-range protection of the genetic and ecological resources of the continental shelves, and b) the Marine Sanctuaries Program must develop the concept of a clearly definable System of Marine Sanctuaries which, when complete, will in fact, preserve the living resources of the shelf. Thus, each individual sanctuary would fulfill a specific essential role in the whole operative system.

Marine sanctuaries should be established for the protection of specific biological resources and features of value to society, resources and features which would likely be in jeopardy if active protective measures were not instituted. Marine sanctuaries should be managed

under the policy that other human uses are permitted to the extent that they are compatible with the primary purposes for which the sanctuaries are established.

Human Intrusion into the Shelf Environment

In a recent report which I prepared for the Office of Marine Pollution Assessment of NOAA it was indicated that the forthcoming decade will be marked by massive human intrusion into the environment of the continental shelf.[1] Coastalization of population and industry, accelerated exploitation of energy and other marine resources, sharp increase in coastal shipping, and elevated levels of pollution all presage major deterioration of the shelf environment.

As civilization destroys its own resource base and fouls its own nest, all reflective people must contemplate the future with apprehension. What must be saved and what can be saved to make tomorrow both possible and worthwhile? Specifically, what environmental values must be protected to support the civilization of the future? A critical part of the answer lies in the preservation of a healthy representation of the native ecosystems of the world, and the sooner we move ahead the better the chance of actually preserving the environmental values which society will need.[2]

Nature has invested millions of years in evolutionary research and development with the result that each native ecosystem is in biological equilibrium with the prevailing climatic, hydrographic, and geologic features of the local environment. It is axiomatic that human intrusion disturbs the natural equilibrium, and experience has shown that the

result is almost always species extinction and simplification of the biological systems. The loss of genetic races and whole species populations will preclude their use by all future human generations. However, since we are unable to predict which populations and species will be needed, the present course of wisdom is to preserve intact representatives of each type of ecosystem in its most complex and near-natural state.

Marine species often display complex patterns of life history in which different stages of a given species may be passed in entirely different habitat types. Spawning takes place in one area, larvae move through another, juveniles mature in a nursery area elsewhere, and the adults must make their way back to the spawning grounds. The life history can be interrupted at numerous points, and because of our incomplete understanding, we cannot really determine the cause of trouble when the catch fails. Sanctuaries which embrace spawning grounds, migratory routes, and nursery areas certainly increase the chances for perpetuating critical marine species.

Practical Values of Marine Sanctuaries

The argument for retention of undisturbed areas of the sea must ultimately rest upon practical values in terms of the present and future needs of society. These values are discussed briefly herewith.

Retention of wild genetic stocks - Natural ecosystems are veritable storehouses of genetic material, all of which is of potential utility for humans. All of our domestic plant and animal species were integral parts of natural ecosystems at the dawn of civilization. Many of the wild progenitors or their close relatives still exist in nature, and in

the case of terrestrial species many of the wild relatives are already being used to improve the genetic strains of domestic species. Disease resistance, higher production, and greater nutritional value are only a few of the desirable qualities which may be bred into domestic species from wild stocks. As our capabilities for genetic engineering increase, it is becoming possible to produce totally new and useful forms of plants and animals. Considering the industrial, pharmaceutical, and agricultural products already being derived from plants and animals, it is obvious that many additional types of useful products may be developed in the future through sophisticated genetic manipulation if the raw materials are still available.

We are only beginning to look at the possibilities of domesticating marine species and making their products available to society. Yet, their potential contribution in terms of food, pharmaceuticals, and other products is already considered to be quite significant. Marine sanctuaries offer the best hope of retaining the diverse species arrays which will provide the genetic raw materials for the needs of the next human generation.

Basis for resource management strategies - In a very practical sense, one cannot preserve alligators, one must preserve swamps. One cannot preserve whooping cranes, one must preserve marshes and nesting areas. One cannot preserve shrimp, one must preserve the quality of marine spawning grounds, migratory routes, and estuarine nursery areas. Ecosystem preservation is the key to successful management of non-domesticated species of commercial, recreational, and esthetic value. Interesting, valuable, rare, and endangered species all exist as integral parts of wild systems, and system maintenance is critical to their health

and survival. Biological resource management strategies must be built around the concept of ecosystem maintenance if such strategies are to be both successful and economical in the long run.

Role in maintenance of environmental quality - Natural areas play two vital roles in our efforts to maintain the quality of the environment. In the first place, they serve as a network of highly sensitive environmental quality monitoring sites which can provide information on subtle and long-term environmental changes. This is so because the most sensitive indicators of environmental quality are the responses of the organisms themselves. Biological indicator species can alert us to environmental deterioration often in advance of chemical tests. In the second place, the sanctuaries may serve as controls for comparison with more heavily utilized sites elsewhere. Such comparison serves as an early warning system of excessive environmental damage in the exploited areas.

Role in protection of major ecosystem values - It is now quite widely recognized that natural ecosystems tend to stabilize otherwise destructive forces of nature. On land they create soils, prevent erosion, retard surface runoff, recharge subsurface aquifers, etc. In the oceans they may retard wave erosion of shorelines, store nutrients against loss to the deep sea, stabilize bottoms, etc. We are still lacking much knowledge about the functioning of marine systems, but we do know enough to realize that they are of great significance in protecting coastlines and continental shelf environments from the loss of values important to society.

Theoretical and scientific values - Sanctuaries and other natural area reserves provide natural laboratories for long-term scientific investigation of ecological processes. Such studies cannot be carried out on areas subject to constant intrusion or on areas in which the

systems have been greatly simplified as a result of disturbance. If we admit that scientific knowledge of how the shelf systems function is of importance to society, then we must also admit the value of establishing undisturbed study sites so that the investigations can be carried out without interference. Since much of the underwater research is carried out by a professor and his graduate students, such areas also become extremely valuable for higher education in the marine sciences.

Toward a National System of Marine Sanctuaries

It was earlier mentioned that the Marine Sanctuaries Program must develop a clear concept of a National Marine Sanctuary System, and this point merits elaboration. In the State of Wisconsin the Scientific Areas Preservation Council is working to preserve high quality representatives of each of its native ecosystem types as well as additional areas which appear to be of particular significance to the fauna and flora. Persistence throughout the past three decades has put Wisconsin near its goal, and when completed the System will encompass the native species and ecosystems, that is, it will protect the genetic and ecological endowment of the State. Over half the states of the Nation have similar or related programs. In such systems each new natural area acquisition must fit a predetermined need. It must constitute a perceived requirement in terms of the integrated whole.

Sanctuary needs for an integrated marine reserve system cannot be quite so easily defined, *a priori*. However, they can be defined in general terms which will permit some vision of the total desired size of the system as well as permitting definition of priorities in sanctuary designation, determination of adequate size and buffer area requirements,

and management objectives for designated sites. One simply cannot proceed on an ad hoc or haphazard basis and expect to establish an integrated system which will protect national values of the continental shelf. Essential to the development of the full system are three initial steps: 1) adoption of a classification system detailing the biological and ecological area types to be included in the final system, 2) development of an objective means of scaling individual areas in terms of their worth and value in relation to the needs of the system, and 3) establishment of a clear and understandable method of prioritizing areas for sanctuary designation, given the practical limitations of time, funds, and knowledge base. Thus, the Marine Sanctuaries Program should get on with its activities in business-like fashion by establishing goals and methodologies and then developing the means of achieving these goals.

Conclusion

The Marine Sanctuaries Program has the potential for performing a major service to society. A well conceived and carefully implemented program would go a long way towards preserving biological and ecological resources of the continental shelf even in the face of massive technological intrusion. However, the program will be successful only to the extent that it can develop clear goals, avail itself of the necessary scientific expertise, establish a workable modus operandi, and call upon the necessary financial resources.

The Marine Sanctuaries Program is critical because it alone, of all the federal agencies, has a clearly defined mission to carry out the necessary protective measures. Individual states, of course, cannot protect areas beyond the limits of their boundaries. This leaves the

Marine Sanctuaries Program as the only hope for real protection of biological and ecological resource values on the vast expanses of the continental shelf.

"When, in the course of human history, mankind is confronted with a train of crises which, if unresolved, will lead rapidly and unfailingly to progressive deterioration in the quality of human life, a decent respect to the rights of unborn generations compels examination of the basic causes of the crises, elaboration of courses of remedial action, and definition of the fundamental constraints under which society must thereafter be governed if it is to enjoy the good life in perpetuity..... As a matter of individual and collective conscience man must realize that he cannot go it alone; that he must evolve from a consumer to a preserver society. Our generation shall either accept the challenge of redirecting the calamitous course of history or our wretched descendents shall thereafter hold us responsible for failure to do so."[3]

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3. A Declaration of Dependence. BioScience, Sept. 1, 1970. p. 945. R. M. Darnell.

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE DEPARTMENT
STATE HOUSE • BOSTON 02133

EDWARD J KING
GOVERNOR

March 25, 1981

Congressman Norman E. D'Amours
Chairman, House Oceanographic Sub-Committee
2242 Rayburn Building
Washington, D.C. 20515

Re: Marine Sanctuary Program

Dear Congressman D'Amours:

I am writing this letter to indicate my strong support for the reauthorization of the Marine Sanctuaries Program (Title III of the Marine Protection, Research and Sanctuaries Act).

There are several features of this program that make it particularly attractive to Massachusetts. These include:

- The goal of the program is protection through management rather than prohibition. Unlike most marine environmental legislation which focuses on specific activities, impacts or species, Marine Sanctuaries provide for a mixture of useage that protects economic and recreational interests as well as natural resources. The area management concept makes this program unique and prevents it from being merely a duplication of other legislation.

- The management plan can be tailored to the special site values of the particular resource area rather than trying to apply broad-based regulations, designed for wide interests, that may not apply in the specific situation. It further provides for an overall management perspective for federal or state agencies having regulatory authority in the area.

- Of special significance is the program's ability to protect marine environments of a special and unique nature; a very useful management tool.

- Included in the program are incentives for research into various aspects of the Sanctuary and its useage to provide greater insight into the relationships among man, resources and the ecosystem.

- Public awareness of the resources of the Sanctuary is fostered through the development of educational and interpretive programs. Alerting our citizens to the values of such areas greatly aides in their protection.

- The enhanced surveillance and monitoring of conditions and activities in the Sanctuary along with the designation of a site manager serve to assure that the plan and protective devices will be implemented.

- The designation process allows for considerable input all along the way from private citizens, interest groups and government agencies to develop a sanctuary program responsive to the needs of the resources and the people.

As you are probably aware, Massachusetts is presently involved in the designation process for portions of Nantucket Sound as a Marine Sanctuary. We look forward to the continuation of this process and the program.

Sincerely,

Edward J. King

Edward J. King
Governor

EJK:EJR/msa

NATIONAL SEA GRANT PROGRAM PROPOSED BUDGET

MONDAY, MARCH 30, 1981

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON OCEANOGRAPHY,
COMMITTEE ON MERCHANT MARINE AND FISHERIES,
Washington, D.C.

The subcommittee met, pursuant to call, in room 1334, Longworth House Office Building, commencing at 1:07 p.m., Hon. Norman E. D'Amours (chairman of the subcommittee) presiding.

Present: Representatives D'Amours, Pritchard, Hughes, Studds, Oberstar, Carney and Schneider.

Staff Present: Howard Gaines, Darrell Brown, Mary Pat Barrett and Pamela Phillips.

Mr. D'AMOURS. Good afternoon. The Subcommittee on Oceanography will come to order. Today's hearing of the subcommittee concerns the administration's proposed budget for the national sea grant program. Witnesses include representatives from the administration, a panel of sea grant college program directors, and a panel of business representatives that have used the services of sea grant.

As I think everybody in this room knows, the sea grant program was created in 1966 to expand our base of marine scientists, technicians and specialists. The program meets its goals and objectives with a tripartite program of research, education and advisory services.

Educational programs have been developed for grade school through high school-age students. Programs have been developed to train technical personnel for industry and funds have also been used to develop and strengthen college and graduate programs in the marine area.

I support the President's call to reduce expenditures, but frankly I am confounded by the logic of the administration in proposing to abolish sea grant because the President is calling for equitable reductions across the board and for the elimination of waste, fraud and fat, et cetera, from our Government's budgets. However, the administration's sea grant proposal is not an equitable reduction for sea grant. Instead it calls for the elimination of sea grant. Sea grant is not full of waste and fraud; it has returned positive benefits to our Nation.

As a matter of reference, the Heritage Foundation strongly supports sea grant. The Heritage Foundation has reported, "Sea grant has an impressive record of success, primarily because it is based largely on local priorities and needs. Sea grant funding should be

increased by 10 percent per year in real terms for the next 5 years."

Our committee has recommended to the Budget Committee that sea grant be level funded at $38.8 million for fiscal year 1982. When inflation is taken into account, this amounts to an actual budget decrease.

The members here today and other members of Congress will be interested in the testimony by Dr. Robert Corell of the University of New Hampshire. Dr. Corell chaired a task force that recently evaluated the impact of sea grant activities on the U.S. economy. The task force provided several specific examples of how sea grant has met local, State, regional and national needs. The most impressive finding to me was that sea grant provided $217 million on a yearly basis in economic returns to the United States. This is an impressive figure, especially since total Federal expenditures to sea grant have only been $270 million over the entire history of the program.

I am deeply concerned, as many others are, that the administration is proposing the elimination of a resource development program. Sea grant is a valuable program that returns positive benefits to industries, our economy, and our next generation of marine scientists and marine resource managers, and the many people that use and enjoy our coastal resources.

The hour is late and I would like now to get moving with the testimony by recognizing any other members of this subcommittee who might have opening statements.

I would like to first ask unanimous consent that the testimony of the Hon. Joseph Moakley, a Member of Congress from the State of Massachusetts, be printed in the record as also will the testimony of Peter Orahovats, the vice president and scientific director of Bristol-Myers Products, which very interestingly highlights some of the marine biomedical research which sea grant has supported at several major universities.

Without objection, those statements will be entered for the record.

[The statements follow:]

STATEMENT OF HON. JOHN JOSEPH MOAKLEY, A MEMBER IN CONGRESS FROM THE STATE OF MASSACHUSETTS

Mr. Chairman, members of the subcommittee. I wish to thank you for the opportunity to submit this testimony to your Subcommittee today in support of the Sea Grant Program. It is my belief that the Administration's efforts to reduce outlays to the Sea Grant Program by 50 percent is simply another case in which the Administration's budgetcutters have taken the ax to a valuable and worthwhile program without understanding how it operates, its benefits and costs, or why it is necessary that we maintain federal support for the program. Basically, the decision is not economically sound.

According to figures which were compiled by the Ad Hoc Sea Grant Task Force, the total cost of the Sea Grant Program, since its inception in 1966, has been approximately $270 million. The Task Force estimates of direct benefits to industry from the program have been approximately $217 million per year. The cost of the total program, over 13 years, is being made up annually by the direct benefits. Certainly this is the type of response which we in government should be applauding rather than penalizing.

I realize, however, that proven cost/benefit effectiveness is not enough justification for the continuation of a multi-million dollar Federal program. Federal programs must demonstrate a substantial positive impact on society. They must also fill a gap which the private sector has either been unwilling or unable to fill.

During my tenure in Congress, I have had the opportunity to follow the progress of the Sea Grant Program carefully. The Massachusetts Institute of Technology Sea Grant Program, which is shared between my district and that of the Honorable Speaker, Thomas P. O'Neill, has demonstrated its ability to both improve the industries which utilize the ocean's resources and to assist in protecting the fragile coastal waters. To my constituents, many of whom derive their livelihood from the Georges Bank fishing grounds and others which find their most enjoyable leisure on the ocean beaches or sailing along the Massachusetts coastline, programs like the Sea Grant Program are not wasteful Federal spending, but rather, an important tool to preserve their traditional livelihoods and lifestyles. I might add that the Coastal Zone Management programs and the State Planning programs, which have also been targeted by the Administration, receive wide support as well.

To illustrate how beneficial and necessary this program is, I wish to draw on several MIT projects as examples of the financial and social benefits which have been derived. These examples clearly illustrate that the Sea Grant Program is not simply for the coastline states, but rather that the nation as a whole benfits from its research.

In 1973, the MIT Sea Grant Program did an economic and environmental impact analysis of petroleum development on Georges Bank which was used as a basic reference in the Georges Bank controversy. The same research team was later chosen to make a similiar analysis for the entire East Coast Continental Shelf area and for the Gulf of Alaska. The oil transport and dispersion model, developed by this research team, became the basis of the current U.S. Coast Guard oil spill tracking model.

In the President's Program for Economic Recovery, the President states that "states and localities should assume responsibility for those NOAA programs from which they directly benefit." This is clearly not the case in the above example. It was not the Commonwealth of Massachusetts decision to undertake leasing on Georges Bank, but rather, the Department of the Interior who authorized the lease sale. The Commonwealth, on the other hand, attempted to block oil development because of the adverse impact which oil development may have on the fishing industry.

It is a national energy crisis, not a Massachusetts crisis, which is requiring the development of Georges Bank. Certainly it is unfair to place the responsibility for this type of research solely on the shoulders of New England. The Federal government has both a need and a responsibility to be an active participant in research which will effect the livelihood and well being of the citizens of New England especially when the threat to that lifestyle is the result of a Federal action.

Other examples of worthwhile projects which have been undertaken by the MIT program and which have national and international benefits include:

A hydrodynamic model for Massachusetts Bay to assess the impact, transport and dispersion of natural and man-made inputs on that and other semi-enclosed bodies of water. This model was used to study the impact of cooling water discharge from Boston Edison's nuclear power plant and resulted in saving projected construction costs of about $30,000,000. The model has since been used in Biscayne Bay, Florida; Narragansett Bay, Rhode Island; San Fransisco Bay, California; Great Bay, New Hampshire; Alaska; Austrialia; and Japan.

High risk research studies investigating new techniques to detect flaws or failures in offshore structures resulted in the development of systems and procedures to detune offshore platforms from the ocean environment.

The successful development and demonstration of a prototype, automatic processing machine for dogfish which was truly a world first and something which industry had been unable to develop.

These are only some of the many projects carried out by MIT and other Sea Grant universities. It is clear that they offer this country many important benefits and will play an ever increasing role as we continue to develop the oceans for additional food, resources, and recreation. The oceans are a unique part of our environment which offer great potential but which we know very little. To understand their workings, and to have the foresight not to make the same types of mistakes which we have made with our land, we must continue to strive to learn all we can about their ecosystems.

I wish to conclude my remarks with one final example of the benefits which have been derived from the Sea Grant program. For this example I draw upon research which was done in Minnesota—far away from our ocean coastlines. The purpose of the research was to reduce the loss of lives resulting from cold-water drownings.

As we know, in the Northern waters, those of much of the United States during the Winter months, the loss of life from drowning is often caused by hypothermia. Even experienced swimmers cannot control the loss of body heat which literally

reduces the temperature of the body core below the point necessary to protect the vital organs. When the temperature drops, even a few degress, the body can no longer sustain life.

The Sea Grant Program studied the temperature regulations of humans in cold-water environments and, in partnership with industry, designed new kinds of personal flotation devices that minimize body temperature loss. This program has stimulated production of three new lines of personal flotation devices and thermal suits grossing $15,000,000 in 1980. Regardless of the economic benefits of the project, the saving of even one human life is clearly worth the expenditure. My guess is that these new devices will save many lives and that the economic benefits from this type of research cannot be measured in monetary terms.

Mr. Chairman, I support the Sea Grant program as an economically sound Federal expenditure which obviously has national purpose. I urge your support for this program as well.

Thank you.

STATEMENT OF PETER ORAHOVATS, VICE PRESIDENT AND SCIENTIFIC DIRECTOR, BRISTOL-MYERS PRODUCTS

THE SIGNIFICANCE AND NATIONAL IMPORTANCE OF SEA GRANT-SPONSORED BIOMEDICAL RESEARCH

I wish to submit the following testimony for your consideration in reviewing the funding of the Department of Commerce-Sea Grant program. My comments are in particular reference to the very innovative and highly productive marine biomedical research which Sea Grant supports at several major universities. Considering the obvious benefits to our pharmaceutical industries, and the inherent virtues in the development of our National marine resources, I strongly recommend continued funding for the Sea Grant Program. The following brief synopis should provide a clear picture of the many rewards received in comparison to the modest funding of this worthwhile research program.

For several years the Sea Grant Program has provided grant support for the exploration and development of maring biomedical resources. Being part of the Department of Commerce, this program has emphasized the development of nonutilized marine resources through the close collaboration of university researchers with industrial scientists. While several areas of medical importance have been investigated in this program, a major emphasis has been placed upon the investigation of marine plants and animals for the isolation of new medicinal agents useful in the treatment of human disease. As ailments such as cancer, cardiovascular disease, and resistant bacterial and viral infections increase in importance, the necessity to explore new sources for safe and effective drugs cannot be over-emphasized.

The Sea Grant Program has evolved as a unique blending of academic and industrial collaboration not equaled in other U.S. granting institutions. Biomedical Sea Grants currently exist at the Universities of California, Rhode Island, Oklahoma, Washington, Delaware, Maine, New Hampshire, and South Carolina, as well as Texas A & M University and the Massachusetts Institute of Technology. Each of these projects is based upon interaction with an industrial counterpart involving such companies as Merck, Sharpe, and Dohme Laboratories, E. I. Dupont Company, Syntex Research, G. D. Searle Company, and Eli Lilly Laboratories.

I am most acquainted with the University of California project at the Santa Barbara campus. As I am familiar with this program, I can summarize some of their notable achievements. An unusually large number of new drug candidates has been isolated by the California group, and their productivity perhaps illustrates the biomedical potential of marine organisms. Among their discoveries is a novel new analgesic/anti-inflammatory substance which is more potent than Indomethacin, and which could be highly useful in treating arthritis. An exceptionally active and selective antiviral drug was also isolated by the California group, which shows potent activity against Herpes Simplex infections. This compound could be the first step toward a successful cure of this now incurable and dreaded disease.

A new toxin is also under current investigation in California as a Neurophysiological probe in studying neurotransmission. This compound blocks nerve transmission by a new mechanism which is, as yet, unknown. In the California program, fourteen new compounds have been isolated which show impressive levels of cancer cell growth inhibition. These new compounds are being studies at several U.C. campuses for their efficacy in the treatment of solid tumors and in the control of leukemia. The California group is interacting with the National Cancer Institute to assess the application of these compounds in anticancer chemotherapy.

Nationwide, I have been informed of significant findings in several Sea Grant projects. Researchers at the University of Oklahoma, for example, have reported the isolation of a new marine polyether which inhibits cancer cell growth and which also may be useful as an antibiotic agent. The Oklahoma program has also been responsible for the isolation of fifteen cancer cell inhibitors as well as a potent substance which prolongs the effects of existing pharmaceuticals.

A group of researchers at the University of Rhode Island have been instrumental in providing a sound understanding of numerous marine toxins, and in exploring marine-derived polymers also for anticancer drug development. Likewise, scientists at the University of Washington have discovered that chitosan, a derivative from shellfish waste, may be useful as a commercial fungicide.These findings represent only a few of the more notable discoveries made through Sea Grant funding, and they clearly attest to the future potential of the marine environment in biomedical research.

Support through Sea Grant for the educational aspects of this program should also be emphasized. Students with experience in collaborative Sea Grant-Industry projects are ideally suited for employment in the pharmaceutical industry, and numerous former graduates now hold important industrial research positions as a result of the program.

It is for these reasons that I strongly support the Sea Grant Program and feel so committed to its continuation. The merits and current benefits are considerable, and the potential for significant commercial development, as supported by the close collaboration with industry, is clearly very great. Considering the quality of this program and the modest investment involved, I strongly urge your positive review.

Mr. D'AMOURS. Our first witness will be Mr. James Walsh, Acting Administrator of NOAA. Mr. Walsh, welcome, and we are prepared to receive your testimony.

STATEMENT OF JAMES P. WALSH, ACTING ADMINISTRATOR, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, ACCOMPANIED BY DR. FERRIS WEBSTER, ASSISTANT ADMINISTRATOR FOR R. & D., NOAA

Mr. WALSH. Thank you, sir.

My name is James P. Walsh. I am the Acting Administrator of the National Oceanic and Atmospheric Administration and I welcome this opportunity to appear before you today and discuss the administration's recent budget request particularly as it relates to the national sea grant college program.

I would like to have my testimony submitted in its entirety for the record. I will simply review it very quickly, and then add a couple of general comments at the end with regard to my agency's overall budget situation and then discuss whatever questions you may have.

Let me start by summarizing my statement and giving you a bit of an overview of the national sea grant program which, as you noted, was established under the Sea Grant College and Program Act of 1966. It was established as a matching fund grant program and its goals were to assist in the development of the Nation's coastal and marine resources by establishing a network of sea grant colleges and university-based research programs. These programs were aimed at meeting local, regional and national needs.

Under the program a total of 16 sea grant colleges have been designated since the program's inception. This designation expresses our confidence in the demonstrated dedication and competence of the institution involved in the areas of marine research and education. At present there are a number of programs that have been engaging with superior performance, and advancing towards sea grant college status, such as: Maryland, Mississippi, Alabama, Virginia, South Carolina, Michigan, and Minnesota.

In addition, the program has provided grants to other public and private institutions; institutes, laboratories and agencies that are engaged in or concerned with the development of marine resources. Major program areas have included marine resource development, marine technology development, marine environmental research, marine socioeconomic and legal research, marine education and training, and marine advisory services.

Grants for projects in these areas have comprised about 62 percent on the average of total project costs, although the maximum allowable under the law is 66⅔ percent. This indicates strong interest in the programs within the states as well as the participating institutions.

During the fiscal year ending this year, grants would be given to 46 institutions and provide partial support for about 810 projects. In all, 4,071 individuals are involved in sea grant-sponsored activities, involving 1900 professionals and 760 graduate students.

The sea grant advisory services program is a representative example of how this program has provided many benefits to diverse groups of users in the coastal States. There are 300 marine advisers who have participated in a number of activities including education for general public audiences, technical advice and instruction in particular marine areas, identification and communication of local needs and the dissemination of research. These advisors work in close conjunction with communicators within the sea grant program to reach the general public so they might understand the very subjects relating to the development and use of marine resources.

The sea grant national projects program which is a new program, was established by the Sea Grant Program Improvement Act of 1976. National projects have been designed to involve researchers from several universities in addressing a problem identified as a national need. Fifteen national needs have been identified and the first of these now being addressed is the near shore sediment transport Study. A second project on marine corrosion involving researchers from six universities was initiated in the fall of 1980.

The final major category of sea grant effort is in the area of international programs. The goals of the cooperative projects under this program is to enhance the marine research and development capabilities of developing countries and to promote international exchange of marine science data and information.

The sea grant program was designed to be the moving force in the creation of a network of colleges and universities with strong programs in marine education and research. This goal has been largely realized as evidenced by the involvement of over 4,000 people in sea grant sponsored activities and the 16 institutions which have received sea grant college status. Sea grant college programs have been directed toward the development of expertise and the satisfaction of local, State and regional needs. Sea grant matching funds have always exceeded the required minimum, and State legislatures in 16 States already appropriate funds as an explicit item in their State budgets.

The fiscal year 1981 appropriation includes $39 million for the sea grant program. Most of the funding is devoted to research and development activities with 23 percent and 10 percent devoted to

marine advisory services and educational training, respectively. Federal funding in 1982 for the sea grant program is proposed to be $1.8 million eliminated and thereafter we calculate that termination of the program will achieve a total savings of $222 million through 1986.

Mr. Chairman, before I complete my statement and go to questions, let me give you some general idea of the context within which the sea grant proposed budget reduction, and program termination, were made. As a result of the review engaged in by this administration starting in January of this year leading to the March 10 budget that was submitted by President Reagan, there was a series of analyses undertaken to identify programs within the Federal budget that could be either reduced or eliminated. Within our agency this has resulted for fiscal year 1982 in a reduction of 23 percent of our budget, or $250 million. The reductions were based, at the outset, at least the large reductions including sea grant, on two fundamental premises.

First, that there are a number of activities which the Federal Government currently funds that are of primary benefit to either State governments or local governments and local interests and needs.

Second, there are programs that are of direct and primary benefit to various industries. These two concerns formed the basis upon which the budget was approached. Within NOAA, several programs have been reduced because they are programs of primarily local benefit. These include the sea grant program and the coastal zone management section 306 program. There are also other programs which include assistance to States, such as the adadromous fish program ($2,000,000) and the commercial fisheries development program ($5,000,000). With regard to assistance to industries in the fisheries area, funding is to be reduced in nonsalmonid aquaculture ($2,000,000) and funds are proposed to be reduced for assistance programs under the Saltonstall-Kennedy program ($10,000,000) resulting in a total reduction of $19 million for the four programs.

In addition, Mr. Chairman, there are other major policy decisions in regard to budgets including delay or postponement or an elimination of major new starts. In this category two satellite systems which were proposed for initiation in President Carter's budget, the national ocean satellite system and the land remote sensing satellite system have been proposed either for reduction, as in the case of LANDSAT or elimination as in the case of NOSS. These two satellite systems probably would have cost in the neighborhood of $1.8 billion over the 10-year life of those programs.

As you can see, we have taken cuts throughout our agency. The 25-percent reduction was not achieved without identifying cuts in many areas across our agency. In addition, as I noted at the outset, decisions were made on a major policy basis that those programs within our agency that are of primary benefit and serve the needs of local communities, State communities, should be reduced or eliminated.

Mr. Chairman, that concludes my prepared statement and I would be happy to try and answer any questions you may have.

[The statement of Mr. Walsh follows:]

STATEMENT OF JAMES P. WALSH, ACTING ADMINISTRATOR, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, DEPARTMENT OF COMMERCE

Mr. Chairman and members of the subcommittee, thank you for the opportunity to discuss the National Sea Grant College Program.

The National Sea Grant College Program, created by the Sea Grant College and Program Act of 1966, was established as a matching-fund grant program. Its goals were to develop and protect the Nation's coastal and marine resources through the establishment and operation of a network of Sea Grant Colleges and a university-based research program designed to meet local, regional and national needs.

Under the Sea Grant College Program, a total of 16 Sea Grant Colleges have been designated by NOAA since the program's inception. An award of Sea Grant college status has expressed NOAA's confidence in the demonstrated dedication and competence of the institution in the areas of marine research and education. Colleges which achieve this status have received priority in obtaining support, within the limits of overall Federal policy and fiscal considerations. To be eligible for such designation, an institution was required to demonstrate a record of superior performance for a minimum of three years in Sea Grant Programs that encompassed research, development of the marine environment, education and training of marine scientists and technicians, and an effective marine extension of advisory program. At present, Sea Grant colleges have been designated in a total of 17 coastal states: Alaska, Georgia, Hawaii, Washington, Oregon, California, Texas, Louisiana, Florida, North Carolina, Delaware, New York, Rhode Island, Massachusetts, Wisconsin, Maine and New Hampshire.

Under the Sea Grant Program, grants have been provided to public and private universities, institutes, laboratories and agencies engaged in or concerned with the development of marine resources. The major project areas suppoorted by these grants have included:

Marine resources development, including aquaculture, fisheries biology and ecology, marine pathology and mineral resource development;
Marine technology development;
Marine environmental research;
Marine socio-economic and legal research;
Marine education and training; and
Marine advisory services.

Federal grants for projects in these areas have comprised 62.5 percent of total project costs (the maximum allowable Federal level is 66⅔ percent), while 37.5 percent has been provided by the grant recipients themselves. During the fiscal year ending September 30, 1981, grants were given to 46 organizations and provided partial support for 810 projects. In all 4,071 individuals were involved in sea grant-sponsored activities, including 1,994 professionals and 760 graduate students.

Sea Grant's marine advisory services programs are a representative example of how this program has provided diverse benefits to a variety of user groups in the coastal states. Sea Grant's 300 marine advisors have participated in informal education for general public audiences, technical advice and instruction in marine areas, identification and communication of local marine community needs, and the dissemination of research findings aimed at user problems through seminars, workshops, publications and personal contacts. The marine advisors have worked in coordination with Sea Grant communicators to reach the general public through press, radio, television and other media. Major subject areas addressed by marine agents and specialists have included fisheries management, sea food processing and marketing, gear technology, marine recreation, coastal and wetland management, taxes, health and safety. Several thousand persons have been contacted each month by the agents who provided direct assistance to users of marine resources. NOAA has entered into cooperative agreements with the Department of Agriculture's Cooperative Extension Service and the United States Fish and Wildlife Service, and has helped train agents and develop the Energy Extension program of the Department of Energy.

The Sea Grant National Projects Program was established by the Sea Grant Program Improvement Act of 1976. National projects have been designed to involve researchers from several universities and disciplines in addressing a problem identified as a "national need". Fifteen "national needs" have since been identified. The first of these to be addressed became the Near Shore Sediment Transport Study. A second national project on marine corrosion involving researchers from six universities was initiated in the fall of 1980.

The final major category of sea grant activity which bears specific mention is the Sea Grant International Program, also established by the 1976 Sea Grant Program Improvement Act. The goals of the cooperative projects in this program are to

enhance the marine research and development capabilities of developing countries and to promote the international exchange of marine data and information.

The Sea Grant Program was designed to be the moving force in the creation of a network of colleges and universities with strong programs in marine education and research. This goal has been largely realized as evidenced by the involvement of over 4000 people in Sea Grant-sponsored activities and the 16 institutes which have received Sea Grant college status. Sea Grant College Programs have been directed toward on local, state and regional needs. Sea Grant matching funds have always exceeded the required minimum, and state legislatures in 14 states already appropriate funds as an explicit item in their state budgets.

The Fiscal Year 1981 appropriation includes $39 million for the Sea Grant Program. Most of the funding is devoted to R&D activities with 23 percent and 10 percent devoted to Marine Advisory services and education training, respectively. Federal funding in 1982 for the Sea Grant Program will be eliminated for a total savings of $22 million through 1986.

The concludes my written statement on the proposed fiscal year 1982 Sea Grant Budget, and I will be happy to answer any questions you may have.

Mr. D'AMOURS. Thank you, Mr. Walsh.

I have a few short questions to lead off with. I am aware that the primary rationale upon which sea grant is being eliminated is that the services it provides are viewed by the administration as primarily local in character. I disagree with that characterization and we have witnesses who are going to testify a little later who specifically are going to disasgree and offer evidences that that characterization is not accurate.

However, assuming it were, would the administration feel the same about eliminating sea grant if it felt that these local services would not be picked up by users or others within the local community?

Mr. WALSH. Mr. Chairman, I don't believe the administration's position would change because I think that it would be very difficult to make a case that all these activities would be eliminated. In other words, it is fair to say that we expect a good number of these activities will be picked up.

Now, I am not saying that all of them will be picked up. In other words, there are two sides of that coin. Some will be picked up and others will not. There have been very many successful activities within the sea grant program. That is not the argument. But it's their very success, as a matter of fact, that identifies the sea grant program. If the fishing industry can be shown that the investment of $2 or $3 million in a research and development project relating to improving their efficiency will, in effect, provide additional economic returns to them, our way of managing companies tells me that I as a fisherman ought to go ahead and invest that money because I am going to get a return. Why wait for the Federal Government to come along and do it because that may not happen. If it is of particular economic value to these industries, and according to the report of the sea grant task force it is, then economic theory would say that people would pick it up and begin to make these investments now that it has been demonstrated to be so effective.

Mr. D'AMOURS. Why wouldn't that philosophy result in the elimination of land grant?

Mr. WALSH. I am not familiar with the land grant program, but——

Mr. D'AMOURS. Well, the sea grant program is modeled and patterned after the land grant program if the economic theory—

since they are really almost entirely premised in the same principles, operate approximately the same patterns, how can you justify eliminating sea grant and not land grant. Or do you suggest that we also eliminate land grant assistance?

Mr. WALSH. I am certainly not suggesting that, no. What I am told, however, is the land grant program after many years of getting started has focused a little more directly on national problems.

As was indicated in my testimony, Congress itself noted that in 1976 the sea grant program seemed to be focusing perhaps a little bit too greatly on local and regional problems and, therefore, Congress amended the statute to add special provisions without matching requirement in order to entice the sea grant institutions away from that local emphasis to a national and international emphasis. These two portions of the statute were added in 1976. I would submit it is because Congress recognized that the focus was perhaps too local.

Mr. D'AMOURS. Well, I want to get back to that, but I just lost my train of thought. I do have another question I wanted to ask you.

I understand that Secretary Baldrige has been receiving numerous calls, letters, and telegrams supporting sea grant. Is it possible for you to make these kinds of documents available to this subcommittee?

Mr. WALSH. Yes, sir, I will be glad to provide copies. We would be glad to provide you with copies of all those letters as well as a copy of the typical response that we send back.

Mr. D'AMOURS. Mr. Pritchard, do you have any questions?

Mr. PRITCHARD. Thank you, Mr. Chairman.

It is nice to welcome you, Mr. Walsh, again, before us. It is a rather difficult assignment I am sure for you today and——

Mr. WALSH. I do not get any bonuses either. [Laughter.]

Mr. PRITCHARD. No, I am sure you do not.

Mr. WALSH. You kept those away from us. [Laughter.]

Mr. PRITCHARD. You know, this sea grant cut did come as somewhat of a surprise, I think, to most of us. Where did this cut orginate? This cut is something that NOAA thought of or is it the Commerce Department or where is the genesis?

Mr. WALSH. I do not think it is fair to say that it came entirely out of the blue, having been associated with the program now for 11 years myself. There has always been a concern within the Federal Government that this administration, the last administration, and the administrations before about the point at which Federal assistance to various kinds of activities, particularly those that impact upon the private sector, stops and private sector picks up, and whether the sea grant was a seed money program initially or was not. We have had debates now for about 10 years that I can remember as to whether the sea grant program was a seed money activity since it was different when it was initially created from the typical NSF funding activity. The sea grant reduction was identified at the outset of the budget review process by Mr. Stockman, OMB examiners, and the President's advisers. As I understand the approach, many of the programs in the Federal Government were being analyzed over a 6- or 8-month timeframe prior to

the election and during the transition period, and then it moved very quickly from that preliminary analysis into a budget review with Mr. Stockman. It was identified by those individuals at the outset of our budget review as a big ticket item. There were several big ticket items that the President referred to—sea grant, coastal zone management, the national ocean satellite system, landsat—that were identified for reduction in our agency at the outset.

Mr. PRITCHARD. If this had been a small ticket item, do you think it might have slid by?

Mr. WALSH. I understand that they didn't consider much below the $25 million level at that review. However, there were additional reviews after that and I can assure you that it would not have, because then we got down to the $2 and $3 and $4 million programs. Again, using the same general philosophy.

Mr. PRITCHARD. You know there is an effort going on in the Senate to restore a certain amount of these funds by a considerable amount. My Senator is doing that. He has the luxury which we will not have here of moving one up and one down, so we may have to wait until the other body sends it over until we can see what we can do. I appreciate your testimony and I appreciate the position you are in.

Mr. WALSH. Thank you.

Mr. D'AMOURS. Thank you. Mr. Carney, do you have any questions?

Mr. CARNEY. No, Mr. Chairman, thank you.

Mr. D'AMOURS. Mrs. Schneider?

Mrs. SCHNEIDER. No, thank you.

Mr. D'AMOURS. Mr. Walsh—by the way, thanks for explaining to me how the marine sanctuary program slipped through. I was confused up until this very moment. It is a smaller than $25 million program. I was not aware of how we had gotten away with that one.

Mr. WALSH. That is actually a long story. [Laughter.]

Mr. D'AMOURS. I think I know some of the details, but I was never aware of this $25 million threshold until you just pointed it out.

Mr. WALSH. That is about the number. Again, I was not privy to exactly the number but it was the big ticket item that was focused on earlier.

Mr. D'AMOURS. Mr. Walsh, when we passed sea grant our declaration of policy stated—and I have the original act here—that referring to a prior paragraph outlining the food, energy, mineral and other resources of the oceans:

> The understanding—assessmen, development, utilization and conservation of such resources require a board commitment and an intense involvement on the part of the Federal Government in continuing partnership with State and local governments, private industry, universities, organizations and individuals concerned with or affected by oceans and coastal resources.

Obviously, when we passed the Act, Congress saw our coastal and ocean resources as national resources requiring some Federal participation. I am not aware that the Department of Commerce at that time had any contrary view of our ocean environment. Has there been any shift in the Department of Commerce since then? Do we see the ocean in our coastal resources as local now and segmented sections rather than as a national resource?

Mr. WALSH. Clearly, there is always a shift following a Presidential election which brings different points of view to bear on continuing policies such as the sea grant program that may be several years old. Each year, each election, and each new person brings in a different point of view depending on current circumstances, topics under national debate, and we alter or keep our policies depending on the outcome. Speaking for the Department of Commerce, we do not view that the ocean is not an area of particular national concern, because it is. For that reason we are continuing a $125 million program in marine fisheries, both commercial and recreational. We are spending over $50 million to operate a large fleet of ocean—going vessels. We have a marine pollution program that adds up to almost $30 million. We are engaged in a variety of research concerning both atmosphere and oceans which indicate this Nation's recognition of the value of ocean resources. What we are saying in this instance is that, notwithstanding these good statements of policy, at this point you have to look at not only the policy, but the funding activities under the program and conclude whether, in fact, the benefits go directly either to someone who achieves a financial reard as a result or that there are matters of most interest to State and local governments. That, of course, is debatable even within the policy statement and it just depends on concerns at the time.

Mr. D'AMOURS. According to the ad hoc task force, a group headed by Dr. Corell of the University of New Hampshire, the total ocean economic sector within the U.S. GNP is comparable to all of agriculture or all of our communications industry.

If sea grant is abolished, is there another State or private agency that you think will pick up the development of marine sciences, the training of marine scientists, do the education and research and the two-way advisory work, where on one hand, the sea grant program advises individuals and industry and on the other hand solicits and receives information from these individuals and industries as to various problems that need to be solved. Is there really something that can replace all of this?

Mr. WALSH. Let me say first of all, education is as indicated by testimony about 10 percent of the funding activity. We have been inordinately successful either in educating marine scientists or inordinately unsuccessful in not finding them jobs. In many areas we have a surplus: for example, marine biologists, we have a surplus of students educated in these fields. We are probably educating too many lawyers——

Mr. D'AMOURS. Excuse me. Who is we?

Mr. WALSH. I am talking about the United States including all its programs—the National Science Foundation and the basic education system of this country. We have educated a lot of people in the last couple of years and I think the sea grant's emphasis has not been on education. One of the problems in the field, and I can attest to it, is that it is tough to find employment. Despite the fact that there are a lot of people coming out of schools employment is certainly not keeping pace with the expertise we are developing in this area.

Now, in terms of whether somebody is going to pick up all of Sea Grant, I would be wrong if I said yes they are. The answer is that

in some situations, depending on who is most interested, parts of it will get picked up. The advisory services are very important. It is quite likely that the advisory services will get picked up by States. To the extent that we put money, for example, in finding pharmaceuticals from the sea, I am sure the major pharmaceutical companies in this country that have an interest in achieving an economic benefit from that will invest in that type of research.

Mr. D'AMOURS. One of the problems with that though, is that when these companies do make these investments, as somebody is going to testify later, they consider that knowledge paid for and they do not like to share it with anybody else. Is not that one of our problems with your approach?

Mr. WALSH. It is most important that the commodity finds its way into the marketplace where competition occurs. I am not interested in that phamaceutical unless it can be developed and sold to me in a way that I trust is of value.

Mr. D'AMOURS. As I see it, there are two problems. No. 1, if private industry is going to fund the process, they are not going to share the results and, No. 2, they are going to tend to fund only those processes which are immediately beneficial to their sometimes rather limited purposes. I think sea grant provides a formula where we can get into a broader range of approaches.

Mr. WALSH. I would agree with you that the concern is that private enterprise does focus on the short-term investment and that we need to find techniques to accelerate private investment in research and development in the long term. Not just that which will enhance the quarterly profit report.

Mr. D'AMOURS. Is that being done?

Mr. WALSH. Yes. In the past we have tried to accelerate ways in which we can get specialized investment into innovative technology through special tax provisions and the like. I am sure this administration has some suggestions about how to provide special tax benefits for investments in R. & D. that has a longer term payoff.

Mr. D'AMOURS. We are going to have testimony a little later that, as a matter of fact, there is a shortage of marine scientists today. I just want to be sure I heard correctly.

Did you say that there is a surplus?

Mr. WALSH. In some areas there is a surplus, yes, Marine biologists is one example. I see Joel nodding his head. I use him as a witness.

Mr. D'AMOURS. All right. I just wanted to make sure we are clear on that because we are going to have another witness later that I think is going to contradict that, but perhaps not. I have no further questions at this time.

Mr. Hughes, do you have any questions of this witness?

Mr. HUGHES. No.

Mr. D'AMOURS. Mr. Carney.

Mr. CARNEY. Mr. Chairman, in your questioning of the witness the witness mentioned that he felt that the marine advisory services program would be picked up by the States.

Mr. WALSH. I sait it might be, yes, sir.

Mr. CARNEY. Could you tell me what percentage of sea grant's total budget was allocated?

Mr. WALSH. Twenty-three percent for advisory services.

Mr. CARNEY. Twenty-three percent. And would you like to speculate as to how much of that 23 percent you believe will be picked up by the States.

Mr. WALSH. I really cannot say because I think right now, Congressman, all the States are trying to assess the entirety of the budget cuts coming from the Federal Government and to assess their priorities on an individual State-by-State basis. I do not believe they have completed the process, I really could not do anything more than, say, speculate. In some places this is considered to be a very valuable asset and some it is not. I really could not give you a breakdown. I will try and do that over the next couple of months.

Mr. CARNEY. Would you say that the advisory program is the applied branch or the applied part of the sea grant program in total?

Mr. WALSH. Applied always sounds like research. Most of sea grants research is categorized as applied in the sense of definition of research. At the same time the marine advisory services take information that is now available, translate it and provide it to users. So in the sense that they are providing an applied information assistance effort, the answer is yes.

Mr. CARNEY. Has there been any indication at all that States would take up the slack?

Mr. WALSH. We have not gotten any definite indication as yet. We have not heard because of the fact that so many States are looking at so many programs. They have not really decided where their priorities are.

Mr. CARNEY. Would you say that the rationale behind the decision or the belief that the States will pick up the program is that the program is a very good program?

Mr. WALSH. I think it is not only that the program is a good program, but that it is a benefit to people, to local users, and State users, and the industry. I think the economic figures that are presented by sea grant really cut two ways. One is to show that if it is of that much economic value, somebody is willing to invest a few dollars to get back that return. That is the rationale.

Mr. CARNEY. Thank you very much.

Mr. D'AMOURS. Jim, thank you very much. I also appreciate your testimony and I share Joel Pritchard's remark that this is not the easiest testimony you have ever given. I would like for the record, though, to comment on your last remark.

That answer might be correct in the abstract, that the States are going to probably judge the great value of this program and, therefore, assume the funding responsibilities. It is hard for me to believe that politically, any States, except those that might be very wealthy, if there is such a thing today—are going to make sea grant a high priority, given the other constraints that are being placed upon their budgets by elimination of other Federal programs. I think you probably agree with that. I am not tring to put words in your mouth. Whether you do or not I appreciate your being here and testifying under difficult circumstances.

Mr. WALSH. Thank you.

Mr. HUGHES. Mr. Chairman.

Mr. D'AMOURS. Mr. Hughes is recognized.

Mr. HUGHES. This has prompted me to wonder—I apoligize for being so late and I hope I am not repeating. But is there any indication at all, has there been any indication for the record that the administration has endeavored to find out which of these programs can be absorbed by the States. Is there any effort systematically to review coastal zone management, sea grant, et cetera, et cetera, to determine which of those programs could be absorbed by those States that would be impacted?

Mr. WALSH. The answer is that there has been no systematic analysis of that type. There was an analysis made of the programs over the last several years and there is a residual view of these programs within the Office of Management and Budget as to where the benefits go. That was the decision. It was not the detailed analysis, Congressman, of who might pick it up and how. It was the philosophy of Federal Assistance to States for States needs.

Mr. HUGHES. Did anyone from the Office of Management and Budget actually sit down with any of the people familiar with sea grant, for instance, to determine whether or not there was a likelihood that the States would pick up, for instance, the advisory service or the educational——

Mr. WALSH. During the budget review process?

Mr. HUGHES. Yes.

Mr. WALSH. I am not aware of such. It might have occurred, but I am not aware of such.

Mr. HUGHES. Would that have occurred without your knowledge?

Mr. WALSH. Possibly.

Mr. HUGHES. Thank you, Mr. Chairman.

Mr. D'AMOURS. Thank you, Mr. Hughes. Once again, Jim, thank you very much. We appreciate your being here.

Mr. WALSH. Thank you, Mr. Chairman.

Mr. D'AMOURS. Our next witness will be a panel of sea grant service users consisting of Joseph Swift, James Hudlow, Gus Fritschie, Jon Lindbergh, and Robert C. Byrd. If you gentlemen are here, I would appreciate your approaching the table at this time.

Gentlemen, I will let you proceed in whatever order you may wish to. I have called your names in the order that you appear on today's witness list, but if you want to vary that order, given the hour and the need of some of you to catch planes perhaps, that is all right with me, I would like to request to the extent that you can summarize your testimony as Mr. Walsh did. They are all fairly short anyway, but in the interest of the hour and the fact that others are waiting if you could just hit the high points of your testimony, I would appreciate it very much.

STATEMENTS OF GUSTAVE FRITSCHIE, DIRECTOR OF GOVERNMENT RELATIONS, NATIONAL FISHERIES INSTITUTE, WASHINGTON, D.C.; JOSEPH SWIFT, OWNER, CLEARWATER TACKLE CORP., AND UPSTATE SPORTS SERVICE, INC., ONTARIO, N.Y.; JAMES HUDLOW, PRESIDENT, SPECIALTY SEAFOOD, CHATTANOOGA, TENN.; JON M. LINDBERGH, DOMSEA FARMS, BREMERTON, WASH.; AND ROBERT C. BYRD, VICE PRESIDENT, BRIAN WATT ASSOCIATES, HOUSTON, TEX.

STATEMENT OF GUSTAVE FRITSCHIE

Mr. FRITSCHIE. Mr. Chairman, with the indulgence of my colleagues, perhaps I will take up your offer to determine the list and proceed first.

My name is Gustave Fritschie. I am director of government relations for the National Fisheries Institute. I have to appear before the other body in approximately 20 minutes to testify on marine sanctuaries. With the indulgence of the panel I will proceed.

Mr. Roy Martin, the institute's director of science and technology, was to have delivered our statement and that statement has been submitted to the committee. I ask that it be inserted in the record.

[The statement of Mr. Martin follows:]

STATEMENT OF ROY MARTIN, DIRECTOR, SCIENCE AND TECHNOLOGY, NATIONAL FISHERIES INSTITUTE

Mr. Chairman my name is Roy Martin and I am Director of Science and Technology for the National Fisheries Institute.

Mr. Chairman the National Fisheries Institute is pleased to offer its comments regarding the exceptional NOAA program called Sea Grant. The National Fisheries Institute is composed of more than 1000 member companies engaged in all the facets of processing, distributing and marketing the majority of this country's fresh and frozen seafoods.

During the past several years we have had the privilege of appearing before this committee to offer support for the Sea Grant Program. We appreciate the invitation to again state our views.

We, as an industry, have been a prime recipient of the benefits from the Sea Grant Program. To us that seafood specialist and extension agent have added a dimension to the industry, that along with the Congressionally supported 200 mile economic zone legislation, is enabling this industry to recover and grow again.

We cannot allow this forward growth to stop. The Sea Grant program must continue as a viable entity just as the university land grant program in agriculture continues to be an important supporting arm of their efforts.

We offer as prime examples of this assistance some of Sea Grant's major contributions to us:

(1) Studies that compare the Protein Quality of underutilized minced fish to that of whole fillets of popular species of fish. We documented that the protein from minced fish was equal to that of traditionally caught fish. From this base we know that we can use minced fish to build whole new families of seafood products engineered as convenience foods for U.S. consumers.

(2) The development of a dip-stick method to quickly determine the freshness of fish at dock level. This test will enable us to tell how we should treat a load of landed fish—do we immediately process, store or reject.

(3) The development of Rapid Bacteriological tests that will aid us in determining the Quality of Raw Breaded Shrimp. Used as a Quality Control tool the time of testing was reduced from 72 to 24 hours.

(4) Studies on Cholesterol in seafoods and their relationship to other fats in the diet. Data enables physicians to better prescribe seafood diet for their patients.

(5) Studies on the amount of Selenium in fish diets as an anti-cancer and tumor agent. Results have indicated that those consuming high fish diets have a much lower incidence of breast cancers.

(6) Determination of Thiamine, Riboflavin & Niacin in certain seafoods. Adding important new information to our data base for nutritional purposes.

(7) Research into possible biochemical or other by-products that exist in the waste effluents of the seafood processing industry.

(8) Using Controlled and Modified inert gas packaging as a mean of reaching inland markets with fresh fish.

In addition let me cite a few other examples of how those extension service people in the field have served as a conduit to educate, bring forward new technology and present it to industry user groups.

(1) A Waste Utilization Conference and the implications of future EPA overregulation of the processing industry—University of Florida extension agent, Steve Otwell, Organizer.

(2) New Advances and an examination of the safety of Modified Atmosphere Packaging—Texas A. & M. University—Ranzell Nickelson, Extension Specialist, Organizer.

(3) Seafood Nutrition—"Train the Trainer". A conference designed to send back with various user groups such as school dietitians, home economists, and food editors enough information about seafood and health to help them "out-reach" to their audiences. University of South Carolina—John Armstrong, Organizer.

These projects and the applied work done by Sea Grant constitute one prime basic need—Food for Man, an additional source of protein.

We therefore urge that funding support be maintained for this unique national resource. People already trained to assist the seafood industry in a period of anticipated growth constitute the wealth and heritage of this nation's oldest commercial industry.

Our prime support for these program components does not indicate a lack of support for other Sea Grant services. I believe other Sea Grant user groups can more properly address their issues.

Mr. Chairman, it has been a pleasure to appear before your committee today and I am ready to answer any questions you or members of the committee may wish to ask.

Mr. FRITSCHIE. What I would like to do very briefly is review the examples that he has listed of important technological research programs and the use by the industry of the extension services provided through the sea grant program. As Mr. Martin indicated in his testimony, the institute has appeared before this committee and other committees many times in the past in support of the sea grant program and we renew our basic support for that program. Examples of sea grant technological research as contained in his testimony include: One, studies that compare the protein quality of underutilized minced fish to that of whole fillets. These studies document that protein for minced fish is equal to that of traditionally caught fish and will enable the industry to develop a new line of seafood products prepared from minced seafood flesh.

Second, the development of bacteriological tests to add in determining the quality of raw breaded shrimp.

Third, studies on cholesterol and seafood and the relationship to other fats in the diet. This data has been used by physicians to better prescribe seafood diets for patients.

Fourth, studies on the amount of selenium in fish diets as an anticancer and tumor agent.

Turning to examples of the industry's use of the seafood extension program, I would cite three recent conferences that have been carried on in conjunction with the institute and various sea grant schools around the country. One, a waste utilization conference on the implications of future EPA overregulation of the processing industry conducted with the assistance of the University of Florida. Second, new advances and examination of the safety modified atmosphere of packaging. This was carried in conjunction with Texas A. & M. University.

Finally, a seafood nutrition symposium carried on with the assistance of the University of South Carolina. Certainly NFI believes that these projects' technological research and other activities of sea grant bring about one important basic need for the seafood industry. Namely, assistance in providing an outreach program to the industry so that the industry can provide better seafood products to the American consumer and to the international market. We, therefore, in particular urge that funding support be maintained for the technological programs and certainly the seafood extension program within the sea grant college program. This does not indicate lack of support for other program components. It just indicates our ability to comment most directly on the importance of those parts of sea grant that most directly impact the seafood industry.

Mr. Chairman, it has been a pleasure to appear before your committee today. I will be prepared to answer any questions that you or other members of the committee may have. Thank you.

Mr. D'AMOURS. Thank you, Mr. Fritschie. I do not know what your time constraints are, but if you could stay to answer questions, we would appreciate it. I understand you are under some pressure.

Mr. FRITSCHIE. I can stay.

Mr. D'AMOURS. All right. The next witness scheduled is Mr. Swift.

STATEMENT OF JOSEPH SWIFT

Mr. SWIFT. Mr. Chairman, honorable Congressmen, my name is Joseph Swift. I reside in the town of Ontario, New York State, within the congressional district represented by Congressman Frank Horton. I am employed as a chemist by the Xerox Corp. in Rochester, N.Y., as a U.S. Coast Guard-licensed commercial charter fishing boat captain on Lake Ontario and as a coowner of a fishing tackle manufacturing company, Clearwater Tackle. I am also a member of the Rochester Trout and Salmon Anglers Club, the Sodus Deep Trollers, the Eastern Lake Ontario Trout and Salmon Anglers, and a member of New York Sea Grant's Coastal Recreation Advisory Committee. Lastly, I serve as chairman of the Wayne County Fishery Advisory Committee as established by the Wayne County Board of Supervisors.

I come before you today in wholehearted support for the sea grant program. In my dealings with sea grant over the last 5 years, I have found this program to be a unique and valuable program and I feel that it must not be shortchanged in your ultimate budget decisions. In lieu of simply offering a litany of laudatory statements about sea grant, I thought I would describe to you several positive experiences that I have had or seen as a user and adviser to sea grant. These examples will serve to only scratch the surface of illustrating the economic and social impacts of the program in my locality, my State, and in other States across this Nation.

Case No. 1. Approximately 5 years ago, I recognized that there was a rapidly evolving sportfishing and tourism industry along the lake counties of Lake Ontario. At that time, I seriously debated a decision to plunge into the charter fishing business. Fortunately, I had the opportunity to meet and talk with a New York State sea

grant specialist. This specialist was able to discuss with me my decision, lay out options available to me and provide me with insurance tips. Perhaps more importantly, he was able to provide me with a research report on the charter fishing business in Lake Michigan that was funded and conducted through the Wisconsin sea grant program. This up-to-date report provided me with pertinent information and allowed me to make a much easier decision going into this business. It also enabled me to avoid many of the pitfalls in starting up a business of this sort. Today as I run this business—it is a successful, heavily booked business—and as I run it I do not forget nor belittle the assistance and information rendered by sea grant in New York and Wisconsin.

Case No. 2. Approximately 4 months ago, a few of the 40-some-odd charter fishing operators that had sprung up on Lake Ontario wanted to get together and consider the formation of a professional trade association. Our first turn here again was to sea grant. Through its local extension specialist, sea grant arranged to walk us through our first annual meetings and was able to provide extremely useful materials on the constitution and organization of other similar associations. Again, this information came from the upper lakes area, Lake Michigan in specific. Today, the Lake Ontario Charter Board Association is established and it will soon offer its 36-odd members reduced insurance saving and national joint advertising.

Case No. 3. Boat access to Lake Ontario is severely limited. Sea grant, through its research and extension effort, has been able to facilitate local and State government in addressing this problem. Here again, economic research on the value of the fishery, access, supply and demand, and thorough knowledge of successful community efforts elsewhere have made it easier for communities, including the community that I live in and observe, to decide on resolving these access problems. In fact, I am very familiar with the situation where information provided by sea grant on boat launch ramp designs helped save Wayne County approximately $45,000 in developing its newest launch facility. Likewise, it has helped Monroe County save approximately $10,000 in engineering costs on its planning of a similar facility.

Case No. 4. Toxic chemical contamination problems on the Great Lakes can and has imposed economic hardships on the tourism and commercial sports-fishing economies. For the last 6 years, perhaps the best source, or should I say the only unbiased source of information on toxic chemical contamination of our fisheries has been through Sea Grant researchers and extension specialists in Wisconsin, New York, and various other coastal States. This information has been critical in making intelligent health and economic decisions under risk situations.

Case No. 5. Difficulties in locating salmonoids during the summer months annually supresses sport-fishing activity and the economic spinoffs in Lake Ontario. Here I have personally had a very positive experience in suggesting that a research study to sea grant researchers in New York that would track the annual movements of salmonoids via electronic gear. This project has been just recently funded and inaugurated. The impacts of this information will undoubtedly provide innumerable benefits to fishing-related

businesses in New York State and perhaps other Great Lake States.

Time and time again sea grant has proven to be the best source of objective coastal resource use information whether it involves businesses, clubs, individuals, or communities. The coastal resource users has come to know that sea grant provides good, solid information. The information may have been developed locally or anywhere across this Nation, but it always seems to prove useful, understandable, and relevant.

As a lay person, I will not attempt to tell you that I understand the Federal budget process. However, I would like to leave this subcommittee with the following thoughts if I may.

My sentiments, and I believe the sentiments of all coastal resource users familiar with sea grant across the country are that sea grant is one of the most effective, efficient, economic stimulating cooperative programs around and it should not be crippled by inadequate Federal support, or support that is withdrawn to severely, too quickly, or too impetuously. There must be a continuation of the national commitment to sea grant as a cooperative State/Federal partnership in the same manner as land grant—which has been conducted and propagated since 1862.

Sea grant is real, it is human, it is responsive, it is helpful, and it is accepted within the coastal States and communities. Why gut the only responsive, cooperative, and popular decentralized program within NOAA? If just doesn't make sense.

Sea grant is obviously an economically attractive investment. Senator Weicker's own computations indicated at least a 7 to 1 return of the Federal investment in over 13 years.

Sea grant has national impact and benefits. Whether it is through education of graduate students, through research conducted in one State yet applicable to all, or through extension people putting out the call for information across the country, it is still rightfully called the national sea grant college program. In conclusion, Mr. Chairman, I would ask that Congress not be involved in destroying or even obstructing the open, proven linkage between coastal resource user—by the boater, fishermen, marine constructor, homeowner, or whomever—and the university system across the country. Our great natural resource—that is, the coasts, the oceans, the Great Lakes—critically, yes critically needs our great national resource—that is, reliable, unbiased, readily available information.

Thank you, Mr. Chairman.

[The statement of Joseph Swift follows:]

STATEMENT OF MR. JOSEPH SWIFT

Mr. Chairman, Honorable Congressmen, my name is Joseph Swift and I reside in the Town of Ontario, New York within the Congressional District represented by Congressman Frank Horton. I am employed as a United States Coast Guard licensed commercial charter fishing boat captain on Lake Ontario; and as co-owner of a fishing tackle manufacturing business, Clearwater Tackle. I am also a member of the Rochester Trout and Salmon Anglers Club, the Sodus Deep Trollers Club, the Eastern Lake Ontario Trout and Salmon Anglers Association, and New York Sea Grant's Coastal Recreation Extension Program Advisory Committee. Moreover, I serve as chairman of the Wayne County, New York Fishery Advisory Committee, as established by the Wayne County Board of Supervisors. Lastly, I am employed as a chemist with the Xerox Corporation, but do not represent that corporation in this testimony.

I come before you today in wholehearted support for the Sea Grant Program. In my dealings with Sea Grant over the last 5 years, I have found the program to be a unique, invaluable program and I feel it must not be shortchanged in your ultimate budget decision.

In lieu of simply offering a litany of praise about Sea Grant, I thought I would explain and describe the positive experiences I've had or seen as a user of, and advisor to Sea Grant. These anecdotes will only scratch the surface of illustrating the economic and social impact of this program in my locality, my state and in other states across the nation.

Example No. 1

Five years ago, prompted by a developing sportfishing and tourism industry on Lake Ontario, I was seriously debating the decision to plunge into the charter fishing business. Fortunately, I was able to identify and talk with a New York Sea Grant extension specialist. The specialist was able to discuss my decision, lay out options and provide insurance tips. But, perhaps, most importantly, he was able to provide a research report on the charter fishing business of Lake Michigan funded and conducted through the Wisconsin Sea Grant Program. Having this up-to-date, objective and pertinent information available allowed for an easier, wiser decision to go into business and to avoid some early pitfalls. Today, I run a successful, heavily-booked charter business on the lake, and as I run it, I do not forget or belittle the assistance and information rendered by Sea Grant in New York and Wisconsin.

Example No. 2

Four months ago, a few of the 40 or so charter fishing operators that have sprung up on Lake Ontario over the last five years wanted to consider the formation of a professional trade association so as to benefit from group insurance discounts and cooperative advertising. Our first turn was to Sea Grant, through its local extension specialist. Sea Grant arranged and walked us through our first meetings and was able to provide extemely useful materials on the constitution and organization of charter fishing associations in the Upper Great Lakes, again by linking with Sea Grant folk in Michigan. Today, the Lake Ontario Charter Boat Association is established and will soon offer its 36 members reduced insurance savings and regional joint advertising advantages.

Example No. 3

Boat access to Lake Ontario is severely limited. Sea Grant, through its research and extension effort, has been able to facilitate local and state government in addressing this problem. Economic research on the value of the fishery, access supply and demand, and thorough knowledge of successful community efforts elsewhere have made it easier for communities to decide on resolving this access problem. In fact, information provided by Sea Grant on boat launch design helped save Wayne County some $45,000 in developing its newest launch facility and helped Monroe County save approximately $10,000 in engineering costs on its own planned boat ramp.

Example No. 4

Toxic chemical contamination problems on the Great Lakes can impose and have imposed economic hardship on the tourism and commercial fishing economy. For the last six years, perhaps the best sources of information on toxic chemical contamination of our fishery resources have been Sea Grant researchers and extension specialists in New York, Wisconsin and other coastal states. This information has been critical in making intelligent health and economic decisions under risk situations.

Example No. 5

Difficulty in locating salmon during summer months annually supresses sportfishing activity and its economic spin-offs on Lake Ontario. I had the very positive experience of suggesting a research study to Sea Grant researchers in New York that would track the movements of salmon and trout via electronic gear. This project has just recently been funded and started, and the impact of the information it will provide could benefit innumerable fishing-related businesses in New York and probably even other Great Lakes states.

Example No. 6

A number of groups, businesses, communities and agencies on Lake Ontario are becoming interested in developing artificial fishing reefs in the lake to attract anglers and develop tourism. Once again, Sea Grant, through its extension and research role, has information available or underway that will aid in making reef-related decisions. In New York, we've been able to benefit from information gener-

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ated by Sea Grant in Michigan, Wisconsin, Florida and Virginia. And some day we hope to repay the compliment.

Time and time again, Sea Grant has proven to be the best source of objective coastal resource use information. Whether it involves businesses, clubs, individuals, or communities, the coastal resource user has come to know that Sea Grant provides good, solid information. The information may have been developed locally or anywhere across the continent, but it seems to always prove useful, understandable and relevant.

As a lay person, I won't pretend to understand the federal budget process, but I'd like to leave the sub-committee with these thoughts, if I may:

1. My sentiments, and I believe the sentiments of all coastal resource users familiar with Sea Grant across the country, are that one of the most effective, efficient, economically-stimulating cooperative programs around—Sea Grant—should not be crippled by inadequate federal support, or support that is withdrawn too severely, too quickly, or too impetuously.

2. There must be continuance of the national commitment to Sea Grant as a cooperative state/federal partnership in the same way that the national commitment to Land Grant has been continued since 1862. Federal involvement insures national guidance, highlights national priorities and encourages state and interstate cooperation.

3. Sea Grant is real—it's human, responsive, helpful and accepted within coastal states and communities. Why gut the only responsive, cooperative, popular decentralized program within NOAA? It just doesn't make sense!

4. Sea Grant is obviously an economically attractive investment. Senator Weicker's own computations indicated at least a 7 to 1 return on the federal investment in over 13 years.

5. Sea Grant has national impact and benefits. Whether it's through education of graduate scientists, through research conducted in one state yet applicable to all, or extension people putting out the call for information across the country, it's still rightfully called the National Sea Grant College Program.

And lastly, I'd ask that Congress not be involved in destroying or even obstructing the open, proven linkage between the coastal resource user—be they boater, fisherman, marine contractor, homeowner—and the university system across the country. Our great natural resource—that is, the coasts, oceans and Great Lakes—critically needs our great national resource—that is, reliable, unbiased information.

Thank you very much.

STATEMENT OF JAMES HUDLOW

Mr. HUDLOW. Mr. Chairman, members of the committee, my name is Jim Hudlow. I am from Chattanooga, Tenn., where I own and operate a seafood packing distributing business. My being in the seafood business is partly due to my experience with the sea grant program. I am pleased to be here today to offer my comments on the administration's recommendation to terminate the national sea grant program.

When Congress established this program, it called for a working partnership between Federal and State governments, universities and industry and it called for a long-term commitment of resources from a non-Federal sector. This challenge was met, and today we have an impressive network of researchers, extension agents and others, all working to develop the best ways to use the Nation's marine resources. With this network functioning effectively, now is not the time for the Federal Government to withdraw a partnership that it was primarily responsible for creating. If the Federal Government withdraws and leaves the responsibility of the sea grant activities to the States, we will lose the central direction and unity of purposes that the Federal leadership has provided in this case. Such an action is not, I do not believe, in the national interest.

My first exposure to the sea grant program came about 6 years ago. At that time I had approximately 30,000 pounds of fish fillets which were so large that there was no ready market for them.

When I asked the National Marine Fishery Service for advice, they referred me to the sea grant program in Georgia. Using the fish smoking technology developed by the Georgia sea grant program, I was able to smoke and market fish successfully. Since then through the Georgia sea grant program, I have benefited from information and expertise in the national sea grant network.

Most of the products I have, which is in excess of a million pounds of fish harvested and processed each year, come from the west coast, mainly Washington State. When parasites cropped up in the fish and jeopardized the markets I established in the southeast, they put me in contact with sea grant specialists in Washington State who made recommendations that helped solve the problem. When I extended my distribution pattern into Alabama, North Carolina, Georgia, and Florida and found it necessary to extend the shelf life for my products, they informed me of technology developed by the sea grant programs in Texas and in California. When further research was required, they undertook a joint project with the Wisconsin sea grant program to address the problem. The results will not only help my business but other seafood distributors and the consumer as well.

Being in Tennessee, which does not have a sea grant program, I appreciate the access to the national sea grant network. I hope that my experience will dispel the myth that the sea grant is mainly oriented toward local needs. When the sea grant program in Georgia and Wisconsin addressed problems that affect my business and the industry I represent, especially since there is no direct benefit to either State and when the research findings and the expertise of the sea grant programs in Texas and Washington State help me, there is no question in my mind that the program is a national one. With non-Federal funds providing more than one-half the cost of the total program and when so few Federal programs can demonstrate tangible benefits, I do not see how the administration can consider terminating a program that clearly justifies its existence on the basis of economic benefits that have accrued. To dismantle the sea grant program on the presumption that it is mainly local in character is naive. Many sea grant activities have local implications, as they should. But we would be very shortsighted if we overlooked their national significance. When sea grant programs in the southeast train fishermen to harvest offshore fish, which must be made available to foreign fishing fleets if U.S. fishermen do not take them, it benefits local fishermen.

But does it not only have national significance and when fish are shipped to meet the needs of consumers in other parts of the country, is there not further national significance? Markets like resources are not limited by State boundaries. The administration has proposes that the national sea grant program be terminated on the basis that it is oriented toward local problems, provides local benefits to local people and should, therefore, be supported by local funds. I hope that my experience has demonstrated that this view is completely without basis. If the administration insists on terminating the national sea grant program, let it look for other grounds.

Thank you for the opportunity to present my views.

[The statement of James Hudlow follows:]

STATEMENT OF JAMES HUDLOW

My name is James Hudlow. I was born and raised in Chattanooga, Tennessee. I still live in Chattanooga where I own and operate a seafood packing and distributing business. My major outlets are in Tennessee, but my distribution pattern extends into Alabama, Georgia, North Carolina, and Florida. My being in the seafood business is partly due to my experiences with the Sea Grant Program, and I am here to offer my comments on the merits of the Administration's proposal to terminate the National Sea Grant College Program.

In its effort to reduce federal spending the administration has apparently lumped the National Sea Grant Program with activities that simply provide assistance to the states. It has obviously failed to recognize that when the Congress of the United States established this program, it called for the development of a working partnership between federal and state governments, universities, and industry, and it called for a longterm commitment of resources from the non-federal sector.

In response to this challenge, universities, state governments, and industry committed funds and mobilized an impressive network of researchers, extension agents, and specialists to work towards the common goal of developing the best ways to use our nation's marine resources. With all of these forces in place and functioning, this is not the time for the federal government to withdraw from a partnership that it was primarily responsible for creating. If the Program was not fulfilling the mission that Congress had intended, I would agree that it ought to be terminated. In my opinion, however, the Program is working, and it is working efficiently and effectively.

My first experience with the Sea Grant Program came about six years ago. At that time I was just getting started in the seafood business, and I called on the National Marine Fisheries Service in St. Petersburg, Florida, for advice and assistance on how to smoke fish that would pass the newly established guidelines of the Food and Drug Administration. They referred me to the Georgia Sea Grant Program based at the University of Georgia which had carried out research in this area. Using the methods that had been developed, I was able to process and distribute successfully 30,000 lbs of fish for which there had been no demand at that time in the existing fresh fish markets.

About two years ago, I started to handle fresh produce from the west coast, mainly Washington State. Soon thereafter, I began to receive complaints from my customers about live parasites in the fish, and the market I had developed was in jeopardy. My supplier was skeptical about these complaints and did not take the problem seriously. When I asked the Director of the Georgia Sea Grant Program for advice, he arranged for me to meet with specialists in the Washington Sea Grant Program. They confirmed the existance of the parasite, provided me and my supplier with information about its life cycle, and suggested techniques to detect and eliminate the parasite from the product. The handling and resolution of this problem is a superb example of how effectively the National Sea Grant Program network operates.

I have been developing in the southeast a market for seafood that continues to grow. With this expanding market, it became necessary to obtain an extended shelf life for my products in order to maintain product quality. Research carried out earlier by the Texas A&M Sea Grant Program had indicated the potential of using modified atmosphere to increase the shelf life of seafood products. Once again I requested assistance from the Georgia Sea Grant Program to see if this technique was applicable to my problem. Since there were questions about the usefulness of this method, the Georgia Sea Grant Program initiated and is currrently undertaking a joint research project with the Wisconsin Sea Grant Program to address this problem. The Wisconsin Sea Grant Program was brought into the project because of its special experience with preservation techniques. The results will not only help me and other seafood distributors, but provide consumers throughout the country with better products.

The reason why I bring out the details of my experience with the Sea Grant Program is to dispel the myth that it is mainly a local program responding to local needs. My business is in Tennessee, and I handle no products from either Wisconsin or Georgia. The research assistance that I have received from the Sea Grant Programs in both states will not result in any benefit to either state. These two programs have helped me because of their commitment to the goals and objectives of the National Program.

Being in a state which does not have a Sea Grant program, I am most appreciative of its existence because I have had access to useful information from the entire network of Sea Grant institutions in the nation. If the federal government withdraws from this national effort, it will result in dismantling of an effective network that has been put together through the dedicated efforts of many individuals and

organizations. If the federal government abdicates its responsibility by turning over current Sea Grant activities to the states, we will lose the central direction and unity of purpose that federal leadership provides. Such an action is not in the national interest.

When you consider that nonfederal funds provide more than one-half the cost of the program, and when so few federal programs provide any tangible benefits to anyone, it is disappointing to see the administration recommending termination of a program which can clearly demonstrate economic gains. To discard the program on the presumption that it is mainly local in orientation is a naive and shortsighted view. It is true that many of the activities of the Sea Grant Programs in the different states have local implications, but they also have national and even international significance.

When the activities of Sea Grant Programs in Georgia and Wisconsin help my business which involves more than a million pounds of fish being harvested and processed each year by the seafood industry in Washington, do thay not have national significance?

When a Program in one state develops a more fuel efficient system of fishing, the results benefit local fishermen, but when that system is adopted by fishermen in other parts of the country, and in other countries, does the activity not have national and international significance?

Under the terms of the Fishery Conservation and Management Act which established the 200 mile limit for our bottom fisheries, the U.S. must make available to foreign fleets fishery resources that U.S. fishermen do not harvest up to the allowable limits. In the southeast, the fishery is based almost exclusively on shrimp and few fishermen are trained to work offshore. If Sea Grant Programs in the southeast train and encourage shrimp fishermen to harvest these offshore stocks which have been virtually unexploited, the results will benefit local economies, but do the activities not have national significance? . . . . And when these fish are shipped to other parts of the country to meet the needs of consumers there, is there not further national significance? We all know that resources are not limited by state boundaries, but few realize that markets also are not limited by state lines.

When a Sea Grant Program in one state provides its special expertise to address problems identified by a Sea Grant Program in another state, does this activity not reflect a national responsibility?

When a Sea Grant Program promotes the development of seafood products for export, the benefits to the local economies are obvious, but does the action not take on national significance in view of the relief it affords to our problem with trade deficits?

The Administration has proposed that the National Sea Grant Program be terminated on the basis that it is oriented towards local problems, provides benefits to local people, and should, therefore, be supported by local funds. As I have indicated this view is completely without basis. If the administration insists on terminating the National Sea Grant Program, let it look for other grounds.

Mr. D'AMOURS. Thank you for your testimony, Mr. Hudlow.

Mr. Lindbergh, would you go next, please.

STATEMENT OF JON M. LINDBERGH

Mr. LINDBERGH. Mr. Chairman, members of the committee, my name is Jon Lindbergh. I live in Bainbridge Island, Wash. I am in commercial aquaculture in the Pacific Northwest, in the Northeast, in the Southeast, and in South America. I have personally participated in two, in my opinion, quite significant sea grant supported programs.

First was a pilot program in salmonoid culture in 1971. Sea grant matching funds to the extent of, I think, $100,000, and some National Marine Fisheries Service technical advice, were the key factors in the successful beginnings of a company that now has sales of several million dollars.

The second project, which is still continuing, involves the development of a genetically-selected net pen salmon brood stock. In other words, we are trying to develop a domesticated salmon analogous to domesticated cattle or domesticated chickens. Sea grant,

through the University of Washington, has provided the fish geneticists who have had quite striking success in just 3 years.

I would like to emphasize that these people are good and their success has been real. In the past, before we got into this program, our survivals of our fish in this particular program were somewhere between 20 to, in one case, 50 percent. With those genetically selected fish, we have gotten survivals between 80 and 90 percent.

In my opinion, the use and development of genetics are absolutely key to the survival of aquaculture, and I would say for all species, if not almost all. It's very similar to what has gone on in aquaculture. We will have to do the same thing, and sea grant has got a good start in getting this program going.

Another sea grant program which I am not particularly or directly involved in, but which I think is quite important, involves chum salmon. The Japanese had a badly depleted chum salmon situation. They got down to about 10 million pounds of fish annually. The Japanese Government, with private interests, were able within 10 to 15 years to multiply that by six.

Now, our chum salmon runs are also depeleted, and they're still depleted. Sea grant is supporting the most comprehensive program to understand our chum salmon runs, and they, in my opinion, have the best chance of success. Success will renovate a fishery that will be worth probably tens of millions of dollars annually. If we don't have that success, we will probably have another import from the Japanese.

Now, I am in strong support of the President's budget strategy, and I understand the need for every agency to accept their share of fund reductions. This will mean for all of us the loss of some assistance in areas that are really quite dear to us.

But the loss of all or most of sea grant support would be a quite grave setback for the new aquaculture industry and for our food industry in general. Matching sea grant support for our pilot program meant a new industry. There are lots of other industries like that that are asking to be born. Sea grant support of fish genetics will allow acquaculture to duplicate in the sea what agriculture has done in the land. But it will take the same sort of support to do it.

Now, the results of judicious sea grant funding can, in our experience, pay off many times over in the building of our aquatic economy. I feel it will be most important that the sea grant office, somewhat leaner if necessary, but still healthy, be able to provide that kind of support in the future that it has, in my opinion, done so effectively in the past.

Thank you very much for your consideration.

[The statement of Mr. Lindbergh follows:]

STATEMENT OF JON M. LINDBERGH

The Sea Grant Office was established more than ten years ago with an objective to encourage and support the development of aquatic resources. I have personally participated in two significant Sea Grant-supported projects.

The first project was a pilot program in salmon culture in 1971. Sea Grant matching funds in that first year and NMFS technical assistance were key factors in the successful beginnings of a company which now has sales of several million dollars annually.

The second project, which is still continuing, involves the development of a genetically selected net pen salmon brood stock. In other words, our objective is a domesticated salmon analogous to domesticated cattle or chickens. Sea Grant, through the University of Washington, has provided the fish geneticists who have achieved striking success in jsut three years.

I am in strong support of the president's budget strategy and understand the need for every agency to accept their share of fund reduction. This will mean the loss, for all of us, of some assistance in areas dear to us.

The loss of all Sea Grant support, though, would be a grave setback for the new aquaculture industry. Matching Sea Grant support for our pilot program meant a new industry in salmon culture. Sea Grant support of fish genetics will allow aquaculture to begin to duplicate in the sea what agriculture has done on land.

The results of judicious Sea Grant funding can, in our experience, pay off many times over in the development of our aquatic economy. I think it most important that the Sea Grant office, leaner if necessary, be able to provide the kind of support in the future which I have seen it provide so effectively in the past.

Thank you for your consideration.

Mr. D'AMOURS. Thank you for your testimony, Mr. Lindbergh.

Our final witness on this panel is Mr. Robert C. Byrd. Mr. Byrd, would you go ahead, please?

STATEMENT OF ROBERT C. BYRD

Mr. BYRD. Mr. Chairman and members of the committee: I am Robert C. Byrd and I am vice president of Brian Watt Associates, Inc., of Houston, Tex. Ours is a consulting engineering firm that specializes in offshore engineering for the oil and gas industry.

My experience with the national sea grant program has spanned the past 6 years, and has been very positive, indeed, with respect to the impact of this program on applied ocean engineering research and graduate education in this field in general.

I have been invited here today to relate some of my experiences and to provide personal testimony as to the significance of the sea grant program to the general marine industry. Before I proceed, I would like to bring forth three points which I would like for you to consider when you review my testimony today:

First, the technology associated with the development of our offshore resources is demanding more and better qualified scientists and engineers;

Second, graduate education in engineering and science is becoming progressively less attractive to American students because of the increasing starting salaries at the bachelors level and the great demand in certain critical fields;

Third, the national sea grant program is a major source of funding for ocean engineering graduate education.

It is this last point that I would like to address and provide support for today.

My written testimony discusses some of my own personal experiences in acquiring research funding through the sea grant program. I spent a number of years in the offshore industry prior to returning to the University of California at Berkeley to pursue a doctoral education in engineering. Through contacts in the marine industry, I had felt that in returning to graduate school I would be able to tap industry sources for the doctoral research which was required for my degree.

During the first couple of years that I was in school, I found that the kind of topics which I felt were very appropriate for the needs of the industry at that time, and which would make good doctoral

subjects, were of a nature that the industry would not wait to have the work done as part of a graduate degree program. The information was needed in too short a period of time and was of a nature that the companies involved felt it should be proprietary. These considerations made the topics I chose inconvenient for combining with a degree program.

I have since found in my experience in the offshore industry that this is not an unusual case. Industry is only prepared to fund certain types of research which fit into specific programs and which can be completed in a time scale which allows them to be performed in academic institutions.

To make the point, I feel I would not have been able to achieve my degree program without the funding of the national sea grant program. The particular work I was involved in was related to the safe design of offshore oil storage and LNG facilities, for earthquake environments, which were particularly being considered for the West Coast States.

Now, lest you consider my own experience with sea grant as being a somewhat unique experience, after leaving the University of California I joined a consulting engineering firm in Houston as part of a team of engineers that was being assembled to look at the offshore development problems relating to the the Alaskan Arctic, particularly offshore of the North Slope.

Of the original group, six were Ph. D.-level engineers, three of us had received the major portion of our funding from the sea grant program.

Again, this sounds like it might be an exceptional experience, but today in our firm we have 15 graduate engineers and 4 of the 15 have received a substantial portion of their funding from the sea grant program.

The engineering community today is being faced with tremendous challenges in carrying out offshore development in the frontier areas, such as the Arctic, deepwater regions, the Outer Continental Shelf. These challenges are being met by the application of a substantial body of experience accumulated by the offshore industry, together with the use of highly motivated and well-trained engineers graduating from U.S. universities, with substantial backgrounds in marine technology.

As I have stated, I believe Sea Grant is a major contributor to this talent pool. However, the general need for engineers today is forcing stiffer and stiffer competition for the available talent. We are finding it increasingly difficult to hire young engineers with graduate degrees and experience directly related to the marine industry. If one excludes foreign students graduating without permanent U.S. residence status, I would say it is almost impossible to hire Ph.D. level engineers in the marine field.

If we examine the reasons for this situation, it relates to the increased starting salaries for B.S. level engineers. The salaries that are being paid today by the industry are higher than anyone would have ever imagined a few years ago.

At the same time, education is more expensive and it is becoming increasingly difficult to find the kind of research support that is required to achieve a higher degree. This is a very alarming

trend at a time when this particular sector of the marine industry is being faced with a period of major growth.

We are facing a situation where, if the current trend in education continues, we will be forced to seek a major portion of our technical expertise outside the United States.

In the offshore industry we are already seeing a substantial portion of the high quality and innovative engineering efforts coming from Europe, Canada, and Japan. We welcome these efforts, but at the same time it would be an unwelcome step backward for this Nation to lose its leadership position in the development of marine technology.

In reviewing the budget cuts proposed for the coming years in the sea grant program, it is very difficult for me to see how these funds can possibly be replaced by State or private sources. It is my understanding that the States are being pressed from all sides to replace similar Federal funds which are being reduced in other programs. General marine research and education considerations cannot possibly outrank other more immediate and pressing concerns. Private industry has not traditionally borne the burden of funding these types of programs directly, and it is highly unlikely in my opinion that they will assume this reponsibility in the near future.

I believe that most enlightened citizens accept the need to reassess our spending priorities. However, I believe we should be aware of the impact of cutting programs like sea grant and place it in the same light as the other pressing needs in the Nation, such as the need to maintain a strong defense.

I am quite sure that the sea grant program can be improved, as can all Government programs. But I think the trimming of these programs should be done in full consciousness of the benefits that are otherwise achieved from the programs.

I thank you for the opportunity to present my testimony. Thank you.

Mr. D'AMOURS. Thank you for so well summarizing your testimony, Mr. Byrd.

[The statement of Mr. Byrd follows:]

STATEMENT OF ROBERT C. BYRD, VICE PRESIDENT, BRIAN WATT ASSOCIATES, INC.

Mr. Chairman and members of the Committee, my name is Robert C. Byrd, and I am Vice President of Brian Watt Associates, Inc., of Houston, Texas. Ours is a consulting engineering firm that specializes in offshore engineering for the oil and gas industry.

My experience with the National Sea Grant Program has spanned the past six years and has been very positive indeed with respect to the impact of this program on applied ocean engineering research and graduate education in general in this field. I have been invited here today to relate these experiences to you as a personal testimonial to the significance of the Sea Grant Program in the marine industry. However, before I proceed with my own experiences I would like to offer three points for your consideration while reviewing my testimony:

- The technology associated with offshore development is demanding more and better qualified engineers.

- Graduate education in engineering is becoming progressively less attractive to American engineering students because of increasing starting salaries for bachelors level graduates.

- The National Sea Grant Program is a major source of funding for ocean engineering graduate education.

It is my intention to provide support for the last point in the following discussion.

I would like to briefly summarize my own educational experience to emphasize the role that Sea Grant has played. I received my undergraduate degree in marine engineering from the U. S. Coast Guard Academy at New London, Connecticut, followed by four

years in the Naval Engineering branch of the Coast Guard. I then acquired a masters degree in Ocean Engineering from the University of Alaska at Fairbanks. My education and the research work which allowed me to complete it were funded by the Office of Naval Research (ONR) as part of their effort to develop a high-speed surface effects vehicle for use in the Arctic. It was my original intention to pursue a Ph.D. degree in Ocean Engineering at that time, but this changed when ONR cancelled this portion of their research program. I left the University of Alaska to spend the next two years working in the offshore industry in Norway developing floating platform systems for use in the North Sea. I returned from this very interesting experience to continue pursuit of a doctoral degree at the University of California at Berkeley. It was my intention when entering Berkeley to solicit funds from within the offshore industry to pursue research on dynamic problems associated with wave-structure interaction on floating systems. However, I soon discovered that the particular problems that I pursued were of a nature that the solutions were required in less time than could be managed in the context of a graduate research program. The work was eventually performed by a consulting engineering firm. This I now know is not an unusual circumstance, and I would like to return to this point in a moment.

Shortly after my unsuccessful attempts to secure research funding from private industry, I became aware of the National Sea Grant Program and its mandate to sponsor research in areas of direct application to current problems. I was subsequently able, with the assistance of my sponsoring professors within the Civil Engineering Department at Berkeley, to find a research topic applicable to this program. This work involved the measurement of hydrodynamic forces on large offshore structures under earthquake excitation using scale models on an earthquake simulator. This research resulted in the verification of analytic procedures for calculating forces on such structures as offshore oil storage tanks and LNG facilities in the presence of earthquakes. This effort along with that of other engineers who followed in the same program stands alone today as the only physical verification of these analyses techniques, to my knowledge. It represents a very comforting landmark for engineers who are charged with the design of such structures for environments subjected to earthquakes.

My personal experiences with Sea Grant did not end upon leaving Berkeley, and I would like to continue that discussion in a moment. However, I think it is interesting to

consider at this point why the research work mentioned above would not have been funded from private industry sources, if it is as significant as I have stated. As a matter of fact, a substantial amount of this type of research is indeed funded by the offshore industry, but their ability to support this type effort at a college or university is restricted by two important considerations. The first is the fact that a great deal of the available resources are consumed by the practical necessity to concentrate on problems that are of immediate application to specific development programs. This means that the results are generally required in a shorter period of time than is usually possible in academic institutions. The second is the fact that most universities require that research work performed in pursuit of a graduate degree be made public in the form of a published dissertation or thesis. Most sectors of private industry feel that if they pay for the research, the results should belong to them exclusively, particularly if it is a topic of significant commercial interest. While this is an issue that can generally be side-stepped by some compromise on both sides, it is a complicating factor that discourages private industry from funding graduate research in universities. In the case of my own dissertation research, most people familiar with this area of technology agreed that it should be in the public domain to allow free access by all parties concerned with the safe design for offshore structures of the type considered. Public funding would seem to be very appropriate for this type of research.

It might be tempting to dismiss my experiences with Sea Grant as a singular example of little significance in the broader picture of offshore technology. Therefore, I would like to continue the discussion. As I was completing my research at Berkeley, I was offered the opportunity to join Brian Watt, our company President, and seven other engineers in forming a team to work with a major oil company to develop the technology required to operate in the offshore regions of the Alaskan Arctic. The team was chosen to provide a broad spectrum of engineering experience to augment that already available within the oil company itself. Six of the original nine engineers had Ph.D's in various aspects of civil engineering; three of the six received a major portion of their doctoral research funding from the National Sea Grant Program. The two other than myself had both graduated from the Massachusetts Institute of Technology.

From this beginning, our firm has evolved into a leader among consulting engineering firms in the devlopment of arctic offshore technology. We now have 15 graduate

engineers, four of whom received the major portion of their funding from the Sea Grant Program. This amounts to nearly 30% of the total.

Once again we should return to the question of the particular significance of this single example. It is my contention that it is very significant. The concentration of graduate engineers who have been strongly influenced by the National Sea Grant Program in our firm is not that far out of line with the general offshore industry, if one considers the high technology sector. Sea Grant institutions like the University of California, MIT, Texas A & M, and many others are supplying a substantial portion of the better talent going into frontier development in the marine industry today. In preparing this testimony, I located another half dozen engineers in companies scattered around the Houston area who had received some portion of their funding from Sea Grant. The impact of this support will be felt for many years to come in offshore development in the U. S. The commercial value of this human resource will be very great.

Returning to the points raised at the beginning of this testimony, the engineering community today is being faced with tremendous challenges in carrying offshore development into the frontier areas such as the Arctic and the deep-water regions of the outer continental shelf. These challenges are being met by application of the substantial body of experience accumulated by the industry in its operations in other areas, together with the use of the highly motivated and well trained young engineers graduating from U.S. universities with substantial backgrounds in marine technology. As I have stated, Sea Grant is a major contributor to this talent pool. However, the general need for engineers today is forcing stiffer and stiffer competition among the groups who compete for the available talent. We are finding it increasingly difficult to hire young engineers with graduate degrees and experience directly applicable to the offshore industry. If one excludes foreign engineers graduating without permanent U.S. residence status, I would say it is almost impossible to hire Ph.D. level engineers. If we examine the reasons for this situation we can identify two major causes. On the one hand starting salaries for engineers are higher than anyone would have imagined a few years ago. On the other hand, education is more expensive, and it is getting more and more difficult to find funding for the type of research which leads to the higher degrees. This is a very alarming trend at a time when this sector of the marine industry is in a major period of growth.

The experiences which I have related apply to a particular sector of marine technology. However, I believe that similar situations can be found in other sectors as well. We are facing a situation where, if the current trend in graduate education continues, we will be forced to seek a major portion of our manpower or technical expertise from outside the U.S. In the offshore industry, we are already seeing a substantial portion of the high quality and innovative engineering efforts coming from Europe, Canada, and Japan. We welcome these efforts, but at the same time it would be a most unwelcome step backward to see this nation lose its leadership position in the development of marine technology. In reviewing the budget cuts proposed for the coming years in the Sea Grant Program, it is difficult for me to see how these funds can be replaced from state and private industry sources. It is my understanding that the states are being pressed from all sides to replace similar federal funding cuts in other programs. General marine research and education considerations cannot possibly outrank more immediate and pressing concerns. Private industry has not traditionally borne the burden of funding these type programs directly, and it is highly unlikely that they will assume this responsibility in the near future.

I believe that most enlightened citizens accept the necessity to reassess the national spending priorities. It is apparent that we have entered an era of more severe limitations on our ability to fund programs from public monies. However, it is my view that when the priorities are established, programs which contribute directly to the development of our technical human resources must be ranked on the same level as other pressing concerns, such as the national defense. If this is not done we stand a great chance of losing our technical leadership in all areas other than defense technology. This would be a very sad state of affairs indeed.

I am quite sure that there are areas in which the Sea Grant Program can be trimmed and improved in its effectiveness and use of available funds. I'm sure that can be said for all government programs. Nevertheless, the importance of this program in marine research and graduate education must be recognized and the human resources that it produces must continue to be available if we are to meet the technical challenges that face us as a nation in the continuing development of our offshore resources.

I thank you for the opportunity to present my view, and I will be happy to address your questions.

Mr. D'AMOURS. Now the panel will be subjected to questions by various members of the subcommittee. I would like to start very briefly with you, Mr. Byrd.

You were here in the room earlier when Mr. Walsh, the Acting NOAA Administrator, testified about a surplus of marine specialists. He mentioned specifically marine biology. In reading your testimony, it caused me to believe, as you just reiterated, that in fact there is a shortage.

Can you account for the disparity in your various testimonies?

Mr. BYRD. I think what Mr. Walsh was saying about biology in particular may well be true. But it certainly is not true of the general marine field.

As I have stated, we are seeing a tremendous decrease in the number of qualified people in the physical science aspects of the marine industry—engineering, coastal processes, and other areas of technology similar and applicable to the offshore industry. I would have to strongly disagree with what Mr. Walsh said in general.

Mr. D'AMOURS. Also, I noted in your testimony you said you had made several attempts to get private funding for the research you did on the hydrodynamic effects upon ocean structures. You were unsuccessful after seeking such private funding and you received through sea grant some help in this regard.

Were the hydrodynamic studies that you performed being done by any other group, or would it have been done had you not received the Sea Grant help?

Mr. BYRD. The initial subject that I had intended to use as my doctoral research topic was done by a consulting engineering firm in Norway for the company to which I applied for research support. The topic which was eventually supported by sea grant was on a different subject.

Mr. D'AMOURS. All right. I'm not sure I'm clear.

Mr. BYRD. The work was done, yes. The subject matter which I had originally wanted to do and sought funding for from industry was done by a commercial engineering firm. The work eventually supported by sea grant was of a nature that it needed to be in the public domain.

Mr. D'AMOURS. Thank you.

I have further questions of other members of the panel, but I will defer at this time and give other people a chance to ask questions.

Mr. Pritchard.

Mr. PRITCHARD. Thank you, Mr. Chairman.

I appreciate you gentlemen coming here, certainly Mr. Lindbergh who's a neighbor of mine, and I'm delighted to see him again.

Gentlemen, I would just make a statement to you. I am hopeful we can get this back up to about 75 percent of where we were, and if we're able to do that, I think we'll be fairly fortunate. That is an effort that is being made in the Senate now by some friends of mine, and they have a little more flexibility than we have on our side. So I am hopeful we can do that.

I would ask this of Mr. Lindbergh. I have always held the view that it's essential that the work be done in the basic research areas and in the long payoff items, and I see the pressure, the push, over the last few years to get into shorter term operations and things

that are at the very end of the development line. I have some personal reservations about spending the Federal money in that area. I wonder if you could comment.

Mr. LINDBERGH. I would agree with you. I think the areas that the Federal Government should put moneys are the areas that are very long range, and areas that have perhaps wide implications. I would pick genetics, for instance, as one of those areas. To carry out a program in genetics takes many years, but it's absolutely vital in any aquaculture or agricultural program.

I think in nutrition perhaps is another one. I think the place that perhaps we should be cautious about putting Federal money is in short-term technical projects, telling inudstry how to do it. Usually industry can do those things better on their own than the Federal Government can. But on the long-term programs, either they're fragmented or they never get done.

Mr. PRITCHARD. Gentlemen—I guess I won't go up and down the line. I think we run into problems when we get the Federal Government into funding those things at the end of the R. & D. effort, and I know sometimes you get Federal funding to get operations going because there is not enough risk capital or the risk is a little greater. But if we're going into a period where money is going to be short, and we keep an operation like this going, we want to make sure that we get that basic research and we get that long-range look. That building of the research base, like building the industrial base, I think that while the payoff is longer, it is more valuable and I think we also keep the Government in its proper role and force the private sector to get out and do their job.

I have no further questions—and that really wasn't as question but a statement. And it always kind of burns me when witnesses come and get statements from Congressmen that don't know a darned thing about it——

Mr. D'AMOURS. But you do.

Mr. PRITCHARD. But having strong feelings in this area, and I have seen the pressure from Congress for short payoffs, saying "Get us things that we can go back to Congress and show a dollar and cents payoff today". But I think in lean, hard times we have to be careful in staying away from that.

Thank you, Mr. Chairman.

Mr. D'AMOURS. Thank you, Mr. Pritchard. I, for one, will attest to the fact that you have a good deal of knowledge in this area.

Mr. Hughes, do you have any questions?

Mr. HUGHES. Yes. Thank you, Mr. Chairman.

I, too, want to thank the panel. Mr. Byrd, I note in your statement that you allude to your belief that the States will not be able to pick up the costs of these programs, and they have to absorb other programs and are just not going to be able to make the commitments to a sea grant type of research education and extension service.

Is that something that you talked to State officials about, or is that just something you surmize from what is happening to States generally?

Mr. BYRD. That is my own opinion. I haven't talked to State officials about it. But I don't see why the States would be inclined to pick up the education aspects of the sea grant program.

You could look back to my own example. In our firm, we don't have a single person that was educated in Texas. Everyone was educated in Massachusetts, California, New Hampshire, and various other places. I can't see that it would be a Texas problem, so I don't see why they would want to pickup that responsibility.

Mr. HUGHES. I suspect we will hear more from some of the directors who will be testifying later this afternoon on that subject, and perhaps some of the State officials that hopefully will be testifying before this subcommittee.

I was also interested in learning a little about your education at Berkeley. That was through the auspices of the sea grant program, as I understand it.

Mr. BYRD. Yes, sir.

Mr. HUGHES. Was that an outright grant or was that a loan program?

Mr. BYRD. No, I was a sea grant trainee working on sea grant-sponsored research. The funding went to, I believe, the office of research at Berkeley and was being sponsored through a group of professors who were the principals involved in the research. I was a trainee as part of that program.

Mr. HUGHES. How would you feel about a program in sea grant that would provide loans that would have to be paid back?

Mr. BYRD. That wouldn't cover the sort of research that we were involved in. My education costs were a very minor part of the overall program. The particular study I was involved in involved the development of a model for assessing the dynamic characteristics of offshore structures, which cost about $200,000. My own education only cost a few thousand dollars per year. So I wouldn't say that a student loan program would solve the problem at all. The cost of research extends well beyond the direct cost to the graduate students.

Mr. HUGHES. How much experience have you had, or any of the panelists, with the extension service aspect?

Mr. SWIFT. I guess I can attempt to address that question. I have had, over a 5-year period, a relatively high amount of interaction with the extension services. In fact, I credit the extension service in New York for many of the successes that I have had in deciding the business climate, assessing business factors, and making efficient decisions.

Running a small business—and my businesses are, indeed, small—I have to look for areas where I can increase productivity. There are, of course, all of the standard routes to increase productivity and I do explore and capitalize on those. But when it comes to having access to fundamental research as it applies to my business environment, I'm clearly not in a situation to expend the type of resources that are currently being spent to support this type of research.

Did I address that correctly?

Mr. HUGHES. Yes, I think so.

We have a rather infinite advisory service in New Jersey, which is my home State, and they perform, as you well know, a comparable service as the extension service does the agricultural community. I would dare say that agriculture wouldn't be anywhere near what it is today—and not just my State but throughout the coun-

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try—if it were not for the research and the extension service trying to make that research work as a practical matter that we have seen in the last several decades. I suspect that most States, like my own, would just not have the resources to pick up the advisory service if, in fact, we were to phase it out right now.

Do you have a opinion as to what your State would do?

Mr. SWIFT. Yes, I agree wholeheartedly, we're looking at a situation where, I suspect in the economic climate, many programs are going to be sublet to the States and it will then be the States responsibility to prioritize these.

In my testimony I indicated to you there are several ongoing research programs that are of immediate benefit to individuals like myself, as well as individuals who are on the threshold of entering this business. The forecasts that are being made at this point in time indicate that the sport fishery tourism business along Lake Ontario is going to grow in leaps and bounds over the next 5 years. This will reflect basically the stocking patterns available. We hope to, in a 5- to 10-year period, have a quality sport fishery as does the State of Michigan.

Needless to say, there are going to be many individuals that are comtemplating embarking on the service trades, the charter sportfishing, the tackle business and what have you. In our area, this is perceived to be a major growth area over the next 5 to 10 years. Since the industrial climate in the Northeast is shifting emphasis toward the Sun Belt areas, we have a resident population in New York State that has been documented to be on the decline. We, therefore, are constantly looking for new areas where growth can occur and clearly in the sportfishery tourism trades areas, this is an area that will be experiencing tremendous growth.

The interaction with the extension service will make the decisions much easier for those individuals involved in this economic climate, where we're seeing prime rates of 21 percent. Without substantial capital up front, it's very difficult for an individual to get into one of these businesses, and it's very expensive to stay in business. Sea grant information could be critical to the success of these new businesses.

Mr. HUGHES. Thank you very much. I appreciate it.

Mr. Chairman, I would like to yield back the balance of my time.

Mr. D'AMOURS. Thank you, Mr. Hughes.

Mrs. Schneider?

Mrs. SCHNEIDER. Thank you, Mr. Chairman.

Because of the testimony of you gentlemen was so very clear and explicit, I have a limited number of questions to ask. It was all rather quite supportive of your remarks.

But I am curious, Mr. Hudlow, that you indicated you were successful in both processing and distributing about 30,000 pounds of fish in an area where there had been no market for that particular type of fish before, and you were able to do that as a result of assistance from the sea grant program.

Could you elaborate a little bit in what way they did specifically assist you?

Mr. HUDLOW. Unfortunately, I had made a very poor purchase of some product that came in from Nicaragua, some Malabar snapper, and I thought I was buying 6 to 8 ounces fillets and when they

arrived they were 2½ to 3 pounds. This did not fit into the market structure that I was serving, which is the chainstore area.

I didn't really know what to do with the product, so I called for some suggestions and I talked to the group down in St. Pete and they suggested I might consider smoking the product, but that the USDA had just recently come out, or Food and Drug had just come out with certain guidelines, and that everything was pretty much up in the air as to the methods that could be used. They suggested that I contact the Georgia sea grant program, which in this particular case they had just completed a study that was acceptable within the guidelines, and this was how I was able to smoke the product and 95 percent of it went back to Florida and was sold in the Florida market.

That was my first experience with the sea grant program and, frankly, I did not know they were in existence. I have been a farmer and have been in the dairy business for a number of years, and my family has been both in public warehousing and distribution. I have been very close to the agricultural aspects in our State, and earlier it was pointed out that the land grant position that we have enjoyed for a number of years has certainly been able to take credit for the fact that we are a nation unparalleled in our agricultural production.

I feel like the sea grant program has offered me a wealth of information. In being in a landlocked State, you can appreciate that when I asked about smoking fish from the TBA, they told me the only experience they had was smoking carp and they didn't think I would like to do that.

Mrs. SCHNEIDER. That's very interesting.

Have you been in a situation to market ocean pout by chance?

Mr. HUDLOW. No, ma'am, I haven't.

Mrs. SCHNEIDER. Are you familiar with that fish?

Mr. HUDLOW. No, I'm not.

Mrs. SCHNEIDER. Well, good. Then you ought to learn about it because we have plenty of pout in Rhode Island, and the way we began eating it was as a result of a program established by the sea grant program in Rhode Island. So maybe we can supply you and you can help Rhode Island's economy, too.

Mr. HUDLOW. The Southeast is just awakening to the fact that fresh sea food is a very excellent product. We have just recently in the last couple of years demonstrated that fresh sea food can be sold in our chains at the fresh fish counter or at the frozen counter, and there are strong indications that at least our markets are growing in that particular area.

I have been challenged by some of my friends in Florida by the fact that I ship product from Washington State to Tampa, Fla., and to Orlando, but I think that with good product, the consumer is going to buy and we have to give them good product. This is the way we can expand our markets.

Mrs. SCHNEIDER. I hope that you will share the information or the benefits that the sea grant program has brought to you with other members of your same industry, because I think that would be most helpful in expanding the consumption of sea food.

Thank you.

I made a statement and I didn't mean to, Mr. Chairman.

Mr. D'AMOURS. To the extent of my knowledge, there is nothing wrong with making statements. In fact, I think more often that's what occurs with Members of Congress, and you have done very well.

Gentlemen, I have no further questions, but I do have an observation that I would like to solicit any reaction that you might have.

In listening to this testimony today and listening to your responses to the questions you received, I have the feeling that we have before us a group of people who are representing industries and State interests, if not directly, at least indirectly. There seems to be a dichotomy between the way the administration sees our ocean industries and the way the people in the States and the various industries see it.

I get the feeling that whereas the administration is looking at our ocean industries on a State's rights basis and from a more parochial perspective, that the people in the industry and from the States see the industry and its impact on the economy more in terms of a national perspective, which I think is the proper perspective.

I don't think there are any antifree enterprise people sitting out here before us. They are all very much involved with free enterprise and the American way and the business community—and I say that with no disrespect intended because I feel the same way.

But here are you people from the industry who seem to be taking a broader look of our ocean and coastal policies, from an economic and well as environmental perspective, than the administration is willing to take. I think that there's a serious dichotomy here and I hope they are able to hear the message that I think you very clearly are sending them, because fishing, pollution, aquaculture and many other things are not parochial and are not limited to State boundaries.

If anybody wants to react to that statement, I then will consider it a question and you will be free to do so. Is there any reaction to that?

Mr. LINDBERGH. I would like to say that your observations I think are very true. So many of the things that sea grant has supported go beyond the locality or the State where a particular project is involved. It spreads out over much of the country. This may not be true in every case, but in most of the key ones I think it does.

Mr. D'AMOURS. I thank you all for your contribution and for your excellent testimony. I appreciate your being here with us today and giving us your time. Thank you all very much.

Our next group of witnesses is a panel composed of program directors of various sea grant college programs. Would you gentlemen please approach the witness table at this time?

Gentlemen, we thank you for being with us today. I will give you the same opportunity that I gave to the prior panel of witnesses. Should your own circumstances require any changing of the order of testimony as appears on the witness list, I would be very happy to abide by whatever agreement or consensus you can come to. Other than that, we will proceed with the testimony in the order you appear on the witness list.

I will ask you also, to the extent it's possible, gentlemen, to summarize your testimony. When we get to the question and answer session, you can get into any specifics you might like.

With that, I will call on our first witness, Mr. Horn.

STATEMENTS OF DEAN A. HORN, MASSACHUSETTS INSTITUTE OF TECHNOLOGY; STANLEY R. MURPHY, UNIVERSITY OF WASHINGTON; B. J. COPELAND, NORTH CAROLINA STATE UNIVERSITY; JACK R. VAN LOPIK, LOUISIANA STATE UNIVERSITY; AND JAMES J. SULLIVAN, UNIVERSITY OF CALIFORNIA

STATEMENT OF DEAN A. HORN

Mr. HORN. Thank you, Mr. Chairman, and members of the subcommittee. I appreciate this opportunity to testify in support of the national sea grant college program. I have submitted my complete written testimony.

I am director of the MIT sea grant college program and my remarks are based on over 10 years of experience with the program's operations and various activities.

In summarizing my testimony, I would like to very clearly state the context of my remarks and then just emphasize a couple of key points.

Mr. D'AMOURS. That's fine. For those of you who perhaps have not testified before a congressional hearing before, I can assure you that your entire testimony as you have submitted it will be entered in the record and that will appear as a matter of record, so you won't be losing any of the impact you have planned on making.

Mr. HORN. Thank you, sir.

The context is this. The stated mission of the Commerce Department is, one, to expand industrial output, two, improve productivity, three, stimulate innovation, and four, create new jobs. Now, I submit, Mr. Chairman, that the national sea grant program as set forth by the Congress has exactly those same objectives for the marine field and, therefore, sea grant supports the Commerce mission.

In this context, then, just two remarks that I would like to make, first the national character of sea grant, and second, the unique capabilities that accrue as a result of the university being a member of the sea grant partnership of Government, industry, and universities.

First, the sea grant college program network is unique. Participating sea grant colleges and universities work through an active advisory service to give a national perspective and benefit to local and regional activities.

One example to illustrate what I'm talking about. In an MIT project a few years ago, we developed four mathematical models describing the movement of water and pollutants in Massachusetts Bay. You might immediately say that's a local problem of concern only to Massachusetts, but that's not so. These models are an analytical tool that can be used for virtually any definable body of water, and these models have been used for a powerplant study in Narragansett Bay, the pollution impacts in New Hampshire's Great Bay, and San Francisco Bay, Biscayne Bay, and in harbor areas of Alaska just to name a few.

To date, the models have been used by over 35 contractors, consultants, Government agencies and researchers, in and out of sea grant. In just one application, the models demonstrated that a cooling water channel for a powerplant didn't have to be modified for a second generator and thus produced a cost avoidance of over $29 million out of one application. So this local project from Massachusetts Bay has had national impact and benefit because of the sea grant network. This is a unique and powerful organization that is capable of translating these local effects and research results into national applications and benefits. There are many other examples from many other sea grant programs as well.

My second key point that I really want to make quite strongly is the unique characteristics sea grant gets from the university partner. Applied marine research at a university has one important advantage over all others—the general acceptance and credibility of research results as objective and trustworthy. I would like to cite one example of this.

Oil spills are a problem loaded with emotions and biases. Through a series of workshops we identified a need for an overall legal, technical and economic analaysis of the problems involving cleaning up oil spills. Primarily due to credibility, I believe that no Government agency, oil company, or manufacturer, could have carried out this type of research. Clearly, this is the type of opportunity made for sea grant.

We brought together representatives of all interested parties and developed this research effort. It is now being supported by sea grant, the Navy, the Coast Guard, the Spill Control Association of America, a manufacturer of spill cleanup equipment, an oil company, the Commonwealth of Massachusetts, and the Doherty Foundation. All are participating. Support includes both financial and direct participation of Government and industry professionals. They meet bimonthly with us to review, critque, advise us, and guide the work as it progresses.

The results of this will be an important, multipartisan process for improving the control of oilspills in a most economical manner. Because the interested parties have contributed the information and data inputs, the integrity of the results will likely be accepted. This example is typical of work in almost every sea grant program. This is university credibility at work at its best.

The university's other unique capability which was discussed by some of the previous witnesses is the ability in education. A very effective and important forum for information dissemination and technology transfer is the force of students leaving the sea grant universities every year. In 1980 alone, nationwide, there were 278 sea grant graduate students who finished their studies and entered professional life in fisheries, marine sciences, ocean engineering, Government service and so on. Over many years, some of the sea grant graduate students from MIT have kept in touch with me. I recently received a letter from a former sea grant graduate student who then became a faculty member and a sea grant researcher and is now in private industry. I would just like to quote from his letter:

The Sea Grant Program brings a healthy breath of reality to the university. It brings a vitality to the education of students. In the areas where I was supported by sea grant, the traditional funding sources were either proponents or opponents. Sea

grant was the only funding source that valued analysis more than rhetoric. Today, as a vice president and division manager of a New York Stock Exchange company, I know that my sea grant exposure was valuable preparation for any career.

In my opinion, today's young people are the most important resource this Nation has. Sea grant graduates are probably the program's most important product. Government support for training and education through sea grant is a sound and necessary investment in the education of our Nation's future leaders in the marine field.

In summary, Mr. Chairman, the sea grant program network assures a national perspective and outreach for local and regional activities and accomplishments. Second, the university partner provides these two unique capabilities of objective research in a neutral territory and the education of our Nation's future leaders in the development of marine resources. In light of the stated goals of the Sea Grant Act, sea grant's excellent record of performance, and the increasing need for the United States to develop and utilize our marine resources, it is essential that the sea grant program be continued as a strong, working partnership of government, industry, and universities.

Thank you very much for this opportunity, and I would be pleased to respond to questions.

Mr. D'AMOURS. Thank you, Mr. Horn, for summarizing your testimony as well as you did.

[The statement of Mr. Horn follows:]

Statement of Mr. Dean A. Horn, Director, Sea Grant College Program, Massachusetts Institute of Technology

Introduction

Mr. Chairman, members of the Subcommittee: Thank you for this opportunity to appear before the House Oceanographic Sub-Committee to testify in support of the National Sea Grant College Program and to urge action by the Congress to assure the continuance of this vital Program. My name is Dean A. Horn: I am Director of the Massachusetts Institute of Technology Sea Grant College Program. The following remarks are my opinions and recommendations based on over 10 years experience with Sea Grant operations and activities, locally and nationwide.

Established by Congress in 1966, the National Sea Grant College Program has been an effective mechanism through which the federal government has provided the necessary and essential leadership of a "continuing partnership with State and local governments, private industry, universities, and citizen organizations." The objective of the Sea Grant Program is "to increase the understanding, assessment, development, utilization, and conservation of the Nation's ocean and coastal resources." This mandate is set forth in the Sea Grant Act "Declaration of Policy".

This Administration has proposed bold, aggressive actions in both federal spending and tax reforms to halt the Nation's economic decline and to regain our world leadership position. The Department of Commerce is providing Administration leadership by carrying out its primary mission of expanding industrial output, improving productivity, stimulating innovation, and creating new jobs. For the marine field, Sea Grant is already dedicated to serving these objectives. It is, I believe, the desire and intent of every Sea Grant Program director to strengthen and expand each Program's efforts in furthering the Commerce Department's mission.

In the Sea Grant Act, the intent of the Congress was clearly to utilize the expertise of our Nation's universities to aid industry and business in the development and utilization of our marine resources for our economic gain and common good. In this context, Sea Grant is a national program, not limited by region or state, but structured to have broad interaction and interchange of ideas and results.

The heart of the National Sea Grant Program is its mutually supporting and continuing partnership concept. This relationship unites the interests, responsibilities, and special contributions of government, industry and

university, into a working program that is more effective in concert than just the sum of the individual partner's capabilities. The balance, interdependence, and complementary characteristics of the partners is such that all must participate, or the system will collapse.

The government's interest and responsibility seem clear. It has jurisdiction over all ocean areas and the utilization of the resources contained therein. The government's partnership contribution is absolutely essential in providing the basic long-term investment and support that forms the thread of continuity linking all efforts together. In addition, the government's central management, focus, and guidance assure the nationwide application of the Program's results.

The industrial, private sector is concerned with the generation of income and benefits. This partner brings the ability to help identify those problems, needs, and opportunities requiring priority attention and resolution; and to underwrite those project activities with the greatest potential to create new wealth.

The university's special contribution to this vital partnership is its capacity for objective, credible inquiry; the education and training of personnel required; and the special capability to provide fundamental research from a multi-disciplinary reservoir of expertise needed to address contemporary problems. The Sea Grant advisory service within the institutional network of Sea Grant Programs assures the prompt delivery of the Program results and the early identification and feedback of problems, needs and opportunities in the marine field.

National Characteristics of Sea Grant

To better appreciate the nationwide impact and importance of the National Sea Grant Program in assisting private industry to expand its productivity, permit me to identify what I consider to be the Program's special features:

- Sea Grant is a nationwide university-based program with the responsibility of responding, not only to local and regional needs, but also to marine-related problems of national significance,
- The program supports high risk research projects that no single industry or government agency can be expected to fund,

- It is a program that, because of the non-federal matching requirement, leverages the federal investment,
- The Sea Grant network pulls together the research talent from many disciplines to solve practical problems.
- The advisory staff in contact with industry and government helps to identify research problems and to disseminate results to those who need them.

The National Sea Grant network is unique; no other such marine oriented, federally-sponsored, R & D program exists. The network links the participating Sea Grant colleges and universities of all coastal and Great Lake states, commonwealths, and island territories into a national entity. This network of experts and information, through which research results are being exchanged, provides all local and regional activities with a national perspective and benefit. The network can only exist if individual university programs continue to operate. Without federal support, the National Sea Grant College Program cannot, in my opinion, be expected to survive. The Sea Grant network would be destroyed and the economy of the nation suffer serious loss.

I will cite one example to illustrate the benefits the network provides. I have chosen an MIT project in which four mathematical models describing the movement of water and pollutants in Massachusetts Bay were developed. Some might think of this as a purely local problem, of interest and benefit to only one state; but this is not so. Massachusetts Bay was, on the contrary, the field laboratory chosen to examine the general problem of how to predict the transport and dispersion patterns of matter introduced into the ocean environment.

The specific need for these mathematical models originated as part of an investigation in which the effects of dredging ocean sand and gravel were to be studied. Several government agencies, universities and industries were involved in this National Ocean Mining Environmental Study (NOMES). The researchers developing the models had planned, and succeeded, to produce an analytic tool that could be used in virtually any definable body of water. Successful application of the models has been made by Sea Grant researchers in the Universities of Florida, New Hampshire, and Maine. The models have been used to study power plant sites in Narragansett Bay, Rhode Island, and Great Egg Harbor, New Jersey; the impact of the pollution in Great Bay and the

Piscataqua River in New Hampshire; and other studies in San Francisco Bay, in Biscayne Bay, Florida, and in harbor areas of Alaska, to name just a few.

To date the models have been used by over 35 contractors, consultants, government agencies and researchers, both in the US and overseas. Engineers from one company who recently used the models to assess the impact of sewer outfalls in a major metropolitan district reported that their work "could not have been done without the models." They consider these the best models of coastal processes in existence today. In one application alone, these models demonstrated the environmental acceptability of an existing power plant cooling water channel to carry the heat load of a second generator. This resulted in an estimated cost avoidance of $29 to $54 million.

This "local" project has thus had clear national impact and benefit that could not have been achieved without the existence of the Sea Grant network.

There are many other examples of how marine studies and research in one locality have benefited other areas, even the whole nation. Such a multiplier effect operates because the Sea Grant network guarantees an active, aggressive exchange of ideas, information and results. Other members of this panel will, I am sure, cite other examples. I am aware, for instance, of the University of Rhode Island's pioneering efforts to develop and introduce fishing gear which has resulted in an annual net increase in income of $431,000 to 18 vessels; that same Sea Grant Program's successful efforts to develop a deep sea red crab fishery on the East Coast should also be mentioned here; aquaculture research and development results are being exchanged through the network among East coast, West Coast, and Great Lake operations.

It should be emphasized here also that the advisory service element of the Sea Grant Program plays a major role in the successful operation of this network. It is my opinion that advisory services achieve full effectiveness when they function as an integral part of a balanced Sea Grant Program, organized to focus the needed scientific and technological resources of the university on important marine problems, needs, and opportunities -- be they local, regional, or national.

In summary, the Sea Grant university network represents a unique and powerful organization capable of translating marine interests, efforts and results into national application and benefit. The network can only exist if there is a National Sea Grant College Program to provide central motivation, support, cohesion and cooperation.

Distinctive Features of Sea Grant Research Capabilities

The wise provision of the Sea Grant Act that requires matching funds and the provision for advisory services by the Sea Grant College Program combine to foster unusual, if not unique, research capabilities. The integration of advisory service capabilities with the research efforts and matching fund requirements enable us to identify and to work on highly controversial, multi-interest research problems that require objective approaches to ensure the research is credible and unbiased.

Multidisciplinary, applied marine research at a university has an advantage that, I believe, is unavailable from any other source in our society. The advantage is the general acceptance and credibility of the results as being objective and trustworthy. Research by university faculty can provide an arena in which competing and conflicting needs can be fairly assessed and judged by a publicly acceptable process. I will discuss a current example of MIT Sea Grant work to illustrate this point.

Oil spills are a problem which represent a research topic laden with potential emotional and economic biases. Through workshops sponsored by our Sea Grant/Marine Industry Advisory Service Program oil spill clean-up was identified as an issue of concern to several government agencies, to oil companies, and to manufacturers of oil spill clean-up equipment. In addition, of course, oil spills are recognized as a serious problem to coastal citizens, fishermen, and environmentalists.

Although a national contingency plan exists, there is no overall legal, technical and economic analysis of the problems involved in cleaning up oil spills to fill a need acknowledged by all cognizant groups. Primarily due to the problems of credibility, I believe no government agency, no oil company, no manufacturer of clean-up equipment could singly carry out, or sponsor, the required research. Conflicts of interest, excessive costs and accusations of bias could be expected, independent of the quality of the results. Clearly, this was an opportunity for Sea Grant to help. Through our Advisory Service and the Sea Grant network, MIT Sea Grant brought together representatives of all interested parties and undertook a research program that is currently being supported by Sea Grant, by the U.S. Navy, the U.S. Coast Guard, the Spill Control Association of America, a manufacturer of oil spill clean-up equipment, an oil company, the Commonwealth of Massachusetts, and the Henry L. and Grace Doherty Charitable Foundation Incorporated.

Participation in this study is not limited to financial support but includes important direct participation, i.e. "in-kind" support. The research team includes industry professionals as well as faculty and students from several MIT departments. An advisory committee comprised of oil company representatives, manufacturers of oil spill clean-up equipment, environmentalists, and interested government agencies meets bimonthly to review, critique, challenge the work in progress.

The results of this research will, we believe, be an important contribution to improving control of oil spills in the most economical manner. Equally important, since many of the interested parties have worked together on gathering information and data for an analytical computer model which is being developed, the integrity or bias of the research results is not likely to be challenged. The important technical contributions and practical experience offered by industry representatives and representatives of government agencies assure that the research results are practical as well as being academically sound.

One of the components of MIT's advisory service is the Marine Industry Advisory Service Collegium, consisting of 100 large and small U.S. companies and eight government agencies. These are routinely surveyed to identify priority marine research needs of a broad spectrum of the industry. One such survey identified a major concern for new mechanisms and techniques for safely carrying out work beneath the sea. In response to this need we now have an ocean engineering theme on unmanned underwater work systems. The project efforts at MIT include work on new techniques for underwater communications and design of semi-autonomous, "semi-intelligent" underwater work systems that can be controlled by operators working on the surface.

The interdisciplinary nature of this problem is reflected in the composition of the MIT research team which includes members of the Ocean Engineering and Naval Architecture Department (vehicle design), the Mechanical Engineering Department (computer control of manipulator systems), the Astro and Aeronautics Department (vehicle control systems), and the Electrical Engineering and Computer Science Department (communication systems). One of the special features of Sea Grant, is its ability to bring together such interdisciplinary teams within universities to work on problems identified by diverse industry and government groups.

Work on unmanned underwater work systems is being pursued independently and cooperatively by the Sea Grant Programs at MIT and the University of New Hampshire. Each has funding from several government agencies, Sea Grant, and industry partners. This work is truly pushing the frontiers of technical knowledge, in high risk areas that no one company is willing to invest in alone until certain fundamentals have been proven.

In addition to the research at MIT, our Industry Advisory Service hosts annual meetings which provide for exchange of ideas and needs among academic researchers, manufacturers of manned and unmanned submersibles, offshore oil industry operators, and cognizant government agency representatives. The level and diversity of interest in this work is indicated by the attendance of 75 people at a recent workshop jointly sponsored by MIT and the Naval Oceans Systems Center at San Diego. The 75 attendees represented 26 companies, 5 universities, 5 government organizations, and 3 not-for-profit research groups.

Without a doubt, one of the most important benefits of projects such as those mentioned above is that the student researchers are actively working on practical, "real world" problems. The students see their education in action and gain experience that will be invaluable in their future industry, government or academic careers.

Sea Grant Education Benefits

While the networking facet of Sea Grant and the Program's advisory services speed the delivery of research to an ever growing array of marine industries and government groups, there is an even more important vehicle of information dissemination and technology transfer that may not be fully recognized. It is the force of students leaving Sea Grant universities every year to work in fisheries, marine sciences, coastal and offshore engineering, urban and port planning, ship design, government and communications. Last year 739 graduate students were directly supported by Sea Grant funds, and another 918 were involved with Sea Grant research and program activities nationwide. Thus a total of 1657 graduate students benefited from the Sea Grant experience in 1980. Of these, 375 finished their studies and entered professional life.

With the help of Sea Grant, these young men and women participated in applied research in which they were able to combine youthful energy and classroom knowledge with realities of business and hard decision making, realities such as cost, safety and regulation. Time and time again the members of MIT's Sea Grant Marine Industry Collegium have pointed to the great value of Sea Grant's support for student involvement in applied research projects. From an employer's point of view, there are two significant benefits in hiring "Sea Grant graduates"--their past experience in "real world research" helps them to contribute quickly; and because they have been involved in high risk, long-term projects that push the state-of-the-art, they bring to their jobs new ideas and innovative technology.

During the past ten years, MIT Sea Grant has supported over 250 graduate students, many of whom have kept in touch with us. In preparing for our upcoming Program Review and Site Visit by the NOAA Office of Sea Grant, I recently contacted some of them. Some are still in the marine field; some are not. However, all credit their Sea Grant experience with giving special meaning to their education and a special sense of understanding the importance of marine issues.

Here is part of a letter from a young man who was a Sea Grant graduate student, then a faculty member and Sea Grant researcher who helped prepare the MIT Georges Bank Petroleum Study. This study has been an important instrument in helping to resolve some of the conflicts of New England offshore oil development. He is now in private industry.

> "The Sea Grant Program brings a healthy breath of reality to the university. It lets problems, conflicts, and controversies come to a neutral corner for definition, analysis, and debate. In doing so, it brings a vitality to the education of students and a focus to the research of faculty. Very few academic problems have the mix of theoretical, experimental, judgmental, and political issues found in ocean mining, offshore petroleum development, fisheries management, waste disposal and marine transportation. Conflicts between economic interests and environmental interests abound. Opportunities for innovation as well as pragmatic design exist in every problem.
>
> Sea Grant provides an objective source of funds. The proposal review process ensures both the quality and the applicability of the work

that is done. In the areas where I was supported by Sea Grant--offshore petroleum development, ocean mining, and marine transportation--the traditional funding souces were either proponents or opponents. Sea Grant was the only funding source that valued analysis more than rhetoric. Sea Grant research and forums provided a common ground where proponents and opponents of a particular ocean use could meet.

In my own experience, Sea Grant funded research provided much of the employment that let me pay for my PhD. Sea Grant funded courses exposed me to a diversity of technologies and people. Today, as a Vice President and Division Manager of a New York Stock Exchange company, I know that my Sea Grant exposure was valuable preparation for any career."

Another ex-student, now a professor in a Massachusetts college, told us:

"Sea Grant provided me with an intellectual home where none other existed. The effect of Sea Grant on my life was more than beneficial; it was instrumental in my career choice. As a member of the Interdisciplinary Systems Design Course, I changed from electrical engineering to environmental research and policy. Sea Grant helped deepen that commitment with support for writing the research results from that course into the MIT Press book, Shoreline for the Public: A Handbook of Social, Economic and Legal Considerations Regarding Public Recreational Use of the Nation's Coastal Shoreline.

Sea Grant's support helped many students; the program was a constructive force that helped to build bridges within the Institute and to transcend the boundaries of departments and disciplines. More than you probably know, that force has a multiplier effect. Today, I am trying to stimulate the same process that allowed me the flexibility and initiative to enter a new field using a multiciplity of resources in the community and at MIT. I am hoping the tree you helped to plant will sprout new branches to support some of my own students."

An outstanding example of another facet of education has been our efforts to develop and introduce new marine related materials into pre-college, kindergarten to twelfth grade, curricula. The objective of this work is to help create a more "marine literate" society through a better

understanding of the role of water and the oceans in our lives. Working with the public school teachers of the New Bedford School System and their very successful summer "Sea Lab" operation, MIT Sea Grant has aided the production of five special leading modules. These are now being independently evaluated for final approval and general distribution.

It would be almost impossible for me to emphasize enough my strong belief that today's young people are the most important resource we have in the world, and Sea Grant graduates are the Program's most important product. I would argue strenuously that government support for training and education through the Sea Grant research will help the U.S. to develop critical resources with innovative technology and a sound respect for the environment. Graduate student research is the biggest economic bargain and the best long term investment available today. It is, I believe, a sound and necessary investment in the education of our nation's future leaders in the marine field: the developers, the researchers, the regulators and the administrators.

Summary

In summary Mr. Chairman, I note that it has taken almost 15 years to build this Program into the effective, productive national organization that exists today. I believe there is no federal program except Sea Grant that operates with as little federal bureaucracy, that so leverages the federal dollars through matching funds, or that has the reserve of scientific and technological expertise readily available to respond to marine research needs. If the momentum of building this program is lost, or even significantly reduced, it will take years to recover. The valuable research and services that now increase the earnings of businesses, industries and individuals working in the marine field will be lost with radical reductions in the Program.

By every measure I can think of, the National Sea Grant Program is a positive force toward regaining, our Nation's economic strength. In the light of Sea Grant's record of performance, the stated goals of the Sea Grant Act, and the increasing need for the United States to develop and utilize our marine resources, it is essential that the Sea Grant Program, the working partnership of government, industry and university, be continued. The weight

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of evidence clearly speaks in support of such action because the National Sea Grant Program:

- helps industry and business,
- creates jobs through economic development of marine resources,
- addresses national issues of national importance,
- provides a civil focus to ocean engineeing,
- leverages the federal investment through matching funds
- educates and trains future leaders in the marine field,
- directs applied research toward identified needs, and
- disseminates research results to users through the National Sea Grant network.

Mr. Chairman and members of the Sub-Committee this has been a rather lengthy overview. I could go on with many more examples and in much more detail. I have tried to describe some of the unique or special features of the National Sea Grant College Program, in an effort to demonstrate the value of Sea Grant to the Nation.

I want to thank each of you and the entire Congress for the creation of the National Sea Grant College Program and for sustaining this national asset to date. I am pleading now for your continued support so that the Program can achieve its full potential for success.

Mr. Chairman, I thank you for your time and this opportunity. I will be pleased to respond to the Committee's questions.

Mr. D'AMOURS. Mr. Murphy, would you proceed?

STATEMENT OF STANLEY R. MURPHY

Mr. MURPHY. I am Stan Murphy. I have been director of the Washington sea grant program in the State of Washington since 1968. As my written testimony points out, for the last year I have been director of the applied physics laboratory at the University of Washington, and in the near future would expect there would be someone else appointed to continue the direction of the sea grant program at my university.

I think my written testimony is reasonably clear and has been well substantiated by many of the comments made by the industrial panel and others on the subcommittee.

I would like to pick up several thoughts that have come through the comments and questions today, and point out what I consider one of the most important aspects of this whole question that has been an undercurrent through our discussion, and that is, what is the role of the Federal versus the State, this question of can the States pick up the funding.

Certainly it has been observed there is no question. Some of these areas that are being worked on by sea grant are working, and certainly some of it will be funded. However, I think the important thing is the coherency that has developed as a result of the Federal funding. If States do invest, they will all invest in their own unique ways and we'll have our own individual setup and structure, and each State therefore will be essentially an entity to itself.

I think it is important to note that the coherency of the national sea grant program is what has created this network that has been

referred to by the industrial panelists and frequently by others. It is this national coherency that is represented by the Federal investment that is extremely important. We all share common goals; we all share common procedures and all of this as a result of the Federal investment and the administration by the national sea grant office, which makes it very easy to exchange information, very easy to share information and form national teams.

In my testimony I try to point out that in my view of the important ways of looking at sea grant is that instead of lamenting that a great deal of the emphasis is local instead of Federal, that we should view it as a proving ground, as a pilot plant essentially, in which ideas are generated, tried locally, and those that succeed, those that stand the test of evaluation, and those that can be transferred to other States are done so through this national network. The national network makes it the important program that it is.

Lastly, I would like to point out another aspect which is also very important in this innovative process, and that is how long it takes to innovate from the conception of an idea through whatever initial organizational structure, new structure, that is required through whatever equipment or studies are necessary to complete the story, and then go out in the field and try it. Although I cite two examples here, one of which was a 10-year project and the other a 5-year project, these are very typical of any kind of innovative process, whether it's in industry or anywhere else, the innovation to utility, essentially, from conception to utility. I think, therefore, the sea grant program must be judged on that kind of time scale when we look at it on a national level, that the fact there are significant national impacts now being felt in the sea grant program, being only 12 years old, as I say, is rather remarkable that we're now seeing very major contributions, and lastly, because of the very limited investment, in fact, that is being made in this program on a national basis.

That would conclude my testimony.

Mr. D'AMOURS. Thank you, Mr. Murphy.

[The statement of Mr. Murphy follows:]

STATEMENT OF STANLEY R. MURPHY, DIRECTOR, APPLIED PHYSICS LABORATORY, AND WASHINGTON SEA GRANT, UNIVERSITY OF WASHINGTON

It is my pleasure to testify on behalf of the national Sea Grant program before the Subcommittee on Oceanography, House Committee on Merchant Marine and Fisheries.

I have been Director of the Sea Grant program at the University of Washington since 1968. However, for the past year, my principal job has been Director of the Applied Physics Laboratory at the University. This laboratory, established in 1943, has been highly effective in the development of innovative marine systems for naval underwater weapon applications. We also do research and development in the application of undersea technology to marine resource development for a diverse set of additional sponsors, both public and private. The current laboratory budget exceeds $12 million per year.

In its relatively brief existence, Sea Grant has a great many accomplishments to its credit, but rather than recite accomplishments I would like to direct my remarks to one outstanding aspect of the program. One of my major concerns as director of an R&D laboratory and as director of a local Sea Grant program has been nurturing the innovative process. How do we stimulate new and worthy ideas? What are the most effective ways to evaluate new techniques? How do we enhance the probability that the sponsor (i.e., the customer) can fully utilize our new products?

In my work with the Navy and other sponsors, I am impressed with how well Sea Grant has addressed these questions. Through its advisory services and because of

the one-third matching requirement, the customer has become an active partner in the development of effective research and education activities. This user-university partnership has not only spawned new ideas that are the product of academic theory and marketplace practicality, but also has facilitated the evaluation of these ideas in the field. The effectiveness of this partnership is amply demonstrated by the numerous documented examples from local Sea Grant programs in the coastal and Great Lakes states.

Although it is clear that Sea Grant has been effective within each state, its national contribution is seldom understood. The network of Sea Grant institutions is a national resource. Through the sharing of information and direct assistance among the state programs, many techniques that have been developed and demonstrated in one state have been shown to apply in other states. Evidence of this process is substantial in recent years as more local projects have reached appropriate maturity. The importance of this process of local innovation as an efficient means for the field trial of solutions to nationwide problems cannot be over emphasized. Too frequently, large-scale national programs fail to achieve intended results, but failure is only evident after large commitments of time and money to establish administrative offices throughout the country.

In order to illustrate the foregoing statements, I would like to describe two examples from the Washington program. The first of these is the development of acoustic techniques to determine the size of fish stocks. The problem is simple. The more accurate the estimation of the size of a fish stock, the greater the current harvest can be without risk of endangering reproduction. Traditional methods, using nets, are subject to high uncertainty and are inefficient.

In 1968 we began research, funded by Sea Grant, on the use of underwater sound to determine the number of fish in a volume of the ocean. Faculty and students from Fisheries, Engineering and Oceanography developed special equipment based on Navy sonar techniques available at the Applied Physics Laboratory. It is interesting to note that these techniques have recently led to an improvement of Navy sonar systems using the knowledge gained by Sea Grant. As research progressed, cooperative projects were developed with many users, including the National Marine Fisheries Service, the state fisheries agencies in Washington and Alaska, power companies in California, utility districts in Washington, and several Indian tribes in Washington.

Today these hydroacoustic techniques are used as the primary means of assessing stocks of pollock in the Gulf of Alaska and the Bering Sea, whiting and widow rockfish in Washington and Oregon, and herring in southeast Alaska and Puget Sound. The ex-vessel value of these stocks is $278 million annually. The total Federal Sea Grant investment in the development of these techniques over the past 12 years is about $1 million. Application of these techniques to herring alone has resulted in an increase of $0.5 million to $2.5 million annually in the allowable harvest.

The successful development of hydroacoustic techniques and their application to fish stock assessment demonstrates the importance of core Federal Sea Grant support. There is no way in which this work could have been accomplished without the core support needed to identify the opportunity, develop equipment, demonstrate its utility, and train people to conduct surveys and interpret the results.

As the second example, in December 1975 Washington Sea Grant was asked by the pacific Seafood Processors Association to review the technical and economic analyses underlying proposed regulations for the treatment of waste water in the seafood processing industry. A cursory examination of the statistical confidence limits of the regulations indicated an inconsistency which we were able to identify as an error in one of the Environmental Protection Agency's mathematical formulae.

Concurrently, reviews of the EPA's economic documents revealed numerous, significant flaws in their economic analyses. These were examined in detail and submitted to the EPA in August, 1976. On February 17, 1977, the EPA withdrew the proposed 1983 regulations for the Alaskan seafood processing industry.

Our review of the EPA methodology was also submitted in a brief filed by the seafood processors and heard by the Ninth Circuit Court of Appeals in April, 1977. The Court's opinion, dated February 4, 1980, was that "the petitioner's objections to the Agency's methodology are sufficiently well taken so that the agency should reconsider such matters . . ."

In October, 1980 the regulations coordinator for Marine Fisheries Service asked our office to coordinate a review of the economic impact of technology proposed for the U.S. seafood industry. This effort, which examined northwest salmon, Gulf shrimp, mechanically-processed blue crab, and Maine sardines, found significant deficiencies in the EPA analytical methodology.

At the present time our office, in conjunction with the National Fisheries Institute, Pennsylvania State University and the National Marine Fisheries Service, is proposing to develop an appropriate methodology for economic impact studies with the objective of assisting the EPA to improve the quality of their analyses. Without the kind of talent traditionally attracted by Sea Grant programs, it would have been impossible to initiate this important effort. Without the Sea Grant network, the benefits could not have been extended nationally.

The two examples also illustrate the time it takes to reduce a good idea to practical use. Hydroacoustics, involving the development of complex hardware and software systems, took 10 years before routine applications by fishery management agencies were possible. The economic analysis of fishery waste disposal, although technically simpler, has taken more than five years to achieve national application.

Given this kind of time scale, it is surprising that Sea Grant, after only 12 years, has made significant national impacts.

In my new role as Applied Physics Laboratory director, I have been struck by this fact: in the system of federally supported research laboratories, the Applied Physics Laboratory is relatively small, yet its annual budget is 30 percent of the National Sea Grant budget. Under the circumstances the recognized successes of the Sea Grant program can only be the result of efficiency in innovation and the dedication of those associated with it.

If the Sea Grant budget is cut, the loss will far exceed the modest savings. Further, such action would be counter to the need to support the development of the nation's marine resources.

Mr. D'AMOURS. Dr. Copeland, would you proceed, please.

STATEMENT OF B. J. COPELAND

Dr. COPELAND. I am B. J. Copeland. I am director of the sea grant program at the University of North Carolina. My testimony was also submitted in advance and it stands on its own. I would, however, like to summarize about four points from that written testimony, Mr. Chairman.

The first point is that the work that is conducted by the sea grant research and extension activities touches those resources that are known as common property resource, those resources that are national in scope. They are also usually sought by small businesses, businesses that do not have the capital to invest in research and development.

Businesses also are not inclined to invest their resources in development when they can't expect to recover them themselves. The type of work that we're talking about here involves mainly the commercial fisheries and recreational fisheries in our coastal and Great Lakes areas.

The second point is that the sea grant program is, in its definition, a State-Federal partnership, which enables the States to exchange information freely. If we had State-financed programs, there would be no incentive for that kind of trading of resources, trading of talent, trading of information. Much like some of the industrial witnesses you heard in the previous panel, their exchange of information knew no State bounds. The fellow from Tennessee who was getting information from other States that had no direct benefit to those States is a good example.

The third point is that there is very little bureaucracy involved in the sea grant program. Over 95 percent of the Federal funds spent on sea grant activities, are spent in the action arena, where the work is done by the researchers and the extenders. All of our money in North Carolina, for example, goes directly to service the people who are receiving the benefits of sea grant.

The fourth and last point is that many of the economic benefits that you have seen in our summary report that has already been

circulated occurred in an area that is economically deprived, especially in the Southeast and the Northwest. The people who live on our coastal fringe have an average income below that of the national average. We are involved in economic returns in that kind of arena. We are happy to say those gaps are closing and have been since the inception of sea grant activities and other related work that has been going on in our area.

With that summary, Mr. Chairman, I would be glad to answer any questions.

Mr. D'AMOURS. Thank you for your summary, Dr. Copeland.

[The statement of Dr. Copeland follows:]

STATEMENT OF B. J. COPELAND, DIRECTOR, SEA GRANT PROGRAM, NORTH CAROLINA STATE UNIVERSITY

SUMMARY

The following testimony is in support of the request that Federal funding for the National Sea Grant Program be continued in 1982 and beyond, and that our commitment to invest in our future through marine-related research, teaching and advisory services in the universities be maintained.

Several generations ago, our land grant colleges began to lay the foundation of modern American agriculture. Now, with the National Sea Grant program, we are building the same powerful initiative for the development of our marine and coastal resources. We are still young, but our successes are great. And, in this generation and the next, as the world turns to the sea for food, energy and minerals, Sea Grant will nurture our growth in the same way land grant universities have nurtured, through research and extension, the flowering of agriculture.

Fortunately, Sea Grant is essentially free of bureaucratic waste. Practically all of the manpower is devoted to research and to the direct delivery of services to people and industry. For this reason, the relationship of costs to benefits in our program is superb. In fact, partial gross revenues and savings on an annual basis Sea Grant work matched the entire federal expenditure for Sea Grant over the whole thirteen-year span of our existence.

As we have experienced in North Carolina, examples of economic pay-offs are abundant: A $125,000 investment in Sea Grant research and advisory activities has produced an improved septic system for coastal homes. The new systems allowed made possible $4 million in new buildings in North Carolina in one year, and the new systems are already solving similar problems in Georgia and Texas. Even the stubborn problems of water pollution and coastal erosion are diminishing, thanks to Sea Grants research. Applying the results of a Sea Grant project, one subdivision planted grasses along its shoreline and save their homes and $80,000 a year in property losses to erosion.

Many times, Sea Grant has provided the know-how that enabled the creation of whole industries. The North Carolina Division of Marine Fisheries credits us with starting a $1 million-a-year eel-fishing industry in the state. Dunegrass nurseries and boat-insulation makers are two more examples of the new industries made possible by technology discovered and extended by Sea Grant.

But most importantly, this economic growth has occurred in one of our most economically depressed regions. Traditionally, coastal communities have been ridden with outmoded industries and menial or unreliable employment. Since 1972, North Carolina Sea Grant has helped 83 seafood handlers and processors expand their plants and improve sanitation and working conditions. The expansion is valued at $6 million and untold jobs have been saved or created. Members of minority groups and women have especially benefitted from these improved conditions.

Without such support from reseach and advisory services, many of these coastal industries could not remain competitive in world and national markets. This is especially true among the commercial fisheries. Fisheries harvest a wild resource, and are not governed by the same economic principles that affect the health and productivity of other industries. This is one clear case in which the private sector cannot be expected to step in and fill the breach. These wild fish are a common-property resource, and businesses cannot own their supplies. There is little or no incentive to invest in research.

The importance of government support for fisheries is taken for granted in other industrialized nations, especially in the Soviet Union and Japan. These nations back

their fleets with research, education and on-the-job training, with expenditures that long ago outstripped our own. If our fisheries are to survive in the marketplace, we must offer them the same kind of support. Sea Grant is the one organization in this country that provides all three components of that support, and it does so very successfully.

Sea Grant research, education and advisory services have introduced new gear—hydraulic net and pot-pullers, for example—which has increased fishing efficiency, safety and incomes. We estimate that about $25,000 in Sea Grant investment has made possible a $6.5 million-per-year gross increase in fishing income. A Sea Grant log bok pinpointing underwater obstructions along the East Coast has saved fishermen and the government at least $600,000 a year in damages to fishing nets and gear. This is the sort of research and extension that works for entire regions and nationwide.

There is little way industries like commercial fisheries can provide this kind of comprehensive support for themselves. Sea Grant efforts have opened up diverse new markets for regional products, improved business practices and strengthened the entire economic base of all coastal regions. Through education, workshops and publications, Sea Grant extends the facts that protect coastal properties from storms, conserve wildlife and promote safe recreation along the beaches. The cost of providing this information is very small compared to the demonstrated improvements in the quality of coastal life.

Certainly, state and local agencies and institutions are sources of help for building on our coastal resources. But these groups frequently have a scope that is local. Sea Grant is designed to bring to bear the strengths of the university, the state, the region and the nation—even the world. In this, we are unique. This is crucial, since the biggest tasks before us will demand a unity of effort transcending any one level of endeavor. We are just beginning to develop our offshore oil, gas and mineral reserves. Energy, especially, will focus our attention on the sea. And aquaculture, the farming of aquatic fish and underwater plants, could become a primary source of excellent food in this country. Sea Grant research in aquaculture is already underway, education has begun, and a world-class industry is poised and ready for the right guidance to begin.

Sea Grant has proven it can provide that guidance. We avoid many of the problems that have plagued research efforts in the past. Because of our unique objectivity, we can provide facts without creating polarization between government and industry. And, because we embrace all three components at once—research, education and advisory service—we also avoid the long delays between the finding of research and their application to real problems.

President Reagan said in his address to you that it is his desire to cut from our government the things that government does not do well, and to leave things it does do well. Clearly, the research, advisory service and education that Sea Grant provides is done exceedingly well. Indeed, there is no better way to get the job done.

Mr. D'AMOURS. We will now proceed with Dr. Van Lopik.

STATEMENT OF JACK R. VAN LOPIK

Dr. VAN LOPIK. Thank you, Mr. Chairman, and members of the subcommittee. My name is Jack Van Lopik and I am dean of the Center for Wetland Resources at LSU, and also director of the Louisiana Sea Grant College program.

I have directed the program since 1968 and I appreciate this opportunity to summarize my written comments for you.

My statement focuses on the national significance of sea grant, and although prepared from a Louisiana perspective, it is typical of the Gulf States and others participating in sea grant.

Again, I must express full concurrence and support for the comments made by previous speakers and by Senator Pell in indicating that sea grant is a partnership between the Federal Government and State and local interests, with each paying a share of the costs. Such a partnership was clearly intended by the Congress and fully comprehended by the States in developing sea grant activities.

In testimony given before this subcommittee in 1977, I indicated that the concept was a key attribute of the program, and necessary

to assure the program fulfills its clear mandate to address State and national issues of critical concern.

Many individual marine-related problems facing a State are inherently national problems. In other cases, aggregation of problems occurring in several States clearly define a national issue. In still other instances, a national need may be identified at the Federal level, and expertise and resources provided by parts of the sea grant network in addressing the subject. Most sea grant programs include a mixture of activities that address various elements in this spectrum of national issues. The need for and vital nature of the State/Federal partnership is obvious to anyone familiar with the sea grant program.

For example, having a deepwater facility in the United States capable of handling supertankers is an essential part of a long-term national energy program. The fact that it's being built off Louisiana does not make it less of a national asset. Sea grant played a major role in assuring its expeditious and environmentally safe development. Our early and continuing involvement with LOOP, Inc. and State agencies in conducting environmental assessments and developing monitoring programs has demonstrated a commitment to environmental protection during all phases of project construction and operation. The important point is there have been no court dictated delays in project schedules because of environmental concerns or perceived impacts. This $700 million terminal and pipeline system should handle a minimum of 200,000 barrels of crude oil per day in May, and capacity should increase to more than 600,000 barrels per day by September.

The possibility of significantly reducing U.S. balance-of-trade deficit through increased coal export will depend to a large measure on having adequate port facilities and channel depths. Maintaining a 55-foot channel from Baton Rouge to the gulf will require continued dredging at the mouth and at a dozen upstream river crossings. This activity will present environmental problems in areas such as dredged spoil disposal, ocean dumping, upriver salinity intrusion, and wetland rejuvenation through freshwater diversion.

We in sea grant are exploring these problems with administrators of the Port of New Orleans and would hope to identify trade-offs, important mitigation options, and operational procedures that would allow channel deepening if national interest so dictates. Sea grant has the capability to rapidly respond to such questions in an objective, credible manner.

In a related activity, we are now completing a comprehensive study of the New Orleans Vessel Traffic System. This work is being funded by the U.S. Coast Guard and is handled as a grant through the sea grant program. Increasing coal transport on the lower river would increase vessel traffic problems and full attention must be given both environmental and traffic problems if the goal of greatly increasing coal export is to be achieved. Here again, a national need is being addressed and Federal support and involvement is essential.

My written statement contains additional fishery-related examples that indicate sea grant contributions to both national and local issues.

The partnership between the Federal Government, States and universities in developing sea grant activities also facilitates more effective communication among participants, and such communication is often necessary and important in effectively addressing both national and local problems. We at LSU have cooperated with researchers at Oregon State, the University of Maryland, Texas A. & M., and the University of Hawaii and MIT in addressing a variety of marine-related problems.

Ironically, the termination of sea grant and the associated loss of a cadre of marine-oriented research is being proposed at a time when the need for research has never been greater. Increasing a knowledge base, the effective utilization of this knowledge, and public comprehension are key elements in maintaining and increasing the productivity and economic viability of our marine and coastal industries. It is clearly in the national interest to nurture and effectively develop the Federal/State partnership embodied in the national sea grant program.

Thank you.

Mr. D'AMOURS. Thank you, Dr. Van Lopik.

[The statement of Dr. Van Lopik follows:]

STATEMENT BY DR. JACK R. VAN LOPIK, DEAN, CENTER FOR WETLAND RESOURCES, LOUISIANA STATE UNIVERSITY AND DIRECTOR, LOUISIANA SEA GRANT COLLEGE PROGRAM

Mr. Chairman, members of the subcommittee, my name is Jack R. Van Lopik. I am Dean of the Center for Wetland Resources at Louisiana State University and also serve as Director of the Louisiana Sea Grant College Program. I have directed the Louisiana program since its inception in 1968 and appreciate the opportunity to appear before this Subcommittee to comment on Sea Grant activities. Prior to my affiliation with LSU I was employed by the U.S. Army Corps of Engineers for 7 years and subsequently by a private industrial firm for a similar period of time. My comments do not solely express an academic viewpoint, but reflect experience in the federal government and appreciation of the needs and motivations of private industry.

This brief statement focusses on the national significance of the Sea Grant Program. Although prepared primarily from a Louisiana perspective, the material typifies that which could be developed for each of the states fringing the Gulf of Mexico.

First of all, I must express full concurrence with and support of Senator Pell's statements in the March 10, 1981, issue of the Congressional Record. Senator Pell stressed that the Sea Grant Program is a partnership between the federal government and state and local interests—with each paying a share of the costs. Such a partnership was clearly intended by the Congress and fully comprehended by the states in developing Sea Grant activities. In testimony given before this subcommittee on October 4, 1977, I indicated that the concept was a key attribute of the program and stated, "The cooperative or partnership arrangement of the federal government with the states and universities is another important consideration in the Sea Grant activities. This partnership cannot be maintained or enhanced if decisions are made at the federal level and forced upon the state and local programs. The partnership concept must be implicit throughout program development and implementation phases." Such action is necessary to assure that the program fulfills its clean mandate to address state and national issues of critical concern. Many individual marine-related problems facing a state are inherently national problems. In other cases, aggregation of problems occurring in several states clearly define a national issue. In still other instances a national need may be identified at the federal level and expertise and resources provided by parts of the Sea Grant network to address the subject. Most state Sea Grant programs include a mixture of activities that address various elements in this spectrum of national issues. The need for, and vital nature of, the state/federal partnership is obvious to anyone involved in or familiar with the Sea Grant Program.

For example, it is evident that the development of the only deep water facility in the United States capable of handling supertankers is an essential part of a national energy program. The fact that it is being built off Louisiana does not make it less

of a national asset and Sea Grant played a major role in assuring its expeditious and environmentally safe development. Our early and continuing involvement with Lousisian Offshore Oil Port Inc. (LOOP), The Louisiana Offshore Terminal Authority (LOTA) and the Louisiana Department of Wildlife and Fisheries in conducting environmental assessments and developing monitoring programs has demonstrated a commitment to environmental protection during all phases of project construction and operation. As a result, there have been no court dictated delays in project schedules because of environmental concerns or perceived impacts. This 700-million-dollar terminal and pipeline system should handle a minimum of 200,000 barrels of crude oil per day in May—and capacity should increase to more than 600,000 barrels per day by September.

The recent tremendous increase in interest in the Lower Mississippi River between Baton Rouge and the Gulf is directly related to the river's potential for transporting large volumes of coal. The possibility of significantly reducing the U.S balance of trade deficit through increased coal export will depend to a large measure on having adequate port facilities and channel depths on our Atlantic and Gulf coasts. Large bulk carriers drawing 50′ of water must be accommodated. Maintaining a 55′ channel from Baton Rouge to the Gulf of Mexico will require continued dredging at the mouth and at a dozen upstream river crossings. This activity will present environmental problems in areas such as dredged spoil disposal, ocean dumping, upriver salinity intrusion and wetland rejuvenation through freshwater diversion. We are exploring these problems with administrators of the Port of New Orleans and would hope to identify trade-offs, important mitigation options and operational procedures that would allow channel deepening if the national interest so dictates. We believe these issues must be addressed even if the so-called "fast track" legislation called for in the Senate port bill is adopted. In a related activity we are presently completing a comprehensive study of the New Orleans Vessel Traffic System. This work is being financed by the U.S. Coast Guard and is handled as a grant through the Sea Grant Program. Inceasing coal transport on the Lower Mississippi River would exacerbate existing vessel traffic problems. Obviously, careful attention must be given both environmental and vessel traffic problems on the river if the goal of greatly increasing coal export is to be achieved. Here again a national need is being addressed and federal support and involvement is essential.

Fish and fish products imported into this country account for a 2-billion-dollar annual trade deficit. It is a recognized national goal to increase the efficiency and productivity of the U.S. fishery industry—and in so doing reduce trade deficits and increase employment. Relevant scientific and technical knowledge, and effective employment of this knowledge, is required to address these issues. Louisiana ranks number one in tonnage of annual fish landings. Each year more than a billion pounds of fish are landed in Louisiana. The state also contains more acreage of coastal wetlands than the entire Atlantic seaboard. This wetland and estuarine area is a vital nursery zone and habitat for the production of many of the commercially important fisheries species. In view of these facts, it is natural that Sea Grant in Louisiana should respond very positively to the fishery needs of the state and the nation. We have worked closely with the Gulf of Mexico Fisheries Management Council in developing a shrimp management plan. Our economists, attorneys and extension agents have worked with shrimpers and other fishermen in the state to address many of the economic problems presently confronting them. All of this effort is aimed at maintaining a viable fishery industry with associated economic benefit to the nation.

One or two activities of more local interest should also be mentioned. Sea Grant played a major role in salvaging the baby green turtle industry in Louisiana. Problems associated with salmonella contamination of these turtles—and resulting FDA regulations—prevented their sale as pets in the U.S. market. A million-dollar state industry was almost destroyed. Sea Grant development of egg processing techniques that effectively eliminate salmonella contamination permitted re-establishment of the industry. It now provides more than 2-million-dollars a year in income for turtle farmers in Louisiana.

Sea Grant support of research and extension service in crawfish aquaculture has significantly aided the growth of this industry. Pond acreage in the state has increased from 12,000 acres in 1969 to 62,000 acres in 1980 with associated increased income to crawfish farmers of $8,500,000 per year.

The purpose of the preceding examples is to provide appreciation of the national interest inherent in most Sea Grant programs and the need for a continued partnership between the federal government, states and universities in developing Sea Grant activities. Federal support and involvement also facilitates more effective communication among Sea Grant network participants. Such communication is often essential in effectively addressing national and local problems. For example,

we at LSU are working with researchers at Oregon State University and the University of Maryland in addressing problems related to Vibrio cholerae in seafoods. We have cooperated with Texas A&M University in developing "hang" charts, i.e., charts locating bottom obstructions that can destroy fishing gear. This work has been utilized in developing both state and federal legislation to provide compensation for such gear loss. We are working with the University of Hawaii in examining the economic feasibility of raising bull frogs in that state. We have cooperated with MIT in holding industrial research collegia. All of these activities are aimed at providing the technical knowledge required for developing or increasing productivity of selected industries.

The proposed federal budget cuts would severely impact and reduce our ability to conduct programs of this type in Louisiana. The program presently receives approximately 1.2 million dollars annually in federal funds and, as required by law, one-half of this amount in additional state matching funds. In the past, the Louisiana Legislature has provided "hard cash" appropriations to meet matching requirements. Assuming retention of all state monies for program support, the loss of federal funds would have a major and disproportionate impact on research activities. This is true because most advisory/extension agents and specialists receive full-position support from Sea Grant; whereas, most principal investigators directing research projects are appointed on a more vulnerable percentage basis—ranging from 25 to 75 per cent. Furthermore, most of our research activities have been designed to address national issues and needs identified by extension agents through contact with resource managers, businessmen and other citizens with marine interests. Without the research efforts required to feed the system, it would become increasingly difficult to provide effective advisory and extension services. Research funds that might be sought from other federal or state agencies—which will apparently be under similar budgetary constraints—cannot meet this need because of the mission-oriented nature and goals of such research. It is also doubtful that the State of Louisiana would opt to provide full support for the program because (1) there is reluctance to expend state funds to solve problems that are primarily of national concern, (2) the concept of a federal/state partnership is fundamental to the existing program, (3) there is growing resistance to finance operational expenses with funds from non-recurring or decreasing revenue sources, e.g., oil and gas. Ironically, the termination of Sea Grant—and the associated loss of a cadre of marine-oriented researchers—is being proposed at a time when the need for coastal and estuarine research—in Louisiana and the nation—has never been greater.

During the past decade there has been increasing awareness of coastal and marine affairs. This is reflected in national concern with such issues as Law of the Sea, deep seabed mining, marine and estuarine sanctuaries, Outer Continental Shelf energy development, deepwater port licensing, coastal zone management, fisheries conservation and management, marine pollution and marine mammal protection. Legislation relating to these issues has had and will have major impact on individuals, industries and governments at the state and local level. It is, however, apparent that the present capabilities of marine science and technology are inadequate to effectively address many of the marine related problems facing Louisiana and the nation. Furthermore, it is obvious that citizens must become better informed regarding marine concepts and problems. The National Sea Grant College Program addresses vital aspects of relevant research, advisory and educational needs. In such efforts, appropriate recognition must be given the undergirding nature of basic research in the solution of practical problems as well as the roles of industry and government in defining and conducting research and educational programs. This is especially critical in creating a marine-literate citizenry through educational activities involving state agencies, universities, school boards and individual schools. In truth, increasing the knowledge base, the effective utilization of this knowledge and public comprehension are key elements in maintaining and increasing the productivity and economic viability of our marine and coastal industries. It is clearly in the national interest to nurture and effectively develop the federal/state partnership embodied in the National Sea Grant Program.

Mr. D'AMOURS. Finally, our last witness on this panel is Dr. Sullivan from the University of California.

STATEMENT OF JAMES J. SULLIVAN

Dr. SULLIVAN. Thank you, Mr. Chairman.

I am Dr. James Sullivan, director of the California Sea Grant College program, which is administered by the University of California Institute of Marine Resources. I appreciate this opportunity

to speak on behalf of the national sea grant program which the administration has recommended be eliminated during the coming fiscal year, and to be of assistance to the committee once again.

I have submitted my written testimony for the record and what I would like to do at this point is just summarize a couple of highlights from that testimony and to present a short summary or conclusion of what I feel I have heard here today.

What I would like to do at the outset is to state that the elimination of the national sea grant program would not only have immediate, serious negative economic and social impacts, but it would also be counter to the national interest in a strategically important area of marine resource development. This is a strong statement but one that can be defended on the record of success sea grant has generated across the country over its short but highly productive life.

Today you have heard a portion of this extensive record, so I will not repeat it. However, it would be helpful, I believe, if I could give my view of sea grant so that my comments will be in perspective.

The national sea grant program, as I understand it, has as its primary goal the accelerated development and wise use of the Nation's ocean and coastal resources. It is to be an action oriented, interdisciplinary program, which seeks to link the nationwide efforts of universities, industries, and Government in a new and cooperative fashion through application oriented research activities, the professional and vocational training of manpower, and the effective, prompt dissemination of research results. And this approach to Federal investment in marine research and development is unique among Federal ocean programs.

When Congress enacted the program in 1966, it initiated this experimental partnership among Government, industry, and the Nation's universities to develop marine resources for the benefit of society. This experiment was partly based on earlier and still successful experience with the Morrill Act of 1868, that created a network of land grant colleges throughout the United Staes to develop the Nation's agricultural resources.

Mr. Chairman, I would like to turn now to some of the nuts and bolts of this record of success that sea grant has generated.

Sea grant has built a nationwide network of university-based programs to take advantage of the threefold purpose of a university: to conduct research, to provide education, and to perform public service.

Through sea grant, the Federal Government provides the incentive for State and local government as well as industry to contribute matching funds for research and advisory activities that have local and regional impacts. But it also and very importantly provides the means by which State-based university researchers can work on marine resource development problems of national and even international significance in cooperation with colleagues at other universities, thus avoiding costly duplication of effort.

It has, as direct testimony today from a few of sea grant's beneficiaries and managers demonstrates, supports meaningful research whose results find relatively rapid application in the larger community—by industry, by consumers, and by the public at large.

I would like now to briefly summarize what I feel I have heard in the testimony today and what that reveals.

First, the importance of marine science engineering and student training; second, the credibility of university-based research and information dissemination; third, the innovative, cooperative national network approach to problem solving; fourth, the shared responsibility for our common resources; fifth, the national significance of local issues such as port development; sixth, the rapid and widespread transfer of technology through the nationwide network; seventh, the importance of the Federal investment in research and development of marine resources; and eighth, the unique capability to evaluate new methods on a smaller scale locally before any national scale-up takes place.

These critical points made in testimony today lead me to conclude that, one, sea grant is people working togther to put good ideas into practice, and two, the Federal Government has not only encouraged the various sectors—Government, universities,and industry—to work together, but has signaled that such cooperation is an important national priority by: (a) Putting Federal dollars into the program make it happen, and (b) by having the other sectors contribute also.

For the Federal Government to now remove its investment is to strongly signal its partners that wise development and use of marine resources are no longer of national concern. Yet the facts that you and the members of this committee have heard here today clearly show that the unique, coordinated and cooperative national sea grant program serves the national interest in the best tradition—a shared responsibility. If the administration's proposal to terminate shared concern succeeds, the long-term consequences could be crippling.

Mr. Chairman, it is essential to actively maintain the shared participation so that all partners have the crucial, factual, objective data base necessary in a free economy for responsible development and use of our shared national common property, the vast expanses of oceans that now lie under Federal jurisdiction.

I would be pleased to answer any questions the committee has.

[The statement of Dr. Sullivan follows:]

STATEMENT OF JAMES J. SULLIVAN, DIRECTOR, CALIFORNIA SEA GRANT COLLEGE PROGRAM

Mr. Chairman and Members of the Committee, I am Dr. James J. Sullivan, director of the California Sea Grant College Program which is administered by the University of California Institute of Marine Resources. I appreciate this opportunity to speak on behalf of the National Sea Grant College Program, which the Administration has recommended be eliminated during the coming fiscal year, and to be of assistance to the Committee.

Mr. Chairman, I would like to say at the outset that to eliminate the National Sea Grant College Program now would not only have immediate serious negative economic and social impacts but would also be counter to the national interest in the strategically important area of marine resource development. This is a strong statement but one that can be defended on the record of success Sea Grant has generated across the country over its short but highly productive life.

Before proceeding to this extensive record I believe it will be helpful if I provide some background for my comments.

The National Sea Grant College Program, as I understand it, has as its primary goal the accelerated development and wise use of the Nation's ocean and coastal resources. It is an action-oriented, interdisciplinary program, which seeks to link the nationwide efforts of universities, industries, and government in a new and coopera-

tive fashion through application-oriented research activities, the professional and vocational training of man power, and the effective, prompt dissemination of research results. And, this approach to federal investment in marine research and development is unique among federal ocean programs.

When Congress enacted the Program in 1966, it initiated this experimental partnership among government, industry, and the nation's universities to develop marine resources for the benefit of society. This experiment was partly based on earlier and still successful experience with the Morrill Act of 1868, that created a network of Land Grant Colleges throughout the United States to develop the nation's agricultural resources.

It is now clear from the record that the Sea Grant experiment works and works well in coastal and Great Lakes states throughout the United States. We regularly see federal and state government, local and nationwide industries, and public as well as private universities cooperatively finding solutions to the pressing and complex problems confronting wise development and use of our nation's valuable and varied marine resources. For example, a recent survey of the Sea Grant coast-to-coast network identified quantifiable economic impacts to the nation, in terms of savings or earnings to local and nationwide idustries, totalling $227 million in one year alone.

Several specific examples of the success of this partnership follow.

The University of Alaska Sea Grant Program designed and conducted a program to improve effectiveness of native Alaskan fishermen in the commercial herring fishery. In the first year after the program started, fishermen's earnings increased by $1,055,000 from exporting this new product.

The Oregon State University Sea Grant Program introduced to the shrimp processing industry improved techniques for handling and processing shrimp that reduces waste by increasing yield and saving energy. Shrimp processors nationally are adopting these new techniques and are realizing a direct annual return of $5,600,000.

The University of Hawaii Sea Grant Program promoted research on and application of undersea technologies to develop a precious coral industry while husbanding rare stocks of coral. The industry grew from 50 employees and gross sales of $500,000 to 214 employees and gross sales of $7,800,000 of which a large portion are to foreign tourist.

The California Sea Grant College Program conducted research to design new fishing traps to increase the efficiency of the black cod fishery. In the year immediately following introduction of the new traps through the advisory service, commercial fishermen realized a ten-fold increase in earnings from domestic and foreign sales, from $70,000 to $700,000.

Mr. Chairman: now let me turn to some of the nuts and bolts of this impressive record of success. Sea Grant has built a nationwide network of University based programs to take advantage of the three-fold purpose of a university: to conduct research, to provide education, and to perform public service. Through Sea Grant the federal government provides the incentive for state and local government as well as industry to contribute matching funds for research and advisory services that have local and regional impacts. But it also and very importantly, provides the means by which state based university researchers can work on marine resource development problems of national, even international, significance in cooperation with colleagues at other universities, thus avoiding costly duplication of effort. It has, as direct testimony today from a few of Sea Grant's beneficiaries demonstrates, supports meaningful research whose results find relatively rapid application in the larger community—by industry, by consumers, and by the public at large.

And, perhaps Sea Grant's greatest strength lies in its decentralized administrative structure in which program direction and day-to-day administration are carried out by small administrative units in contrast to large federal bureaucracies. Yet, because the Sea Grant Program is an element of the federal government, the opportunity and responsibility exist for national networking among university researchers throughout the U.S. to address national needs.

For example, in California, Sea Grant is supporting research, in cooperation with the seafood processing industry, to extend the storagability of fresh seafood products through the use of modified atmospheres. The TransFresh Corporation realized savings of $454,000 by using modified atmospheres in a refrigerated (not frozen) shipment of two million pounds of salmon from Anchorage, Alaska, to Seattle, Washington. This technology, as you have heard today in other testimony, can be applied by seafood distributors throughout the United States. And, as you have heard here today, this technology is also now used in Tennessee.

Another specific use is the University of Washington's successful application of acoustic techniques for more accurately estimating fish populations for the Pacific

herring industry. The data gathered have been used by the Pacific Regional Fishery Management Council to increase harvesting productivity while guarding against overfishing. This led to an increase in the allowable harvest of Pacific herring, resulting in an annual landed value of $1,500,000. The techniques can be adapted for application to other fisheries in other regions to realize the same benefits.

Another solid case in point is the interdisciplinary research effort in marine pharmacology involving researchers from three different University of California campuses, other universities across the country, and several industrial collaborators. The testimony submitted by Dr. Peter Orahovats of Bristol Meyers Products reveals the wide geographic network and the benefits that are accruing nationally because of this program.

Mr. Chairman, often national needs are met by working on aspects of those problems that have direct local impacts such as the port developments like Los Angeles, and Long Beach. More examples of the variety of positive impacts Sea Grant makes are contained in the document "Economic Effects of Sea Grant."

In addition to the national role played by the Sea Grant programs, regional marine resource needs are also directly addressed. For the Sea Grant sponsored programs in Hawaii, Alaska, Oregon, Washington and California, this means addressing marine resource needs in the region of the northern Pacific Ocean basin.

With federal support we have organized the Pacific Area Sea Grant Advisory Program (PASGAP) to identify regional needs, to coordinate planning activities and to stimulate application of new knowledge and research results into new products, new markets and a better understanding of the resources and their interaction.

A recent example is the Pacific Seaweed Aquaculture symposium under the leadership of Drs. Isabella Abbott (Stanford University), John West (University of California, Berkeley), and Roy Tsuda (University of Guam). The aim of the symposium was to draw together workers from universities and corporations who could pool information on growing and using seaweeds, particularly in the Pacific basin. It is in these tropical and subtropical geographic areas that many of the world's most useful seaweeds grow (e.g., various species of Eucheuma). where local unemployment is high and new industry is desperately needed. At the same time, this information has great potential value to US-based industry, as evidenced by the active participation in the symposium of researchers from Kelco Division of Merck, Marine Colloids Division of FMC, Research Division of Stauffer Chemical Co., Canadian Benthic Co., Ltd. and others. Needless to say, the commercial value, to say nothing of the recreational value, of Pacific seaweeds is significant. Follow-up activities to this symposium are in progress by local agencies and industries.

This year we will be holding a workshop on salmon smoltification in June. Sea Grant has sponsored research on smoltification, the process by which salmon adapt from freshwater to seawater. Recent research breakthroughs, a major one funded by Sea Grant at the University of California, Berkeley, have set the stage for an imminent possible two-fold increase in survival of salmon released from hatcheries. If this occurs, it could be of great recreational and commercial value internationally. Researchers from universities, federal, state government agencies and the new private salmon ranching industry from the USA, Canada, Japan, Norway, and elsewhere will attend this symposium.

Mr. Chairman, I think it will be good at this time to reiterate the opinion of many experts that we are just beginning to appreciate and realize the enormous resource potential of the sea and the importance of developing that potential. For example, by the year 2000, the following commodity deficiencies are indicated for the United States:

aluminum	dismond	mica
antimony	flourine	nickel
asbestos	uranium	niobium (columbium)
barium	germanium	platinum
bismuth	gold	quartz crystal
cadmium	graphite	tin
copper	indium	sand and gravel
tungsten	lead	silver
cesium	magnesium	sulfur
chromium	tantalum	
cobalt	mercury	

In 1975, the National Academy of Science had this to day in its report "Mining in the Outer Continental Shelf and in the Deep Ocean":

"The development of marine resources is important to the maintenance of the international economic and political balance and to support the standard of living in the United States. While it is probably not feasible or desirable for the United

States to become self-sufficient for the basic mineral commodities, the Panel considers it prudent to develop adequate alternate sources of supply from the sea."

Estimates of apparent marine mineral resources have been developed by M. Cruickshank for dissolved, unconsolidated, and consolidated deposits. With the exception of asbestos, graphite, and quartz crystals, where data are available and deficiencies have been predicted, alternative marine sources for the minerals exist and may exceed existing land resources. While few of these reserves have been positively identified at the present time, certain specific commodities have been found along the outer continental shelf and on the deep seabed. As marine mining and extractive technology are developed, it is believed that these apparent resources will become viable mineral sources." Marine resources include vital minerals, energy sources, food sources, transportation means, and military aspects not to mention recreational and aesthetic values. All are of national interest and if Sea Grant did not exist we would have to create it to ensure the wise development of these strategic marine resources.

Mr. Chairman: I would now like to turn to the matter of federal investment in people. In addition to the technology transfer function performed by the network of marine advisors and specialists, formal education and training is another way this function is performed.

It is in the area of professional and technical education and training that Sea Grants prepares for the future ocean uses and decisions that will become increasing important and difficult. And, it is precisely in this area that the universities make what is, perhaps, a unique contribution. The Committee has heard testimony from Dr. Robert Byrd, Vice President of Watt and Associates (Houston) regarding the value of this type of education to the development of competent U.S. human resources. Let me point out at this time, that many of our national leaders have recognized with concern the diminishing availability of highly competent professional engineers and scientists in the United States. This situation is of concern in marine resource development as well as other areas. May I add that the California Sea Grant Program has supplied crucial support for the education and training of leaders through more than 400 graduate traineeships over the past eleven years. Dr. Byrd is a former Sea Grant trainee.

In conclusion Mr. Chairman I would like to quote from my program recent summary report "Using California's Marine Resources" which I am submitting for the record.

In a time of declining terrestrial resources and of a growing national interest in development of domestic natural resources, Sea Grant's contribution has been significant. Its success thus far, during a relatively brief existence, can be attributed to the strong partnership it has forged among universities, industry and government.

Sea Grant's contribution will continue to depend upon people with innovative ideas working together to convert those ideas into practical application in industry and government.

I would be happy to answer you questions.

Mr. D'AMOURS. Thank you, Dr. Sullivan, and thank you all, gentlemen, for so ably summarizing your testimony and for the excellent quality of that testimony.

I couldn't agree with you more, Dr. Sullivan. I don't understand the perspective that this administration seems to have taken, or seems to be in the process of taking. Let's hope it's not an end process—of parochially viewing our ocean interests from a State's rightist point of view, when in fact it is a shared sea coast and our interests do seem to be communal in our ocean environment and our ocean sciences. They are obviously willing to give up the trading of resources, talent, and information, as you have pointed out, that the sea grant program, if nothing else, provides us.

One question that I asked Jim Walsh, the Acting NOAA Administrator, earlier was how the administration could take this type of view of the sea grant program but not of the land grant program, which apparently it agrees has produced well and should continue to exist and thrive.

Are there any basic differences between sea grant and land grant concepts that should cause us to end the sea grant program while continuing the land grant program, or are they, in fact, really of

the same genus such that if land grant should continue so should sea grant?

What are your thoughts on that? I address that to the panel in general and anybody can answer it.

Dr. VANLOPIK. I might confuse the issue even more, but I think it should be pointed out that in a State like Louisiana the money that is going into the land grant program totals about $45 to $47 million. That is combined Federal and State dollars. The total sea grant budget in Louisiana is about $1.2 million for Federal funds and, of course, the necessary $600,000 for matching.

I'm not saying there is anything wrong with having $45 to $47 million going into agricultural research and extension in Louisiana, but certainly there is a balance that we're missing someplace in the State and I think this is pretty much typical of other States. I'm sure others would like to comment on this, too.

Mr. D'AMOURS. Would anyone else like to comment on that?

Dr. COPELAND. Mr. Chairman, at our institution the sea grant college is patterned very closely after the land grant college concept. We operate much in the same manner that they do.

Mr. D'AMOURS. Well, you gentlemen are in a position to answer my next question better than the prior panel was.

It has been suggested that the States and private industry will pick up the important parts or the successful parts of the sea grant program's operation if the Federal Government should walk away from it.

From the perspective of your experience and position, what are your thoughts on that?

Mr. MURPHY. I would like to make a comment.

The first question is which part and when. The magnitude of the problem is who decides when a good investment is to be made on what basis. I think that's what I tried to say earlier, that if there is a strong national component in that decision process then one can, as Representative Pritchard pointed out, take the long view essentially. Industry can't always take the long view, particularly small industry. So I think the real question is what part can be picked up and is it going to be an integrated whole, or are there going to be pieces missing.

I submit that the example I gave of the use of acoustics in counting fish population, that could not have happened without the sea grant support, even though the total investment of outside dollars was something like four or five times larger than sea grant dollars. But it was that coherency, that team effort, essentially, and where sea grant can take a longer view, plan, educate, develop equipment in an experimental sense.

A good example of some of the equipment developed that proves the point was on the order of $100,000 where the National Marine Fisheries Service in Seattle has put $2 million into a complete system based entirely on that development. But without the development, there would have been no way they could have made that type of investment. I think it's that coherency that is really important, not just few percent in terms of dollars that may or may not be lost.

Dr. SULLIVAN. Mr. Chairman, I would like to comment on that same question and maybe even tie it in a bit to the last one.

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One of the things I have heard quite a bit are these comments about States and industry picking up the cost. One of the Members of the House the other day, when some of us were talking with him, made the comment that he wished he represented that ideal State which could come forward and pick this cost up.

As far as the land grant approach, the county-based marine advisers in our system work very closely and are housed with the county-based cooperative extension agent. In fact, they are actually part of that staff. They do get support at the county level as well as support at the State level.

However, in California for example, we are beginning to feel the effects of proposition 13, now that the State's surplus has left us. The chairman of the State assembly ways and means committee refers to "our State fiscal crisis" and tells us we had better watch our matching funds during this coming year, especially since we're in trouble here in Washington.

Now, there can't be a clear signal to the States as to where to put their effort in their problem of raising funds. You go where the Federal Government is signaling they're going to put their money. And if they're not going to put their money into developing marine resources, then it's my considered opinion the States are not going to put money in either.

I think we have a solid case that sea grant works. The recent Exxon magazine, article of December 1980, contains a statement that, "Sea Grant set up colleges and funded a vast research program. County marine agents were to do for the sea what county agricultural agents have done for farms and farming." They have had 112 years; we've had 12 years.

Mr. D'AMOURS. Thank you, Dr. Sullivan.

Would anybody else like to comment on that?

Mr. HORN. I would like to add just one comment, two things. First, generally we're talking about, as referred to earlier, resources that are a common resource and an industry that is highly disaggregated, so it is extremely difficult to get any industrial support. Second, is that the university and the sea grant program provide a place for high-risk, innovative activities that can have an extremely high payoff in the long term. This is an asset for the development of marine resources that should not be overlooked.

Dr. COPELAND. Mr. Chairman, I would like to speak to that same point.

Our State legislature is currently in session, and one of the things they are considering is the State line item for the matching funds. The chairman of the committee called me last week and said, "since the Federal Government is going to close down sea grant, why can't we just do the same?" So not only will the State not pick up the Federal portion of the sea grant program, they will cease supporting the State's matching portion of the program because the Federal Government has signaled they aren't interested in these marine resources.

Mr. D'AMOURS. Thank you, Dr. Copeland.

Gary, do you have any questions?

Mr. STUDDS. Thank you, Mr. Chairman.

With all due respect to our distinguished panel, I almost wish I hadn't come. I almost had a whole hour without getting angry at

someone and now I'm reminded of what we're all up against here. It's really a most frustrating situation. I would recommend the longest possible lunch hour, and turn off the television, radios, and newspapers and don't read a thing.

We have been through this before with many of the gentlemen on the panel, and I appreciate what they're trying to do. It is discouraging.

The chairman mentioned the administration somehow is emphasizing States rights. I guess you meant at the expense of the national interest. You will notice tomorrow, Mr. Chairman, when you have your hearing on coastal zone management, that the administration's concern for States rights will evaporate promptly at 10 o'clock. And with respect to giving the States a voice of any consequence, with respect to the management of their coastal zone, or a voice in what is going to happen to the Outer Continental Shelf, that will suddenly become preeminently a national question and we—the gentleman from New Hampshire and myself, who have always insisted on States rights here, as you know—will be lectured by this administration on the overriding national interest in the development of the energy resources of the Outer Continental Shelf. And we will be told that State's rights, in this case, are simply part of a delaying tactic on the part of fuzzy-headed environmentalists and we must not do such a thing.

I am glad the chairman pointed out the contrast between land grant and sea grant. It would be interesting to know what would have happened perhaps to our own fisheries had they received over time the level and magnitude of support that our land-based food production has received. We look around the world and with pride, we invite the world to look at the successes of American land-based agriculture. Meanwhile, we hoped, at least in our part of the country, that the world wouldn't notice American fishing vessels because they were sort of embarrassing until very recently. I suspect that had we had any kind of analogous commitment to the production of food in the oceans, and viewed the mandate of the sea grant universities with the seriousness that we did the land grant, that we never would have let our fisheries deteriorate to the extent that we did before finally beginning to take action to try to revive them. It's an indication of how important the program is.

You all talked about the relative unlikelihood of States picking up where the Federal Government may let off with respect to funding. California has 13; Massachusetts has 2½—I don't know what the rest of you call what you have, but I suspect we find retrenchment now at all levels of government simultaneously.

What would happen, what kind of judgment can you make with respect to the effect on marine research at your institutions in the event the administration's recommendation to terminate this program were gone along with by the Congress?

Dr. SULLIVAN. I think in our university the first significant impact would be a lack of really the coherency, cooperation, or even awareness of what might be going on at other campuses. One of the reasons I say this is because the university campuses in California are spread over a very wide geographic area. And the traditional approach to funding of science, individual-to-agency relationship, as for example the NSF, encourages the individual to be

concerned about only that particular activity for which he is funded. Whereas sea grant, in its management structure, is unique, in that it is an institution to agency relation, where there is an institutional infrastructure in place to insure that there is coordination among the various scientists. As I say, in a place like ours it becomes critical, and where you have campuses spread all over the country ever more so.

Second, I think what you would have is good science directed to a purpose. A good example is Prof. Howard Bern at Berkeley, one of the leading endocrinologists in the world, who is working on a problem of salmon smoltification support. Approximately 40 to 50 percent of the salmon released by hatcheries fail to adapt to salt water successfully. They either die or they become stunted.

Now, this is quite a significant applied problem. But, there is no way you cannot call this research anything but fundamental or basic science. However, it is going on for a purpose. The purpose is to solve this smoltification problem. We don't know if someone would have undertaken that same line of research to simply understand better how well the endocrine gland of a salmon works.

So here we have again incredibly basic research directed toward problem solving. If they're successful, and there are strong indications that they're going to be, it would double the amount of salmon that reach the ocean now successfully without any additional expenditure. And the State Fish and Game Department is experimenting with new release techiniques,

Mr. STUDDS. Does anyone else want to respond to that with respect to its impact in your own institutions?

Mr. HORN. Mr. Congressman, yes, I would like to respond to that.

I could say categorically that at least one-third of the marine-related research would probably cease, but more importantly, we would lose a very strong focus of the remaining two-thirds, where there is a lot of cross-fertilization within the institution, and as Dr. Sullivan just stated, the interchange within the sea grant network is even more important.

But I see another very important loss at my institution, and that would be the lack of the advisory role which gives us the means of coupling some high technology to real applied uses as we have been able to achieve through the Maritime Academy, with which I believe you're familiar.

Mr. STUDDS. I appreciate that.

Dr. VAN LOPIK. As far as LSU is concerned, I think the reduction in Federal funds would eliminate about 20 percent of the marine research at the institution. If the State money were also taken away, which as B.J. pointed out is a distinct possibility, it would be about 35 percent.

Another point that I would like to make, though, in looking at land grant and sea grant and the possible effect, is that land grant at most institutions has evolved pretty much as a monolithic-type organization. They have their own people within the College of agriculture, they have the ag extension program, and the group is administered by a single vice chancellor, dean, or other administration.

Sea grant is a more pervasive-type operation, where we draw upon departmental faculty, in not only different departments

within the university, but other universities within the State. When this goes away, this cadre is going to be lost because they're not going to direct their activities and interest toward marine-related activities as they had in the past.

Mr. MURPHY. At the University of Washington what it would mean is we would lose about 12 percent of our most innovative marine component.

I think Dean Horn made an extremely important point in regard to the advisory part. The sea grant advisory service just doesn't pass information that sea grant has generated. Sea grant advisory services communicate with our marine community and passes information, from whatever source, to that community needs. So what we would really lose is, since we're not a land grant institution—although we have close cooperation with the land grant institution in terms of field agents that are supported by sea grant that work on the same staff—what we would lose is substantial communication with our marine community in our State that sea grant provides. Whether the research is funded by NSF or other parts of NOAA or other Federal or State agencies doesn't matter. The sea grant information transfer is an important part of making sure that information is properly packaged and made available to the user community in our State. If we lost that, we would lose a great deal.

Dr. COPELAND. At the University of North Carolina we would lose about 25 percent of the marine research at our institution. We would also lose an effective advisory services program, transferring information through various means of communications to about a half-million people trying to make a living in our coastal zone.

Mr. STUDDS. I appreciate what you have said.

First of all, I hope you will all be very kind to Chairman D'Amours because, as I'm sure you have gathered, the administration has recommended the elimination of nearly everything over which he now has jurisdiction, which is a very cruel way to greet a new subcommittee chairman.

Mr. D'AMOURS. That's not quite accurate, but I'll accept it if it is going to advance our cause. [Laughter.]

Mr. STUDDS. It's pretty close to accurate.

Let me make a plea with you gentlemen. I know it's not necessary, based on your activities in the past, but you have just made a straightforward and I think common sensical justification on behalf of a very modest program with obviously national significance. If there is not a national interest in the comprehension of and wise treatment of our oceans, I can't imagine where there should be one. It is a very modest program and is another example, it seems to me, of the shortsightedness of the proposals of the administration. There is nothing partisan about it, and I hope you will convey that to those who represent your States on both sides of the aisle in this committee and in this Congress.

We have already been subjected, unfortunately, to essentially partisan approaches to questions like this. It seems to me to do an enormous injustice to the concerns which certainly transcend partisan as well as State lines. I would urge your cooperation in that.

Thank you.

Mr. D'AMOURS. Thank you, gentlemen.

I have just one more comment I would like to make for the record, a clarification for the record. I think it was Mr. Murphy who got into the long-term, versus short-term approaches of sea grant, fulfilling long-term objectives that would certainly go unfulfilled by private industry. But the truth is, is it not, gentlemen, that sea grant does in a shorter term get involved in a number of projects which also would not be picked up by private industry, at least for the most part?

I would just like to know for the record whether that statement is not accurate. Isn't is true, that sea grant does a great deal of its work in short-term projects, and that because of proprietary interests of private industry or because of the somewhat limited perspective of private industry would not be delved in at all were it not for the program; isn't that correct? [Panelists nodding affirmatively.]

I guess you can give one collective Yes or No to that.

Mr. MURPHY. This is really the nice balance between the interest of the academic community and the interest of the marine community. Small business, the small businessman has a problem. His fish are dying or something of that kind. He isn't looking for the long-term solution. He will be out of business if he doesn't get some help in a short time.

On the other hand, the university community generally likes to look at things on a more broad, fundamental, long-term basis. It is that melting pot that sea grant represents in our States, the melding of the two interests.

What we frequently do is work on a short term basis in establishing a relationship—You know, my example of a person whose fish are dying, who gets some immediate help, of course is encouraged to work with us on a long-term basis where he has to feel a sense of trust, that in fact we are going to produce something that is of long-term benefit. I think we see that evolution in sea grant.

In the early days a lot of the things we did appeared to be short term because we were establishing relationships, at least in part. Now we are in a position that our customers are working with us in a way that we can begin to do things on a much longer term basis.

Mr. D'AMOURS. I thank all you gentlemen for your very meaningful contribution to today's record.

Mr. D'AMOURS. Our next and final witness is Dr. Robert Corell from the University of New Hampshire. Welcome, Bob. I thank you for your patience.

STATEMENT OF ROBERT CORELL, CHAIRMAN OF THE SEA GRANT TASK FORCE, AND DIRECTOR OF SEA GRANT AND MARINE PROGRAMS, UNIVERSITY OF NEW HAMPSHIRE

Dr. CORELL. Thank you, Congressman D'Amours, members of the subcommittee. I really do appreciate this important opportunity to testify on the national sea grant college program and to share with you some thoughts about the vital importance of this program to our Nation and to the President's program for economic recovery.

It is my privilege and honor to appear before you as chairman of a special sea grant task force, a group that represents the sea grant community throughout the Nation and here in Washington.

The national sea grant college program is a national program that is devoted to and committed to solving marine resource problems. It is the only comprehensive research and development partnership linking the Federal Government, industry and universities which is specifically designed to foster the development of our Nation's marine resources.

In my opinion, it has become a national asset; partially because it focuses on economic development questions in the marine sector; partially because it is concerned with methods and technologies to improve productivity and profits; partially because it is concerned with technology transfer to industry, business, Government and citizens of our States; and partially because it has the capacity to play an objective role in clarifying issues for Government and for industry; and finally, partially because it serves industry's needs in the development of trained manpower and educated individuals to serve our marine interests in this Nation.

The others who have appeared before you today have given you an overview from the industry point of view, and from those who work on a daily basis with sea grant programs nationwide.

My purpose is being here today is to do three things: first, to describe the economic context within which sea grant functions in the United States; second, to provide an overview of some specific accomplishments and impacts the sea grant college program has had in this Nation which are a direct result of the sea grant task force that has been working in the recent past; and finally, to outline the projected impacts as we see them of the administration's budget recommendation to eliminate Federal support of the sea grant college program.

As you well pointed out, Congressman, the economic development potential of the marine and coastal resources of the United States has attracted much attention in recent years, and that its magnitude of impact on the economic sector of this Nation has only been recently identified and clarified. That process of clarification has placed the ocean sector within the GNP of this Nation at over $30 billion in 1972 dollars. We do not have more figures recent than those.

We have some other factors which are not as well known. A recent assessment by the sea grant task force looked at a number of industry sectors that are of direct consequence and involvement with the sea grant program nationwide. Looking at fishing, marine-related manufacturing, marine transportation, marine tourism, these are all clientele served by sea grant programs throughout this Nation. And in 1978, the total sales of these industries nationwide amounted to $66 billion, employed over 1.4 million people, and represented a payroll of in excess of $11 billion. This is the clientele, the community with which sea grant programs work.

The Department of Commerce has recently looked at the sales within these industries and found in 1 year, between 1977 and 1978, these industries increased in their total sales, gross sales, by over 21 percent, with an increase of 8 percent in employment, and a productivity increase of 14 percent in sales and shipments per person. Indeed, it's a healthy environment with which sea grant has an opportunity to work.

The national sea grant program works with a unique kind of industry. Previous members of the panel outlined the character of that industry as being one highly disaggregated, deals with public domain properties, and the fishing industry is probably an excellent example of an industry that must work in a disaggregated fashion and with a common property resource.

Most observers agree that the commitment of university-Federal partnerships played a dominant role in encouraging American agriculture, as has been outlined previously today. Congress did, in fact, establish a national sea grant program along similar lines with an intent to "achieve the gainful use of marine resources" in the United States. The term "sea grant" was consciously chosen to emphasize the agricultural parallel in meeting contemporary national needs by developing the economic potential of our marine resources.

My major purpose is to summarize two recent analyses conducted by the sea grant community, to outline two facts. First, to provide a statistical overview of the kinds of things that sea grant is doing nationwide, and second, to look at some economic effects that are derived from the sea grant program.

This latter report which we submit today is entitled "Economic Effects of Sea Grant" and is a part of the written testimony that I have submitted. This particular report has selected 57 projects, a few percent of the total number of projects active in the sea grant program at this time, and provides documentation of the economic effects that these projects have had on industry, business and commerce.

The annual gross revenues in savings stimulated by these 57 sea grant projects amounted to, on an annualized basis, a $227 million impact. These are outlined in the report and cover a number of areas, ranging from fish harvesting, seafood processing and marketing, aquaculture, marine construction, transportation, retail trade, real estate and the all-important marine service industry.

For example, if we look at the fish harvesting sector alone, 16 projects are discussed in the report and the average annual effect of these projects is in excess of $2 million. If you look at the marine construction area and look at the effect of the projects reported in there, the average is over $30 million.

A specific example gives you an idea of the kinds of things sea grant tries to do. One of the projects discussed in the report describes the development of new fisheries opportunities as a winter supplement for the seasonal Gulf shrimp fishery, and as a consequence, those fisheries are now expanding to year-round employment and being able to use their capital on a year-round basis. This single activity has had an identified economic impact of $2.6 million in one region alone.

All the examples in the report are documented and are the direct result of the Federal-university partnership, and the Federal partnership in our opinin is the keystone. Because these major marine resources are, in fact, in the public domain, and because these industries are very often independent and certainly not closely linked, the industry and State funding prospect does not appear to be a viable alternative as is suggested by the administration. This need for Federal support through universities is even some-

what greater amplified when you look at the average total sales of these industries throughout the United States. They average less than a million dollars apiece. It is difficult to aggregate that and undertake a task of the character of sea grant.

Much more detail is provided in the written record and in the document entitled "Economic Effects of Sea Grant", published today.

A second study entitled, "Survey Data for the Assessment of the Institutional and Program Impacts of the National Sea Grant College Program", a summary of which is also contained in the written record, discusses the essential data and statistical facts that characterize the sea grant program as of this time, 1981.

Mr. D'AMOURS. Excuse me, Dr. Corell. What is that second study? I miss that.

Dr. CORELL. It's called "Survey Data for the Assessment of the Institutional and Program Impacts of the National Sea Grant College Program".

Mr. D'AMOURS. Do we have that information?

Dr. CORELL. You have a summary of it in the full written testimony, and the statistical facts will be published in a complete report in the very near future.

That study attempts to outline the characteristics of the program as it exists today. A small part of that is summarized in the written testimony, and I want to just hit a few of the highlights from that.

In terms of the numbers of individuals served by sea grant in 1980, and their data for 1981 as well, looking at the various industrial sectors throughout the United States, and asking the sea grant programs nationwide to be careful and be able to document the numbers submitted, we were able to find in the recent weeks past that well over 500,000 people in the industrial sector are receiving directly, in some fashion, counsel, support, or impact by the sea grant program. That ranges from the fishing industry right through all that list that I read to you a little while ago, including manufacturing and transportation.

In commercial fish harvesting, commercial fish processing and aquaculture, for example, 175,000 individuals were served by sea grant in 1980.

If we look at education, training, both at the secondary school level and in our universities, approximately 5,000 students are served by sea grant in some directly identifiable fashion in the year just past, both at the graduate and at the undergraduate level.

But an area which is not often understood is the tremendous impact the sea grant program is having in our public schools and the teachers and students therein. Over 400,000 students and teachers in 1980 were served by sea grant programs throughout this Nation.

One of the important points of discussion in previous testimony was the development of research and the communication of that through the extension service and through other mechanisms to the individuals who are most likely to benefit by the research and activities of the sea grant program.

In terms of the production of technical reports and journal articles that report on the accomplishments of a research program, almost 1,500 were published during 1980. Probably a more important measure is the numbr of individuals who want sea grant publications, who seek them out and ask for them. Almost 300,000 individuals requested sea grant publications in 1980. Almost a half-a-million individuals in the United States receive on a regular basis sea grant publications. These are the tools the sea grant program has at its disposal for translating the information of the laboratory into useful material to the citizens and institutions served by sea grant.

Another important measure of the accomplishments of sea grant might be seen in the number of patents that are sought by and awarded to sea grant projects and the institutions that are within the program. In 1980, there were 16 either awarded or in the pending category.

I would like to turn our attention then for a moment at this point to the impact we perceive will take effect if the proposed elimination of Federal support of sea grant is a fact.

The crucial question, in my judgment, is whether the sea grant college program, as we know it today, can continue without Federal support. In an attempt to answer that, we, during the past several weeks, have asked sea grant college programs throughout the Nation to look at that from a number of points of view, to gather data and assist in the evaluation of that question. Based upon that survey, which involved all sea grant programs in the United States, the consensus is that the sea grant program, as we know it today, will disappear.

Of the 27 programs that gave us direct data, only 8 percent of those programs indicted that they would probably survive—and I use the word probably with forethought—that they would probably survive without Federal support, while 68 percent indicated that their programs would not survive.

We asked these programs to also look into the question of whether the prospects for obtaining immediate and alternative funding of their programs was a reality. Only 8 percent indicated that they could probably obtain alternative funding. No one indicated that they could, in their judgment, find alternative funding. All the other programs indicated that their chances for alternative funding ranged from remotely possible to highly unlikely to none at all.

The impact on personnel within the sea grant program nationwide has also been assessed, and the essential factors are reported in the written testimony. Ninety percent of the graduate students supported in the current year are in jeopardy—90 percent of the graduate student research assistanceships that are currently supported are in jeopardy. That's 725 students.

Fourteen percent of the faculty positions, of those that are active in the sea grant program today, are in jeopardy. That's 200 positions.

Forty-five percent of the professional and other individuals who are serving within the sea grant program are also in jeopardy. That number is 802.

While those have direct impact on our program within our States, probably the most important impact is that the several

hundreds of thousands of individuals, industries, and agencies now served by sea grant, will either not receive that benefit or will receive a very small fraction of that benefit. We see this as a nationally important contribution that the sea grant program, nested in the States and our coastline and the Great Lakes, can provide for our entire Nation.

Within our States themselves, the sea grant program in partnership with the Federal Government, provides another kind of economic leverage. For example, in 1980, the $37.5 million of funds from the Federal Government to support the sea grant program generated over $61 million worth of research, technology transfer, and manpower training. These activities themselves generated, using the standard economic multipliers acceptable in the industry, generated $68.3 million personal income in our various States and generated 6,283 jobs.

It is this kind of factual information that we would like to supply you, Mr. Congressman, and the administration about the character of the sea grant program as it exists today, the impact it has on important questions in the economy, and the importance of that program to our Nation as a whole. It is our view that the Federal partnership works. There appears, in our judgment, to be adequate documentation to support that contention. The sea grant college program, in our judgment, is also a cost-effective way of working with marine resource development as has been done in agriculture, and it represents a public investment in technology innovation and increased productivity.

The Federal Government's participation in this partnership is crucial. The common property nature of the majority of our Nation's marine resources and the structure of those industries demand, we think, the Federal partnership be continued and that the tripartite be extended for long-term research that is essential to the wise use, development, and conservation of our Nation's marine resources.

It is my privilege to appear before you. I would be happy to answer those questions that you wish to direct to us.

[The statement of Dr. Corell follows:]

STATEMENT OF ROBERT W. CORELL, CHAIRMAN OF THE SEA GRANT TASK FORCE, AND DIRECTOR OF SEA GRANT AND MARINE PROGRAMS, UNIVERSITY OF NEW HAMPSHIRE

THE NATIONAL SEA GRANT COLLEGE PROGRAM

-A National Program For Solving Marine Resource Problems-

The National Sea Grant College Program is the only comprehensive research and development partnership linking the Federal Government, industry and universities which is designed to foster the development of our nation's marine resources. In twelve years, Sea Grant has effectively blended the capabilities of universities with the needs of our nation's industries and citizens. In so doing, it has become a significant National asset by focusing on:

- Economic development in the marine industrial sector.
- Methods and technologies to improve productivity and profits.
- Technology transfer to enhance industry, business and commerce.
- Objective clarification of government regulations and procedures.
- Industry's needs and demands for personnel trained and educated in marine related fields.

Today witnesses from several industries have outlined specific achievements in various aspects of marine resource development and utilization. Several Sea Grant Program Directors have outlined the character and substance of the Sea Grant Program after twelve years of careful development. My purpose in appearing before you today is to (1) describe the economic context within which Sea Grant functions in the United States; (2) to provide an overview of specific accomplishments and impacts the Sea Grant College Program has had on this country; and (3) to outline the projected impacts of the Administration's budget recommendation to eliminate Federal support of Sea Grant.

The Industrial Context Within Which Sea Grant Functions

The economic development potential of the marine and coastal resources of the United States has attracted much attention in recent years. However, the magnitude of this economic activity within the coastal and ocean sectors only recently has been assessed (Science, Vol. 208, 30 May 1980). This analysis of the ocean economic sector in the National Income Accounting System (NIAS) places the ocean sector value at $30.6 billion in 1972 dollars which is comparable to agriculture ($35.4 billion), mining ($18.9 billion), construction ($58 billion), transportation ($46.2 billion), and communications ($29.4 billion). This NIAS assessment is based upon nine major industrial subsectors:

1. Commercial Fishing
   (Harvesting, processing, and aquaculture)
2. Marine Mining
   (Oil and gas, sand and gravel, and limestone)
3. Marine Construction
4. Manufacturing
   (Ship and boat building)
5. Marine transportation and communication
   (Shipping, cargo handling and warehousing, transportation services, and marine-related communications)
6. Marine-related Retail Trade
   (Marine-related merchandising and retailing)

7. Marine Financing, Insurance, and Real Estate
8. Marine Services
   (Hotels, marine recreation, educational services, museums, and marine organizations)
9. Public Administration--State and Local
   (Federal Government, ocean-related activities)

These data provided the first major overview of the oceans' economic importance. A more recent assessment of the magnitude of the private marine sector has been conducted by an ad hoc Sea Grant Task Force. Considering all aspects of fishing, marine-related manufacturing, marine transportation and marine-related tourism, industries of primary concern to Sea Grant, it was found that total sales exceeded $56 billion in 1978, employing over 1.4 million people (representing a payroll of over $11 billion. Further, Department of Commerce figures indicate that sales within these industries increased 21.4% from 1977 to 1978, with an increase of 8% in employment, for a productivity increase of 14% in sales or shipment per person.

It is important to understand the structure and characteristics of the industrial, business and commerce components of the ocean sector. A preliminary analysis suggests that most of the industries within the private marine sector are discrete, often small evolving units. (This does not include the oil and gas industry.) The commercial fishing industry, for example, is comprised mainly of small independent businesses.

The National Sea Grant Program functions within that context. Our marine resources development activities are focused within these industrial sectors.

Most observers agree that the commitment of universities and industry to research and extension was the key to Federal policy that so effectively encouraged the agricultural industry. In 1966, the Federal Government established a similar policy and structure for encouraging development of the ocean sector through the National Sea Grant College Program Act. Its intent is "to accelerate national development of marine resources, including their conservation, proper management, and maximum social and economic utilization." More specifically, the program was directed to "achieve the gainful use of marine resources" (Sec 202(d)) through a partnership between the Federal and State Governments, universities, and the private sector. The term "Sea Grant" was chosen to emphasize the agricultural parallel in meeting comtemporary national needs by developing the economic potential of our marine resources.

The importance of agricultural research and extension efforts is well recognized by the current administration who reversed cuts proposed by the previous administration. The Secretary of Agriculture cited the relationship between university research investment and agricultural productivity as the reason for such increases. The parallels in marine resource development conducted through Sea Grant are so obvious as to cause one to wonder why an administration so oriented toward increased productivity and private industrial development would seek to eliminate a program that in a few years has made such dramatic contributions to the enhancement and utilization of our nation's marine resources.

An Overview of Sea Grant's Accomplishments and Impacts

The testimony of other witnesses provides a broad range of Sea Grant accomplishments and impacts. I intend to summarize two recent analyses. One provides an overview of economic effects derived from Sea Grant; the other provides a statistical overview of the program. A National Sea Grant survey has provided data on research and extension activities that have had direct economic impacts on industry, business and commerce. This analysis is summarized in a report entitled "Economic Effects of Sea Grant" which is appended to this testimony. The report outlines the economic impacts from fifty-seven Sea Grant projects and documents their effects on industry, business, and commerce, using the major marine categories of the National Income Accounting System. The annual gross revenues and savings stimulated by those 57 efforts amounted to $227 million, divided as follows:

A.	Fish Harvesting	$ 36,552,000
B.	Seafood Processing and Marketing	16,500,000
C.	Aquaculture	21,752,000
D.	Marine Construction	126,896,000
E.	Marine Transportation	2,890,000
F.	Marine-Related Retail Trade	19,400,000
G.	Marine-Related Real Estate	2,196,000
H.	Marine Service Industry	813,000
	TOTAL	$226,999,000

Sixteen projects considered in the fish harvesting sector each provided an average annual effect of over $2 million, while projects in marine construction section had an average annual effect of over $30 million each. For example, one of the projects discussed in the report describes the development of new fisheries as a winter supplement for the seasonal Gulf coast shrimp fishery which now provides year-round employment and capital utilization for these fishermen. This single activity has had an identified economic impact of $2.6 million in one region alone.

All examples in the report have been documented, and are the direct result of federal-university partnerships, and the Federal contribution is the keystone. Because the majority of marine resources are in the public domain, and because many marine industries are independent and not closely connected, industry and state government funding is virtually impossible. This need for federal support through universities is even greater in view of the fact that the average total annual sales of these marine firms is about $900,000.

A second study entitled "Survey Data for the Assessment of the Institutional and Program impacts of the National Sea Grant College Program" contains the essential data and statistical information of the character of the Sea Grant College Program. A small part of the results of that survey is summarized below, providing actual figures for 1980 from 27 Sea Grant Programs:

I.	EDUCATION AND TRAINING ASPECTS OF SEA GRANT FOR 1980		
	A. Graduate students		
	1. supported	739	
	2. involved or directly impacted	918	
			1,657
	3. entering the workforce	795	
	B. Undergraduate students		
	1. supported	365	
	2. involved or directly impacted	2,889	
			3,254
	3. entering the workforce	142	
	C. K-12		
	1. children served	371,400	
	2. teachers served	44,172	
II.	INDUSTRIAL PEOPLE SERVED BY SEA GRANT IN 1980		
	A. Commercial fish harvesting	87,207	
	B. Commercial fish processing	61,250	
	C. Aquaculture	27,085	
	D. Marine mining	1,414	
	E. Marine construction	23,575	
	F. Marine manufacturing	3,446	
	G. Marine transportation	4,048	
	H. Marine retail trade	43,598	
	I. Marine financing	113,885	
	J. Marine services	195,637	
			562,145
III.	TECHNICAL INFORMATION PROVIDED BY SEA GRANT IN 1980		
	A. Research journal articles	497	
	B. Technical reports and pamphlets	960	
			1,457
	C. Requests for Sea Grant Publications	291,118	
	D. Regular recipients of publications	445,415	
	E. Patents, awarded or pending	16	

Impacts of the Proposed Elimination of Federal Support of Sea Grant

The critical question is whether the Sea Grant College Program as we know it now can continue without federal support. Based upon a survey of all Sea Grant Programs, the concensus is that Sea Grant as we know it today would disappear. A survey of 27 Programs indicates that only 8% of the Programs would probably survive without Federal support, while 68% indicated their Programs would not. These Programs also reviewed the prospects of obtaining immediate, alternative funding to maintain the Programs. Only 8% indicated it was "probable" that other funding sources could be found. The other programs indicated it is "remotely possible (29%), "highly unlikely (50%), and "no" (12%), that alternative funding would be available.

The impact on personnel within the Sea Grant Programs has been assessed, and the essential facts are summarized below:

- Number of Graduate Student Research Assistantships in Jeopardy.....725
  (90% of those supported in FY 81 are in jeopardy)

- Number of Faculty Positions in Jeopardy.....200
  (14% of all those involved in FY 81 are in jeopardy)

- Number of Professional and other Sea Grant Positions in Jeopardy...802
  (45% of all those involved in FY 81 are in jeopardy)

Ultimately, the most important impact is that the hundreds of thousands of indi iduals, industries, and agencies now served by Sea Grant would not continue to benefit from the nationally important contributions of the Sea Grant Programs.

From another perspective, the federal-university partnership provides economic leverage within the program itself. For example, in 1980, the $37.5 million budget for the Sea Grant College Program generated a total of 61.0 million worth of research (50%), technology transfer (27%), and manpower training (11%). Using standard and acceptable economic multipliers, these activities themselves generated $68.3 million in personal income and 6,283 jobs. Obviously, these are in jeopardy with the proposed elimination of Federal support.

Conclusion

The federal-university partnership works, and documentation is available to prove that fact. The Sea Grant College Program is the most cost-effective marine resource program in the Nation, representing a public investment in technological innovation and increased productivity.

The value of the program to the nation has been well documented. The program has led to increases in annual business gross revenues and savings totalling $227 million. Sea Grant annually impacts some 376,000 students, 44,200 pre-college teachers and 562,000 individuals in industry and business. The program nationally answers some 290,000 individual requests for publications each year and distributes its publications on a regular basis to some 445,000 individuals and businesses.

The Federal Government's participation in this partnership is critical. The common property nature of the majority of the nation's marine resources and the structure of the United States industry involved in their development mandates that the Federal Government support the long-term research which is essential to the wise use, development, and conservation of those resources. Additionally, the Federal role insures research application on a nationwide basis and is a check against unwarranted duplication. It represents the basic thread linking the program into a nationwide network.

Twelve years of effort has resulted in the effective blending of the individual capabilities of the partners. The strength of this partnership is greater than the sum of its parts making the Sea Grant College Program a national asset to be fully utilized for national benfit.

Mr. D'AMOURS. Thank you, Dr. Corell. I appreciate your testimony as the chairman of the sea grant task force which prepared these reports, and also as the director of the sea grant program at the University of New Hampshire.

I don't have many questions of you because primarily your testimony is statistical, but is most important because the administration has taken the position that the sea grant program is doomed by its own success. I think your evidence rather clearly indicates that as a matter of fact the program will not continue successfully without the Federal-private-university partnership, and also that the program as we know it today will, in fact, disappear.

When you say in your testimony that sea grant, as we know it today, will disappear, you don't mean that it will be modified, do you? I think the administration would be very quick to accept that the program as we know it today will not continue, but they would also claim that it would continue in a modified state. That's not your statement, is it?

Dr. CORELL. No, it is not.

Mr. D'AMOURS. You mean it will cease to exist.

Dr. CORELL. Yes.

Mr. D'AMOURS. In your figures you say you have analyzed, Bob, 57 projects, aggregating nearly $227 million in annual social impact.

How did you come up with the 57 projects? How were they selected? I'm wondering how much difference there might have been in your bottom line had you been less selective in choosing projects.

Dr. CORELL. This is a beginning of an analysis which we believe will have to continue. We wish to have it continued. We asked the sea grant programs to address specifically the question of economic effects and economic impact, and asked those programs to submit examples of the kinds of activities that have been present in their programs that have direct economic effect—such as increased annual sales or savings in the industry or what have you.

So in that sense we asked them to focus on that. They submitted some 200 or 300 projects to us for analysis. We selected from those the ones where we had data that would stand the test, that could be viewed by economists, people who have a good understanding of economic practice and theory. So we weeded those down to 57.

We were trying to demonstrate, not on a comprehensive, systemwide basis, but on an example basis that sea grant is, in fact, contributing to the economic welfare of the Nation.

This started as a request from the Secretary of Commerce, Malcolm Baldrige, who was interested in the economic impact and requested that we take a look at this. We did in a short period of time.

We are carrying this forward and beginning to look at such questions as cost benefits and factors of that nature, and over the time ahead, weeks or months ahead, we will continue this assessment of economic activities within sea grant. So it was not intended to be a comprehensive look at every project to determine its economic benefit because, in fact, some of the projects are not directed toward that goal.

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Mr. D'AMOURS. Of the projects that were excluded from the 200 or 300 projects, were they excluded because they, in your judgment, had no direct economic impact or——

Dr. CORELL. No. On the contrary. Every one of them outlined the way the economic benefits to that region or that industry were present. We just felt we should communicate those where the facts and figures are clear, where they're on an annualized basis, so that we have some way of collecting this information in a way that is readable and understandable. We chose to do it on an annualized basis.

A number of them might lead to an economic benefit that is only once accrued and might not be continuing, or that the facts and figures were presented in such a way that they weren't quite as decisive and clearly communicative as the ones we have presented. All of them were, however, directed toward economic benefit to industry, business, and commerce.

Mr. D'AMOURS. Thank you.

Without objection, I want to make your report, "Economic Effects of Sea Grant", a part of the hearing record. That is ordered.

[The report follows:]

ECONOMIC EFFECTS OF SEA GRANT

Prepared by
Sea Grant Task Force
Washington, D.C.
March 26, 1981

On Behalf of
The Marine Affairs Committee
of
The National Association of State Universities and Land-Grant Colleges
in conjunction with
The Sea Grant Association

EXECUTIVE SUMMARY

- EXAMPLES FOR THIS ECONOMIC APPRAISAL CAME FROM SEA GRANT PROGRAMS NATIONWIDE.

- ECONOMIC EFFECTS ON INDUSTRY, BUSINESS AND COMMERCE, DERIVED FROM 57 PROJECTS STIMULATED BY FEDERAL INVESTMENT THROUGH SEA GRANT, SHOWED:

A.	FISH HARVESTING	$ 36,552,000
B.	SEAFOOD PROCESSING AND MARKETING	16,500,000
C.	AQUACULTURE	21,752,000
D.	MARINE CONSTRUCTION	126,896,000
E.	MARINE TRANSPORTATION	2,890,000
F.	MARINE-RELATED RETAIL TRADE	19,400,000
G.	MARINE-RELATED REAL ESTATE	2,196,000
H.	MARINE SERVICE INDUSTRY	813,000
	TOTAL	$226,999,000

- THIS ANNUAL FIGURE ($227 MILLION) APPROACHES THE TOTAL FEDERAL INVESTMENT IN THE SEA GRANT PROGRAM OVER ITS THIRTEEN-YEAR HISTORY.

SEA GRANT TASK FORCE

R. Corell, University of New Hampshire * (Chairman)

D. Horn, Massachusetts Institute of Technology *

F. Jennings, Texas A&M University *

J. Judd, University of Michigan *

J. Kermond, Sea Grant Association/NASULGC

N. Rorholm, University of Rhode Island *

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PARTIAL LISTING OF ECONOMIC EFFECTS

OF

THE SEA GRANT COLLEGE PROGRAM

Summary

Estimates and analyses of parts of the Sea Grant program indicate it has led to or stimulated over $227 million in annual gross revenue or savings (cost avoidance) leading to fuller utilization and greater efficiency in marine or coastal resource based industries.* Not accounted for are contributions to better management of these resources. Neither do we attempt to place a monetary value on the manpower development role of Sea Grant. The latter is a major contribution to the nation's ability to use its coasts and water productively whether for commerce, food or for recreation.

Twenty-six Sea Grant Programs participated in developing the data for an analysis of economic effects. A substantial volume of background data was prepared as source information on the economic stimulation to industry, business, and commerce. The data obtained (based on fifty-seven projects) represent a few percent of the total project activity within Sea Grant. Each program selected only a few examples of documented economic effect from its research and educational efforts. The intent of this report is to provide, from a nation-wide point of view, a partial assessment of economic effects of Sea Grant's work. A summary (Table I) of the findings for eight major categories of Sea Grant research and educational activity indicates the aggregated annual effects.

TABLE I

SELECTED SET OF ECONOMIC EFFECTS FROM THE SEA GRANT COLLEGE PROGRAM

A.	FISH HARVESTING Increase the economic productivity of commercial shellfish, groundfish, and mid-water fisheries.	$ 36,552,410
B.	FISH PROCESSING AND MARKETING Expand the economic base of the seafood processing industry.	$ 16,500,465
C.	AQUACULTURE Provide new commercial opportunities by developing the science, technology, and economic potential of aquaculture of marine species.	$ 21,752,000

* Footnote: Production costs have not been subtracted. Later analysis will attempt more detailed net benefit studies of selected parts. The partial nature of this analysis should also be stressed. It is based on examples from individual programs rather than on total coverage. Hence, it is conservative.

D.	MARINE CONSTRUCTION Facilitate improvements in environmentally sound, economical, and safe waste disposal and offshore construction activities.	$126,895,771
E.	MARINE TRANSPORTATION Increase the efficiency and safety of the U.S. shipping fleet and the competitiveness of U.S. boat manufacturers in the foreign market.	$ 2,890,000
F.	MARINE-RELATED RETAIL TRADE Promote the growth of precious coral and pet turtle industries and reduce the loss of lives from cold-water drownings.	$ 19,400,000
G.	MARINE-RELATED REAL ESTATE Develop new technologies for shoreline stabilization, flood control, and alternative methods of sewage treatment.	$ 2,196,000
H.	MARINE SERVICE INDUSTRY Reduce wave damage to marinas and find an economically feasible alternative to breakwater construction for small marinas.	$ 812,760
	TOTAL	$226,999,406

The material that follows provides summary information on each of the fifty-seven projects in the eight major categories outlined above.

Sea Grant and the Economy

The economic development potential of the marine and coastal resources of the United States has attracted much attention in recent decades. The magnitude of 1972 economic activity within the coastal and ocean sectors only recently has been assessed (Science, Vol. 208, 30 May 1980). This analysis of the ocean economic sector in the National Income Accounting System (NIAS) places the ocean sector value at $30.6 billion in 1972 which is comparable to agriculture ($35.4 billion), mining ($18.9 billion), construction ($58 billion), transportation ($46.2 billion), and communications ($29.4 billion). The NIAS is an analysis technique that indicates the contribution of various economic sectors to national income and, hence, provides a way of understanding the composition of the economy. The NIAS assessment is based upon nine major subsectors, with the percentage indicated:

1. Commercial Fishing (1%)
   (Harvesting, processing, and aquaculture)

2. Marine Mining (7%)
   (Oil and gas, sand and gravel, and limestone)

3. Marine Construction (1%)

4. Manufacturing (4%)
   (Ship and boat building)

5. Marine Transportation and Communications (8%)
   (Shipping, cargo handling, and warehousing, transportation, services, and marine-related communications)

6. Marine-related Retail Trade (24%)
   (Marine-related merchandising and retailing)

7. Marine Financing, Insurance, and Real Estate (15%)

8. Marine Services (3%)
   (Hotels, marine recreation, educational services, museums, and marine organizations)

9. Public Administration--State and Local (37%)
   (Federal Government, ocean-related activities)

These data provided the first major overview of the oceans' economic importance. A more recent assessment of the magnitude of the private marine sector has been conducted by the Sea Grant Association Budget Committee. Considering all aspects of fishing, marine-related manufacturing, marine transportation and marine-related tourism, it was found that total sales exceeded $58 billion in 1978, with employment in these industries at nearly 1.4 million. Further, Department of Commerce figures indicate that sales within these industries increased 21.4% from 1977 to 1978 with an increase of 8% in employment, for a productivity increase of 14% in sales or shipment per person before adjustment for inflation.

Understanding the structure and characteristics of the industrial, business and commerce components of the ocean sector is important. A preliminary analysis suggests, that with some exceptions such as the oil and gas industry, most of the components within the private marine sector are disaggregated and evolving in nature. The fisheries component, for example, is comprised mainly of small independent businesses that have been shown to be the most viable economic force in the catching sector.

Most observers agree that the university/industry commitment to research and extension was the key Federal policy that contributed so significantly to the productivity of our agricultural industry. In 1966, the Federal Government established the policy and structure for similar activities aimed at marine resources through the National Sea Grant College Program Act. Fortunately, like the agricultural sector, the oceans sector has access to universities and industry. Primarily, the focus is on fisheries and aquaculture, seafood processing, marine construction and transportation, and marine-related trade, real estate, service industries, recreation, and tourism.

The Sea Grant College and Program Act of 1966 (P.L. 89-688) was passed "to accelerate national development of marine resources, including their conservation, proper management, and maximum social and economic utilization." More specifically, the program was directed to "achieve the gainful use of marine resources" (Sec 202(d)) through a partnership between the Federal and State Governments, universities, and the private sector. The term "Sea Grant" was chosen to emphasize the agricultural parallel in meeting present needs of the nation by developing the economic potential of our marine resources.

Since 1966, the United States has laid claim to a 200-mile economic zone, including all resources in the water column, on and under the ocean floor. By this single action, the United States almost doubled the territory under sovereign jurisdiction. When developed wisely, these vast new areas offer the nation economic opportunities equal to or greater than the agricultural sector of the nation's economy.

The factors that contribute to the productivity of the Sea Grant Program are:

1. The partnership of universities, industry, and government.

2. Sea Grant is the only Federally-stimulated program focused on developing the resources of the ocean on a broad economic front.

3. Economic analyses of the Sea Grant Program, such as the attached, clearly demonstrate an unusually good return on investment.

4. The Sea Grant Program is identifying and developing new resources for the nation in such areas as biomedicinals, aquaculture, ocean energy, conversion, diverse waste conversion, reduction of marine corrosion and biofouling.

Several independent assessments of the Sea Grant Program have been made in the past. The productivity of the program is generally recognized. The most recent assessment was made by the Heritage Foundation, which reviewed all Federal programs in 1980 and reported the following on Sea Grant:

> "It has an impressive record of success....It operates in partnership with state and local governments, private industry, universities, organizations and individuals concerned with or affected by ocean and coastal resources....A key element of Sea Grant is its outreach mechanism whereby results of research are provided to users in industry, government agencies, and the general public."

This appraisal demonstrates the economic effects of the Sea Grant Program. The sections that follow were based on data supplied by 26 Sea Grant Programs. However, this report must be seen as a partial assessment, prepared on relatively short notice. The Sea Grant Program will continue to improve its means of assessing benefits and documentation of program accomplishments.

Economic Examples

A. FISH HARVESTING

Sea Grant's assistance in increasing the productivity of the commercial shellfish, groundfish, and mid-water fisheries resulted in annual economic effects of $36,552,410 on industry, from sixteen projects on which data are readily available.

EXAMPLES OF ANNUAL ECONOMIC EFFECTS

1.	Eel fishery	$ 148,000
2.	Herring fishery	1,250,000
3.	Commercial fish	6,500,000
4.	Shrimp trawl obstruction	3,500,000
5.	Side trawler operations	494,000
6.	Soft blue crab production	1,000,000
7.	Oyster fishery	98,100
8.	Black cod fishery	321,000
9.	Net damage by underwater obstructions	600,000
10.	Offshore fishery	11,210
11.	Alaska commercial fishery	1,055,000
12.	Swordfish and blackfish tuna fisheries	2,600,000
13.	Finfishery	475,000
14.	Herring fishery	1,500,000
15.	Great Lakes commercial fishery	6,000,000
16.	Crab fishery	18,000,000
	TOTAL	$36,552,410

A1. CHALLENGE: Develop the eel fishery in North Carolina.

SOLUTION: Provide research to improve fishing and handling techniques and development of export market for fresh frozen eels to Europe and Japan.

BENEFIT: Growth of eel fishing industry from $16,000 in 1972 to $1,200,000 of foreign exports in 1980, an average annual growth of $148,000.

SOURCE: North Carolina

A2. CHALLENGE: Assist ground fishing fleet changeover to deep water species.

SOLUTION: Development of midwater fishing gear for herring export catch.

BENEFIT: Has led to annual gross increases of $1,250,000, or net increases of $431,000 of exportable fish from 18 vessels. Technology is still spreading.

SOURCE: Rhode Island

A3. CHALLENGE: Improve the efficiency of harvesting by commercial fishermen.

SOLUTION: Assisted the fishermen to develop new and improved technology for handling nets, crab pots, and other fishing gear. Cost-effective hydraulic gear is now being used on 60 medium-sized boats.

BENEFIT: $6,500,000 per year increased income for fishing industry.

SOURCE: North Carolina

A4. CHALLENGE: Reduce loss and damage to shrimp trawls (subject to federal compensation by law) from bottom obstructions.

SOLUTION: Collected data on obstruction locations from personal contacts with boat captains and the historical record, assembled their data with LORAN navigation coordinates, and disseminated the information to the shrimping fleet.

BENEFIT: $3,500,000 per year.

SOURCE: Texas

A5. CHALLENGE: Improve the safety of side trawler operations; the attachment of towing cables to the stern of a side trawler is extremely hazardous, sometimes causing serious injury or death to fishermen.

SOLUTION: Developed and introduced a quick-acting, remote-releasing hook-up block to New England fishermen. Modification of this unique device has adapted it for use by U.S. Coast Guard for life boat handling. A commercial concern is studying use of the block as an anchor release.

BENEFIT: Increased one fishing captain's earnings by at least $3,000 per year. When fully implemented, a modified block for successfully handling its new RHI lifeboat will save the Coast Guard an estimated $2,500,000 or $491,000 annually over 15 years.

SOURCE: Massachusetts

A6. CHALLENGE: Revitalize declining soft blue crab production.

SOLUTION: Provided technical, economic feasibility analysis and marketing assistance to the industry.

BENEFIT: $1,000,000 per year.

SOURCE: Florida

A7. CHALLENGE: Reduce threat to Chesapeake Bay oyster industry of the widespread occurrence of pink coloration in oysters.

SOLUTION: Showed the pink coloration had no effect on the oysters' wholesomeness or palatability, publicized these findings, and convinced a Federal purchasing agent to reverse an earlier shipment rejection.

BENEFIT: This one incidence had a $500,000 benefit but the aggregate value to the Chesapeake Bay oyster fishery is hard to calculate. Over 15 years this amounts to an annual amount of $98,100.

SOURCE: Virginia

A8. CHALLENGE: Re-establish black cod fishing catch.

SOLUTION: Provided research and developed new design traps.

BENEFIT: Landings increased by a factor of 8 (poundage) from 1973 to 1975 with an average annual value of $321,000.

SOURCE: California

A9. CHALLENGE: Prevent net damage by underwater obstructions (reimbursable by the Federal Government by law).

SOLUTION: Collected information on such obstacles from individual fishermen and published the descriptions and locations in a log book.

BENEFIT: Saved fishermen $600,000 per year in net costs plus unaccounted reduction of losses in fishing time.

SOURCE: North Carolina

A10. CHALLENGE: Locate offshore fishing grounds and disseminate new sonar tracking techniques.

SOLUTION: Provided offshore research and training in advance fish travel, radar and navigation.

BENEFIT: $80,000 in one harvest involving 5 boats (otherwise idle due to failure of in-shore fishery). This amounts to $11,210 annually over 15 years.

SOURCE: Georgia

A11. CHALLENGE: Enhance the income of the native Alaskan fishermen from commercial fishing.

SOLUTION: Designed program to improve effectiveness of native Alaskan fishermen in commercial herring fishery.

BENEFIT: Earnings increased by $1,055,000 in first year after program started.

SOURCE: Alaska

A12. CHALLENGE: Develop a winter catch supplement for the seasonal Gulf coast shrimp fishery to provide year-round employment and capital utilization.

SOLUTION: Developed new swordfish and blackfish tuna fisheries.

BENEFIT: $2,600,000 per year.

SOURCE: Texas

A13. CHALLENGE: Find alternative fisheries for shrimpers in South Carolina.

SOLUTION: Helped shrimp fishermen adapt their vessels to fish for previously unexploited finfish and instructed fishermen in new techniques.

BENEFIT: $475,000 annual gross income from finfish over past 5 years.

SOURCE: South Carolina

14. CHALLENGE: Accurately determine the herring fish stock, to increase harvesting efficiency while protecting against over fishing.

SOLUTION: Successfully applied acoustic techniques for more accurately estimating fish populations for the Pacific herring fishing. Data are used in establishing the Regional Fisheries Management Plan for Pacific herring.

BENEFIT: Increased the allowable harvest from approximately 30% resulting in an annual landed value increase of approximately $1,500,000.

SOURCE: Washington

A15. CHALLENGE: Rebuild the Wisconsin Great Lakes Fishing Industry.

SOLUTION: Identified historical spawning reefs in Lake Michigan, developed new processing and new marketing techniques for under-utilized sucker fish, developed canned pack for improved marketing of under-utilized alewives, and provided research data and technical assistance to the industry.

BENEFIT: Recovery of Wisconsin commercial fishing industry from brink of collapse to $6,000,000 annual dockside sales.

SOURCE: Wisconsin

A16.	CHALLENGE:	Increase number of crab species harvested by U.S. fishermen.
	SOLUTION:	Carried out a marketing study in conjunction with North Pacific Fishery Management Council which successfully showed that Japanese Tanner Crab fishing fleets should be removed from U.S. waters.
	BENEFIT:	Tanner Crabs now totally harvested by domestic fishing industries with a value of $18,000,000 per year to date. The U.S. industry was $6,000,000 prior to 1977.
	SOURCE:	Alaska

B. SEAFOOD PROCESSING AND MARKETING

Through Sea Grant's efforts to expand the economic base of the seafood processing industry, the annual aggregate economic effects from eleven projects on which data are readily available was $16,500,456.

EXAMPLES OF ANNUAL ECONOMIC EFFECTS

1.	Salmon canneries	$ 4,615,456
2.	Seafood quality	150,000
3.	Storage of fresh fish	454,000
4.	Clam-mincing by-products	500,000
5.	Oyster industry	1,000,000
6.	Crab-processing wastes	2,500,000
7.	Oyster-cleansing system	1,000,000
8.	New domestic seafood markets	100,000
9.	Shrimp processing	5,600,000
10.	Fish processors	1,231,000
11.	Frozen seafood packaging	350,000
	TOTAL	$16,500,465

B1. CHALLENGE: Help prevent closing of Alaska salmon canneries that would result from proposed environmental regulations on disposal of salmon-processing waste requiring modification of equipment.

SOLUTION: Studied economic impact of proposed regulations and revealed serious errors in the contractor data and analysis report supporting the regulations. As a result of the Sea Grant study EPA regulations were modified.

BENEFIT: The requirement for modifications to waste processing equipment was rescinded with the resulting saving of $22,500,000 to the Alaskan salmon processors in 1979. This amounts to $4,615,465 annually over a 15 year period.

SOURCE: Washington

B2. CHALLENGE: Improve seafood quality by insulating boat holds.

SOLUTION: Promoted engineering and research to develop insulation requirements and handling techniques for improved quality of catch and increase income to fishermen for higher quality products.

BENEFIT: $150,000 per year increased revenue for fishermen.

SOURCE: North Carolina

B3. CHALLENGE: Extend storage time in transportation of fresh fish.

SOLUTION: Developed CO_2-modified atmosphere containers.

BENEFIT: Estimated savings of $454,000 per year for transporting Alaskan salmon into California as well as saving one-third of energy costs.

SOURCE: California

B4. CHALLENGE: Utilize by-products of clam-mincing operations.

SOLUTION: Provided rinse-water research resulting in clam broth stabilization.

BENEFIT: $500,000 per year (1 company alone).

SOURCE: New York

B5. CHALLENGE: Sustain Apalachicola Bay oyster industry threatened with shutdown due to water-quality problem.

SOLUTION: Through technical assistance in sanitation and processing procedures and cooperation with the state Oyster Task Force, sustained and enlarged continued production of safe oysters, even under newly strengthened sanitation requirement.

BENEFIT: Not only was disaster to the industry averted, but oyster production was increased from 5,784,930 pounds in 1979 to 6,395,778 pounds in 1980 equaling a landing value of $5,800,000.

SOURCE: Florida

B6. CHALLENGE: Reduce the cost of disposal of crab processing wastes (many processors faced shutdown due to increased cost of waste disposal).

SOLUTION: Demonstrated crab-meal production, using 20-30 million pounds of hard-crab processing scrap.

BENEFIT: A gross benefit of $2,500,000 per year, through reduction of waste disposal costs and sale of crab meal, has been achieved in the Middle Atlantic region.

SOURCE: Virginia

B7. CHALLENGE: Develop an off-bottom oyster cleansing system.

SOLUTION: Developed mechanization system for depuration process and performed biological studies enabling lifting of some regulatory restrictions.

BENEFIT: Productive and economically feasible depuration process resulting in $1,000,000 of oysters.

SOURCE: Mississippi

B8. CHALLENGE: Find new seafood markets (domestic).

SOLUTION: Perform market research and provide technical assistance.

BENEFIT: $100,000 per year to one company in Tennessee.

SOURCE: Georgia

B9. CHALLENGE: Prevent waste of edible portion of shrimp that is lost during processing.

SOLUTION: Developed and introduced to industry improved handling and processing techniques to reduce waste by increasing yield and saving energy.

BENEFIT: Annual yield region was increased by 4%; the equivalent of $5,600,000 per year direct return to processors.

SOURCE: Oregon

B10. CHALLENGE: Assist fish processors to cope with environmental regulation problems.

SOLUTION: Studied operations of fish meal plants and developed a procedure to increase productivity simultaneously with reduction of problems from effluent pollution.

BENEFIT: Prevented closure of fish processor allowing continuance of industry amounting to $1,231,000 gross annual income to processor and commercial fishermen.

SOURCE: Wisconsin

B11. CHALLENGE: Meet new market demands in frozen seafood packaging.

SOLUTION: Provide fish-mincing research and demonstration.

BENEFIT: Improved packaging and product life and generated income of $350,000 per year.

SOURCE: New York

C. AQUACULTURE

Aquaculture of marine species provided new commercial opportunities by developing the science, technology, and economic potential. $21,752,000 represents the annual aggregate economic effects on industry from projects on which data are readily available.

EXAMPLES OF ANNUAL ECONOMIC EFFECTS

1.	Crawfish aquaculture	$ 8,450,000
2.	Pen-reared salmon	192,000
3.	Oyster beds	160,000
4.	Net-pen fishery	3,000,000
5.	Land clam and oyster spawn	400,000
6.	Seafood production	6,000,000
7.	Maine fishing industry	1,000,000
8.	Ocean ranching	2,300,000
9.	Salmonid mortality	250,000
	TOTAL	$21,752,000

C1. CHALLENGE: Develop crawfish aquaculture as an industry in Louisiana.

SOLUTION: Since 1969, introduced research on crawfish aquaculture to pond operators and to rice farmers where crawfish are now being stocked in rice paddies.

BENEFIT: Increased pond acreage from 12,000 acres in 1969 to 62,000 acres in 1980 with associated increased income for crawfish farmers of $8,450,000 per year.

SOURCE: Louisiana

C2. CHALLENGE: Reduce mortality rate (50 to 80%) of pen-reared salmon when smolt are transferred from freshwater to saltwater.

SOLUTION: Through generic research (similar to that applied to the poultry industry), developed a strain of coho salmon specifically adapted to pen-rearing with one-half the mortality rate of natural stock.

BENEFIT: One commercial salmon grower realized a net saving of $192,000 per year raising this new strain.

SOURCE: Washington

C3. CHALLENGE: Help prevent continual reduction of the size of natural oyster beds due to development and pollution.

SOLUTION: Develop pilot closed-system oyster culture facility.

BENEFIT: Understanding in oyster spawning, spot setting, nutrition, and water-quality control are already contributing an estimated $160,000 per year benefit to the natural bed fisheries. The ultimate goal of commercial sized closed-system aquaculture facilities will be a major industry of conservation breakthrough.

SOURCE: Delaware

C4. CHALLENGE: Develop a net-pen fishery.

SOLUTION: Provided research and demonstrated projects that resulted in several companies in the Pacific Northwest going into commercial production of salmon using this technology.

BENEFIT: Domsea Farms, now a subsidiary of Campbell Soup, is harvesting over $3,000,000 of salmon per year.

SOURCE: Washington

C5. CHALLENGE: Reduce mortality in land clam and oyster spawn.

SOLUTION: Provided shellfish disease research and training hatchery operators.

BENEFIT: $400,000 in increased annual revenue from sale of spawn to hatcheries.

SOURCE: New York

C6. CHALLENGE: Increase the production of seafood through aquaculture.

SOLUTION: Conducted research to identify and select the most promising plant and animal species for aquaculture, developed the supporting technology and marine science for commercial expansion, and provided advisory assistance to the developing industry.

BENEFIT: Aquaculture in Hawaii now produces a wholesale value of over $6,000,000 (1980) and is projected to increase to over $32,000,000 in 1985.

SOURCE: Hawaii

C7. CHALLENGE: Bring greater economic stability to the Maine fishing industry.

SOLUTION: Stimulated the formation of a new shellfish aquaculture industry.

BENEFIT: This still young industry's last year's sales exceeded $1,000,000 with a projected five-fold increase over the next five years.

SOURCE: Maine

C8. CHALLENGE: Develop ocean ranching in Alaska.

SOLUTION: Assisted development of private non-profit aquaculture corporation and hatchery to stock salmon in geographic areas where salmon fisheries do not exist.

BENEFIT: New salmon fishery where salmon stocks had not existed with a catch in 1980 valued at $2,300,000.

SOURCE: Alaska

C9. CHALLENGE: Excessive mortality in smoltification of salmonids.

SOLUTION: By demonstrating the role of ammonia in oxygen transport in fish, investigators have helped the Dworshak National Fish Hatchery to reduce salmonid mortality during smoltification from 35,000 per day to 300 per day.

BENEFIT: An annual savings of $250,000

SOURCE: Rhode Island

D. Marine Construction

Facilitating improvements in environmentally sound, economical and safe coastal and offshore construction activities has resulted in $126,995,000 annualized cost avoidance or savings aggregated from projects on which data are available.

EXAMPLES OF ANNUAL ECONOMIC EFFECTS

1.	Mathematical modeling	$80,645,000
2.	Construction aggregates	45,000,000
3.	Sand and dredging industry	250,000
4.	Wave-tracking buoy	1,000,000
	TOTAL	$126,995,000

D1. CHALLENGE: Assess impacts on marine environment of offshore construction and disposal permitting.

SOLUTION: Developed finite element mathematical models to accurately assess impacts and successfully predict transport and disposal of materials in semi-enclosed water bodies.

BENEFIT: Saved $29,000,000 to $54,000,000 in estimated circulating-water channel modifications or new construction costs. An annual saving of $5,417,779 over 15 years. Using the minimum estimate amortized over an assumed 10-year construction period, this represents a $2,900,000 annualized cost avoidance. Demonstrated environmental acceptability of sewage outflow led to EPA approval of a waiver request and will result in construction cost avoidance of $400,000,000 ($300,000,000 is federal subsidy). Amortizing this saving over a 10 year construction period, this represents a $74,727,992 annualized cost avoidance. Contractor reports savings of $15,000 to $80,000 for each application of the model over conventional techniques and estimates total savings of up to $500,000 per year.

SOURCE: Massachusetts

D2. CHALLENGE: Meet supply demands for construction aggregate.

SOLUTION: Located sand and gravel supplies, determined quantities and impacts of removal.

BENEFIT: $45,000,000 annual savings to consumers.

SOURCE: New York

D3. CHALLENGE: Revitalize sand and dredging industry in Toledo, closed because of environmental concerns.

SOLUTION: Showed that the sand and gravel used for construction aggregate could be dredged without harming the environment.

BENEFIT: $250,000 worth of sand and gravel now dredged annually.

SOURCE: Ohio

D4.	CHALLENGE:	Obtain accurate wave-spectra data for design and construction of offshore facilities and structures.
	SOLUTION:	Developed wave-tracking buoy to directly measure and record wave directional spectra.
	BENEFIT:	New wave-tracking buoy has been added to a small business product line with projected annual sales of $1,000,000.
	SOURCE:	Massachusetts

E. MARINE TRANSPORTATION

The result of increasing the efficiency and safety of the U.S. shipping fleet and the competitiveness of U.S. boat manufacturers in the Mexican market meant an annual aggregate economic benefit to industry of $2,800,000, from four projects on which data are readily available.

EXAMPLES OF ANNUAL ECONOMIC EFFECTS

1.	Satellite information	$1,560,000
2.	Shrimp boat manufacturing	700,000
3.	Fishing vessel replacement	40,000
4.	Offshore tanker mooring	590,000
	TOTAL	$2,890,000

E1. CHALLENGE: Disseminate NOAA's satellite information on Gulf Stream dynamics to disaggregated user industries.

SOLUTION: Worked with NOAA satellite and weather service personnel to locate and establish communication linkages to a broad-base user clientele.

BENEFIT: One shipping company estimates $1,560,000 annual savings in fuel costs.

SOURCE: Florida

E2. CHALLENGE: Increase competitiveness of U.S. shrimp boat manufacturing (for international markets).

SOLUTION: Trained international boat operators for maximum vessel usage (on site) (e.g. Mexican fishermen).

BENEFIT: Continued gross sales of U.S.-built vessels amounted to $700,000 in a year.

SOURCE: Georgia

E3. CHALLENGE: Replace worn out fishing vessels for individual fishermen.

SOLUTION: Instructed fishermen how to build their own fiberglass boats.

BENEFIT: Sixteen boats built resulted in total net saving of $40,000.

SOURCE: South Carolina

E4.	CHALLENGE:	Improve the safety of offshore tanker mooring operations.
	SOLUTION:	Developed prototype talking current spar buoy that reports ocean currents to ship operators making offshore moorings.
	BENEFIT:	A new talking current spar buoy instrument has been added to a small business product line with projected annual gross sales of $590,000.
	SOURCE:	Massachusetts

F. MARINE-RELATED RETAIL TRADE

Sea Grant helped promote the growth of precious coral and pet turtle industries and helped reduce the loss of lives from cold-water drownings. $19,400,000 represents the annual aggregate economic effects on industry from only three projects on which data are readily available.

EXAMPLES OF ANNUAL ECONOMIC EFFECTS

1. Cold-water drowning		$10,000,000
2. Pet turtle industry		2,100,000
3. Precious coral industry		7,300,000
	TOTAL	$19,400,000

F1. CHALLENGE: Reduce loss of lives resulting from cold-water drownings.

SOLUTION: Studied temperature regulation of humans in cold-water environments and, in partnership with industry, designed new kinds of personal flotation devices that minimize body temperature loss.

BENEFIT: Stimulated production in three new lines of personal flotation devices and thermal suits grossing $10,000,000 in 1980.

SOURCE: Minnesota

F2. CHALLENGE: Help prevent collapse of pet turtle industry threatened due to FDA ban on interstate shipment of carriers of salmonella.

SOLUTION: Developed antibiotic treatment of turtle eggs in vacuum chamber that eliminated the salmonella transmission problem.

BENEFIT: Industry expanded in business to $2,100,000 yearly production.

SOURCE: Louisiana

F3. CHALLENGE: Develop a precious coral industry while husbanding rare stocks of coral.

SOLUTION: Promoted research and application of undersea technologies.

BENEFIT: The industry grew from 50 employees and gross sales of $500,000 to 214 employees and gross sales of $7,800,000.

SOURCE: Hawaii

G. MARINE-RELATED REAL ESTATE

The economic importance of coastal real estate has motivated the development of new technologies for shoreline stabilization, flood control, and alternative methods of sewage treatment. This represents $3,000,000 aggregated annual economic effects on industry from four projects on which data are available.

EXAMPLES OF ANNUAL ECONOMIC EFFECTS

1. Shoreline erosion		$1,000,000
2. Flood control		750,000
3. Waste disposal		850,000
4. Irradiation of sewage sludge		400,000
	TOTAL	$3,000,000

G1. CHALLENGE: Reduce economic losses to coastal property owners from shoreline erosion.

SOLUTION: Performed research on vegetation to stabilize shorelines, studies of cement-asbestos bulkhead failure, and research on erosion in local communities, providing information to adjust building setbacks.

BENEFIT: $1,000,000 saved from property damages and remedial actions.

SOURCE: North Carolina

G2. CHALLENGE: Improve flood control techniques.

SOLUTION: Developed and demonstrated new design concepts.

BENEFIT: Reduction in federal flood insurance payments (e.g. $750,000 per flood) and reduced flooding.

SOURCE: New York

G3. CHALLENGE: Reduce the impact of waste disposal on the economic development of coastal land and water.

SOLUTION: Provide research on environmental distribution of sewage waste and developed alternative, cost-effective disposal system which has been approved and adopted by coastal communities.

BENEFIT: $850,000 per year increase in shellfish harvest and the lifting of building restrictions to allow $4,000,000 of new building during 1980.

SOURCE: North Carolina

G4. CHALLENGE: Provide a new method of sewage sludge treatment that is less capital and energy intensive.

SOLUTION: Developed and had approved by EPA an electron irradiation process for pasteurizing sewage sludge.

BENEFIT: Miami-Dade Water and Sewage Authority is now constructing the first facility based on this process which is projected to perform at an annual savings of $400,000.

SOURCE: Massachusetts

H. MARINE SERVICE INDUSTRY

Reducing wave damage to marinas and finding an economically feasible alternative to breakwater construction for small marinas resulted in annual aggregate economic effects on industry of $812,760 from just three projects. These savings have been replicated numerous times in many regions of the U.S.

EXAMPLES OF ANNUAL ECONOMIC EFFECTS

1. Small-marina operators		$ 176,760
2. Wave damage reduction		500,000
3. Marine trade seminars		136,000
	TOTAL	$ 812,760

H1. CHALLENGE: Find an economically feasible alternative to traditional breakwater constructions for small-marina operators.

SOLUTION: Introduced marina operators to the concept of floating tire breakwaters and floating tire docks, gave the needed design and construction information, and advised on the construction and installation of an expanded marina facility.

BENEFIT: Saved $176,760 in annual facilities costs.

SOURCE: Michigan

H2. CHALLENGE: Reduce wave damage to marinas.

SOLUTION: Developed and demonstrated floating tire technology.

BENEFIT: $500,000 annual savings.

SOURCE: New York

H3. CHALLENGE: Improve efficiency of Marine Recreational firms.

SOLUTION: Formulated and conducted ten Marine Trade management seminars along the U.S. East Coast involving 680 firms.

BENEFIT: $136,000 in immediate savings.

SOURCE: Rhode Island

Mr. D'AMOURS. I have no further questions of you at this time, Bob. I thank you for your great patience in waiting all afternoon in order to present your testimony. It is extremely valuable. We in the committee appreciate it.

That will terminate these hearings.

[The following was submitted for inclusion in the record:]

STATEMENT OF HON. ROY DYSON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MARYLAND

Mr. Chairman. Since it began in 1977, the Maryland Sea Grant Program has focused its major research and advisory work on the problems and opportunities of commercial fishing, seafood processing and marine recreation—three marine industries with direct economic consequence to the state of Maryland and to all those who make their living from the Chesapeake Bay. The program primarily addresses problems and needs important to the commercial and environmental well-being of Chesapeake Bay. Resource development research and advisory services are directed toward improving the long-term harvest of the commercial fisheries for oysters, blue crabs, and several species of finfish. Research is also focused on understanding the environmental character of the Bay and its capacity to assimilate such potentially harmful substances as agricultural herbicides, heavy metals, and pathogenic organisms.

Sea Grant has developed an effective plan in Maryland for distributing available oyster seed and realizing greater harvests at no greater cost. The distribution plan, developed through one small economic analysis project costing $5,000, would generate, if applied, a 33 percent increase in production from 2.2 million to 3 million bushels, resulting in an additional $6 million in revenues, soley by making more efficient use of available seed and shell.

To terminate this cost effective program, as suggested by the Reagan administration, would be a major step backward and reverse the recent gains made by the struggling seafood industry. For many years now our domestic seafood industry has existed in the shadow of the imposing foreign fishery, whose technology has been and still is far superior to ours. The Sea Grant Program holds promise of showing our seafood industry the way in which it can become a competitive force. With our country running higher and higher export deficits, the sea offers a way to reduce this deficit and at the same time offer the American consumer a high quality, high protein food at a reasonable price.

In a very short time, the Sea Grant Program in the state of Maryland has gone a long way toward solving economic problems which confront our important fisheries, and serves as an excellent example of successful state and federal cooperation. The University of Maryland is presently on line to become a Sea Grant College in January, 1982. To come so far so quickly is a tribute to Dr. Rita R. Colwell, the very capable director of the University of Maryland's Sea Grant Program. The federal government's participation in this partnership with the states is critical. To cut off funding in mid-stream would be an unconscionable waste.

STATE OF MARYLAND,
EXECUTIVE DEPARTMENT,
Annapolis, Md., March 2, 1981.

Hon. MALCOLM BALDRIGE,
Secretary, Department of Commerce,
Washington, D.C.

DEAR SIR: The current economic crisis, with associated reductions in federal spending, is creating serious financial problems. As you may know, I have joined other governors in supporting the concept of constricted federal aid accompanied by reduced regulation and added flexibilities at the state level. I share President Reagan's hope that these measures may improve the nation's economy. In the haste to remedy a serious situation, however, it is important to make budget cuts wisely. In this light, I hope you will spare the National Sea Grant College Program.

The Sea Grant approach is an excellent example of a successful federal-state partnership. It has proven to be effective and economical. In contrast to many federal programs, it is regionally directed. This characteristic of Sea Grant allows it to address real problems facing Maryland residents, to communicate its findings quickly, and to deliver technical assistance directly to those who work in our major marine industries.

Oysters, blue crabs and finfish—the great fisheries of the Chesapeake—long have been important in Maryland where generations of Bayshore residents have passed on a tradition of following the water, choosing to work as self-employed watermen, seafood processors, shippers and wholesalers. These fisheries provide $25 million in dockside earnings and generate $75 million throughout the state's economy. They also represent a food source that will prove even more productive in the future through application of new seed production technologies and improved management techniques being developed by the University of Maryland Sea Grant Program.

Sea Grant has been effective in assisting our rapidly growing marine recreation industry. Established businesses and hundreds of new firms have benefited from expansion of this industry now occurring in Maryland.

The industries cited are important to Maryland's economy, as well as to its sense of regional identity. During the past four years, the Maryland Sea Grant Program has played a key role in developing fisheries resources and marine recreation in Maryland. It has studied the problems and potential of Maryland industries, examined causes for recent harvest fluctuations and provided practical assistance to those who depend on the estuary for their daily work.

Sea Grant is a relatively small program, but in Maryland it has already made a significant impact on the economy, and it promises even more benefits, as current research projects and studies are completed.

I urge you to give the National Sea Grant College Program your full support.

Sincerely,

HARRY HUGHES, *Governor.*

CHESAPEAKE BAY SEAFOOD INDUSTRIES ASSOCIATION, INC.,
Easton, Md., February 27, 1981.

Secretary of Commerce MALCOLM BALDRIGE,
Department of Commerce,
Washington, D.C.

DEAR SECRETARY BALDRIGE: It has recently come to my attention that thoughts are being given to reducing or eliminating the National Sea Grant Program.

This, in the opinion of our seafood industry, would certainly be a major step backward and reverse recent gains to a struggling industry. For many years now our domestic seafood industry has been existing in the shadow of the mighty foreign fishery, who's technology has been and still is, far superior to ours. The Sea Grant Program has been the light that has emerged from under the basket, that holds promise of showing our industry the way to being a competitive force. With our country running higher and higher export deficits, the sea offers a way to reduce this and at the same time offer the American consumer a high quality high protein food at a reasonable price.

Sea Grant is working to bring about a future for the seafood industry that will offer increased employment, through development of new equipment, new technologies, and a healthier environment, all of which is a must if this industry is to prosper and grow. We have seen in Maryland how a good sea grant program works and have in its short period of existance, experienced benefits through knowledge disseminated by the program, especially through its highly efficient extension service.

We have learned much about the oyster culture and how to improve growth in the open water and the continuation of this program is essential if we are to reap the benefits from on going projects. Sea Grant is delving into the life cycle of the blue crab which up to now has been a mystery, yet its early life habits are most important to a successful adult crop. We must know more about this important specie because it is a major portion of Maryland's seafood harvest.

Harvesters have been aided constantly by the extension service on gear improvement, vessel operation, energy conservation and safety. The processing sector has also benefited by Sea Grant through technical assistance in improving certain processes, by holding workshops and seminars to disseminate information for improvement of their operation.

Sea Grant is important to Maryland, as I am sure it is to other areas and it serves an industry that needs this type of expertize, that isn't available anywhere else. Therefore, the Chesapeake Bay Seafood Industries Association earnestly supports the Sea Grant Program and begs for its continuation. Your help in this matter will be greatly appreciated and remembered.

Sincerely,

WILLIAM R. PRIER,
Executive Director.

CORVALLIS, OREG., *March 18, 1981.*

Representative JAMES WEAVER,
Longworth House Office Building, Washington, D.C.

DEAR REPRESENTATIVE WEAVER: As an investigator in the Sea Grant Program, I will use our research project on wood in waterfront structures (enclosed) as one reason why this Program should be continued. Wood piling and timbers in these structures suffer annual losses of $1 billion, about equally divided between rot above water and marine borer damage in the water. We have shown that:

1. Internal decay of pressure-creosoted Douglas-fir piling can be stopped using volatile chemicals we developed in cooperation with the electrical utility industry for pressure-treated Duglas-fir and western redcedar transmission poles. From the use of these chemicals, annual investment savings of $2.25 million were reported by Bonneville Power Administration and $1.5 million by New York State Electric and Gas Corporation (See enclosures).
2. Internal decay of untreated Douglas-fir piles, used extensively in Oregon estuaries, can be greatly reduced by these chemicals. We estimate that the service life of these untreated piles can be increased from 8 to 20 years or more by an internal chemical treatment and capping the piles to shed water.
3. Certain volatile chemicals greatly reduced marine borer attack on douglas-fir panels in Oregon waters. These chemicals are not intended to and will not replace creosote, but they may stop internal damage of piles by marine borers. Tests are in progress.
4. National standards for the preservative treatment and handling of treated piles were found to be inadequate. One standard was changed and a second is undergoing change.
5. A marine borer, which is very destructive to creosoted-piling in southern waters (California and south), also inhabits upper Oregon estuaries in high populations with very little or no damage to creosoted piles. Dr. Gonor's research to explain this difference in attack could lead to new methods for protecting wood against this world-wide marine borer.

Although I cannot place a value on the savings realized from this research, it will far exceed the $284,000 that Sea Grant invested. The savings to be realized by the small and large Oregon ports, also means the more efficient utilization of Oregon's most important renewable resource—trees.

Very truly yours,

ROBERT D. GRAHAM.

THE AUDUBON SOCIETY OF NEW HAMPSHIRE,
Concord, N.H.

STATEMENT OF THE AUDUBON SOCIETY OF NEW HAMPSHIRE

The Audubon Society of New Hampshire, by resolution of the Executive Committee, supports the continued funding of the National Sea Grant Programs on a meaningful level. In the interest of fiscal responsibility, we understand and accept budget cuts that are equitable and treat programs with fairness and impartiality. However, we cannot condone the elimination of a valid program, established by law, without a public accounting of its value and without reason being given for its elimination.

According to its purpose, the Sea Grant Program was established to help "accelerate national development of marine resources, including their conservation, proper management, and economic utilization." This purpose would seem to place the program in the current mainstream of encouraging economic development, with added provisos that would lead to environmentally sound use of marine resources. Coastal areas experience tremendous resource use pressures and conflicts. There are population pressures, with needs for housing, waste disposal, energy, and recreation, to name a few. There are conflicts between development and preservation, between public and private use, between efforts to use marine resources which occur side-by-side, such as fisheries and oil and gas development. It is imperative that we use our coastal and marine resources wisely if these resources are to withstand the pressures and demands placed upon them. If we do indeed encourage more economic development, it is vital that we also retain those programs that show us how to use our precious resources wisely. Sea Grant is such a program.

The Audubon Society's familiarity with the Sea Grant Program stems from New Hampshire projects, but our statement should not be taken parochially. Our support is for the Sea Grant Program as a whole, not just as it applies to New Hampshire. However, we would like to share with the committee several New Hampshire

projects as examples of the breadth of needs and problems being addressed by the Sea Grant Program in New Hampshire.

The interpretive program at Odiorne Point State Park in Rye, NH, was begun in 1973 by the Audubon Society of New Hampshire, and was broadened and strengthened in 1977 when the Odiorne Point Interpretive Program became a Sea Grant Project (A/0A-108) under the University of New Hampshire Marine Program. Odiorne Point is the only marine interpretive center of its kind between Boston, Massachusetts, and Portland, Maine. As such, it has been invaluable as an educational resource for schools, local organizations, and the general public. In 1980 the program served over 100 New Hampshire public schools and 4000 students, and provided marine education workshops for more than 100 teachers and their aides. During the 1980 summer season, in excess of 3000 people participated in Odiorne Point's guided walks and interpretive programs.

As a cooperative endeavor of the New Hampshire Division of Parks, the Audubon Society of New Hampshire, and the University of New Hampshire Marine Program, and also involving approximately 40 local Retired Senior Volunteers and Community Field Volunteers, this program is a successful example of state, federal, and private sectors working together to serve the public good. The Odiorne Point Interpretive Program obviously is fulfilling a need in the heavily populated coastal area of New Hampshire. While there is still same private funding involved, the program is largely funded by Sea Grant. It would be difficult to serve the public with an interpretive program of the present high caliber without some Sea Grant funds.

In addition to educational projects like the Odiorne Point Program, there are extension projects such as the Marine Docent Program which provides classroom presentations on New Hampshire's marine environments. In 1980 presentations were made to 7000 students, and even more will be reached in 1981. The extension project also provided in-service training to 300 teachers in 1980. Other projects of the University's Marine Program have included adult lecture series and a unique pilot floating lab program in which 20 schools participated over a two week period on board a specially equipped boat. Experiments were conducted within the Portsmouth, New Hampshire, harbor and farther afield, consisting of both physical and biological sampling.

Sea Grant research projects in New Hampshire address a wide variety of practical problems and needs. There are aquaculture research projects ranging from stimulating new fisheries to solving problems such as seaweed infiltration of fishing nets and gear. Another research problem of a practical nature involves determining the substrate of the ocean floor. These results can be used by oil and gas companies during exploratory activities along the outer continental shelf.

The Sea Grant Program should not be terminated without determining the value of the program to all affected groups, from industry to school children to the general public. In some cases the value may be fairly evident, such as an immediate boost to the fishing industry or needed information for oil exploration. But in other instances the value is more intangible and may never be readily apparent, such as the effect of an educational experience on future decision-making. The assessment must be made, however. In our rush to promote economic development, we must not abandon the long term view of sound resource management.

The Sea Grant Program can help guide us along the path of sound management of our coastal and marine resources. It has a vital role to play and should be funded, at the very least, on an equitable level with other programs.

The Audubon Society of New Hampshire is an independent, non-profit organization with over 3000 members in New Hampshire and surrounding states.

Respectfully submitted

JACQUELYN L. TUXILL,
Director, Environmental Affairs,
Audubon Society of New Hampshire.

STATEMENT OF DR. ROBERT B. ABEL, NEW JERSEY MARINE SCIENCES CONSORTIUM

Mr. Chairman and Gentlemen, I am pleased by Representative Hughes' invitation to submit written testimony in behalf of the National Sea Grant Program, which I understand has been under examination by your Committee this week. For the record, I am the Founding Director of the Program, having been appointed to this position on February 13, 1967. I remained as Director of the National Program for exactly ten years in the National Science Foundation and the National Oceanic and Atmospheric Administration.

The Sea Grant Program has enjoyed a highly successful history in a short time, and its impacts on industry and commerce, our country's education programs, and state and local governments, have been significant. There is no need to detail the

Program's exploits; they will, undoubtedly, have been offered by others. I would prefer, rather, to confine my remarks to the managerial inconsistencies represented in the Administration's announced intent to discontinue the Sea Grant Program:

1. The Administration has announced, as one of its two watchwords, that of encouraging and promoting American industry. Yet, the Sea Grant Program, which the record has demonstrated to have contributed more to American industry than the aggregate of all the other ocean programs, has been uniquely selected for termination.

2. The Administration's second watchword has been that of reducing the Federal bureaucracy; yet, in the Commerce Department at least, it would appear that terminations have been directed inordinately at the outreach programs.

3. The Administration has evidenced an intriguing tendency to emulate the British Government's doctrine on reducing government spending. Reference to the only British analysts who have examined American oceanography shows that the Sea Grant Program is just about the only American marine enterprise they respect. In this regard, the appropriate passages from the British examination are attached herewith.

4. The Administration has declared its intent of running the United States Government as a business enterprise. Under these circumstances, does it really make sense to terminate the only ocean program yielding a 3:1 return-on-the-investment?

Three weeks ago, I addressed a letter along these lines to the Secretary of Commerce; in return, he was gracious enough, acting through the Associate Deputy Secretary, to invite me to Washington to discuss the various issues attendant upon discontinuing the Sea Grant Program. It was an interesting meeting, and, in this regard, I must express, for the record, my admiration and gratitude to Ms. Martha Hesse, Associate Deputy Secretary of Commerce, who gave considerable time and attention on March 19, 1981, to explain to me the Administration's intent respecting the Sea Grant Program. Our conversations bore fundamentally on the issues under examination by this Committee.

As I understood Ms. Hesse, the Administration has decided to terminate the Sea Grant Program because it has fulfilled all of its original objectives and it is now time for industry to assume responsibility for support of the Program. Candor requires the admission that this is, in theory, a defensible and reasoned approach to any Federal program and Sea Grant ought not to be an exception to this type of scrutiny. I can fault neither Ms. Hesse nor the Secretary on their fundamental approach to streamlining the Commerce Department's programs.

I do feel constrained, however, to offer a few observations on the other side of the coin. First, I believe myself to be the only person still around who was present at the Executive Sessions in both the Senate and the Executive Office of the President when the Sea Grant Program was first placed under consideration prior to legislative action on the original bill. I can assure you, Mr. Chairman and Gentlemen, that the Program's objectives, as originally chartered, were anything but ad hoc. In fact, they can be most likened to the general charters of the Departments of Agriculture, Bureau of Mines, etc., i.e., to promote, encourage, and support our nation's efforts to exploit the oceans in man's behalf. It would not be realistic to expect that the United States has now completed its mission in that direction.

Second, during the time of our interview, I asked rhetorically where this country would be now had a similar decision been made 100 years ago to terminate our agriculture program (e.g., the Agricultural Experiment Stations, et. al.) just a dozen years following that program's inception.

Third, if, in fact, the country is to be run as a business, it doesn't seem productive to turn off that component of the business which appears to be effecting a high rate-of-return on the investment.

Ms. Hesse replied that if the Program were of that much benefit to industry, industry should undertake the support of the Program. Considerable discussion ensued of how industry could be mobilized in such a way as to undertake this responsibility, i.e., how would one mobilize all of the industries now benefiting from the Sea Grant effort into some sort of cooperative union? Ms. Hesse personally does not know of any such enterprise, but stated that she would be willing to assist our efforts, either to locate some sort of precedent or to develop some sort of technique for achieving this system.

Viewing the Commerce Department decision clinically, I believe it is valuable to keep an open mind. If, in fact, some sort of industrial Consortium were to take over the Sea Grant Program support, it would be a dramatic step in government-industry relationships. While I don't personally see how it could be done, this does not necessarily mean that it is impossible.

The two principal problems will be first forming such a Consortium against all historical precedents; and, second, operating it in such a manner that the benefits of Sea Grant efforts would be available to all industries, whether or not members.

In summary, while the solution proposed by the Commerce Department is mathematically possible, my personal conclusions are that: 1) apparently no one questions the valuable services performed by Sea Grant in the past; 2) these services should be continued for the benefit of all sectors of American enterprise; and 3) this function can be performed only by the Federal Government, accepting partnerships with State and local government and industry.

Thank you for affording me the opportunity to give testimony on this important subject.

HORSFELD, BRENDA & STONE, PETER B., THE GREAT OCEAN BUSINESS

(Coward, McMann, N.Y., 1972)

THE U.S. CONJURING TRICK

The National Sea Grant College and Program Act became law on October 15th, 1966. The government hopes it can become a cornerstone of long-term investments to marine resource development. The programme places a special emphasis on developing regional capabilities to work on regionally orientated problems.

It has three objectives: it is supposed to provide more ocean engineers, it is supposed to push research into marine resources, and it is supposed to tell everybody about it and offer extension and advisory services.

It can work in two different ways. Firstly it can help existing academic institutions evolve into sea grant colleges which are then supposed to provide regional leadership in ocean research and development. Secondly it can support projects which involve specialised scientific or engineering research, or even education advisory or training activities. The National Science Foundation is supposed to do the initiating and supporting of sea grant programmes.

The emphasis is on strictly short-term prospects capable of reasonable financial return: food from the sea, environmental forecasting, continental shelf exploitation and multiple use of the sea coast. The last refers to the need to reconcile competing uses of the coast, amenity, fishing, dredging, polluting, and recreational sailing and boating.

The fundamental notion is pump priming. "To mobilise collective resources, foster local channels of communication and establish new patterns of collaboration beyond the limits of any single sea grant institution . . . industrial requirements can help to shape the direction of the program and indeed the NSF looks to industry for suggestions and ideas . . ." available qualified manpower may be expected to double within a decade, 300 or more a year of graduate ocean engineers and perhaps 1,000 a year or more of ocean technicians.

Lest anyone lacking in imagination should fail to see quite what marine resources have got to do with such routine educational chores as teaching people domestic science, law, or journalism, the document "Marine Science Affairs" January 1967 (Report of the President to Congress on marine resources) spells it out at length. Federal money up to a limit of two-thirds of the total will help a state institution's school of law if the students buckle down to studying the legal aspects of marine resource development. Even a school of domestic science or home economics can get money from federal coffers if it deals with the home utilisation of marine foods, that is presumably American for cooking fish and cleaning mussels. If anyone wants the money they have to take it seriously, a host institution must adopt the sea grant mission as a major goal and a full-time programme director or co-ordinator will be regarded as earnest of such intentions.

Sea grant project support is intended to advance know-how most of all at the stage where scientific discovery first blends into a possible social application, but where practical economic benefits are still uncertain.

In its first full year, 1968, total funding for the sea grant programme came to five million dollars for 27 grants at Oregon State, Rhode Island, Washington, Hawaii, Texas and Wisconsin Universities. In 1970 the money available doubled that available in 1968.

As an example of the thoroughness with which the American go about this sort of vocational education one may take the curriculum for "ocean technicians". This is for use in junior colleges giving two-year courses and is below first degree standard. There is no doubt that any man emerging with success from this sort of course would be a most excellent hand in any sort of marine activity. An ocean technician will have survived three courses of technical English in which he will have even

conducted meetings and conferences. His technical mathematics will embrace differential and integral calculus and his technical physics will include electron theory and properties of matter. Navigation and seamanship sounds as if it is up to the sort of standard required for junior officers in the Royal Navy and includes celestial navigation. Making charts also features. That is only half of the ambitious curriculum, however; oceanography, fishing and marine biology are also introduced with emphasis on the practical. On top of that, the budding technician is to be capable of stripping a diesel, petrol engine or pump and will be trained to be handy with rigging and anchor laying and keeping a marine refrigeration system going. Lastly this salty paragon will be able to type and use a desk calculator! The only thing he cannot do, dare one mention it, is dive and swim but that is probably regarded like car driving as something every boy knows about anyway.

If the sea grant programme goes on to fulfill its objectives America will soon have the most awesome capability in marine activities. The momentum provided by such a solidly based labour force will be irresistible and if there is wealth in the oceans then the United States will get it.

Those three factors then have played the most important parts in generating the new big science of oceanography. To recapitulate, they are first, the U.S. Navy's need to maintain mastery of the sea; second, the advanced technology companies' wish to deploy their skills in new fields related to aerospace; and third, the skillful deployment of federal money in the education system.

Together they have raised the recurrent spectre for the rest of the world, a runaway American lead in yet another area of advanced technology. The rest of the world has responded after its fashion. The British, who were, indeed possibly still are in 1970, slightly ahead of the United States in the pure science side of oceanography, reacted with the slow, mumbling suspiciousness of a punchy old boxer. The French, led by the glamour boy of oceanography, Jacques Cousteau, established a beautiful formal structure and a National Centre. The Germans and the Japanese in their turn are watching the Americans closely and in 1970 there was a feeling of relief that at least things were not happening as fast as had once seemed likely. The Russians who have militarily as much at stake as the Americans have said as little as possible.

[Whereupon, at 3:55 p.m., the subcommittee was adjourned.]

COASTAL ZONE MANAGEMENT BUDGET CUTS

TUESDAY, MARCH 31, 1981

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON OCEANOGRAPHY,
COMMITTEE ON MERCHANT MARINE AND FISHERIES,
Washington, D.C.

The subcommittee met, pursuant to notice in room 2337, Rayburn Building, commencing at 10 a.m., the Honorable Norman E. D'Amours (chairman of the subcommittee) presiding.

Present: Representatives D'Amours, Studds, Pritchard, Emery, Carney, and Schneider.

Staff Present: Howard Gaines, Darrell Brown, Mary Pat Barrett, Pam Phillips, Curt Marshall, and Dale Brown.

Mr. D'AMOURS. The Subcommittee on Oceanography of the House Committee on Merchant Marine and Fisheries will come to order.

We have a rather lengthy schedule of witnesses today. We will go from now until we complete the morning witness list and then we will be resuming at 2 o'clock this afternoon until completion.

We're meeting today to receive testimony concerning the Reagan administration's proposal to terminate Federal involvement in the coastal zone management program and the coastal energy impact program.

These two programs represent the end product of more than a decade of Congressional input into the shaping of a national coastal policy. Just last Congress, this very subcommittee held 9 days of hearings and received over 2,000 pages of testimony on CZM and CEIP. In the end, Congress affirmed its commitment to the programs mentioned and voted to reauthorize them for 5 years. Congress rejected the proposal from the Carter administration that Federal involvement be phased out and, in amending the policy section of the bill, more clearly spelled out the national policies and objectives of the programs they meant to achieve.

No one who participated in last year's debate could have anticipated that we would be meeting in the early days of the 97th Congress to rehash many of these very same issues. Nevertheless, the central issue before us today is whether or not we should have a national coastal policy. The administration has argued that, while CZM and CEIP are worthy programs, they are essentially State programs and States should be willing to fully fund them.

We will be receiving testimony today from representatives of State programs, from private citizens and public interest groups, as well as from the adminstration, on these assumptions.

As many of you know, this hearing is the second of two hearings this subcommittee is holding on proposals to terminate the Federal

involvement in coastal oriented programs. Yesterday we met to discuss the sea grant program. Both of these hearings suggest rather clearly that the new administration has decided the United States no longer needs a national coastal policy, or rather it has decided that a national coastal policy conflicts with the national energy policy. For at the same time that we are contemplating terminating these programs, CZM, CEIP, and sea grant, the administration is gearing up to accelerate development of oil and gas on the continental shelf.

A sound foundation of research, education and intelligent management of our coastal areas does not have to be contrary to the interest of energy development. I believe that for the people of the coastal States to support development outer continental shelf, they must be convinced that these activities are being undertaken with a respect for the best interest of the coastal and ocean environment. We should be asking ourselves today whether we can do this in the absence of a CZM or CEIP program.

Finally, it should be remembered that one of the original reasons for establishing a coastal energy impact program was the question of equity between inland and coastal states hosting energy activity. Inland States receive 50 percent of all the royalties paid to the Federal Government for energy activity on Federal lands within State borders. Coastal States have never directly received any part of the royalties for off-shore development. I recently asked the Congressional Research Service to provide estimates on how much money coastal States would receive if they enjoyed the same Federal leasing arrangements as inland States with regard to energy development. CRS reported that, in the period 1981 through 1984, States' share of royalties from expected OCS activity would average more than $3 billion per year. I have lately seen figures that make me think that estimate is, in fact, conservative.

Nevertheless, the Federal assistance States now are receiving through CZM and CEIP combined appropriations amounts to less than 3 percent of that total. In terminating Federal involvement in these programs, we should be fully aware of the implications of reopening that equity question.

I look forward to hearing the testimony of a very distinguished witness list today and I'd like to begin by calling to our witness stand two Members of Congress, Mr. Swift and Mr. Won Pat.

Gentlemen, I welcome you to the hearings and I don't know if you have predetermined any order in which you would like to speak.

Al, I think you are being designated by our Guam delegate to go first.

Go ahead.

Mr. SWIFT. Thank you very Mr. Chairman.

Thank you, Mr. Won Pat, for letting me go ahead.

I have a prepared statement which I would ask you now to consent to include as part of the record.

Essentially, what the statement says is—it details a specific loan of one of the areas in my district under the coastal energy impact program that has been rescinded in 1981. The decision sent up by the President.

I don't particularly want to go into those details. They are not directly relevant to the work of this committee except insofar as it is an excellent example of the kind of thing that will disappear if, in fact, the entire program is not reauthorized.

Specifically, it would provide dredging of a new channel so that this area could utilize barges carrying oil platforms, both semisubmersible and submersible energy development facilities. In addition it would provide for the construction of docking, fueling and support activities for the OCS and other boat and basin activities. Both of those relate directly to energy development for this Nation off of our coasts.

The points I want to make here are that elimination of this coastal energy impact program would, in fact, I think be bad for this Nation. I think that it is completely wrong to assume that this is something of interest only to States, because currently in our American efforts to explore or patrol the sea, we will find that we buy the vast majority of our oil rigs, the platforms, from the Japanese and from other foreign areas because we don't have adequate facilities, especially on the west coast to construct these for ourself. They require deep water ports, they require considerable area and we have not developed those ourselves. So, we in our own oil exploration off our coasts, have to go to foreign countries with which to buy one of the major pieces of gear necessary for undertaking that.

This seems to me to be a poor policy in a number of specific respects. First of all, clarity doesn't help us with our balance of payments problem.

Second, permitting other countries to build equipment that we need, certainly impacts our domestic economy, jobs, and so forth.

And finally, it means that we are again dependent on other nations when it comes to providing our own energy supply.

So, it seems to me that the very kind of program that has been rescinded in the 1981 budget in my district is the kind of program that we should not only not be preventing it from going, but we should be encouraging it, both in terms of our balance of payments, in terms of our energy independence and in terms of our domestic economy.

So, I would suggest to this committee that they consider very carefully as to whether or not the administration's proposal in this area don't, in fact, throw the baby out of the bath water, if they are not being pennywise and pound foolish.

Mr. D'AMOURS. Thank you, and I can assure you that we're not going to throw anything out. We are trying to save the tub and all.

Tony, would you like to give your statement.

Mr. WON PAT. Mr. Chairman, and other members of the committee, first let me thank you for this opportunity to present a statement from the Territory of Guam concerning the coastal zone management program.

Mr. Chairman and members, as Chairman of the Interior Subcommittee on Interior Affairs, I am charged with the oversight, investigative and legislative jurisdiction over the insular areas of the United States and I am here before you to urge continuation of the coastal zone management program for the insular areas in the

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Pacific: Hawaii, Guam, Commonwealth of the Northern Marianas, and American Samoa.

The Pacific Basin Development Council has submitted a position paper which I would like to read a part of:

One of the major justifications that has influenced the decision to seek the continuation of the program is truly a unique island status that requires special considerations and attitudes. Justification for the concept is based on the following: One, percentage of impact on the lands of the individual islands. Two, percentage of impact on total population. Three, relevancy of the Coastal Zone Management Act on the totality of the island government(s).

Impact of coastal zone management on Pacific islands—The coastal zone is a diverse natural resource that extends a total of 101,500 miles along the Atlantic, Gulf, Pacific, and Great Lakes coast, as well as the total perimeters of the islands of American Samoa, Guam, Hawaii, the Northern Mariana Islands, Puerto Rico, the Virgin Islands, and more recently, the Trust Territories of the Pacific Islands/TTPI. Although there are two separate methods of viewing the "unique islands status" both result in the fact that islands should be treated with special considerations.

One approach addresses the concept that 100 percent of the island's respective total land area comes under the impact of the Coastal Zone Management Act. This differs from the general mainland state program. For example, one state has determined that 100 yards—measured from the mean high water mark—is the area boundary of the coastal zone that's impacted by the CZMA. When this is compared with the total area of the sample state, the percentage of impacted area is very low.

When using this same concept as it relates to the island situation, one finds that each island area is impacted a total of 100 percent—excluding Federal owned lands. Not only does this "100 percent impactable land" apply to the lands and oceans, it impacts on almost all of the programs and activities of both the public and private segments. This includes activities involving energy usage and generation of all types of construction to include private residences, schools, powerplants, shopping centers, hospitals, governmental structures, initial highway and road sites, locations of ports, boat docks and repair facilities, as well as sewer and waste projects, to name a few.

Another approach is to address the concept of the island unique situation from the viewpoint that the total perimeter of each island—as opposed to a lesser amount of perimeter as a result of the particularly land-locked mainland States—falls into the coastal zone impacted area. This approach introduces the concept of a proportional coastal impact factor (PCIF). This approach also results in a clear indication that the island situation with regard to coastal zone management justifies continued support at the current authorized level.

Population impact.—On the mainland—as of 1979—seven of the nine largest metropolitan areas in the Nation were within the coastal management zone impact area and more than 50 percent of the Nation's population lived in counties that are, at least in part, within 50 miles of the land-sea margin. The unique island status is also present in this factor since a total of 100 percent of the respective island population lives in the designated coastal zone area.

Relevancy of CZMA on the totality of island programs—island governments, for reasons discussed below, are in a situation where they are required to meet Federal requirements and/or address local needs, but often lack the long-term information gathering capabilities or resources taken for granted by mainland States.

Pacific island governments, including Hawaii, are relatively new to our formalized Federal system. Prior to reaching the respective self-governing status, they often were not eligible for the formalized Federal programs that have assisted mainland States in reaching certain levels of achievement. Although island governments are now eligible for most, if not all Federal programs, there is a continued need to play catch-up in order to deliver a product based on the levels of sophistication required, by not only coastal related programs, but by many other Federal programs.

The island governments have found CZM as an excellent opportunity to respond to local needs and issues as well as other Federal program requirements. Often without CZM, the Territorial Island Governments would have a limited level of planning or resource management. The kinds of problems and issues which are important and yet could be unaddressed without CZM include, land-use planning, flood plain management, infrastructure development, base-line information gathering and research, general planning, regulation and enforcement, curriculum development, preservation of prime farm lands, historic preservation, cultural preservation, fisheries development and management, water and sewage projects, water resources development and park development.

As you can see, the coastal zone management program has provided these islands with a mechanism to work together regionally on the problem of coastal zone management. In the case of Guam, my district, the coastal zone management has impacted heavily into such major areas as tourism, the island's private industry, fishery development, park facility development and land and water resources planning and development.

The local government, which is heavily subsidized by Federal moneys, will not be able to fill any gap created by budget cuts or termination of the coastal zone management.

Mr. Chairman, I respectfully request the subcommittee to give my comments serious committee consideration.

Mr. D'AMOURS. Well, we thank the delegate from Guam, Mr. Won Pat, for his contribution to this question. And I have no questions at this time.

Mr. Pritchard, do you have any questions?

Mr. PRITCHARD. No, I just want to tell you that I can appreciate that you have a particular problem there in Guam, and it seems to me that this type of program can not be structured without special consideration for the islands out there. I think they have a special case. They really need special treatment. I'll be glad to work with you and if this can't be done we will do something else. We do have particular problems out there that should be addressed.

Mr. WON PAT. I certainly appreciate your understanding of that problem. Indeed, we have a unique situation and it requires a unique resolution to the problem.

Thank you, Mr. Chairman.

Mr. D'AMOURS. Our next witness is Mr. Jim Walsh, the Acting Administrator of NOAA; I believe accompanied by Bob Knecht, the Acting Administrator of CZM.

STATEMENT OF JAMES WALSH, ACTING ADMINISTRATOR, NOAA; ACCOMPANIED BY BOB KNECHT, ACTING ASSISTANT ADMINISTRATOR, NOAA, CZM

Mr. WALSH. Thank you very much, Mr. Chairman.

My name is James Walsh. I am the Acting Administrator of the National Oceanic and Atmospheric Administration, part of the Department of Commerce.

As you noted, accompanying me here today is Bob Knecht, at the present time holding down two jobs. One is the Acting Assistant Administrator of our coastal zone management agency, and the Acting Director of our new office, Ocean Minerals and Energy.

Once again I thank you for the opportunity to appear before you today and discuss the administration's budget proposals as they relate to activities under the jurisdiction of this subcommittee.

Yesterday, I went over in some detail the broader cuts that affect our agency and in the context in which sea grant and now coastal zone management fit. So, I will skip over the first part of my prepared testimony and, of course, ask that it be entered in the record.

With regard to the coastal zone management program, the administration's revised 1982 budget proposal suggests decreases totaling $37 million as a result of the termination of the Coastal Zone Management Act, section 306, administration grant program.

There are also associated savings in program management. We estimate that the cessation of this program will save approximately $179 million through 1986 from the proposals that President Carter had recommended in January. Federal support of the coastal zone management program, in the opinion of this administration, has largely achieved its purpose. States covering 78 percent of the coastline already have received about 7 years of assistance in developing and implementing coastal zone management programs.

The administration also is proposing to terminate the coastal energy impact program for a savings of $158 million from the Carter budget through 1986 and to rescind the remainder of the 1981 carryover loan fund involving $40 million. You may recall President Carter had also recommended that the coastal energy impact program not be recapitalized in 1982. However, that recommendation allowed for some outyear funds associated with loans during the speed up of the outer continental shelf development program.

Consistent with the objectives of the coastal zone management legislation, the CEIP program has provided a valuable incentive for State participation in costal zone management. It has augmented the coastal zone management program in assisting States in dealing with coastal energy issues of various types, and has provided front-end financing to communities faced with OCS oil and gas development.

It is believed that the coastal zone management program has largely achieved its purposes, and that continuation of state CZM programs, and any additional improvements, should now be financed by the individual States, as the program was designed to be institutionalized at that level when the Federal sponsorship terminated. The change in the CEIP is also consistent with the original intent of the program. That is, to provide Federal assistance only if absolutely essential. Presently, local impacts from oil and gas development have proved to be far less than originally anticipated and it is believed will be within the capabilities of States and localities to manage. Furthermore, CEIP has fostered institution buildings. States have now developed planning capacity, through planning and OCS State participation grants, for addressing coastal energy development.

Federal program functions, however, will continue under the Coastal Zone Management Act, specifically those for continuing review of State program performance required under section 312 and the monitoring, mediation, and appeals responsibility under section 307. In addition, State rights and responsibilities under this act and other Federal statutes which accompanied Federal approval of State coastal management programs will continue.

Mr. Chairman, my testimony then goes into some comments on the status of coastal zone management programs and the kind of program activities that are underway under this act and the benefit to the States that will come from this program. All of these, of course, underlie our belief that States will not abandon coastal zone management efforts with the cessation of Federal funding.

Let me briefly give you the status of where we are.

Presently, a total of 25 States and territories, which as I mentioned, covers about 78 percent of the Nation's coastline now have

programs approved by the Secretary of Commerce that incorporate the basic management framework, policies and authorities required under section 306 of this act. Six States receive program approval in September 1980 and are in their first 6 months of program implementation. Two States have continued program development in spite of the expiration of the section 305 filing; four States are not presently participating; four States are in the final states of program development, New Hampshire, Indiana, Texas, and Florida are in that latter category. The Florida coastal management program is currently under review and we anticipate there is a possibility that it will be approved later this fiscal year.

Let me turn now to some of the areas in which State programs have been effective and the results forthcoming and setting forth some of the reasons why we believe they will pick it up.

First of all, many States have simplified and improved coordination of Federal and State requirements by instituting joint permit applications. A couple of the States, I might mention in particular on which I will be testifying shortly before the OCS Special Committee, Alaska and California, have put together good programs in this area that are facilitating the review of Federal permits.

In siting and development of coastal-dependent facilities, there are efforts being made for example in such States such as Florida, Massachusetts, Maryland, Maine, and Wisconsin, and the State programs which have been funded by the Federal Government have acted as to catalyst arrangements within the States, to involve State, local, and private investment and enhance the Federal management of commercial waterfront areas. In Maine, for example, there is a statewide effort to revitalize the coast as a site for economic development of commerce and recreation.

In Florida, CEIP funds have been used to revise harbor plans to accommodate major renovations.

In Wisconsin the plan and program has identified much needed dredged material disposal sites for future port expansion.

In the area of protection of natural resources, most State CZM programs are providing new or enhanced protection of the coast's natural resources, beyond the traditional regulatory measures. These resources, of course, are critical because of their economic, storm-protective, or ecological values. For example, Louisiana, in addition to implementing a new coastal use permit program, has begun a number of positive enhancement activities aimed at maintaining the viability of its coastal wetlands and reducing the annual loss of approximately 40 square miles that occurs. In the area of protection of life and property in many programs they have shore protection and hazard mitigation elements to safeguard natural resources from natural events such as hurricanes and other storms.

Some States have also acted to enhance public access to coastal areas. Not only California, Rhode Island and Delaware have taken steps in order to provide greater access.

In summary, we believe that the benefits to States and local governments from the coastal zone management program and the coastal energy impact program have been substantial. The interest, therefore, of the States lies strongly in favor of continuing these efforts after Federal funding is eliminated.

Before I conclude my testimony, Mr. Chairman, let me just summarize very quickly where we stand with regard to the implementation of the 1980 amendments to the Coastal Zone Act which was enacted just last year.

As you know there was a recommendation by the Carter administration for a phase down of the coastal zone management program in the context of the reauthorization legislation which was rejected by the Congress and the program has been reauthorized at the same level for 5 years.. Congress specifically directed that regulations implementing major provisions of the act be issued by July of this year. NOAA intends to work toward meeting this congressional timetable, while taking into account the administration's budget proposal and responding to the President's recent Executive Order No. 12291, which puts new controls on rulemaking in the Federal Government.

In order to comply with the congressional deadline, we began rulemaking preparations last fall. In November and December we met with State and Federal agencies interest groups to identify the range of issues. On December 30, 1980, we issued advance notice of proposed rulemaking that received numerous comments. These comments are being reviewed and incorporated where possible into detailed issue papers and we are having them circulated and commented upon at the present time. Copies of these issue papers, by the way, have been provided to the congressional staff and we will make more available if you wish.

While rulemaking is in process, NOAA has been implementing the amendments within the existing statutory framework. For example, each grant after September 30, beyond the first year funds, has included conditions assuring that an increasing proportion is devoted to the activities to implement the national objectives, such as the changes that were made by Congress last year in section 303. Likewise, the nine evaluations of the performance of State programs carried out since September have addressed the expanded directives.

Finally, Mr. Chairman, I would mention that the act requires a review of Federal programs that affect the coastal resources and a report to the Congress. In January 1981, NOAA completed a report to the President about the Federal program and coastal program, describing the results of the review of major Federal programs affecting significantly coastal resources. The recommendation for administrative and legislative action have not yet been reviewed but will be reviewed as soon as we can put our attention to it.

That concludes my testimony, Mr. Chairman. I would be happy to respond to any questions.

Mr. D'AMOURS. Thank you, Jim. I appreciate your testimony. I do have a series of questions that I would like to ask and I am sure other members of the committee might.

I think I recognize the position that you find yourself in today in testifying as you have, is perhaps not the easiest position you have ever taken. But my questions necessarily can't take that into consideration that you are the only chance that I am going to get to talk to the administration. So, I want to talk to you accordingly. Nothing personal in any of this, of course.

Mr. WALSH. Certainly not.

Mr. D'AMOURS. Nor could there be.

So, first of all you spent a good part of your testimony detailing what a great program this is and what great wonders it has worked in a number of areas across the country. I agree with that.

You also say that the States are now going to pick it up and after Federal withdrawal will carry the program on as before.

Now, we are going to have other testimony this morning and this afternoon, a considerable amount of testimony that I believe is going to be to the contrary. But what I would like to know is if the administration were convinced or believed that, in fact, it was wrong on this point that the States would not, or more probably could not pick up the programs, would it change its position do you think?

Do you think it would advocate terminating the Federal involvement?

Mr. WALSH. In terms of the budget recommendation, I think the answer is it would not change its opinion.

Mr. D'AMOURS. So that means that whether or not the program is picked up by the State, the Federal Government will terminate its funding and, therefore, is willing to end the CZM program about which you said so many nice things?

Mr. WALSH. Well, I don't think the issue is totally ending it because it is anticipated and I am sure you will hear from some people today that there are several States that will continue some level of effort in this area. So, we really are not talking about terminating it. The issue, as I laid it out yesterday, is that the Federal Government is seeking to back itself out of funding many passthrough programs, amounting to between $30 and $40 billion a year to go to individual States in which these individual States more or less have control over the way the program goes and benefit most directly. While there are national benefits, it is believed that these programs in most part provide assistance to States to do things that if it's in their interest to do, they will do.

In many of the cases that I have talked about the successes auger for States picking them up, because it has worked, it has been a good investment for Federal funds and, therefore, it ought to be a good investment for State funds.

Mr. D'AMOURS. When and if there are State funds to be invested, what—I'm asking about the situation where there are no State funds to be invested. And I think we are all realistically aware that there may be a few States, I don't know. I will wait for the testimony today. There might be some States that can pick it up.

What about the many that can't?

Mr. WALSH. Well, let me comment on that.

First of all, you have to understand that Congress did not say when they passed the coastal zone management program that each and every State that is a coastal State in the United States must be in the coastal zone management program. Congress said it was not in the national interest to have a mandatory coastal zone management program, but what it did is it decided it will be a voluntary one and it accepted at that time that certain States would simply opt not to get into the program.

There are States that have opted not to get into the program. Georgia is the best example. There are others. It is clear that there

are some States that will not pick up the program at the level I anticipated. But, again, it was a carrot program and Congress never mandated that the States must do a program because it's absolutely vital to the national interest.

Mr. D'AMOURS. Of course. But the congressional finding read that there was a national interest to be found in the affective management of our coastal area and yet the plan was—you say carrot-stick was to encourage them. We have amended the plan to further encourage States to participate in this program, recognizing that there is a national interest to be found in the effective management of our sea coast areas. Your approach, the administration's approach, really takes a much more parochial view of our sea coast and denies a national interest and leaves it to the States solely to decide whether or not and how the coast should be managed—the coastline should be managed; isn't that true?

Mr. WALSH. Well, not totally, because the coastal zone management program was an effort to bolster the ability of the States to deal with essentially their own problems, land use problems, problems of regulating uses. That is inherently in our system, an integral part of the local police power.

Mr. D'AMOURS. Sure.

Mr. WALSH. The Federal interest is protected in any number of ways. For example, all navigable waters carry with them a navigation servitude which serves the national interest. And there are permit systems and there are controls that insure that the national interest in navigability, including the environmental protection, are satisfied.

But, what is being stated in this case is that the Federal Government has provided assistance to individual States to build up their capability of dealing with complex management problems. Management problems which are inherently their own. Building of a dock in New York City, while there is some national interest, it still most directly affects New York City. And it is stated—a decision as to where those docks are to go, are really inherently and at bottom a State and local decision and the Federal Government has provided adequate incentive to build up the capability to do that well and now it should turn it over.

Mr. D'AMOURS. I want to follow up on that and I will, but for the time being my 5 minutes has expired.

Mr. Carney, do you have any questions?

Mr. CARNEY. Thank you, Mr. Chairman.

Do you know why Georgia did not take it upon themselves to avail themselves of the opportunity?

Mr. WALSH. Yes, sir, I am all too familiar with that situation.

They, basically, concluded that—I'm using their arguments and I'm sure that they can probably articulate much better than I—they simply felt that the conditions requirements and the restrictions associated with the program, in their opinion, was not worth the money that they would receive in return. That's a capsulization of their comments.

We came to a difference of opinion over whether the policies they were embracing in their coastal zone management program would, in effect, be binding on various State agencies. And they felt that it was adequate that they had accepted those policies and that

the Goverment would enforce them. We wanted something a little more definitive, say, that the head of the Department of Transportation could not go ahead and ignore those policies.

We had the same difference of opinion, I might add, in Maine. However, we reached an agreement with Maine and were able to approve their program. But in the case of Georgia, I guess they basically told us to pack up and leave.

Mr. CARNEY. Where is the largest seaport in the east coast?

Mr. WALSH. Where is the largest seaport in the east coast?

Mr. CARNEY. Right.

Mr. WALSH. I assume that it is New York City.

Mr. CARNEY. They are not in the program?

Mr. WALSH. Seaport or sea coast?

Mr. CARNEY. Seaport.

Mr. WALSH. I assume that's New York City. Yes.

Mr. CARNEY. New York State is not in the program either?

Mr. WALSH. New York State is not in the program and, given no funding, they won't be in the program. They have some serious political problems with the program at the present time.

Mr. CARNEY. Do you know of any of the States on the coast that has a deficit right now?

Mr. WALSH. I'm certainly not familiar with all. Some States are in surplus, some are in deficit. I assume New York is in deficit.

Mr. CARNEY. New York is not—constitutionally, they are not allowed to——

Mr. WALSH. Well, New York City is not an example then. I'm sorry.

Mr. CARNEY. Thanks to the Federal Government. I can appreciate the program worthiness, but again we have to look at this in full context of the administration's attempts to put ourself back on an economic track.

Perhaps I am leading up to the fact that the States are probably better off right now, financially, than the Federal Government is to take over this program. I think perhaps those who have appreciated the program, have joined the program and support the program do it through their own funding and I just think that the climate that we're dealing with today, this is one program where that actually can happen with those would benefit by it and should pick up the responsibilities financially of carrying the ball.

Mr. WALSH. I would only add that from the figures I saw, the surplus in all State government treasuries throughout the United States are somewhere around $20 or $30 billion, which was almost equal to the amount of the Federal funds that goes to the States from the Federal Government. The transferred State payments and the State surplus were about the same.

And as you know, States are now saying that they wish to do more—to do their thing with more freedom, to not have the Federal Government tell them what to do, and given the surplus it would indicate that they had the money to go ahead and do their own thing.

Mr. CARNEY. I would think so, that they would be in a better position. Also, there are several States—like you say, Georgia and New York, that haven't even joined the program. So, they have opted to stay out.

Mr. WALSH. Virginia is another.

Mr. CARNEY. It's almost the whole eastern seaboard at that point.

Mr. WALSH. There are others that are in, South Carolina and North Carolina.

Mr. CARNEY. Right. But it's clear that the intention was that it was to be an optional program with the States, and as such I think this is a good program given the fact that we must take some short-term pain for long-term economic gain in our Nation and this perhaps is a program that would give us the least pain, reduction of this program.

Thank you, Mr. Chairman.

Mr. D'AMOURS. Mr. Emery, do you have any questions?

Mr. EMERY. Thank you, Mr. Chairman.

I wonder if you can tell us what the attitude with respect to coastal zone management has been in States engaging in energy relating activities, specifically, those in the gulf coast and on the west coast? How do you feel that the coastal zone management program has worked with those States in relating problems of vocational, heavy industry, refining, et cetera?

Mr. WALSH. Well, I think in terms of energy, the best example of interest comes from Louisiana that has put together a pretty darn good program in order to deal with the many problems they have, not only the energy development aspect, but also the enormous amount of wetlands.

However, in neighboring States that also share large-scale energy development, such as Texas, the interest has been a little slower in developing. It has played a role, we believe, in assisting with accommodating that kind of development, not only the planning capability. I mean it used to be that when a large refinery would come into a small parish in Louisiana the refinery, of course, would come in with enormous amounts of planning and expertise behind it. And the local parish might have one clerk that would look at a permit application and would then try to discern what the overall impact of this refinery would be. And in many cases the clerk just went ahead and signed off, saying it was a good thing, or didn't, depending on what he knew or didn't know. And the whole goal over the last several years in coastal planning is to give that local parish the ability to plan for that development. So, if you have an enormous influx of people associated with the new refinery at least the county or the parish can start thinking about what sewer lines they need, what hospitals they need, what roads they need.

Mr. EMERY. You think that program would have provided that capability?

Mr. WALSH. We think the program has provided that capability and built it up now. And the planning capability is likely to be continued.

With regard to the impact made, assistance has been given but it hasn't been so clearly related to enormous impact of the new developments that the boom and the bust we worried about is forthcoming.

On the west coast it has played a role, but let's face it, in some States, for example, California, the existence of the Coastal Zone

Management Act came a little bit after the forces that created the California coastal plan. That's true in Oregon, Washington, and California. They developed their programs without regard to the fact that the Federal Government was pushing it. They felt it was important and they went ahead and did it. They got a benefit in it later on when Federal assistance came along and helped them continue their program. But the original genesis was of local origin in those places, particularly in California. The California program is extremely a good program and one that has developed some very good procedures for evaluating energy development as they afffect coastal areas.

Alaska is another good example.

Mr. EMERY. We in New England are interested in the potential impact of energy development on the coast. There has been recent thrust, as you are aware of, to lease certain areas east of New England on the Georges Bank and on OCS for oil and gas drilling. And naturally it's a controversial question and interfaces on the environment of the fishing industry and lifestyles that many people in New England have traditionally enjoyed.

The question that I'm trying to determine is whether or not the experience of the coastal zone management program in other States where energy development has taken place subsequent to this CZM implementation, has, in fact, been helpful or whether the same States have been made and the same old problems have been conducted rather than the usual impact. It's a little difficult to assess impact of coastal zone management in the areas where energy development has already taken place.

What I'm really interested in is determining what the effect has been in energy development after a CZM program has been implemented and I wonder if you can give us some specific examples of that situation?

Mr. WALSH. Well, I think that in several situations, I think in Rhode Island, as an example, energy development was coming along and the coastal zone management program, of which they have in their State——

Mr. EMERY. Let me interrupt.

What energy development took place in and around Rhode Island?

Mr. WALSH. At the present time they are anticipating—first of all, there has been traffic related to natural gas and other things, but also anticipating OCS development.

Mr. EMERY. Are you referring to energy production or are you referring to basing operations for explorations of the Baltimore Canyon?

Mr. WALSH. Basing explorations for the Baltimore Canyon and the Georges Bank——

Mr. EMERY. You are not implying that there is any drilling or production taking place in the jurisdiction of Rhode Island?

Mr. WALSH That's correct. What we're talking about is if there should be development, where the onshore impact occurs, that is where do you build.

As Congressman Swift noted, where do you build the staging areas or construct the rigs or put in equipment. And servicing and

these type of activities. Where are people located that must go out to the rigs, and that kind of thing.

Mr. EMERY. Is the construction of facilities and equipment for support substantially different from constructing and expanding shipyards?

Mr. WALSH. In some cases it may be because you are talking about it, its a large enough area, you're talking about pretty substantial amounts of coastal area that will require new demands. For example, again using Rhode Island, it is a large Naval base there that was surplused some time by the Federal Government and it has been identified because of its large size for dealing with the large bulky kinds of material that you would get. It's a little bit—yes, it's a little bit like a port facility because, in effect, you are transporting something in, you are staging it and then you are doing construction or you are transporting out.

But it is water dependent, new water dependent activities that must come into the coastal zone if you are going to do this kind of thing offshore, and we have seen that experience in this case is that States who know how much is coming down the road and what they have to do to make way to accommodate it, helps it to deal with all the problems. It won't change. In some cases the attitudes of the people about whether they want oil off their coastal area or not will—oil drilling off their coast or not, it certainly is one thing that may or may not be changed.

So, we think it has been effective in areas in which new development is occurring, but at the same time we have built it up to a level now that its value is there and, therefore, if there is going to be some oil and gas development on Georges Bank, the States of New England know that if they have this capacity, it's going to help them cope with it and they are not going to just let it fritter away because of lack of Federal funds. Because it is in their interest in order to accommodate this kind of development. That's the rationale for it.

Mr. EMERY. Thank you, Mr. Chairman.

Mr. D'AMOURS. Mr. Walsh, I don't want to quibble, but just for the record, the situation of New York was raised and I would just like to make sure the record is clear.

New York did avail itself of 305 moneys?

Mr. WALSH. Yes, of 305 moneys.

Mr. D'AMOURS. It fully availed itself of 305 moneys and wasn't there—doesn't CZM have information that New York was planning to pass a program if the 306 and 308 moneys were available?

Mr. WALSH. I don't know.

Bob, do you recall the precise circumstances under which——

Mr. KNECHT. As far as I understand it, Mr. Chairman, I thought that the legislature of New York has been considering coastal zone management State legislation for a number of years.

It would be considered favorably in one house and not in the other, and back and forth. It is pending again in New York State legislature and we understand that it would have a chance to pass if the question of Federal funding in the future—Federal funding could be an element in the way in which that legislation is disposed of.

There are other elements, as well, and the program remains controversial, of course.

Mr. D'AMOURS. Thank you.

Mr. CARNEY. If I might——

Mr. D'AMOURS. I will yield for a moment to the gentleman from New York.

Mr. Carney?

Mr. CARNEY. As Congressman from the State of New York, the fact of the matter is, CZM couldn't get past the State Senate for years. It couldn't get past this year either. For political reasons they don't want it. They don't want the Federal intervention. That's the reason that they turned down the programs. The chairman of the committee involved won't let it out of the committee.

Mr. D'AMOURS. Thank you.

Getting back to that clerk, that lonely clerk, Jim, in that lonely parish in Louisiana, you know that clerk was provided in Louisiana and in other places a lot of help through the 306 moneys. Now, you are going to take it away. You are going back to the lonely clerk in the lonely parish. And here they come again with oil rigs. So, is that really in the best interest. If it was worth doing in the first place, why are we going back to that—if the situation was worth correcting in the first place, why are we reverting to the original scenario?

Mr. WALSH. Well, I think it is different. That lonely clerk sometime ago didn't have at his disposal at the time when the program started, the things he now has. For example, what have we done.

The program is required, first of all, to put together an inventory of what their resources are. The States now have adequate information about what their real interests are, what their resources are. They have been required to put together policies. They have made corporate decisions about what is important and what is not important to guide regulatory management decisions.

There are permit systems now in place that require that certain particular activities be regulated in a certain manner. There are coordination requirement and the big problem, as you know, whenever you try to get a permit on any kind of activity, there are hundreds of permits required of several agencies. The case of problems in the past have been——

Mr. D'AMOURS. Are you referring to a specific situation, a specific locality?

Mr. WALSH. No, just generally. I am saying that the clerk now has history of developing the inventory, the policies, the programs and the procedures in order to better manage coastal management. He will not, in the future, under this proposal get the Federal funds to pay his salary or perhaps to do more work. It will have to be the States to pick that up. But those policies and procedures, programs and inventories are still there. And that is an enormous experience.

Mr. D'AMOURS. There is some familiarity with the situation, but still you keep harping back to the safety net which you have stated, and that is that the States are going to have the wherewithall to pick up the personnel costs and the other costs that are attendant to this kind of OCS development.

When we originally passed the bill, that Stratton report, and the national estuary study, both found that the States were unable and the localities were unable to cope with the increasing pressures on our seacoasts. They didn't have the money nor the knowledge.

I find it so difficult to believe that in this day and age and when the pressure on the States is increasing so tremendously, given the general budgetary cutbacks that we are now operating under, that they are going to make a high priority of this when fuel assistance money is being cut and other title 20 service money is being cut and many other moneys are being cut that have a large deserving and vocal lobby, that they are going to find that this continuing personnel costs and other management costs are going to be worth funding.

Mr. WALSH. I am not saying that each and every State is going to pick it up. We think that most of them will. Some of them won't.

At the same time you have to understand that the coastal zone management has moved into a new phase. The change this last year to the Coastal Zone Management Act were rather significant to what it has basically been, a carrotstick, allowed a lot of flexibility kind of program.

What has happened is that the nine particular areas were identified for emphasis and it was stated that funding from the Federal Government would begin to focus on this emphasis. I think it will be fair to say that the States view this with some lack of enthusiasm. It's in the classic situation where money has been provided and the Federal Government is now beginning to focus more precisely on what they want the States to do and they are beginning to use various kinds of bigger sticks, so the States themselves are beginning to say, as in the case of Georgia, and I'm not saying all of them, but some are beginning to think, why should we have some Federal program official from the office of coastal zone management tell us how to manage our coastal program.

They want more freedom. They want to do their own thing without regard to who pays the bill.

Mr. D'AMOURS. Well, OK.

Now, let's get to an area that frankly we haven't really touched upon yet, and that's the CEIP program or the 308 moneys.

You say in your statement that there really haven't been—there has not been as great an impact as had been anticipated, and yet the Department of Commerce and the study they released last August found that, in fact, there were impacts and that they were likely to become aggravated. That is, offshore oil development impacts that would result in CEIP fundings.

Now, you know that money is going—if it goes, aren't you afraid that you're going to raise this whole equity situation that I mentioned in my opening statement and aren't we really going to be reopening the entire equity question coastal vis-a-vis inland States and inland development on federally leased lands? And do you plan—does the Commerce Department, to your knowledge, plan on doing anything about this very serious inequity?

Mr. WALSH. Let me comment first on the Commerce report. As you know there was an analysis of the program. It was concluded that, in particular, the planning aspects of the coastal energy impact program has been quite effective. However, I would not

characterize the report as saying that definitively boomtown events had occurred. As a matter of fact it was somewhat equivocal about whether, in fact, there was adequate evidence on which to base the so-called boomtown phenomena. As a result of that report, the Carter administration after reviewing it, decided not to recapitalize either the loan fund or the formula grant fund and decided, however, to provide loans in the outyears in the event that this boomtown event would occur.

So, the study, I would have to say, with regard to the boomtown event, was certainly not definitive.

Mr. D'AMOURS. As I understand the history of the matter, the Carter administration decided not to continue the CEIP and requested that the administation, I think through the OMB, requested the Commerce study and obviously the study didn't change its mind because it didn't come out the way the administration wanted it to come out, but I quote from the study: "The program has been successful. Some of the problems that the program was intended to address do, in fact, exist and are likely to become aggravated." It doesn't sound very ambivalent to me.

Mr. WALSH. No; I was talking about the boom town issue.

The issue that we're addressing is the—is have there been these enormous ups and downs that Congress anticipated when it passed it. The best example that was always used during the debate was poor little Yakutat, Alaska. There was hardly anybody there and they were going to get this enormous influx of oil workers who were going to build rigs and triple, quadruple or multitriple, or whatever it is the population and poor little Yakutat isn't going to have the tax base to build the sewer line, build the school and all of that. And they are going to be overwhelmed. That kind of phenomena was the basis for the CEIP.

As a matter of fact, Yakutat was the rallying cry to get this legislation, as I remember. It has not proven itself to be the normal course of events. There are problems, there are—absolutely there are problems with going to an area in which 70 percent of the population is within an hour and everything is congested and there is going to be energy development.

Mr. D'AMOURS. Did they drill in Yakutat yet?

Mr. WALSH. I don't know if they drilled in Yakutat or not. Alaska is down the road.

Mr. D'AMOURS. If nothing has happened how can you say there has been——

Mr. WALSH. Yakutat is an example of our frontier area. There are other frontier areas, that is, areas where you are going to have new leasing. There are new leases going in California and new leases off Georges Bank.

Mr. D'AMOURS. I don't know that the Commerce Department study that I just quoted said anything about Yakutat, Alaska, but it does project, does it not, that the impacts are likely to be exacerbated in the future, are likely to become progressively worse?

Mr. WALSH. It says that there are going to be increasing problems as energy development occurs.

Now, how do you handle that?

One: You have to plan for it, to mitigate it. Planning capacity has been funded and is in place. It's up to the States to pick it up.

Two: How do you deal with things that—like providing infrastructure. Obviously, one way you could do it is the tax base. As these activities——

Mr. D'AMOURS. What about the leasing, the share of the leasing revenue, such as they do in many inland States?

You haven't addressed that part of my question yet. Why not do it that way? That's a way of doing it and that's the CEIP way of doing it. However imperfectly.

Mr. WALSH. Equity issue is a difficult issue to address. Unlike in the case of——

Mr. D'AMOURS. Like the puppet says, "difficult for you and easy for me."

Mr. WALSH. Well, there is a difference and that is you must understand that the Federal lands are outside the boundaries of coastal States. In the other situation they are internal of the boundaries of the coastal States. Therefore, most of the activity that occurs in coastal States is——

Mr. D'AMOURS. What you're saying is——

Mr. WALSH. They get to tax that drilling operation, they get to tax that drilling rig. In the case of offshore they are beyond their activities.

Remember that equity does go back to what you call these definitional distinctions, but that is a major distinction. If the activity occurs beyond the boundaries of the State it can't be taxed and therefore, there is no severance kind of tax for those OCS lands. But in the case of all Federal lands in——

Mr. D'AMOURS. The landlocked States we're talking about receive 50 percent of the leasing revenues which we can extrapolate to about $3 billion a year if that were to happen in the OCS.

Now, we're not talking about offsetting the—any loss of taxing ability when we talk about those kinds of revenues and those kinds—aren't we talking about philosophically, the same basis for the CEIP program, and that is impact-offsetting, replace tax revenues?

Mr. WALSH. To some extent, yes.

Mr. D'AMOURS. And aren't you concerned that if CEIP is abolished that this whole equity question is going to be raised?

Mr. WALSH. There is obviously going to have to be that issue to be thought about, yes. The equity, particularly when you are talking about revenues, I believe, are between $7 and $8 billion a year, going up to perhaps $12 or $15 in the next 3 or 4 years.

That's a lot of money and I'm sure the States are looking at those sums.

Mr. D'AMOURS. I just have one further comment.

On page 3 of your testimony, you take some pains to point out that the fiscal year 1982 budget request represents a 5.1-percent decrease from the estimated NOAA fiscal 1981 expenditures. And you point out that the fiscal 1982 request is almost 24 percent below the amount requested in the original January budget submission.

Frankly, I am at a loss as to what the significance of that is unless you are telling me that the reason that NOAA is here justifying the elimination of CZM and the CEIP is that it has been put in the position of having to kill one of its children and as

unpleasant as that is, it chose this child. Is that what you are telling us there?

Mr. WALSH. I wouldn't quite use those words. It is a fact that our budget request represents a $92 million budget reduction in our ocean program. That's correct.

Mr. D'AMOURS. Well, what is——

Mr. WALSH. This is associated with the policy decisions made by this administration that in those areas in which States or industries are most benefited then they should pickup the tab.

Mr. D'AMOURS. What is the purpose of that testimony? Why are you telling us that—how much money NOAA is giving up in its overall budget?

Mr. WALSH. Just to give you some idea how it has been broken down. In other words, there has been the feeling that only this program or only that program has been affected. It has been across the board and plus the major policy decisions. I want to give you some idea of where all the funds are coming out of this agency. Because it by my estimation is going to be a zero-sum gained to the extent that you add money back into our budget. We will have to cut it out of somewhere else and that overall priorities must play a role in Congress 'decision.

Mr. D'AMOURS. Who made that decision?

Mr. WALSH. Who made the decision?

Mr. D'AMOURS. Yes. To the extent that you cut moneys from one program and you have to cut them from another?

Mr. WALSH. That's been the position of the administration and many of the Members of Congress that I have talked to, given that the budget numbers are going to be adhered to, I'm told that it is quite likely that there will be zero sum gain.

I could be wrong, because——

Mr. D'AMOURS. I think the answer to my original question is, "yes," you were forced to choose and this is the one. I have no further questions. Mr. Studds, do you have any quetions for the witness?

Mr. STUDDS. There is no misunderstanding, is there, that if Congress enacts a statute either with the President's signature or over it, under the Constitution, that that's the law. I mean whether those administering it are particularly fascinated by it or in love with it or not, they are bound by their oath of office to administer it. And that the decisions with respect to the fundamental priorities of the land, with respect to the budget, are made in partnership between the President and the Congress, not by the President, alone.

Is that not a fair statement?

Mr. WALSH. Well, let me try and remember all the points in that. One is that yes, the administration's job is to recommend budgetary priorities within the number of programs that we have to administer.

In NOAA we have well over 100 separate statutes that we must administer. I would guess that it's maybe closer to 200.

Congress has said over time this program is important, this next program is also important, this next program is also important. And I guarantee you that if we carried out all 100 or more of those statutes that we have to carry out of $800 million, it does not

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include a number of things which the administration has decided should be left to the States to do but it continues the other things that we should have to do, for example, $125 million we are spending on fishery management. The $400 million that we are spending to provide weather services, the $100 million we're spending to provide mapping and charting. All the other things that our agency does which we believe are absolute——

Mr. STUDDS. Well, I'm grateful to your decision not to terminate the national weather service. I think that is wise. That is one of the things you have done right.

But I don't think it says much about the rest of your priorities.

I don't know if I can hold you responsible for this or not, we will find that out later. But you were a party with us in constructing many of these programs and you, as I recall, participated in many of our hearings before this committee and the subcommittee in the preceding Congress, as we struggled through the question of whether or not to authorize these programs. We held hearings all over the country to determine whether the program was worth authorizing or not.

I meant what I said at the time as chairman of the subcommittee. I said I'm approaching this with an open mind and it may be that this is a waste of taxpayers' money. It may be that it can be accomplished in other ways and out of other funds. Maybe we should discontinue it all together, or maybe amend it substantially or just let's see. And we spent 2 years addressing that question.

We went everywhere, we listened to every affected State. We listened to you. We listened to the office of Coastal Zone Management. We listened to everybody who wanted to be heard and the consensus was very clear, very broad, very bipartisan. There was not, as I recall, a member of this committee, Republican or Democrat, who did not share in that consensus up until at least November 4 of last year, that this program addressed a genuine and critical and national interest and it was very modest and it should be continued at a very modest level.

Now, if the new administration has come in and said to us, not what I think many of us expected, which was OK, fellows, there is a new team in town, we are going to tighten this ship and you are going to have to take a 5- or 10-percent cut like everybody else.

I look over here at this committee, and we're being asked to kill, not to cut. Coastal Zone Management we're being asked to kill. Coastal Energy Impact, we're being asked to kill, not cut. Sea Grant, the same thing. A lot of other things like that.

I go back to my other committee in foreign aid and what's happened to the budget cutting Administration, it's being increased. It's being increased. But guess where? They're taking 11 billion out of economic aid and putting more than that in the military aid. This isn't a cut of the budget, it is a radical transformation of the budget of this country, a radical restructuring of the priorities and focuses and concerns of the Federal Government.

This administration has asked us, as you know, for a greater Federal deficit this year than that proposed under preceding ones and a greater one the following year.

Well, I'm tired of hearing that we're being asked to tighten our belts. No such thing is true. In fact, our belts are being loosened. They are—this is going to get me in trouble if I go much further.

So, let me just say that this obviously is not a question, but let me just express my enormous disappointment, particularly in those amongst us—and this is not meant personally—whose opinion seems to have been transformed overnight by factors which elude my comprehension.

If there was a national interest last year in preserving the coastal zone and assisting the States in doing that, there is a national interest this year in doing that.

Those who agreed with us last year that there was an overriding national interest and passed almost unanimously—I think unanimously this committee, a bill based on that premise have some real explaining to do it seems to me, as to why they might suddenly have changed their minds.

Certainly, it isn't that the States have suddenly become more responsible or more equal to act to protect the national interest in their coastal zones. At least in my part of the country the reverse is true, as you well know.

I assume my 5 minutes has expired.

Mr. D'AMOURS. I haven't said anything.

Mr. STUDDS. I know my time has expired.

Mr. CARNEY. I just want to commend Mr. Walsh for the job that he is doing. On November 4 there was a change of attitude in this Nation and, Mr. Walsh, you are making a tough decision. I commend you for the job that you are doing, coming here day after day in this committee and other committees trying to carry out a job and sometimes that can be very, very testing to a person and you have to be somewhat restrained in dealing with some of the personalities that has been elected to the Congress and I commend you for the job.

Mr. D'AMOURS. Thank you very much.

Our next group of witnesses will be a panel of persons representing various State programs, Jim Ross; Michael Fischer; Chris Shafer; William Townsend for Victoria Tschinkel, Secretary, Department of Environmental Relations; and Stephen Olsen.

STATEMENTS OF PANEL CONSISTING OF JIM ROSS, COASTAL STATES ORGANIZATION, ACCOMPANIED BY MICHAEL FISCHER, CALIFORNIA COASTAL COMMISSION; CHRIS SHAFER, DEPARTMENT OF NATURAL RESOURCES, MICHIGAN; WILLIAM TOWNSEND, DIVISION OF ENVIRONMENTAL PROGRAMS, FLORIDA; JOHN WEINGART, BUREAU OF COASTAL PLANNING AND DEVELOPMENT, NEW JERSEY; AND STEPHEN OLSEN, COASTAL RESOURCES CENTER, UNIVERSITY OF RHODE ISLAND

Mr. ROSS. Good morning. Mr. Chairman, my name is Jim Ross, and I am chairman of the Coastal States Organization—CSO—as the Coastal States Organization is normally called, was created in 1969 by the National Governors Conference especially to deal with coastal management issues.

Let me very briefly identify further for you the members here that will make up the State panel. I will not go back and reintroduce them, then, when their time to testify comes up.

On my left is Michael Fischer who is the executive director of the California coastal commission. And on my right is Chris Shafer who is chief of the Great Lakes shorelands section, State of Michigan, Department of Natural Resources.

Bill Townsend, who is a director of the division of environmental programs for the State of Florida. John Weingart, John is chief of the bureau of coastal planning and development in New Jersey.

And Steve Olsen, who is with the coastal resources center at the University of Rhode Island.

In addition, Mr. Chairman, to the oversight hearings that were held at the Coastal States Organization in 1979, they held a conference in Fredericksberg, Virginia, and brought together at that time and at that place a number of people with a broad range of diversified views and philosophies and at that conference asked that those people, before they left that 2-day meeting which was an American assembly styled conference, to produce a document that represented a consensus opinion of those people.

They were able to do that. The conference, in that regard, was a success; and that document is a part of "The Congressional Record" along with much of the other information that was generated in the oversight hearings of the committee.

And I would point out that that wealth of information conclusively demonstrated the effectiveness of federally assisted and State implemented coastal management programs. But today we are back here, and maybe this room is somewhat appropriate, particularly given just the conversation that preceded my testimony—we're back here with a crisis facing coastal States 5 months after the coastal management program was reauthorized for a 5-year period outlining in some detail what the national interest was in managing our coastal resources.

But we are here with the administration recommending termination of the program just as effectively as if the Congress had not reauthorized it last October. The Office of Management and Budget indicated two things, very briefly, in dealing with coastal zone management that, No. 1, it had largely achieved its purpose, and, No. 2, that "their" programs should be financed by the States.

I would suggest there are three problems in their perception of coastal zone management. No. 1, "their" programs, as they have referred to coastal management programs at the State level, ignores the declaration of Congress last year and earlier in 1972 that there is a national interest in coastal zone management; and, second, both of those statements miss the whole notion that there is a partnership between the Federal Government and State government and local governments in some degree in terms of managing coastal resources.

And if the administration, and even perhaps Congress, believes that the States in total are going to be able to continue that partnership relationship without their being something more than a totally silent partner at the Federal level, I believe that the administration and—if that happens—the Congress will be sadly mistaken.

Not all States, of course, I would hasten to add, will abandon the program. I will speak more to that later.

The third point I would take issue with in terms of the OMB statement is that they ignored—or, at best, Mr. Chairman—summarily dismissed the vast body of knowledge that was gained in oversight hearings last year.

What is the impact of no CCM funds or funding in fiscal year 1982 on the States? The Coastal States Organization, Mr. Chairman, has done a questionnaire of nearly all of the coastal States and territories, and I believe we have some significant information to share in that questionnaire.

It is in draft form. When it is in final form, we will forward it to your offices. First of all, total elimination of Federal 306 grants will result in an extremely high failure rate among State coastal programs.

Second, the remaining States that are still participating in the program, it is very unlikely that many of those will be able to complete their programs and gain approval.

And, lastly, that group of five or six or even maybe now seven States that are not participating, it really reduces any incentive for them to move forward. Federal consistency, by itself—what would be, in essence, the remaining contribution by the Federal Government—is not enough, unfortunately, for most States to continue with the Federal program itself.

Most specifically, only four States, Mr. Chairman—and this is information generated by the States to the Coastal States Organization—only four States have any possibility of picking up all of the funding that will be lost in fiscal year 1982 if there are no funds for section 306.

The majority—in this case, the number is 14—out of 25 approved States indicated that it is too late now to modify their own budget for Federal fiscal years 1981 and 1982. Some of those States, by the way, are on biennial budgets, and it will heavily impact them.

States numbering 13 have indicated that they would have to shut down their coastal programs, their separate coastal management programs. However, 23 States indicated that if funding were reduced on a phasedown period over 2 to 3 years, that their changes would be greatly improved of being able to pick up the lost funding.

Clearly, Mr. Chairman, more time is needed to allow States to institutionalize coastal zone management at the State level. I believe, Mr. Chairman, the irony of the administration's fiscal year 1982 306 and 308 cuts can be very apparent.

No. 1, coastal zone management would appear to be a model program in the context of the administration. It is voluntary. It provides a small amount of funding to help States implement national policy through State and local initiative. It is a States rights program, if you will, Mr. Chairman, in that it returns the power to State and local government. That's the Federal consistency notion that is part of the Coastal Zone Management Act.

Sadly, I report to you that the abrupt termination of the section 306 coastal zone management funding will destroy or seriously impact coastal zone management programs across this Nation.

What are the benefits? And our State panelists will speak to those quite directly. I think, first, Mr. Chairman, the coastal management program provides a forum for achieving a more balanced, equitable, and predictable decisionmaking process regarding economic development and environmental conflicts that occur and the States must deal with.

Let me give you an example of how it provides a forum for achieving that kind of balancing. I can use one particular estuary, if you will, in the State of Oregon—Euquinna Bay. There are 42 different city, county, State, and Federal entities or agencies that have some regulatory agencies, some say, as to how we are going to manage the land and water resources around that particular bay—42.

It's no wonder that there is chaos or was chaos in the area of coastal management. And it is this program that is helping provide a forum where those 42 different entities can develop one—in the case of Oregon's program—public document that represents the public interest in terms of how we're going to manage our land and water resources.

And that is one thing I think we are going to be losing in the United States, is that kind of forum.

Other things, very quickly, that are of benefit. Permits simplification—the setting aside of areas for water dependent development that are uniquely suited to water dependent development and not allowing other kinds of development activity to preclude the option of industrial development, and so forth, using that shoreline area that environmentally suited.

Purism in the long-term wise management of resources will be increased.

Habitat protection. There are over 60 species of commercially harvestable fish and shellfish which generally inhabit our estuaries for some portion of their life cycle. I think the point I'm making here, Mr. Chairman, is that most coastal areas, save the metropolitan areas, are sustained on a natural resource based economy, so a good natural resource management plan is a good economic development plan. And that fact cannot escape those who want to close to coastal management.

There are other specific projects, obviously, that will be touched upon that are occurring in coastal zones in terms of port development, setting aside of dredged material disposal areas, access. And dredging, of course, is not the environmental problem so much as where is one going to put the dredged soil, a critical point.

I won't go into any more detail on some of the other benefits save one. And that, I think, can perhaps justify the existence of coastal management alone, and that is the millions of dollars, Mr. Chairman, that can be saved through wise coastal management by not allowing development to occur in areas that are hazardous—on barrier islands, in flood plains, on active foredunes and sand pits and slide areas, and so forth. Millions of dollars go in annually to disaster relief and flood insurance just because we have not wisely managed those particular resources.

Mr. Chairman, what are the alternatives to providing funding for coastal management? First of all, the Coastal States Organization is on record no cuts should be made in fiscal year 1982. The Coastal

States Organization, if necessary, would recommend a phasedown, particularly in fiscal years 1983 and 1984.

And that could be done through a modification of the Federal match requirements, perhaps. One suggestion. I think that Dr. Marsh Hershman who we talked to earlier today perhaps will have some comments to be made that I hope you will analyze very carefully.

One option in terms of not having to provide new fiscal year 1982 funds for section 306 would be to take a look at, Mr. Chairman, the fiscal year 1981 CEIP loan funds, section 308D1, and reprogram a portion of those for 306 management.

Another small portion of those funds, perhaps, need to be used in that loan program, and I believe, at least, Doctor Shafer would probably speak for that. In the long term, there is perhaps another alternative for funding coastal management, as well. You touched upon it—or the basis for it, at least, in your opening remarks, Mr. Chairman, and that is the equity question.

President Reagan's budget for fiscal year 1982 includes an increase of revenue to the States for inland mineral activity on Federal lands while eliminating, as you noted, all CEIP revenue to coastal States. That is inequitable, and it's perhaps even more inequitable when one considers that the present administration is requesting an increase—a speeding up, if you will—of energy activity on the Outer Continental Shelf, thereby increasing the amount of impact that are going to impact the coastal zone.

The States are being asked on one hand to implement the expanded energy program while the other hand takes away both sources of revenue—sections 306 and 308—which provides States with the ability to plan for expanded coastal energy development and to mitigate their impact.

And I would hasten to point out that when Bud Walsh indicated earlier that OCS lands are outside State jurisdiction, of course, that is true; but please remember that the impact from the activity of that land on the Outer Continental Shelf is going to be directed on a very narrow shoreline that is within the State's jurisdiction.

I believe perhaps he lost that point. The long-term solution might be, Mr. Chairman, a block grant approach using a small portion of the revenue generated from our continental shelf activities. It could even, perhaps, be a small portion of that additional revenue that is estimated to be generated as a result of increased energy development on the Outer Continental Shelf.

Some $1.1 billion in increased revenue is expected as a result of recent action.

In summary, then, Mr. Chairman, it is essential that funding for section 306 be maintained at or near this current level, and this funding could continue on a phasedown within the next 5 years. There are many reasons. Let me give you three.

First, coastal problems have national significance. I think we agree on that. And these problems have grown in complexity and magnitude since 1972 and surely will continue to persist into the future.

Second, coastal zone management provides the coordination between the many and sometimes conflicting, heavily funded Federal

programs. When compared with the aggregate of that funding, coastal zone management is minuscule, indeed.

Thus, the economic and environmental values to be gained from rational and comprehensive coastal management are great and far exceed the modest investment of funds to be made available through the coastal zone management office.

And the last one, Mr. Chairman, the process of building a coastal zone management effort or program are complex, timeconsuming—and I can tell you, it's not very glamorous work; and so it has taken time and it's going to take additional time.

That concludes my testimony, Mr. Chairman. I would ask that the letter that you received on March 20 from the State of Hawaii from Governor Herioshi be added in the record if it is not already in, and also that additional written testimony of the Department of Land Conservation and Development in Oregon be added to the record.

Mr. D'AMOURS. We have both those items, and without objection they will be made part of the record. Thank you, Mr. Ross.

Mr. Fischer, before you proceed, I'd like to point out that we did take an awful lot of time for the first witness and to congressional witnesses who we were not aware of until late yesterday; so if the rest of you could—Mr. Ross has covered the waterfront pretty well—if you could not read your entire statements. I don't want to embarrass anybody at this point; if you have to, go ahead.

We would appreciate it if you could summarize them. They will be made part of the record as they have been submitted to us.

Mr. FISCHER. Thank you, Mr. Chairman. We appreciate your demonstrated personal commitment to coastal zone management and the leadership that you've already presented at this session. It is something that we appreciate. We also appreciate the forum that you are providing this hearing to allow those of us affected States the ability to outline for you the impact of the administration's proposals.

We judge California to be a strong coastal management State and will probably agree with those in the oil industry and in the administration who will say: "Oh, California can survive a budget cut."

Just to indicate the strength of California's commitment: Since 1965 the Federal Government has invested $16 million in fiscal management in California. California has invested $40 million in that same period. We've been around 8 years. We have a staff of 210 people in 8 offices. We process about 7,000 coastal permits a year, and our success rate with many dozens of challenges in the courts is 90 percent.

In addition, perhaps we are more fortunate than other States—our current fiscal year budget of $11 million would be affected by only 1.8 million if the administration's proposal were to come to pass, as half of this fiscal year's budget is already assured by our current Federal grant.

Not in bad shape, one might say. But even California would be seriously crippled by the proposal before you. First, as Mr. Ross indicated, regarding the budget making process in States, our budget is locked up. I've already had my budget hearing before the State senate. The Governor is not able to amend his budget now.

The budget hearing before the assembly will be in another week or so, and that's it.

It's too late to change the California coastal program budget. And even if it weren't too late, the effects of proposition 13 are hitting California this year, and we're out of our surplus. We will be terminating our local government bailout this year with local governments screaming about their inability to fund school programs, policing programs, et cetera.

It is unlikely that the State legislature would be able to see its way clear to covering a Federal back-out of a program like coastal zone management.

It would impact seriously for a number of reasons. First of all, the cornerstone of our program is the local coastal planning that cities and counties are undertaking. This fiscal year is the peak fiscal year for that effort. Our 67 local governments are to have their plans completed and underway between now and, say, 18 months from now—exactly the period that would be the most seriously affected.

We pass through about half of the Federal grants, and we match it with 20-percent State money. That means, really, because of the conditions that our legislature has placed on it, that 100 percent of the money that flows through our agency to cities and counties will be cut off. Approximately 60 staff members of cities and counties who are now working with their cities to provide advice to their citizen committees and city councils would have to be laid off; local coastal planning in California would be terminated in next January if the administration's proposal was adopted by Congress.

In my own agency of 210 staff members, I would be required to lay off 72 of them—a percentage cut which we could not absorb and still handle the caseload of local coastal plans and permits that would continue to flow.

Make no mistake about it. Coastal zone management programs are controversial. Congress and State legislators have asked us to allocate a limited and precious resource, our coastline, between conflicting uses. And there's a lot of money to be made or lost in those allocation decisions. Major contested situations create a lose-lose proposition for agencies such as ours.

I would present to you a very serious doubt that a controversial program such as ours would politically survive unless we were adequately funded. There are at this moment 50 bills in California State Legislature to either abolish—there are 5 bills to abolish my commission, and another 45 to significantly change and remove the authority.

A strong, confident, credible program such as the one we have now would turn most of those bills aside—not all of them. But a program in disarray, as we would be in January, would be unable to turn aside most of those legislative assaults.

Coastal zone management is not a grant-in-aid program. This has been mentioned before. But it's very much unlike section 701, local planning grants or the 208, clean water planning grants. This is not the sort of Federal program that encourages localities to do what they really otherwise ought to.

This has a different national, constituency. It is unfair and unreasonable to expect a political body, either a State or a locality, to

represent a constituency that they are not elected into office to serve—a constituency that's composed of inland residents.

You know, to think that the coastal zone program or commission whose members sit on and serve their residents in Mendocino County or San Luis Obispo County in California or coastal counties in South Carolina—to expect those local elected officials or local League of Women Voters members to represent constituents in Kansas City is, I think, ludicrous.

That's what Bud Walsh is suggesting when he says that the coastal zone program has provided benefits to States and localities and they can now accept their full responsibilities; baloney.

Mr. Ross mentioned the phasedown approach. That's not our objective. We think it would be irresponsible for Congress and the Federal Government to take that approach. There is already a partnership of almost half-and-half funding, and that's not something that you should abandon.

He indicated that a phasedown approach as opposed to a shove-us-over-the-cliff approach before you now is the minimum unless the real aim before you is to kill the program. In fact, killing the program is what's before you.

Let me remind you, of course—and you need no reminding—that Congress specifically considered and rejected the phasedown approach just last session. We know—believe me, we know—that changes occurred in the last election. But the change that's occurred all over does not merit the machete attacks upon environmental regulations and environmental laws which some of the members of this administration have undertaken so far.

The coastal energy impact program is another example of something that doesn't make sense. I will not dwell on that. Pages 11 to 13 of my statement indicate the ways in which California has utilized that program. I indicate to you, Mr. Chairman, that California will be more than happy to take its share of the $5.5 billion in revenue sharing, if you want to consider that option.

You asked for this hearing, Mr. Chairman, to talk about the funding threat before us. And others have indicated that there is only one other carrot—that's the Federal consistency provision. You should know that there are going to be challenges to those parts of the Coastal Act, as well, either through rulemaking, which will water down the effect of Federal consistency; or through legislative changes that the American Petroleum Institute is expected to press for—not in the Coastal Zone Management Act that is before you—but in the OCS Lands Act and its amendments.

So if the OCS Lands Act is amended to preclude application of Federal consistency to offshore oil drilling, that, sir, would be dropping the other shoe and would be, indeed, the total killing of this program.

Not only does the administration seem to be abandoning its own commitment, recently restated, of coastal protection and State and Federal partnership that we so carefully have developed, but the proposal before us also abdicates the partnership between our generation and those yet to come.

There is no part of this Earth that's as fragile and has such a potential of being deleteriously affected by man's activities as the shoreline. It is in the Nation's interest to respect that partnership

with the Earth and to future generations. To do otherwise would be an irresponsible abdication of this Nation's responsibility.

Mr. D'AMOURS. Thank you, Mr. Fischer. I very much appreciate your testimony.

We will now hear from Mr. Shafer.

Mr. SHAFER. Thank you very much. I welcome the opportunity to appear as a witness today, and I sincerely appreciate your allowing us to participate in this hearing on the very important issue of the future of coastal management.

What I would like to do is, very briefly highlight some of the key points of my written testimony. I don't believe there were enough copies of my testimony for everyone who is here today. I'd be happy to provide copies to anyone who will request them.

The first point I'd like to make is that I think a very strong argument can be made that the coastal resources are the Nation's most valuable natural resources, and that important national objectives are directly supported by State coastal programs.

In other words, effective coastal management is not just a State program. We're directly providing sound management in support of national objectives such as controlling development in hazard areas, guiding waterfront revitalization, promoting industrial and commercial development that is coastal dependent, protecting critical fish and wildlife habitat, and streamlining the regulatory process.

This subcommittee last year, through an extensive series of oversight hearings, clearly documented these specific substantive benefits, and I won't dwell on them. I would like to refer to my written testimony, however, for a set of specific examples in which millions of dollars of savings or direct private investment have resulted in a direct contribution by the Michigan coastal management program over the last 3 years.

Given the importance of coastal resources and coastal management, I believe it is unconscionable for the administration to propose an abrupt termination of the funding for the relatively inexpensive coastal program—and I stress that—$37 million is a very inexpensive program—less than the Foster Grandparent program proposed under the current administration's budget. I've got nothing against grandparents—I have four of my own—but I think in a relative sense, coastal resources are extremely important, particularly in view of the specious justification provided by the administration to abruptly terminate funding for coastal management.

Specifically, in Michigan, the abrupt termination of coastal management funds would have a devastating impact on Michigan's shoreline's management efforts for the longest freshwater coast in the world. Abrupt termination would cripple our regulatory program and eliminate all local passthrough funding for creative coastal projects. It is simply impossible for Michigan to absorb the costs of program administration on such short notice, especially in view of Michigan's critical budget situation, which is the worst since the Great Depression.

However, given the commitment in the past to coastal management and the importance of coastal resources in the Great Lakes to Michigan, I can state unequivocally that I would be very positive that we would be able to assume the cost of effective coastal

management program implementation given a reasonable period of time in which to absorb those costs.

I would stress that although the coastal management program directly supports national objectives, we could support a phasedown period of over a 2- to 3-year period of time. But, again, as my colleague from California has indicated, that is a minimum. I think a very convincing argument can be made that these State programs are directly implementing national objectives and national policies, and therefore Federal funding should continue to support these State coastal programs.

The second priority of particular concern to Michigan and the Great Lakes States, but other marine coast States as well, is the future of the coastal energy impact program, specifically with regard to the recently enacted coal amendment that was added into the Coastal Zone Management Act this past fall to respond to federally induced impacts of increased utilization and transport of coal.

The Great Lakes are a major waterway for coal transport at the present time. There are other major coal transshipment facilities proposed in Massachusetts, Virginia, Maryland, South Carolina, Oregon, and I think it is critical that at least a portion of the $30 million that is proposed in the 1981 budget for CEIP to be rescinded must be retained to respond to these federally induced impacts for coal transshipment.

In conclusion, I would like to stress, that in view of the increasing pressures on the coastal zone, I believe it would be a tragic mistake and extremely shortsighted to abruptly terminate funding for these valuable coastal programs. I respectively urge that the 306 appropriations be continued for at least a 2- to 3-year period and at least $20 million of the 1981 CEIP Fund be retained to respond to coal impacts and likely impacts of OCS leasing in Georgia's Banks, Baltimore Canyon, and the California coast.

I believe that to do otherwise—in other words, to just go along with the administration's proposal to abruptly terminate the funds—would make reauthorization of the Coastal Zone Management Act this past fall a very hollow commitment, indeed. Thank you again for the opportunity to present this testimony.

Mr. D'AMOURS. Thank you very much, Mr. Shafer.

We are next going to hear from Mr. Townsend.

Mr. TOWNSEND. Thank you, Mr. Chairman. I want to first extend Secretary Tschinkel's apology. She could not be here today. She had a State budget matter come up on Friday night and there was no way she could make arrangements around that.

I have a very abbreviated statement from the one that is in the record, and I thought I could keep it short rather than reiterate many of the things that the other gentlemen have said.

The State of Florida is experiencing extraordinary growth along its 8,426 miles of shoreline. During the last 10 years, a 43-percent increase in population makes Florida the third fastest growing State in the Nation. Because of this important economic, social, and natural amenities, our coastal area receives most of the growth.

The effect of growth threatens the attractiveness and viability of many of the State's economic, recreational, and natural assets.

These assets, including such resources as wetlands, ports, barrier islands, fisheries, and interview facilities also are part of our national assets and must not be displaced at the shore.

Florida is committed to fulfilling its role in safeguarding these resources of national importance. We believe the problems and opportunities along our shoreline are going to increase. It is imperative that we improve our abilities to balance competing uses of coast, to end wasteful conflict and inquities located on the shore.

The special role on the part of coastal management and the impact coastal programs play is in reconciling competing uses in the long run and assuring that economic objectives are achieved without sacrificing vital resources.

The State of Florida spent a considerable amount of time and money in developing a coastal management approach that will result in tangible and useful results. Implementing this program will enable the State to balance the mounting number of competing coastal uses. Several national objectives will also be met by the program: One, under coastal management more efficient decision-making will provide clear guides to the private sector and more predictable and faster responses to the public sector. This will reduce delays and costs in the private sector.

Two, Florida's program will reduce unnecessary expenditures in Federal dollars and provide a way for single-purpose programs to pull together and accomplishing chosen goals.

Three, recent efforts on the part of coastal management program has been directed at minimizing a loss of life and property caused by hurricanes.

Last, the Florida coastal management program will allow Federal, State, and local efforts to provide for a cohesive approach to protect the coastal resources of national importance. Yet the promise of achieving these significant results is jeopardized by the proposal to eliminate fiscal year 1982 section 306 funding. The Florida program is scheduled for approval this summer. As a matter of fact, we were scheduled to leave the hearing this week on this issue.

It is not institutionalized; it lacks solid funding and administrative foundations. It will take continued Federal assistance to consolidate the benefits of the program and to give State legislators time to deal with the issue under Florida's biennial budget.

I want to add that our legislative session is beginning in 1 week and we find ourselves in exactly the situation California does. There's no way that we can adjust, and it's a waste of time to accept the program.

The State simply cannot pick up the total cost of implementing its coastal management program at the present time. Florida is committed to pursuing a strong State effort; however, the Federal funds previously spent in developing the Florida program will be undermined by abrupt termination of section 306 funds.

Improvements to the state of the nation will not happen unless we have Federal support to establish a working program and time to demonstrate results to the citizens of Florida and the Nation.

I would like to discuss the coastal energy impact program in my remaining time. The effectiveness of the CEIP in balancing energy related development with sound environmental and economic man-

agement, and most importantly, its importance in achieving Federal objectives calls for the continuation of Federal funding for this program.

The CEIP has made contributions to achieving the national goals to reducing our dependence upon energy in Florida, to protect the public health and welfare, and to increase economic productivity. The role CEIP plays in meeting these goals and assisting local governments in planning for use of facilities more than pays back the financial assistance appropriated for these purposes by the Federal Government.

Another important benefit of the CEIP is the assistance provided under the Outer Continental Shelf participation program. This program has been important in supporting State efforts to provide information to the Department of the Interior. The continuation of the OCS participation program is essential for maintaining a productive relationship between the State and the Department of the Interior and during the time of the exploration and development of OCS interview recall.

I'll be pleased to provide any further specific information should anyone request it.

Mr. D'AMOURS. Thank you, Mr. Townsend. I appreciate your very able summary of your statement.

We now will hear from John Weingart.

Mr. WEINGART. Thank you, Chairman D'Amours, and members of the subcommittee. Thank you for this opportunity to give you the New Jersey perspective on the budget cuts recommended by the President for the coastal zone management and coastal energy impact programs. I speak to you today as a representative of a State that, like California, is considered to have one of the best coastal programs in the Nation. We are also considered likely to experience less severe impacts from the President's proposed budget cuts than many other States. Yet the effect of such cuts, even in New Jersey, will be dramatic. They will turn a program which has been struggling to develop answers to complex national issues into one which consumes all of its retrenched resources on processing permit applications and devising short-term solutions to the most pressing aspects of long-term problems.

Contrary to what some believe, the Federal approval of coastal management programs in 25 States and territories is not a signal that all our coastal issues are all resolved. Rather, it is a recognition that the States now have the knowledge and organization to tackle these issues, if we are given some Federal assistance.

The sudden closedown of available funding will mean there will be less attention paid to the persistent, complex, and often messy and awkward problems facing the Nation's coasts, and also that there will be less credibility for Congress the next time the States are offered a voluntary program which promises rewards in exchange for helping it meet certain national objectives.

A sudden end to Federal funding will also create waste. With the 5-year reauthorization of the Federal Coastal Zone Management Act only 5½ months ago, most States naturally began some multiyear projects. In New Jersey, for example, we designed a comprehensive coastal fisheries strategy which will take 2 years to complete. The President's recommended cutoff of Federal funds would

stop this project at the end of the first year with much less than half the benefit that would be produced by the full 2-year effort.

Many different types of activity are attracted to New Jersey's coast, including those associated with our two largest industries—petrochemicals and tourism—new housing, urban parks, wildlife refuges, defense installations, and ports. There are conflicts between some of these activities but they are a reflection of the conflicts on the Nation's coasts as a whole.

Coastal zone management provides the only forum which can seek their resolution. I have provided a number of successful efforts to address New Jersey issues in my written statement.

Why should there be a national program? Why aren't coastal issues strictly the concern of the individual States? The answer is the same as it was when Congress first passed the Coastal Zone Management Act in 1972 and when it was amended in 1976 and reauthorized in 1980—proper management of the coast serves the national interests for energy production, port development, fisheries management, recreation, and other uses of this sensitive area.

The Federal coastal zone management program has served a vital function by keeping alive the spirit of multiuse management of the diverse resources of the coastal zone. The philosophy that no one coastal activity should preclude all others is important and must be protected.

This Federal role is essential as it contrasts with the more single or limited purpose perspectives of other Federal agencies with important responsibilities in the coastal zone such as the Fish and Wildlife Service, the Army Corps of Engineers, and the Environmental Protection Agency.

Congress appears to have four options concerning the future of the Federal Coastal Zone Management Act. First, if the funding for coastal zone management is terminated through the budget process, then the law itself ought to be repealed. This is clearly not an alternative I favor, but there should be no illusion that the act itself without funds would achieve any of its lofty purposes.

Second, the program could be phased out over a 1- or 2-year period with increasingly diminishing funds. This would not be as dramatic as the current Federal budget proposals but it, too, would effectively end this national program.

Third, the program could be fully funded for the 5 years of the current authorization.

Fourth, the funding formula could be changed, either through changes in the current Federal-State ratios or to a block grant approach combining funds available under sections 306 and 308 and perhaps even the sea grant program. This approach would give States the greatest flexibility and could occur with the best results if it followed an additional year of transitional funding under each of the current programs.

Budget politics should not dictate the future of the Nation's coastal zone, particularly on the heels of full reauthorization. The problems facing the Nation's coast will persist regardless of the funding made available by the Federal Government.

The Federal coastal zone management program does make a difference to the Nation's coast. Expertise has been assembled and is now concentrating on solving coastal problems. To abandon this

effort now would be shortsighted. To terminate the funding would break critical momentum.

While New Jersey will not abandon its coast and its problems, we will not be able to do the job that we know must be done and that we are now capable of doing, without continued Federal financial assistance.

I urge this subcommittee to continue to be an active proponent for the cause of coastal management, and to continue to support adequate funding, either through full funding as presently authorized or through some change in the funding process. Thank you.

Mr. D'AMOURS. Thank you, Mr. Weingart.

Now, will Mr. Olsen speak?

Mr. OLSEN. Thank you. My name is Stephen Olsen. I am the director of the coastal resources center at the University of Rhode Island Graduate School of Oceanography in Narragansett, R.I.

The center began working with the State's coastal resources management council in 1972 and drafted the State coastal zone management program that was approved pursuant to OCZM 306 regulations in 1978.

If 306 funding ceases, some 33 people who presently work in support of the Rhode Island coastal program will be terminated. This will include 75 percent of the permit processing staff, all of the policy development and implementation staff at the Coastal Resources Center, all education efforts, all the enforcement personnel recently hired to support the program, and 90 percent of the administrative and support staff.

We will be left with the 17-member Coastal Resources Management Council which was created by the legislature in 1971 and charged to both plan for and regulate activities in our coastal zone.

We expect the legislature to continue annual appropriations to support the Council itself but we do not foresee any additional funding to cover the people funded with 306 moneys. Council members serve part time. Without 306 funds they will be supported by a tiny permit processing staff composed of two engineers in the Department of Environmental Management.

It is all too clear that the critically important role of the present program in issue analysis, conflict resolution, and coordination of activities along the shore and in tidal waters will be drastically curtailed.

Many of the ongoing resource management activities will cease altogether. The program will be reduced to the processing of individual permits, which is not management.

I will try to now briefly sketch out what the Rhode Island coastal program is accomplishing and why we feel that our efforts are important. I think we should first recognize that multiple use conflict resolution within the context of ecosystem management is a new game, a very complex one, and something we are only beginning to learn how to do.

We have learned that some problems take years of effort to crack, little of which relates to a mere permitting function. An example is the dredge disposal problem which has virtually halted all dredging in the State for the past 10 years.

When the program was created in 1971, nobody foresaw that it would be the principal State agency overseeing the siting of a

proposed nuclear powerplant in 1978. Defining that regulatory process took two people at the Coastal Center the best part of a year.

In order to deal with these issues effectively, the Council cannot sit back and rely on the permit process to bring the issue before them. By that time the alternatives are too few, and an effective program must be out in front with staff capable of analyzing the issues, proposing solutions, organizing meetings, and making sure that the skills and knowledge at the University are brought to bear on the problem at the appropriate time. This takes staff and the staff must be paid.

Perhaps the most important lesson is that coastal management ultimately must deal with values as much, and often more, than scientifically acceptable facts. Management is largely the job of finding where people can agree, and in our society concensus on anything is hard to find. To me, this means that the plans and regulations, if they become immutable after they have been adopted, cannot possibly in themsleves assure good management.

They must be followed intelligently, not blindly, and plans and regulations must be changed when they become outdated. I strongly agree with those who feel that we are, as a society, over regulated. Too often regulations are only the attempt of one fraction of society to impose its values.

This is a lousy way to build consensus. Any program must articulate its purpose and the rules by which it will take action but these basics, particularly in a program as wide ranging as a coastal zone management program, can only be the first step.

If the CZM program goes beyond the mere imposition of regulations, if it demonstrates that it is responsible, does not duck real issues, and provides needed services to the society it serves, then that program will have a constituency.

In Rhode Island we worry about our constituency and we have enjoyed the benefits of solid popular support. This, however, is built very largely on our education programs, advance planning, and conflict resolution activities. Without these ingredients, all of which are fueled with 306 funds, our CZM program can only suffer.

I have implied thus far that if 306 funds disappear, there will at least be—that at least the Coastal Council's permitting function will continue. This is true, but we must recognize that the Council relies heavily in its decisionmaking on the input from sister agencies which are supported with 306 funds and provide the Federal consistency reviews and analysis of the proposal for conformance with other State regulations and plans.

If these activities are as drastically curtailed as we fear they will be, we can only expect that the time needed to sort out Federal, State, and private issues will stretch out and that conflicts will intensify.

If agencies of Government cannot obtain or analyze the information they need, the reaction is to resist making a decision or to follow the safer course and say, no. I find it very sad to imagine our coastal zone management program being reduced to such a bureaucratically unfortunate fate.

Thank you.

Mr. D'AMOURS. Thank you, Mr. Olsen.

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That concludes the formal presentation of the testimony of this panel, and we will now proceed to questions. I have very few, frankly.

You all obviously agree that there still is some national interest in proper management of our Nation's coastline. I hardly would think that that question should be an issue after all these years, but apparently the administration has chosen to make it an issue. And I'll say this for the administration. They're consistent, because in the hearings we had yesterday on the sea grant program they were also maintaining the position that, in fact, there isn't much of a national issue on a State-by-State basis.

You can formulate some kind of a national ocean policy. One of the benefits, it would seem to me, of Federal involvement that is necessary if there is a national interest, is the transfer of information that goes on with a central Federal vehicle. And I'm wondering, I guess, Mr. Ross, he would be the first one. He probably should answer this question since you had a group of, an organization of coastal States, what impact do you think the absence of Federal presence here, some kind of a centralized focus provided by the Federal presence, what kind of a impact do you think that would have on your ability to transfer information and as a State agency—excuse me—as a head of a coastal State group and as a coastal State group participant?

Mr. Ross. I think, by and large, Mr. Chairman, the question of information—the transfer of information—I guess there are two responses to that. One is that it has been the presence of and the encouragement of the Office of Coastal Management—which, I might add, is one of the least bureaucratic agencies we've ever had to deal with, and I use bureaucratic in a negative sense—the presence of their funding and encouragement to develop information that is shared within State and coordinated among States has probably been much more laudible, I suppose, than sharing of information that occurs at the national level.

I might turn to other members of the panel to see if they would care to respond. I do know that they have had a very, very functional information program over the year. It has not worked as much, perhaps, to benefit States in the past year than it did when we were formulating our program.

Mr. FISCHER. Very briefly, Mr. Chairman, I think it's a telling question. The Coastal States Organization does get together, either quarterly or semiannually, and in those 2- or 3-day sessions are able to exchange information among ourselves. However, most of our energies, of course, are needed to resolve our own internal problems, and so we don't generally put together reports to tell the Chris Shafers around the Nation about what we're doing in California, so I'm not all that familiar with what's going on in New Jersey or South Carolina.

I am informed, however, by the Office of Coastal Zone evaluation team which comes in in somewhat, sometimes, bureaucratically and sometimes with some vigor and tell me that my program isn't as good as the one in Rhode Island in these specific instances and if only we could do some improvements like Rhode Island is doing, I imagine other States are bludgeoned by OCZM with grant conditions to require the to handle problems like California is doing.

That requires staff members, somebody familiar with what's going on around the country and the Coastal States Organization does not have the resources to do that. Yes; we are benefited by that information provided by a fully funded OCZM.

Mr. D'AMOURS. So there would be a loss.

Mr. FISCHER. Oh, yes.

Mr. D'AMOURS. A communication that could not be picked up by the Coastal States Organization.

Mr. WEINGART. At the State level, in New Jersey and, I think, most other States, one of the functions that is carried out with Federal money is the publication of a newsletter for the coastal zones which addresses coastal affairs around the State.

Over the years more than 5,000 people have asked to be on the mailing list for that newsletter. We recently tried to prune our mailing list, figuring that a lot of people had moved, and we received more than 3,000 responses back—people who are interested in coastal zone management. That is a very high response rate for that kind of solicitation.

Mr. D'AMOURS. OK. I'll direct this to the entire panel for anybody who wants to respond.

You know, we all want to help the administration to retrench in the Federal spending. It's really been moving along geometrically for a number of years. I think it's a legitimate objective. Of course, in this case he's asking CZM and CEIP to cease as a meaningful program. But is there a ground where we—a middle ground where we could.

I mean, I don't know what kinds of money there might be within the CZM 306 or 308 grants and loans and what not that we might cut back on or retrench on without abolishing, but is there any room for that? Perhaps changing the mix. Perhaps it shouldn't be 80-20. Maybe it should be 70-30, 60-40, whatever. But have you given much thought to some things we might do which would not amount to killing the program, which would not amount to phasing it out, as I think some of you are suggesting; but which might amount to the States picking up a higher cost of the program rather than all of the cost?

Mr. ROSS. Yes, Mr. Chairman, we have. We, in fact, discussed that at some length when the Coastal States Organization had a meeting; we had several leads.

No. 1, it is fairly critical for sustaining the coastal management effort that is underway now that we have full or near full funding for fiscal year 1982. The principal reason for that is most of us are not able to go back and modify our budget. So that's the first issue.

Second, I think the States generally recognize that we can move forward with a changed grant ratio—down to perhaps 50-50—in terms of match requirement. Thereby, over the next 4 or 5 years, saving substantial amounts of money for the Federal Government but at the same time not going below a threshold level. And I'm not prepared, Mr. Chairman, to indicate what that threshold level might be, although we may be able to generate that, if necessary.

There is a national interest. There should be a sustained Federal presence at some threshold level over the duration of the authorization period. We're talking about a phasedown rather than a phaseout. And——

Mr. D'AMOURS. Well, that was another question I had. It wasn't altogether clear. You are—you were earlier—two or three of you had mentioned the phasedown, meaning just that. That you want the program and Federal involvement in it. You're not talking about a phaseout.

Mr. ROSS. That is the position the coastal States are taking.

Mr. D'AMOURS. My time is up. I have one more question I want to ask, but we'll go to Mrs. Schneider.

Mrs. SCHNEIDER. I have a particularly neat, appropriate background in that I had served as the Federal coordinator for the coastal zone management program, and it gives me great pleasure to direct my question to my boss here today—or my former boss. But I do have a particular interest in the coastal zone program, needless to say, and I very much appreciate Mr. Weingart's suggestions of specific ways that we might reallocate them, funding.

But, Mr. Ross, you said that if we would like you to help regenerate from the bottom line figures as to what amount of money might be appropriate to still continue this program than perhaps a more phased down budget level, and I think for my own purposes that would be very useful because I feel that there is perhaps bipartisan support of this program. But as our chairman has just mentioned, we are all very interested in cutting back, but not necessarily closing down.

So if you can help us with some specifics, I, for one, would greatly appreciate that. Coming up with an alternative to zero.

In addition, I'd like to just get a sampling of some of the different priorities that you might have insofar as where the funding should go, and perhaps all of you. Do you think the money should be directed toward more special area management and away from the more general permitting processes? And so what specific priorities do you have?

Mr. ROSS. First of all, if I could, Mr. Chairman, over 30 percent of the moneys that come through States in terms of the aggregate is passed on to local government. Some States—Maine, for example, has a much higher figure, and so does Oregon.

I think we're probably talking in terms of any phasedown of trying to one degree or another those dollars to national interest issues. Unfortunately, those national interests cover a broad spectrum that cover the major portions, the significant portions of the States. So that would be the first place I would see phaseddown in the economy sometime.

Mr. FISCHER. It's a question of priorities. I'm reluctant to urge that Congress use budget-control language in the fiscal act to set priorities that would apply across the board. It is one that we've discussed constantly with some vigor with those in the OCZM who now have to apply the national guidelines. What is high priority in one State is not necessarily high priority in another State, so I would not encourage uniform priorities. I don't believe that that would be a problem in managing Federal funds. And it would phase down, it would allow each State within itself to set priorities as long as we have to meet the requirements of the Federal system and are, in fact.

I think there are different ways of doing that.

Mrs. SCHNEIDER. How do the rest of you feel about that?

Mr. SHAFER. I was just going to indicate that I think that Congress spoke to that very issue during the reauthorization process and specified nine areas that the States should be focusing their attention on. I think those are priorities that we should be addressing.

We generally supported those priorities during the reauthorization process, with the understanding that Michael indicates that there are some differences among the States and that one priority may be more pressing—one national issue may be more pressing in a State than others.

But, generally, the nine national policies or interest areas as specified by the amended statute give us the framework to work in, and clearly I believe we are responding to those national issues.

Mr. WEINGART. I agree with what Chris has said. Let me answer your question more specifically about the priorities that we have in New Jersey. Our first one is to make sure that our environmental regulatory laws work efficiently and effectively. Those are laws that are going to continue to be on the books, regardless of what happens with Federal funding.

Our second is probably shore development issues. It is an area that through the coastal program we've identified and tried to come up with solutions that might work. We have a very highly developed shore, and like much of the east coast, it is going to be severely threatened by the next major storm. We don't have answers as to what to do about it now or what to do about it after the next storm. We need to come up with those answers.

Our third priority is working with the municipalities and counties to help kindle local initiatives for water front and coastal planning, particularly in urban areas.

Mrs. SCHNEIDER. All right. Thank you, Mr. Chairman.

Mr. D'AMOURS. Thank you. Gentlemen, you seem to be talking an awful lot about phasedown all of a sudden. I think, Mr. Townsend, you raised the question, like Florida, they were really just starting up the program. Maybe you could lead off with the answer to this question, but I'm wondering if we are going to get into a phasedown situation whether we shouldn't be giving some special considerations to States like Florida which are really just—New Hampshire happens to be one also—are really just starting up, if that, and what you think are some of the special considerations might be?

Mr. TOWNSEND. Mr. Chairman, I—before speaking of phasedown, I think always, at best, that's a fall-back position, that we're trying to reconcile what looks like a new reality. And, of course, Florida this year, if we don't receive exactly what we planned on, I don't think that Florida is talking about phasedown. I think we're gone. We need the time to—I was trying to say it in my statement—to institutionalize the program.

And I've listened here to other States who have developed programs, and I can see the types of adjustments that they're getting to make in their thinking. Ours—we tread such a tortuous path to get to the place where we are today, we've reconciled so many conflicting interests and dealt with so many political problems and have a program that is just really a precarious balance right now between the demands of the Federal requirements that we've met

and the conflicting interests we've had to reconcile that I, without some sort of special consideration to at least a couple of years, I don't see how we can survive.

Mr. D'AMOURS. You're talking about some kind of an exemption phase in the next couple of years?

Mr. TOWNSEND. Yes, sir. Well, we could probably make the adjustments to small—using percentages as a way of paying. There is always a relative concept, we can make some adjustment if they were minimal. For at least a couple of years we're going to need very substantially—the same kind of support that we planned on originally.

Mr. D'AMOURS. Mr. Ross, did you want to comment on that? I'm not requiring everybody to comment on each one of these questions, but if you'd like to, feel free.

Mr. ROSS. Good, please, Mr. Chairman. The States organizations addressed this question, and it was the concensus of States at our meeting that we really would need to look at States who had recently joined the program, in terms of program approval, or were just coming in and would be coming in in the near future and providing a greater level of Federal support to those than perhaps States like—sorry, Michael—Oregon. I'm from Oregon, by the way.

Oregon, California, perhaps the State of Washington, as well. These are the only three States that have been in the program for more than 3½ years. So I think that where you were going after that question was a very good one.

Mr. D'AMOURS. Thank you. I have one other question. If we're going to phase down, I assume we're talking about 306 rather than 308, isn't that correct? Is anybody suggesting that we somehow phase down 308? We all agree that we should be increasing the 308 money, do we not?

Mr. FISCHER. Well, Congressman D'Amours is absolutely right. However, I think we would all regard it as a minor miracle if 308 happened to be funded this year.

Mr. D'AMOURS. Well, let me ask you this? Let me make that question a little less puffy and a little more significant. Under 308B, I think, is a section where funds are provided not only prevention but also amelioration—I think means, repair of damage caused by accidents that might occur in OCS development.

Do any of you have any opinion as to the sufficiency of funds based upon formula for the possible impacts—the pollution impact and how it could refer to recreational areas and the like?

Mr. FISCHER. Mr. Chairman, we think that the administration's position is that of posturing, that, yes, indeed, we haven't seen the kind of boom-bust that occurred in Northern British Isles, North Sea development. But I doubt that anybody really did credibly expect that thing. You know, the Akatak, Alaskas are damned few and far between, and that's not where those who created the CEIP expected most of the effects would occur.

The onshore facilities required in Santa Barbara Channel, the onshore impacts of potential oil spills, the air pollution impacts, and the risk to tanker traffic with the increasing thicket of oil rigs in and about the shipping lanes are all things that we are using CEIP money to plan for and minimize the effect and where we're

unable to eliminate the effects to mitigate or ameliorate, to use your word.

Mr. D'AMOURS. Those are the statute's words.

Mr. FISCHER. Those are all things—planning, minimizing, and amelioration are all things that need to occur. The current money is inadequate; and the proposed money, of course, is less than inadequate.

Mr. D'AMOURS. So you think the current formula funding is, in your judgment would be inadequate or might be inadequate to meet the potential damage caused by an accident.

Mr. FISCHER. Absolutely. On one hand we have the administration seeking an acceleration of leasing, exploration, and development—and production. And on the other hand, it's giving you the funds available to do all these things. It's crazy.

Mr. ROSS. I would like the Great Lakes team to respond to that, as well.

Mr. SHAFER. With regard to the question of the formula grants or 308B for the Great Lakes States, until last year the funding was completely inadequate because we weren't eligible to receive any of it, no matter how much was in the Federal budget, it was all targeted to outer shelf development. Over the last 2 to 3 years we've had an exponential increase in coal use and shipment in the Great Lakes region. Congressman Bonior, former member of this subcommittee, was largely responsible last session for including in the new act the coal transshipment amendment; and, I think, for the first time now the act can respond—if there are funds still retained in the budget—to these major, new impacts of coal transshipment and utilization.

It's not just the Great Lakes States that are being impacted, although we are presently having a significant impact in Michigan. We have the largest coal-fired facility in the world along our shoreline on Lake Erie that was built about 5 years ago. There are major environmental impacts that need to be ameliorated there, especially if we go back in time a couple of years. There's also a major transshipment facility at Duluth-Superior—on the Lake Superior shoreline which straddles the Minnesota and Wisconsin shorelines. Again, that was built 3 to 4 years ago. There are major impacts that need to be mitigated at that present location.

We have another major coal-fired facility targeted for the Lake Huron shoreline. And there are other examples along the Ohio and Pennsylvania shoreline. But now we're seeing a major increase in coal transshipment facilities for the marine coast States, as well. And there are a number of specific proposals—Charleston, S.C.; and Virginia; and a number of States are presently looking at major expansion of those facilities that if there were funds retained in the budget, or in some unlikely event increased to respond to the new impacts of coal, the impacts are there and the needs are clearly there.

Mr. D'AMOURS. Thank you. I have no further questions of the panel. Mrs. Schneider, do you have any further questions?

Mrs. SCHNEIDER. No, thank you.

Mr. D'AMOURS. Well, I thank you all, gentlemen, for having traveled this distance to help us out; it's been most productive.

The subcommittee stands adjourned until 2 o'clock when we will resume with the public witness panel.

[Whereupon at 12:45 p.m. the subcommittee was recessed to reconvene later the same day.]

AFTERNOON SESSION

Mr. D'AMOURS. We are ready to proceed with this afternoon's session, and we will first hear from the panel of witnesses from the public sector, Dr. Hershman, Mr. Reilly, Barbara Fegan, Merilyn Reeves, Matthew Creamer, Karen Gottovi, Sam Tucker, and Robert Hughey.

Dr. Hershman, if you would want to, lead off.

STATEMENTS OF DR. MARC HERSHMAN, PRESIDENT, COASTAL SOCIETY; WILLIAM K. REILLY, PRESIDENT, CONSERVATION FOUNDATION; BARBARA FEGAN, CHAIRMAN, NATIONAL ADVISORY COMMITTEE ON COASTAL ZONE MANAGEMENT; MERILYN REEVES, NATURAL RESOURCES COORDINATOR, LEAGUE OF WOMEN VOTERS; MATTHEW CREAMER, CHAIRMAN, MARYLAND COASTAL RESOURCES ADVISORY COMMITTEE; KAREN E. GOTTOVI, COMMISSIONER, NEW HANOVER COUNTY, N.C., NATIONAL ASSOCIATION OF COUNTIES; SAM TUCKER, ENVIRONMENTAL MANAGER, FLORIDA POWER & LIGHT CO.; AND ROBERT E. HUGHEY, PROFESSIONAL PLANNER, ATLANTIC COUNTY, N.J.

Mr. D'AMOURS. May I say, before you begin, I don't know if any of you were here at this morning's session, but because of the time constraints and the numbers of witnesses on this panel and a subsequent panel, I would appreciate it, if you can, if you would summarize your testimony as much as possible. Your printed texts will be entered in the hearing as though you had delivered them verbatim.

Dr. Hershman.

Mr. HERSHMAN. I appreciate the opportunity to present my views to you about the future of our Nation's coastal zone management (CZM) effort. I have studied and taught CZM for the past 10 years at the University of Washington, and formerly at Louisiana State University. I participate actively in the affairs of the CZM Journal and the Coastal Society, the two leading research-oriented organizations in this country and abroad that serve CZM professionals. My goal today is to make an argument for retention of the CZM program, but with adjustments that would make it responsive to the President's new national goals.

CZM IS NEEDED BECAUSE IMPORTANT NATIONAL INTERESTS ARE AT STAKE

In general terms, effective CZM responds to national problems and serves important national interests. For this reason a nationally based program is needed. First, high population concentration in the coastal zone and the competition for scarce resources results in conflict and less than optimal resource use for the Nation. In effect, national population migration patterns are, in part, the cause of many coastal problems. When close to 40 percent of our

Nation's population lives in the coastal areas, the coastal zone is more a national, rather than State or local, asset. Second, local communities often transport their pollution, environmental degradation or unwanted industry problems onto others who live outside their State or region. This affects national distribution of coastal zone industries and natural amenities, resulting in inequities. Problems of this type require a broad-based national effort. Third, CZM is necessary if Federal regulation and management of navigable waters is to be effective. CZM allows States to have an effective voice in Federal decisions affecting these navigable waters, and insures that public access and multiple-use planning are part of the U.S. navigational servitude interests. Fourth, the coastal zone is a national resource because facilities and environments serve people all over the Nation. Tourism, load center ports, fisheries, energy facilities, and many other coastal uses serve people far from the coastal area where the facility is located. The fact that CZM serves these national interests should be kept in mind because elimination of the Federal program means virtual abandonment of this national perspective on the problem and its solution.

Further, Congress has already clearly stated the national interest in CZM by defining the Nation's CZM objectives. The CZMA and court interpretations make it clear that there is a national policy to have coastal management programs, that those programs should be focused at the State level with active local government involvement, and that they should balance many competing uses. The 1980 amendments to the CZMA strengthen this point by noting nine specific national objectives and requiring that 30 percent of Federal funds be spent to improve efforts to achieve those objectives. Thus, over the past 10 years, Congress has regularly dealt with the question of the Nation's interest in effective coastal zone management and has on many occasions, through amendments to the CZMA, reiterated the importance of this program to the Nation. The proposal to eliminate funding for CZM in its entirety is an indirect attempt to say that we no longer recognize that there are "national interests" to be served. In fact, OMB in its "black book" said that States could now manage "their" coastal zone without Federal assistance. It seems to me that if we are to alter our CZM objectives it should be done with a full hearing by Congress. The result of such deliberations could be a repeal or substantial alteration of the CZM Act. This would be the straightforward and honest way to change policy rather than reversing policy through financial starvation.

ELIMINATING 306 FUNDING IS THE SAME AS REPEALING THE LAW

If funding of the CZMA were eliminated, this would render the act impotent—the same as a repeal. The fundamental goal of the act is to create the capacity within State and local governments to perform coastal management. That capacity was to be sustained through Federal funding assistance. If the funds are eliminated there would be no incentive for the States to follow Federal guidelines. They could pick and choose the particular coastal zone objectives they wished without consideration of the balance mandated under the Federal act. One could argue that States would want to continue in an approved Federal program status because of the

benefits of Federal consistency. However, Federal consistency would most likely become meaningless if the States had no management capability. Why should Federal agencies go along with State wishes when the States have no management capability, and thus cannot back up their preferences with information? And it would be poor policy to give States a veto over Federal actions if they cannot implement an approved coastal management program because of lack of funds. These arguments simply point out that denial of funding for the CZMA is an effective repeal of the law—a major policy change. It is bad government, in my opinion, to have a law with no implementation capability.

The real challenge, however, is whether the national goals outlined by President Reagan, and the national interests in coastal zone management, are compatible. OMB has said that the President's goals can best be served by eliminating the Federal role in CZM. To me, this is taking the easy way out. No thought has been given to how CZM might be used to strengthen and help achieve national priorities. I believe there are alternatives to the elimination of the CZM program that would please the President, and these will be discussed later.

PRACTICAL REASONS WHY THE CZM PROGRAM SHOULD BE RETAINED

The CZMA is a general law that establishes a management framework that can shift to deal with comtemporary problems. Today's problems are different from those 10 years ago when CZM was initially set up, and tomorrow's problems will differ from today's. The CZMA has proved to be a flexible law that can deal with changing problems. For example, in 1976 we were able to use the CZMA as a vehicle for dealing with the concerns of local government about impacts from new or expanded OCS oil and gas development. In 1978, when urban waterfront deterioration problems were getting a lot of national attention, CZM, with just one million dollars, was able to get 25-30 small planning efforts underway throughout the Nation. These funds contributed directly to new investments by the private sector and other public entities to enhance the urban waterfront for recreation and tourism. In the past, then, the management capability of CZM has been used as a vehicle for addressing a new set of problems rapidly and efficiently. If we retain this managent capability, it could be expanded or redirected to emphasize new priorities. If we do not retain this management capability, we will have to pay for an entire new framework at some point in the future. CZM is increasingly relied upon by Federal agencies to express State and local interests as part of Federal decision making policies. This is most observable in the Corps of Engineers regulatory program where CZM agencies are asked to provide expressions of State and local interests as part of the Corps' review of section 10 and section 404 applications. In many States around the country joint procedures have been established between CZM and the Corps of Engineers for review and processing of applications. In some States CZM works closely with the Department of Interior on Outer Continental Shelf lease planning. These relationships, whereby a general Federal resource management program is learning to work with a State counterpart, leads to better resource management because the interests of all

levels of government are involved. To eliminate the CZM program would add a new burden on these Federal agencies—they'd have to act without clearly stated local preferences, or seek out other agencies within the State to express those interests. Thus, a mutual dependence has been built up between Federal and State agencies which insures thorough consideration of proposed projects. We'd be undermining national interests if an important player in the game were eliminated at this stage.

CZM has established a corps of expert professionals who can deal with many coastal zone issues. These experts, trained in planning, engineering, law, and resource management know a great deal about coastal zone dynamics, resources and interest groups. It takes a long time to develop such expertise. If CZM were dismantled, this capacity would be lost very rapidly and it would cost millions in the future to gain that capability once again. For example, along the west coast, there are at least 100 career coastal managers who work in State and local government whose expertise should not be thrown away lightly.

CZM is an integral part of the Nation's marine resources management and development efforts. If it were eliminated an important component would be lost. As mentioned above, CZM was a useful vehicle for solving an energy development problem on Outer Continental Shelf lands a few years back. In Washington State CZM was a vehicle for accommodating aquaculture development when recreational homeowners opposed clam harvesting and oyster and mussel rafts in rural counties. In South Carolina, CZM and port development have worked closely together—both a coastal zone and a port plan were developed and implemented simultaneously. Admittedly, more needs to be done to integrate the various parts of the Nation's marine resources management and development activities. NOAA has initiated programs calling for cooperative efforts on coastal hazards, a living marine resources strategy and other joint activities. I would propose a much closer connection between the Port Development Office within the Maritime Administration, a Commerce Department Agency, and the CZM Office. These kinds of collaborations could result in efficiencies within the Federal Government. The key point, however, is the interdependence of marine programs. Just as the shore side and offshore aspects of a particular resource development activity (for example fisheries or offshore oil) are part of one integrated system, the governmental programs are as well. We'd cripple our Nation's marine resource management capability by eliminating the Federal CZMA, while retaining the others.

CZM CAN BE ADJUSTED TO REFLECT THE PRESIDENT'S NEW GOALS

The President has proposed some important new directions for the Nation. These include increased productivity of goods and services and the reduction of the role of the Federal Government in our daily affairs by reduction in Federal spending and simplification of burdensome regulations. The crucial question now is whether CZM can achieve the goals set out in the statute while also helping achieve the President's policies. If we accept (1) that we have important national interests in the use and management of the coastal zone; (2) that the CZMA is a flexible law that can suit the

problems of the times; (3) that we have a corps of coastal zone experts at work throughout the Nation; and (4) that more productive resource use and reduced Federal Government overhead is a national policy, then we should ask if there are ways the CZM program can be adjusted to reflect the resource use—decentralization goals. I believe there are three ways in which this can occur.

First, a closer link should be made between CZM and U.S. resource development efforts that are marine oriented. The three resource development efforts that appear most fruitful for closer collaboration are the marine transportation sector (ports and harbors); fisheries management and development; and off-shore oil and gas development. Port and harbor development will be used to illustrate how closer collaboration may be possible. It is basic U.S. policy to provide navigable waterways and harbors for U.S. shipborne commerce. Yet, in almost every State there are one or more harbors where major dredging projects have caused considerable controversy and uncertainty. It would seem to be in the national interest to have CZM efforts work closely with the Corps of Engineers and other Federal agencies to resolve these problems. If more of the limited funds under the CZM program were earmarked to be applied to port and harbor development issues, then solutions might be more rapidly found. For example, many of the conflicts center around appropriate mitigation and the scope of planning in relation to the dredging project. The particular role of CZM could be to help expand the traditional planning functions of the Corps of Engineers so that these broader issues could be dealth with simultaneously. This happened in Grays Harbor in Washington State. With CZM funds a special task force studied all the uses of the estuary in order to come up with a balanced plan that would then permit a major dredging project and landfill activity to proceed. Although the plan is not yet completed, it has been viewed nationally as a potential way to solve port development and environmental and recreational conflicts within estuaries. Another example is San Francisco Bay where CZM funds have helped pay for an interagency effort to determine port development priorities which will expedite permitting for port development activities in the future. A key to both of these activities is the development of appropriate mitigation strategies as tradeoff's for the development activity. A focused CZM effort dealing with the development of mitigation strategies could be an effective way to link CZM to national development activities and to make effective use of the limited funds available to the program. The special area management program authorized in the 1980 amendments may be a vehicle for achieving this linkage.

Second, emphasis should be placed on management strategies which involve resource use and development rather than planning and regulation. CZM has been concerned, primarily, with the development of comprehensive plans, regulations, permitting and project evaluation procedures. In the last couple of years more emphasis has been placed on the creation and restoration of new resources and public access to the coast as specific "positive" management activities undertaken through CZM efforts. These new positive resource strategies culminated in the adoption of section 306A of the CZMA this last session of Congress. The intent of the new section

was to provide funds to repair deteriorating waterfronts, construct new public access areas and restore deteriorated environments through marsh building, controlled dredge material management, and so forth. Congress authorized some funds for this new program but none have as yet been appropriated. It seems to me that these new positive management strategies are in line with the desire of the new administration to increase the use and productivity of our natural resources. Also, they are fully within the CZM framework laid out in the Federal law because they emphasize the "balanced" use of coastal resources. If 306A funds were available, on a 50-50 match basis, this could result in many environmentally and recreationally beneficial projects throughout the Nation in which half the funds would come from local or private sources. This could result in new technologies, such as those for marsh creation or habitat establishment, and more intense use of urban waterfronts which can spur private investment in many areas.

What is suggested, therefore, is a shift away from 306 funding and toward the funding of special area management programs, and 306A. The effect of this shift would be to keep the management capabilities alive in the States (at a reduced level, as discussed below) but to require more focussed efforts within the States that relate to productive resource use goals. The basic 306 CZM efforts, covering a wide range of coastal planning and management activities, would be to be absorbed by the States, as recommended by the President.

Third, CZM can be administered in a more decentralized fashion, and the overall cost share for the Federal Government could be reduced to 50 percent. In the past, emphasis has been on Federal regulations, Federal grants administration, and Federal evaluation as the primary mechanisms for implementing the CZMA. As a result, the States have always waited for guidance from Washington, D.C., on all aspects of the program's administration, and of late the Federal-State tensions have become numerous. One possible way to avoid this is to require self-implementation and evaluation by the States. States would read the Federal statutes themselves and decide what State activities fit those congressionally established requirements. Federal regulations would be limited to definition and explanation of terms. At the end of each year States would be required to commission an independent evaluation report which would analyze the States' activities against the requirements of Congress. The report would be detailed showing exactly how money was spent and how the objectives of Congress were achieved. The States would be required to circulate the report widely. If it appears that the law was not followed OCZM could withhold future funds or bring legal action if required. If interest groups feel that funds were misspent they could make this known to Members of Congress or bring court action if appropriate. My hunch is that if the burden for evaluation rested on the State, and an independent report were required, better evaluations would result. At present, OCZM's evaluations are spotty, evaluators change yearly, States are treated differently and there is no accounting for achievements and benefits resulting from the program. I believe self-implementation and evaluation could reduce Federal overhead substantially. In addition, I believe the division of

interests in the coastal zone, between those that are national and those that are purely State and local are extremely hard to measure. I believe the 80 percent to 20 percent Federal-State cost sharing was overly generous to the States. I recommend, therefore, that the cost sharing should be 50-50 and propose that the statute be amended accordingly.

CONGRESS SHOULD ESTABLISH CZMA IMPLEMENTATION PRIORITIES AS A NEW SUBSECTION TO THE AUTHORIZATION SECTION OF THE CZMA

The changes I proposed above do not require, in my view, a major overhaul of the CZMA. Since the law is very general, and it is impossible to do every part of it justice even at current levels of spending, it seems reasonable to establish implementation priorities by law for a given number of fiscal years. These priorities would not change the nature of the statute as a "balancing" law, but would require that federally supported management be oriented toward particular areas or use problems. Above I discussed ports and harbors as one possibility. The implementation priority could require that Federal funds be used to advance special area management plans in estuaries where major dredging projects are proposed. It might also specify that mitigation strategies involving living resource restoration be evaluated and pursued. Implementation priorities could be proposed for other sectors as well, including fisheries and living resources, oil and gas development, et cetera. Only one or two should be chosen, otherwise the value of prioritizing is lost. In each case the same set of issues of general concern to CZM—environmental quality, public use of resources, development in appropriate locations—can be met. But these would be met with respect to a smaller piece of the coastal zone and a more discrete issue. About 8 or 9 years ago there was debate over the ability to segment the coastal zone so that plans for one segment could proceed rapidly while other segments were put aside for later attention. By adopting implementation priorities Congress would be saying, for example, that major industrial harbors where channel improvement is planned, should receive Federal CZM funds over the next few fiscal years because of the pressing need to resolve the conflicts within those harbors, and that disputes can be resolved expeditiously through better mitigation strategies.

WE SHOULD START NOW TO THINK AHEAD ABOUT FUTURE FUNDING FOR CZM

It should be clear that a new source of funds is needed to address the problems and issues of the coastal zone. The Reagan administration proposed a tax on recreational boaters to support Coast Guard safety and rescue activities. There has been talk about waterway user charges to support the development and maintenance of canals and locks. It seems to me that the time is ripe to think of a user charge system to fund CZM. This requires an analysis of who benefits from CZM, or who causes the greatest problems. It then requires the imposition of a charge system to establish a fund which can provide ongoing management services, and a mechanism for disbursing the funds and deciding how they shall be used. This could be done at a national level by a charge on

privately owned recreational docks, administered by the Corps of Engineers. Or, foreign oil imports or foreign fisheries could be taxed to support a broad based marine resource management effort, including CZM. User charges could be done at the State level. In Washington State, for example, the State collects rent from those who lease submerged lands. Portions of the revenues are used to establish a "resource management cost account" which then pays for resource use plans and management activities. We should begin now to study appropriate user charge systems that might support CZM activities at the Federal and State level in the future.

Thank you very much.

Mr. D'AMOURS. Thank you very much, Dr. Hershman.

Next we will hear from William Reilly.

Mr. REILLY. Thank you, Mr. Chairman. With your permission, I ask that my statement be submitted for the record. I will summarize it briefly.

Mr. D'AMOURS. All statements have already been submitted for the record, they will all appear.

Mr. REILLY. Thank you, sir. I am president of the Conservation Foundation. Based in Washington, D.C., the foundation is a nonprofit research and communications organization concerned with resources and the environment.

We have a long history of concern with coastal development and coastal conservation. Since the late 1960's, we have worked closely with State and local governments, particularly in the South and on the west coast to aid in integrating planning and economic considerations with coastal conservation objectives.

We prepared a report last year, *"Coastal Zone Management 1980—A Context for Debate,"* which reviewed the Coastal Zone Management Act and offered a number of suggestions for its future. It did so, however, in a context different from the one we confront today.

I want to say something about the report and then build on it in my recommendations for the future of this act in the face of new circumstances.

We affirmed in coastal zone management 1980, which was supplied at your request to the committee, the continuing seriousness of coastal problems. In our view, they are more severe today than they were when the Coastal Zone Managment Act was first authorized in 1972.

We said we believed for a variety of reasons that some of the most important opportunities for addressing coastal issues lie at the State and local levels.

We provided advice in that report essentially to four groups. First, with respect to environmentalists, our own community, we stated that based upon the opportunities before the States and the localities to make a success of coastal zone management, many more of our resources, environmentalist's resources, ought to be directed to these levels of government, rather than to Washington.

We took note also of the multiple objectives in the Coastal Zone Management Act, and we suggested that with respect to a number of specific conservation objectives the conservation community direct more of its attention to other Federal programs and laws.

Second, respect to the States, we recommended a program of constituency building. We said, basically, that we will not see Federal funding for coastal zone management under the Coastal Zone Management Act indefinitely. We may lose it as early as the mid-1980's.

We were wrong in that presumption.

We said the States must prepare for the day when Federal funding no longer existed. Every State must build a constituency recognizing its own State problems. That is where we urged States direct their priorities.

Third, with respect to Congress, we said that the act deserved reauthorization. But we said the Congress should to reauthorize it cautiously. We thought the program in many ways had not borne fruit thus far. We thought that was a consequence of where States are now in implementing the law. They simply have not had time to make good on the kind of promises that existed in the Coastal Zone Management Act, promises we think, and thought then, the Federal Government should keep. Today we still think the Federal Government should keep these promises.

Finally, with respect to the administrators of the coastal zone management program, we recognized that their role was going to be difficult in the years ahead. We thought they should recognize the opportunities to direct coastal development and conservation at the State level. The administrators were necessarily limited by the program.

The Office of Coastal Zone Management didn't have that much clout with respect to many of the State programs. But we thought the administrators should continue, to the extent they were able, to play the role of the parent of adolescent State programs, pressing for greater consideration of the environmental and resource issues in the various States.

Today in the new context we find ourselves, we are prepared at The Conservation Foundation to acknowledge the imperative of cutting the growth of the Federal budget. Certainly, the Reagan administration believes it has a mandate to do that and do it significantly. I think it probably does. What I am going to say, I think, is consistent with this underlying premise.

There are three conclusions I would emphasize from our own consideration during the past couple of months of the future for coastal zone management.

First, with respect to section 306 funding, we think the objective must be to assure an orderly transition to State and local responsibility for coastal zone management, one that ultimately assumes little or no Federal funding. But we think zero funding is an extremely unwise situation to allow this year.

Such a step seems to us likely to waste a great deal of Federal money, to squander Federal investment thus far made in coastal zone management. It gives those States which have taken Federal promises at their word and have gone forward to develop with great effort coastal zone management programs, hardly any time to implement their plans.

We believe there should be at a minimum 2 years for the States to prepare to assume these new responsibilities, to do the constituency-building I mentioned.

Second, we agree with the Reagan administration that the estuarine sanctuary program should be maintained. I think this program is more properly a sanctuary management program or estuarine management program. What it does that I value is help the States and localities to coordinate the actions of Federal agencies, which very often have the most significant impacts on the coast and on estuaries.

Third, I believe very strongly that if we are going to suffer severe reductions in aid for coastal planning in this Federal program, now 8 years old, we must, to be consistent, apply the same budget-cutting criteria to the other programs of the Federal Government.

Let me offer one illustration with which you may already be familiar, the case of Dauphin Island. It was nearly wiped out by a hurricane on the coast of Alabama in 1979. There were at that time 1,200 homes on the island and a bridge. Most of them were substantially damaged or destroyed, and the bridge, too.

It is now my understanding that the Federal Highway Administration proposes to reconstruct the bridge to Dauphin Island at a cost of many millions of dollars. Further, I understand that EPA is prepared to fund a sewer system that will support not just the 100 or so homes that had sewage treatment before, not even the 1200 homes that were on the island before, but more than 12,000 homes. Many of them would be new and many on lots in the coastal high hazard area of the island.

That, Mr. Chairman, one illustration of the kind of problem that the Federal Government has itself created or contributed to on much of the coast. It is more widespread than that one example would suggest. I recommend that water development assistance, sewer and bridge construction assistance, the activities of the Small Business Administration and the Federal Emergency Management Agency, and other agencies be scrutinized very closely to determine their impacts on barrier islands. Furthermore, I recommend that any support whatever for this construction, the funding of which ultimately does come back to the taxpayer when it is wiped out or damaged in a storm, be withdrawn. To do otherwise would require the taxpayer to foot the bill for what should have been avoided in the first place. That, I take it, is consistent with the fundamental purpose of the Coastal Zone Management Act.

I think I have said enough on this, Mr. Chairman. I feel very strongly about it, and I think the conservation community certainly joins in that feeling.

I appreciate very much the opportunity to give these views today, and invite your question after the other witnesses have finished.

Thank you.

Mr. D'AMOURS. Thank you, Mr. Reilly.

We will now hear from Barbara Fegan.

Ms. FEGAN. Mr. Chairman, if I may, I will give my time to Ms. Reeves at this point because she has to leave before I do.

Mr. D'AMOURS. That will be fine.

Ms. Reeves, proceed, please.

Ms. REEVES. Thank you, Ms. Fegan, for allowing me to testify before you.

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I am Merilyn Reeves. I serve as the national director of the League of Women Voters of the United States.

We are a citizen education and political action organization, and we have more than 1,350 league organizations in the 50 States, the District of Columbia, the Virgin Islands, and Puerto Rico.

We are here today to support the continued development and implementation of a national coastal policy.

During the past 5 years our members in every coastal State have been very actively working for the development of strong, comprehensive State coastal programs. We have served on numerous committees, we have worked with State governments, we have worked with local governments, and we have provided public education.

It seems like it was just such a short time ago that in this very subcommittee you were debating the reauthorization of this act, and you sat through lengthy hearings. There were about 8 or 9 days of hearings and thousands of pages of testimony.

We believe it was significant that although there was a predictable degree of debate over the amendments offered to this Act, not a single comment entered into the record called for the termination of the program.

We testified on this act and we pointed out that while the coastal zone management program was beginning to have a positive effect on the management of the Nation's coasts, certain weaknesses in the statute hindered the program's effectiveness. Many of those deficiencies were addressed by the amendments to the act, particularly those expanding and clarifying section 303 policies and objectives and those provided additional incentives to States, such as the section 306(A) special project grants.

Our members clearly believe that a stable source of funding—Federal funding—is necessary for the continuation and the success of this program. The Reagan administration has proposed total elimination of funding for section 306 administration grants.

The league takes strong issue with this proposal. We believe that the program has not reached maturity, and we oppose sudden and unplanned termination of Federal assistance.

In making this budget proposal, the Reagan administration too easily assumes that the States have the capability of fully financing their own CZM programs, and doubts that most programs would be abandoned.

We differ with that assessment. In fact, at a recent meeting the Coastal States Organization, states that officials down the line confirmed that an abrupt end to Federal funding would severely restrict them from locating and appropriating the necessary funds to continue coastal efforts.

The League stands by its position taken last year during the debate over the reauthorization of the Coastal Zone Management Act. The Nation's coasts and shorelines face everincreasing and competing needs for their limited resources. The need for a rational balancing of competing demands has never been greater.

The Coastal Zone Management Program is the only governmental program that has begun to address and reverse a legacy of expedient, uncoordinated decisions regarding coastal resources. Federal funds spent to help States carry out comprehensive plan-

ning and institution-building during the last 6 years have been a good Federal investment.

But the value of that investment, in terms of both national and State needs, cannot be fully realized unless the program continues. Premature termination of Federal funding in fiscal year 1982 is unwise and irresponsible.

Short-term fiscal benefits must not overshadow the long-term deleterious effects on coastal resources arising from poor coordination and sporadic planning. Taking into account both the national interest and the known capabilities of States, we believe that full funding of the coastal zone management program in fiscal year 1982 is the only rational approach.

We would join with our colleague from the Conservation Foundation, William Reilly, in his statements of those areas in which funds can be taken far better than they can from the coastal zone program.

We, too, have submitted a 30-page statement to Members of Congress indicating various programs that we believe should be scrutinized and cut, including certain water projects and syn fuel commercialization projects.

We feel that these programs should be scrutinized, and we again reiterate that we believe there should be continued development and implementation of a national coastal policy.

Thank you very much.

Mr. D'AMOURS. Thank you, Ms. Reeves.

Ms. Fegan?

Ms. FEGAN. I am Barbara Fegan, and I am chairperson of the Coastal Zone Management Advisory Committee. We are established in the statute to advise the Secretary of Commerce on the operation of this program, and since we are in the business of giving advice, we felt ourselves also constrained to offer you our advice.

The committee is made up of nine persons at present. We have two vacancies. We come from diverse geographical areas of the coast, and also represent those varied interests which use the coast for development and also for environmental enhancement. There is a list of the committee members appended to the testimony.

The committee recognizes, as everyone has before me, the increased activities in the coastal zone. Fifty percent of our population lives within 50 miles of the coast. That population shift just predicts additional impacts on this fragile geography.

We have the development of coal as an export, the development of coal as an energy source within the United States. This is going to have a significant impact upon our ports.

Oil and gas and energy development offshore, including the new and sophisticated off-the-shelf OTEC will again have an impact upon the coastal zone

The committee charges me to tell you that we support the funding for the State program as a partner with the Federal Government in considering the national interests in the coastal zone, and also funding for the State program as competency-building at the State level.

Recognizing, too, that the 40 percent of the funds that are allocated to the States in the 306 part of the program are then transferred through to local communities we then have a consistent

policy carried out in our coastal zone, by three levels of Government, Federal State, and local with the loss of the 306 funding, States with approved programs that would be dismantled, 30 percent of the States would dismantle their programs absent the Federal funding.

States with approved programs to continue, about 15 percent.

States with approved programs that would reduce their activity absent the Federal funding, 30 percent.

States without approved programs which would not continue to pursue approval, 25 percent of those eligible States.

Only five States have said they could continue at this point in time.

The committee, therefore, recommends continued full funding of this program in fiscal 1982, looking to a phase down over time, and a reduction or change in the ratio of the Federal to State support for the program.

We are suggesting a phase-down period of 3 to 5 years, and a change in the funding ration from 80-20 to 50-50 over time.

We also would like to support continued, or continuation of the coastal energy impact program—grant program—as a low budget alternative to State revenue sharing for development of oil and gas on the Outer Continental Shelf.

The continued funding would enable the States to restructure and reorganize and to find the institutional setting for a State coastal zone management program and the additional resources to carry it out.

Again, I must say that we would like to see maintained and enhanced citizen participation in the decisionmaking in this program.

At the State and local levels, there is a heroic effort in many States to provide a focus, a place for the citizens to negotiate among the various interests and for citizens to have an actual impact on the program.

I come from Massachuetts, and in New England we are addicted to the town meeting form of government, and, therefore, we insist upon having our say in what State and local people do to our territory.

The committee also would like to recommend the continuation of the Coastal Zone Management Advisory Committee as the one body at the Federal level that provides for a two-way funnel, if you will, for citizens to influence the development of the coastal zone management program.

Our influence has not been as great as we would have like it to have been, but we plan to be extraordinarily effective from now on.

Thank you very much.

Mr. D'AMOURS. Thank you, Ms. Fegan. I think I mispronounced it Fagan.

Ms. FEGAN. Fagan taught little boys to steal.

Mr. D'AMOURS. Mr. Creamer?

Mr. CREAMER. Thank you. Good afternoon, Mr. Chairman, and ladies and gentlemen of the committee.

I appreciate this opportunity to appear before you on this subject of great importance to the people of Maryland and to our Nation.

My name is Matthew Creamer. I am the chief administrative officer for Wicomico County, Md., located on the Delmarva Peninsula, about 90 miles east of here.

We are primarily rural and agriculture, and in the heart of Maryland's coastal area.

I am also appearing before you as chairman of Maryland's Coastal Resources Advisory Committee. This is a 95-member advisory group to Maryland's coastal zone management program. It includes private citizens, representatives of local government and representatives of business such as the chamber of commerce, trade associations such as the Watermen's Association, private industry, such as Bethlehem Steel, an environmental and scientific organization such as the League of Women Voters on the Maryland Conservation Council.

State and local agencies and academic institutions also participate. The role of our organization is to guide the coastal zone management program in Maryland, and there are a few things about the Maryland experience that I would like to share with you.

It is the only forum in our State which brings together individuals representing constituencies which often hold opposing points of view on coastal matters.

As you must well know by now, all States participating in the coastal zone management program have used their dollars to fund many worthwhile projects which would certainly have not been accomplished without the Federal dollars.

But the importance of coastal zone management lies not simply in the funding of projects. It is the role which the program has played which makes it so valuable.

Maryland's coastal zone management program is doing what no other program—Federal or State—can do and that is to plan, solve problems, and coordinate multijurisdictional attempts to manage coastal resources.

I would like to share two key examples with you. The Wicomico River on Maryland's lower eastern shore is vital to the distribution of petroleum products for a large portion of the Delmarva Peninsula. Necessary maintenance dredging to keep this river open had been delayed for 6 years.

Federal, State and local agencies were unable to agree on a dredge spoil disposal site until they were brought together by Maryland's coastal zone management program.

The three key ingredients for success were:

One. Coastal energy impact program funds for local government to purchase the site.

Two. Technical assistance from the State coastal zone management agency.

Three. Commitment of Federal agencies to the State coastal zone management program goals.

A second example is beach maintenance. A Corps of Engineers project has been proposed to maintain and stabilize the beach at Ocean City, Md. However, it will be at least 10 years before it can be implemented. The Coastal Resources Advisory Committee saw a need for State action in the interim.

A CRAC task force defined the problems and issues, and Maryland's Coastal Zone Management Agency used program funds to develop a series of alternative approaches.

A plan was recommended to and adopted by the Maryland Department of Natural Resources. The plan is a significant example of combined citizen, State and Federal effort working toward commonly held State Coastal Zone Management goals.

We are very concerned with the proposed elimination of this vital program. To those of us living in the Chesapeake Bay area, it is clear that the resources and activities we attempt to manage are of national significance.

This magnificent estuary, shared by Maryland and Virginia, is influenced by fresh water from West Virginia, Pennsylvania, New York and Delaware.

Striped bass, which spawn in the bay, provide 90 percent of the fishery for this species on the entire east coast. The bay yields more blue crabs and oysters than any other region of the United States.

The ports of Baltimore and Hampton Roads make the bay the major export waterway for the coal-producing regions of Appalachia. As many of you know, the bay is one of the finest bodies of water in the world for sailing, and according to National Geographic magazine, it is used by 9 million people per year for recreation.

Without a coastal zone management program, the job of managing these national resources will be left to a myriad of single purpose, primarily regulatory agencies. Without the umbrella of a State coastal management program backed by Federal commitment and Federal dollars, there will be no way to make the necessary trade-offs between the Nation's economic and environmental goals. Each decision will result in a regulatory quagmire, as was happening with the river dredging effort I mentioned earlier.

While the administration may see the coastal zone program as solely an environmental issue, in Maryland this has not been the case. We have sought a balanced approach, giving equal weight to economic, environmental and natural resource values.

Finally, as a local government official, I recognize that sound fiscal management is essential to good government.

I respect and agree with the administration's efforts to reduce Federal spending.

I respectfully urge, however, that you consider maintaining funding for this vital program at a level which will allow this successful effort to continue.

Mr. D'AMOURS. Thank you, Mr. Creamer.

Now Ms. Gottovi.

Ms. GOTTOVI. Thank you very much for giving me the opportunity to come today.

I am Karen Gottovi, I am a commissioner, elected officially, from New Hanover County, N.C.

I am chairman of the Coastal Zone Management Subcommittee of the National Association of Counties.

I am going to give you NACO's views on the future of coastal management this afternoon. It is our understanding that the Reagan administration has proposed the elimination of funding for

the coastal zone management program, and that this budget cut would take effect immediately.

I am here today to make the case for an alternative favored by the National Association of Counties, and I am going to summarize it.

Basically we would propose as an alternative to an immediate cutoff of all coastal funding a 5-year phaseout during the remainder of the period for which the Federal program is currently authorized.

This would enable coastal States and counties to plan for orderly transition of financial responsibility for coastal management.

It would give us time to come up with an alternative means of funding local coastal management institutions that play a key role in administering State laws and in adjudicating competing claims on coastal resources.

It would allow us to continue to protect natural resources that have an importance beyond county lines, across State boundaries, indeed, for the Nation as a whole.

I am going to give you an addendum today to tell you just exactly what the cutoff of coastal management funds would mean to North Carolina and to New Hanover County, which is my county.

New Hanover County is in the southeast corner of North Carolina. It is a very small geographical county but it is the most urban coastal county in North Carolina. We now have a hundred thousand-some people.

We have also a deepwater port and several barrier islands.

The coastal zone management program in North Carolina Coastal Zone Management Act passed in 1974 for which I lobbied, have been of tremendous help to New Hanover County.

With the funds and the expertise that have come to us through the program, we have been able to do extensive mapping and land-use planning for our county.

Our municipalities have used their grants for planning and also for larger projects such as Wilmington's Waterfront Redevelopment Park, Brightsville Beach Public Access Park and other public recreational needs.

About $40,000 came to New Hanover County and its municipalities last as a result of CZM programs and was matched by local dollars and in-kind services.

We cooperated because we wanted to with this program. Enforcement of the regulations has resulted in much more sensible development of our beaches and estuaries, of protection of the public's right of access to these areas.

Federal and State activities within our county have had to be keys with our local land-use plans and have resulted in consideration being given to local needs and districts in these larger projects.

CAMA, Coastal Area Management Act, is an excellent example of what a good Federal and State program can be.

Coastal zone management authorized at the Federal level passes money to the coastal States to develop a coastal land-use plan and development program.

North Carolina, in turn, instituted a citizens board, the coastal resources commission, to which I was appointed as a local govern-

ment representative last summer by our Governor; and it oversees the program and promulgates regulations. But it turns over most of the planning responsibility and the moneys to accomplish it to local government. Enforcement is a shared function. Local governments are reimbursed for their expenses.

Our program is one of the best in the Nation in terms of the results we have been able to achieve in streamlining permits, including the Corps of Engineers' dredge and fill permit.

We have negotiated regulations and that is not an easy process.

And we have kept the planning responsibility at the local level. There is no way New Hanover County could have accomplished this alone without CZM and CAMA.

An abrupt cutoff of CZM funding would effectively end North Carolina's program as 80 percent of our $1,750,000 budget is Federal funds. The staff of 41, who are distributed in several centers along the coast and provide great local service, would be cut to 5, and would only be able to manage the dredge and fill permit.

All planning and enforcement activities which would have to be picked up by local government, most of which in coastal North Carolina which, as I have told you, is basically rural, some counties don't even have stoplights in their counties.

We do not have the staffs nor the expertise to accomplish this. Who would suffer? Both private and public interests.

The developer who now has expert advice, provided for development activities and permits coordination to speed up the process, will lose time and money.

The public will lose, too. The public will lose access to beaches and estuaries, the public will lose taxes as public funds are pulled in for rebuilding beaches and rebuilding poor development as Mr. Reilly explained and the public will lose resources provided by our vast productive estuarine systems.

Given time, and a gradual phase-down of Federal dollars, North Carolina could probably absorb the cost of the whole program.

We can't by July 1, which is our fiscal year.

An abrupt cutoff of funds would end coastal zone management in any effective sense of the word in North Carolina.

Thank you.

Mr. D'AMOURS. Thank you, Ms. Gottovi.

Our next witness will be Sam Tucker.

Mr. TUCKER. Thank you, Mr. Chairman.

I am Sam Tucker, director of environmental affairs, Florida Power & Light Co. My testimony today is given in behalf of the Edison Electric Institute, the Association of Investor-Owned Electric Utilities.

We believe the administration's proposed budget reductions generally are compatible with the goals of the Coastal Zone Management Act.

The act was designed to improve State management of coastal resources. Once developed and implemented with Federal technical and financial assistance, however, these programs were always intended to be carried out by the States.

As this subcommittee is aware, under the 1972 act, Federal financial assistance for State development and implementation of a program was authorized through fiscal 1977.

The act was later amended to extend development grants through fiscal 1980 and implementation grants through fiscal 1985.

Through the leadership of Mr. Knecht, the Coastal Zone Management Act has been successful in creating State awareness of the need to manage coastal resources and in assisting State development and implementation of management programs.

As of January 1981, some 25 States and territories representing nearly 80 percent of the Nation's coasts, are now managed under federally approved State management programs.

EEI has worked closely with NOAA during the promulgation of regulations to implement the act and the approval of State programs.

We believe NOAA has completed this task and for this they deserve our acknowledgement.

States electing not to participate, we understand, generally did so for State policy reasons and probably would not submit programs if financial assistance were continued.

In examining the impact of the proposed budget cuts, this committee should recognize the fundamental distinction between coastal zone management and other Federal-State programs such as those under the Clean Air Act, Clean Water Act, or Resource Conservation and Recovery Act.

Unlike those acts, the States' participation under the Coastal Zone Management Act is truly voluntary. There is no minimum Federal standard, or direct Federal authority in the absence of State action. Indeed, during consideration of the Coastal Zone Management Improvement Act of 1980, this subcommittee specifically rejected such a system.

Under the Coastal Zone Management Act each State elects whether it will participate by developing and implementing federally sponsored coastal zone management programs.

If the State elects to participate, it, one, receives Federal grants to initiate, develop, and administer a management program meeting the requirements of the Coastal Zone Management Act. And, two, obtains the privilege to exercise Federal consistency.

That is to require that certain Federal activities are consistent with its approved program.

In exchange for Federal assistance and the privilege of Federal consistency, the State voluntarily assumes an obligation to consider, during the development and implementation of its program, certain national interests such as energy and to provide for State override of local requirements for uses of regional benefit.

The evaluation of the effect of the proposed budget cuts on these activities should include, one, whether the State management activities will continue and, two, whether the national interest will be properly considered.

We believe that the act has served its initial function. That is, it has encouraged and assisted interested Coastal States to develop federally approved coastal zone mangement programs.

Twenty of the thirty eligible Coastal States now have approved programs. With regard to the States without a federally approved program, we point out to this subcommittee that the absence of a federally approved program does not connote that no management program exists.

For reasons of State policies or need for flexibility, some States have elected not to effect a federally approved program. Notwithstanding the Federal assistance and Federal consistency privileges.

With regard to the State management activities then, it appears to us that most are sufficiently established to withstand the proposed budget cuts. States with approved coastal zone management programs continue to enjoy the privilege of Federal consistency review and the obligation to consider the national interest with or without financial assistance.

So long as States retain this veto authority over Federal activities, it is essential that they continue to observe the national interest requirement of the act. For this reason it is necessary that NOAA continue to monitor implementation of State programs.

We believe this is intended under the administration's budget.

We appreciate the opportunity to testify. We would be pleased to respond to any questions you may have.

Mr. D'AMOURS. Thank you, Mr. Tucker.

Now the last witness on this panel is Mr. Hughey.

Mr. HUGHEY. Now for the middle ground, Mr. Chairman, and members of the committee, I come here today representing no one but myself.

I am Bob Hughey. I am a professional planner in Atlantic County, New Jersey. During the last 3 years I have worked on approximately $1 billion worth of projects for private investors and five or six local governments; all of that work has involved the New Jersey coastal zone management program, and I come here today to share with you my perspective of the program.

I should add and preface my remarks by telling you that I have generally dealt with the program as an advocate of another position.

My experience with the New Jersey Department of Environmental Protection has not always been agreeable, friendly, or visibly productive.

But the sum total of that experience has led me to a great deal of respect for New Jersey's program and for its purposes. The direction and the policy of the program which I now respect has taken time. It has evolved as the department has evolved, as it has matured and has learned how to manage and develop the coastal zone program.

Any directional change in the Federal policy which has as its consequence a loss of experienced personnel in the New Jersey Department of Environmental Protection and a corresponding decline in the responsiveness of our State program is a step backward.

As a former county administrator, Atlantic County, N.J., with a reputation for both cutting budgets and localizing programs, I am really sympathetic to the objectives underlying the proposed cuts, but as a realist and a planner, I must question the suddenness of the shifting policy and view with alarm the potential impacts.

If we could assume an ability on the part of State governments to immediately absorb additional costs or, in the alternative, if we could assume a universal desire to develop in a manner consistent with sound environmental standards, then my concerns would be

alleviated. But I cannot and the members of this committee should not make either assumption.

In the first instance we heard this morning that most States have already put their budgets together for this year. This is but one of many programs which is being referred back to the States.

All you have to do is walk up and down the halls of this building to get an idea of how many programs fit into that category.

In the second instance, you only have to look in New Jersey at the number, nature, and quality of projects being developed in the coastal area, in multiples of 24 or fewer units which evades the coastal policy to see how readily good environmental standards are accepted.

I strongly believe that the States, working with local government, should have the power to plan, administer and regulate coastal regions.

It is my experience that they do in a more realistic responsive and creative way than do any of the Federal reviewing agencies.

I applaud the willingness of the Federal Government to place responsibility with the States. But with responsibility should go the financial resources necessary to accomplish the objective.

At least in this initial phase of shifting policy.

In a period where effective local government participation is being actively encouraged, it is more than a little ironic that in an instant where State government, at least in New Jersey's case, has proven its ability to have a workable and successful program it now faces an immediate withdrawal of passthrough funding.

I would suggest that there are at least two more viable ways to reach the same funding goal: One, phase out funding over a 2-year period and then—from what I have heard today that may be a longer period required for some States. So that the State agencies can revise procedures and adjust their fee structures in a noncrisis and responsible manner.

Two, make the funding cuts on the Federal side of the budget where a number of agencies such as Army Corps, EPA, Federal Fish and Wildlife, and National Marine Fisheres are now overlapping the State review process.

The current funding suggestion is shortsided and one dimensional. Public policy simply does not shift on demands. It is typically dependent upon a corresponding shift in resources and the case of the coastal zone management program, Congress has recognized this connection.

It is a connection that deserves to be reaffirmed.

Thank you very much.

Mr. D'AMOURS. And thank you very much, Mr. Hughey.

I have a number of questions. I am not sure I will be able to quickly enough to direct them properly as I should. So we will follow no particular order.

I couldn't help wondering, Ms. Fegan, did you give any advice to Malcolm Baldridge or anybody in the Department of Commerce?

Ms. FEGAN. Yes, the committee did give advice, essentially the same advice you are hearing today to Secretary Baldridge.

Mr. D'AMOURS. I guess that is not very encouraging, is it, obviously nothing came of it?

Ms. FEGAN. Congressman, when you are in the business of giving advice, you don't expect to win all the time but that does not preclude you from making the effort.

Mr. D'AMOURS. Mr. Tucker, you are one of the last to testify and you raised some very interesting points.

A representative from your State testified this morning that without continuation of the program, or rather with implementation of the administration's approach, that in fact Florida would lose in all probability whatever program it now has.

You want the Federal Government to continue, you testified, overseeing State programs. How could that occur, (*a*) if there is no State program to oversee, and (*b*) the Federal Government isn't disbursing any money?

I mean, it is a volunteer program; how do you perceive the Federal Government maintaining a role in this process under those circumstances?

Mr. TUCKER. Well, I think your question is two-part. First, in regard to Florida they have been in the process of developing a program for several years. Actually, the coastal zone efforts in Florida preceded the Coastal Zone Management Act.

We had a coastal zone program, only it wasn't called that, but a coastal program initiated, I believe it was in around 1970 or even prior to that.

We do have many special coastal protection laws in Florida; in fact, we pioneered in this effort.

The existence of a coastal protection program or coastal management program, I am sure, will continue in Florida whether it is continued as a federally approved program or otherwise.

Now, as far as——

Mr. D'AMOURS. Were you here when Mr. Townsend testified this morning?

Mr. TUCKER. No, sir, I was not.

Mr. D'AMOURS. That was not his opinion. His opinion was quite diverse from yours on that point.

Mr. TUCKER. Mr. Chairman, Mr. Townsend and I quite frequently have different opinions about things.

Mr. D'AMOURS. Somehow that doesn't surprise me.

Mr. TUCKER. I think that it is time for a lot of us to make some tough decisions relative to priorities, and I think the States are going to have to make those decisions, and I think if they want to have an effective coastal program they are going to have to fund it, but I don't think that the continuation of the Federal funding of these programs is going to assure their continuity at any point in time at which the Federal funds are withdrawn.

I agree that perhaps a gradual reduction of the Federal funds would be more preferable from a lot of standpoints, but I think that we are in a very critical time and we have to make some very tough decisions, and I think that the administration has done that.

It has taken the leadership in making these recommendations. I think the Congress is going to have to bite the bullet and I think that the States are going to have to bite the bullet.

I think that Florida has the resources and, in my opinion, will utilize the resources to continue a coastal management program.

Mr. D'AMOURS. Somebody once said that everybody is going to bite the bullet except the people that make the bullets.

Mr. TUCKER. Mr. Chairman, I used to have the responsiblity for running the State budget in the State of Florida so I have bitten bullets in my time, too.

Mr. D'AMOURS. That is quite right. I don't know of anybody on this subcommittee who doesn't agree with you. As with many of the panelists who have testified today, too, the Reagan administration does have a mandate and that they are and we are willing as a subcommittee, as a Congress, to support the Reagan administration in that effort.

Obviously, there is one thing in cut back, paring down; it is another thing to totally eliminate. In this case we are not paring back, we are totally eliminating, and you will acknowledge there is quite a difference between the two, I am sure.

In your testimony you said that you talked about national interest in the coastal zone and you said national interests such as energy.

What other national interests should we be protecting, do you think, in the coastal zone?

Mr. TUCKER. Certainly the national resources is one of the significant things. Recreational uses, providing access to the beaches, I think all of these things are in the national interest. National defense, there are a variety.

Mr. D'AMOURS. Estuaries?

Mr. TUCKER. Estuarine protection; yes, sir, that is a national interest, and I think like energy, a lot of these are not only national but they are of regional and local benefit as well.

Mr. D'AMOURS. What proposal do you assign to the Federal Government in protecting these national interests?

Mr. TUCKER. Well, under the act whether the State programs continue to receive Federal funding or not, there is a national interest provision in the act where the national interest has to be considered by the States in their coastal zone management program.

We are suggesting that an appropriate role for the Federal Coastal Zone Management Agency would be to continue to assure that that provision of the law was carried out by the States in the operation of their programs.

Mr. D'AMOURS. A consistency provision, you say?

Mr. TUCKER. The consistency provision would be in addition, we feel both the national interest provision of the act and the Federal consistency provision still have to be carried out by the States.

Mr. D'AMOURS. How does a person from Kansas feel any way secure without some national program that his or her interests are being looked after in Florida, South Carolina, or New Hampshire?

Mr. TUCKER. Mr. Chairman, I don't believe Kansas has a State program.

Mr. D'AMOURS. I am talking about national interest.

Mr. TUCKER. How would they assure——

Mr. D'AMOURS. If these are national interests, you are saying they are national interests but they should be determined by the States who own the coastline. I am saying if the interests are truly national, a person from Kansas has—shares some of this interest

and how are his interests being looked after and by whom, if South Carolina or New Hampshire or Florida are making the decisions regardless of any other Federal or National requirements?

Mr. TUCKER. I did not mean to suggest that the national interests should be determined by the individual States. In fact, we have given testimony previously before this subcommittee that we feel that the national interest in energy facilities at least should be determined at the national level, appropriately by the Department of Energy.

But what I am saying today is that the appropriate role of the Office of Coastal Zone Management is to assure that the national interest is considered by the States in the management programs.

Mr. D'AMOURS. What is the leverage? How does the Federal Government leverage its interest into the State decisionmaking process?

Mr. TUCKER. They could withdraw approval of the programs, Federal approval of the programs.

Mr. D'AMOURS. What programs?

Mr. TUCKER. The programs in the 20 coastal States that are in existence today.

Mr. D'AMOURS. What is the leverage? How are they going to do this? The Federal Government is walking away from these programs and you are suggesting somehow they will retain some ability to influence the programs?

Mr. TUCKER. Through Federal consistency primarily.

Mr. D'AMOURS. So it does resolve itself down to consistency?

Mr. TUCKER. I think that is the one stick, if you will, that the Federal Govenment would retain without funding.

Mr. D'AMOURS. So we are really talking about energy development. You are pretty much limited in your interest in that to energy development. You talk about estuaries and the like but what else are you protecting through Federal consistency, really, that decisionmaking that affects energy development on the OCS?

Mr. TUCKER. I don't think Federal consistency is really the device to protect that. I think Federal consistency is primarily a lever, you know, that is a privilege the State assumes under this program really, to assure that Federal actions are consistent with their own State program management plans.

Mr. D'AMOURS. Well, on the area of consistency, as I recall, Dr. Hershman, you indicated in your testimony a little earlier that without this funding and without programs that the consistencies provisions would be virtually impossible to—I think you even said they might be—in terms of effectuation.

Could you answer that in response to Mr. Tucker's statements?

Mr. HERSHMAN. Mr. Chairman, it seems to me that the mechanism for any dialog between Federal and State governments is primarily through the granting mechanism. If you are going to consider national interests, the only way the Federal Government can check the State each year would be to check to see how the Federal dollars were spent and to require that they be spent in a certain way to consider certain national interests.

It seems to me that the national interest is one side of the coin, the other side of the coin is Federal consistency.

If there is no fund to require the national interests be considered ongoing, if I were a Federal agency and some State were trying to make me be consistent with them, I would say well, how could I be consistent with you, you are not even being checked over by any Federal agency, there is no guarantee that you are even considering national interest, it is a farce.

Mr. D'AMOURS. Would you like to say anything to that, Mr. Tucker?

I wish we had more than one mike, I am sorry we have to pass it around like this.

Mr. TUCKER. Mr. Chairman, both the national interest provision and Federal consistency provisions are a matter of law in the Coastal Zone Management Act.

And as long as these States with federally approved programs continue to administer those programs they are obligated to carry out both of those provisions of law.

Mr. D'AMOURS. But you understand what is being proposed by the administration—there be no more Federal participation, overview, approval of, nothing in these programs?

Mr. TUCKER. No, sir, I don't agree with that. That is not my understanding of the administration's position.

Mr. D'AMOURS. Do you think the Federal Government will continue enforcing the statute after all funding for it has been removed?

Mr. TUCKER. All funding has not been removed, Mr. Chairman. If I understand it correctly, what the administration has recommended——

Mr. D'AMOURS. What funding remains?

Mr. TUCKER. The funding remains for the operation of the Office of Coastal Zone Management at the Federal level.

Mr. D'AMOURS. To close it down?

Mr. TUCKER. No, sir. Am I incorrect in that? That is my understanding.

Mr. D'AMOURS. You are incorrect, sir.

Mr. TUCKER. There are no funds at all?

Mr. D'AMOURS. They are taking the estuarine programs and marine sanctuaries, separating it out and they will continue those programs separately. Everythinq else is gone.

Mr. TUCKER. My understanding is that the 306 funds were being taken away and 308 funds, but my understanding was they were still funding the maintenance of the——

Mr. D'AMOURS. That is all there is. They are leaving enough moneys to, $1.7 million to phase down the program, I believe. That is it. That is just to go through the—the $40 million of the 308 money is totally withdrawn and all of the rest of the $38.7 million I think in the 306 program.

The rest of the program is gone. I really think that what you are suggesting is something that would be impossible to accomplish. I don't want to dwell on that. I don't want to browbeat you, I want to get your testimony as accurate as possible on the record. If you want to come back a little later, you certainly can.

I have a question for Karen Gottovi.

You indicated a 5-year phaseout. Did you mean phaseout? You would like to see a phaseout rather than a phasedown?

Ms. GOTTOVI. I would personally like to see a total continuation of all funds. I am, however, speaking for the National Association of Counties who feel that given enough time the States could probably pick up the funding of the programs.

I think in North Carolina's case we probably could. I think there is enough interest at the Governor's level and I think we can generate—given some time—enough of a constituency at the State level to maintain a program.

I don't know, however, what will happen to those States who have just come up to the program and just begun the program. I would have grave doubts whether they could ever pick it up.

Mr. D'AMOURS. I would like to address this next question to anybody that wants to answer it.

Most of you, many of you, Dr. Hershman just left, you feel, I was hoping he would be here to answer this question, too, you have recommended a number of changes in the program and I wonder if it is wise at this point, we have changed that program so darn many times in just its few short years of existence, I wonder if we really want to consider, however meritorious or how tempting it might be, I wonder if it wouldn't be better for the moment to keep it as is?

I don't known when your plane leaves, Dr. Hershman.

Mr. HERSHMAN. I have to get a plane, that is why I was out of the room.

Mr. D'AMOURS. If you have a few minutes, could you respond? I would like the record to show that nobody brought you back shackled but, Dr. Hershman, if you could take a few minutes.

I was saying that a number of you, and you were one of the earliest witnesses, recommended a number of changes in the program. We have changed this program so many times in its short history, I wonder if it wouldn't be wiser now, however tempting meritorious changes may be, to forego that temptation and let the program operate in place for a period of time before we tinkered with it further?

I would like to hear the responses of anybody out there on that and since you do have a plane to catch and have to leave, maybe you can respond now.

Mr. HERSHMAN. The two areas I propose we could focus on are areas just recently authorized in 1980, special area management planning and 306(a).

It seems to me that these are ways to focus efforts in coastal zone management. I have a general feeling that the small amount of money applied throughout the Nation has resulted in establishment of general programs but sometimes special problems don't get the kind of attention that they should.

If we are faced with limited funds and if we are faced with the need to rejustify the program in dialog with the administration, I think this focusing might be a leverage that we could use.

Believe me, the recommendation is in the interests of saving the program and keeping the experts working throughout the country on the job.

I personally was very much in support of 306(a) and special area management planning.

I would like to see them move along. It may be that we can use these new directions as a way to convince the administration that we are not just saying we want to continue doing what we have been doing or to say that why don't you phase us out more slowly but rather say we are going to meet you halfway and shift a little bit to come more in line with the national priorities you have set up.

I don't think this would be a major impact on the States. It would require focusing of the Federal dollar efforts toward particular kinds of problems.

Mr. D'AMOURS. OK.

Would anybody else like to comment on that question?

Yes, Ms. Fegan.

Ms. FEGAN. That is precisely what the committee is going to address at its June meeting if there is a June meeting. We want to look at the advice we might give as to a restructuring and reorganizing State efforts in order to accomplish the purposes of the act.

We are not recommending any changes in the act at this point in time having been fully supportive of reauthorization last year in the last session.

Mr. D'AMOURS. Anybody else like to comment on that question? I am not requiring you do but if anybody has any thoughts.

Mr. Reilly.

Mr. REILLY. In connection with the CF's report I described earlier, one of the State managers made a remark to my staff to the effect that he has spent the last 2 years trying to qualify for Federal assistance and trying to comply with Federal regulations. If the law is substantially changed now, he said, if it is made better, worse, changed in different ways, he foresaw spending the next 18 months to 2 years doing the same thing and not tending to his State's coastal needs.

I think this is a fairly widely held view. I sympathize with it very strongly.

I would like to add, Mr. Chairman, a sense I have that this issue is much larger than coastal zone management. The kinds of burdens that are proposed for transfer from the Federal sector to the private, nonprofit sector, and to the States are really extraordinarily large.

One estimate suggests that the Federal budget reductions as they will affect nonprofit organizations that have been receiving Federal assistance is on the order of about $6 billion.

The administration's position is that the independent or nonprofit philanthropic sector and corporate foundations begin to fund the things the Federal Government has been doing.

By comparison the total amount estimated to have been provided by philanthropic institutions in the country last year is $40 billion. So it is from $40 to $46 billion that these philanthropic agencies are being asked to increase their giving.

That doesn't touch the demands that will affect the States and the localities. So to suggest that coastal zone management is just one more of those responsibilities that we can expect to see picked up is, I think, very unrealistic considering all the other obligations the States have. This has been a volunteer grant-in-aid program with the principal incentive for participation Federal money.

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Mr. D'AMOURS. I think that is an excellent point to make. I thank you for putting that on the record.

One of the things that I guess is oftentimes overlooked in discussing the CZM, CEIP policies is that after all, a good deal of coastal zone management effect is to give States a voice in policies that they otherwise would have absolutely no participation in and to that extent it would seem to be a reversal of traditional trends that this administration has set for its course.

I think the point you state in fact relates to that point. One can wonder why this is occurring at a time when energy development is being accelerated vastly but I don't know that anybody will ever give us the correct answer to that question.

One final area I would like this panel to address itself to is you are all for cutting back, paring back on the program to some extent and I think at least two of you have mentioned 50-50 rather than 80-20 would be most appropriate if somewhat arbitrary level of funding.

I don't suppose you mean that—I wonder if any of you feel that the CEIP program, especially the 308(b) CEIP moneys, the grant hundred percent moneys should be cut back in any way? Nobody has really directly addressed that point.

I wonder, (a), let me ask you two parts, are the CEIP moneys sufficient to meet possible uses to which they will be put and; (b), should they and can they be cut back now or even later?

If anybody wants to play with that one, I will be glad to have any of you respond.

Ms. GOTTOVI. I can start.

Mr. D'AMOURS. Mr. Creamer, I believe, if you would go first?

Mr. CREAMER. Thank you, Mr. Chairman.

Your questions concerning making the 308 program a cost sharing effort is probably a good one in that in most cases where an expenditure of dollars is concerned, we tend, when we are talking about Federal Government, State government, local government, or us private individuals, we tend to look more closely at those needs and those expenditures if we ourselves have a stake in them.

Most Federal programs and most grant programs, whether they be State or Federal or whatever, have a cost-sharing clause in them. Certainly, I think, from the local governmental point of view, we would recognize that a cost-sharing would not be inappropriate.

This could be a means of spreading those funds further, or accomplishing the same good with perhaps lesser expenditure of Federal dollars.

I am not necessarily favoring that we would like to give up the hundred percent. Sure, nobody likes to give up a gift horse, but looking at it responsibly and recognizing that there are serious problems that have to be addressed, you are suggesting a responsible route. You didn't suggest it, but I am responding to your comment.

Mr. D'AMOURS. I made no such suggestion. I will be happy to give you authorship of that suggestion. [Laughter.]

Does anybody else want to talk about that?

Ms. GOTTOVI. I don't remember what all the letters and numbers mean in all these various programs, so I will sort of address them by what I know them as.

As a county commissioner, our local government functions primarily on the property tax, and we have to set out tax rate by July 1, by law. We won't even know what the impact of your budgetary cuts in all these various programs is going to be until long after that and we are really going to be in a bind. So that is just one plea to ease in any kind of impacts that we are going to have.

I have brought along with me some preliminary land-use plans which we have done with some of your money. We are in the process now of public hearings on these. These are our second land-use plans under coastal zone money, a 1981 update.

This impacts upon property. I see some rationale for funding planning mechanisms with property tax money. That does not bother me nearly so much as some of the other things which I see coming down on our count as a result of Federal policy.

Our neighboring county wants an oil refinery. It is going to be on the river which we share. The fumes are going to blow on my county because that is the way the wind blows. The oil spills are going to end up on our shores, because that is the way the currents go. We already have had tests that pretty much prove that.

We can't seem to get any CEIP money. We tried to put in some requests for these moneys to try to get a handle on the social and economic impacts that that refinery is going to have on our county but we have not gotten the first cent.

I would like to see us able to use moneys like that to plan for the future for an industry that is going to give our neighboring county an incredible amount of property tax and give us a lot of problems.

Mr. D'AMOURS. Thank you very much.

Yes, Ms. Fegan.

Ms. FEGAN. There was in my testimony a recommendation of the continuation of the 100 percent CEIP money, and I hope you didn't overlook that.

Mr. D'AMOURS. I know that. You specified section (b) grant money. I remember that very well, and I thank you for saying it.

I wondered if it might elicit responses from the other members of the panel.

All right, I want to thank the panel for coming. It has been crowded, but I appreciate your time and your testimony, all of you.

Mr. REILLY. Thank you.

Mr. D'AMOURS. Our next panel is a relatively little teeny one, a panel of environmental representatives, Elizabeth Kaplan, and Sarah Chasis.

Would you approach the table, please.

STATEMENTS OF A PANEL OF ENVIRONMENTAL REPRESENTATIVES, ELIZABETH KAPLAN, COASTAL ALLIANCE, FRIENDS OF THE EARTH; AND SARAH CHASIS, NATURAL RESOURCES DEFENSE COUNCIL

Ms. KAPLAN. Thank you, Mr. Chairman. I am going to be blessedly brief here this afternoon. We are the last panel. I want to say first of all that it is indeed heartening to see your interest, Mr.

Chairman, and your concern and clearly your deep commitment to the coastal zone program.

It has been most distressing to many of us in the environmental community that the Reagan administration has choses to arbitrarily cut out this program.

My organization, Friends of the Earth, was involved in many ways last year with the reauthorization of this program. We were very involved in the Year of the Coast activities. Our offices in New York, Boston, Maine, Seattle, and San Francisco had Year of the Coast events, and we were involved in citizen participation activities around the CZMA.

I think the panel preceeding us made many of the points in my testimony, and I do not see the need to repeat very many of them.

I would like to say a couple of things. One is that what the Reagan administration is proposing amounts to a de facto repeal of the coastal zone management program. We think that is unacceptable. It was apparently done without consulting with the program managers and the Office of Coastal Zone. It was apparently not even done before consultation with NOAA. It is very distressing to see a program just getting underway to be cut off at the knees in that way. I know you have heard that many of the States are just beginning to implement their programs.

I think one of the things that CZM can do is create predictability in planning and development in the coastal zone. Predictability is one of the things, or is the thing, I think that the energy industry and the development industries have most wanted in the coastal zone, and the coastal zone management program at least helps to provide that by creating a planning process.

So it is hard for us to understand the lack of support from organizations like Edison Electric, because it seems to us that they should be supporting CZM for the predictability in siting energy facilities that they would like to have.

I would also like to say that I agree with Mr. Hershman's observations on the effect of the consistency provisions of CZMA. It seems to us that it would be very difficult to enforce or to actually achieve a consistency provision if there is no coastal zone management program. We wonder what the effect on the consistency provision would be of a lapse in this program.

At a time when Outer Continental Shelf oil and gas development, the OTEC program, deep sea bed mineral program and others are just getting underway. It seems to be a time when it is more vital than every that we have an active coastal zone management program.

Friends of the Earth would not support any phaseback, phaseout, or phasedown of the coastal zone management program, and I think most of the organizations in the environmental community would agree with that.

We believe that if it is a time to cut the Federal budget that it should be done equitably, and the coastal zone can support a 5-percent cut or whatever is equitable, equal to the cuts in the average of the whole Federal budget.

Thank you.

[Text of statement by Ms. Kaplan follows:]

PREPARED STATEMENT OF ELIZABETH KAPLAN, LEGISLATIVE DIRECTOR, FRIENDS OF THE EARTH

Friends of the Earth is a national and international conservation organization with affiliates in twenty-three countries and approximately twenty-five thousand members in the United States. F.O.E. has had a long-time interest in the Coastal Zone Management Act and the CZM program. We have supported its reauthorization with recommendations for improvements and we have commented extensively on proposed rules. We have also been involved in implementation of state programs.

To many of us who saw a tremendous resurgence in interest in the coast and coastal issues during 1980, Year of the Coast, it is difficult to imagine that after October first of this year there may well no longer be a federal interest in maintaining a viable coast. The Coastal Zone Management Act (CZMA) will exist, but it could possibly exist only as a paper reminder that this Congress wrestled with the incredibly complicated problem of coastal deterioration and came up with a creative plan for a federal-state cooperative program to bring under control the chaotic destruction of our nation's coast.

We view the Reagan Administration's decision to abolish the CZM program without consultation with any of the people who have been involved in its creation or implementation as a gross disregard for the integrity of our coastal systems. It shows a shocking ignorance of the vital importance of maintaining a healthy coast. The social and economic wellbeing of large regions of the country depend on it, and yet this decision was made by the Administration with no analysis of its impact on the states and regions affected. Most disturbing is that such a move amounts to a de facto repeal of the CZMA, without consultation with the Congress, the states, the program's implementors or the public at large.

The public record of support for the CZMA is voluminous. I recently leafed through over 2,000 pages of testimony before this Subcommittee presented during 1979 and 1980 in preparation for reauthorization in 1980. That record is a powerful testament to the strong public support for the CZM program, to the impact it has had on state attitudes toward preservation of their coastal resources and to the hopeful future which this program holds for our endangered coastal resources.

In 1980 Friends of the Earth and other environmental groups supported amendments to the CZMA to clarify the Act's intent, give it greater specificity and give greater encouragement to the states to protect their coastal resources. Many individuals and organizations at that time testified before this committee that the coast is in a state of crisis, that we cannot afford to let our coastal resources deteriorate at their present rate, and that the CZMA was the vehicle for asserting the national interest in protecting the living resources of the coast. While not all of our recommendations were not adopted by the Congress last year, several strengthening provisions were added by the Congress, primarily by this committee. The Congress not only renewed its commitment to Coastal Zone Management, but it reaffirmed the intent of the Act to provide a mechanism for controlling runaway development in the coastal zone.

The Amendments of 1980 to the CZMA provide important clarifications of the intent of the Act and other incentives to the states to develop coastal programs that are dedicated to protecting coastal resources. The CZMA policy was significantly strengthened to emphasize the need for safeguarding the vital resources of the coast. This important direction was clearly spelled out for the first time. To the many concerned citizens, hope was renewed that the CZMA would become a meaningful tool to direct states to develop management systems to protect the increasingly threatened resources of the coast.

The Administration's move to end the CZM program couldn't come at a worse time for the coast. Increased pressures on the coast are coming from a number of directions. Of great concern is the new Outer Continental Shelf (OCS) five-year lease sale prepared by the Carter Administration. This sale proposes some 35 leases in offshore waters with the need for on-shore facility development to begin during the next five years. It is indeed shocking that with such a rapid deployment of energy exploration in the OCS in the next few years that the Reagan Administration would terminate the Coastal Energy Impact funding. The on-shore coastal impacts of this massive search for energy in our off-shore areas will be enormous. Both the CZMA and the CEIP are needed more than ever to cope with this development. In addition, the rapid increase of coal transshipment in the Great Lakes, the proposed expansion of eastern and Gulf ports to handle increased coal exports all are evidence of the need for more CZM funding and adequate CEIP funding, not less. We have been critical of the CEIP program because we have felt that in many cases it has not been directed toward the proper goal, mitigation of impacts. But we support a well-directed program which addresses the actual needs of communities to cope with OCS development.

Another important aspect of the CZMA is the consistency provision that safeguards states against federal activities that are inconsistent with the states' approved CZM plans. What will happen to the consistency clause if CZM is terminated, states are forced to give up their programs, plans lapse, and there is nothing to measure consistency against? Failure to fund CZM appears to us to be a backdoor attempt to open up unmitigated energy development in the states' back yard. With the five-year lease sale the industry has access to off-shore areas at an unprecendented rate. This Administration may even enlarge the lease areas available in the five-year plan or add additional areas. We cannot afford such increased activity, especially in frontier and environmentally sensitive areas without the most cautious evaluation and mitigation of impacts. Terminating the CZM program may very well end the consistency test when it is most needed.

Finally, we would like to remind this Committee of the urgency of shaping and maintaining a strong Coastal Zone Management system along our coast. Coastal resources continue to vanish at an alarming rate. Population growth in coastal areas is growing faster than anywhere else in the nation. Seven of the nine largest cities are on the coast. Over sixty percent of our population lives in coastal counties, and by 1990, it is estimated that 75 percent will live in coastal areas. Last year a number of fishing groups testified before this committee as did environmental groups of the crisis in fisheries, which is being caused at least in part by the deterioration of coastal habitat, wetlands, estuaries and shallow off-shore areas due to pollution. Between 1966 and 1975, $226 million in lost revenues resulted from shellfish bed closures. Chesapeake Bay's oyster harvest is today only half the size of what it was a century ago. The development of the Hampton Roads refinery in Virginia threatens to add another layer of pollution to an estuary already grossly polluted and potentially destroyable.

Recreational uses of the coast account for a multi-billion dollar industry. Sport fishermen alone spent $1.2 billion in 1970, ten years ago. With continued growth of recreation along the coast, and the pressures to build second homes, the need for a strong Coastal Zone Management program is more urgent than ever. Growth on barrier islands is running at ten times the national average. Development on barrier islands is setting a scenario for national disaster. Because of the instability and storm-prone nature of these islands uncontrolled growth leads to the urge to build outrageously expensive structures to protect initial investments. A withdrawal of the federal interest in coastal policy at this time is a signal to the states that we are abandoning our national commitment to get control over this kind of rampant destruction of the coast. We urge this committee to reaffirm the Congressional intent to give direction to the states in setting a national policy and program for coastal protection by providing full funding for Section 306 of the CZMA and by reinstating at least half of the CEIP funds. We support the national commitment to cutting the budget, but we believe that it can be done equitably without wiping out entire programs that are vital to maintaining the integrity of our natural resources.

Mr. D'AMOURS. Thank you, Ms. Kaplan. I appreciate your testimony.

Now, Ms. Chasis, would you go ahead.

Ms. CHASIS. Thank you very much, Mr. Chairman.

I am here representing the Coast Alliance as well as the Natural Resources Defense Council.

I serve as chairperson of the Coast Alliance, which is an organization supported by the major national environmental groups including the Sierra Club, National Audobon Society, Environmental Defense Fund, and others.

The Coast Alliance worked extremely hard last year to bring increased public awareness of the need for coastal protection and for reauthorization and strengthening of the CZMA.

NRDC has been, I would say, the primary environmental organization following implementation of the Coastal Zone Management Act since it was first funded in 1974, and we have reviewed most of the State management programs along the east coast and the Pacific coast to try to work to make sure they adequately protect coastal resources,

The justifications for elimination of the program which were given by the Reagan administration have been, I think, well re-

sponded to today. Certainly I think the States have made the case that elimination of Federal funding will lead to a majority of those States with approved programs having to terminate their programs.

We are extremely concerned, too, about States on the brink of coming into the program and the effect termination of funding will have on them. I have been involved in the development of the New York State program, for example, and I am seeing the devastating effects that the prospect of elimination of Federal funding are having on the attempts of that State to put together a coastal program. I would disagree with what Congressman Carney said this morning. I think there is really a chance of New York getting a program if Federal funding is not cut off. We are certainly working as hard as we can to support a State program.

What I would really like to focus on is the other justification given by the Reagan administration for elimination of the program, namely, that the objectives of the act have been satisfied.

As you well know, last year the act was amended in what we consider several important aspects. Section 303(2) set out a series of national objectives which States are required to spend an increasing percentage of Federal grant money on achieving.

We view these national interests as absoutely critical. It was clear last year that Congress recognized that time, funding, and Federal oversight were all necessary to insure that the State programs met those objectives and this is one reason I am very concerned even about discussion of the phaseout or phasedown. I do not think those interests are going to be able to be effectively addressed if Federal funding is phased out in even 2 or 3 years.

Another section that has not been mentioned today is section 306(i) which encourages States to inventory coastal resources of national significance and provide protections for those areas.

States are not even required to do that until 1984. In fact, they are not required to do it. Rather they are encouraged to do it, and the mechanism for encouragement is the award of 306A grant money.

If you eliminate the 306A grant money or phase it out before 1984, there is really going to be no incentive for the States to inventory and protect those areas determined by Congress to be of national significance.

I would give four basic reasons why I think it is essential that the national coastal program be continued to be funded at present levels.

First is the fact that the coast is a national resource. It contains the most biologically productive areas on the continent. There has been a lot of scientific study concerning the importance of tidal wetlands and their value as compared with other resources, and I think their productivity is well established. They and our esturiane coastal waters play a critical role in supporting what is becoming a very sizable and ever-growing commercial seafood harvest.

The retail value of that commercial fishery in 1978 was on the order of $6 billion, and it is increasing each year. This is something of great importance to the Nation.

The savings to the Federal taxpayer from planning for wise development in hazard areas is something that has been mentioned

before. Hundreds of millions of Federal taxpayers' dollars are spent each year in supporting development in hazardous areas. That money can be and should be saved through effective coastal management.

Second, the only national program which effectively and comprehensively addresses coastal resources and calls for their comprehensive management is the coastal zone management program. There is nowhere else to turn if this program is eliminated.

Third is the fact that there are very important improvements, that States have undertaken and are undertaking now because of Federal fundings and oversight. Many of these will be undermined by a cutoff of funds. I would like to give you some illustrations. I have cited several of these in my testimony at page 6.

Maine has adopted regulations under two important coastal resource statutes—coastal wetlands and site location—where none existed before.

Massachusetts has promulgated five sets of regulations to implement its core coastal environmental laws. It also established development restrictions for most of the wetlands on Cape Cod. Finally, the Governor has promulgated an executive order protecting the State's barrier beaches.

New Jersey has asserted control over waterfront development along its entire coastline for the first time. Dune and shorefront protection legislation has been developed and is now before the State legislature. Again, these things are only the result of the Federal funding and oversight.

Delaware is in the process of a comprehensive revision of its regulations implementing the State's beach preservation law and is proposing amendments to strengthen the State's wetlands law. The State is also in the process of developing enforceable criteria to guide decisionmaking under the State's Coastal Act.

North Carolina has completed a comprehensive revision of permitting standards for ocean hazard areas. This has significantly increased the State's ability to manage development in these areas. Permitting standards for other areas identified as areas of environmental concern have also been established.

South Carolina is in the process of revising its permitting rules and regulations to provide greater clarity as to what development will be allowed in critical areas and under what conditions; in addition, a permit monitoring system has been established to track compliance with conditioned permits.

I think there is strong evidence, too, in the States of Washington and Oregon that principally as a result of Federal involvement, the State has now gone out and developed the enforcement capability to implement their coastal regulations and to pursue legal recourse where necessary.

Finally, the CZMP is a cost effective program. I think for an expenditure of $37 million a year, what this Nation is gaining in terms of economic benefits is tremendous. We mentioned earlier the importance to the commercial fishing industry and the savings to Federal taxpayers in terms of disaster relief and flood insurance; $37 million is a small amount of money. We don't think it is anywhere near enough to do the job needed. We would strongly

urge you to continue full funding, and we would not be in favor of a phasedown.

Mr. D'AMOURS. Thank you very much, both of you, for your testimony. Mrs. Kaplan, I think your observation about Edison Electric, or any other energy company, not appreciating the value of the coastal zone management program to them in terms of, as has already been demonstrated and testified to, shortening licensing times, for instance—one of their major problems is getting licensing for the siting of facilities and the like—and for some reason this point has not been appreciated, and I wish I had thought to ask that question while we had someone here who could have tried to answer it.

What do you think—I will address the question to either of you—earlier, it was indicated that since the 1969 Stratton report, which really pointed out the impacting of our coastal areas and the inability of the localities to deal with it, and the inability of the States to help the localities to deal with it, but Mr. Walsh's principle seemed to be that we have so many environmental laws on the books now that we really don't face the situation that we faced in 1969 or in 1972 when we passed the act.

What is your response to something like that?

Go ahead, Ms. Chasis, first.

Ms. CHASIS. In our experience this program has provided absolutely a critical role. The fact is that most land use planning along the coast is still controlled by State and local governments. There aren't a plethora of Federal programs, environmental or otherwise, that deal with coastal land use. This is really the only national program which gets those States and localities to focus on the effects of land use on the coast, and on coastal waters.

So we don't in any way see this as duplicative or extra. As a matter of fact, we see it as absolutely critical, because it is at the State level that most of this regulation goes on, and if it is going to be effective and if it is going to serve national interests, it needs to have the direction from this program.

Ms. KAPLAN. I would like to add one thing. Any other programs, especially permitting programs, address specific problems in specific areas, and there is no other environmental law or program that I can think of that provides the opportunity to assess and plan for incremental impacts of development on the coast.

Coastal zone management is the one that addresses that. It is incremental development, little by little, filling of the wetlands, that is occurring everywhere.

Mr. D'AMOURS. Why do you suppose so many of our ocean and coastal-related programs supported by the Federal Government are being targeted for extinction by this new administration? Have you perceived any rhyme or reason or pattern to this?

With CEIP and CZM and a decision I read about the other day, and Mr. Watt's approach to energy development on the shelf and elsewhere, from your perspective can you provide me with any rationale?

Ms. CHASIS. My own feeling is that this is not an administration that is terribly environmentally concerned or aware.

Mr. D'AMOURS. I am limiting my question—I am asking the question of the ocean and coastal-related areas. Why does there seem to be a particularly harsh approach to our coastal areas?

Ms. CHASIS. The deep budget cuts are not only of coastal and ocean programs. We are seeing very significant cuts at the Interior Department and the EPA, as well as at NOAA. On the other hand we are seeing, for example, the accelerated leasing program that Mr. Watt is proposing. I think there is a real lack of sensitivity to environmental interests, and a very, very prodevelopment approach which is being taken.

I see a pattern not only in the coastal and ocean areas, but in other environmental areas of concern to us.

Mr. D'AMOURS. OK. Did you want to reply?

Ms. KAPLAN. I think Secretary Watt gave a clue last week when he said he views the budget as a means of changing public policy. It is very clear that public policy, which I think is coming from the national resources area, largely from the Department of the Interior at this time, is to expedite development, particularly energy development, at whatever cost, and to that end what we see are that all the environmental assessment programs, pollution control programs, are being drastically reduced.

The Alaskan Outer Continental Shelf environmental assessment program, for instance, is being cut 40 percent for 1982, at a time when they will be doubling the numbers of leases that they are having off the coast of Alaska.

I am afraid this administration views environmental assessment and evaluation as somehow thwarting the development of energy, where in fact it is our view that the two can continue side by side, and indeed if the environmental assessment is not done, they will find that energy development projects are going to become tied up, I am afraid, in litigation.

Mr. D'AMOURS. I have one final question. What do you feel about the suggestion that was made today by a number of witnesses that to effectuate some sort of cost cutting, however unpleasant that may be to certain persons, that it is still a mandate of this administration, and that it could be effectuated here by changing the mix to a 50-50 match rather than the 80-20 existing in current statutes?

I believe one of the witnesses testified—I can't remember which—that that would translate to about a 30 percent cut over all in the budget. You might not find that very pleasant, but if it has the salutary effect of saving the program, what would you feel about a change in the mix and specifically the 50-50 change that has been suggested?

Why don't we reverse the order this time, and you go first.

Ms. KAPLAN. All right. I guess I would say that it is a painful, but possibly acceptable, proposal if it is achieved over a period of time.

I think that 1982 would be too early to impose that. I can see maybe a gradual phasedown to 50-50.

Mr. D'AMOURS. Let me just interject here. We have received testimony that there ought to be some special consideration given to the States which are just starting up the program. Now, if that were so, if those States were treated somehow a little more gently,

those states that are just beginning to implement a program, if they were treated separately, would you then be willing to accept something like a 50-50 mix more quickly than you are suggesting?

Ms. KAPLAN. Well, I would prefer to see it happen over a 2- or 3-year period. I think the States are going to be suffering terrible cuts in all their programs, and it would probably make a considerable difference if it could happen gradually.

Mr. D'AMOURS. Ms. Chasis?

Ms. CHASIS. I agree with that. Even a 30 percent cutback, which is certainly better than what the administration has proposed, is very painful, and it is going to be those national interests which Congress saw fit to specifically articulate in the act which will not be pursued.

Mr. D'AMOURS. Thank you. I have no further questions, ladies. I thank you for having come and joined us and given us your very valuable testimony.

Ms. CHASIS. Thank you.

Ms. KAPLAN. Thank you.

Mr. D'AMOURS. There were two other witnesses who wanted to testify, but they have left, and there being no further witnesses here prepared to testify, this meeting of the subcommittee stands adjourned and the subcommittee will be adjourned until the call of the Chair.

Thank you.

[The following was submitted for inclusion in the record:]

PREPARED STATEMENT OF ROBERT DANIEL O'NEILL, OF THE STATE OF OREGON

As immediate past chairman of the Klamath County Citizen Involvement Program, so far the administrative rule process by which the LCDC program is being developed has created chaos, as a matter of fact, 8 years of total uncertainty.

The idea that this program requires and responds to citizens' involvement is absurd. The condition is that the responsibility is at the local level, but the authority is at the State level.

I am here at the request of the citizens of my area who have asked me to convey to you to please cut these funds and get this monkey off of our backs.

Thank you.

PREPARED STATEMENT OF MICHAEL FITZGERALD, OF OREGON

I live on a ranch and raise sheep and cattle near Brookings, Oreg. I have just completed a 4-year term as county commissioner in Oregon's coastal zone.

I went to register a vote last Friday of all coastal jurisdictions in Oregon against the continued funding of the CZM program, in case nobody noticed.

My own objection—and I speak as an individual, apparently giving the only representation to the American taxpayer and property owner here today, who is the target of all the complicated recommending that we have been hearing—is based on the fact that CZM funds flow into the Oregon statewide planning and zoning program, and that is a mandatory program. There is no trace or suggestion of the volunteerism we have been hearing about today.

This mandatory program is unconstitutional in its ursupation of public and private property rights, and specific confiscation of public and private property.

It is crippling the economy of Oregon and destroying the social structure of that State as developed under the Constitution.

Contrary to what Mr. Ross told you this morning, this program, known in Oregon as the LCDC program, though in motion 8 years, has been unsuccessful. It involves the acknowledged plans of only a handful of Oregon's 36 counties 3 years after the final deadline for those plans to be in.

It is not only unconstitutional, it is not working, but worse than anything is the effect of the sham of the citizen involvement we have heard so much about today.

Taking the effort of the few people who still dare to invest their time and literally throwing it in the wastebasket, then getting the confiscatory county plans they, the militant staff members who are setting the policy and running the program, want.

PREPARED STATEMENT OF WILLIAM K. REILLY, PRESIDENT, THE CONSERVATION FOUNDATION

I am William K. Reilly, president of the Conservation Foundation. The foundation, founded in 1948, is a nonprofit research and communications organization, based in Washington, D.C. We conduct interdisciplinary research and communicate our views and findings to policymakers, opinion leaders, and interested citizens. We believe that public policies must be based on rigorous factual analysis and public understanding.

Wise management of the coast has been a continuing concern of the Conservation Foundation. As early as 1967, we conducted a series aof studies demonstrating opportunities to conserve critical coastal areas. During the 1970's, we produced several publications intended to aid State and local government to address coastal needs.

Almost exactly a year ago, in March 1980, we issued a report "Coastal Zone Management 1980: A Context for Debate," in which we suggested a future course for the coastal zone management program. Several messages from that report remain valid today.

One of those messages was the continuing seriousness of coastal problems. Demands upon coastal resources are more intense today than they were in 1972, when the Coastal Zone Management Act was enacted. And they promise to grow still more intense during the 1980s. Offshore oil and gas development promises to have massive coastal impacts. So does the demand for deepwater ports for petroleum imports and coal exports, for natural gas and pipeline terminals, and coastal sites for refineries and power plants. Demand for residential development is also growing, putting greater pressure on senitive coastal ecosystems and exposing ever greater populations to flooding and hurricane threats. In short, demands on the coast—and the resulting problems of responding to those demands—are not going to disappear.

Another message was that many of the most important opportunities to protect coastal resources lie at the State and local levels rather than at the Federal level. We suggested a year ago that environmentalists—and I quote—"should direct fewer of their coastal management efforts to Washington and more to the States and local governments . . . environmentalists must now press for effective action at the State and local levels, where . . . approved [coastal zone management] programs are being implemented."

With these points in mind, the report made recommendations to Congress and to the States. Congress at that time was being asked to reauthorize the CZMA. We recommended that it do so, but "cautiously."

"State management programs have only recently begun to enter the implementation phase envisioned in the 1972 law, [the report noted]. Coastal zone management is in this sense a fledgling program, one which has proceeded to date along the path laid out in the statute, and it should be given another half decade to prove itself.

"But [the report continued], reauthorization now should in no sense constitute an implied promise to support the program indefinitely. What is a fledgling program today will not be so in the mid-1980s. By then the program will need to demonstrate real results, to prove itself worthy of further support."

To states starting to implement their management programs, the report stressed the need to concentrate on producing results meaningful to citizens and coastal interests in their states. State managers, [the report said]

"should recognize the need to attract and build a constituency of state supporters. If state programs are to merit future federal or state budgetary support—and federal support may well expire during the 1980s—they must have proved useful to someone. . . . The invitation open to the states is to be inventive and effective. The challenge is to make good quickly."

Little did we realize when we wrote those words that the challenge might be to make good this quickly. When we wrote that federal support might well expire during the 1980s, we did not have in mind that it could expire in September 1981. Frankly, we would like to see the funding of this program continued—for the same reasons that we favored reauthorization last year. This is a state-focused program, and the program is doing more than any other to aid the states (and through them many local governments) to develop their own capabilities to deal with coastal issues.

We recognize, however, that these are difficult economic times, that many programs are being reduced or eliminated, that coastal programs—small as they are in context of the entire budget—are unlikely to come through unscathed. So we've given considerable thought to federal initiatives that are especially worthy of support in these times of budget stringency.

We have reached these conclusions:

First, if Section 306 grants to the states for implementation of their coastal zone management programs must be cut back, the states should still be given time to adjust to the change. State-level constituencies for coastal zone management are still building. To cancel funding abruptly now would be to pull the rug out from under state efforts. Funding for at least two more years, at a reduced level if necessary, seems highly desirable to give the political processes at the state level time to operate.

Second, we think it important that the estuarine sanctuary program created by Section 315(1) of the CZMA be continued, as the Administration proposes. This small program represents an essential experiment in coordinating the efforts of federal, state, and local governments in the management of estuarine resources.

In identifying the estuarine sanctuary program, we start with the proposition that the federal government must, at minimum, continue to bear responsibility for actions that states and localities *cannot* reasonably handle by themselves. Among the most significant of those actions—which have great impact on the coasts but which states and localities often find beyond their control—are actions of the federal government itself.

Let me suggest an example. If a state or locality decides to modernize its ports to facilitate the export of coal, it needs cooperation not only from state and local agencies but from federal ones as well: the Corps of Engineers, the Environmental Protection Agency, the Fish and Wildlife Service, the Maritime Administration, and so on.

Many of the important projects that raise particularly difficult coordination issues take place in estuaries. And the Estuarine Sanctuary Program, which might more accurately be called an estuarine management program, helps states address these coordination needs.

Our third conclusion is that the same budget stringency applied to coastal management programs should be applied to the far more expensive federal programs that aid and encourage development of coastal high hazard areas. Barrier islands and coastal high hazard areas are natural buffers between land and sea, absorbing the effects of powerful storms and the constant erosion of the shoreline. Extensive development of these hazard areas not only brings degradation of valuable coastal resources but also potentially high losses of life and property.

According to the Interior Department's Barrier Island Study, the population of barrier islands increased 153 percent between 1945 and 1975. Fourteen percent of the land area of these fragile and hazardous islands is considered urbanized—a much higher percentage than for the nation as a whole.

Federal policies unwittingly encourage and subsidize unwise development in these hazardous areas. Low interest loans and grants provide assistance for basic infrastructure: the roads, bridges, causeways, water and sewer systems, etc. needed to support substantial residential or commercial development. These loan and grant programs, designed to assist communities throughout the country, have historically made little or no special provision for areas subject to acute and chronic hazards.

Once a community is established in a hazard area, residents may seek federal funds for structures such as groins, bulkheads, and seawalls—all designed to protect property from the natural effects of coastal storms and the ongoing processes of shoreline erosion and migration. Finally, when disaster occurs, the federal government not only provides relief but all too frequently funds the rebuilding of damaged communities in the same fashion and location that made them vulnerable to damage in the first place.

Let me give you one example. Until September 1979, the sewage treatment plant on tiny Daughin Island, a barrier island off the coast of Alabama, served 100 of the 1200 houses on the island; the remainder were served by individual septic systems. The lack of additional septic drainage fields limited the island's development. Then came Hurricane Frederic, which destroyed or severely damaged most of the homes on the island as well as the bridge connecting it to the mainland. The Federal Highway Administration now proposes to rebuild the bridge with some $34 to $40 million of Federal funds. (The estimated cost of this one bridge, by the way, is roughly the same amount budgeted by the last Administration for 306 grants under the CZMA during fiscal 1982.) The proposed bridge construction has been challenged in the courts by several environmental groups.

If the bridge is nevertheless completed, EPA has proposed to go ahead with funding for an upgraded treatment plant that would not only serve all 1200 houses on the island but also provide excess capacity to allow construction on 2000 undeveloped lots in the high-hazard zone. Although Dauphin Island requested a temporary withdrawal of the treatment plant funds until the bridge is rebuilt, citizens were assured that the project would be returned to the head of the state's priority list if the bridge is completed.

Dauphin Island is only one of many possible examples. The point is that the taxpayer has been footing the bill for facilities that permit private development in coastal high hazard areas, then for protective structures such as seawalls, and then for reconstruction after disaster strikes. In the process, the federal government has degraded valuable coastal resources. It has also spent—and in our view, wasted—vastly more than anyone has ever thought of spending on coastal zone management.

EPA, FEMA, and other agencies have moved recently to reduce this waste by making special provision for coastal hazard areas and barrier islands. Bills that the Congress will be considering during the current session would cut this waste further. We are pleased by the Agency actions and hope for early enactment of sound legislation cutting expenditures for development in coastal hazard areas.

In sum, we would emphasize three conclusions:

First, if the 306 program must be cut back as part of overall budget reductions, we urge that funding continue at least two years, at reduced funding levels if necessary, so that state political processes may adapt to the change.

Second, we urge that the estuarine sanctuary program be continued, as the Administration proposes.

Third, and most important, if budget stringency compels the cutting back of programs to aid the coast, it is important that the same stringency be applied to cut back the far more expensive federal programs that damage it by encouraging unwise development of coastal high hazard areas and barrier islands.

Finally, I wish to make clear that we understand and support the need to reduce the federal budget. Significant budget reductions can actually result in improving the conservation of the coasts, as I have suggested. However, as we remove or reduce the federal role in coastal development we need to recognize that, for state and local governments to be able to step up effectively to their new, expanded role, there needs to be an orderly transition. That's what continued funding ought to support.

Mr. Chairman and Members of the Committee, I appreciate your invitation to present these views today and I am pleased to respond to your questions.

Prepared Statement of Merilyn Reeves, Natural Resources Director for the League of Women Voters of the United States

I am Merilyn Reeves, Natural Resources Director of the League of Women Voters of the United States. The LWVUS is a citizen education and political action organization composed of over 1350 local Leagues in the 50 states, the District of Columbia, the Virgin Islands and Puerto Rico. The League has a long history of involvement in environmental and land use issues that began in 1956 with a study of coastal and inland water resources. In the early 1970's we strongly supported establishment of the federal Coastal Zone Management program, anticipating that the program would provide both a forum for resolving conflicts over land and water uses in the coastal zone and some protection for fragile coastal resources. In 1976 we supported amendments to the program to enhance the ability of states to evaluate the costs of increased energy production and cope with the consequences. Throughout the past five years, Leagues in every coastal state have been actively working for the development of strong, comprehensive state coastal programs.

Realizing the need for citizen support to make these programs work, Leagues have undertaken a variety of efforts to encourge widespread citizen interest in the development of state programs. Most recently, the League joined with other groups in sponsoring the Year of the Coast to draw attention to the value of coastal resources. Throughout 1980, state and local Leagues undertook dozens of public awareness activities. This nationwide celebration was a great success at educating thousands of Americans to the importance of protecting, restoring, and where we can afford to, wisely developing the physical and biological resources of the coastal margin.

In retrospect, it is evident that this enlightened public had a significant impact on the major coastal event of 1980, the reauthorization of the Coastal Zone Management Act (CZMA) by the Congress. Broad-based and vociferous support for the CZM program was exhibited time and time again in the many hours of testimony gathered during regional oversight hearings in 1979 and 1980, as well as subsequent

reauthorization hearings in Washington. While a predictable degree of debate ensued over substantive amendments offered to the Act, not a single comment entered into the record called for termination of the program.

The League of Women Voters was in the forefront of those urging reauthorization of this important program. Several League members testified at regional hearings and we addressed both this subcommittee and the Senate Commerce Committee here in Washington just a year ago. We pointed out that while the CZM program was beginning to have a positive effect on the management of the nation's coasts, certain weaknesses in the statute had hindered the program's effectiveness. Many of these deficiencies were addressed by amendments to the Act, particularly those expanding and clarifying Section 303 policies and objectives and those providing additional incentives to states such as the Section 306A special projects grants. Entering the new year, the League was hopeful that a renewal of attention on the nuts and bolts of state programs would produce the type of results envisioned at the time of our original support for this legislation.

In the few brief months since Congress acted to reaffirm the nation's commitment to the wise use and management of the coast by reauthorizing the CZM program for five years, our position has not changed. We believe that a stable source of funding—federal funding—is necessary for the continuation and success of this program.

The Reagan Administration has proposed total elimination of funding for Section 306 administration grants, the heart of the CZM program. The President's Program for Economic Recovery asserts that, with 25 approved state programs, the intended purpose of the federal program has largely been achieved. However, the League takes strong issue with the view that the program has reached maturity. And we strongly oppose sudden and unplanned termination of federal assistance.

In all fairness, the CZM program has made progress in accomplishing many of its objectives. For example, better coordination between federal, state, local and regional government now exists in many coastal areas because of the program. In many cases, planned economic development of the coastal zone has now replaced previously sporadic, haphazard growth and development. And greater predictability exists for both public and private investments in industry, housing, recreation and conservation.

However, in spite of these accomplishments, there remains much unfinished business. The vast majority of states are still in the critical early stages of program implementation, having received only two or three years funding. In many cases, there has not been enough time for states and localities to fully institutionalize their programs into the established and accepted functions of their governments. Further, while the CZM program retained its fundamental state-focus after the 1980 amendments were added, a new emphasis was placed on specific national goals. States are now looking to the federal government for direction in considering the proper management of coastal resources of national significance, and in considering such national interest goals as the siting of energy facilities, the expansion of ports and harbors, and the location of other coastal-dependent developments. Without the CZM program, how will the national interest be addressed?

In making this budget proposal, the Reagan Administration too easily assumes that the states have the capability of fully financing their own CZM programs, and doubts that most programs would be abandoned. However, at a recent meeting of the Coastal Organization, state officials down the line confirmed that an unplanned and abrupt end to federal funding, as proposed, would severely restrict them from locating and appropriating the necessary funds to continue coastal efforts. In many cases, officials said, state programs would be killed. In jeopardy, as well, are the various coastal planning and management activities carried out by local governments with federal monies passed through the states. Although federal funding is critical at this time, the League fully believes that once the program matures and is more thoroughly integrated into the functions of state and local governments, states should bear an increasingly greater share of the financial burden. However, until that maturity is demonstrated, and until fair warning is given to states that were anticipating five years of grant funding, we cannot expect the states to shoulder the costs of this program alone.

In summary, the League stands by its position taken last year during the debate over reauthorization of the Coastal Zone Management Act: The nation's coasts and shorelines face ever-increasing and competing demands for their limited resources. The economies of whole towns, cities and regions are dependent on the viability of these resources, including fisheries and both the natural and man-made attractions supporting coastal tourism. In the search for new energy and mineral sources, development of outer continental shelf oil and gas deposits has taken on greater importance. And the new technologies of ocean thermal energy conversion and deep seabed mining create new management needs for coastal lands and waters. Industry

and coastal-dependent commercial uses must vie for space, as do those who seek the coast for recreation and a renewal of spirit. The population projection indicating that by the end of this decade 75 percent of the American people will reside within 50 miles of the natio's shorelines is mind-boggling. The need for a rational balancing of competing demands has never been greater.

The CZM program is the only governmental program that has begun to address and reverse a legacy of expedient and uncoordinated decisions regarding coastal resources. Federal funds spent to help states carry out comprehensive planning and institution building during the last six years have been a good federal investment. But the value of that investment, in terms of both national and state needs, cannot be fully realized unless the program continues. Premature termination of federal funding in fiscal year 1982 is unwise and irresponsible. Short-term fiscal benefits must not overshadow the long-term deleterious effects on coastal resources arising from poor coordination and sporadic planning. Taking into account both the national interest and the known capabilities of states, full funding of the CZM program in fiscal year 1982 is the only rational approach.

Prepared Statement of Sarah Chasis, President, Coast Alliance for Coast Alliance and the Natural Resources Defense Council

I welcome this opportunity to testify before the Oceanography Subcommittee of the House Merchant Marine and Fisheries Committee on the proposed budget cuts in the Coastal Zone Management Program and the Coastal Energy Impact Program. This testimony is presented on behalf of both the Coast Alliance and the Natural Resources Defense Council. The Coast Alliance is a non-profit organization dedicated to advancing public understanding and protection of the coast. It was formed and is supported by the major national environmental organizations, including Sierra Club, Friends of the Earth, National Audubon Society, Natural Resources Defense Council, Environmental Defense Fund, National Wildlife Federation, American Littoral Society, Oceanic Society, and others. The Coast Alliance sponsored the Year of the Coast in 1980 and, as part of that effort, worked for reauthorization and strengthening of the Coastal Zone Management Act. As president of the Coast Alliance, I am here today because of our concern that unless the proposed budget cuts are rejected, the progress made over the last years for coastal protection will be completely undercut. I am also testifying on behalf of the Natural Resources Defense Council (NRDC), a national environmental organization with a membership of over 45,000 and offices in New York, Washington, D.C. and San Francisco. NRDC through its Coastal Project, of which I am co-director, has been the principal national environmental organization monitoring implementation of the Coastal Zone Management Act since its passage. We have worked at the national, state and local level to promote the development and implementation of coastal zone management programs which adequately protect valuable coast resources and meet the requirements of the CZMA. We have reviewed and commented upon every Atlantic and Pacific state's program. NRDC actively supported reauthorization and strengthening of the CZMA.

SUMMARY OF POSITION

The Reagan Administration has proposed total elimination of all federal funds for Coastal Zone Management. If approved by Congress, this cut would kill the only national program for comprehensive coastal management and protection. It would mean that the Coastal Zone Management Act, which was reauthorized by Congress for another five years in 1980, would be functionally repealed.

The following justification has been offered by the Reagan Administration for these cuts:

"1. The Federal CZM assistance has largely fulfilled its intended purpose with 25 approved State programs covering 78 percent of the coastline. The Federal Government has achieved the original objective of the grant assistance program, which was to help States develop and implement CZM programs. The States should be expected to fund fully a program which manages their coastal zones.

"2. Given that many of the States' CZM programs have been in existence for several years and are part of their overall environmental protection activities, it is doubtful that most efforts to date would be abandoned by States."

We take strong issue with the stated reasoning and with sudden and unplanned termination of federal assistance.

1. This budget proposal assumes that states have the capability of fully financing their own CZM programs, with only a few months notice. But most states cannot. Withdrawal of federal funds will mean the loss of coastal zone management pro-

grams in most states. The proposed cuts therefore are the functional equivalent of a repeal of the Coastal Zone Management Act itself.

2. This program has made progress in accomplishing many of its objectives. Better coordination between federal, state, and local and regional government now exists in many coastal areas because of the CZM program. In many cases, planned economic development of the coastal zone has now replaced previously sporadic, haphazard growth and development.

Yet in spite of these accomplishments, the CZM program has not yet achieved the maturity that the Reagan Administration cites. Just last fall, the Congress reaffirmed the nation's commitment to the wise use and management of the coast by reauthorizing the CZM program for five years. While the program retained its state focus, a new emphasis was placed on specific national interest goals and on the proper management of coastal resources of national significance. The federal government must provide direction and oversight to ensure that the states work towards meeting these national goals, which would be forsaken without the CZM program.

3. There is tremendous inequity in the federal government's proposing to accelerate offshore leasing over the next five years yet giving the states no money to deal with the impacts of this accelerated leasing. Huge federal r enues ($11 billion) are projected for fiscal year 1982 from accelerated offshore leasing. With the elimination of funding for the coastal zone management program, none of this money would go to helping states manage or mitigate the effects of offshore drilling.

4. We stand by the position taken last year during the debate over reauthorization of the Coastal Zone Management Act: the nation's coasts and shorelines face ever-increasing and competing demands for their limited resources. The economies of whole towns, cities and regions are dependent on the viability of these resources, including fisheries and tourism. Industry and coastal-dependent commercial uses must vie for space, as do those who seek the coast for recreation and a renewal of spirit. The CZM program is the only governmental program that has begun to address and overcome the fragmentary and short-term decision-making processes regarding coastal resources that have prevailed to date. Federal funds spent for comprehensive planning and institution building during the last five years have been a good federal investment. But the value of that investment, in terms of both national and state needs, will be lost unless the program continues. Once the program matures and its benefits become more apparent, states should be willing to bear a greater share of the financial burden.

We urge you to fight the abrupt and premature termination of funding for Coastal Zone Management. Taking into account both the national interest and the known capabilities of States, we ask your support for full funding of the CZM program in fiscal year 1982 ($37 million).

THE NATIONAL INTERESTS SERVED BY A NATIONAL COASTAL ZONE MANAGEMENT PROGRAM

As Congress recognized when it reauthorized the Coastal Zone Management Act in 1980 for another five years, the coastal zone management program is the only national program to comprehensively address the need for protection and effective management of the nation's coast. The fact that the program is implemented through the development and implementation of state coastal zone management programs does not detract from the fact that there are vital national interests which Congress sought to further through the passage and reauthorization of the CZMA. Maintenance of the national program is essential to protecting these national interests. It also is an economic way to protect these interests: by spending only $40 million annually, the nation can reap very significant economic benefits, far in excess of the $40 million.

What are these national interests that the national coastal zone management program protects? Congress detailed them only last year when it amended and strengthened the CZMA. These national interests, set out in § 303(2), include: the protection of valuable coastal resources, including wetlands, floodplains, estuaries, beaches, dunes, barrier islands, coral reefs, and fish and wildlife and their habitat; the management of coastal development to minimize the loss of life and property as well as the cost to the federal taxpayer of providing disaster relief and flood insurance; the need for priority consideration for coastal-dependent uses; increased public access to the coast for recreation; assistance for redevelopment of deteriorating urban waterfronts; enhancement of living marine resources. Under the statute, over the next five years coastal states are to spend an increasing percentage of their § 306 grant money on activities which will lead to significant improvement in achieving these and other national objectives. This articulation of national interests and the linkage of continued federal funds to achievement of these goals was needed

because state coastal zone management programs do not yet fully protect national interests. More time and money, as well as federal direction, are needed to accomplish this.

Congress also recognized that there are coastal resources of national significance which must be protected (§§ 304(2) and 306(i)). Through the use of incentives, namely the § 306A resource management improvement grants, the CZMA seeks to encourage states to provide such protection. If they do not, it may become necessary for the federal government itself to protect these resources.

Congress recognized that, to further the national interests, a continuing federal presence was needed to provide direction and assistance to states. Thus, Section 312 of the amended Act provides for continuing federal review of state implementation of improvements in coastal zone management programs.

The fact is that the coast is a national resource. Its effective management benefits the entire nation as well as future generations. The economic benefits we reap from a healthy coast are enormous. The coastal zone includes the continent's most productive and valuable ecosystems. Two thirds of the fish species which make up the annual U.S. seafood harvest depend on the coast for some portion of their life cycle. The economic value of this fishery resource is growing annually. In 1978, the retail value of the entire U.S. commercial fishery was only a shade under $6 billion—the highest it has ever been—and it is growing every year.

The tidal wetlands which border estuaries and edge the landward side of barrier islands produce food to exceed the output of a rich wheat field by tenfold and have been estimated to provide $25,000 per acre, per year (in 1973 dollars) of water purifying capability.

Barrier islands, dunes and beaches serve as natural protective barriers against the assault of storms and hurricanes. Protection of these areas from unwise development can help avert damage to life and property and can save federal taxpayers the hundreds of millions of dollars which are paid out each year in the form of federal disaster assistance and federally-subsidized insurance payments.[1]

Opportunity for public access to the coast is in the interests of all Americans. Yet the opportunity for such access has been severely restricted. In many regions of the country, particularly the Northeast and the Great Lakes, only a small percentage of the coastline (2-4 percent) remains in public ownership.

The above represent some of the facts about the coast which point to its importance as a national resource. the values of the coast, combined with the fact that what happens along the coastline of one state can have dramatic effects on the citizens in adjoining states and throughout the country, underscores the national need for continuation of the CZMP—the only national program to recognize the importance of the coast the establish a comprehensive scheme for its protection and management. Moreover, for the very few federal dollars involved in this program, sizeable economic gains can be achieved for the entire country.

EFFECTS OF PROPOSED BUDGET CUTS

The Coastal States Organization has conducted a preliminary survey and found that without federal assistance 80 percent of existing state CZM programs will be significantly curtailed or shut down. This verifies our own impression which is that federal funding and oversight are essential to the development and continuation of coastal zone management programs. It does not make sense to invest in coastal management for six years (1974-1981) and then see that investment made worthless because of hasty and ill-considered elimination of federal funding.

Not only will existing programs be lost and the federal investment in creating them. So too will be opportunity for improvements in these programs, envisioned by the 1980 Amendments as necessary for the national interest.

Moreover, there are still several key states (New York, Florida, New Hampshire, Texas) which have not yet, but are close to establishing coastal zone management programs. These states represent major and important portions of the nation's coastline. The promise of federal funding has been essential to getting state legislatures and local governments within these states to support coastal management.

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[1] The winter storms of 1977-1978 cost the federal government $190 million in disaster relief to the State of Massachusetts alone. The Corps of Engineers spends millions of dollars annually constructing artificial barriers along the coast even though the efficacy of these measures is highly questionable. The Federal Flood Insurance Program represents the second highest liability of the federal government after social security. Insurance payments under the program have far exceeded the amounts paid in through premiums; thus, the federal taxpayer has been heavily subsidizing the government's underwriting of insurance for development in the floodplain, including the coast.

The elimination of federal funding will be devastating to efforts to establish programs in these states.

The importance of continued federal funding and federal oversight of state coastal zone management programs cannot be overstated. By way of illustration, let us point to some of the significant steps which states have taken or are taking because of this funding and oversight.

1. Maine has adopted regulations under two important coastal resource statutes (Coastal Wetlands and Site Location) where none existed before.

2. Massachusetts has promulgated five sets of regulations to implement its core coastal environmental laws. It also established development restrictions for most of the wetlands on Cape Cod. Finally, the Governor has promulgated an Executive Order protecting the state's barrier beaches.

3. New Jersey has asserted control over waterfront development along its entire coastline for the first time. Dune and Shorefront Protection legislation has been developed and is now before the state legislature.

4. Delaware is in the process of a comprehensive revision of its regulations implementing the state's Beach Preservation law and is proposing amendments to strengthen the state's wetlands law. The state is also in the process of developing enforceable criteria to guide decision-making under the state's Coastal Zone Act.

5. North Carolina has completed a comprehensive revision of permitting standards for ocean hazard areas. This has significantly increased the state's ability to manage development in these areas. Permitting standards for other areas identified as Areas of Environmental Concern have also been established.

6. South Carolina is in the process of revising its permitting rules and regulations to provide greater clarity as to what development will be allowed in critical areas and under what conditions; in addition, a permit monitoring system has been established to track compliance with conditioned permits.

7. Washington and Oregon have made significant strides in developing the capability to monitor compliance with coastal regulations and to enforce compliance through legal action where necessary.

Without continued federal funding and oversight, these important efforts which are now underway would come to a halt. Others which have not yet begun, but are needed, will never begin.

For all the above reasons, we strongly recommend level funding for the Coastal Zone Management Program in fiscal year 1982.

THE COASTAL ENERGY IMPACT PROGRAM

The Reagan Administration has proposed elimination of the Coastal Energy Impact Program (CEIP), as well as funding for implementation of state coastal zone management programs, in fiscal year 1982. At the same time, the Administration is contemplating a more accelerated offshore leasing program. The effect of such actions is draconian: states' ability to manage the impacts of OCS-related development would be undermined, at the same time states would be exposed to the increased likelihood of such development occurring. Such an approach is outrageous and flies in the face of the national interest in the sound management and continued vitality of this nation's coastal resources.

The Administration anticipates $11 billion in federal revenues from OCS leasing in fiscal year 1982. Can it spare none of it to assist the states in managing and mitigating the effects of such development?

We believe that the conduct of an accelerated national leasing program is unacceptable in the absence of a national commitment to a fully funded coastal zone management program, including funding for state participation in the OCS leasing process.

Thank you for this opportunity to testify.

PREPARED STATEMENT OF STEPHEN OLSEN

My name is Stephen Olsen. I am Director of the Coastal Resources Center at the University of Rhode Island Graduate School of Oceanography in Narragansett, Rhode Island. The Center began working with the state's Coastal Resources Management Council in 1972 and drafted the Rhode Island Coastal Zone Program that was approved pursuant to OCZM 306 regulations in 1978. We continue to serve as the principal policy development and planning arm of the Council and work closely with other state agencies and local governments on issues related to coastal and marine resource management. I served as Chairman of the New England-New York Coastal Zone Task Force in 1978-1979. I am here today at the request of the

Committee and not as an official representative of the State of Rhode Island; my comments reflect my own opinions.

I would like to briefly outline the probable impact of the proposed cessation of 306 funding to the structure of the Rhode Island CZM Program and then discuss the importance of the coastal management program to our state.

If 306 funding ceases some 33 people who presently work in support of the Rhode Island coastal program will be terminated. This will include 75 percent of the permit processing staff, all the policy development and implementation staff at the Coastal Resources Center, all education efforts, all enforcement personnel recently hired to support the Program and 90 percent of the administrative and support staff. We will be left with the 17-member Coastal Resources Management Council which was created by the legislature in 1971 and charged to both plan for and regulate activities in our coastal zone. We expect the legislature to continue annual appropriations to support the Council itself but we do not foresee additional funding to cover the people funded with 306 monies. Council members serve part time. Without 306 funds they will be supported by a tiny permit processing staff composed of two engineers in the Department of Environmental Management. It is all too clear that the critically important role of the present Program in issue analysis, conflict resolution and coordination of activities along the shore and in tidal waters will be curtailed. Many ongoing resource management activities will cease altogether. The Program will be reduced to the processing of individual permits, which is not management.

I will now try to sketch out what the Rhode Island Coastal Program is accomplishing and why we feel that our efforts are important. I think we should first recognize that multiple use conflict resolution within the context of ecosystem management is a new game, a very complex one, and something we are only beginning to learn how to do. When we wrote the state's CZM Program in 1977 there were no models. The Program adopted was the third attempt at a complete draft. A very active and productive two-year public participation effort provided us broad support. As one of the first group of Programs considered by OCZM for 306 approval we were the object of intense scrutiny by the Natural Resources Defense Council. Their criticisms and OCZM's reactions were in many ways useful but the Program that was adopted is, I think, an effort to be too many things to too many people. When the Program was adopted, we knew it would have to be modified and this has indeed proved to be all too necessary. A major problem with which we are presently struggling, and winning, is that the Council's permit function has become mired down in a sea of expensive, time consuming, paperwork.

It is obvious to those of us working in coastal management that the Program, as adopted, only sets the stage. Detailed special area plans are essential if the Program is to provide a forceful means of managing such complex and highly productive ecosystems as the salt ponds along the south shore and charting a future for our long neglected urban waterfront at the head of Narragansett Bay. We are making good progress but the two detailed special area plans we hope to complete before the funding dries up should be the first and not the last step in this direction.

We have learned that some problems take years of effort to crack, little of which relates to a mere permitting function. An example is the dredge disposal problem that has virtually halted all dredging in the State for a decade. The result is that shipping is curtailed in the Port of Providence and marines choked with silt are going out of business. We are making progress advocating spoils disposal techniques like salt marsh building but the job is certainly not done. Then there are the new and unforeseen problems that a meaningful coastal management Program must address. When the Council was created in 1971 nobody foresaw that it would be the principal state agency overseeing the siting of a proposal nuclear power plant in 1978. Defining that regulatory process took two people at the Center the best part of a year. In 1977 we did not predict the prospect of massive dredging projects for the coal ships that would probably by plying the Bay by the mid 80's. We could predict a fight between the fledging aquaculture industry and Bay fishermen and that is now upon us. In order to deal with these issues effectively, the Council cannot sit back and rely on the permit process to bring the issue before them. By that time the alternatives are usually few. An effective program must be out in front with staff capable of analyzing the issues, proposing solutions, organizing meetings and making sure that skills and knowledge at the University are brought to bear on the problem at the appropriate time. This takes staff and the staff must be paid.

Perhaps the most important lesson is that coastal management ultimately must deal with values as much, and often more, than scientifically acceptable "facts." Management is largely the job of finding where people can agree, and in our society concensus on anything is hard to find. To me this means that plans and regulations, if they become immutable after they have been adopted, cannot possibly in them-

selves assure good management. They must be followed intelligently, not blindly, and plans and regulations must be changed when they become outdated. I agree strongly with those who feel that we are, as a society, over regulated. Too often regulations are only the attempt of one faction of society to impose its values. This is a lousy way to build concensus. Any Program must articulate its purpose and the rules by which it will take action but these basics, particularly in a Program as wide ranging as a CZM Program, can only be the first step.

If a CZM Program goes beyond the mere imposition of regulations, if it demonstrates that it is responsive, does not duck real issues and provides needed services to the society it serves then that Program will have a constituency. In Rhode Island we worry about our constituency and we have enjoyed the benefits of solid popular support. This however is built very largely on our education programs, advance planning and conflict resolution activities. Without these ingredients all of which are fueled with 306 funds, our CZM Program can only suffer.

It is necessary in these times to examine the economic benefits of all Programs. The economic benefits of the Rhode Island CZM Program are real but they do not always lend themselves readily to quantification. If the special area plan for the salt ponds achieves its goals the state will retain the values of beautiful and highly productive resources that are a major reason for the area's high real estate values, substantial out-of-state tourist income and are central to the area's value as a recreational resource for the entire state. If a comprehensive management plan is not written and applied then it would appear that the present trends toward decreased water quality, loss of aesthetic values and the mounting use conflicts that accompany crowding will combine to decrease the economic benefits that the area presently generates. Examples of such environmental degradation and subsequent economic losses are all too numerous. The Program's efforts in the upper Bay are beginning to untangle the many conflicts and opportunities in this heavily urbanized area. Through planning, coordination and conflict resolution the Program is beginning to make headway in helping businesses, sister agencies and local governments to find appropriate solutions to the barriers to increased shipping activity and the water quality enhancement necessary if we are to enjoy the recreational and fisheries potential of the upper Bay region. These are only two examples. The Program has provided tangible assistance to the commercial fishing industry by expediting needed dredging and planning the onshore support facilities for a growing industry. The technical expertise provided by Program engineers and biologists to applicants for Council permits have brought modifications to the design of coastal structures that ultimately provide a real economic benefit to their owner.

I have implied thus far that if the 306 funds disappear that at least the Coastal Council's permitting function will continue. This is true, but we must recognize that the Council relies heavily in its decision making on the input from sister agencies which are supported with 306 funds and provide the federal consistency reviews and analysis of the proposal for conformance with other state regulations and plans. If these activities are as drastically curtailed, as we fear they will be, we can only expect that the time needed to sort out federal, state and private issues will stretch out and that conflicts will intensify. If agencies of government cannot obtain or analyze the information they need the reaction is to resist making a decision or to follow the safer course and say no. I find it very sad to imagine our coastal management program being reduced to such a bureaucratically unfortunate fate.

Prepared Statement of W. Samuel Tucker, Jr., on Behalf of Edison Electric Institute

I am W. Samuel Tucker, Jr., Director of Environmental Affairs, Florida Power & Light Company. My testimony today is given on behalf of the Edison Electric Institute. Edison Electric Institute is the association of investor-owned electric utilities. Its members provided approximately 78 percent of the nation's electricity needs, service over 99 percent of all ultimate customers of the investor-owned sector of the industry, and operate in each of the 30 coastal states. We wish to express our appreciation for the opportunity to testify today. At the conclusion of my statement, I would be happy to respond to any questions the Subcommittee may have.

INTRODUCTION

As Edison Electric has stated in previous testimony before this Subcommittee, the electric utility industry supports comprehensive coastal planning for the wise management of our nation's coastal resources. We believe that the 1980s will be a period of "belt-tightening" in which the wise management and use of our resources is essential.

In previous testimony, Edison Electric has provided this Subcommittee with our industry's forecast of electric energy needs over the next 20 years. We feel that the Coastal Zone Management Act recognizes the need for utilization of coastal resources for the development of electric energy facilities as a part of wise coastal management.

Electric energy facilities are uniquely of local, regional, state, and national interest. Electric energy is provided predominantly by public utilities or quasi-public investor-owned utilities under requirement of law in response to demand for services. They are funded, used by, benefit and impact the same group of citizens. For example, any cost for compliance with coastal zone requirements incurred by these facilities is funded by the same citizens which utilize and pay for the electricity they produce. As a result of reviews and permits required under federal and state law, there are no significant impacts from these facilities which are not balanced by their benefits. For these reasons, we believe that the state is the proper government forum for land-use decisions concerning these facilities including matters of coastal zone management.

IMPACT OF PROPOSED BUDGET REDUCTIONS FOR CZMA

We believe, the Administration's budget reductions generally are compatible with CZMA. The CZMA was designed to improve state management of coastal resources. Once developed and implemented with aid of federal, technical and financial assistance, however, these programs were always intended to be carried out by the states. As this Subcommittee is aware, under the 1972 Act, federal financial assistance for state development and implementation of a program was authorized through fiscal year 1977. The Act was later amended to extend development grants through fiscal year 1980 and implementation grants through fiscal year 1985. Through the leadership of Mr. Knecht, the CZMA has been successful in creating state awareness of the need to manage coastal resources and in assisting state development and implementation of management programs. As of January 1981, some 25 states and territories representing nearly 80 percent of the nation's coast are now managed under federally-approved state management programs. EEI has worked closely with NOAA during the promulgation of regulations to implement CZMA and the approval of state programs. We believe NOAA has completed CZMA's task and for this they deserve our acknowledgement.

States electing not to participate, we understand, generally did so for state policy reasons and probably would not submit programs if financial assistance were continued.

In examining the impact of proposed CZMA budget cuts, this Committee should recognize the fundamental distinction between CZM and other federal/state programs, such as those under the Clean Air Act, Clean Water Act or Resource Conservation and Recovery Act. Unlike those Acts, a state's participation under CZMA is truly voluntary; there is no "minimum federal standard" or direct federal authority in the absence of state action. Indeed, during consideration of the Coastal Zone Management Improvement Act of 1980, ("CZMIA"), this Subcommittee specifically rejected such a system.

Under the CZMA, each state elects whether it will participate by developing and implementing federally-sponsored Coastal Zone Management Programs. If the state elects to participate, it (1) receives federal grants to initiate, develop and administer a management program meeting the requirements of CZMA, and (2) obtains the privilege to exercise federal consistency, i.e., to require that certain federal activities are "consistent" with its approved program. In exchange for federal assistance and the privilege of federal consistency, the state voluntarily assumes an obligation to consider, during the development and implementation of its program, certain national interests, such as energy, and to provide for state override of local requirements for uses of regional benefit.

The evaluation of the effect of the proposed budget cuts on these activities should include (1) whether the state management activities will continue, and (2) whether the national interest will be properly considered.

1. *State Management Activities.*—We believe that the CZMA has served its initial function, that is, it has encouraged and assisted interested coastal states to develop federally-approved CZM programs; 20 of the 30 eligible coastal states now have approved programs. With regard to the states without a federally-approved program, we point out to this Subcommittee that the absence of a "federally-approved program" does not connote that no management program exists. For reasons of state policies or need for flexibility, some states have elected not to effect a federally-approved program, notwithstanding the federal assistance and federal consistency privileges.

With regard to the state management activities, then, it appears that they will proceed notwithstanding the proposed budget cuts.

2. *National Interest Consideration.*—States with approved CZM program continue to enjoy the privilege of federal consistency review and the obligation to consider the national interest, with or without financial assistance. So long as states retain this "veto" authority over federal activities, it is essential that they continue to observe the national interest requirement set forth in section 306(c)(8) of the Act. For this reason, it is necessary that NOAA continue to monitor the implementation of state programs. We believe this is intended under the Administration's budget.

In addition to the above effects, the Subcommittee should also consider additional relevant matters.

3. *Effects on CZMIA.*—For those CZMIA provisions which concern the apportionment of grants not provided under the Administration's budget, the need for implementing regulations may be moot. Accordingly, NOAA should be directed to suspend the development of all regulations implementing CZMIA pending final budget determinations.

4. *Federal Consistency.*—With or without any budget reductions, some changes in NOAA's federal consistency regulations are needed to bring those regulations into compliance with the CZMA. NOAA should be urged to undertake and complete these regulatory proceedings, independent of any rulemakings under the CZMIA.

Finally, if this Committee intends to offer an alternative budget reduction scheme to the Administration, we suggest that it focus on grants such as those under section 306(A) and section 308(c) which assist states in making actual physical improvements in management of coastal resources.

We appreciate this opportunity to testify and would be pleased to respond to any questions the Subcommittee may have.

Prepared Statement of Karen E. Gottovi on Behalf of the National Association of Counties

Good afternoon, Mr. Chairman and members of the Subcommittee. I am Karen Gottovi, a commissioner from New Hanover County, North Carolina, and chairman of the Coastal Zone Management Subcommittee of the National Association of Counties. I thank you for this opportunity to express our views on the future of coastal zone management.

It is our understanding that the Reagan Administration has proposed the elimination of funding for the coastal zone management program, and that this budget cut would take effect immediately. I am here today to make the case for an alternative favored by the National Association of Counties.

At our annual legislative conference in March, my fellow county officials and I went through the exhaustive exercise of reviewing the entire Reagan budget proposals for the coming fiscal year. Each policymaking committee deliberated proposed cuts in its area and decided which programs were dispensable, which were essential and which were important, but in our opinion subject to modification. The NACo Board of Directors subsequently reviewed the committee decisions and voted to endorse them.

Thus, what I have to say about coastal zone management—one of the programs deemded very important—should be taken in the context of general NACo support for the President's budget-cutting initiative. We at NACo have not arrived at our conclusions lightly, without careful thought about the need to balance the goal of putting the nation on a solid financial footing, with the objective of maintaining worthwhile programs and services. And coastal zone management is one program that counties believe is worthwhile.

A balanced approach to budget cutting, however, demands that everyone must be prepared to sacrifice to some extent. That is why NACo has come to the conclusion that a gradual phase-out of coastal zone management funding is preferable to an abrupt and complete cutoff, and acceptable to counties even through we, like every constituency, would rather see federal funding continued indefinitely.

We would propose, as an alternative to an immediate cutoff of all coastal funding, a five-year phase-out during the remainder of the period for which the federal program is currently authorized. This would enable coastal states and counties to plan for an orderly transition of financial responsibility for coastal management. It would give us time to come up with alternative means of funding local coastal management institutions that play a key role in administering state laws and in adjudicating competing claims on coastal resources. It would allow us to continue to protect natural resources that have an importance beyond county lines, across state boundaries—indeed, for the nation as a whole.

Coastal counties very much want to continue to serve this role. But we will be hard-pressed to do so if suddenly, and without adequate notice of the cancellation of

a federal commitment, we are thrown back upon our own devices. It took some time for us to get up to speed, and it will take some time for us to shift gears, so to speak, and avoid losing all momentum toward responsible development and protection of coastal resources.

In contrast, an abrupt cutoff of all federal coastal management funding would probably result in the collapse of many state and local programs. Faced with our own budget cycles, we will find it very difficult to respond to such an event. And it is worthwhile to consider the broader implications of this consequence. For the fundamental resource management problems, and the need to mediate among conflicting claims on coastal resources, will not disappear along with federal funding to support state and local programs. Indeed, with the cutback of other federal environmental programs such as clean water, the resource problems and conflicts are likely to multiply.

Special interests on all sides of coastal issues will continue to argue just as vigorously for public sanction of private development and conservation proposals. Someone will have to make the decisions, and to pay for the planning, administration and evaluation that are necessary for responsible decisionmaking. If the state and local machinery for resolution of coastal disputes is dismantled, it is not farfetched to suggest that the federal establishment will bear the brunt of conflict resolution at the behest of private interests. I think that there simply will be no escape because the resource management problems that gave rise to the Coastal Zone Management Act will remain with us, and the public will not let us ignore them for long. Too much is at stake.

In summary, NACo believes that both financial and political considerations support the phase-out alternative to an abrupt and complete cutoff of federal coastal zone management funding. Financially, it is doubtful that the federal government can realistically avoid spending to resolve conflicting claims on coastal resources, try as it might, without wholly abandoning the essential goal of balancing development and protection of the coastal environment.[1] Politically, it makes more sense to help sustain the state and local responsibility for coastal management than to be forced to exercise greater federal domination and control.

Coastal counties would, of course, greatly perfer to be able to continue to manage their own resources, than to see their control eroded away because they are unable to pay for management. Yet that will be the consequence, we believe, of an abrupt termination of federal coastal zone management funding. A gradual phase-out that enables coastal states and counties to adjust their management programs offers the greater hope that decisionmaking authority will remain at the local level.

Prepared Statement of Barbara Fegan, Chairperson, Coastal Zone Management Advisory Committee

I appreciate this opportunity to testify on behalf of the Coastal Zone Management Advisory Committee. The Committee is established under the Coastal Zone Management Act and charged by statute to advise the Secretary of Commerce concerning the coastal zone. The Committee is made up of nine members (we have two vacancies) representing diverse groups and organizations interested in a wise use of this fragile, heavily pressured, and valuable resource. A list of the Committee members is attached.

Since we are in the business of giving advice, the Committee charged me at the last meeting to offer you our recommendations for funding the Program in fiscal year 1982. Members of the Committee have been involved with the Coastal Zone Management Program since its inception. Because, as Committee members and representatives of interest groups, we have had a close relationship with the Program we have been, in many instances, its most severe critics. In the last session of Congress when the Coastal Zone Management Act (CZMA) was re-authorized, the Committee, through its many relationships, scrutinized the Program, evaluated the results, and supported continuation of the CZM Program.

The CZMA supports a rational system for addressing the management issues in this geographic context. Congress rightly recognized that management is most efficient, effective, and practical at the state and local levels so long as a consideration for the national interest is built into the planning process. Because the Committee

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[1] Proof of this proposition might be found in a comparative examination of federal expenditures on coastal conflict resolution—environmental impact assessments, permit proceedings, etc.—in states with approved coastal programs and in states without such programs. I am willing to wager than the figures will show that, in the absence of a state and local mechanism for avoiding and resolving disputes, the federal agencies have had to spend more on adjudication.

was supportive of the CZM Program we were more than disappointed to find that the President's budget for fiscal year 1982 has no funds for the states to implement their coastal management plans.

In essence, the funds the Committee wishes to speak to you about are the funds used to support state programs. Under the CZMA the Federal government funded states on a voluntary basis to develop CZM plans and then continued funding implementation in those states with approved CZM Programs. The Committee is aware and concerned about the following future and/or increased activities in the coastal area:

(1) There is an increasing population shift to the coastal regions with a concommitment increase in the burdens on coastal areas in regard to land useage, transportation, energy, etc. Over 50 percent of the nation's population is presently concentrated in 8.2 percent of our land area, ie., approximately 50 miles from the coast.

(2) There are increasing coal activities along the coast. This burdens present rail and transportation systems and infrastructure for coal activity. Presently many ports are gearing up for future coal activity placing increased burdens on port capacity.

(3) Increasing activities in the offshore regions for oil and gas exploration, production, and shipping.

(4) Increased coastal energy related activities of all types including LNG, petroleum, and coal and energy processing activities.

(5) Development of new offshore technologies such as OTEC, and deep sea mining.

(6) Increased interest and concern for the importance of ocean activities for fishing, trade, recreation, and defense.

Management of the coastal zone focused on the inter-relationships of competing causes and issues and the development of organizational infrastructures and skills at the state and local levels to carry out mutually developed policies between Federal, State, and local levels of government. Few, if any other government activities are so uniquely structured to bring to bear an interdisciplinary approach to policy development and implementation. This approach is particularly needed to reconcile environmental concerns and developmental activities.

With such an increase in coastal activities as has been described the Advisory Committee is of the opinion that the Office of Coastal Zone Management is equipped to assist in the solution of coastal problems and to act, at State, and local levels, as a coordinator, integrator, catalyst and mediator in the solution of coastal issues.

Our next concern was to gauge the estimated impact on the states of a phase out of the CZM implementation grants in fiscal year 1982. This was done by conducting a brief survey by our Advisory Committee members with program managers and interested groups. In order to facilitate this analysis we asked the following questions.

(1) Which states with approved programs are likely to dismantle the CZM agency and efforts if there is an immediate phase out.

In our judgment: Ten (10) states fell into this category.

(2) Which states with approved programs are likely to continue a separate CZM function if there is an immediate phase out?

In our judgment: Ten (10) states fell into this category.

(3) Which states with approved programs would continue coastal zone programs at a reduced dollar level if there is an immediate phase out?

In our judgment: Ten (10) states fell into this category.

(4) Which states without approved programs are unlikely to pursue Federal approval without 306 funding?

In our judgment: Eight (7-8) states fell into this cateogry.

I will summarize the results of the survey. These are approximate percentages (based upon 35 coastal states).

States and activity:	*Approximate percent*
With approved programs:	
Dismantle	30
Continue	15
Reduced levels	30
Without approved programs:	
Not pursue	25

(A list of states in each category is attached.)

While this method of analysis is somewhat subjective it does provide an overall picture and prognosis of approximately where government investment is likely to go should funds be reduced to zero as is anticipated.

Thus, out of 25 states now approved, it is expected only five of the 25 approved states, or approximately 20 percent of approved programs will most likely be continued in present form.

The Advisory Committee feels that this is a waste of government investment in a unique program. The CZM Program has not not been allowed to come to maturity and if the program is phased out abruptly neither State or local governments will have been given sufficient time to adjust to the fact that the Federal government is no longer available or contributory to their specific coastal issues, many of which they can't handle at the State or local levels at this time.

The Coastal Zone Management Act language clearly states that there is a national policy to have coastal management programs. In addition, these programs should focus at the state level with local level involvement. The coastal zone is used by people from all over the country and is really, therefore, a national resource, as opposed to a specific state or regional resource.

What funding formula alterations may be used as an incentive to keep as many states within programmatic guidelines? How may states be enocuraged to continue efforts in coastal activities? How may the program operate during phase out? How may citizen concerns for their coastal resources be protected if the program is phased out?

The Advisory Committee is concerned that these questions be addressed. We therefore make the following recommendations to this sub-committee: In regard to the termination of the Coastal Zone Management (CZM) section 306 state grant program ($34.6 M) and energy impact formula grant program ($7.2 M) we recommend:

The Federal share be reduced over a period of three to five years to a formula of 50/50 percent rather than the present 80/20 formula. We feel that the 80/20 formula may be over generous on the part of the Federal government. At the same time, this will provide the carrot or incentive for state programs to operate at reduced but contributory levels. The Advisory Committee feels that an elimination of Section 306 state funding is tantamount to elimination of the complete CZM Program.

In regard to the termination of the Coastal Energy Impact Program (CEIP) including the proposed rescission in FY '81 of currently available but unobligated funds ($40.0 M) we recommend:

CEIP should be continued in the form of block grant assistance to state governments to prevent or mitigate coastal energy development impacts as authorized in sections 308(b) and (c)(1), (c)(2) and (c)(3) of the CZMA as amended in 1980. We believe that the added flexibility inherent in the block grant form of assitance will result in savings at the State and local levels.

We do not recommend the recapitalizing of the CEIP credit assistance program. The loan program has an excellent administrative record in that no defaults and/or repayment assistance awards have ever been necessary. However, the Advisory Committee recognizes the concern for economy in government and the priority of national interest goals in reducing borrowing to soften inflation and improve private sector productivity. Therefore, the Advisory Committee recommends that CEIP assistance be in grant form only.

The Advisory Committee wishes to point out that the CEIP is a low budget alternative to state OCS revenue sharing.

Pursuant to the Mineral Leasing Act of 1920, as amended, inland states may receive up to 50 percent of the revenues generated on Federal lands. In 1981, the inland states will receive approximately $400 million under this authority as compared to the $40 million available in CEIP funds to coastal states.

In regard to assisting the State and local programs in adjusting their activities to new economic realities the Advisory Committee recommends:

Policies be developed to assist States and localities in phasing down programs but at the same time allowing them to adjust to new economic realities. This may be done by recommending new organizational structures, re-examining citizen input activities, re-shaping priorities, etc., providing information as to how program thrusts may develop with the assistance of other government agencies.

In regard to maintaining citizen involvement in coastal zone management programs the CZMAC recommends:

That the Coastal Zone Management Advisory Committee be retained.

That consideration be given to folding the activities of the Advisory Committee into National Advisory Committee on Oceans and Atmosphere if the Advisory

Committee is not retained so as to allow continuity and retention of citizen experitse and interest in coastal issues.

Provide funds for citizen groups to assist in the development of a national plan for coastal zone reduced operations to make certain that government/citizen investment at state/local levels and national interest continues to be protected.

Let me close by saying that the Coastal Zone Management Program is a small budget Program that is accomplishing a great deal of positive management capability at the state level and it would be extraordinarily unwise to discontinue the program precipitously. When the states have their governmental structures in place, minimum Federal support will be necessary but to withdraw support now means we lose the investment of the last ten years.

Thank you very much. It has been a pleasure.

ATTACHMENT 1

COASTAL ZONE MANAGEMENT ADVISORY COMMITTEE

Barbara Fegan is the President of the Massachusetts League of Women Voters. She is also an active member of the Governor's Task Force on Coastal Resources, the State Coastal Resources Advisory Board, and other important groups. Mrs. Fegan is presently Chairperson of the Advisory Committee.

Paul L. Kelly is Senior Vice President and General Counsel of Zapata Corporation, a major ocean-related natural resources company whose activities include fishing, shipping, marine construction and mining, and serving offshore oil and gas operators. Mr. Kelly is a director of the National Ocean Industries Association and has testified numerous times before Congress.

Alfred E. Hammon is the Supervisor of Port Development for New York/New Jersey Port Authority, and has an indepth knowledge of coastal zone management.

Stephen A. McMillan has distinguished himself among his professional colleagues as a realtor at the local, state and national level during his career. He actively participated in the passage of the Alabama coastal law and has since served as Chairman of the Alabama Citizen's Coastal Advisory Committee. He has recently been elected to the Alabama State Legislature.

Eileen DeGrand Mershart is an educator and a member of the Wisconsin Coastal Management Program's Citizen Advisory Committee. As Chair of that Committee, she helped write the program, policies and goals of the Wisconsin Coastal Zone Management Program. She is also a member of the Superior Board of Harbor Commissioners and was appointed by Governor Lucey to the Interstate Port Authority Commission.

Michele Perrault (pronounced PER-ROW) was the Office Director of the New England Sierra Club, and has an extensive background in land use, coastal, Outer Continental Shelf and marine issues. She recently moved to California to become the Central Coordinator for the Sierra Club's San Francisco Bay Chapter.

Shirley Taylor has a Ph.D in Biology and serves as a Laboratory Technologist at Florida State University. She is currently Chairperson of the National Coastal Task Force of the Sierra Club and a member of the Audubon Society and the National Wildlife Federation. She has been very active in coastal managment activities during the past three years.

Henry Wheatley is President of Ocean Environments, Inc., and Wheatley Realty Corp., and is also Vice President of the Virgin Islands Conservation Society and the Islands Resources Foundation. He has extensive experience in coastal and marine affairs. Mr. Wheatley is the first Black member appointed to the Committee since its establishment.

OCZM staff

Steven R. Purcell, Executive Director of the Committee.

Jeanette Polansky, Committee Staff Assistant.

ATTACHMENT 2

Approved Coastal Zone Program	- -	Likely to dismantle
Maine		Virgin Islands
Massachusetts		American Samoa
Connecticut		Guam
Pennsylvania		Northern Marianas
Alabama		
Alaska		

Approved Coastal Zone Program	- -	Likely to continue
Rhode Island		Louisiana
New Jersey		California
South Carolina		

Approved Coastal Zone Program	- -	Reduced Levels
Delaware		Mississippi
Maryland		Puerto Rico
North Carolina		Oregon
Michigan		Washington
Wisconsin		Hawaii

Without approved Coastal Zone Program	- -	Not likely to pursue
New Hampshire		Indiana
New York		Texas
Virginia		Florida
Ohio		Georgia

DON EDWARDS
19TH DISTRICT, CALIFORNIA

COMMITTEE ON
JUDICIARY

CHAIRMAN
SUBCOMMITTEE ON
CIVIL AND
CONSTITUTIONAL RIGHTS

COMMITTEE ON
VETERANS' AFFAIRS

Congress of the United States
House of Representatives
Washington, D.C. 20515

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March 31, 1981

The Honorable Norman D'Amours
Chairman
Merchant Marine and Fisheries
Subcommittee on Oceanography
3577 House Annex #2

Dear Chairman D'Amours:

President Reagan's budget request for fiscal 1982 calls for zero funding for the Coastal Zone Management Act and the Coastal Energy Impact Fund. I believe that these cuts are shortsighted, and would do harm to both our environment and energy planning systems. I urge you to see that the Subcommittee restores the authorization levels requestedby former President Carter.

CZMA was designed to provide federal assistance for states to plan and develop their own resource management system. California has been the leader in planning for sound management of its coastline, initiating its own program prior to the enactment of this federal law. Today over 25 states participate in this nationally important program.

Our coastlines are very sensitive and energy production under the Outer Continental Shelf Act invites states to participate in the planning for energy development. This is not only for the economical benefit of the nation, but of those states where the resources are found. California has been most helpful in preparing an analysisfor the Federal Government on the impact development will have on its economy withinthe three mile coastal shoreline. At a time when the President is calling for more State and local participation in decisionmaking processes, it would be a mistake to terminate these two programs.

I appreciate your attention to this matter and would once again urge you to see that full funding for these programs is restored. Please see that this letter is made a part of the record on your March 31, 1981 hearing.

Sincerely,

Don Edwards

Member of Congress

DE:raw

OFFICE OF
THE COMMISSIONER

GOVERNMENT OF THE VIRGIN ISLANDS OF THE UNITED STATES

Department of Conservation and Cultural Affairs

P. O. BOX 4340
CHARLOTTE AMALIE, ST. THOMAS 00801

April 8, 1981

The Honorable Norman D'Amours
Chairman
Subcommittee on Oceanography
Committee on Merchant Marine and Fisheries
House of Representatives
U.S. Congress
Washington, D.C. 20515

Dear Chairman D'Amours:

I strongly oppose the Reagan budget cuts for FY '82 which would zerobudget the Coastal Zone Management Program at the Federal level, thereby crippling State and Territorial CZM programs by eliminating their principal source of financial support. Contrary to OMB's assertions, the Federal program has not yet achieved its purpose, and State CZM programs cannot maintain themselves without continued technical and financial assistance from the Federal CZM office. The effect of the CZM program at the local level and the effect of the proposed budget cuts are described in the enclosed summary "THE VIRGIN ISLANDS COASTAL ZONE MANAGEMENT PROGRAM: IMPACT OF PROPOSED REAGAN BUDGET CUTS".

In 1972 Congress recognized that the coast and its immediately adjacent land and water areas encompass many of the Nation's most valuable resources and that it is the area most threatened with deterioration and irreparable damage. Congressional recognition resulted in enactment of the Coastal Zone Management Act to establish a formal management system to assure that the myriad decisions affecting the use of scarce, non-renewable coastal resources would be made on a reasoned basis with the participation of all segments of

APR 14 1981

Honorable Norman D'Amours, Chairman
Subcommittee on Oceanography
Committee on Merchant Marine & Fisheries

the community. Congress created a system of voluntary State programs responsive to State needs which would conform with minimum Federal standards to assure that the National interests were taken into account. Financial incentives were offered to assist States in establishing authorities and implementing programs to manage their coastal resources, according to each State's priorities. Congress proposed to assist the States through the implementation phase of their programs and then phase out the Federal grants. Most States are now at critical stages in their implementation.

Along with 34 other States, the Virgin Islands participated in the Federal CZM program and has just received its second grant for implementation of the Virgin Islands CZM statute, which has become a focus not only for management of coastal resources, but also significant regulatory reform within the Executive branch of Government. It has established a permitting system for land and water use, a bureau which enforces CZM and numerous other local and Federal environmental statutes, a policy unit to prepare long-term plans for areas of particular concern, and a mechanism for coordinating all Federal activities (including grants) in the Territory which affect the coast or water.

Despite these initial achievements, the Virgin Islands CZM program will be hamstrung without continuation of Federal funding for two or three more years. We now receive 80% of our CZM budget through a section 306 grant. The Virgin Islands -- and most of the other CZM States -- interpreted the five-year Congressional reauthorization of the CZM program in 1980 as a clear signal that the Federal Government remained committed to the CZM idea. That reauthorization followed extensive oversight hearings concerning the effectiveness of the CZM program at both Federal and local levels. Congress concluded that CZM had begun to deliver what proponents had promised: a comprehensive system designed to unify what had been a fragmented policy on the use of coastal resources and the institutions to implement those policies. However, Congress also found that most programs were still at the formative stage and had not yet been "institutionalized".

The Virgin Islands CZM program cannot survive intact without a transition period from 80% to 0% Federal funding. What has begun as a well-rounded program with regulatory, enforcement, planning, and development or enhancement aspects will dwindle to a one-sided permitting mechanism. The law requires permits to be processed within a time certain. Ironically, those activities which give the permitting function predictability and rationale -- namely the planning and policy activities -- will be curtailed if the Virgin Islands loses Federal funding for CZM.

Honorable Norman D'Amours, Chairman
Subcommittee on Oceanography
Committee on Merchant Marine & Fisheries

The CZM program has given the Virgin Islands the capability and a system to determine how coastal resources will be used. For the first time, a mechanism for rational decision-making is in place. To withdraw financial assistance at this "make or break" stage would put the Territory back ten years to disjointed and haphazard development which needlessly destroys natural resources and cheats Virgin Islanders out of their heritage.

The Virgin Islands possess some of the Nation's most unusual and fragile resources, such as coral reefs, historic waterfronts, tropical estuarine systems, mangrove lagoons, off-shore islands and cays which provide habitat for marine and bird species. Virgin Islanders consider those resources precious because they are "home". But they are also a National resource enjoyed by thousands of visitors every year. In fact, our natural treasures are also our economic livelihood because tourism represents the foundation of the Territorial economy. Poor management will result in severe economic dislocations, as well as a tragic loss to the Nation.

I urge you to restore full funding to the Federal budget for Coastal Zone Management for at least two or three years. If we are to utilize our coastal resources properly and effectively, then proper management is a necessity. For a small investment not only the Territory but the Nation as well will derive enormous benefits.

Yours very truly,

Darlan Brin
Commissioner

Enclosures
cc: Members of the Committee

THE VIRGIN ISLANDS COASTAL ZONE MANAGEMENT PROGRAM: IMPACT OF PROPOSED REAGAN BUDGET CUTS

NATIONAL BACKGROUND OF COASTAL ZONE MANAGEMENT

Congress enacted the Coastal Zone Management Act in 1972 to establish voluntary State programs to manage the nation's coastal areas. Recognizing that without a comprehensive policy, the pressures of growth and development, such as energy extraction, recreation, tourism, and general urban sprawl would consume and ultimately destroy the national coastline, Congress set up a unique State-Federal partnership. State programs would conform with minimum federal standards, but respond to and be controlled by the states themselves.

To encourage state participation in the CZM program, Congress offered financial support for the establishment of appropriate state authorities and the implementation or "institutionalization" of the state programs. Thirty-five coastal states or territories accepted the federal offer and have participated in programs to manage their coastal resources and balance conflicting interests which range from investors trying to develop business opportunities, to environmentalists trying to preserve selected natural areas, to industry trying to take advantage of coastal locations and resources. As an added incentive to the states, Congress mandated that all federal actions be consistent with local management programs, thus enhancing the state's capability to manage federal activities within its boundaries.

In 1980, the Congress held extensive hearings, including five Regional hearings to scrutinize the progress of the CZM program. After that thorough examination, Congress renewed its commitment to the CZM program with a five-year authorization.

REAGAN'S PROPOSAL TO TERMINATE CZM PROGRAM THROUGH BUDGET CUTS

The Reagan Administration proposes an abrupt and total cut-off of all federal funding for Coastal Zone Management by eliminating the $37,000,000 appropriation for FY '82. The proposed cut is premised on a half truth that the national CZM has "largely served its purpose" and that the state programs can stand alone without some federal financial assistance, despite the abrupt switch from the Congressionally authorized funding over five years to none after October, 1981.

Such a sudden reversal in federal fiscal policy will kill not only the national CZM program, but also the state programs, including the Virgin Islands CZM program, most of which are at "make or break" points in their implementation.

THE VIRGIN ISLANDS CZM PROGRAM

Approved in July, 1979, the Virgin Islands Coastal Zone Management Act establishes the organizational framework for implementing the policies em-

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bodied in the statute and the program document (see appendix for description of program). Through the Division of Coastal Zone Management and an independent Coastal Zone Commission, the CZM program is the primary authority for administering land and water use regulations, managing development, and resolving conflicts between interests competing for resources. The Act consolidated four pre-existing permits into one whose processing is completed within a time certain. As the lead administrative agency for CZM, the Department of Conservation and Cultural Affairs (DCCA) has formulated numerous long-term management plans for Areas of Particular Concern, sites singled out for special attention because they possess unusual or unique attributes. Some are urban waterfronts, some significant natural areas,and some industrial sites. Besides its regulatory and planning functions, the CZM program has enforcement authority for numerous territorial and federal laws, thus avoiding unnecessary and expensive duplication. The CZM program also provides eligibility and easy coordination with other federal programs such as the Coastal Energy Impact program (CEIP), the Marine Sanctuary program, the Estuarine Sanctuary program, and National Marine Fisheries programs. CZM also enforces boating safety laws in the territory.

A few of the Virgin Islands CZM Program accomplishments are listed below:

I. Regulatory Reform and Governmental Coordination

Consolidation of four permits into one (zoning authority, earth change, open shorelines, and trustlands occupancy).

Establishment of joint permit with U. S. Army Corps of Engineers.

Coordination of federal activities through Section 307.

Joint administration of amended Flood Control Regulations.

Cooperative arrangement between DCCA and National Marine Fisheries Service to enforce federal laws.

Establishment of water quality certification process as prerequisite for CZM permit with Division of Natural Resources.

Drafting of Handbook for Homebuilders and Developers to explain procedures and policies of CZM (also listed under long-term planning).

II. Long-Term Planning for Better Resource Management

Intensive Management Strategies for Areas of Particular Concern:

Christiansted Waterfront, St. Croix
Southshore Industrial Area, St. Croix
Salt River, St. Croix
Coral Reefs, St. Croix
Cruz Bay, St. John
Charlotte Amalie Waterfront, St. Thomas
Mangrove Lagoon, St. Thomas
Magens Bay, St. Thomas

Coastal Water Use Plan to resolve problems arising out of competing and conflicting uses of water areas.

Preparation of nomination (including EIS) for Marine Sanctuary at Mangrove Lagoon, St. Thomas.

Ticketbook system for enforcing minor environmental and boating safety laws and regulations.

Preparation of Environmental Factsheets and Curriculum for K - 12th Grade with Department of Education.

III. Promotion of Economic Interests

Joint Port Study with Commonwealth of Puerto Rico.

Daily cleaning of 14 miles of Beach.

Technical assistance to St. Thomas/St. John fishermen in establishment of fishermen's cooperative.

Technical assistance to develop application to provide disaster relief under Fishermen's Compensation Act to local fishermen for hurricane damages.

Reactivation of Fishery Advisory Committees on St. Thomas and St. Croix.

Coordination between Commonwealth of Puerto Rico and British Virgin Islands on items of mutual interest.

CEIP grants for repair of fishhouse, boat ramp, and pier at Frederiksted, St. Croix and boat ramp and pier at Gallows Bay, St. Croix.

IMPACT OF PROPOSED REAGAN CUTS IN FINANCIAL ASSISTANCE TO V. I. CZM

The territorial CZM program receives 80% of its funding ($700,000 from the federal government, pursuant to section 306 of the Federal Act; the Virgin Islands provides a 20% match ($179,064). The proposed Reagan cuts would effectively cripple the program which has been run on a "no frills" basis since its establishment. This year's CZM work program provides for no outside consultants and no construction. The entire local match goes to personnel costs. Without federal assistance, 36 persons ranging from Con-

servation Enforcement Officers to an Assistant Attorney General to Laborers who clean the beaches would lose their jobs.

The practical effect would be to stop all CZM activities except those explicitly spelled out in the enabling legislation -- namely, the regulatory functions which require processing of permits within a time certain. The delegations of authority by which CZM shoulders enforcement responsibilities for various federal and local laws would have to be rescinded, resulting in expensive and unnecessary duplication. The long-term planning efforts directed towards increasing predictability in the regulatory system, resolving conflicts between competing interests, coordinating governmental functions, and public information would all cease because of lack of money. Similarly, the efforts directed toward promotion of economic development, technical assistance and special projects aimed, for example, at identifying appropriate marina sites would stop.

Since its inception, the V. I. CZM program has known that federal assistance would diminish after an initial infusion of funds; consequently, it has made long-term plans to finance CZM through the imposition of water use, submerged and filled land, and boating registration fees. The federal law provides for support of establishment, initial implementation and "institutionalization" of local programs. That implementation and "institutionalization" has not yet been accomplished in the Virgin Islands. The abrupt change in federal funding levels would totally alter that process. Without a more gradual scaling down of federal assistance, the Virgin Islands CZM program will self-destruct. The cut-off comes at a time when the territory is experiencing fiscal difficulties on the revenue as well as the program side. Because of the Virgin Islands tax system, which keeps federal taxes in the territory as the principal source of revenue, the proposed 30% tax cut will mean a loss of 30% of revenue to the V. I. Government as a whole. If that were distributed evenly over all V. I. programs, the Reagan budget, including tax cuts and elimination of program funds, would mean CZM would go from a total budget of $879,064 to $125,344. That amounts to more than "belt-tightening."

CONCLUSION AND RECOMMENDATIONS

Proponents of the Reagan budget cuts have called for an across-the-board and even-handed "belt-tightening." However, they have cut the FY '82 budget for CZM from $37 million to $0, despite a Congressional reaffirmation of the CZM program through a five-year authorization approved in FY '81 for FY '81-FY '86. State programs planned on the basis of that Congressional commitment. The sudden change in budget levels amounts to a major shift -- not in the funding, but in basic policy. The rationale put forward that the CZM program has "served its purpose" is false. Without continued federal funding for two-three years, the State programs will collapse because they have not yet reached maturation; they have not yet been institutionalized.

Ending the CZM program now would be a classic example of governmental false economy. It would mean wasting the State and Federal monies which have been expended during the establishment phase of CZM because neither the federal government nor the states would have anything to show for those dollars or efforts. On the other hand, continuation of the program with a gradual phasing down of federal assistance will allow the states to assume the financial burden in an orderly fashion. For a small investment of approximately $100 million over three years, the nation will achieve a comprehensive coastal policy and the states will have strong mechanisms for responding to local and national interests.

Prepared Statement of New York State Department of State

As Governor Carey has said many times, we in New York State understand the need for fiscal austerity; our record bears this out. However, the Coastal Management Program has been the stimulus for some excellent initiatives at the local government level which need a little time before they can become totally self sufficient. Furthermore, some of the political complexities of reaching consensus on competing needs for coastal space can be ameliorated by minimal incentive support.

We are, therefore, proposing that the federal cut not exceed 80% for the first two years to enable us to assist in this transition. If this can be implemented, it would support a transition period that you may wish to accelerate by increasing the State match. The attached chart shows New York State's fiscal position in past years and how it would fare if we qualified under the above formula.

New York State has, over the last five years, prepared and sought to establish a statewide coastal management program that responded to the purposes of the federal Coastal Zone Management Act of 1972, and Coastal Zone Management Improvement Act of 1980, and which provided a means for balancing the public and private sectors' concerns of resource protection and economic development. The New York State Department of State in cooperation with state, regional and local agencies worked diligently to put this program into effect. Our efforts received considerable support from state and local elected officials, organizations and many of the 15 million residents of New York State who live along and near its maritime and Great Lakes coasts. The Department's staff devoted a substantial amount of time with representatives from the public and private sectors to resolve differences on matters such as coastal area boundaries, designation of geographic areas of particular concern, program policies and methods for implementing the State's proposed coastal management program.

In January of this year, we were optimistic that legislation establishing a coastal management program for New York State would be enacted early in the current session of the Legislature. This optimism was soon diminished when President Reagan released his budget proposals for the 1982 fiscal year. Given the fact that Sections 306, 306A, and 308 of the Federal Acts are not recommended for funding, the Legislature's resolve to enact a Coastal Management bill may be weakened. Consequently, if the President's position is accepted by Congress, New York State may not elect to participate in the federal Coastal Zone Management Program. We are, however, determined to continue our efforts to insure a state coastal management program, and are pressing for amended legislation during the current session.

Based upon an examination of the issues that are prominent in New York's coastal areas, an analysis of the State's capability to resolve those issues and opinions stated at numerous public meetings and hearings, there is a definite need for a coastal management program in New York State. In order to effectively manage coastal resources and the effects of development activities on these resources, the program will require the cooperative efforts of federal, state and local governments for each exercises legal authority that impacts on the coastal area. The federal Coastal Zone Management Program provides a structure within which all three levels of government can operate their individual programs in accord with one another. For this reason, the Department strongly urges that funding for the states to administer their approved coastal zone management programs be continued.

The Department of State will support any effort by Congress to ensure continued funding for the federal Coastal Zone Management Program over the next few years which was the intent of Congress in the Coastal Zone Management Improvement Act of 1980. Such action by Congress would provide the incentive for New York State to participate with 25 other coastal states and territories in the federal program. We are fully aware of the electorate's mandate to reduce governmental spending. Over the last six years, New York State and its local governments have endeavored to place reasonable limits on their expenditures. Therefore, the Department would agree with a reduced level of funding for the federal Coastal Zone Management Program. But, such reductions should be made gradually to allow states sufficient time to adjust to their increased financial responsibility under this Program.

As stated above, effective coastal management requires the cooperative participation of federal, state and local government. New York State shares much of its navigable coastal waters with Canada and the States of Connecticut and New Jersey. Also, the State is situated between two lease areas on the Outer Continental Shelf, where exploratory drilling for natural gas and oil is or will soon be taking place. In both situations, the federal government has specific responsibilities which if improperly conducted could have serious adverse effects upon the coastal resources of New York State. The President and Congress must recognize that there is a continuing role for the federal government in coastal management matters, and it is essential for the coastal States to work with the federal agencies on these matters of mutual interest. To ensure the active cooperation of the coastal states in these matters of mutual interest, a minimum level of funding under the federal Coastal Zone Management Program and the Coastal Energy Impact Program should be continued. This funding would also permit the States to address some of the national interests expressed in the Coastal Zone Management Improvement Act of 1980.

It is our belief, then, that a statewide coastal management program could be implemented in New York State at a substantially reduced level of expenditure. The State cannot, however, immediately assume the full financial responsibility for this program.

	COASTAL MANAGEMENT PROGRAM								PROPOSED WATERFRONT REVITALIZATION PROGRAM			
	Previous Funding (November 1974 - December 1980)				Anticipated Budget (Federal FY 81/82)				Budget			
	Federal	State	Total		Federal	State	Total		Federal	State	Total	
Program Development/Implementation												
Personal Services	$2,934,695	$ 970,907	$3,905,602		$ 715,000	$ 155,000	$ 870,000		$ 200,000	$ 200,000	$ 400,000	
OTPS	281,969	23,102	305,071		85,000	0	85,000		25,000	25,000	50,000	
Funding to Localities & Other Agencies	1,394,561	803,878	2,198,439	34% to localities	2,600,000	695,000	3,295,000	78% to localities	0	0	0	
Total PD/I	$4,611,225 72% of Total	$1,797,887 28% of Total	$6,409,112		$3,400,000 80% of Total	$ 850,000 20% of Total	$4,250,000		$ 225,000 50% of Total	$ 225,000 50% of Total	$ 450,000	
Coastal Energy Impact Program												
Personal Services	129,057	14,336	143,393		120,000	27,000	147,000		22,500	22,500	45,000	
OTPS	13,002	0	13,002		5,000	0	5,000		2,500	2,500	5,000	
Funding to Localities & Other Agencies	1,184,087	272,972	1,457,059	90% to localities	625,000	75,000	700,000	82% to localities	250,000	250,000	500,000	91% to localities
Total CEIP	$1,326,146 82% of Total	$ 287,308 18% of Total	$1,613,454		$ 750,000 88% of Total	$ 102,000 12% of Total	$ 852,000		$ 275,000 50% of Total	$ 275,000 50% of Total	$ 550,000	
Erosion Hazard Areas Program (DEC)												
Personal Services	147,864	84,179	232,043		290,000	65,000	355,000		156,000	156,000	312,000	
OTPS	2,136	0	2,136		60,000	0	60,000		19,000	19,000	38,000	
Funding to Localities & Other Agencies	0	0	0		0	0	0		50,000	50,000	100,000	22% to localities
Total Erosion	$ 150,000 64% of Total	$ 84,179 36% of Total	$ 234,179		$ 350,000 84% of Total	$ 65,000 16% of Total	$ 415,000		$ 225,000 50% of Total	$ 225,000 50% of Total	$ 450,000	
Waterfront Research/Design Projects												
Personal Services	31,000	7,006	38,006		77,000	20,000	97,000		22,500	22,500	45,000	
OTPS	1,200	0	1,200		3,000	0	3,000		2,500	2,500	5,000	
Funding to Localities & Other Agencies	312,000	10,000	322,000	89% to localities	1,920,000	480,000	2,400,000	96% to localities	250,000	250,000	500,000	91% to localities
Total Waterfront	$ 344,200 95% of Total	$ 17,006 5% of Total	$ 361,206		$2,000,000 80% of Total	$ 500,000 20% of Total	$2,500,000		$ 275,000 50% of Total	$ 275,000 50% of Total	$ 550,000	
GRAND TOTAL	$6,431,571	$2,186,380	$8,617,951		$6,500,000	$1,517,000	$8,017,000		$1,000,000	$1,000,000	$2,000,000	
	75% of received funds: Federal	25% of received funds: State/local			81% of Anticipated Budget: Federal funds	19% of Anticipated Budget: State/local funds			Proposed Budget is 50% Federal and 50% State/local match			

Notes: 46% of all previous funds has gone to localities and State agencies other than DOS and DEC.

The Federal contribution to the Proposed Budget is only 15% of the Anticipated Budget.
The State contribution to the Proposed Budget is only 66% of the Anticipated Budget.
55% of the Proposed Budget is earmarked for localities.

HOUSE OF REPRESENTATIVES
STATE OF DELAWARE
LEGISLATIVE HALL
DOVER, DELAWARE 19901

GWYNNE P. SMITH
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GUNNAGOS
WILMINGTON, DELAWARE 19809
HOME: 302-478-6640
HOUSE OFFICE: 302-736-4150

COMMITTEES
NATURAL RESOURCES & AGRICULTURE, CHMN.
SUNSET

April 14, 1981

The Honorable Norman E. D'Amours
Chairman
House Subcommittee on Oceanography
Rayburn House Office Building, Room #2242
Washington, D.C. 20510

APR 21 1981

Dear Representative D'Amours:

The Delaware legislature is quite concerned that adequate funding for federal Coastal Zone Management programs be continued long enough to derive maximum benefits from investments already made here.

The enclosed Concurrent Resolution (HCR 38) has passed the House unanimously; the Senate has not yet had a chance to act due to time constraints. When we reconvene on April 28, 1981, HCR 38 may be considered by the Senate, following which I will be pleased to send you an official communication.

In the meantime, it might be helpful for you to know the attitude of the Delaware House of Representatives and nine members of the Senate, co-sponsors of the Resolution. Passage of concurrent resolutions in the Senate requires eleven "yes" votes.

I'll be glad to answer any questions you may have. Please call my home phone (302-478-6640) anytime during the next two weeks.

Thank you very much.

Sincerely,

Gwynne P. Smith
Representative
Tenth District

GPS:jh
Enclosure

SPONSOR Representatives Smith, Cordrey, Derrickson, Dixon, Fallon, George, Jester, Minner, Powell, Sincock, Soles, Van Sciver; Senators Berndt, Knox, McDowell, Murphy, Vaughn, Martin, Arnold, Neal, Bair

HOUSE OF REPRESENTATIVES

131ST GENERAL ASSEMBLY

HOUSE CONCURRENT RESOLUTION NO. 38 APR 9 1981

REQUESTING THE CONGRESS OF THE UNITED STATES TO SUPPORT THE STATES' EFFORTS IN MANAGING THEIR COASTAL RESOURCES AND TO PROVIDE ESSENTIAL FUNDING THEREFORE.

WHEREAS, the State of Delaware, along with many other coastal states, has endeavored to manage its fragile coastal areas for the benefit of the citizens of this State and nation; and

WHEREAS, Delaware's coastal resources are an asset of significant value to the nation, our Atlantic Coast being widely recognized as the "Nation's Summer Playground"; and

WHEREAS, after diligent effort and with the full participation and support of the general public, varied interest groups, county and local governments, and the General Assembly, Delaware's Coastal Management Program was duly adopted by the Governor of the State of Delaware and the Secretary of the United States Department of Commerce in August 1979; and

WHEREAS, Delaware has received financial assistance under the provisions of Section 306 of the Federal Coastal Zone Management Act, as amended, for the purpose of implementing such Coastal Management Program; and

WHEREAS, financial assistance under the provision of this Act was to be available for a prescribed period following program approval in order to assist states in the implementation of their management programs, such assistance now being in jeopardy prematurely as a result of the President's budget proposals for federal fiscal year 1982; and

HR:X:nm

WHEREAS, the State has underway certain projects and programs for which continued funding is essential in order for their full benefits to be realized and for the public to receive an appropriate return on the funds already expended; and

WHEREAS, among these projects and programs are: the resolution of encroachments and claims against the State's Public Lands; the development of modern policies and procedures to manage the State's fisheries resources; the evaluation of the Open Marsh Water Management technique for mosquito control, offering a more effective and environmentally sound method for dealing with these pests; the implementation of improved techniques for the prevention of water pollution caused by improperly placed and installed on-site sewage systems; the establishment of a comprehensive management strategy for the State's inland bays; and the modernization, clarification, and streamlining of the State's capabilities to manage wetlands, beaches, the coastal zone, and our tidal waters.

NOW, THEREFORE:

BE IT RESOLVED that the House of Representatives of the 131st General Assembly of Delaware, the Senate concurring therein, requests that the Congress of the United States provide such continued funding for the use of the State of Delaware and other coastal states as appropriate to complete these important coastal management initiatives;

BE IT FURTHER RESOLVED that the Office of Management, Budget, and Planning, the Department of Natural Resources and Environmental Control, the Department of Justice and such other agencies as may be responsible be requested to undertake these important efforts diligently and efficiently;

BE IT FURTHER RESOLVED that a copy of this resolution be forwarded to the Delaware delegation in Congress, to the Secretary of the United States Department of Commerce, to the Chairman of the Appropriations Committees of the U.S. House of Representatives and the U.S. Senate, to the Chairman of the House Comittee on Merchant Marine and Fisheries, to the Chairman of the Senate Committee on Commerce, Science, and Transportation, and to appropriate subcommittees thereof.

Jasper County Council

P. O. DRAWER F · RIDGELAND, SOUTH CAROLINA 29936

PHONES: 803/726-3173
803/726-3706
803/726-3831

PAUL MAX MALPHRUS
Chairman

HENRY C SIMMONS
Vice-Chairman

EUNICE H DOE

JAMES S. BRANTLEY

D P LOWTHER

HEYWARD ROBINSON
Administrator

March 26, 1981

Representative D'Amours
Chairman, Subcommittee on Oceanography
House Merchant Marine & Fisheries Committee
1334 Longworth House Office Building
Washington, D. C. 20510

Dear Representative D'Amours,

President Reagan's proposal to withdraw all federal support from state coastal management programs concerns Jasper County. It is my opinion that the sudden withdrawal of all funding will severely decimate or destroy the extremely important work these state programs have so ardously achieved under the Federal Coastal Zone Management Act of 1972, as amended and reauthorized for five years in 1980. In fact, it would appear that President Reagan's proposal is an executive repeal of this legislation so recently strengthened by the Congress.

As envisioned in the 1972 Act and strengthened in the 1980 Amendments, wise management of coastal resources relies upon the development and implementation of comprehensive coastal management programs, which will achieve national interest objectives, by the states and not the federal government. This here-to-fore unique effort will have been wasted if President Reagan's funding proposal is implemented. States have not been given time to plan for the state funding of these nationally significant programs. Withdrawal of all support at once will unreasonably jeopardize the significant progress in managing state and national coastal resources the states have achieved.

I urge you to consider working in the Congress for a more reasonable method of transferring financial responsibility for nationally significant coastal management efforts from the federal to the state governments. Since the Coastal Zone Management Act has just been reauthorized, perhaps it would be more reasonable to phase down federal support over the reauthorization period.

This would provide the states the time they need to plan their budgets to accomodate these comprehensive coastal management programs. In this way the states' ability to control activities, including federal activities, that impact coastal resources can be maintained, and this unique effort to combine national objectives in state controlled programs will be successful.

I trust you share my concern in this matter and will vocalize and support a more reasonable approach than an executive repeal of this most important work. Certainly it is my hope that the Congress, with your leadership, will ensure that the states are given reasonable time to plan for the funding of these nationally important programs in their own budgets. If I may be of assistance in this effort, I would be most pleased if you called on me.

Sincerely,

Heyward Robinson
Administrator

HR/zi

STATE OF MICHIGAN

NATURAL RESOURCES COMMISSION
JACOB A HOEFER
E M LAITALA
HILARY F SNELL
PAUL H WENDLER
HARRY H WHITELEY
JOAN L WOLFE
CHARLES G YOUNGLOVE

WILLIAM G MILLIKEN, Governor
DEPARTMENT OF NATURAL RESOURCES
STEVENS T MASON BUILDING
BOX 30028
LANSING, MI 48909
HOWARD A TANNER, Director

March 25, 1981

Honorable Norman E. D'Amours, Chairman
House Subcommittee on Oceanography
2242 Rayburn House Office Building
Washington, D.C. 20515

Dear Congressman D'Amours:

I would like to take this opportunity to correspond with you regarding the future of our precious Great Lakes and ocean coastal resources, which 80 percent of the nation's population depend on for commerce and industry, recreation, tourism and water supply.

As you undoubtedly already know, President Reagan has proposed to eliminate all federal funds for implementing state coastal management programs in fiscal year 1982. This represents a reduction of $37 million from President Carter's recommended 1982 federal budget. This abrupt termination of coastal program implementation funds is proposed in spite of the recent unanimous reauthorization of the Coastal Zone Management Act this past fall, and in spite of the positive substantive impacts of coastal management in protecting critical coastal resources, controlling hazardous development, streamlining the regulatory process and promoting urban water revitalization and coastal dependent commercial and industrial development.

Such an abrupt termination of federal coastal funds would have a devasting effect on Michigan's ability to protect and manage its 3,288 miles of Great Lakes shoreline, the longest freshwater coast in the world. The regulatory programs which protect sensitive resources and control development in hazardous areas would be crippled. All local pass-through grants for planning, site design, engineering and low-cost construction would be eliminated. Much of the progress made during the past three years of coastal program implementation would be negated. The attached impact analysis describes these impacts in greater detail as well as highlighting accomplishments of coastal management in Michigan thus far.

Congressman D'Amours
Page 2
March 25, 1981

Michigan, as well as many other states, simply cannot absorb the costs of administering an effective coastal management program on such short notice. As one of the most fiscally impacted states in the nation, Michigan fully appreciates the economic issues facing the nation and the budget problems confronting the new Administration and Congress. However, it is imperative that appropriations for state coastal program implementation be maintained for at least 2-3 years to allow states to assume the financial costs of program implementation. A second priority, but also important, is that at least ten million dollars of the existing $40 million Coastal Energy Impact Program fiscal year 1981 appropriation proposed for recision, be retained to implement the recently enacted coal amendment, Section 308(c)(3), which was intended to respond to federally induced shoreline impacts of accelerated utilization and transport of coal.

In view of the importance of the nation's coastal resources and the increasing pressures on these finite resources, it would be a tragic mistake to abruptly eliminate funds for the relatively inexpensive, but highly effective, coastal management program. I respectfully urge your support for continued funding for a reasonable period of time to allow states to absorb the administrative costs to ensure continued effective protection and management of our critical coastal resources.

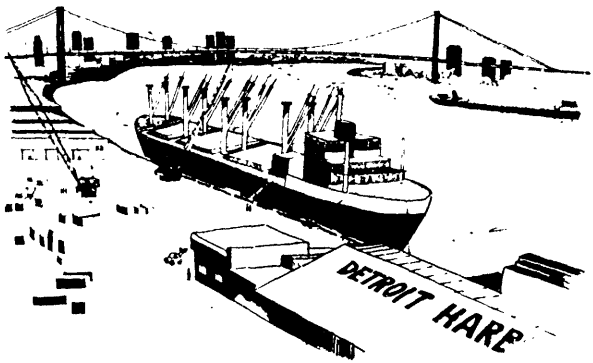
Sincerely,

ACTING John F. Cleary

Howard A. Tanner
Director

Michigan Coastal Management Program Impact Analysis

A Response to the Reagan Administration Budget Recommendations



PREPARED BY:
Michigan Coastal Management Program
Land Resource Programs Division
Michigan Department of Natural Resources
Lansing, Michigan 517-373-1950
March, 1981

MICHIGAN COASTAL MANAGEMENT PROGRAM IMPACT ANALYSIS

The National Context

The citizens of the 34 coastal states and territories, representing 80 percent of the nation's population, are dependent on our ocean and Great Lakes resources for commerce and industry, tourism, recreation and water supply. Congress declared a national commitment to effective management and protection of coastal resources by enacting the Coastal Zone Management Act of 1972. This commitment was strongly reaffirmed in October of 1980 when Congress unanimously reauthorized the act for an additional five years of funding at the original 80/20 matching ratio, and extended the opportunities afforded by the act to several new and challenging areas. Congressional reauthorization followed an extensive series of oversight hearings throughout the country which conclusively demonstrated the effectiveness of this federally assisted, state implemented, coastal management program.

Effective coastal program implementation by the participating states and territories has clearly led to major accomplishments in managing and protecting essential coastal resources reflecting local, state and national objectives. National objectives such as promoting coastal dependent industrial and energy facilities, urban waterfront revitalization, controlling development in hazardous areas, protecting critical fisheries and wildlife habitat areas, and streamlining the regulatory process, are directly supported and enhanced by the state coastal management programs.

The Reagan Administration's Proposal

In spite of the recent Congressional reauthorization, and the specific substantive impacts of coastal management, the Reagan Administration proposes to abruptly terminate the federal financial assistance by eliminating the $37 million appropriation recommended by the Carter Administration for fiscal year 1982. This proposal is based on the erroneous assumption that the national coastal management program has "largely served its purpose", and that the states should now assume full financial responsibility for implementing their respective coastal management programs.

For the following reasons, such an abrupt termination of federal assistance would have a devasting impact on Michigan's ability to protect and manage its 3,288 miles of Great Lakes shoreline, the longest freshwater coast in the world.

The Michigan Experience

Michigan's Coastal Management Program is generally considered to be one of the best in the nation. Federal financial assistance during the past three years of program implementation has allowed Michigan to substantially improve the administration of its state shoreline statutes, and to provide over 2.5 million dollars directly to local units for shoreline planning, site design, engineering and construction projects (see attached chart and maps). Specific examples of completed coastal projects are as follows:

- Urban waterfront redevelopment projects in Detroit, Monroe, Marine City, Muskegon and Sault Ste. Marie. The $100,000 Linked Riverfront Parks project has served as the catalyst for investment of millions of dollars of city, state and private funds in revitalizing Detroit's waterfront.
- Port development and marketing projects in Detroit, Saginaw-Bay City, and Benton Harbor-St. Joseph. The port operation plan and market strategy for the Port of Detroit should result in millions of dollars of expanded trade, and the port development study for St. Joseph may lead to the development of a multi-million dollar grain terminal.
- The Lake Erie Gateway Development Plan for the City of Monroe has resulted in the recent investment of several million dollars by a private firm for redevelopment of the Consolidated Packaging/Hellenburg Field property.
- Coastal park site designs in Trenton, Detroit, Tawas City, Alpena, Traverse City, Muskegon, Marquette and Escanaba which have resulted in more than $500,000 of local and state funds for construction.
- An adaptive re-use study of a historic building along the Detroit waterfront is under active consideration for several million dollars of private investment for commercial redevelopment.
- Low-cost construction projects for historic preservation or public access restoration in Ecorse, Detroit, Clay Township, Harbor Beach, Rogers City, Petoskey, Charlevoix, Grand Haven, South Haven, Bridgman, Marquette and Escanaba. These projects assist communities in refocusing attention to their waterfronts and capitalizing on their assets for increased tourism and recreation.
- Designation of 250 miles of high risk erosion areas subject to state structural setback requirements. These designations should prevent millions of dollars of damage to private investments.
- Designation of 150 miles of coastal wetlands subject to state regulations. This will protect critical fish and waterfowl habitat areas essential to Michigan's multi-million dollar Great Lakes fisheries and waterfowl hunting recreational programs.
- Permit consolidation and computerized permit tracking to streamline the regulatory process and save hundreds of thousands of dollars to private individuals.
- Development of detailed management policies and recommendations for the state's largest coastal wetland, the St. Clair Flats, designed to protect both the critical wetlands and existing private development.

Impact of Terminating Federal Financial Assistance

Termination of the federal coastal financial assistance in fiscal year 1982, as proposed by the Reagan Administration, would cripple the state regulatory programs designed to protect sensitive coastal resources and control hazardous development, and would eliminate all pass-through funds to local units for creative coastal projects. Waterfront revitalization efforts would be greatly curtailed, public access opportunities would be reduced, and port development would be slowed. Development in hazardous areas would go undetected, critical habitat areas would be destroyed, violations would not be prosecuted, and permit applications would be processed much more slowly.

80-338 O - 81 pt.1 - 36

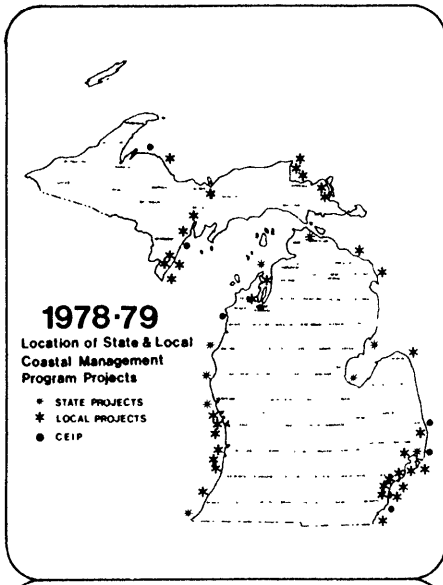
Recommendation

Michigan, as well as many other coastal states, simply cannot absorb the costs of administering effective coastal programs on such short notice, and so late in our state appropriation process. As one of the most fiscally impacted states in the nation, Michigan fully appreciates the economic issues facing the nation and the budget problems facing the new Administration and Congress. However, in view of the ever increasing pressures on our critical coastal resources, it is imperative that the appropriations for state coastal program implementation be maintained for at least 2-3 years to allow states to assume the financial costs of program administration. During this 2-3 year phase down period, federal financial assistance could be reduced below the current $37 million annual level with commensurate increases in state financial support.

In view of the importance of the nation's coastal resources, and the increasing pressures on these finite resources, it would be a tragic mistake and extremely short-sighted to abruptly eliminate funds for implementation of the relatively inexpensive, but highly effective, coastal management program. States must be given the opportunity to absorb the administrative costs over a reasonable period of time in order to ensure continued effective protection and management of our critical coastal resources. The Congressional reauthorization of the national coastal program this fall must not be allowed to become a hollow commitment.

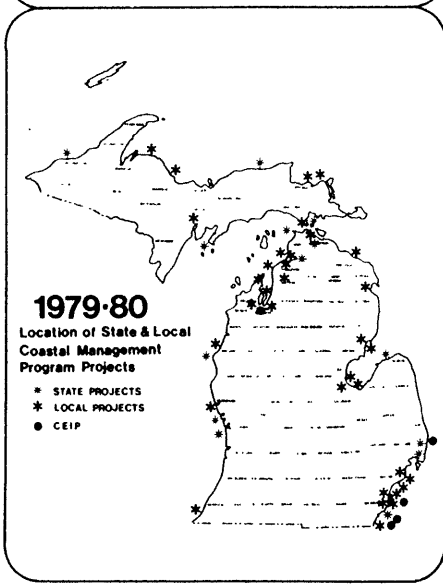
MICHIGAN'S COASTAL MANAGEMENT PROGRAM/COASTAL ENERGY IMPACT PROGRAM
MICHIGAN GRANTS - 3 YEAR SUMMARY

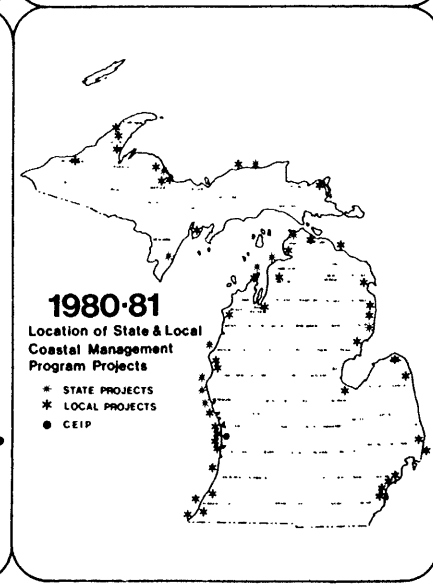
	Federal Grant $	Local Projects	State Projects & Technical Studies	State Statute Administration	Local Construction	Program Administration
COASTAL MANAGEMENT PROGRAM (CMP)						
78-79	1,580,000	661,530	171,225	332,310	233,680	181,255
79-80	1,807,800	701,850	135,350	440,600	355,100	174,900
80-81	1,928,570	333,270	141,500	640,500	614,070	199,230
TOTAL	5,316,370	1,696,650	448,075	1,413,410	1,202,850	555,385
COASTAL ENERGY IMPACT PROGRAM (CEIP)						
78-79	233,169	161,169	-	-	-	72,000
79-80	228,993	75,532	107,327	-	-	46,134
80-81	305,000	-	80,127	-	178,000	46,873
TOTAL CEIP	767,162	236,701	187,454	-	178,000	165,007
Federal Share	6,083,532	1,933,351	635,529	1,413,410	1,380,850	720,392
State/Local Share	1,520,883	483,338	158,882	353,353	345,212	180,098
TOTAL MI PROGRAM	7,604,415	2,416,689	794,411	1,766,763	1,726,062	900,490
	100%	32%	10%	23%	23%	12%



Michigan Coastal Management Projects

3 YEAR SUMMARY





COASTAL ENERGY IMPACT PROGRAM
CEIP (P.L. 92-583) SECTION 308

Reagan Administration Budget Proposal

- Recision of an existing 1981 $40 million appropriation.
- Elimination of 1982 funding.

Background

Acquiring sufficient energy supplies to support our economy is one of the most significant public policy issues facing the United States today.

In the next two decades, coal will play an increasingly important role in the Nation's energy picture. A combination of oil shortages and high prices, the national commitment to become energy self-sufficient and the national coal conversion program all indicate substantial increases in the amount of coal utilization and movement. Nearly every energy scenario of the future has coal as a major gap filler in the increasing disparity between our energy requirement expectations and predicted energy supplies. Coal is the world's most abundant fuel with more than one-quarter lying under American soil. Many experts predict coal production in the United States will increase two - threefold by the year 2000 (see attached chart).

The U.S. Congress recognized the importance of coal activities in October of 1980 by unanimously amending the Coastal Zone Management Act to include a new section in the Coastal Energy Impact Program (CEIP) to specifically address the impacts associated with the transport, transfer and storage of coal. If the national commitment to coal as the primary energy source fully materializes, then a dramatic increase in the amount of coal movement and use in the Great Lakes region is virtually assured.

The projected increase is largely due to the influx of western coal from Montana to transshipment facilities in the upper Great Lakes. Presently, one facility at Duluth-Superior Harbor is moving eight million tons of western coal to power generating facilities in lower Michigan, with eventual expansion planned for 20 million tons annually. Similarly, a facility has been planned for Kewaunee, Wisconsin, which would ship three to five million tons of western coal to ports on eastern Lake Michigan annually. The availability of low sulfur western coal has prompted Buffalo, New York, to consider the development of an unloading facility which would receive between six and 12 million tons annually providing coal for inland and lakeside users. Finally, the expansion of existing coal storage and transshipment facilities at Conneaut, Ohio, are expected as shipment of eastern Applachian coal to domestic and Canadian ports increases from the current eight million tons to a projected 13 million tons annually (see attached map).

During the last three years, coal transport on the Great Lakes has reached 40 million tons annually. This coal is used for electrical generation, steel production and other uses in many parts of the Great Lakes region. Michigan has 28 coal fired electric power plants located on the Great Lakes and their

connecting waterways, with an additional three units planned for the very near future, and four units mandated to convert to coal. These Michigan coastal power plants alone are capable of utilizing approximately 45 million tons of coal annually. The Michigan Great Lakes shoreline is already experiencing coal impacts in the form of degradation of air and water quality, increased port dredging and resultant dredge disposal problems, erosion in connecting waterways, the loss of many acres of valuable coastal wetlands for coal storage and fly ash disposal, and the displacement or degradation of coastal parks and recreational boating facilities as well as decreased public access due to coal related activities and facilities.

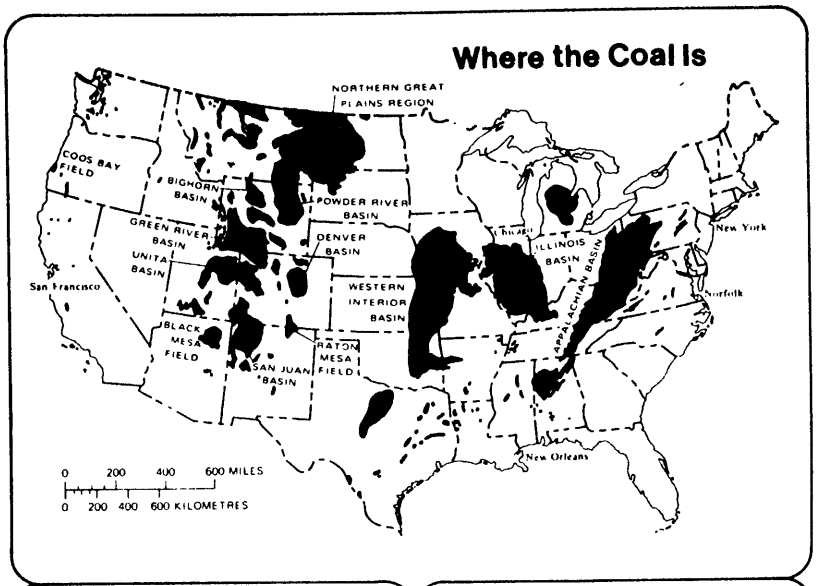
Specific areas in Michigan which are currently under stress due to transport or expanding use and storage of coal include Monroe County with the 3,000 MW coal Monroe Plant, St. Clair County with the new construction of a 1,394 MW coal fired power plant, the Saginaw Bay area with conversions proposed for the Karn-Weadock plants, the Marquette, Grand Haven and Port Sheldon areas which have coal power plant expansions, and the Great Lakes connecting waterways, the St. Marys, St. Clair and Detroit rivers through which coal is shipped.

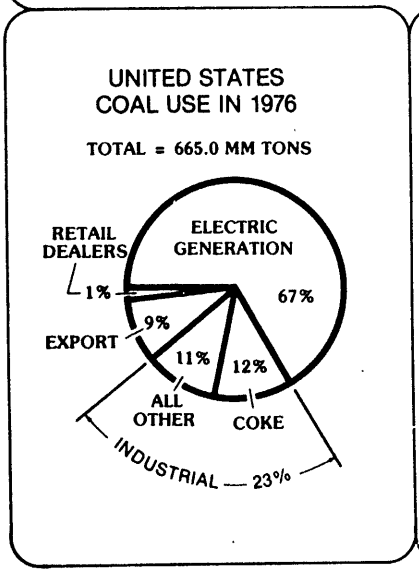
Conclusions

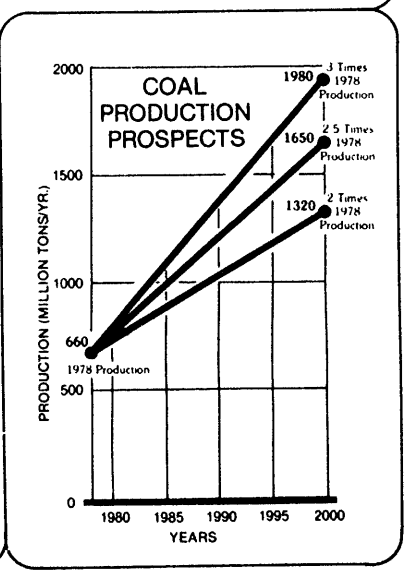
The Reagan Administration proposes to rescind an existing CEIP appropriation of $40 million based on the assumption that local impacts from oil and gas development have proven to be far less than originally anticipated and well within the capability of states and localities to handle. Very few states are in a position to assume the costs of mitigating federally induced large scale energy development impacts. It was clearly the intent of Congress to provide continued federal funding to address the issues and impacts associated with energy development, and especially those associated with increasing coal activities as expressed by the enactment of the new coal amendment.

It is well recognized that the nation is in a severe economic condition and that budget cuts must be made. Therefore, a $20 million recision, or 50 percent of the existing $40 million CEIP appropriation, is acceptable to assist in the economic situation. However, $20 million must be retained for CEIP; $10 million is necessary to implement the new coal amendment which was enacted by Congress only a few months ago, and $10 million is necessary to continue to mitigate the impacts of gas and oil development (leasing activities are currently occurring in Baltimore Canyon, Georges Bank and along the California coast).

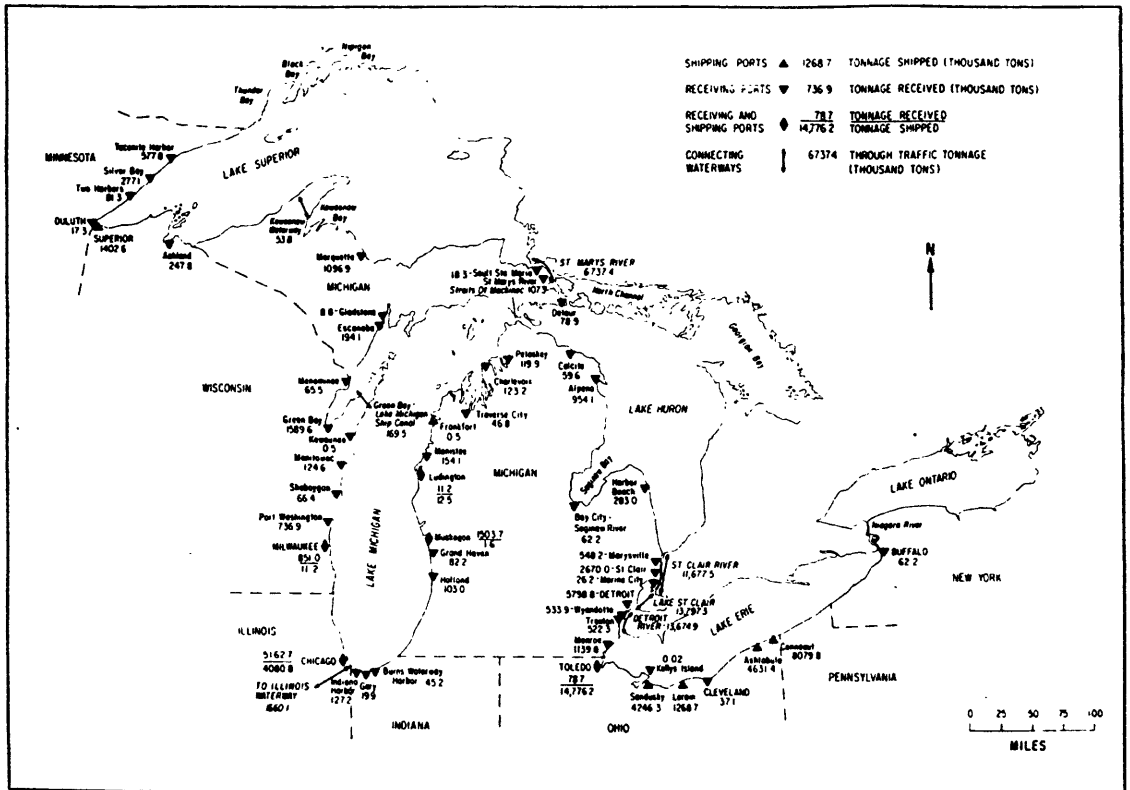
If federal policies and mandates encourage an accelerated coal and energy self-sufficiency program, then it is equitable and essential that federal financial assistance be provided to states to mitigate shoreline impacts resulting from federally induced energy development.


Where the Coal Is
NORTHERN GREAT PLAINS REGION
COOS BAY FIELD
BIGHORN BASIN
POWDER RIVER BASIN
GREEN RIVER BASIN
DENVER BASIN
UINTA BASIN
San Francisco
WESTERN INTERIOR BASIN
BLACK MESA FIELD
RATON MESA FIELD
SAN JUAN BASIN
ILLINOIS BASIN
APPALACHIAN BASIN
New York
Norfolk
New Orleans
0 200 400 600 MILES
0 200 400 600 KILOMETRES


UNITED STATES
COAL USE IN 1976
TOTAL = 665.0 MM TONS
ELECTRIC GENERATION
67%
RETAIL DEALERS
1%
EXPORT
9%
11%
ALL OTHER
12%
COKE
INDUSTRIAL — 23%


COAL PRODUCTION PROSPECTS
PRODUCTION (MILLION TONS/YR.)
2000
1500
1000
660
500
0
1980
1650
1320
3 Times 1978 Production
2.5 Times 1978 Production
2 Times 1978 Production
1978 Production
1980
1985
1990
1995
2000
YEARS

U.S. GREAT LAKES PORTS SHIPPING AND RECEIVING BITUMINOUS COAL - 1975



Source: Western Coal Shipment on the Great Lakes:Background and Research Needs, Oct. 1977, Argonne National Laboratory

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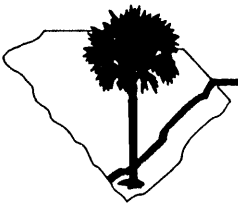


South Carolina Coastal Council

James M. Waddell, Jr.
Chairman

H. Wayne Beam, Ph.D
Executive Director

March 24, 1981

Representative Norman E. D'Amours, Chairman
Subcommittee on Oceanography
House Merchant Marine & Fisheries Committee
1334 Longworth House Office Building
Washington, DC 20510

Dear Representative D'Amours:

I am deeply concerned over a proposal by President Reagan to withdraw all federal support from state coastal management programs. It is my opinion that the sudden withdrawal of all funding will severely decimate or destroy the extremely important work these state programs have so ardously achieved under the Federal Coastal Zone Management Act of 1972, as amended and reauthorized for five years in 1980. In fact, it would appear that President Reagan's proposal is an executive repeal of this legislation so recently strengthened by the Congress.

As envisioned in the 1972 Act and strengthened in the 1980 Amendments, wise management of coastal resources relies upon the development and implementation of comprehensive coastal management programs, which will achieve national interest objectives, by the states and not the federal government. This here-to-fore unique effort will have been wasted if President Reagan's funding proposal is implemented. States have not been given time to plan for the state funding of these nationally significant programs. Withdrawal of all support at once will unreasonably jeopardize the significant progress in managing state and national coastal resources the states have acheived.

I urge you to consider working in the Congress for a more reasonable method of transferring financial responsibility for nationally significant coastal management efforts from the federal to the state governments. Since the Coastal Zone Management Act has just been reauthorized, perhaps it would be more reasonable to phase down federal support over the reauthorization period. This would provide the states the time they need to plan their budgets to accommodate these comprehensive coastal management programs. In this way the states' ability to control activities, including federal activities, that impact coastal resources can be maintained, and this unique effort to combine national objectives in state controlled programs will be successful.

P.O. Box 1026 • Beaufort, South Carolina 29902 • (803) 524-0755 • 524-5053

Representative D'Amours
Page 2
March 24, 1981

I trust you share my concern in this matter and will vocalize and support a more reasonable approach than an executive repeal of this most important work. Certainly it is my hope that the Congress, with your leadership, will ensure that the states are given reasonable time to plan for the funding of these nationally important programs in their own budgets. If I may be of assistance in this effort, I would be most pleased if you called on me.

Sincerely,

James M. Waddell, Jr.

James M. Waddell, Jr.
Chairman

JMWjr/jwr

Prepared Statement of Hon. James M. Waddell, Jr., a Senator From the State of South Carolina

Thank you for this opportunity to speak to you about the impacts of President Reagan's proposal to withdraw all federal support from state coastal management efforts. In light of the severe impacts the proposal would have on these efforts, I would like to thank the House Merchant Marine and Fisheries Committee for its action last Tuesday, which was to recommend to the Budget Committee that the Congress should continue to support state coastal management efforts under the Coastal Zone Management Act of 1972 (the Act), as strengthened and reauthorized for five years last October. I commend the Committee for this action and hope that, strengthened by today's hearing, the argument for continued federal support of state coastal management programs will be persuasive in the Congress. Allow me to add the potential impacts on South Carolina to your deliberations.

The position of South Carolina on President Reagan's proposal is that, if the Congress decides so soon after reauthorizing federal support for state coastal management efforts that federal support should be withdrawn, then the Congress must give the states a reasonable time in which to plan for assuming this financial responsibility. As stated in the Act, South Carolina believes the wise management of coastal resources is in both the state and national interest. The careful

crafting of state coastal management programs to meet state and national needs has been undertaken for 93 per cent of America's coastline. The real test of these programs, the majority of which received federal approval in the last two years, is still to come. Implementation of programs requires time; to decimate the programs by withdrawing federal support without adequate warning would ensure their failure, that they would not be implemented. I urge you to consider the waste of taxpayer dollars the deliberate dismantling of these programs would represent at this point in time.

South Carolina's Coastal Management Program received federal approval in September of 1979 after two and a half years of hard work to create a comprehensive program for the management of coastal resources and development. We have labored long and hard to gain public support. Our support and acceptance from our Executive and Legislative branches of government in South Carolina have been tremendous.

Under the State's Coastal Management Act, which supports the State's involvement in the federal program, a new and streamlined permit process and a comprehensive management program were developed for South Carolina's coastal zone. An eighteen-member Council then began to implement the program that they successfully carried to the legislature, the Governor and the Secretary of Commerce for approval. The 1980 census figures reveal that the coast of South Carolina is the fastest growing region of our state. Assimilating that growth is one of our primary objectives. Monitoring and enforcement activities, research, and planning activities to ensure the wise use of coastal resources under the Act have continued as the Council began to develop the expertise necessary to balance the many conflicting needs along the coast. Access to the resources,

development of fisheries, identification of habitat and other resources, erosion management and hazard mitigation activities continue as local governments are brought into closer coordination with the program. All of this extremely difficult but absolutely necessary work has been made possible by the federal support provided by the Coastal Zone Management Act. The impact of executively repealing this Act and cutting all federal support from such efforts with no warning to the State of South Carolina will mean virtually the end of this hard work. Twenty of twenty-six staff positions are funded by the Office of Coastal Zone Management's implementation grants. Special area management planning, fisheries research and development, and enforcement activities all rely on this federal support. Only the permit program, without enforcement or adequate staff, could possibly survive the proposed sudden withdrawal of federal support. South Carolina strongly supports the Coastal Management Program, but we must be given time, if federal support must be withdrawn, to plan for the financial support of the Program. At a minimum, I urge you to grant this time to the states. I more strongly urge you to support the very Act you strengthened last October and work in the Congress for continued federal support of these nationally significant coastal management programs.

Thank you for your time and your efforts in the Congress on this vital issue.

THE AUDUBON SOCIETY OF NEW HAMPSHIRE
SILK FARM ROAD • CONCORD • NEW HAMPSHIRE 03301
TELEPHONE (603) 224 9909
TUDOR RICHARDS
EXEC. DIRECTOR

March 25, 1981

Hon. Norman E. D'Amours
Longworth House Office Bldg.
Washington, D.C. 20515

Dear Congressman D'Amours:

We at the Audubon Society of New Hampshire send our congratulations to you on your election as chair of the Subcommittee on Oceanography of the Merchant Marine & Fisheries Committee. We are pleased to have you in this position of responsibility. With our Bellamy River Sanctuary along the Great Bay estuary, many small saltmarsh holdings totaling 220 acres and our innumerable field trips and other activities along the coast, we have a very keen interest in coastal issues.

One issue of concern is the proposed termination of the Coastal Zone Management (CZM) program. While we could understand a budget cut, we are opposed to the termination of a program that advocates a balanced approach to resource use and development. The value of the program (in addition to its voluntary, state-oriented structure) is that while it encourages economic development in coastal areas, it also assures consideration of the long term health of our coastal natural resources and their value to the public as a whole. With the current emphasis on economic development, it is vitally important that we not abandon this concern for the wise use of our natural resources over the long term.

Our immediate concern,of course, is with New Hampshire's limited coastal area and its multiple challenges of population pressures, economic development, tourism and public use. Small as this area is, its combination of ocean frontage and sizable estuaries such as Great Bay and Hampton Harbor make it also of exceptional value for many forms of wildlife, including whales and many sea and marsh birds as well as commercial fish. A state coastal program that confronts these challenges and provides for wise use of coastal resources is a high priority for the Audubon Society of New Hampshire in 1981. We realize that implementation of a state program is placed in doubt if CZM funds are terminated.

However, our support of the CZM program is not strictly parochial, but is based on the realization that coastal ecosystems and wildlife do not necessarily respect political boundaries. We are concerned with the wise use of all coastal resources, including New Hampshire's. We urge you to oppose termination of the CZM program and to support, at the least, limited CZM funding. We would appreciate knowing when hearings will be held on the CZM program so that we can prepare a statement.

As you know, another issue of concern is the Sea Grant program. We hope that the recent hearing reflected favorably on the future of Sea Grant, and we would urge your personal support for continued Sea Grant funding.

Please keep us informed of further developments in these issues. Thank you.

Sincerely,

Jacquelyn Tuxill

Jacquelyn Tuxill, Director
Environmental Affiars

DEPARTMENT
OF NATURAL
RESOURCES

APR 14 1981

Mr. Norman E. D'Amours
Chairman
Subcommittee on Oceanography
House, Office, Bldg.
Washington, D.C. 20515

Dear Mr. D'Amours:

As you are aware OMB is proposing major reductions in funding for many of NOAA's programs. CZM is slated for no funding starting in FY 82. Despite claims by OMB that funds can be found elsewhere for these efforts, I believe the termination of federal funding is paramount to the termination of this program in its entirety. This would constitute a major change in the nation's ocean policies--an unwise and short-sighted change, in my opinion.

The CZMA was reauthorized by the Congress last October. This occurred after two years of study and debate, during which time there were no suggestions that the program be terminated. Conferences were held and reports produced by the Coastal State Organization, NACOA, the CZM Advisory Committee, the Conservation Foundation, the Coastal Alliance, the League of Women Voters, GAO and others. At the CSO conference in Fredericksburg, VA in January, 1979, many industry representations participated. The option of terminating the program was considered and rejected by the panels. In 1980 there were Congressional hearings on proposed amendments to the law. A wide range of private and governmental interests participated in these deliberations, ranging from port authorities and oil companies to environmental advocacy organizations. Although the interest group differed over methods of implementation, the concensus was that the federal CZM program was providing important benefits to the nation and should be continued and enhanced in the future.

I believe it is poor policy to abruptly terminate funding of the CZMA. A phase down, rather than an abrupt termination, should be considered. In general, I believe government should act more predictably and orderly when making change. State and local governments acted in part because of the promose of federal financial assistance. It is unfair to remove this from them without sufficient advance notice to allow time to find alternate funds.

I also believe it would be poor policy to eliminate the CZM program in its entirety. Coastal problems and opportunities are going to increase in the future because population continues to increase in coastal areas. The need to balance competing uses of the coastal zone is imperative, otherwise endless conflict or inequities result. If we want more recreation and tourism, better port development, healthy fish and wildlife, someome has to oversee the effect these use-sectors have on one another--and that is the special niche of the national CZM program. Even if it is agreed that other interests take priority at this time, and the federal CZM effort should be reduce, it is not wise to

Commonwealth of Puerto Rico, Department of Natural Resources
OFFICE: Muñoz Rivera Avenue, Stop 3, San Juan, Puerto Rico
MAILING ADDRESS: Box 5887, Puerta de Tierra, Puerto Rico 00906

eliminate it altogether. Substancial expertise has been developed which, if kept intact, can be called upon in the future should we want to expand CZM efforts. To close it down completely means we have to start all over again at some date in the future when the coastal zone problems and opportunities are discovered once again.

There are a number of ways to respond to OMB's assertion that each state can find the funds to manage its coastal zone.

1. The CZMA language and court interpretations make it clear that there is a national policy to have coastal management programs, that those programs should be focused at the state level with active government involvements, and that they should balance many competing uses. The 1980 amendments to the CZMA strenghen this point by noting nine specific CZM objetives and requiring that 30 percent of federal funds be spent to improve efforts to achieve those objetives.

2. The coastal zone of any one state or region is used by people from all over the country (and world), regating the idea that the coastal zone "belongs", in an exclusive way, to any state. Tourism in Hawaii or Florida, load-center ports that serve the nation, fisheries that are stuarine dependent, and energy facilities are just a few examples of how the coastal zone is national resource.

3. It is no answer to say that the national interests are already protected by the regulatory programs of the Corps of Engineers, Fish and Wildlife Service, National Marine Fisheries Service, and E.P.A. These agencies are single-resource oriented, their jurisdiction is limited to water or wetland areas (not shorelands), and they have to planning capability. They analyze environmental impacts of proposed uses but do not ask how competing uses are reconciled over the long run. They look to local and state governments for this guidance.

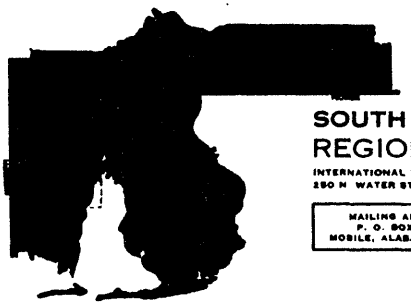
4. The federal consistency provisions of the CZMA can only be implemented if there is an active state CZM program. Bargaining occurs between federal, state and local officials and new information is sometimes needed which CZM has paid for. Federal consistency in an important national objetive, one very much in line with the present administration's desire to return power to state and local governments. Federal agencies could ignore state and local wishes if federal funds to states are withdrawn completely.

I believe a fair solution to the problem is possible--one that meets the interest of Congress in passing the CZMA and one that meets the policies of the new administration. I propose that the level of effort for CZM remain the same over the next four years but that the federal share be reduced in FY 82 and in subsequent years. The present 80%-20% cost sharing maybe, after seven years of federal funding, over generous to state and local government. Recognizing the difficulty of determining how much coastal use serves national or multi-state interests and how much serves state or local interests, dividing it in half is equitable. Recognizing the need to provide an adequate transition period would mean providing additional federal funds over a two to keep it viable. It would also affort enough time for appropriate funding or administrative actions by state or local government. Budget savings at the federal level would be substantial over the next four years. The percentage cut would be well above the average for other government programs.

Sincerely,

Hilda Díaz Soltero

Hilda Díaz-Soltero
Acting Secretary



MAR 25 1981

SOUTH ALABAMA
REGIONAL PLANNING COMMISSION

INTERNATIONAL TRADE CENTER
250 N WATER STREET

MAIN OFFICE (205) 433-6541
AREA AGENCY ON AGING
(205) 433-7417

RICHARD D. PRUITT
EXECUTIVE DIRECTOR

MAILING ADDRESS
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NORMAN J WALTON, CHAIRMAN
NEIL LAUDER, GENERAL VICE-CHAIRMAN
J C DAVIS, JR., PROJECT REVIEW VICE-CHAIRMAN
W. M MCGOUGH, SECRETARY
DEVON WIGGINS, TREASURER

March 18, 1981

The Hon. Norman D'Amours
Chairman of House Subcommittee
on Oceanography
Room H
2541 House Annex #2
Washington, D.C. 20515

H

Dear Congressman D'Amours:

In an effort to obtain energy self-sufficiency, the United States government is leasing over one million acres on the Outer Continental Shelf (OCS) annually. Oil and gas exploration and production activities on the OCS have a tendancy to heavily tax the resources, facilities, and services of adjacent coastal states. Since July, 1977, the Coastal Energy Impact Program (CEIP) has been the only program that bore the resemblance of the United States government sharing any portion of its revenues from OCS lease sales and production activities with coastal states.

The United States government, Department of Interior, is in its initial stages of implementing its five year OCS Oil and Gas Leasing Program. This involves an accelerated leasing, exploration and production program designed to increase domestic energy production, an effort to attain energy self sufficiency. A program of this nature is dependent on and will heavily impact on-shore coastal facillties resources, requiring coastal area governments to incur extensive capital outlays (often front end) while receiving very little financial benefit. On the other hand the federal government receives revenues from the lease sale, rentals, and royalties, at very little related obligation. During the period 1979 through 1980 the federal government received over $12 billion from these activities, and allocated less than one-half of one (1) percent to coastal states through CEIP to mitigate the impacts, and facilitate the change in industrial activity. The federal government has estimated its 1981 revenues from OCS activity to exceed $11 billion, while assistance to the states is being eliminated.

The U. S. Department of Interior is now considering additional leasing activity on the Outer Continental Shelf, but President Reagan is attempting to eliminate funding for the Coastal Energy Impact Program. While the CEIP is a marginally equitable means of sharing OCS revenues with coastal states and communities, its elimination would place the total burden of supporting OCS activities on coastal states while the federal government receives the financial benefits.

We urge your support for the funding of the CEIP in 1982, and a quest for a more equitable means of sharing OCS revenues with coastal states and communities. Continued funding of this or a similar program will enhance our ability to support OCS energy development.

Your assistance in this matter is greatly appreciated.

Sincerely,

Norman J. Walton
Chairman

HONOLULU, HAWAII, *March 24, 1981.*

Hon. NORMAN E. D'AMOURS,
Chairman, Subcommittee on Oceanography, House of Representatives, Longworth House Office Building, Washington, D.C.

In consideration of your oversight hearing deliberations on the future of the national CZM program, the statewide advisory committee to the Hawaii coastal zone management (CZM) program is very much concerned with the magnitude of the proposed fiscal year 1982 Federal budget cuts to this important national effort. At the very least, more time is needed for the State to evaluate and assume the costs of this unwarranted action. With our State legislature in its final weeks of their 1981 session, we cannot hope for financial adjustment until their 1982 session.

With strong public sentiment here in Hawaii for improving regulatory efficency, and with an equally strong need to conserve our precious natural resources within the context of a fragile island economy, we sincerely believe that efforts such as the Hawaii CZM program should be encouraged rather than abruptly terminated.

The Hawaii CZM program has enabled our State planning and management process to move from the issuance of piecemeal development permissions to better coordinated and more informed decisionmaking. This has been accomplished through the implementation of a comprehensive coastal management framework culminating in the enactment of the Hawaii CZM act of 1977, which allows HHPSL to carry out national policy through State and county initiatives, using Federal funds and the consistency provisions of the national CZM Act.

This advisory committee is composed of major business interests in Hawaii, as well as representatives of State and county agencies and environmental groups. The member organizations include: State of Hawaii Departments of Transportation, Health, Land and Natural Resources, State Land Use Commission, State Office of Environmental Quality Control, Planning Departments, Counties of Kauai, Maui, and Hawaii, Department of Land Utilization and General Planning.

City and county of Honolulu, Oahu Development Conference, Kapalua Lan. Company, Kamehameha Schools/Bishop Estate, Hawaii Leeward Planning League of Women Voters, Sierra Club, and the Hawaii Council of Five Clubs.

In accordance with the results of our meeting of March 23, 1981, we are united in our support of this proven Federal-State partnership and hope that you will take all necessary actions to assume continued funding in accordance with the provisions of your reauthorization of the national CZM program in October, 1981.

Sincerely,

AARON LEVINE,
Chairman, Hawaii CZM Program, Statewide Advisory Committee.

MAR 25 1981

EXECUTIVE CHAMBERS

HONOLULU

GEORGE R. ARIYOSHI
GOVERNOR

March 20, 1981

H

The Honorable Norman E. D'Amours, Chairman
Subcommittee on Oceanography
United States House of Representatives
1503 Longworth House Office Building, #1503
Washington, D.C. 20515

Dear Representative D'Amours:

In consideration of your oversight hearing deliberations on the future of the National Coastal Zone Management (CZM) Program, I welcome this opportunity to present the views of the State of Hawaii in support of continuing this important national effort.

While my administration agrees that the National CZM Program, along with all other Federal programs, must share in the FY 82 Federal budget cuts, I believe that the proposed abrupt termination of this entire Program goes far beyond the conventional notion of sharing. This unfortunate result is particularly puzzling in view of the reauthorization of the Program last October by Congress which occurred after two years of debate, during which time there were no suggestions that the Program be terminated.

As an island state, Hawaii's early and active participation in the National Program was an outgrowth of our State's historic identification with the sea and the fact that the National effort was voluntary and based upon the principles of state's rights and self-determination. With respect to the latter, this outstanding model of intergovernmental relations has been most effectively operationalized by allowing participating coastal states to implement national policy through State and local initiatives, utilizing Federal program development and implementation grants and by invoking the Federal consistency provisions of the National Act.

We in Hawaii firmly believe that this innovative Federal-State partnership has worked superbly. We also believe that the National CZM Program has and will continue to have major implications for the State's well-being. In support of this contention, enclosed for your review and consideration are three attachments: Attachment "A" summarizes the impacts of the FY 82 budget cuts on the Hawaii CZM Program; Attachment "B" sets forth some implications of the Federal cutback; while Attachment "C" outlines the benefits and accomplishments to date from our participation in the National Program.

In conclusion, I believe that a more equitable solution to the problem is both desirable and necessary -- one that meets the interest of Congress in reauthorizing the National CZM Act, one that is consistent with the policies and philosophy of the new Administration, and one that, at a minimum, allows sufficient time for state governments to appropriately modify their CZM programs to match the future Federal marine resources effort.

I urge your most serious consideration of Hawaii's concerns and pledge the full support of my Administration in helping you resolve this unfortunate situation.

With warm personal regards, I remain,

Yours very truly,

George R. Ariyoshi

Attachments
cc: The Honorable Walter B. Jones
Chairman of the House Committee on
Merchant Marines and Fisheries
The Honorable Daniel K. Akaka
The Honorable Cec Heftel
Mr. Jim Ross
Coastal States Organization

ATTACHMENT "A"

SUMMARY OF IMPACTS OF PROPOSED NATIONAL COASTAL ZONE MANAGEMENT (CZM) PROGRAM FY 82 BUDGET CUTS ON THE HAWAII CZM PROGRAM

Financial Background of Hawaii CZM Program

Federal CZM Funds Received During Program Development (FY 74-78)	$1.5 million
Federal CZM Funds Received For Program Implementation (FY 79-81)	$3.0 million
Total Funds Received (FY 74-81)	$4.5 million

Major FY 82 Program and Project Areas Affected

DPED Program Administration (Interagency coordination and program development, monitoring, and compliance)

Inter-Agency Task Force for Permit Simplification Project

Kawainui Marsh Resource Management Plan

Hawaii Permit Application and Support System (H-PASS)

Ocean Management Planning Program

Cultural Resources Mapping Project

DLNR Fisheries Management and Volunteer Enforcement Programs

DOT Enforcement Program

Hawaii, Maui, Kauai, and Oahu County CZM Administration, Management, and Enforcement

Pacific Basin Development Council: CZM Coordination

Coastal Energy Impact Planning Program Energy Data management system and environmental baseline/impact mitigation studies for ocean thermal and other alternative energy developments

Number of Non-Consultant, State and County Personnel Affected: 51

Other Impacts: 1) State matching funds for FY 82 cannot be used to operate Hawaii CZM Program, since such monies can only be allotted to match Federal funds.

2) Hawaii will still be legally obligated to carry out the Lead Agency enforcement and monitoring provisions and requirements of the Hawaii CZM Program enabling legislation (Chapter 205A) without the benefit of either Federal or State Financial assistance. This could result in various types of court challenges which the State will be ill-prepared to meet without minimum staff, program, and financial resources.

Suggested Actions:

1) Petition Congress to restore budget cuts.

2) Seek State legislative support for on-going Hawaii CZM Program implementation. *

* The implementation of this suggestion will be difficult in view of the recent 1978 amendment to the Hawaii State Constitution which established a general fund expenditure ceiling, limiting the rate of growth of general fund appropriations to the estimated rate of growth of the State's economy as measured by personal income. It is expected that State funding of the minimal difference between the expenditure ceiling and the State Administration's proposed budget for FY 82 and 83 will be subject to competing pressures such as the expected new collective bargaining contracts and unionized State workers and the likelihood that the State will have to fund various social welfare programs cut by the Reagan administration. As such, it is unrealistic to assume that the Hawaii CZM Program will be successful in securing adequate State legislative funding to continue the Program.

ATTACHMENT "B"

February 17, 1981

Ref. No. 2735

MEMORANDUM

TO: The Honorable George R. Ariyoshi
Governor of Hawaii

FROM: Hideto Kono, Director

SUBJECT: Implication of the President's Proposed Budget Cuts to the National Coastal Zone Management Program and the Coastal Energy Impact Program

The purpose of this memorandum is to review some of the implications of the proposed budget cuts to the National Coastal Zone Management (CZM) and Coastal Energy Impact Programs from both national and local perspectives.

Background on the National Coastal Zone Management Act (CZMA) and Program

The National Coastal Zone Management Act (CZMA) of 1972 was a Congressional response to the increase in uncontrolled activities occurring along the nation's coastlines. The purpose of the Act was to encourage and assist coastal states in the development and implementation of management programs for the purpose of protecting, preserving, developing, and where possible, restoring the nation's coastal resources.

The CZMA was reauthorized by Congress last year for an additional five years at $85 million per year through the CZM Improvement Act of 1980. This reauthorization effort took two years and resulted in over 2000 pages of testimony. It is interesting to note in this regard that Congress rejected the recommendation of the Carter Administration that Federal CZM funding be phased out over time on the basis that the implementation of individual State CZM programs required or warranted full Federal funding support over the next five years.

Moreover, Congress, with the able assistance of our Congressional Delegation, amended the CZMA to provide grants which specifically address the impacts associated with the transport, transfer and storage of coal and alternative energy activities through Section 308 (c)(3) of the Coastal Energy Impact Program (CEIP).

This new section, however, as well as the entire CEIP and the implementation grants available under Section 306 are currently facing the threat of elimination, in that the Reagan Administration has proposed a zero budget level for fiscal year 1982. In addition, no appropriation for the new CEIP amendment is included in the fiscal year 1981 budget.

State of Hawaii Involvement in CZM

As an island State, Hawaii is very cognizant of coastal processes and activities. In this regard, Hawaii developed a Federally-approved State CZM Program under Section 305 of the National CZMA. Currently the Hawaii CZM Program is in its third year of implementation and receives over $1 million in grants annually under Section 306 of the Act to help administer the Program.

Among the many program activities which CZM partially or entirely supports with Section 306 funds are: the DLNR Enforcement Programs; the Kawainui Marsh Study; the Fisheries Development Program; the Ocean Management Program; and the Hawaii Permit Application Support System (H-PASS).

The State has also been involved in the Coastal Energy Impact Program (CEIP) since 1977. To date, Section 308 funds have supported an evaluation of the public review process for shoreline-energy facilities; a cumulative impact assessment of energy activities occurring at major industrial parks; analysis of alternative impact mitigation strategies; and environmental baseline monitoring and infrastructure studies for ocean thermal energy development; and the development of an Energy Data Management System.

Implications of the Section 306 Budget Cuts

From a Hawaii perspective, the drastic cutting of the CZM 306 budget as proposed will, of course, jeopardize all of the on-going programs mentioned above and those future activities noted in the attached 5-year work program. In this regard, present efforts being made towards protecting significant natural resources; managing coastal development; increasing recreational access; protecting historic, cultural, and aesthetic coastal resources; and improving governmental decision-making will be affected and may have to be entirely or partially abandoned.

In addition to the effect the cuts will have on these important program activities, the jobs of over 50 individuals throughout the State are now entirely or partially supported by CZM funds, will be affected (see Appendix "A").

Although we expect that the State legislature will provide approximately $150,000 to match our formerly-anticipated FY 82 Federal CZM grant, we will be unable to use this to operate our Hawaii CZM Program, since such monies can only be allotted to match Federal funds.

Finally, because of the Lead Agency enforcement and monitoring requirements contained in our Hawaii CZM State legislation (Chapter 205A), we will still be legally obligated to carry out the provisions of our enabling legislation without the benefit of either Federal or State financial assistance. Such a situation will undoubtedly result in various types of court challenges which we will be ill-prepared to meet without minimum staff, program, and financial resources.

Implications of the Coastal Energy Impact Program (CEIP) Budget Cuts

From a national perspective, there is a need for a 1981 supplemental appropriation for the new CEIP amendment and future annual appropriations to provide the means for addressing the impacts of accelerated alternative energy development. The economic implications of oil shortages, the burden of high prices, and subsequently, the national commitment to achieve energy self-sufficiency all point to a substantial new focus on our indigenous energy resources. Inasmuch as rapid alternative energy development is anticipated, it is esential that provision be made for the analysis of potential impacts. In addition, the opportunity currently exists, before extensive development occurs, to formulate strategies which will ensure that the transition to energy self-reliance occurs in an orderly fashion.

From a local perspective, Hawaii faces an extremely vulnerable economic situation, inasmuch as the State is over 90 percent dependent on petroleum imports. A strong commitment has been made on the part of your administration and the State Legislature to lessen this dependence through an accelerated energy self-sufficiency program. The opportunity to utilize CEIP assistance to address potential impacts associated with this development effort is highly significant given that the magnitude and priority of the State's program far surpasses its capability to finance associated costs. The State's efforts to develop ocean thermal energy exemplify the type of financial commitment that is needed, for example, in that 6 to 7 million dollars will be required over the next 6 to 10 years to support the environmental baseline studies associated with the OTEC pilot plant project.

Inasmuch as Hawaii is in the initial stages of developing its alternative energy resources, a significant opportunity to avoid potential impacts associated with such development is possible given adequate financial support. This opportunity would be greatly reduced with the

elimination of the CEIP. In addition, the importance of being able to utilize CEIP assistance to manage energy development rather than just to react to the consequences of such development cannot be overemphasized for Hawaii. The viability of a major economic activity in the State, namely tourism, depends upon the maintenance of a high standard of environmental quality.

Conclusions

In view of the large numbers of programs and staffing currently being partially or entirely supported by the Fedeal CZM Program, the proposed budget cuts are, of course, of major concern. The fact that the Hawaii CZM Program involves a State-wide network of agencies at both the State and the County levels further increases the importance of this Program. In the three years of program implementation, the Federal Government has provided over $3 million to the State for various CZM projects.

While the proposed budget cuts are not likely to halt all of the State's efforts aimed at protecting our coastal resources, it will definitely make such endeavors more difficult to accomplish as well as limit new and/or innovative projects. This latter point is important, inasmuch as the Hawaii CZM Program has been able thus far to serve as a catalyst 1) in assisting agencies saddled with budgetary constraints in fulfilling their agency responsibilities, i.e., the DLNR Voluntary Enforcement Program, 2) in undertaking program activities which are beyond the scope or jurisdiction of one or more agencies, i.e., the Kawainui Marsh Project, and 3) in coordinating the activities of different levels of government dealing with Federal consistency, ocean management, permit simplification and streamlining, and Pacific Basin Development Conference CZM-related concerns.

BUDGET AND AFFECTED PERSONNEL

Program/Project	Budget	Affected Personnel
Department of Planning and Economic Development	$322,180	11
Kawainui Marsh Resource Management Plan	80,000	—
University of Hawaii-Urban and Regional Planning Program	227,000	12
Department of Land and Natural Resources		
a. Enforcement Program	109,164	6
b. Fisheries Management Program	55,000	4
Department of Transportation		
Coral Studies Modifications	20,300	—
County of Hawaii		
a. Program Management and Enforcement	113,388	5
b. CZM Legal Support	29,707	1
c. Coastal Hazard Program	18,400	1
d. Public Access Program	15,000	—
City and County of Honolulu	97,340	5
County of Kauai		
Program Management, Enforcement, and Development	67,527	4
County of Maui		
a. Program Administration	61,325	3
b. CZM Legal Support	29,000	1
c. Permit Coordination and Enforcement	15,050	1
TOTAL	$1,175,381	51

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APPENDIX A

Hawaii Coastal Zone Management Program

FY 1980-81

SUMMARY OF PROJECTS, BUDGET AND AFFECTED PERSONNEL

The following is a summary of the projects being funded in FY 1980-81.

Department of Planning and Economic Development

Overall CZM program and grant administration, administer Federal Consistency provisions, public participation and information including assuming the publication and production functions of the HCZNews, revision of Five-Year Work Program, preparation of fourth-year CZM grant, Federal reporting and evaluation, interagency coordination and consultation, monitoring state and county agency activities for compliance including coordination of the H-PASS project, review of Special Management Area (SMA) boundary and rule amendments as necessary, Program changes or amendments, coordinate the activities of the Ocean Management Program, direct and support the Inter-Agency Task Force for Permit Simplification in developing recommendations, and follow-up on any CZM-related legislation.

Kawainui Marsh Resource Management Plan

This plan engages consultants for the completion of certain technical studies which are essential to the preparation of a Marsh Resource Management Plan.

Lead Agency Consultant Services—University of Hawaii Urban and Regional Planning Program

(1) Second year development, demonstration and implementation of the Hawaii Permit Application and Support System (H-PASS)—a computerized system networking coastal-related permits and agencies to improve permit application processing and reporting, improve inter-agency operations and capabilities, facilitate permit tracking, enable lead agency monitoring, and facilitate interagency communication. DPED and the four counties were networked in the first year; DLNR and DOH are scheduled in the second year. (2) Continue the development of an Ocean Management Program to address issues concerning the proper use, protection, and development of ocean resources within a comprehensive framework. Following completion of issue papers on specific ocean topics, a framework study will be pursued, along with initiation of ocean management policy. (3) Continuation of the Cultural Resources Mapping Project to improve the inventory of significant historic lands and sites and use the criteria for archaeological impact evaluation to identify areas of archaeological sensitivity. Mapping for the County of Hawaii will be completed and work on the County of Maui will be initiated.

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Department of Land and Natural Resources

a. Enforcement Program

Continuation of a highly successful program of support for a more efficient and effective enforcement program by providing for specialized staff training, expanding the volunteer officer program from sixty to eighty-five officers, and continuing public information efforts.

b. Fisheries Management Program

Continue efforts to provide for an advanced fisheries data collection and evaluation program to improve the technical basis for fisheries management and to contribute to the subsequent development of specific Fisheries Management Plans.

Department of Transportation

Coral Studies Modifications

Engage the consultant working on the Army Corps inventory of coral reefs to gather and expand information content to include data relevant to harbors and related facilities planning.

County of Hawaii

a. Program Management and Enforcement — Planning Department

Administration of the CZM program at the county level to include administering development activities in the SMA, review and amendment of SMA boundaries as needed, coordinating and streamlining the development review process, and participation in the lead agency's H-PASS project.

b. CZM Legal Support — Office of the Corporation Counsel

Provide the necessary legal assistance to properly manage, coordinate, and implement the County's CZM program, including the enforcement and revision of CZM-related ordinances rules and regulations.

c. Coastal Hazard Program — Department of Public Works

Provide support to coastal hazard management within flood, tsunami, storm wave, or erosion prone areas, including review and update of the County Building Code in conformance with the National Flood Insurance Program, and establishing field procedures for field inspection and hazard monitoring.

d. Public Access Program — Consultant through the Planning Department

Develop an action plan to prioritize public access routes along the shoreline for acquisition and dedication.

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City and County of Honolulu -- Department of Land Utilization

Administration of the CZM program at the City level, including the review and amendment of SMA rules and boundaries, administering the Shoreline Management Permit and Shoreline Setback variances, and provide for improved permit processing monitoring, and coordination.

County of Kauai

Program Management, Enforcement, and Development — Planning Department

Manage development activities in the SMA, including permit review, on-site inspections, and enforcement of applicable regulations and permit conditions. Other activities include the amendment of SMA boundaries as necessary, support permit coordination and streamlining activities of the CCA, develop a Coastal Zone Ordinance manual, and continue the public access master plan and coastal resource inventory program, including improved information on coastal hazards and coastal ecosystems.

County of Maui

a. Program Administration — Planning Department

Administer development activities in the SMA including permit review, on-site inspection, and enforcement. Also, support public participation and inter-governmental coordination.

b. CZM Legal Support — Department of the Corporation Counsel

Provide the additional legal support to effectively administer and enforce CZM responsibilities, including development of criteria for permit approvals, amendment of SMA rules and regulations, refinement of contested case procedures, and development of an inventory of case law relating to CZM litigation.

c. Permit Coordination and Enforcement — Department of Public Works

Assist in the coordination and review of development applications for CZM permits and assure compliance with permit requirements. Information and maps will be developed and acquired as needed to facilitate permit processing, while enforcement actions will assure compliance with existing laws and permit conditions.

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HAWAII COASTAL ZONE MANAGEMENT PROGRAM

FIVE YEAR WORK PROGRAM

Introduction

In 1978, Hawaii's Coastal Zone Management (CZM) Program was finalized and subsequently approved by the U.S. Department of Commerce. As a result, Hawaii became eligible to receive annual Federal grants to assist in administering the program. Pursuant to Chapter 205A, Hawaii Revised Statutes, the Department of Planning and Economic Development (DPED) is responsible for the overall administration of the CZM Program, including the receipt and disbursement of allotted grant funds.

The Five Year Work Program has been developed to assist the DPED in fulfilling its lead agency responsibilities. It is intended to provide direction for the planning and budgeting of projects over the next five years. In addition, it will be a helpful tool for evaluating the progress of the Hawaii CZM Program.

An initial draft document set forth the general goals and priorities for CZM activities over the next five years. Following this guidance, State and County agencies identified their individual needs and five-year work program priorities while preparing funding proposals for fiscal year 1981. The DPED considered agency funding proposals and priorities in formulating the State's FY 1981 grant application and in finalizing the Five Year Work Program.

The work program is organized in three sections. First, major areas of concern relating to management activities in general are described and five year program goals to address them are identified. Secondly, based upon perceived problems and needs associated with the CZM program's seven resource categories, work priorities are listed. The final implementation section describes anticipated five year accomplishments toward achieving the program goals in accordance with the work priorities.

The entire work program will be reviewed and updated periodically to reflect problems and issues that arise over time and their influence upon CZM program priorities. In this regard, the CZM Statewide Advisory Committee and participating agencies will actively assist the DPED in setting the future course of program implementation.

Program Goals Fiscal Years 1981-1985

Given the broad nature of National and State long-term CZM program goals, five year goals have been identified to more specifically define a focus for intended accomplishments in the immediate future. Based upon an assessment of current problems and needs, they address major areas of concern relating to management activities in general.

The administration of regulatory and management programs requires systematic consideration of numerous elements and interests. Interagency coordination and cooperation, public awareness and involvement, sound fiscal management, and efficient administrative practices contribute to effective implementation and enforcement of legal mandates and management objectives.

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Hawaii's CZM law (Chapter 205A, HRS) and the CZM management network of laws, ordinances and regulations constitute the legal basis for implementation of the CZM objectives and policies. The management agencies of this network administer and enforce land and water use regulations in conformance with the CZM objectives and policies; control uses, areas, and development covered by the management program; and resolve conflicts among competing uses.

A common need identified among the networked agencies is additional staff support to effectively and efficiently administer and enforce CZM-related programs. The CZM Program acknowledges this need and will budget funds to supplement the management agencies' activities. Each of these agencies, however, is encouraged to investigate other funding sources for their ongoing administrative needs to allow more grant funds for other needed projects not ordinarily funded through existing State or County programs.

Overlaps, gaps and conflicts in the program's legal foundation and among political jurisdictions often hamper effective management of coastal resources. To date, problems persist as evidenced by the numerous testimonies presented at legislative and public hearings on CZM related plans and programs. Additional strengthening and refinement of this legal basis may be necessary for more effective coastal resource management practices.

The lack of information and criteria to guide planners and decision-makers in evaluating proposed land and water use activities has contributed to detrimental impacts upon coastal resources; the destruction of valued resources; and lost opportunities for increasing public benefits. This is of particular concern in consideration of the increasing demand for management practices which give full consideration to ecological, cultural, historic, and aesthetic values as well as to needs for economic development. Improved guidance in the form of plans, programs, and attendant data will be extremely beneficial to decision-makers at all levels of government and the private sector.

In consideration of the above, the following are the program's five year goals.

GOAL: To improve the administration and enforcement of coastal resource regulations and management programs.

GOAL: To improve the legal basis for coastal resource regulation and management.

GOAL: To improve the substantive basis for coastal resource regulatory and management decisions.

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On the premise that Hawaii's environment is both overregulated and undermanaged, the State Legislature authorized the Hawaii CZM Program to integrate the various CZM authorities and regulatory mechanisms to improve management of the coastal zone. These goals respond to this legislative intent by directing the CZM program toward a systematic strengthening of the administrative, substantive, legal, and enforcement components necessary for better management decisions.

Program Work Priorities, Fiscal Years 1981-1985

Specific problem areas have been identified for each of the seven CZM objective categories. Work objectives designed to address the substantive, legal and administrative aspects of these problems provide direction and focus for a range of implementation activities. Within each category, priority rankings are assigned to reflect the relative importance and immediacy of the needs and/or problems to be addressed.

RECREATIONAL RESOURCES

Hawaii's coastal recreational resources--its parks, near-shore waters, coastal ecosystems, surf sites, and beaches--are limited in number and are under increasing demand. This demand is rising because of population growth and increased tourism, leisure time, and income. At the same time, coastal development has reduced public access to recreational resources and has increased public land acquisition costs. In addition, Federal agencies have tended to restrict public access from sizeable shoreline and near-shore areas with considerable recreational potential.

Projected recreational demand over the next fifteen years will require significant increases in the supply of boat launching and mooring facilities, and beach parks for swimming, sunbathing, picnicking, and camping. Shortages in the supply of these facilities will reduce the quality of coastal recreational opportunities available to both local residents and visitors to Hawaii.

WORK PRIORITIES:

Priority 1: To inventory and assess the needs for public access through Federal, State, County, and private lands.

Priority 2: To prepare and implement plans for the acquisition and management of access to and along the public shoreline including expanded public access to Federally controlled shorelands.

Priority 3: To develop plans and programs for expanded recreational activities and facilities including, but not limited to, small boat harbors, boat ramps, surf sites, recreational fishing areas, and beach parks.

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HISTORIC RESOURCES

Hawaii's historic, pre-historic, and cultural resources are of immense cultural and economic importance. They contribute to public understanding of the multi-cultural heritage of today's Hawaii and provide a source of intense ethnic pride for all its people. Historic preservation and interpretation also provides a unique vacation experience for Hawaii's visitors and thus contributes to the health and stability of the State's tourist industry.

Available management alternatives range from the preservation and acquisition of very valuable sites to special salvage operations designed to recover relics and record the characteristics of less important sites. Problems have arisen, however, in determining the criteria for classifying a site's significance and for identifying areas which potentially contain sites of historic significance.

In general, State law protects historic and pre-historic resources on State raised and submerged lands. State protection of sites on private lands, on the other hand, is limited to those on the State Register of Historic Places. Prior to development of a site listed on the State Register, the landowner must notify the DLNR which then has 90 days to salvage historic artifacts or initiate condemnation of the site. Since funds for acquisition at both the State and local level of government are limited, alternative methods for preservation including incentive programs for private landowners and conditions of land use permissions should be pursued.

A significant proportion of Hawaii's land areas are under Federal jurisdiction. Detailed surveys of these lands would greatly increase the amount of land which has received intensive historic and archaeological inspection. Unfortunately, many areas under Federal control have not been surveyed in accordance with Federal Executive Order 11593 which directs all Federal agencies to "...locate, inventory, and nominate...all sites, buildings, districts, and objects under their jurisdiction or control that appear to qualify for listing on the National Register of Historic Places."

WORK PRIORITIES:

Priority 1: To support inventories and technical studies for improved management of historic and pre-historic cultural resources, including the formulation of criteria for historic and archaeological impact evaluation.

Priority 2: To assist in the formulation and implementation of plans and programs for the acquisition and interpretation of historically or pre-historically significant lands or sites and for improved integration of resource assessment practices with existing land use management systems.

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Priority 3: To formulate incentive programs which increase private support of historic or archaeological surveys, preservation and restoration.

Priority 4: To formulate agreements and cooperative programs with Federal agencies relating to archaeological surveys on Federal lands.

SCENIC AND OPEN SPACE RESOURCES

Hawaii's coastal open space and scenic resources contribute to the quality of life in Hawaii's natural environment and to the State's attractiveness as a visitor destination area. Coastal aesthetic amenities and open space, however, are subject to pressures of urbanization including public and private development of structures which are visually incongruous and result in the loss of open space.

The State Land Use Law protects the State's open space and scenic resources by restricting most housing, industrial, and resort development to limited urban districts. County planning, zoning, and subdivision powers are generally adequate to preserve aesthetic amenities by restricting the scale, location, and design of development in the urban district.

The mere existence of such land use controls, however, has not always been sufficient to protect coastal aesthetic amenities and open space. Permit review processes which require consideration of aesthetic impacts tend to be highly subjective. Standardized procedures and criteria for assessing, identifying, and protecting the aesthetic value of Hawaii's unique scenic resources have yet to be developed. Since available funds are generally insufficient for both acquiring and adequately maintaining publicly-owned open space, alternative techniques for the preservation of valuable scenic resources should be studied.

WORK PRIORITIES:

Priority 1: To formulate criteria for identifying and classifying valued scenic and open space resources.

Priority 2: To develop registers of scenic resources, including scenic districts, open space areas, scenic sites, view corridors, and view planes.

Priority 3: To develop and implement plans, programs, and mechanisms for the preservation of scenic and open space resources including, but not limited to, acquisition programs, private incentive programs, and improved design review procedures associated with land use permissions.

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COASTAL ECOSYSTEMS

Hawaii's coastal ecosystems are an integral and valuable component of the natural systems which constitute Hawaii's environment. Ocean areas, streams, wetlands, estuaries, and reefs, for example, serve as biological reservoirs for replenishment of the State's unique diversity of species. Man's uses of these valuable resources, e.g., recreational and commercial fishing, depend upon such natural replenishment processes.

Hawaii's coastal ecosystems, however, have been increasingly threatened by man's activities. Areas which are fragile or unique should be identified and activity impacts upon them minimized through the application of mitigation measures derived from on-site technical studies, designation as CZM areas of particular concern, or by acquisition.

There is also a need to focus upon the "wet side" of the State's coastal zone to improve management coordination of activities affecting ocean areas giving due consideration to the interface with activities on land. Fisheries development, ocean transportation, ocean energy development, seabed mining, ocean disposal, and pollution of coastal receiving waters are subject to regulatory and management programs of numerous agencies. The current lack of coordination in planning for activities in these areas potentially may adversely impact valuable coastal ecosystems.

WORK PRIORITIES:

Priority 1: To develop and implement plans, programs, and mechanisms to enhance management coordination and acquisition of areas where activities have high potential for damaging coastal zone ecosystems.

Priority 2: To develop and implement plans, programs, and mechanisms to minimize non-point source pollution of streams, groundwater sources, and coastal waters.

Priority 3: To conduct technical studies to promote the continued establishment of CZM Areas of Particular Concern.

ECONOMIC USES

Management of Hawaii's coastal zone is critical to Hawaii's future economic growth and stability. Shoreline sites are essential for some economic uses and desirable for many others. Many uses or activities such as harbors, sewage treatment plants, power plants, resorts, fisheries, mariculture and oceanographic research operations depend on access or proximity to coastal waters.

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Coastal dependent economic uses often have adverse physical, social, or economic impacts which fall most heavily on residents of the immediate area or on people who do not directly benefit from such uses. As a result, economic development of Hawaii's coastal zone is often controversial. In addition, narrow management focus and ad-hoc decision-making have contributed to insufficient consideration of the broader implications of proposed coastal dependent development.

The formulation of a public management strategy for the development and accommodation of future economic uses would assist in minimizing adverse impacts and in promoting management coordination.

WORK PRIORITIES:

Priority 1: To develop and implement plans, programs, and mechanisms to enhance management of coastal dependent development areas including, but not limited to, urban waterfronts, harbors, ports, visitor industry facility sites, and energy generating facility sites.

Priority 2: To support the development of marine and fisheries resources consistent with CZM objectives and policies including, but not limited to, aquaculture, mariculture, ocean thermal energy conversion, and manganese nodule mining.

Priority 3: To support data acquisition and advance planning related to the proposed location of coastal dependent industrial and energy facilities, airports, and harbors.

COASTAL HAZARDS

The economic potential offered by the development of shorelands and upland areas has encouraged improper use of some areas with high risk of storm waves, erosion, flooding, subsidence and tsunami inundation. The results have been tragic and costly in terms of loss of life and property. To a certain degree, government action has actually subsidized development of some hazardous areas by providing low cost assistance to the victims of natural hazards without appropriate land use controls.

Although the National Flood Insurance Program mapping project will identify areas subject to flood and tsunami hazards, information is lacking about storm wave and coastal erosion hazards. Design criteria for construction within hazard areas is lacking and land use management systems in general have not adequately conditioned development in extremely hazardous areas.

Improved information on coastal hazards, identification of areas subject to extreme hazards, acquisition funds, improved management controls and increased public awareness of coastal hazard areas will assist in reducing loss of life and property.

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WORK PRIORITIES:

Priority 1: To develop and implement plans, programs, and mechanisms to manage and acquire identified coastal hazard areas including improved integration of hazard prevention and control practices with existing land use management systems.

Priority 2: To assist in the implementation and enforcement of the Federal Flood Insurance Program.

Priority 3: To develop and communicate to the public information on storm waves, tsunami, flooding, erosion, and subsidence hazards.

MANAGING DEVELOPMENT

Almost every aspect of the development process in Hawaii is subject to regulation by one or more public agencies. The proliferation of development permits has resulted in a complex, timely, and costly process for those engaged in construction and development activities. Yet, existing permit requirements have not always adequately addressed the impacts of development. Furthermore, responsibility for regulation of development is distributed among various public agencies, and the coordination among them is not effective.

Inadequate communication and information regarding proposed developments and their impacts has alienated citizens from participating in planning and regulatory decision-making processes. The public has also been frustrated by the duplication of work effort among existing agencies and permit application requirements.

The lack of enforcement capabilities has weakened agency administration of effective regulatory systems. Public agencies also lack an accessible, integrated information base with which to make informed resource management decisions.

WORK PRIORITIES:

Priority 1: To develop implementation mechanisms to facilitate timely processing of permit applications and to resolve overlapping or conflicting permit requirements.

Priority 2: To improve enforcement capabilities of agencies with permit and regulatory responsibilities.

Priority 3: To promote public participation in and education of the development review process and the CZM program.

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IMPLEMENTATION

A range of activities may be undertaken to implement the work priorities and assist in accomplishing work program goals. Agencies with authority to implement the work program pursuant to State mandates of the CZM management network include the DPED, various County agencies, the State Departments of Land and Natural Resources, Transportation, Health, and Defense, and the Office of Environmental Quality Control.

The primary factors influencing project selection and phasing over the next five years are:

1. The degree to which a proposed activity reflects work program goals, objectives, and priorities.

2. The estimated cost of activities including those necessary for implementation of CZM legal mandates or for completion of phased projects.

3. The level of anticipated Federal CZM funds available to the State of Hawaii in any given year.

4. The appropriateness of the implementing agency.

Given anticipated budgetary constraints, sufficient funding for all proposed activities may not be available. Accordingly, the following is a general description of anticipated accomplishments over the five year work program period. Detailed project descriptions, work tasks and completion schedules, personnel requirements, and Federal/State shares for each program project will be set forth in the annual funding application prepared for consideration by the Office of Coastal Zone Management.

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Year 1 - Fiscal Year 1981

Administration and Enforcement

A major proportion of annual funds will be allocated for implementation of CZM legal mandates, including program administration and enforcement functions at the State and local levels. The preponderance of such activities reflects the State's continued concern for effective implementation of the CZM management network.

During the first year, DPED's interim monitoring of agency land and water use permissions and approvals will be evaluated as to the system's effectiveness in detecting patterns of non-compliance. Since the automated H-PASS system generally uses the same approach and information requirements of the interim-monitoring system, the evaluation will assist in early identification of potential problems and inadequacies prior to full implementation of H-PASS.

Legal Basis

The strengthening and refinement of the CZM legal network will be supported especially in areas which will result in improvements to the land and water use regulatory systems.

Substantive Basis

Special study projects will be undertaken in areas where the lack of information or management coordination has impeded improvements to the management of coastal resources.

Year 1 activities include:

-- DPED management responsibilities as the State's CZM lead agency including program administration, development and compliance functions.

-- County administration and enforcement of the Special Management Area permit and other CZM network laws.

-- Department of Land and Natural Resources Enforcement Program including the volunteer officer program.

-- CZM public awareness and involvement programs.

-- State Department of Transportation Enforcement Program.

-- Development and implementation of the Hawaii Permit Application and Support System.

-- DPED guidance and support to the Governor's Inter-Agency Task Force for State Permit Simplification.

-- CZM Program assistance to local agencies in carrying out their central coordinating agency responsibilities.

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- - Continued review and refinement of laws, ordinances, and regulations of the CZM management network.

- - Kawainui Marsh Special Study Project

- - Ocean Management Program

- - Cultural Resources Mapping Project

- - Environmental Impact Statement Data Base

- - Public access and hazard areas studies by the Counties

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Year II - Fiscal Year 1982

Administration and Enforcement

By the end of the second year, sufficient experience with administering and enforcing the CZM program should be gained to enable an evaluation of the program's effectiveness in these areas. At this point in time, it is anticipated that the results of DPED's interim monitoring and H-PASS activities would have been utilized as a catalyst to effectuate changes to improve compliance with CZM program requirements. Direct enforcement activities such as enforcement officer programs, legal support to administering agencies, and judicial proceedings would also be reviewed to identify contributions to overall program compliance. This will assist the DPED in determining levels of performance and funding necessary for maintaining effective compliance activities.

Legal Basis

Year II activities will include implementation and evaluation of recommendations made by the Governor's Inter-Agency Task Force for State Permit Simplification.

Substantive Basis

It is anticipated that the Cultural Resources Mapping project, the Kawainui Marsh special study project, and the Ocean Management Program will be completed at the end of FY 1982.

The stable base mapping of sites and areas of archaeological investigation and historic importance will be completed for the State's major islands. As a result, improved information will be readily available to user agencies in an area of critical concern to the State of Hawaii.

The protection and improved management of valuable coastal ecosystems will be enhanced by the completion of the Kawainui Marsh Special Study Project and the Ocean Management Program. The inter-disciplinary approach utilized by these projects will provide experience in developing creative solutions to issues and management problems which may be applied to other environmentally sensitive areas of statewide concern.

All of the Year I activities will be continued during this fiscal year.

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Year III - Fiscal Year 1983

Administration and Enforcement

It is anticipated that third year administration and enforcement activities will result in substantially improved integration of management decisions affecting Hawaii's coastal resources and improved methods for early identification of potential non-compliance cases. As the number of H-PASS user agencies increases during the year, substantial progress in facilitating lead agency monitoring, interagency communication and coordination, in improving internal agency efficiency and operational capabilities, and in providing a readily accessible statewide resource information base is expected. Since the interim monitoring system will have been phased out at the end of Year II, efforts will focus on evaluating the effectiveness of H-PASS in detecting patterns of non-compliance and follow-up enforcement actions.

Legal Basis

With regard to strengthening the legal basis of the CZM program, third year efforts will focus on continued improvements to Hawaii's land and water use regulatory systems. Subsequent to completion of the State Permit Simplification Project, it is envisioned that the potential applicability of the project's results to Federal and County permit processes will be analyzed in cooperation with the appropriate agencies.

Substantive Basis

Improvements in the level of information available to the decision-maker would at this point in program implementation primarily relate to public access, ocean resources, and coastal hazards. In each of these areas, completed comprehensive planning programs will facilitate the assessment of resource management concerns in the processing of State and local permits, in the review of Federal consistency determinations, and in preparing applications for Federal, State and local funding assistance.

Year III activities include:

-- On-going DPED lead agency management responsiblities including an evaluation of the program's progress in assuring compliance with CZM program requirements.

-- On-going County administration of the CZM program at the local level including the administration and enforcement of the Special Management Area permit and other CZM network laws.

-- Continuation of the DLNR enforcement program.

-- Continuation of the CZM public awareness and involvement programs.

-- Continued development and implementation of H-PASS.

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-- In cooperation with Federal and County agencies, including the Central Coordinating Agencies, develop and implement means of simplifying permit processes as appropriate.

-- Continued CZM Program assistance to local agencies in carrying out their central coordinating agency responsibilities.

-- Review and evaluate refinements to laws, ordinances, and regulations of the CZM management network and continue efforts to assure consistency with the CZM program as the need arises.

-- Continued support of County public access planning and implementation programs.

-- Continued support of County efforts to manage coastal hazard areas especially in conjunction with implementation of Federal Flood Insurance Program requirements.

-- Support the gathering of resource information and data necessary for improved management of the "wet side" of the coastal zone.

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Year IV - Fiscal Year 1984

Full implementation of H-PASS in the fourth year will establish an integrated coastal permit and land use information system which will have far-reaching effects in furthering planning and permit coordination on a statewide basis. In addition, H-PASS will provide information on coastal impacts identified during the permit application review process; on mitigation measures to address any adverse impacts; and will report on an agency's action in approving or denying the application. DPED's effectiveness in carrying out its monitoring responsibilities will be enhanced by the automated system since more timely information will be provided than was available under the earlier manual, after-the-fact, interim monitoring system. It is also anticipated that H-PASS will facilitate early consideration of CZM concerns in agency planning activities and processes.

Year IV activities include:

-- Continued support of DPED and County program administration and enforcement responsibilities.

-- Full implementation of H-PASS.

-- Continued CZM public awareness and involvement programs.

-- On-going enforcement and refinement of the CZM management network.

-- Follow-up activities relating to efforts to streamline and improve governmental permit processes including the evaluation of prior modifications to development review and approval procedures.

-- Identification and support of studies which will improve the substantive basis of management decisions affecting important coastal resources such as coastal-dependent development, scenic and open spaces, recreational resources, and areas subject to coastal hazards.

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Year V - Fiscal Year 1985

By the fifth year, substantial progress in improving management decisions affecting Hawaii's coastal zone will hve been accomplished. The integration of administrative, monitoring, enforcement and evaluation responsibilities will provide a systematic approach to managing Hawaii's coastal resources. Given projected population growth, limited land resources, development of new technologies for utilizing ocean resources, and Hawaii's vulnerability to rapidly changing mainland and world economic conditions, increasing pressures for use of Hawaii's coastal resources is predictable. Accordingly, the integrated systematic framework, its legal basis, and the planning tools and information developed in previous program years will be refined to assure timely response to changing problems and needs.

Year V activities include:

-- Continued support of DPED and County program administration and enforcement responsibilities.

-- Implementation of H-PASS.

-- Continued CZM public awareness and involvement programs.

-- On-going enforcement and refinement of the CZM management network.

-- Identification and support of studies which will improve the substantive basis of management decisions affecting important coastal resources.

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ATTACHMENT "C"

BENEFITS AND ACCOMPLISHMENTS OF THE HAWAII COASTAL ZONE MANAGEMENT PROGRAM

INTRODUCTION

Hawaii's Coastal Zone Management (CZM) Program, formulated by government, special interest groups, and the general public, was approved by the United States Department of Commerce in September 1978. This program impacts upon the entire geographic area and population of the Hawaiian archipelago. Indirectly, the program has national and international economic, political, and legal impacts.

Hawaii's population includes over 100,000 visitors present at any given time, primarily from other States, Japan, and Canada. Over the past years urbanization has caused an explosion in the use of coastal resources. Shipping, scientific and technological research, military operations, commercial fishing, and recreation abound in Hawaii's surrounding waters.

Hawaii's Coastal Zone Management Program has successfully approached this array of often conflicting activities with an aim toward reducing waste and duplication. Pioneering efforts have been made in governmental administration and resource development and management. These efforts are described. The accomplishments of the program impacting on Hawaii's tourist industry and budding energy industries are also detailed.

GOVERNMENTAL ADMINISTRATION

A cost-saving intergovernmental coordination component of the Hawaii Coastal Zone Management Program has been developed. This program grew out of a long-standing need to improve the efficiency and coordination of governmental agencies responsible for the administration of a wide range of policies and permits for land and water use throughout the State. This responsiblity is due in large part to the structure of the program which is based upon a legal networking of existing statutory authorities to achieve the objectives and policies set forth in the Hawaii law. Through this networking approach Hawaii has been able to streamline governmental permitting activities affecting land and water use throughout the State. The Hawaii program, then, has been the catalyst for improving governmental administration by improving communications to reduce fragmentation and overlap of agencies with related functions.

Handbook of Permit Requirements Published

The program has developed and published a handbook of governmental permitting requirements for coastal land and water uses to clarify the procedural and substantive requirements of land and water use laws. The program staff has further developed extensive studies on the coastal permitting actions, is serving as staff to the Inter-Agency Task Force for State-Level Permit Simplification, and has developed a land and water use information system which will substantially improve land and water permitting reviews. Studies and recommendations of the Inter-agency Task Force will result in a more efficient, yet impact-sensitive, permitting process so necessary to ensure Hawaii's continued economic growth.

Permit Application Demonstration Project

The Hawaii Permit Application and Support System is a demonstration project which is networking 10 State and County agencies into a computerized information system which is intended: (1) to assist governmental agencies, private business, and the public in the tracking of land and water use permits through permit review processes; (2) to coordinate the informational requirements and processes among state and county agencies; (3) to obtain resource and land use data by geographic and legal property parameters; and (4) to assist developers, planning and architectural consultants, and the public in locating information pertinent to the land development process. At present, 11 different data bases have been developed and 7 agencies have been networked in the system.

Ocean Leasing Study

The program has also assisted in an Ocean Leasing study to provide the basis for the allocation of water column areas and ocean resources to mariculture, commercial fishing, energy, mining, transportation, and other present and future marine industries. This program will serve to significantly stimulate ocean development which provides for economic feasibility in a manner which is consistent with the environment.

RESOURCE DEVELOPMENT AND MANAGEMENT

Hawaii's CZM Program continues to promote several projects to identify resources in the State's coastal zone. This effort develops readily interpretable information bases spanning a variety of resources areas. In this section, the Program's major resource mapping efforts are described as follows:

Coral Reef Inventory

The Hawaii Coral Reef Inventory was developed by the U.S. Army Corps of Engineers in 1978. It contains mapped and textual information on the shoreline and coral reefs for the islands of Oahu and Maui, including physiography, flora and fauna, historical and archaeological sites, uses, and prior studies and surveys. The inventory was intended as a reference document for interested persons, organizations, and Federal, State and County agencies involved in coastal zone assessment, management, and planning. The State Department of Transportation was allocated coastal zone management funds to modify these maps to better accommodate its harbor planning and development needs.

Beach Erosion Research

Since Hawaii's beaches are reknown worldwide for their beauty, they are an integral part of the State's attraction as a tourist destination. Beaches, however, can be subject to erosion if not properly managed. On Oahu, the problem is particularly evident where intense development pressures have resulted in structures damaged in areas subject to long term erosion and where mitigative

measures such as seawalls have, in some cases, accelerated erosion on adjacent beaches. As a first step addressing this problem of beach erosion, we have identified the erosion patterns of the State's beaches. We have also developed a methodology to determine erosion and accretion patterns through the use of aerial photographs taken over an extended period to include its application to beaches on the island of Oahu. The results have been acclaimed by agencies involved in beach management. At present, we are investigating the means by which these results can be integrated into a statewide management framework.

Resource Development Coordination

Ocean resource development is currently gaining increased attention in Hawaii. Innovative technological applications such as ocean thermal energy conversion (OTEC), manganese nodule mining and processing, and mariculture are among the new marine-related activities of economic importance to Hawaii. Research and development in these activities are of immediate economic benefit to Hawaii. Large scale fisheries development is also being pursued by the State as a means to diversify Hawaii's narrow economic base. Added to the diverse existing uses of the seas surrounding Hawaii (transportation, recreation, small-scale commercial fishing), the potential for conflicts and competing uses increases significantly. Because development of these resource potentials are being pursued relatively independently by various governmental agencies and the private sector, there has been insufficient attention given to identifying and addressing potential conflicts. As a result, we are funding a project to map the areas in which various ocean resources occur or are anticipated to be developed. Maps were selected as the medium for communicating information, inasmuch as they can be readily interpreted and can provide the flexibility needed to identify conflicts between diverse activities when displayed in the form of transparent overlays.

Historic Preservation

Cultural resources in the coastal zone are socially and economically valuable to the State and are integral to Hawaii's attraction as a tourist destination area. In light of the mounting pressures for development, therefore, the need to identify cultural resources is important. Through proper identification, successful salvaging or restoration efforts can and have been accomplished. In some instances, historic sites have been incorporated into the design of hotels in the Kona area on the island of Hawaii. Presently, however, the methods for identifying historic resources are inefficient, resulting in considerable wasted time and effort. In response to this, our cultural resources mapping project was designed to serve as an accessible repository of readily interpretable information for agencies charged with managing cultural resources. The savings in time and effort will not only benefit the managing agencies but will also result in savings to developers.

OCEAN MANAGEMENT PLANNING

As an island State where economic growth has taken hold, land is a limited resource in Hawaii. Consequently, coastal zone management in Hawaii has begun to emphasize the potentials of the ocean. To provide systematic guidance for harvesting the potentials of the ocean, Hawaii has initiated the formulation of an ocean management plan. As research and development efforts continue for a number of ocean technologies, the prospects for major private sector investments look promising. Floating sea-farming operations could result in substantial tonnage of fish and shellfish. Electricity for island businesses and homes can be derived from the ocean's thermal gradient through ocean thermal energy conversion, and in this regard, operation of OTEC plantships is on the horizon. Manganese nodules with considerable content of copper, cobalt, manganese, and other minerals can also be mined from the sea and processed in the islands. To facilitate these opportunities, our coastal program has either initiated or supported a number of ocean related projects intended to contribute to the rational development of Hawaii's ocean resources. We are encouraging the multiple use of the ocean waters in the context of both resource utilization and environmental management. In this way, we can reap the economic benefits of the ocean while maintaining a safe and clean marine environment.

Purposes of Ocean Management Program

In our ocean management program efforts, we are pursuing a number of legal, environmental, and development issues for current and future use of the ocean resources. These projects are intended to provide both short-term solutions to management problems and to develop long term policies that will benefit future resource use in Hawaii.

This approach is intended to: (1) achieve increased coordination among private and public sector interests spanning a variety of ocean resources and uses, (2) avoid future conflicts among ocean resource development activities, and (3) provide a forum and framework for determining priorities for governmental participation, (e.g., for promising but high risk ventures, government may have to play an important role in clearing the uncertainties as an incentive for private sector investment).

Ocean Leasing and Fisheries Management

Ocean leasing and fisheries management are two economically important marine projects in which coastal zone management has been involved. The program assisted financially and in an advisory capacity in the development of the report on ocean leasing for Hawaii which addresses legal and policy issues for the wise use of marine resources. This study develops guidelines for licensing mariculture operations, including assessments of the major legal issues related to ocean development, contraints to fostering commercial activities, and regulatory issues which govern the State's jurisdiction over ocean areas. It analyzes ocean leasing which encompasses ocean thermal energy conversion devices, fish aggregation buoys, and mariculture farms. It also provides a solid technical foundation for the orderly development of the marine environment.

The program has been instrumental in coordinating and facilitating a fisheries development master plan which encourages the rapid development of commercial fisheries. High priority is given to promote data evaluation and to develop an economic base which will enhance Hawaii's fishery resources. The plan is designed to protect the biological resources while maintaining an economically feasible fishery through the establishment of guidelines for resource utilization.

Coastal Energy

Hawaii is extremely vulnerable economically because of its 90 percent dependence on petroleum imports and the effects of fuel costs on tourism. The Governor, the State Legislature, and private industries have made strong commitments to lessen this dependence through an accelerated energy self-sufficiency program. This effort is crucial to the attainment of two other high priority objectives of the State, namely, statewide economic diversification and the expansion of the Neighbor Island economies. A few examples of the near-term economic benefits anticipated to result from the development of Hawaii's indigenous energy resources include: (1) a reduction in the State's vulnerability to interruptions in oil supplies and oil price increases (in 1980, over $1 billion flowed out of Hawaii economy for imported oil); (2) new employment opportunities created by energy facility construction maintenance, and servicing; (3) diversification of the agricultural products industry through the future provision of reliable, relatively inexpensive energy sources; and (4) expansion of the aquaculture industry to include temperate water species through the use of geothermal fluids and the ocean thermal energy conversion process waters available now through joint government/private sector development activities.

Private Sector Investment

Development of Hawaii's indigenous energy resources will depend heavily on private sector investment. Although many opportunities exist, a great degree of risk is associated with the various energy development potentials. To operationalize these potentials, therefore, the government must ensure that energy resource development is properly guided to avoid detrimental impacts to these and other economic activities. The opportunity to capitalize on the assistance provided by the Coastal Energy Impact Program in addressing the potential impact associated with energy development is highly significant. This is because of the fact that the magnitude and priority of the State's energy program far surpasses its capability to finance the costs required for proper energy resource management activities.

Geothermal power generation has the potential to supply much of the electricity demands on the Island of Hawaii. Even the steam and hot water from the conversion have direct industrial applications. While rapid commercial development of geothermal resources is being encouraged, the State and County governments are encountering difficulties in fulfilling their monitoring and planning responsibilities relating to the cumulative impacts that are expected to result from this energy source. The Coastal Energy Impact Program has provided the initial financial

support to formulate a special monitoring and compliance program for geothermal power which will expedite the review and approval process from a balanced resource management perspective. It is hoped that this program can continue to significantly contribute to reducing the time and risk factors that are of critical concern to induce private sector investment in geothermal energy development.

TOURISM

The visitor industry is the largest single economic activity in Hawaii. In 1979, for example, visitor expenditures surpassed the 2 billion dollar level. It will be important to maintain the economic health of this industry and to take actions necessary to enhance its growth, while ensuring that the direction and pace of the growth is beneficial to residents and visitors alike.

Hawaii's visitor industry is closely linked to the coastal regions, to the ocean, and to the adjacent lands of the four major islands. The industry is based on an image of high quality waters, broad expanses of white sandy beaches, and planned and controlled tourism centers.

In this major industry, coastal zone management has a central role. Through the Hawaii CZM program's environmental provisions, it contributes significantly to the maintenance of the environmental qualities which are crucial to the islands image as a major tourism destination area.

Beach Erosion

Inasmuch as Hawaii's beaches are major attractions to the resident and tourist populations, beach accretion and erosion are primary concerns. No other program has been able to adequately handle these concerns. Therefore, Hawaii's CZM program has initiated a study to identify the patterns of accretion and erosion and the methodologies for assessment. Pioneered on the Island of Oahu, it provides existing and potential visitor centers with a means of predicting cyclical changes for all of the major beaches on the island. It identifies problems of beach changes which are attributed to structural alterations. In addition to serving as an early warning system for remedial action, it has become a useful tool for planners and developers to determine where development can occur with reasonable safety, thus reducing premature investment of public and private sector monies. The continuation of the National CZM Program will allow for expanded coverage of this project to all the major beach areas throughout the State, as well as, provide another element of predictability in assuring the integrity of our natural environment that is so important to Hawaii's resident and visitor population.

Water Quality

Recognizing that our quality coastal waters are an essential component in promoting tourism in the islands, Hawaii's CZM program helps to preserve this important resource. While the Program does not have direct functional responsibility in implementing specific water quality control measures, it does provide an integrative review of water quality concerns through a networking of agency activity reviews. In this way, the State's waters can be assured of their high quality while the continuance of these management measures contributes to the preservation and growth of tourism.

Historic Preservation

Hawaii offers its visitors a cultural heritage that is unique. This heritage, which encompasses a pre-historic culture of social and organizational importance as well as the legendary and structural remains of America's only kingdom, is important to the visitor industry and to the residents of the islands.

Hawaii's coastal program has initiated projects to support the identification and preservation of the State's historic resources through activities which enhance the systematic classification of cultural resource maps and information. This provides potential developers with easily retrievable information on the resources by location early in the planning stage. Access to information on the presence or absence of important sites has helped developers to avoid siting problems which directly affect development scheduling and costs.

Pacific Basin Development Council
Suite 620 ○ 567 South King Street ○ Honolulu, Hawaii 96813
Telephone (808) 523-9325 ○ Telex 743-0668

Governor George R. Ariyoshi
Hawaii
President

Governor Carlos S. Camacho
Commonwealth of the Northern Mariana Islands
Vice President

Governor Peter Tali Coleman
American Samoa
Secretary

Governor Paul M. Calvo
Guam
Treasurer

March 21, 1981

Honorable Malcom Balridge
Secretary
U.S. Department of Commerce
14th Street and Constitution Avenue
Washington, D.C. 20230

Dear Secretary Balridge:

In my capacity as President of the Pacific Basin Development Council (PBDC), a regional cooperative organization representing the American flag islands of the Pacific, I would like to provide you with my comments concerning the proposed demise of the Coastal Zone Management program and the impacts that will be felt by the member Governors of PBDC.

During 1980 the last of the island governments that comprise the membership of PBDC received approval for their individual coastal zone management plans. Through the PBDC, we were just starting to develop and address some of the unique regional issues and were using some of our CZM funding to explore the transfer of technology and some joint efforts in the area of problem resolution.

In the attached material we have identified the uniqueness of our island State and Territories, the relevancy of CZMA to the totality of island programs and the proven benefits of the national program in the areas of economic development, intergovernmental administration and regional developement.

It is my firm hope and desire that you will take into consideration the points that we have made as you assess the future of the National Coastal Zone Management Program.

With warm personal regards, I remain,

Yours very truly,

George R. Ariyoshi
President

Jerry B. Norris
Executive Director

Pacific Basin Development Council
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Executive Director

COASTAL ZONE MANAGEMENT

The Governors of the Pacific Basin Development Council have made the decision to seek support to continue the Coastal Zone Management Program at its current authorized level. The American Flag islands have just begun to benefit in a positive manner from the federal resources and program guidelines that have been provided through the national CZM program.

The CZM program is unique in that it provides national objectives and has allowed the States and Territories to develop, with a minimum of interference, those national objectives. An important aspect of the CZM program is that it mandates other federal agencies to participate in and respond to decisions made relating to CZM program elements, thereby giving States and Territories the opportunity to strongly influence federal decisions as those decisions relate directly to local coastal zone management programs. It is clear that the CZM program could serve as a guide and model for other programs that are being shifted from the federal level to the state and local governments.

UNIQUE ISLAND STATUS

One of the major justifications that has influenced the decision to seek the continuation of the program is the fact that the island governments that comprise the Board of Directors of the Pacific Basin Development Council have come to realize that there is truly a unique island status that requires special considerations and attitudes. Justification for the concept is based on the following:

*percentage of impact on the lands of the individual islands;

*percentage of impact on total population;

*relevancy of the Coastal Zone Management Act on the totality of the island government(s).

1) IMPACT OF CZM ON PACIFIC ISLANDS - The coastal zone is a diverse natural resource that extends a total of 101,500 miles along the Atlantic, Gulf, Pacific and Great Lakes coasts as well as the total perimeters of the Islands of American Samoa, Guam,

Hawaii, the Northern Mariana Islands, Puerto Rico, the Virgin Islands and more recently, the Trust Territories of the Pacific Islands/TTPI (It should be noted that the 101,500 miles does not take into consideration the recent decision (PL 96-464) to include the TTPI in the CZMA). Although there are two seperate methods of viewing the "unique islands status", both result in the fact that "islands" should be treated with special considerations.

One approach addresses the concept that 100% of the islands respective total land area comes under the impact of the CZMA. This differs from the general "mainland state" program. For example, one state has determined that 100 yards (measured from the mean high water mark) is the area boundary of the coastal zone that is impacted by the CZMA. When this is compared with the total area of the sample state, the percentage of "impacted" area is very low. When using this same concept as it relates to the island situation, one finds that each island area is impacted a total of 100% (excluding federal owned lands). Not only does this "100% impactable land" apply to the lands and oceans--it impacts on almost all of the programs and activities of both the public and private segments. This includes activities involving energy usage and generation, of all types of construction to include private residences, schools, power plants, shopping centers, hospitals, governmental structures, initial highway and road constructions (and subsequent expansion activities), local park sites, locations of ports, boat docks and repair facilities, as well as sewer and waste projects, to name a few.

Another approach is to address the concept of the "island unique" situation from the viewpoint that the total perimeter of each island, (as opposed to a lesser amount of perimeter as a result of the particularly "land-locked" mainland states) falls into the coastal zone "impacted" area. This approach introduces the concept of a "proportional coastal impact factor" (PCIF). This approach also results in a clear indication that the island situation with regards to coastal zone management justifies continued support at the current authorized level.

2) POPULATION IMPACT - On the mainland (as of 1979) seven of the nine largest metropolitan areas in the nation were within the coastal management zone impact area and more than 50 percent of the nation's population lived in countries that are, at least in part, within fifty miles of the land-sea margin. The "unique island status" is also present in this factor since a total of 100% of the respective island population lives in the designated coastal zone area.

3) RELEVANCY OF CZMA ON THE TOTALITY OF ISLAND PROGRAMS -Island Governments, for reasons discussed below, are in a situation where they are required to meet federal requirements and/or address local

needs, but often lack the long-term information gathering capabilities or resources taken for granted by mainland states.

Pacific Island Governments, including Hawaii, are relatively new to our formalized federal system. Prior to reaching the respective self-governing status, they often were not eligible for the formalized federal programs that have assisted mainland states in reaching certain levels of achievement. Although Island Governments are now eligible for most, if not all federal programs, there is a continued need to "play catch-up" in order to deliver a product based on the levels of sophistication required, by not only coastal related programs, but by many other federal programs.

The Island Governments have found CZM as an excellent opportunity to respond to local needs and issues as well as other federal program requirements. Often without CZM, the Territorial Island Governments would have a limited level of planning or resource management. The kinds of problems and issues which are important and yet could be "unaddressed" without CZM include, land-use planning, flood plain management, infrastructure development, base-line information gathering and research, general planning, regulation and enforcement, curriculum development, preservation of prime farm lands, historic preservation, cultural preservation, fisheries development and management, water and sewage projects, park development, water resources development and port development.

ECONOMIC DEVELOPMENT

The island entities and their governments have identified positive economic and developmental aspects from their coastal zone management programs in the areas of fisheries management and development, tourism, port development, agriculture, aquaculture, sea bed mining, ocean marine resources and defense. The aforementioned examples are specific programs that have been funded, either totally or in part, by CZM.

Within the framework of CZM programs, the local governments have fostered the input of the private sector through their participation in the Citizens Advisory Groups. The economic benefits of this aspect of the program are not only the joint local government/private sector input into decision making activities, but provide clear signals to the private sector as to the current planning activities, future expectations and possible investment strategies. This element of the program has and will continue to lead to more economic self-sufficiency and will encourage more economic development through private sector investment in the local communities.

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REGIONAL DEVELOPMENT

The local coastal zone management programs provide a mechanism to identify, not only island specific programs and priorities, but serve as a mechanism to allow for unified regional economic development strategies. The program also allows for technology transfer from one entity to another which assures the best use of limited resources. The regional development activities assume that there are some issues that are as important on a regional level as on an island specific level. An example of such an activity was the recent funding by CZM of individual island fisheries development plans. These plans are now completed and PBDC has obtained funding from other than CZM sources to develop a Western and Central Pacific Fisheries Development Plan, making heavy use of the CZM funded island plans.

It has been determined that a regional approach to major issues is needed to assure that issues or conflicts can be resolved between competing interests for coastal zone utilization; to identify the need for consistent federal policy decision-making; and to assure the establishment of coordinated management between island governments with a regional perspective. Issues which are special to individual islands involve the immediate land mass and shoreline waters, various needed studies to better determine and control resource management of each of the islands, environmental education of island residents and non-residents (visitors/tourists), technological issues regarding the coastal zones, assessing potential and determining the economic feasibility of extracting mineral resources from the ocean waters near the Islands. Potential for regional economic development by the private sector, both in the areas of generating risk capitol and making use of regional development banks and other private resources, make clear the need for a continuation of regional support from CZM as well as other federal programs.

The basic economics of the Pacific rest on the identification, development and management of fragile and finite natural resources that are unique and valuable to the individual islands, and to the region and to the nation. The CZM program has played an important role in identifying opportunities for future development that will benefit all concerned. Examples include ocean mining, OTEC, as an energy resources as well as a program that could well benefit an increase in aquaculture programs; tourism development and port expansion, as well as fisheries development. In the areas of management and development (both having significant roles in future production opportunities), CZM resources have played a significant role in areas to include fisheries, port expansion, water quality, as well as ocean-related studies, and other activities that assure that the use and production of these types of unique Pacific Basin resources are administered in such a way that they will continue to serve future generations as a continuing economic base.

INTERGOVERNMENTAL ADMINISTRATION

An important function of CZM programs is that it serves as a keystone to inter and intragovernmental cooperation and administration, in that it brings together all elements of government--federal, state, territorial/local--into the priority setting, planning and implementation processes. It is clear that in the Pacific Basin, coastal zone management is more than just a tool--it is the very essence of the major decision making processes that result in both short and long-term benefits with all levels of government and private sector participation.

SUMMARY

The island communities do in fact present a "Unique Island Status" because their total land areas (excluding federal holdings--and this in itself is significant to long range planning) are under the actual or perceived authority of CZMA. THis 100% coverage also should be considered when assessing that 100% of the island population also falls under CZMA. Because of the uniqueness of the island communities, and oftentimes because they are relatively new and have not had the benefit of other federal programs in the past, a diverse number of programs are either impacted or being implemented by the use of CZM programs and funds.

In the area of Economic Development there are specific elements and programs that are addressed and supported by CZM that have both short and long-range economic development impactand potential. The participation of the private sector in not only in the planning but the potential private sector's investment opportunities make CZM local programs potentially beneficial as they relate to leveraged private investment opportunities.

In the area of intergovernmental administration, the CZM program serves as an opportunity (and in many cases a mandated role) of all elements of governmental participation.

Although not formally activated, there is a potential for a significant regional development opportunity within the perimeters of CZM. The fact that there is increasing pressure to develop a living marine resources approach to programs involved with Coastal Zone Management, Sea Grant and National Marine Fisheries Service indicates that especially in the island environment, as identified as the Pacific Basin, there can be rewards that benefit all in the areas of ocean marines resources planning and implementation. This approach reinforces the "unique island status" and serves to support the case for continuation of CZM's program at the current level. Without CZM funding and guidelines the multi-program approach to planning and more importantly implementation of ocean resources activities will be set back a number of years and the island specific, regional, and national objectives that are ever so important to the economics of the region and nation will be set back to a point of potentially unrecoverable status.

It is with the aforementioned rationales that the Pacific Basin Development Council Board of Directors seek continued support of CZM to assist the island entities in reaching the goals established by the CZMA:

*protecting the nation's unique and significant natural resources;

*protecting historic and cultural resources and providing for increased recreational access;

*managing rapid and widespread coastal development;

*coordinating and streamlining federal and state decisions affecting coastal resources.

MEMORIAL No. 46

HOUSE OF REPRESENTATIVES
THE ELEVENTH LEGISLATURE

STATE OF HAWAII
STATE CAPITOL
HONOLULU, HAWAII 96813

April 15, 1981

APR 20 1981

46

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HENRY HAALILIO PETERS
Vice Speaker
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DENNIS R. YAMADA

†Majority Leader
††Majority Floor Leader

The Honorable Thomas P. O'Neill
Speaker
U. S. House of Representatives
Washington, D. C. 20515

Dear Sir:

I transmit herewith a copy of House Resolution No. 360, which was adopted by the House of Representatives of the Eleventh Legislature of the State of Hawaii, Regular Session of 1981.

Very respectfully,

George M. Takane
Clerk, House of Representatives

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1981 APR 22 PM 2:36

HOUSE OF REPRESENTATIVES
ELEVENTH LEGISLATURE 1981
STATE OF HAWAII

H.R. NO. 360

HOUSE RESOLUTION

REQUESTING THE REINSTATEMENT OF FUNDING FOR THE SEA GRANT COLLEGE PROGRAM AND THE OCEAN THERMAL ENERGY CONVERSION PROGRAM.

WHEREAS, the citizens of the State of Hawaii are concerned about the recent reports from Washington that federal funds for certain energy and marine programs are being completely abolished or severely curtailed; and

WHEREAS, according to the information from Energy Secretary James B. Edwards, all funds earmarked for ocean thermal energy conversion (OTEC) projcts are being deleted from the federal budget starting in October 1981; and

WHEREAS, in addition, it has been reported that the Office of Management and Budget has recommended ending the Sea Grant College Program in the next fiscal year's budget; and

WHEREAS, substantial or complete funding cuts for these programs would adversely impact Hawaii and would severely set back the State's energy efforts as well as marine resources development programs; and

WHEREAS, the Sea Grant College Program is an integral part of ocean resources development in Hawaii providing seed money funding for various marine projects including, among others, manganese nodule mining, aquaculture, and OTEC-related research projects; and

WHEREAS, in addition, the Department of Energy funding has been instrumental in supporting the highly successful OTEC projects in Hawaii; and

WHEREAS, the proposed budget cuts of these funding sources do not recognize the importance of these programs to Hawaii, the nation, and the world as well; and

WHEREAS, for example, the development of a viable manganese nodule industry in the United States is in the national interest for national security purposes due to the fact that the manganese nodules are rich in the manganese,

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H.R. NO. 360

nickel, copper, cobalt, and other metals critical for our industrial needs; and

WHEREAS, except for copper, the United States is almost completely dependent upon foreign sources of supply for these essential metals; and

WHEREAS, several international consortia are considering Hawaii as the location of their manganese nodule processing plants; and

WHEREAS, in order to reduce our nation's dependence on imported oil and to meet our nation's future energy needs, alternative energy resources must be developed; and

WHEREAS, OTEC, which relies on temperature differentials between warm surface water and colder bottom water to generate electricity, offers a means of meeting a substantial portion of our nation's future energy needs utilizing a renewable energy resource which is essentially inexhaustible; and

WHEREAS, because of Hawaii's favorable climatic, marine, and geographic features, all three of the nation's major OTEC projects, the mini-OTEC, the OTEC-1, and the Seacoast Test Facility are located in Hawaii; and

WHEREAS, in order to meet the protein needs of underdeveloped countries as well as our own needs, more efficient means to produce food, particularly protein, must be developed; and

WHEREAS, aquaculture and mariculture provides an excellent means of meeting these needs; and

WHEREAS, Hawaii is currently the recognized leader in the aquaculture of prawns and the first state in the nation to develop a comprehensive master plan for aquaculture development; and

WHEREAS, while these aforementioned programs provide major economic opportunities for Hawaii, these programs also have major national as well as worldwide benefits and significance; and

WHEREAS, the State's long-term plan for each of these programs relies on participation and further funding from the

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H.R. NO. 360

Sea Grant College Program and the Department of Energy; now, therefore,

BE IT RESOLVED by the House of Representatives of the Eleventh Legislature of the State of Hawaii, Regular Session of 1981, that the President of the United States is respectfully requested to reconsider the decision to delete funds in the federal budget for the Sea Grant College Program and the OTEC program and to reinstate such funds; and

BE IT FURTHER RESOLVED that certified copies of this Resolution be transmitted to the President of the United States, the Secretary of Energy, the Secretary of Commerce, the President of the United States Senate, the Speaker of the United States House of Representatives, and to each member of Hawaii's Delegation to the United States Congress.

OFFERED BY:

MAR 9 1981

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H.R. NO. 360

MAR 9 1981

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City of Hanahan

MAR 31 1981

MAYOR
GEORGE C WILLIAMS

CITY ADMINISTRATOR
DANIEL W DAVIS

CITY COUNCIL
KENNETH CHILDRESS
W MAX DONALDSON
MARION T DUDLEY
RONALD A HOAR
CHARLES W MARTIN
BETTY G RICKETT

March 27, 1981

Representative D'Amours
Chairman, Subcommittee on Oceanography
House Merchant Marine & Fisheries Committee
1334 Longworth House Office Building
Washington, D.C. 20510

Dear Mr. D'Amours:

I am deeply concerned over a proposal by President Reagan to withdraw all federal support from state coastal management programs. It is my opinion that the sudden withdrawal of all funding will severely decimate or destroy the extremely important work these state programs have so ardously achieved under the Federal Coastal Zone Management Act of 1972, as amended and re-authorized for five years in 1980. In fact, it would appear that President Reagan's proposal is an executive repeal of this legislation so recently strengthened by the Congress.

As envisioned in the 1972 Act and strengthened in the 1980 Amendments, wise management of coastal resources relies upon the development and implementation of comprehensive coastal management programs, which will achieve national interest objectives, by the states and not the federal government. This here-to-fore unique effort will have been wasted if President Reagan's funding proposal is implemented. States have not been given time to plan for the state funding of these nationally significant programs. Withdrawal of all support at once will unreasonably jeopardize the signigicant orogress in managing state and national coastal resources the states have achieved.

I urge you to consider working in the Congress for a more reasonable method of transferring financial responsibility for nationally significant coastal management efforts from the federal to the state governments. Since the Coastal Zone Management Act has just been reauthorized, perhaps it would be more reasonable to phase down federal support over the reauthorization period. This would provide the states the time they need to plan their budgets to accommodate these comprehensive coastal management programs. In this way the states' ability to control activities, including federal activities, that impact coastal resources can be maintained, and this unique effort to combine national objectives in state controlled programs will be successful.

I trust you share my concern in this matter and will vocalize and support a more reasonable approach than an executive repeal of this most important work. Certainly it is my hope that the Congress, with your leadership, will

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Coastal Zone Management
Page Two
March 27, 1981

ensure that the states are given reasonable time to plan for the funding of these nationally important programs in their own budgets. If I may be of assistance in this effort, I would be most pleased if you called on me.

Sincerely,

George C. Williams
Mayor, City of Hanahan

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Statement of Wilbur E. Ternyik Representing the Oregon Coastal Zone Management Association, Inc.

My name is Wilbur E. Ternyik, President of the Port of Siuslaw and representing in testimony today the Oregon Coastal Zone Management Association, Inc. (OCZMA). OCZMA is a voluntary association of all seven Oregon coastal counties, nearly all of its major coastal ports, all coastal soil and water conservation districts and several coastal cities. Presently, twenty-six local units of government--all of which have a vital interest in the wise utilization of the coastal resources--comprise the Association in an attempt to provide a unified voice in matters pertaining to coastal planning and development.

Before I begin, however, the Association would like to offer its sincere appreciation for past and present federal assistance to our coast. Specifically, I refer to coastal zone management funding for coordinated planning assistance, jetty restoration, maintenance dredging, loans to fishermen experiencing severe economic difficulties, and other beneficial programs. We look forward to continued federal assistance in the enhancement and proper use of our resources

and not just in the regulation of scarcity. Today on the Oregon coast, our coho salmon fishing industry is in a critical situation while at the same time necessary and proper rehabilitation of the Nehalem jetties, despite our best planning efforts and after many years of work and subsequent Corp approval, is being held up by legal actions based on extrememly week arguments.

Mr. Chairman, despite differing views and many frustrating setbacks, the Oregon Coast has long supported planning and management of coastal resources and in ensuring a balance of uses in the Coastal Zone. I was Chairman of the Oregon Coastal Conservation and Development Commission during much of its existence between 1971 and 1975 (when its functions were assumed by the Department of Land Conservation and Development with the adoption of the four coastal goals--estuarine resources, coastal shorelands, beaches and dunes and ocean resources). In a sense, then, Oregon's coastal jurisdictions interest in coastal zone management pre-date both the state and federal efforts in the management of our coastal area.

Likewise, Oregon's Coastal Management Program was among the first in the Nation to meet the requirements of the Coastal Zone Management Act of 1972 as amended in 1976. Since 1976, Oregon has received federal coastal zone management grants under Section 305 (planning) and Section 306 (implementation) as well as Section 308 (Coastal Energy Impact Program). Funding is administered by the state's Department of Land Conservation and Development and is closely interwoven with the state's comprehensive land-use planning process of which local governments are given the responsibilities of developing and implementing land use plans which meet OCMP objectives.

It is as a local coastal elected official representing an Association intimately concerned with the Coastal Management Program that I make these

comments today. On March 19th and 20th, 1981, the Association carefully studied the impacts of proposed federal budgetary reductions on the State of Oregon and on coastal jurisdictions. In this effort, we were fortunate to have Mr. Jim Ross, Deputy Director of the Department of Land Conservation and Development and current Chairman of the Coastal States Organization, meet with us to explain the short and long-term impacts from federal reductions in Coastal Zone Management funding under Sectiosn 306 and 308.

After long and careful deliberation, the Association recognizing the necessity of federal budgetary restraints, unanimously support the termination of funding Sections 306 and 308. We make this recommendation carefully and fully cognizant of its potential impact on Oregon's coast and the State of Oregon. In this respect, we request that termination of Section 306--so vital for the State and for local governments in the process of finaling their comprehensive planning--be completed in 1982 and that 1981 funding not be rescinded!

We make this recommendation concerning funding termination primarily for the following reasons:

---The Association understands and supports efforts to reduce governmental spending and/or to redirect necessary funding along more constructive lines.

---Oregon's initial coastal planning process is nearing completion and hopefully the process established will, in the future, require less funding at the state level for administration of the Coastal Management Program.

---Oregon's Coastal Management Program will be largely implemented at the local level through the comprehensive planning process and should require no continued large federal or state governmental apparatus for its ultimate success.

---Although the range and complexity of Oregon's Coastal Management Program to-date probably has had a negative impact on this state's coastal economy, the Association looks forward to an implementation period following the state adoption of local plans when the Program will provide for that elusive balance of uses in the coastal zone.

---If an improved national economy results from the reduction or redistribution of federal funding, hopefully the coastal economy of Oregon--presently experiencing high unemployment and under-utilized resouces--will improve and with it the ability of local governments, so dependent on the state of the local economy for its ability to fulfil its proper role, to improve its coastal resource management.

The Association is convinced, however, that termination of Section 306 funding does not eliminate federal, state or local coastal management interest or need. Clearly, it was the intent of the original legislation and subsequent amendments and reauthorization that the coastal zone would be protected, enhanced and developed where appropriate for all the people of the nation. This implies that all of the people of the nation should have some share in implementation costs.

Therefore, the Association supports termination of 306 and 308 mindful of the importance to-date of federal funding to this state and its local coastal jurisdictions. In this regard, the Association proposes that Congress and the President give serious consideration to offsetting federal funding reductions to the states and to local coastal governments by direct revenue sharing from a reported $9.9 billion oil and gas revenue annually generated and paid to the federal government from offshore lease activities.

Funding would be tied to Outer Continental Shelf <u>productivity</u> with a

guaranteed minimum percentage distribution to each coastal state to ensure equity and on-going coastal zone management. Such funds could be used by local jurisdctions to their best advantage in continued coastal planning and would allow jurisdictions to implement their plans with the absolute minimum in multi-level bureaucracy and regulation. Additionally, these funds could be used for the enhancement of our coastal resources--including salmon and sea-going trout enhancement projects (habitat creation and/or restoration, hatchery production, etc.), estuarine productivity, and many other resource protection and enhancement possibilities--and for direct action programs for the needed redevelopment of coastal marinas, wharves and other vital port facilities.

Therefore, in keeping with our belief that it was not the intent of Congress to place entirely the burden of implementing coastal zone management on local jurisdictions alone, that coastal zone management for the preservation, restoration, enhancement and appropriate development of our coast remains a viable concept, that coastal zone management in Oregon will and should continue in some form and, that the loss of federal funding will severely affect local coastal governments, we accept the necessity of federal budgetary reductions at this time and perceive this necessity as an opportunity for a more creative, realistic and productive local-state-federal relationship in the proper management of our splendid and vital coastal resources.

Mr. Chairman, this is an initial recommendation from the Association and we would very much appreciate the opportunity to return at a later date with more specifics on the proposed revenue sharing program. On behalf of the Oregon Coastal Zone Management Association, Inc., I thank you for this opportunity to testify.

Wilbur E. Ternyik, President, Port of Siuslaw

STATEMENT OF J. RON BRINSON, EXECUTIVE VICE PRESIDENT AMERICAN ASSOCIATION OF PORT AUTHORITIES

For more than three centuries, America's seaports have been centers of population, trade, and economic growth. The modern U.S. deepwater port industry consists of 189 seaports located on the Atlantic, Pacific and Gulf coasts, and on the Great Lakes. The American Association of Port Authorities, founded in 1912, represents public port agencies throughout the Western Hemisphere, including virtually every seaport in the United States. We appreciate the committee's invitation to present testimony regarding the Reagan Administration's budget proposals for the Coastal Zone Management and Coastal Energy Impact programs.

A port may be described as the hub of the transportation system that integrates the movement of cargoes by land and by sea. The U.S. seaport function has been derived from a partnership between local port authorities and the federal government. That partnership, forged through history and built upon declarations by the country's founding fathers, rests on the proposition that the construction and maintenance of navigable waterways is a federal responsibility, while the providing of shoreside cargo handling infrastructure is the task of local, state, and private sector interests.

Seaports by definition are an integral part of the coastal zone, and share with other users a common interest in the orderly development and protection of this priceless natural resource. The seaport industry basically supports the concept of coastal zone management as a means of consolidating and expediting the permitting procedures, environmental assessments, approvals, and public hearings that encumber and in some instances, effectively block port development. Those delays are costly and economically counterproductive.

Coastal management should strive to achieve the most rational use of coastal resources. Ports certainly rank high in the heirarchy of uses. Data developed by the U.S. Maritime

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Administration indicates that in 1977, for example, the U.S. port industry was responsible for:

--Gross sales within the economy of $28 billion;

--A $15 billion contribution to U.S. gross national product;

--1,046,800 jobs;

--Personal income of $96 billion;

--Business income of $3.7 billion;

--Federal tax and customs revenue amounting to $5.2 billion; and

--State and local taxes totaling $2 billion.

Moreover, it is through these ocean gateways that moves the millions of tons of cargo that is the very lifeblood of modern civilization. In 1978, foreign commerce handled at U.S. ports amounted to 903.2 million tons valued at $197.9 billion.

AAPA recognizes growing general demand for use of coastal land resources, and the increasing interest in recreational development and basic environmental protection. Responding to this wide range of interest, government agencies appear to have done more to regulate than to promote appropriate uses.

The changes AAPA has favored in the CZM Act relate first to the question of "federal consistency." We believe that the national interest must be paramount over local concerns in actions involving port development. Ports have found from experience that federal actions can be halted when they are not consistent with a state CZM program. Moreover, federal actions that are consistent do not necessarily receive affirmative action. We believe that a goal in the CZM program should be to improve coordination with environmental protection and other use policies. In line with the federal-state partnership that has produced our modern seaport system, we favor a closer working relationship between the federal government on the one hand and the port authorities on the other in developing and implementing the port features of the coastal zone management. This is simply not happening in some areas.

Another concern arises from the existence of abandoned, unneeded, and decaying port structures rendered obsolete by technological changes in ocean transport. Port authorities

generally possess the planning and engineering skills but frequently lack the capital resources needed to rehabilitate and develop these waterfront areas. Federal aid would be particularly welcome and helpful in this regard.

In this connection, we would prefer that the Section 306 implementation grants be phased out over a three-to-five year period, rather than abruptly terminated in September as proposed by President Reagan. Section 306 authorizes the Secretary of Commerce to grant upwards to 80 percent of the cost of administering a state's federally-approved coastal management plan. We believe that the grants provided under Section 306 (a) for urban waterway development should be allocated on the basis of need rather than exclusively according to formulas reflecting shoreline population.

Permit delays, redundancies, inconsistencies, regulatory changes, and general confusion have become the facts of life for port developers. Particularly needed is a streamlining of the permitting procedures controlled by the Environmental Protection Agency, the Corps of Engineers, and various state agencies. Coastal zone management offers a means of untangling this difficult problem.

With the prospects of significantly expanding U.S. coal exports, many of our ports are hoping to accelerate the construction of coal terminals. In so doing, some ports are looking to Section 308 (c) (3), which authorizes grants aimed at preventing or mitigating unavoidable environmental or recreational losses resulting from the "transportation, transfer or storage of coal, or from alternative energy activities." That provision would also extend funding for planning as well as for mitigation. The use of planning rather than corrective action to achieve mitigation would seem to be a logical route to take. If the Coastal Energy Impact Program is not funded, those coasts would likely be reflected in energy facility project costs or in higher local taxes.

The Coastal Zone Management program has been transformed in a mere three months from a necessity to an expensive, disposable luxury. To the extent that CZM serves certain coastal regions as a forum for a coordinated resolution of port issues, it is a useful program. In other areas, however, the program amounts to little more than a regulatory nemisis. Approximately one-third of the states currently involved are likely to drop out of the program if federal aid is withdrawn. These states must then seek assistance for their coastal programs from another source while those remaining in the program face the alternative of funding through localities or state supported monies.

Statement of D. Lorin Jacobs, Chairman Oregon Land Conservation and Development Commission

Mr. Chairman, members of the Committee, I am Lorin Jacobs, Chairman of the Oregon Land Conservation and Development Commission (LCDC). The LCDC and its associated Department are the designated agency for Coastal Zone Management in Oregon. Accordingly, the LCDC is the responsible agency in Oregon for preserving those national interests mentioned in Section 303 of the Coastal Zone Management Improvement Act of 1980.

The Oregon Coastal Management Program (OCMP) was approved by the U.S. Secretary of Commerce in May of 1977, the second coastal zone management program in the nation to receive such approval. The OCMP is based on Oregon's comprehensive land use program, but also incorporates a network of state agency statutes and authorities which address land use and resource management. At the heart of the Oregon program are the state land use planning and resource management standards referred to as the "Goals." In order to address the national interests as expressed in the Federal Coastal Zone Management Act (CZMA), the LCDC in 1976 adopted, in addition to the original 14 Statewide Planning Goals, four additional Goals. These "Coastal Goals" address estuarine resources, coastal shorelines, beaches and dunes, and ocean resources. Both the state's interest and the broader national interests are provided for by these four Goals.

The Oregon land use program is a decentralized approach which depends on implementation of the Goals by the governing bodies of cities and counties; the state through the LCDC retains oversight and review authority. This local implementation method is the most time-consuming and expensive federally approvable implementation method allowable under Section 305 of the CZMA. It is the State of Oregon's opinion that it is also the best method for implementation, for it has the effect of institutionalizing coastal zone management at the city and county levels of government. Thus, coastal management implementation is a two-level approach in Oregon. Cities and counties are required by law to develop a comprehensive land use plan. Until such time as these plans are "acknowledged" by the LCDC as complying with the Goals, the Goals must be applied directly to all land use actions. After acknowledgment (the Oregon statutory term for the approval of a local comprehensive plan), the Goals no longer directly apply, and land use actions are governed by the city or county comprehensive plan. The LCDC oversight and review authority assures that the plans will be used by all levels of government.

Of the $5.8 million received by the State of Oregon for OCMP implementation, the majority has been used for the development of comprehensive plans by Oregon's 42 coastal jurisdictions. To date only seven of these jurisdictions have been acknowledged. The LCDC hopes to acknowledge twice this many throughout the remainder of 1981, but it will not be until 1983 that all 42 coastal jurisdictions will be acknowledged. The slow rate of acknowledgments is explained by the depth and substance of Oregon's approach to coastal zone management, the complexity of the resources addressed, and the realization on the part of local coastal officials that comprehensive plans will have to be used. In other words, this is not just another paper planning process which can consume unlimited amounts of dollars without an impact in the way land, air, and water resources are managed.

The LCDC, which has been provided invaluable aid and assistance from the Federal Office of Coastal Zone Management, is committed to finishing the coastal zone management job in Oregon. The Governor shares that commitment. It is the Governor's and LCDC's concern, however, that the recommendation by the Administration to terminate Coastal Zone Management Section 306 funding beginning October 1, 1981, will seriously cripple Oregon's coastal management efforts. The job is not completed in Oregon; coastal management has not been well institutionalized at the local level, and this objective is at least two years away. For these reasons, I respectfully request that this Committee consider two years of additional funding for Section 306 of the Coastal Zone Management Improvement Act. The two years of additional funding would provide for the completion of the initial coastal management implementation task in Oregon, protect the already considerable federal investment in Oregon's Coastal Management Program and protect those national interests addressed by the Oregon program. While funding beyond two years is not being specifically requested by Oregon, we urge that Congress recognize, as they have in the past, that with the stated national interest in the Coastal Zone goes a national responsibility as well.

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[Whereupon, at 3:57 p.m., the subcommittee adjourned, to reconvene subject to the call of the Chair.]

LAW OF THE SEA—TENTH SESSION

TUESDAY, APRIL 28, 1981

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON OCEANOGRAPHY,
COMMITTEE ON MERCHANT MARINE AND FISHERIES,
Washington, D.C.

The subcommittee met, pursuant to notice, in room 1334, Longworth House Office Building, commencing at 10 a.m., Hon. Norman E. D'Amours (chairman of the subcommittee) presiding.

Representatives present: Representatives D'Amours, Mikulski, and Schneider.

Also present: Howard Gaines, Tom Kitsos, Onno Husing, Mary Pat Barrett, Pam Phillips, Larry O'Brien, Jack Sands and Curt Marshall.

Mr. D'AMOURS. The Subcommittee on Oceanography will come to order.

This morning, we welcome Hon. James Malone, Assistant Secretary of State Designate for the Bureau of Oceans and International and Scientific Affairs.

Welcome, Mr. Malone.

Mr. Malone will be testifying today before the subcommittee on the recently concluded 10th session of the Law of the Sea Conference, in addition to the administration's decision to conduct a policy review of the more than 10 years of negotiations involving the Law of the Sea Treaty.

The Deep Seabed Mining law voices congressional support for the successful conclusion of a Law of the Sea Treaty and states in section 3(a)(1) that: "The Secretary of State is encouraged to negotiate successfully a comprehensive Law of the Sea Treaty which, among other things, provides assured and nondiscriminatory access to the hard mineral resources of the deep seabed for all nations, gives legal definition to the principle that the resources of deep seabed are the common heritage of mankind, and provides for establishment of requirements for the protection of the quality of the environment."

At the conclusion of the ninth session of the Law of the Sea Conference in Geneva, Switzerland, in August of 1980, it was widely believed among the various state delegations that 90 percent of the issues had been resolved by a consensus of the delegations.

The 10th session in New York was scheduled to complete the negotiations on the remaining unresolved issues and finalize the draft text. However, on the eve of the New York session the administration instructed the U.S. delegation to insure that the

negotiations would not end at the adjournment of that session, in order to allow a policy review by the U.S. Government.

Although, it is understandable that a new administration would want to reassess the negotiating strategies and goals of previous administrations before continuing them, this administrative action virtually halted all serious negotiations. It is this uncertainty of the new U.S. policy toward the Law of the Sea Treaty and the impact the review will have on the future of the negotiations which has caused our subcommittee to question the administration's long-term goals regarding the treaty.

We have for this purpose invited Assistant Secretary of State Designate Malone to testify before us.

So again, Mr. Malone, welcome, you may proceed with your testimony.

STATEMENT OF JAMES L. MALONE, ASSISTANT SECRETARY OF STATE DESIGNATE FOR OCEANS AND INTERNATIONAL ENVIRONMENTAL AND SCIENTIFIC AFFAIRS; ACCOMPANIED BY THEODORE KRONMILLER, DEPUTY ASSISTANT SECRETARY OF STATE FOR OCEANS AND FISHERIES

Mr. MALONE. Thank you, Mr. Chairman. I would like to introduce the gentleman to my right. He is Mr. Theodore Kronmiller, the Deputy Assistant Secretary of State for Oceans and Fisheries, and an expert in the area upon which I will be testifying this morning.

I would like, then, to pass directly on to my statement, if I may, Mr. Chairman, and to indicate that it certainly is a pleasure to be given the opportunity to speak today before this subcommittee about the recently-concluded session of the Law of the Sea Conference, and the administration's policy review process.

I know that the Law of the Sea has long been of interest to your subcommittee. I would like to assure you at the outset that you and other interested Members of Congress will be fully consulted during the course of the review.

My statement will attempt to put into perspective this administration's approach to the Third United Nations Conference on the Law of the Sea, and the reasons why we adopted the decision to slow down the negotiating process just as it may have been about to finalize the draft convention text.

Preparation for the Third United Nations Conference on the Law of the Sea began, as is well known, in 1966. During the 15-year history of these negotiations, the United States has sought to protect U.S. oceans interests, and has pressed for urgent solutions to what it perceived to be the problems of the Law of the Sea. The developing countries have approached the negotiations with a different perspective and have sought economic concessions from the industrialized world, chiefly in the deep seabed part of the negotiations. Increasingly important compromises to developing country interests were accepted by our negotiators in order to achieve the protection of U.S. interests as they defined them.

When this administration took office, it was confronted with an informal Draft Convention on the Law of the Sea containing a number of provisions raising concerns on which I shall elaborate shortly. We were informed that the Conference was on the verge of

finalizing this text and that there was an expectation that the negotiations would conclude in 1981.

Many of the provisions of the draft convention prompted substantial criticism from industry, Congress, and the American public. There was also some question whether this draft convention was consistent with the stated goals of the Reagan administration. Therefore, the administration decided that it would be better to face criticism in the UN than to proceed prematurely to finalize a treaty that might fail to further our national interests.

Many comments were made by foreign delegates and in the U.S. press about the manner in which we announced our decision to conduct a policy review and to appoint a new chief negotiator. Let me report to this subcommittee that the decision to conduct the review was made as rapidly as possible, consistent with the many burdens and competing priorities faced by any new administration. A change in the leadership of the American delegation was essential, in order to insure that other countries clearly understood our seriousness of purpose with respect to the review. That action was also necessary in order to send the signal to other delegations that the U.S. could not be induced to return immediately, and thus prematurely, to the bargaining table by offers of minor technical changes to the draft convention. I am sure you can also appreciate that it would be less difficult for a new head of delegation to adhere to a negotiating posture that diverged from our past approach.

The argument has been made by some that the United States is failing to keep its commitments by reviewing its policy and possibly changing its position on subjects of importance. This, in my judgment, is an unconvincing argument. Shortly before the Carter administration took office, leading representatives of the developing countries at the Conference rejected treaty provisions they had previously negotiated and demanded substantial changes to the draft text then on the table as the price of future agreement. Those delegates entertained the hope that more favorable concessions could be extracted from a new administration which was thought to be more sympathetic to developing country positions in U.N. forums.

It has always been well understood at the Law of the Sea Conference that a successful treaty must be based on a package deal. The position that the administration will take toward the contents of that package remains to be determined in the course of the review process. No nation is committed to the text in the sense that it is bound by it. In this regard, I would like to quote from the Conference president's preparatory remarks to the draft convention with reference both to it and to early texts:

> This text, like its predecessor, will be informal in character. It is a negotiating text and not a negotiated text, and does not prejudice the position of any delegation.

Mr. Chairman, let me list for you some of the features of the present draft convention which I referred to earlier as raising concerns. They give rise to concerns because questions have been raised whether these features are consistent with U.S. interests. I will not today seek to identify other features of the text which have been considered to preserve or promote other U.S. interests.

This will be part of the review process. The areas of concern include the following:

(1) The draft convention places under burdensome international regulation the development of all of the resources of the seabed and subsoil beyond the limits of national jurisdiction, representing approximately two-thirds of the Earth's submerged lands. These resources include polymetallic nodules. They also include mineral deposits beneath the surface of the seabed about which nothing is known today, but which may be of very substantial economic importance in the future.

(2) The draft convention would establish a supranational mining company, called the Enterprise, which would benefit from significant discriminatory advantages relative to the companies of industrialized countries. Arguably, it could eventually monopolize production of seabed minerals. Moreover, the draft convention requires the United States and other nations to fund the initial capitalization of the Enterprise, in proportion to their contributions to the United Nations.

(3) Through its transfer of technology provisions, the draft convention compels the sale of proprietary information and technology now largely in U.S. hands. Under the draft convention, with certain restrictions, the Enterprise, through mandatory transfer, is guaranteed access on request to the seabed mining technology owned by private companies and also technology used by them but owned by others. The text further guarantees similar access to privately owned technology by any developing country planning to go into seabed mining. We must also carefully consider how such provisions relate to security-related technology.

(4) The draft convention limits the annual production of manganese nodules from the deep seabed, as well as the amount which any one company can mine for the first 20 years of production. The stated purpose of these controls is to avoid damaging the economy of any country which produces the same commodities on land. In short, it attempts to insulate landbased producers from competition with seabed mining. In doing so, the draft treaty could discourage potential investors, thereby creating artificial scarcities. In allocating seabed production, the International Seabed Authority is granted substantial discretion to select among competing applicants. Such discretion could be used to deny contracts to qualified American companies.

(5) The draft convention creates a one-nation/one-vote international organization which is governed by an assembly and a 36-member executive council. In the council, the Soviet Union and its allies have three guaranteed seats, but the United States must compete with its allies for any representation. The assembly is characterized as the supreme organ and the specific policy decisions of the council must conform to the general policies of the assembly.

(6) The draft convention provides that, after 15 years of production, the provisions of the treaty will be reviewed to determine whether it has fulfilled overriding policy considerations, such as protection of land-based producers, promotion of Enterprise operations and equitable distribution of mining rights. If two-thirds of the states parties to the treaty wish to amend provisions concern-

ing the system of exploitation, they may do so after 5 years of negotiation and after ratification by two-thirds of the states parties. If the United States were to disagree with duly ratified changes, it would be bound by them nevertheless, unless it exercised its option to denounce the entire treaty.

(7) The draft convention imposes revenue-sharing obligations on seabed mining corporations which would significantly increase the cost of of operations.

(8) The draft convention imposes an international revenue-sharing obligation on the production of hydrocarbons from the Continental Shelf beyond the 200 nautical mile limit. Developing countries that are net importers of hydrocarbons are exempt from the obligation.

(9) The draft convention contains provisions concerning liberation movements, like the PLO, and their eligibility to obtain a share of the revenues of the Seabed Authority.

(10) The draft convention lacks any provisions for protecting investments made prior to entry into force of the Convention.

Mr. Chairman, on the basis of the foregoing difficulties and others that I have not taken the time to mention, it is the best judgment of this administration that this draft convention would not obtain the advice and consent of the U.S. Senate. Of course, since the treaty would require implementing legislation, the House would also have a major role that must be considered. We have reason to doubt that the House of Representatives would pass the necessary legislation to give effect to a treaty containing provisions such as these. The provisions I have mentioned raise questions for this administration. We must seriously consider whether those provisions should be included in a treaty to which the United States would become a party, unless there were a countervailing national policy interest. The review will evaluate all of our national interests and objectives, including national security, to determine the extent to which they are protected by the draft convention, to identify necessary modifications to it. The review will also examine with great care whether these same interests and objectives would fare better or worse in the absence of a treaty.

During the course of the review, we will consult with the Congress, with other nations, including our principal allies, and with a broad spectrum of the private sector. We anticipate that this will be a fairly lengthy process. The administration believes that any decision concerning a subject as comprehensive and complex as this one must be taken with deliberation and with keen understanding of foreign and domestic reactions.

Accordingly, we have determined that the policy review process cannot be fully completed before the resumed 10th session of the Law of the Sea Conference in Geneva this August. We must have time to insure adequate opportunity to test our tentative views with the widest possible number of countries.

At the recently concluded session of the Conference, disappointment and apprehension were, indeed, registered at the decision of the United States to undertake such a sweeping review, although this reaction was not universal. The administration realizes the concern and disappointment that this decision has engendered. However, we feel strongly that the American people would wish to

see this review occur, rather than being plunged headlong into this treaty.

We think that the world community, too, will be better served, if we return to the Conference with a realistic assessment of what will satisfy our people and our Congress. The administration does not wish to be in a position of misleading other countries into concluding a treaty they will expect us to ratify, a treaty which in many respects is believed by them to satisfy our national interests, and then find us unable to participate in the final result.

As could have been expected in the light of the U.S. position, the session in New York this spring was, relative to previous sessions, inactive. We were not in a position to negotiate on substance and, because our participation is vital to the formation of consensus, participants in the Conference were unwilling to proceed without us. There was some activity, however, which I will now briefly summarize.

The first week of the Conference was devoted to electing a President to succeed the late Ambassador Hamilton Shirley Amerasinghe of Sri Lanka. Ambassador Tommy Koh of Singapore, an able and experienced diplomat, was elected to replace him.

In Committee I, that is the committee dealing with seabed mining, Chairman Paul Engo of the United Republic of Cameroon focused attention on the draft resolution setting up the Preparatory Commission, or PrepCom, as it is commonly referred to, of the International Seabed Authority. The developing states attacked, and the developed states defended, the requirement set out in the text that the rules, regulations, and procedures adopted by the PrepCom be applied by the Seabed Authority until others are recommended to the assembly by a consensus of Council members and are adopted by the assembly. Some developed countries, with the United States reserving its position at this session, have regarded this approach as essential to assuring those ratifying the treaty that the Seabed Authority would operate in a foreseeable manner.

Participation in the PrepCom (the so-called "Ticket of Admission" problem) was also debated. Those industrialized countries expressing a view preferred that signatories of the final act of the Conference be full participants in the work of the PrepCom and in its decisionmaking procedures in order to provide the broadest possible participation. The developing countries wanted membership reserved to those states which had expressed the intent to become parties to the treaty by signing it. The developing states at that point offered a "compromise" that would have allowed those states that had signed the final act of the Conference, but not the treaty itself, to participate as observers in the PrepCom's work. Other Committee I issues were treated only superficially.

The U.S. delegation confined its participation in the seabed discussions to several brief interventions reserving our position pending completion of the review.

Committee II, which deals with navigation and coastal state jurisdiction, held four informal meetings without agenda to permit delegations to raise any questions deemed important to them. Some states favored requiring prior authorization or notification of warship passage in the territorial sea. Of the approximately 70 states

which expressed views on the subject, roughly one-half favored the amendment and one-half opposed it. Among those favoring the amendment, a small number thought that notification, alone, might be acceptable.

Brazil argued that the text should be revised to exclude military exercises in the exclusive economic zone unless authorized by the coastal state. This proposal received support and opposition along the same lines as did that relating to warship passage.

Argentina pressed its suggestions for a change in the text to provide for cooperation among affected states for the conservation of so-called "straddling stocks," that is, fish stocks found both within and without the exclusive economic zone.

Disagreement continued to be expressed as to the relative weight to be placed upon "equitable principles" and the "median or equidistance line" in the formula for the delimitation of maritime boundaries of the exclusive economic zone between opposite and adjacent states. Finally, there was some discussion concerning artificial islands.

At the conclusion of the Committee II meetings, Chairman Aguilar of Venezuela noted that while there were widely divergent views expressed, a practical consensus existed along the basic lines of the Committee II package and that there remained only a very few questions of interest to a substantial number of delegations. As in the case of Committee I, no changes in the text emerged as a result of work regarding Committee II subjects.

Committee III, dealing with marine scientific research and pollution, met only once during the session. Chairman Yankov of Bulgaria stated that, in his view, negotiations had been completed at the ninth session and that any attempt to reopen substantive negotiations would seriously endanger the compromises already achieved. Several delegations expressed agreement with these views. The United States reserved its position on the status of the work of the committee, pending the outcome of our review. Further, the United States made clear that there also remained several minor, essentially technical, changes that needed to be discussed at some point.

The Drafting Committee did extensive work directed toward conforming and harmonizing the texts, and I would point out that the Drafting Committee is working with some six languages, and their burden has been rather considerable. However, a great deal of additional work confronts the Drafting Committee.

Finally, the Conference scheduled a 4-week session beginning August 3 in Geneva, with the option to extend the Conference for an additional week. Five weeks prior to the August resumed session, will be dedicated to drafting efforts.

In closing, I would like to emphasize that it is our intention to keep members of this subcommittee and other interested Members fully informed throughout the policy review. We will welcome your views, and you in turn may expect from us candid and continuous reports on our progress.

Thank you for giving me the opportunity to appear before you today. I would be pleased to answer your questions.

[Prepared statement of Mr. Malone follows:]

PREPARED STATEMENT OF JAMES L. MALONE

Mr. Chairman:

It is a pleasure to be given the opportunity to speak today about the recently concluded session of the Law of the Sea Conference and the Administration's policy review process. I know that the Law of the Sea has long been of interest to your subcommittee. I would like to assure you, at the outset, that you and other interested members of Congress will be fully consulted during the course of the review.

My statement will attempt to put into perspective this Administration's approach to the Third United Nations Conference on the Law of the Sea, and the reasons why we adopted the decision to slow down the negotiating process just as it may have been about to finalize the draft convention text.

Preparation for the Third United Nations Conference on the Law of the Sea began in 1966. During the 15-year history of these negotiations, the U.S. has sought to protect U.S. oceans interests and has pressed for urgent solutions to what it perceived to be the problems of the law of the sea. The developing countries have approached the negotiations with a different perspective and have sought economic concessions from the industrialized world, chiefly in the deep seabed

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part of the negotiations. Increasingly important compromises to developing country interests were accepted by our negotiators in order to achieve the protection of U.S. interests as they defined them.

When this Administration took office, it was confronted with an Informal Draft Convention on the Law of the Sea containing a number of provisions raising concerns on which I shall elaborate shortly. We were informed that the Conference was on the verge of finalizing this text and that there was an expectation that the negotiations would conclude in 1981.

Many of the provisions of the draft convention prompted substantial criticism from industry, Congress, and the American public. There was also some question whether this draft Convention was consistent with the stated goals of the Reagan Administration. Therefore, the Administration decided that it would be better to face criticism in the U.N. than to proceed prematurely to finalize a treaty that might fail to further our national interests. Many comments were made by foreign delegates and in the U.S. press about the manner in which we announced our decision to conduct a policy review and to appoint a new chief negotiator. Let me report to this subcommittee that the decision to conduct the review was made as rapidly as possible, consistent with the many burdens and competing priorities faced by any new Administration. A change in the leadership of the American delegation was essential, in order to ensure that other countries clearly

understood our seriousness of purpose with respect to the review. That action was also necessary in order to send the signal to other delegations that the U.S. could not be induced to return immediately, and thus prematurely, to the bargaining table by offers of minor technical changes to the draft convention. I am sure you can also appreciate that it would be less difficult for a new head of delegation to adhere to a negotiating posture that diverged from our past approach.

The argument has been made by some that the U.S. is failing to keep its commitments by reviewing its policy and possibly changing its position on subjects of importance. This, in my judgment, is an unconvincing argument. Shortly before the Carter Administration took office, leading representatives of the developing countries at the Conference rejected treaty provisions they had previously negotiated and demanded substantial changes to the draft text then on the table as the price of future agreement. Those delegates entertained the hope that more favorable concessions could be extracted fron a new administration which was thought to be more sympathetic to developing country positions in U.N. forums.

It has always been well understood at the Law of the Sea Conference that a successful treaty must be based on a package deal. The position that the Administration will take toward the contents of that package remains to be determined in the course of the review process. No nation is committed to the text in the sense that it is bound by it. In this

regard, I would like to quote from the Conference President's preparatory note to the draft convention:

> This text like its predecessor will be informal in character. It is a negotiating text and not a negotiated text, and does not prejudice the position of any delegation.

Mr. Chairman, let me list for you some of the features of the present Draft Convention which I referred to earlier as raising concerns. They raise concerns because questions have been raised whether these features are consistent with U.S. interests. I will not today seek to identify other features of the text which have been considered to preserve or promote other U.S. interests. This will be part of the review process. The areas of concern include the following:

-- The Draft Convention places under burdensome international regulation the development of all of the resources of the seabed and subsoil beyond the limits of national jurisdiction, representing approximately two-thirds of the earth's submerged lands. These resources include polymetallic nodules. They also include mineral deposits beneath the surface of the seabed about which nothing is known today, but which may be of very substantial economic importance in the future.

-- The Draft Convention would establish a supranational mining company, called the Enterprise, which would benefit from significant discriminatory advantages relative to the companies of industrialized countries. Arguably, it could eventually monopolize production of seabed minerals. Moreover, the Draft Convention requires the U.S. and other nations to fund the initial capitalization of the Enterprise, in proportion to their contributions to the U.N.

-- Through its transfer of technology provisions, the Draft Convention compels the sale of proprietary information and technology now largely in U.S. hands. Under the Draft Convention, with certain restrictions, the Enterprise, through mandatory transfer, is guaranteed access on request to the seabed mining technology owned by private companies and also technology used by them but owned by others. The text further guarantees similar access to privately-owned technology by any developing country planning to go into seabed mining. We must also carefully consider how such provisions relate to security-related technology.

-- The draft convention limits the annual production of manganese nodules from the deep seabed, as well as the amount which any one company can mine for the first twenty years of production. The stated purpose of these controls is to avoid damaging the economy of any country which produces the same commodities on land. In short, it attempts to insulate landbased producers from competition with seabed mining.

In doing so, the draft treaty could discourage potential investors, thereby creating artificial scarcities. In allocating seabed production, the International Seabed Authority is granted substantial discretion to select among competing applicants. Such discretion could be used to deny contracts qualified American companies.

-- The Draft Convention creates a one-nation one-vote international organization which is governed by an Assembly and a 36-member Executive Council. In the Council, the Soviet Union and its allies have three guaranteed seats, but the U.S. must compete with its allies for any representation. The Assembly is characterized as the "supreme" organ and the specific policy decisions of the Council must conform to the general policies of the Assembly.

-- The Draft Convention provides that, after fifteen years of production, the provisions of the treaty will reviewed to determine whether it has fulfilled overriding policy considerations, such as protection of land-based producers, promotion of Enterprise operations and equitable distribution of mining rights. If two-thirds of the States Parties to the treaty wish to amend provisions concerning the system of exploitation, they may do so after five years of negotiation and after ratification by two-thirds of the States Parties. If the U.S. were to disagree with duly ratified changes, it would be bound by them nevertheless, unless it exercised its option to denounce the entire treaty.

-- The Draft Convention imposes revenue-sharing obligations on seabed mining corporations which would significantly increase the costs of seabed mining.

-- The Draft Convention imposes an international revenue-sharing obligation on the production of hydrocarbons from the continental shelf beyond the 200-mile limit. Developing countries that are net-importers of hydrocarbons are exempt from the obligation.

-- The Draft Convention contains provisions concerning liberation movements, like the PLO, and their eligibility to obtain a share of the revenues of the Seabed Authority.

-- The Draft Convention lacks any provisions for protecting investments made prior to entry into force of the Convention.

Mr. Chairman, on the basis of the foregoing difficulties and others that I have not taken the time to mention, it is the best judgment of this Administration that this draft convention would not obtain the advice and consent of the Senate. Of course, since the treaty would require implementing legislation, the House would also have a major role that must be considered. We have reason to doubt that the House of Representatives would pass the necessary legislation to give effect to a treaty containing provisions such as these. The provisions I have mentioned raise questions for this Administration. We must seriously consider whether those provisions should be included in a treaty to which the U.S.

would become a party, unless there were a countervailing national policy interest. The review will evaluate all of our national interests and objectives, including national security, to determine the extent to which they are protected by the Draft Convention, to identify necessary modifications to the Draft Convention. The review will also examine with great care whether these same interests and objectives would fare better or worse in the absence of a treaty.

During the course of the review, we will consult with the Congress, with other nations, including our principal allies, and with a broad spectrum of the private sector. We anticipate that this will be a fairly lengthy process. The Administration believes that any decision concerning a subject as comprehensive and complex as this one must be taken with deliberation and with keen understanding of foreign and domestic reactions. Accordingly, we have determined that the policy review process cannot be fully completed before the resumed Tenth Session of the Law of the Sea Conference in Geneva this August. We must have time to ensure adequate opportunity to test our tentative views with the widest possible number of countries.

At the recently concluded session of the Conference, disappointment and apprehension were, indeed, registered at the decision of the U.S. to undertake such a sweeping review, although this reaction was not universal. The Administration realizes the concern and disappointment that this decision

has engendered. However, we feel strongly that the American people would wish to see this review occur, rather than being plunged headlong into this treaty.

We think that the world community too, will be better served, if we return to the Conference with a realistic assessment of what will satisfy our people and our Congress. The Administration does not wish to be in a position of misleading other countries into concluding a treaty they will expect us to ratify, a treaty which in many respects is believed by them to satify our national interests, and then find us unable to participate in the final result.

As could have been expected in the light of the U.S. position the session in New York this spring was, relative to previous sessions, inactive. We were not in a position to negotiate on substance and, because our participation is vital to the formation of consensus, participants in the Conference were unwilling to proceed without us. There was some activity, however, which I will now briefly summarize.

The first week of the Conference was devoted to electing a President to succeed the late Ambassador Hamilton Shirley Amerasinghe of Sri Lanka. Ambassador Tommy Koh of Singapore, an able and experienced diplomat, was elected to replace him.

In Committee I, that is the committee dealing with seabed mining, Chairman Paul Engo of the United Republic of of Cameroon focused attention on the draft resolution setting

up the Preparatory Commission (PrepCom) of the International Seabed Authority. The developing states attacked, and the developed states defended, the requirement set out in the text that the rules, regulations, and procedures adopted by the PrepCom be applied by the Seabed Authority until others are recommended to the Assembly by a consensus of Council members and are adopted by the Assembly. Some developed countries, with the U.S. reserving its position at this session, have regarded this approach as essential to assuring those ratifying the treaty that the Seabed Authority would operate in a foreseeable manner.

Participation in the PrepCom (the so-called Ticket of Admission problem) was also debated. Those industrialized countries expressing a view preferred that signatories of the Final Act of the Conference be full participants in the work of the PrepCom and in its decision-making procedures in order to provide the broadest possible participation. The developing countries wanted membership reserved to those states which had expressed the intent to become parties to the treaty by signing it. The developing states at that point offered a "compromise" that would have allowed those states that had signed the Final Act of the Conference, but not the Treaty itself, to participate as observers in the PrepCom's work. Other Committee I issues were treated only superficially.

The U.S. delegation confined its participation in the seabed discussions to several brief interventions reserving

our position pending completion of the review.

Committee II, which deals with navigation and coastal State jurisdiction, held four informal meetings without agenda to permit delegations to raise any questions deemed important to them. Some States favored requiring prior authorization or notification of warship passage in the territorial sea. Of the approximately seventy States which expressed views on the subject, roughly one-half favored the amendment and one-half opposed it. Among those favoring the amendment, a small number thought that notification, alone, might be acceptable.

Brazil argued that the text should be revised to exclude military exercises in the exclusive economic zone unless authorized by the coastal State. This proposal received support and opposition along the same lines as did that relating to warship passage.

Argentina pressed its suggestions for a change in the text to provide for cooperation among affected states for the conservation of so-called "straddling stocks," that is, fish stocks found both within and without the exclusive economic zone.

Disagreement continued to be expressed as to the relative weight to be placed upon "equitable principles" and the "median or equidistance line" in the formula for the delimitation of maritime boundaries of the exclusive economic zone between opposite and adjacent States. Finally, there was some discussion concerning artificial islands.

At the conclusion of the Committee II meetings, Chairman Aguilar of Venezuela noted that while there were widely divergent views expressed, a practical consensus existed along the basic lines of the Committee II package and that there remained only a very few questions of interest to a substantial number of delegations. As in the case of Committee I, no changes in the text emerged as a result of work regarding Committee II subjects.

Committee III, dealing with marine scientific research and pollution, met only once during the session. Chairman Yankov of Bulgaria stated that, in his view, negotiations had been completed at the Ninth Session and that any attempt to reopen substantive negotiations would seriously endanger the compromises already achieved. Several delegations expressed agreement with these views. The United States reserved its position on the status of the work of the Committee, pending the outcome of our review. Further, the U.S. made clear that there also remained several minor, essentially technical, changes that needed to be discussed at some point.

The Drafting Committee did extensive work directed toward conforming and harmonizing the texts. However, a great deal of additional work confronts that Committee.

Finally, the Conference scheduled a four-week session beginning August 3 in Geneva with the option to extend the Conference for an additional week. Five weeks, prior to the August resumed session, will be dedicated to drafting efforts.

In closing, I would like to emphasize that it is our intention to keep Members of this subcommittee and other interested Members fully informed throughout the policy review. We will welcome your views, and you in turn may expect from us candid and continuous reports on our progress.

Thank you for giving me the opportunity to appear before you today. I would be pleased to answer your questions.

Mr. D'AMOURS. Thank you for your very forthright testimony. It is appreciated by the subcommittee. On my own behalf I welcome the administration's decision to stop and review the entire process, and some of the agreements with regards to seabed mining.

I am concerned about how expeditiously, however, you plan to proceed. You have indicated in your testimony that it would take a considerable amount of time without specifying any parameters. You apparently do not intend to have the review process completed by the time the Conference resumes in Geneva this summer.

In the case that you have not completed your review, does the United States intend to participate fully in the summer meeting in Geneva?

Mr. MALONE. Mr. Chairman, as I pointed out in my statement, this is a very, very complex treaty that we are concerned with, and we feel that our review must be a very thoroughgoing one which goes into all of the elements of the informal draft text, not just to the part concerning the problems of deep sea mining.

In order to do the thorough job that the President has requested in this connection, and to attempt to elicit what is in the clear net national interests of the United States, we feel that we must devote substantial time, attention and effort within the executive branch, and we must also, as part of that process, consult very fully with the concerned committees and Members of the Congress, with the public organizations that have a significant interest, with our allies, and with many of the other nations that are represented in this negotiation.

It has become apparent to us that we cannot do this in any sort of a foreshortened time. This sort of extensive and complete analysis and review necessarily will be extended in nature.

We feel that it would be unrealistic to think that we could complete it by the beginning of the resumed summer session.

Consequently, we will utilize this opportunity in Geneva to bring to the representatives of the other participating States the results of our review process to date, to carefully elicit their reactions, and to factor that into the completion of this process.

We believe that because of the process that we are going through, we will not have finalized our review process so that we would be prepared to negotiate the final versions of the draft text.

Again, I emphasize that we mean to undertake our review in a very thorough-going and serious way, and we do mean to very

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seriously use the August session, but it would be along the lines that I have suggested.

Mr. D'AMOURS. Well, could you give this subcommittee any parameters as to the time in which you think you might arrive at some final conclusions, or at least be in a position to negotiate openly on the question?

Mr. MALONE. I think in a number of aspects we will have reached some fairly substantial decisions by August. I would think that certainly relatively shortly following the August session we will have completed our review and would be in a position to move forward in a final and definitive way.

Now, having said that, obviously our review, as I have mentioned in my statement, will consider various options, treaty and nontreaty options, and various combinations that might fall between those extremes, and therefore I could not answer you and say what the final outcome of our review process will be.

However, the review process will, in our judgment, be essentially completed within that time frame.

Mr. D'AMOURS. So you do intend to have the time frame for reconsideration expire sometime this fall. Would that be an accurate summation?

Mr. MALONE. That is our best estimate and judgment at this point, Mr. Chairman.

Mr. D'AMOURS. Thank you.

A few more substantive questions. As you know, I read your testimony along with you, having not received it until this morning, and so I am reacting quickly to some of the things you say in your testimony.

One of those appears at the bottom of page 6. I made a note where you noted that in speaking about the Enterprise's operation and distribution of mining rights, and the amending policy. You stated:

> If two-thirds of the states party to the treaty wish to amend provisions concerning the system of exploitation, they may do so after five years of negotiations and after ratification by two-thirds of the States parties. If the United States were to disagree with duly ratified changes, it would be bound by them nevertheless, unless it exercised its option to denounce the entire treaty.

Are you suggesting that the United States should not be a party to any treaty in any way that binds it to any will that is not its own, or with which it does not agree?

Mr. MALONE. Mr. Chairman, I am making the suggestion that the text gives rise to services questions.

Mr. D'AMOURS. What is the purpose of that language, then?

Mr. MALONE. I am suggesting that, of course, it would be a very serious departure for the United States to denounce a treaty once it had decided to join in that treaty.

I think the burden of my remarks are to the effect that we must be extremely cautious and assure ourselves that what we are undertaking, before we undertake it, is in our clear national interest because to make a judgment to denounce a treaty such as this would be a very serious move, and it would be something that certainly would not be and could not be taken lightly by the United States.

Mr. D'AMOURS. Could you tell me whether or not the administration is prepared to accept one of the underpinnings of the treaty

and one of the underpinnings of the deep seabed hard mineral resources that we have already passed. The resources of the deep ocean are in fact the common heritage of mankind. Are we proceeding from that position, or have we not yet accepted it? Is the administration proceeding from that position, or has it not yet accepted it?

Mr. MALONE. As I am sure you are aware, Mr. Chairman, we agree with, and indeed participated in, the 1970 U.N. resolution declaring the resources of the deep seabed to be the common heritage of mankind.

I believe, however, that we must look for a moment at its interpretation from a juridical point of view; that is, the meaning of "common heritage of mankind."

It was indeed brought out by the late Hamilton Shirley Amerasinghe in the Conference, that we are not, nor is any other nation, bound to a specific interpretation of the common heritage of mankind, at least until the treaty has been concluded.

It is our judgment, however, that the working premise of the meaning in a juridical sense of "the common heritage of mankind" as applied to the deep seabed, is that essentially of the regime of freedom of the high seas, that is, that we would be in a position to explore and to exploit deep ocean resources under existing international law.

Now, I recognize that there are other interpretations given by other participating countries in the negotiations to the effect that the common heritage is really establishing a basic concept that there is a commonality of ownership in the deep seabeds, and that, as under the current draft convention, that this is to be managed on the basis of what is really a one-nation/one-vote, centrally controlled or managed type of regime, which we would deem to be somewhat disconsonant with the principles of free enterprise and the principles of a market economy.

Mr. D'AMOURS. Well, Mr. Assistant Secretary, do you think that definition of the "common heritage" in your opinion conforms with the definition adopted by the United Nations?

Mr. MALONE. Well, as I said in prefacing my remarks to your last question, Mr. Chairman, I do not believe that in the resolution adopted that there was a specific juridical definition given to those terms, and we have followed the principle that we will not be bound by what may be a majority view in this instance.

We could not continue to represent ourselves as a sovereign state, nor could any other nation do so, if bound by the interpretation of a majority in an issue such as this. We have not finally agreed to the meaning of the "common heritage". We did go along, as I say, with the resolution, but our working interpretation is along the lines that I have suggested to you.

Mr. D'AMOURS. All right. I asked you a question earlier when we talked about the methods of establishing amendments to the edicts of the Enterprise, whether or not the language there would seem to indicate an unwillingness to be bound by a will other than our own. You answered that, I thought satisfactorily, but now I am sensing a resistance on the part of the administration to accept definitions or constraints that do not reflect our Nation's will.

Am I picking up the wrong signals from you on that?

Mr. MALONE. Mr. Chairman, I don't think that, as I say, we have accepted the definition that many states have proposed for the common heritage, and of course we have not finally accepted any definition with regard to the proposed treaty in that we have not yet become bound by it. At such time that we did become bound by it, we would be willing, of course, to accept such a definition.

Mr. D'AMOURS. That satisfies my concern. Thank you.

One final matter. At the end of your testimony you indicated a willingness to let the Congress participate to some extent in the review process. I appreciate that. I am wondering how those conducting the review will seek to consult the Congress, and whether or not this subcommittee will be receiving the draft report.

Mr. MALONE. Yes, you certainly will, on this subcommittee, be receiving reports of our progress.

We also are developing a program now for specific consultations with concerned committees, and with Members of the Congress. Of course, as you are also aware, there is a congressional advisory committee to the Law of the Sea, and we will be closely consulting with the members of that committee.

I would like, if I might, to have Mr. Kronmiller, who is the responsible official heading the executive branch's review process, to comment just for a moment on the status of our planning for consultation with the Congress.

Mr. D'AMOURS. Mr. Kronmiller?

Mr. KRONMILLER. Thank you, Mr. Chairman.

There are a number of different levels on which we are going to approach consultations. We are not going to satisfy ourselves simply with reporting to you on the record in formal subcommittee proceedings, nor will we satisfy ourselves simply with having discussions with Members of Congress through the advisory committee, although both of those avenues for consultation will be utilized.

It is our intention to arrange that there be papers, as the Assistant Secretary has indicated, to be distributed to Members of Congress who are interested in this subject, for their consideration.

There will also be thorough consultation with staff on a continuing basis, so that we will be able to assure that the review proceeds in a manner which carefully responds to the detailed views of Members. We will maintain a sound working relationship between the executive and the Congress. we intend to make specific arrangements for the transmittal of papers and for meetings and briefings in the future.

Mr. D'AMOURS. Thank you, Mr. Kronmiller. I appreciate that very much.

I thank you, also, Mr. Assistant Secretary Designate Malone.

Mr. MALONE. I hope not to have to characterize myself: as "designate," Mr. Chairman.

Mr. D'AMOURS. Thank you. I do appreciate your coming here. I appreciate your going through the process that you have indicated you are going to take. I share your conclusion and the administration's conclusion, indeed, for this kind of process at this time, and your willingness to work with us also is appreciated.

We will have you back, I hope, from time to time to report on the future progress.

Thank you very much for your testimony.

The subcommittee stands adjourned.

Mr. MALONE. Thank you very much, Mr. Chairman. We certainly look forward to working with you and the other members of the committee as we proceed through the review process. Thank you.

[Whereupon, at 10:50 a.m., the subcommittee was adjourned, to reconvene subject to the call of the Chair.]