

Final Evaluation Findings

Rookery Bay National Estuarine Research Reserve

February 2011 to September 2019

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Summary of Key Findings

The Coastal Zone Management Act requires the National Oceanic and Atmospheric Administration (NOAA) to conduct periodic evaluations of the performance of states and territories with federally approved coastal management programs. This evaluation conducted by the Office for Coastal Management examined the operation and management of the Rookery Bay National Estuarine Research Reserve for the period from February 2011 to September 2019. The evaluation focused on three target areas: administration, research, and communication, outreach, and training. The four sectors addressed by all of the national estuarine research reserves are research, training, education, and stewardship.

The findings in this evaluation document will be considered by the NOAA Office for Coastal Management in making future financial award decisions concerning the coastal program. The evaluation came to these conclusions:

Accomplishment: The Rookery Bay Research Reserve and Florida International University have smoothly transitioned to a new partnership with minimal disruption to reserve programs and staffing.

Accomplishment: The Rookery Bay Research Reserve has collaborated successfully with entities across Southwest Florida to implement positive protection and enhancement strategies for estuarine areas and adjacent uplands.

Accomplishment: Rookery Bay Research Reserve has been actively sharing lessons learned from disaster preparation and recovery with partners across the state of Florida.

Accomplishment: The Rookery Bay Research Reserve continues to expand opportunities for research within the reserve by collaborating with major universities in South Florida.

Accomplishment: The Rookery Bay Research Reserve's close partnership with the Florida Fish and Wildlife Conservation Commission has improved protection of key habitat areas within the reserve boundaries.

Accomplishment: The NOAA Office for Coastal Management commends the Rookery Bay Research Reserve for its outstanding efforts to provide robust training opportunities for local decision makers and to support and manage a diverse cadre of volunteers.

Accomplishment: Rookery Bay Research Reserve is commended for investing in the development of a new program to maintain the interest of students in estuarine and marine science during their middle school years and maximize the value of high school programs to individual classes.

Recommendation: The Department of Environmental Protection is encouraged to continue its strong support of the Friends of Rookery Bay to further the programmatic and management goals of the reserve and the department at no costs to the overall state budget while enhancing local economic impacts provided by the reserve.

Recommendation: The Department of Environmental Protection should consider conducting a workforce analysis to balance staff compensation between the different offices within the department and within different regions of the state.

Recommendation: The Department of Environmental Protection's Office of Resilience and Coastal Protection should continue engaging with Bureau of Design and Construction staff to improve department prioritization of reserve construction projects impacted by federal funding requirements and deadlines.

Recommendation: The Rookery Bay Research Reserve should consider working with partners to explore social science opportunities concerning public perceptions and public communications with partners during the execution of the Belle Meade Estates project.

Recommendation: The Rookery Bay Research Reserve should examine available funding opportunities, including an arrangement with the Collier County School District to provide board of education funding for on-site marine educational positions, to further support and expand educational programming at the middle and high school level.

Recommendation: The Department of Environmental Protection should encourage promotion of its partnership with NOAA at the Rookery Bay Research Reserve while operating within the new "One DEP" framework.

Necessary Action: The Rookery Bay Research Reserve must work with the NOAA Office for Coastal Management to develop within 90 days of the receipt of the final evaluation report an agreed-upon timeline for the adoption of a final reserve management plan.

Conclusion: This evaluation finds that the State of Florida Department of Environmental Protection is adhering to the requirements of section 312(a) of the Coastal Zone Management Act, 16 U.S.C. § 1458(a), in the operation of the Rookery Bay National Estuarine Research Reserve.

Program Review Procedures

The NOAA Office for Coastal Management evaluated the Rookery Bay National Estuarine Research Reserve in fiscal year 2019. The evaluation team consisted of Ralph Cantral, evaluation team lead, Matt Chasse, site liaison, and Heidi Stiller, south regional director, all from the NOAA Office for Coastal Management; Janice Kerns, manager of the Old Woman Creek Research Reserve (Ohio); and Justine Lundsted, Knauss Sea Grant fellow. The support of the Rookery Bay Research Reserve staff members was crucial in conducting the evaluation, and their support is most gratefully acknowledged.

NOAA sent a notification of the scheduled evaluation to Secretary Noah Valenstein of the Florida Department of Environmental Protection on March 29, 2019, and published a notice of intent to evaluate the Rookery Bay Research Reserve in the *Federal Register* on July 23, 2019. The Rookery Bay Research Reserve posted a notice of the public meeting and opportunity to comment in the *Florida Administrative Record* on August 21, 2019.

The evaluation process included a review of relevant documents and a survey of stakeholders, which helped identify three target areas for the evaluation: administration, research, and communication, outreach, and training. A site visit was conducted from September 24 through 26, 2019, during which the evaluation team held group discussions with stakeholders and program staff members. The evaluation team also discussed the target areas with reserve staff members, who helped identify issues and workable solutions to maintain and improve the implementation of the reserve's programs. In addition, a public meeting was held on September 25, at 5:00 p.m. at Rookery Bay Environmental Learning Center, 300 Tower Road, Naples, Florida 34113, to provide an opportunity for members of the public to express their opinions about the implementation of the reserve programs.

Stakeholders and members of the public were also given the opportunity to provide written comments via email or U.S. mail through Friday, October 4, 2019. No written comments were received from the public or interested parties.

Final evaluation findings for all national estuarine research reserves highlight each reserve's accomplishments in the target areas and include recommendations that are of two types:

Necessary Actions address programmatic requirements of the implementing regulations of the Coastal Zone Management Act and of the reserve's management plan approved by NOAA. These must be carried out by the dates specified. Failure to address necessary actions may result in a future finding of non-adherence and the invoking of interim sanctions, as specified in the Coastal Zone Management Act §312(c). This evaluation contains one necessary action.

Recommendations are actions that the office believes would improve the program, but which are not mandatory. The reserve is expected to have considered the recommendations by the time of the next evaluation or by the dates specified. This evaluation contains seven recommendations.

Evaluation Findings

Target Area 1: Reserve Administration

The Rookery Bay Research Reserve is administered by the Florida Department of Environmental Protection through the Office of Resilience and Coastal Protection. Rookery Bay Research Reserve is one of three estuarine research reserves administered by the office, which also manages the Florida Coastal Management Program and a system of aquatic and buffer preserves.

Key Findings

The Rookery Bay Research Reserve is one of the largest within the National Estuarine Research Reserve System, with more than 100,000 acres within its boundaries and a staff of more than 30. Reserve management relies on a number of partnerships, and reserve staff members are employed through a number of vehicles, including the state personnel system, direct contracts, cooperative agreements with other institutions, and the reserve's not-for-profit support group, Friends of Rookery Bay.

During the review period, the research reserve has had administrative arrangements with three different educational institutions: Florida Gulf Coast University, Florida SouthWestern State College, and Florida International University. These partnerships have proven crucial to maintaining adequate staff resources to support research reserve activities.

Most recently, the reserve transitioned to a partnership with Florida International University (FIU), and a significant portion of the reserve staff is now employed through a contract with FIU. The transition appears to have gone well, and the reserve has expanded relationships with both FIU and Florida Gulf Coast University. Although the initial focus of the relationship between the reserve and FIU has been to serve as an administrative home for many of the reserve's contractual employees, the reserve is positioned to take advantage of a number of other benefits of the partnership related to research, education, and outreach, including translation of communications materials. (See target area 2: research, as well.)

Accomplishment: The Rookery Bay Research Reserve and Florida International University have smoothly transitioned to a new partnership with minimal disruption to reserve programs and staffing.

The Rookery Bay Research Reserve's not-for-profit partner organization, Friends of Rookery Bay, has continued to support the reserve in many ways, including providing funds to employ key positions such as the middle school education coordinator. The partnership is a crucial element of the reserve's success in involving the surrounding community in resource stewardship activities, including Team OCEAN (Ocean Conservation Education Action Network),

the volunteers who patrol heavily used areas of the reserve. The Friends of Rookery Bay also provide logistical assistance to support the education programs, including scheduling of guided nature tours in partnership with local experts.

Recommendation: The Department of Environmental Protection is encouraged to continue its strong support of the Friends of Rookery Bay to further the programmatic and management goals of the reserve and the department at no costs to the overall state budget while enhancing local economic impacts provided by the reserve.

Prescribed fire management is another area where the reserve works collaboratively with area land managers, and where partners expressed their appreciation. Area land managers that have staff certified to participate in fire management activities, such as the National Park Service, will participate in burn days at the reserve. Other partners such as the Conservancy of Southwest Florida rely on trained reserve staff members to conduct fire management on areas they own or manage.

Another example of collaborative work is the reserve's partnership with the Ten Thousand Islands National Wildlife Refuge. The reserve's stewardship and research program staffs were instrumental in the creation of replacement refugia for West Indian manatees within Faka Union Bay, and they provide extensive environmental monitoring data from throughout the refuge to support management by the U.S. Fish and Wildlife Service. Without the support of the information provided by the research reserve, refuge staff would not be able to manage refuge resources as effectively.

Accomplishment: The Rookery Bay Research Reserve has collaborated successfully with entities across Southwest Florida to implement positive protection and enhancement strategies for estuarine areas and adjacent uplands.

Rookery Bay Research Reserve routinely is not able to match the salaries of similar positions in the Southwest Florida area. The evaluation team learned that this is a problem not only in comparison to other employers, but also to other divisions of the Department of Environmental Protection doing similar work. This has caused problems in hiring and retaining staff members because of the high cost of living in the Naples area.

Recommendation: The Department of Environmental Protection should consider implementing a workforce analysis to balance staff compensation between the different offices within the department and within different regions of the state.

The reserve has gained a great deal of knowledge related to disaster preparation, response, and recovery as a result of Hurricane Irma which made landfall in the reserve in September 2017. The reserve's preparations minimized damage during the storm, staff restored functionality of facilities after the storm, and post-disaster funding was secured to remove marine debris and repair and replace facilities. Lessons learned have already been applied (e.g., installed tie-down anchors and purchased straps for boats), making the reserve more resilient.

Staff participation as Natural Resource Advisors during marine debris removal activities after Hurricane Irma also helped minimize damage to habitats and species outside of the reserve. In addition to activities throughout Southwest Florida, reserve staff members traveled to the Florida Panhandle to help the Apalachicola Estuarine Research Reserve and the St. Joseph Bay State Buffer Preserve clean up and recover after Hurricane Michael in October 2018.

Accomplishment: Rookery Bay Research Reserve has been actively sharing lessons learned from disaster preparation and recovery with partners across the state of Florida.

The evaluation team discussed several issues with agency leadership to explore ways to reduce or remove time constraints that have caused projects to be eliminated or delayed and funding to be returned to NOAA. During the review period, the reserve was forced to return federal funds because of the inability to award contracts. Discussions indicated that the extended periods might be due, in part, to Department of Environmental Protection procedures for capital improvements. It also appears that different offices and regions may have differing priorities.

Repairing and replacing structures damaged or destroyed by Hurricane Irma has proven to be difficult. At the time of the site visit, the Goodland dormitory structure damaged during Hurricane Irma had not been replaced. Fortunately, bids had finally been received, and communication channels between the two divisions appeared to be open.

Recommendation: The Department of Environmental Protection's Office of Resilience and Coastal Protection should continue engaging with Bureau of Design and Construction staff to improve department prioritization of reserve construction projects impacted by federal funding requirements and deadlines.

Target Area 2: Research

Research, along with education, training, and resource stewardship, is one of four key elements addressed by each of the 29 national estuarine research reserves.

Key Findings

The new relationship between the Rookery Bay Research Reserve and Florida International University provides tremendous opportunities for new research within the reserve. The university recognizes that the reserve is an excellent location for research for graduate students from this Tier 1- (Research 1-) level institution, as new research initiatives can build upon the many years of continuous data collection by the reserve. This relationship can benefit FIU by helping to attract new graduate students with an interest in estuarine science, and can benefit the reserve by providing opportunities for publications by respected faculty and students.

Rookery Bay Research Reserve also continues to collaborate with Florida Gulf Coast University, which offers master's degrees. Faculty members of both Florida Gulf Coast and Florida International Universities serve on the board of the Friends of Rookery Bay and play an important role in identifying needs and opportunities for the reserve.

Accomplishment: The Rookery Bay Research Reserve continues to expand opportunities for research within the reserve by collaborating with major universities in South Florida.

In November 2018, the Rookery Bay Research Reserve convened the Mangrove Symposium that brought together a number of nationally prominent scientists who have studied the mangrove ecosystem at the research reserve over the past 40 years. The scientists shared their knowledge of past research in Southwest Florida and shared their thoughts about the future of mangrove management with local researchers and interested citizens.

Rookery Bay Research Reserve has long-standing nesting bird research and monitoring programs in partnership with National Audubon and Audubon Florida. These partnerships have provided essential information for the designation by the Florida Fish and Wildlife Conservation Commission of new critical wildlife areas within the reserve. These designations offer a much higher level of protection for significant nesting areas. In addition, shorebird monitoring and protection has led the reserve to co-locate an Audubon Florida staffer at the reserve.

Accomplishment: Rookery Bay Research Reserve's close partnership with the Florida Fish and Wildlife Conservation Commission has improved protection of key habitat areas within the reserve boundaries.

Reserve staff have worked closely with local government officials to implement the findings of the Restore the Rookery Bay Estuary Project funded through the reserve system's Science Collaborative. This project was designed by reserve staff members to provide information to

state and local water resource managers to determine the impacts of potential land use and development decisions. The resulting information was critical to the improvement of models used by state water resource managers, and has led to better land use and water management decisions in the Rookery Bay watershed. The study has been used extensively to guide the Collier County project funded under the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf States Act (RESTORE Act) that will reestablish historic sheet flow patterns from the Belle Meade Estates area to Rookery Bay.

One aspect of this Belle Meade Estates restoration project that may not have been adequately addressed by existing studies is related to public perceptions of the project. The Rookery Bay Research Reserve could support research to help identify communications strategies that would make the project more understandable to the local community.

Recommendation: The Rookery Bay Research Reserve should consider working with partners to explore social science opportunities concerning public perceptions and public communications with partners during the execution of the Belle Meade Estates project.

The research reserve has also made significant progress in rebuilding research partnerships with NOAA's National Centers for Coastal Ocean Science and other federal agencies, including the U.S. Geological Survey, U.S. Fish and Wildlife Service, and U.S. Department of Agriculture. These interagency partnerships should provide a strong foundation for management of resources throughout Southwest Florida.

One of the key elements of research at Rookery Bay Research Reserve is long-term monitoring. The reserve has gone far beyond the requirements of the System Wide Monitoring Program by developing programs for habitat and wildlife monitoring. The habitat mapping has ranged from seagrass distribution to shoreline change in key nesting areas and mangrove forests. The reserve has also monitored the regrowth of vegetation in areas of prescribed burns to detect changes in type and abundance. Wildlife monitoring has included panthers, shorebirds, sea turtles, and gopher tortoises, in addition to numerous aquatic species.

The research reserve actively participates in system-wide and regional research priority-setting activities. This effort has produced several interesting proposals and projects, such as a joint science catalyst proposal with Jobos Bay Research Reserve in Puerto Rico to the Science Collaborative, which was successful. This project will focus on hurricane impacts and community resilience. Additional research collaborations with other research reserves have examined blue carbon, environmental DNA, estuarine modeling, and surface elevation table methods.

The partnership with Florida International University has created an excellent opportunity for the attraction of students with specific interest in estuarine research, and especially within the mangrove ecosystem. This partnership can be productive for both entities, as the reserve can develop relationships with researchers, and the university can use the partnership to attract new students with interests in the field.

Target Area 3: Communications, Outreach, and Training

Southwest Florida is one of the fastest growing regions of the United States. The Rookery Bay Research Reserve provides valuable information about natural resources and management techniques to local officials and local residents.

Examples of Key Efforts

The Rookery Bay Research Reserve has actively sought to maintain support from the community and from coastal decision makers. The reserve regularly invites local, state, and federal officials to visit the reserve to keep them updated on the benefits the reserve provides to the community and the threats to the reserve's resources. The reserve also supports decision makers by providing data and training, and by convening stakeholders to examine local issues. This approach has been quite successful in gaining support.

The reserve has also worked with the ecotourism industry to create a variety of tours that expand the reach of its educational messages to the public. The reserve's partnership with the Friends of Rookery Bay has enabled the expansion of environmental education activities with only limited staff investment. By providing fiscal and administrative assistance, the Friends have allowed reserve staff members to focus on the reserve's core mission and activities.

Convening and actively collaborating with other organizations is a strength of the Rookery Bay Research Reserve, and is appreciated by diverse partners. As mentioned in the research section (target area 3), the reserve held the Mangrove Symposium in 2019 that brought together a wide variety of partners to learn more about past research and the current status of mangrove research in Southwest Florida.

The reserve's coastal training program has brought information about numerous topics to a variety of professional audiences, ranging from landscapers to city planning board members. Training topics range from facilitation training to inundation mapping and integrated pest management. The coastal training program annually convenes area law enforcement (county, city, and Florida Fish and Wildlife Conservation Commission) to share both ecological and enforcement information.

Community volunteers at Rookery Bay are a critical resource that supports a wide range of reserve programs, including education, outreach, monitoring, research, and stewardship. Team OCEAN volunteers, in particular, have been critical to public outreach efforts, which have positive impacts for the reserve's natural resources and specifically the nesting success of colonial shorebirds.

Accomplishment: The NOAA Office for Coastal Management commends the Rookery Bay Research Reserve for its outstanding efforts to provide robust training opportunities for local decision makers and to support and manage a diverse cadre of volunteers.

The Rookery Bay Research Reserve has conducted for many years a highly successful and valued education program for the students of Collier County. The education program not only continues to coordinate with schools to bring fourth graders and high school students to the reserve, but also recently identified a need to involve middle school (grade 7) students in the program. With this new effort, all school levels are able to experience a different component of the reserve, starting on land as Estuary Explorers in fourth grade and advancing to “on the water” experiences for high school marine science students.

The inclusion of middle school students in the program has already proven to be an effective tool to pique students’ interest in pursuing marine education as part of their science program in high school. To date, staffing to support the new middle school initiative has been provided through the Friends of Rookery Bay.

Accomplishment: Rookery Bay Research Reserve is commended for investing in the development of a new program to maintain the interest of students in estuarine and marine science during their middle school years and maximize the value of high school programs to individual classes.

The Rookery Bay Research Reserve has been working to increase the utility of the education program to the local school district and especially to under-served populations within the county. To this end, the reserve is working with an outside education specialist to conduct a formal evaluation of the education program. This effort is focused on identifying the desired goals of the educators who bring students to the reserve. The primary result of the evaluation will be a guide that will allow reserve staff members to assess whether the goals of both the education program and the teachers are being met, and identify where improvements might be made. In light of this effort to support the local schools, the reserve may want to seek a more formal relationship with the Collier County School District.

Recommendation: The NOAA Office for Coastal Management encourages the Rookery Bay Research Reserve to examine available funding opportunities, including an arrangement with the Collier County School District to provide board of education funding for on-site marine educational positions, to further support and expand educational programming at the middle and high school level.

The Department of Environmental Protection recently implemented new guidelines that promote “One DEP.” This is a very positive step for the department in showing the connections between its many valued programs. The Rookery Bay Research Reserve, however, is not just a

Department of Environmental Protection venture. It is a partnership between the department and NOAA. This partnership provides opportunities to build upon the strengths and identities of both agencies, and therefore, it is in the best interest of both partners to promote this alliance.

Recommendation: The Department of Environmental Protection should encourage promotion of its partnership with NOAA at the Rookery Bay Research Reserve while operating within the new “One DEP” framework.

Implementation of General Requirements

The 2012-2017 management plan for Rookery Bay National Estuarine Research Reserve became out of date two years ago. The regulations for the National Estuarine Research Reserve System (15 CFR 921.33) require that management plans be revised at least every five years. The reserve is currently updating its management plan and has been coordinating with the NOAA Office for Coastal Management.

Necessary Action: The Rookery Bay Research Reserve must work with the NOAA Office for Coastal Management to develop within 90 days of the receipt of the final evaluation report an agreed-upon timeline for the adoption of the final management plan.

Evaluation Metrics

Beginning in 2012, national estuarine research reserves began tracking their success in addressing three specific evaluation metrics for their programs. The evaluation metrics include a five-year target and provide a quantitative reference for each program about how well it is meeting the goals and objectives it has identified as important to the program.

In 2016, Rookery Bay Research Reserve requested to revise their performance measures. The measures were approved July 20, 2016, thus there are only two years of results available for evaluation purposes.

METRIC 1—Community Awareness

Goal: To increase the community's level of awareness, knowledge, skills and sense of value for the coastal environment that would result in positive attitudinal and behavioral change.

Objective: Conduct education, training and outreach programs for a variety of targeted audiences that incorporates the best available science and stewardship practices while emphasizing the value of coastal resources.

Strategy: Provide educational opportunities for school field trips, public visitors, and eco-tour participants. Student environmental education and outreach will be implemented through continuing implementation of K-12 Environmental Education Programs (KEEP). On-site interpretive programs and outreach programs will continue, with assistance from trained volunteers. The RBNERR boat and kayak tours will provide an on-the-water education estuarine experience for guests.

Performance Measure: The number of K-20 students, visitors to the Environmental Learning Center, attendees at RBNERR festivals and events, and the number of visitors who experience a RBNERR eco-tour.

Targets: Annually, 14,000 K-20 students, visitors to the Environmental Learning Center, attendees at RBNERR festivals and events, and the number of visitors who experience a RBNERR

First Year Results: 10,161

Second Year Results: 12,479

Cumulative Results: 81% of goal.

Discussion: Due to damage from Hurricane Irma in September 2017, the reserve was closed for an extended period, which caused a drop in total attendance figures. As of the time of the site visit, the reserve was once again highly functioning and well on its way to meeting this target.

METRIC 2 – Monitoring Hydrologic Restoration

Goal: Minimize adverse environmental impacts from land use while restoring the ecosystem services.

Objective: Support regional efforts to reestablish the hydrologic connections from the Fakahatchee watershed and Southern Golden Gate Estates (Picayune Strand State Forest) the Ten Thousand Islands.

Strategy: Long-term fisheries and juvenile shark research and monitoring in the Ten Thousand Islands (TTI) is a crucial program for RBNERR to continue to assess and forecast estuarine impacts stemming from the upstream Picayune Strand hydrologic restoration, a key component of the Comprehensive Everglades Restoration Plan. Monitoring efforts are focused on the TTI back bay systems (Pumpkin Bay, Faka Union Bay, and Fakahatchee Bay). This effort includes an annual compilation, analysis, and dissemination of long-term data for RBNERR management needs and to RBNERR partners and stakeholders (e.g., USACOE, USFWS, SFWMD). This effort provides a science-based, data-driven platform for informed coastal/estuarine resource management and assessment.

Performance measure: The number of fish trawls and juvenile shark tagging trips conducted by RBNERR.

Targets: Annually, conduct 30 fish trawls & juvenile shark assessment and tagging trips.

First Year Results: 41

Second Year Results: 29

Cumulative: 35 per year average (exceeded the goal of 30)

Discussion: The reserve staff were hindered by bad weather during the second year, yet the average over the two years exceeds the annual goal.

METRIC 3 – Maintain and Restore Habitat

Goal: Improve the conservation of native biodiversity

Objective: Reduce non-native invasive plant and animal species.

Strategy: The acres of uplands and wetlands in RBNERR where the Stewardship team takes direct actions to address loss of native biodiversity due to invasive plants and animals and suppression of natural fire regimes. Initial treatment and outlier treatment of many exotic

invasive plants populations has led to maintenance levels in many areas. Additionally, where funds and staff limit extensive exotic plant control, Stewardship staff focus of rare habitats and highs with high levels of native biodiversity. Exotic plant treatment combined with prescribed fire that mimics natural fire regimes are efficient at providing additional control. RBNERR has a mature prescribed fire program leveraged by assistance from federal, state, and local partners. Several areas of the RBNERR are now in the third or fourth year of fire rotation. The addition of an Environmental Specialist will assist with additional acreage treated. Stewardship staff will follow Best Management Practices to ensure no impact to listed species or their habitats occur.

Performance Measure: Number of acres that are exposed to prescribed fire and treated for exotic invasive plants.

Target: Annually, 500 acres that are exposed to prescribed fire and treated for exotic invasive plants.

First Year Results: 942 acres

Second Year Results: 883 acres

Cumulative Results: 912 acres per year (180 percent of goal)

Discussion: The Rookery Bay Research Reserve has been very successful at meeting targets for invasive species control and controlled burns to restore habitats within the reserve.

Conclusion

For the reasons stated herein, I find that the Florida Department of Environmental Protection is adhering to the programmatic requirements of the Coastal Zone Management Act and its implementing regulations in the operation of the Rookery Bay National Estuarine Research Reserve.

These evaluation findings contain one necessary action and six recommendations. The recommendations must be considered before the next regularly scheduled program evaluation, but they are not mandatory at this time. Program recommendations that must be repeated in subsequent evaluations may be elevated to necessary actions.

This is a programmatic evaluation of the Rookery Bay National Estuarine Research Reserve that may have implications regarding the reserve's financial assistance awards. However, it does not make any judgment about or replace any financial audits.

signed by Keelin S. Kuipers
Keelin S. Kuipers
Deputy Director
NOAA Office for Coastal Management

dated March 16, 2020
Date

Appendix A: Response to Written Comments

No written comments were received.