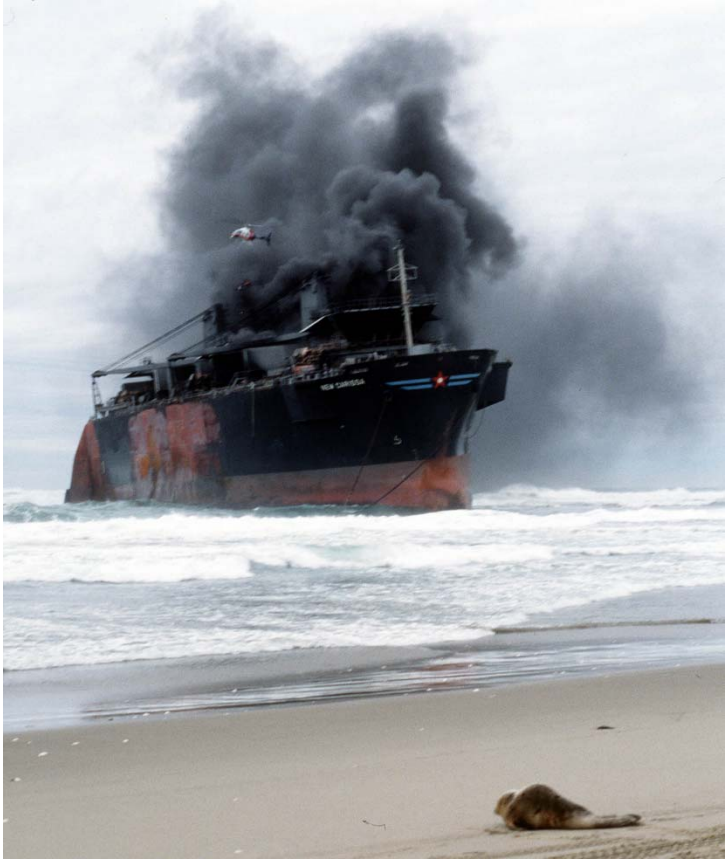
Towards a Resilient Coast

Modernizing Oregon Spill Response Plans for the 21st Century

Proposal for NOAA Coastal Management Fellow, 2017 – 2019
NOAA Office for Coastal Management
October 14th, 2016



USCG photo by Brandon Brewer, Coos Bay, OR. Feb 12, 1999

Coast Guard helps avert environmental catastrophe after the bulk carrier New Carissa ran aground one mile north of Coos Bay, Oregon and began to leak oil. The ship's remaining fuel was intentionally ignited to help prevent nearly 400,000 gallons of oil from reaching the shoreline.

Oregon Coastal Management Program
635 Capitol St. NE Suite 150
Salem, Oregon 97302
Phone: 503-373-0050
Fax: 503-378-5518

Patricia Snow, Program Manager

Oregon Department of Environmental Quality
700 NE Multnomah St #600
Portland, OR 97232
Phone: 503-229-5696
Fax: 503-229-6124

Bruce Gilles, Emergency Response Program Manager

Background & Introduction

Oregon's dramatic and beautiful coast is the product of dynamic, powerful natural forces of weather, climate, ocean waves and currents, and the Earth's own tectonic evolution. These forces continually shape the coast, creating an environment that is at once attractive and dangerous. Among the many dangers, oil and hazardous material spills pose a major potential threat to Oregon's waters, air, land, and wildlife. Large volumes of oil move along the Columbia River and along the coast. Hazardous materials are shipped along coastal highways and by rail. Occasionally, factors combine that result in spills that threaten coastal resources.

On 4 February 1999, the New Carissa was bound for the Port of Coos Bay to pick up a load of wood chips. The ship's crew was informed by the local bar pilots that weather conditions would prevent the ship (which was empty at the time) from entering Coos Bay harbor until the next morning. The captain ordered the ship to drop anchor 1.7 nautical miles off the coast in order to ride out the storm. The crew used a single anchor to secure the ship. According to a United States Coast Guard review of the incident, the chain used was too short. The short chain and the weather conditions, including winds of 20–25 knots, caused the ship to drag its anchor. Poor navigational techniques and inadequate watch keeping led to the crew's failure to notice that the ship was moving. Once movement was detected, the crew attempted to raise anchor and maneuver away from the shore, but the weather and sea conditions made this difficult. By the time the anchor was raised, the ship had been pushed too close to the shore to recover. The ship ran aground on the beach 2.7 miles north of the entrance to Coos Bay, and attempts to refloat the vessel failed. Two of the five fuel tanks on the ship began to leak fuel onto the beach, eventually spilling approximately 70,000 US gallons of viscous "bunker C" fuel oil and diesel onto the beach and into the water. The wreck of New Carissa caused one of the most serious oil spills to affect the state of Oregon, and the worst since a 1984 spill near Longview, Washington that dumped 200,000 US gallons of oil into the Columbia River. Although the coast has recovered from the New Carissa event, the understanding of how much worse the outcome could have been lingers in the memories of coastal communities and resource managers, and emphasizes that we must always be prepared to respond quickly and effectively to protect the coast from spills of any magnitude.

More recently, a summer 2016 oil train derailment in Mosier, OR reminded Oregonians of the potential for spill events in the NW and highlighted the importance of effective, implementable spill response plans to protect natural resources. Fortunately, the Columbia River spill response plan had been recently updated by the Washington Department of Ecology, and published in a new, more detailed format designed to assist responders in implementing the adopted strategies. This event was a sobering reminder that in Oregon's coastal zone, the development and update of oil spill response plans has not kept pace with the availability of natural resource information, or advancements in geographic information systems technology.

In the last few years, northwest area contingency planners and responders have identified several activities that would help the region be better prepared in advance of any spills. A few of these activities, although well defined, have not seen significant progress in the current environment of limited resources. We see several of these areas as ones that could be fulfilled by a coastal zone management fellow, and propose to build a fellowship project from these opportunities. The three specific opportunities to fill information voids that would significantly improve the current spill preparedness situation are:

- Shoreline segmentation according to SCAT protocols
- Updates to Oregon Coast Geographic Response Plans (strategy review & development)
- Development of dynamic Geographic Response Plan summary reports

Work on these tasks will require networking with coastal communities, and response staff, as well as familiarity with geographic information systems (GIS). Through this work, the fellow will gain experience in developing living geospatial data products and incorporating these products into preparedness plans with practical real-world applications.

Project Description

Since the 1970s, Oregon has had programs to prepare for and respond to spills of oils and hazardous materials in the coastal zone, in fact, Oregon created some of the first oil spill response plans in the United States. Geographic Response Plans (GRPs) are plans developed to identify potential spill sources, document pre-identified strategies to contain and collect oil or other hazardous materials, and highlight areas that require protective measures to exclude contaminants and lessen the potential for impacts. The Oregon Coast is covered by several spill response plans, however, the development and update of these

plans has not kept pace with the development of the coast, changes in shipping and transport, or the collection of information on natural resources that has occurred since the early 1990s. This project aims to update the existing GRPs for the Oregon open coast and large bay systems by utilizing recently developed natural resource information, analysis of existing data, and leveraging new tools to streamline and execute response plan production.

The Oregon Department of Environmental Quality (DEQ) works with the NOAA Response and Restoration Division, the US Coast Guard, and partners in Washington and Idaho under the auspices of the Northwest Area Committee (NWAC) to develop the methodology and collect the information required to develop spill response plans. DEQ has partnered with the Washington Dept. of Ecology, and the Environmental Protection Agency in the development of plans to protect the Columbia and Deschutes Rivers, utilizing in-house and contracted resources from these partners to provide the means of collecting data and publishing the updated plans. Unfortunately, DEQ has not had the program resources required to leverage the publication systems utilized by these partners to update the GRPs for the Oregon Coastal Zone.

On a positive note, Oregon DEQ, NOAA, and others have invested in the development of excellent natural resource data for the Oregon Coast. Current technologies offer a means of capturing this natural resource information, combining with emergency response information, and providing a streamlined mechanism for the creation of GRPs. DEQ has undertaken recent pilot projects utilizing local universities to explore the means to capture response planning information, and leveraging new capabilities within the GIS to accomplish the streamlined publishing of updated GRPs. These pilot projects have identified the general processes required to simplify the mapping components of the plans, and to streamline production of key plan elements. The fellow will assist DEQ in pulling these new resources together and in putting pilot project recommendations into operation.

Current Situation

- The Oregon Coast is covered by two Geographic Response Plans (GRPs) for the open coast, and three response plans for the largest coastal bays (Tillamook, Yaquina and Coos Bay). Content in these plans dates from the late 1980s to early 1990s.
- The science of resource protection strategy development has changed with experiences gained from responses such as the New Carissa, Cosco Busan and Deep Water Horizon incidents and needs to be incorporated into Northwest Coast response plans.
- NOAA has recently completed a digital compilation of Environmental Sensitivity Index (ESI)[1] information for the coastlines of Oregon and Washington. This compilation contains important information about the presence of species to be protected in the coastal zone that was not available when the initial GRPs were created.
- Oregon has recently completed the inventory of natural resources for the entire coastline and bays, and collected low altitude oblique aerial imagery through the ShoreZone[2] process.
- The state also continues to develop seamless Coastal and Marine Ecological Classification Standard (CMECS)[3] data for Oregon estuaries
- Together, these new data sources provide much of the content needed to bring the older GRPs into a modern format, and to revise the strategies to reflect the state of the science in spill response strategies.

Expected Improvements

- The fellow will use newly acquired natural resource data and new information on the feasibility of spill response measures to review the efficacy of existing spill response strategies in the Oregon Coastal zone, resulting in the update of spill response strategies. This will involve meetings with local trustees and stakeholders, local knowledge of resources at risk and the means to protect them.
- The fellow will create a segmented shoreline data set based on means of access, and will break the shoreline into lengths amenable to spill response surveys by various means of access. The availability of new shoreline access data, and the Northwest Area Committee's Shoreline Segmentation Standard will guide this phase of the project and result in a means to organize efficient and safe surveys of the coast for spills, search and rescue, beach cleanup, etc.

---

[1] Information about NOAA's Environmental Sensitivity Index can be found at: http://response.restoration.noaa.gov/maps-and-spatial-data/environmental-sensitivity-index-esi-maps.html

[2] Information about the ShoreZone process and the Oregon datasets can be found at: http://www.oregonshorezone.info/

[3] Information about CMECS, the Coastal and Marine Ecological Classification Standard can be found at: https://coast.noaa.gov/digitalcoast/training/cmecs-pub.html

- The fellow will utilize new functionality in GIS products, and the results of recent pilot projects, to formalize the procedures for creating and publishing spill response plans. This will result in the first true update of the spill response plans for Oregon's shorelines, bays and estuaries since they were created in the late 1980s/early 1990s.
- The fellow will create maps to guide various emergency response operations during oil spill responses and drills or exercises.

Desired Outcome

- Federal, state and local spill responders will be operating from up to date and accurate information, utilizing plans that incorporate accurate maps that aid in the efficiency and accuracy of deploying spill response measures.
- The creation of a simplified means of creating and publishing the geographic response plans will aid other areas of the country, by functioning as a template that can be adopted without advanced database design/creation and associated costs.
- The creation of the segmented shoreline product will result in a base plan for the efficient and safe conduct of shoreline surveys, search and rescue operations, and beach cleanup organization.
- Using the best available data and mapping to support response plans will result in better protection of human health and the environment without delays in implementation.

Additional details about the three primary areas of fellowship work are as follows:

1) SCAT Shoreline Segmentation

When spilled oil contaminates shoreline habitats, responders must survey the affected areas to document impacts and determine the appropriate response measures. NOAA specifies formal methods for conducting shoreline assessments and for incorporating the results into the decision-making process for shoreline cleanup at oil spills. This process is known as the Shoreline Cleanup and Assessment Technique (SCAT). SCAT procedures document the degree of oiling of a shoreline and guide development of recommendations for cleanup of the shoreline to be conducted during the response. During a spill response, SCAT is an integral component of the response. SCAT teams are often made up of representatives from state and federal agencies, and the U.S. Coast Guard (USCG) or U.S. Environmental Protection Agency (USEPA). Bringing their organization's expertise, SCAT Team Members collect the data needed to develop a shoreline cleanup plan that maximizes the recovery of oiled habitats and resources, while minimizing the risk of injury from cleanup efforts.

The SCAT process requires a great deal of organization and logistics to conduct formal surveys of the various types of shorelines present along the Oregon Coast. The primary means of organizing the SCAT surveys is the development of a coastline segmented with respect to shoreline type, means of access and the breakdown of longer continuous stretches into manageable lengths for survey crews.

The Oregon Coastal Management Program has developed coastal shoreline access information that is a key part of developing shoreline segments for SCAT survey. The Northwest Area Committee has also recently developed a SCAT Segmentation Attributes/Schema for the capturing of shoreline segments into a standardized GIS data file. Together with the shoreline type information contained in the Oregon ShoreZone information and the NOAA ESI data, it is now possible to streamline and document an organized segmentation of the Oregon Coast to guide emergency responders in the conduct of SCAT surveys. The data will also have utility in organizing search and rescue (SAR) operations along Oregon shorelines and the identification of the best means of access to various parts of the coast.

2) Update Oregon Coast Geographic Response Plans

NOAA has recently completed a digital compilation of Environmental Sensitivity Index information for the coastlines of Oregon and Washington, while Oregon's recently completed the ShoreZone mapping of the entire coastline and bay systems contains invaluable detail and photographic documentation about coastal resources. These compilations contain important information about the presence of species to be protected in the coastal zone that was not available when the initial Oregon coastal GRPs were created. In addition, the science of resource protection strategy development has changed with experiences gained from responses such as the New Carissa, Cosco Busan and Deep Water Horizon incidents and needs to be incorporated into Northwest Coast response planning. These

new data and best practice protection strategies can be leveraged to provide critical components of updated GRP reports for individual Oregon coast response plans. In partnership with the University of Washington GIS Certificate Program, Oregon DEQ has incorporated the new ESI and ShoreZone data, along with existing GRP information into NOAA's Environmental Response Management Application (ERMA)[4] application. ERMA can now be used to display resources at risk from oil spills with coastal resources stakeholders, review the existing strategies for containing and controlling the spills, and capturing revisions to the strategies that need to be incorporated into updated GRPs.

The NOAA Fellow would assist in updating Oregon's coastal GRPs by meeting with coastal stakeholders and emergency response personnel (local responders and USCG Incident Management Team members), reviewing the new resources at risk data, reviewing existing GRP strategies, revising the strategies as indicated by feasibility, effectiveness, and resource priority, and capturing the information via ERMA's editing functionality.

3) **Implement dynamic Geographic Response Plan reports**

The availability of regional tools such as NOAA's ERMA aids in presenting a common operating picture for the spill response community. However, spill responders also need printed GRP reports that present information on how to deploy booming and other response strategies to contain oil and protect natural resources. These summary reports can draw much of their required elements of information from existing GIS data, the NOAA ESIs, ShoreZone imagery and data. Oregon DEQ has recently worked with the University of Washington GIS Certificate Program to explore various publishing methods that can streamline report production by leveraging this data, and has developed publishing techniques that can be leveraged to automate updated GRP production. However, unfortunately Oregon DEQ does not have staff trained in GIS that can be utilized to complete GRP formatting, turn the techniques into a formal publishing process, and do the mass production of updated strategies.

The NOAA Fellow would complete the development of the GRP publishing format consistent with other Northwest Area GRPs, finalize and document the data publishing techniques, and use the updated GRP strategy information to create updated GRP strategy reports.

Through completion of these project components, the results of this fellowship project will be invaluable in helping Oregon respond to future hazardous materials releases and oil spills, and in conducting emergency response operations in a safe, efficient, and more appropriate manner. This will ultimately result in better outcomes for natural resources at risk to spills in the coastal zone.

Goals and Objectives

Goal: To create updated Geographic Response Plans for the Oregon Coast that incorporate new natural resource data, new understanding of spill response techniques, and that are easier to update in future years through formalization of an automated approach to development. Updated Geographic Response Plans will result in improved efficiency and safety during spill response, better protection of natural resources, and the protection of cultural and economic resources at risk.

Objectives:

- To leverage new natural resource and oil spill response information prepared by NOAA's Office of Response and Restoration, the Oregon Coastal Management Program, and Oregon Department of Fish and Wildlife into updated spill response plans for the Oregon Coast.
- To provide updated plans and response reports in formats designed for easy implementation by emergency response partners in the Northwest Area.

[4] ERMA is NOAA's Emergency Response Management Application, an online mapping tool that integrates both static and real-time data, such as Environmental Sensitivity Index (ESI) maps, ship locations, weather, and ocean currents, in a centralized, easy-to-use format for environmental responders and decision makers. Information on NOAA's ERMA for the Pacific Northwest can be found at: http://response.restoration.noaa.gov/maps-and-spatial-data/environmental-response-management-application-erma/pacific-northwest-erma.html

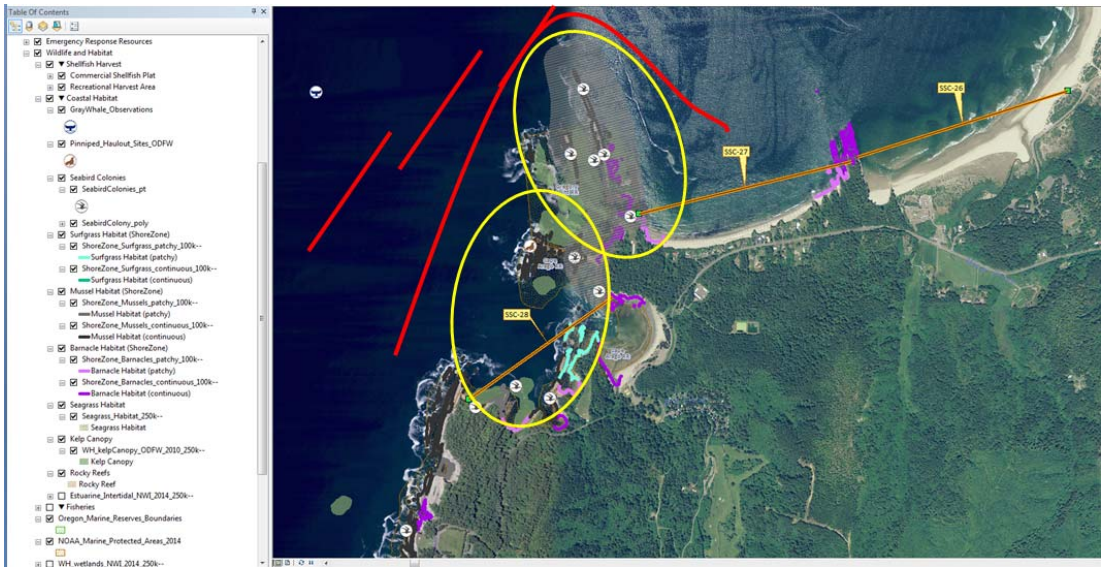


Figure 1. *Incorporation of detailed wildlife/habitat data into GIS to support review and update of GRP strategies. Note: Existing GRP strategies represented as orange lines; resource/habitat to be protected within yellow ovals, and proposed strategies as red lines.*

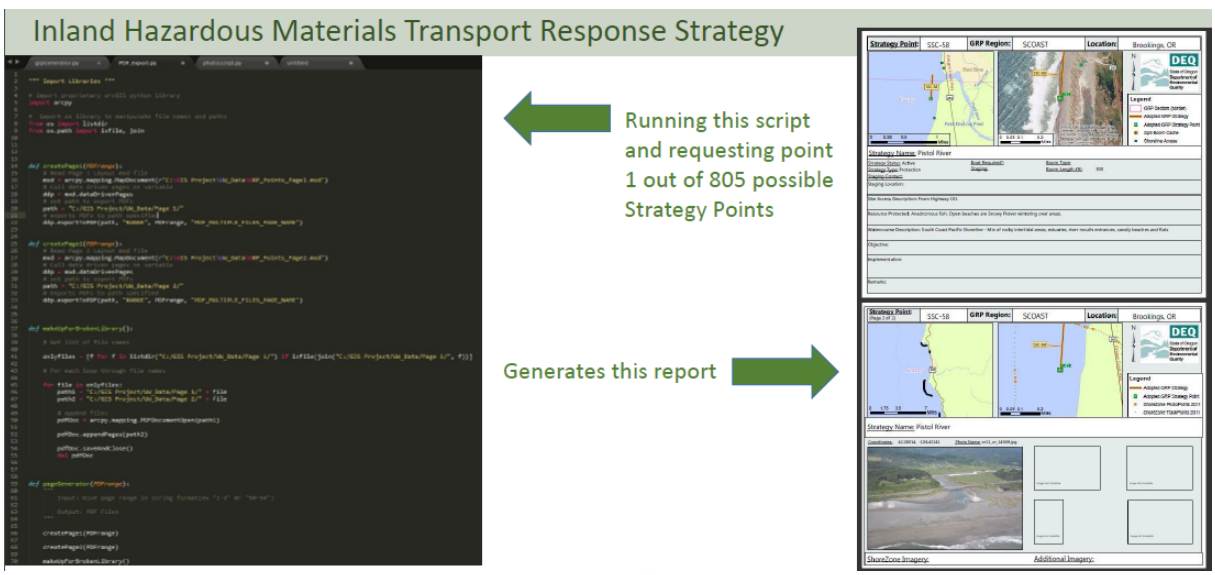


Figure 2. *Execution of simple python scripts within ArcGIS to streamline GRP report production*

Project Timeline for Tasks and Outcomes

Task 1: Familiarization with Geographic Response Plans and Inventory of Oregon Data (Sept 2017-Oct 2017)
This task will introduce the fellow to the current status of Geographic Response Plan development, data used to create GRPs, newly available natural resource data, and the existing means of plan production. The fellow will work with both the OCMP and ODEQ mentors to create a work program and timeline for reviewing available data and information products and scoping of improvement needs. This time period will also include time for meeting key program and local contacts, the assembling of a project coordination team and schedule, and orientation to the logistical support needed to accomplish the project.

- Outcomes: Understanding of how GRPs are developed, the data required, and challenges to efficient plan production. A project plan/schedule will be developed to guide the project, and establishment of a project team, and the assembly of the tools needed to complete the project.

Task 2: Create Segmented Shoreline for Emergency Response Planning (Oct 2017 -Jan, 2018)
The fellow, with assistance from the OCMP and DEQ mentors, will conduct GIS analysis of the NOAA continuously updated shoreline product (CUSP) to create a segmented shoreline for the Oregon Coast (including bays/estuaries) to guide emergency response efforts to the coastal zone. The analysis will incorporate the recent shoreline access data (OCMP), the newly completed NOAA Environmental Sensitivity Index dataset and the ShoreZone shoreline type datasets to guide segmentation, and will be prepared to the NW Area Committee's shoreline segmentation standard (NWAC 2015). Shapefiles and map files will be created to present the information to NW area responders, and incorporated into ERMA for distribution to oil spill response organizations and responders for use in spill response and testing at upcoming exercises and drills.

- Outcomes: A shoreline product based on the NOAA CUSP shoreline that is segmented to support emergency operations and which will be delivered in a GIS format for incorporation into NOAA's Emergency Response Management Application (PNW ERMA).

Task 3: Outreach to Coastal Stakeholders and Emergency Responders (Jan 2018-Sept 2018)
The fellow, with assistance and support of the DEQ mentor, will conduct outreach to coastal resource trustees and local stakeholders to review existing threats and the presence of natural resources at risk due to potential oil spills. The fellow will identify needed oil spill response strategies and document them utilizing the editing capabilities with NOAA's Emergency Response Management Application (ERMA) so that they can be incorporated into agency geographic information systems, and shared with other stakeholders and emergency responders during public comment. DEQ will announce proposed changes and the fellow will document the approved changes to the geographic response plans.

- Outcomes: GIS data documenting proposed changes to the response strategies in existing coastal geographic response plans.

Task 4: Complete Development of Response Plan Publishing Technique Utilizing GIS (April 2018 – Dec 2018)
With the direction and assistance of the OCMP and DEQ mentors, the fellow will expand and refine the processes identified during recent UW pilot project to streamline the production of Geographic Response Plan components, consistent with the NW Area Committee format for GRP content. Through the utilization of Data Driven Pages, Report Generation and Python scripting, the fellow will develop a simplified and efficient process to accomplish the mass production of documents for updating Oregon's coastal GRPs.

- Outcomes: A documented approach to creating and publishing GRP maps utilizing new capabilities within ArcGIS including data driven pages, new report generation functionality, and limited Python scripting.

Task 5: Complete Streamlined Publishing of Geographic Response Plans (Jan 2019 – Sep 2019)
The fellow will utilize the process determined in Task 3 to generate updated geographic response plans for the Oregon coastline and bays/estuaries. The fellow will complete the publishing of the geographic response plans utilizing the streamlined GIS-based publishing system developed in Task 4.

- Outcomes: Updated Geographic Response Plans for Oregon's open shoreline, bays and estuaries. The updated plans will be available as printed documents (portable document format) that will be posted on the DEQ website for use by the public, oil spill responders, and local/state/federal agencies during response.

Task 6: Optional Task - Create Oil Spill Operational Organization Maps (Jan 2019 – Sep 2019)
If time allows, the fellow will use the products created in Tasks 2 and 3 to develop maps to facilitate response operations including Shoreline Cleanup and Assessment Technique (SCAT), oil spill boom deployment, and shoreline surveys for oiled wildlife, etc. for the Oregon Coastal Zone. The maps will be created in a GIS and may be further developed into web-based maps for use by oil spill responders from mobile computing devices, if time allows.

- Outcomes: This optional task will result in the creation of both printed and web maps that can be used to guide spill operations in the field and command post. Similar maps can also be created (available time pending) for search and rescue, beach cleanup events, and other coastal zone operations.

Fellow Mentoring

Where: The Fellowship project will be housed in the Emergency Response Program Office of the Department of Environmental Quality in Portland. This office is two blocks from the Portland office of the Oregon Department of Land Conservation and Development's Coastal Program, which will allow for efficient coordination between the two agencies.

Who: The Fellow will be mentored by experienced Coastal staff: Don Pettit, Senior Emergency Response Planner at the Emergency Response Program of Oregon DEQ, will be the primary mentor and provide guidance on Geographic Response Plans, Shoreline Assessment methods, and coordination with the Pacific Northwest response community. Don utilizes GIS to assemble information to support emergency response to hazardous materials and disasters in Oregon and has been an active in the Northwest spill response community's efforts to prepare for incidents. In addition, Tanya Haddad of the OCMP staff will assist the fellow with technical topics related to GIS and integration with online tools. The fellow will confer periodically with the Coastal Program Manager Patty Snow, participate in monthly Coastal staff and DEQ meetings typically held in the main DLCD and DEQ offices, and participate in semi-annual coastal network meetings with local planners.

Value to Fellow: The Fellowship project will provide experience in two primary areas. The first is working with stakeholders and resource trustees to prioritize resources to protect and effective measures to protect them (plan development). The second is development of a streamlined means to publish the developed plans leveraging new sources of data and tools to efficiently document the plans (plan publishing). The Fellow will work with a small, focused team where his/her input has a direct impact on how Oregon is prepared to respond to spills in the coastal zone, and will meet and work with practitioners at the community level such as state wildlife trustees, U.S. Coast Guard and NOAA response personnel, city and county planners, and others with local knowledge. In addition, the Fellow will gain hands-on experience with information technologies such as GIS, decision support tools, and web-based data delivery, and have the opportunity to interact with professionals in the field of hazards management and planning in local, state, and federal agencies, non-governmental organizations, and academia. In short, the fellow will gain:

- *Knowledge and experience in local and state coastal spill response operations, emergency response planning, and coastal emergency management.*
- *Opportunities to create working relationships and contacts with coastal resource professionals, managers, resource users, and scientists.*
- *Skill in combining the best of information technologies such as GIS and web delivery to support practical decision making needs.*
- *Experience in developing natural resource protection plans that will have practiced real-world applications.*

Project Partners

A diverse group of partner agencies participate in the spill response community and thus will have a strong interest in the outcomes of the Fellowship project. Some of these organizations will have a direct influence on the outcome of this project and have provided letters of support (attached). Key partners directly involved in the management of the project will include:

Oregon Department of Environmental Quality (DEQ): DEQ is the agency charged with protecting the environmental quality of Oregon's land, air and water. DEQ prepares plans and resources to respond to oil spills in the marine environment and maintains oil spill plans for the Oregon Coast and Bays, and the major inland waterways.

Department of Land Conservation and Development (DLCD): The Oregon Coastal Management Program (OCMP) is housed within DLCD, that statewide land use planning agency. The mission of the OCMP is to work in partnership with coastal local governments, state and federal agencies, and other stakeholders to ensure that Oregon's coastal and ocean resources are managed, conserved, and developed consistent with statewide planning goals. This includes helping communities and citizens plan for, protect and improve the built and natural systems that make up Oregon's natural resources legacy, and that provide a high quality of life within sustainable, vibrant communities.

United States Coast Guard (USCG): The USCG is the designated Federal On-Scene Coordinator for spills of oil or hazardous materials that impact shorelines of the United States. The USCG utilizes Geographic Response Plans as a primary tool to respond to spills in the coastal zone.

National Oceanic and Atmospheric Administration (NOAA): The NOAA Office of Response and Restoration (OR&R) provides technical expertise to protect the nation's coasts from spills of oil and hazardous substances that could threaten habitat and the environment, and are the primary scientific support to the USCG.

Oregon Department of Fish and Wildlife (ODFW): ODFW is responsible for protecting and enhancing Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations. ODFW is a partner in response to oil and hazardous materials spills that could threaten Oregon's diverse and abundant wildlife or the habitat they depend upon.

Oregon Parks and Recreation Department (OPRD): OPRD is charged with the protection and preservation of the recreation, scenic, and natural resource values of Oregon's shores.

Cost Share Description

The State of Oregon will contribute both in-kind services and a $15,000 non-federal cash match. The Department of Land Conservation and Development will contribute $15,000 from its general fund for the fellowship. DEQ will provide in-kind match in the form of work space, equipment, materials and supplies, and support services at the new Portland office location. DEQ will provide access to a state vehicle and cover travel related expenses.

A furnished computer work station and appropriate software will be provided, along with all necessary office supplies and materials for performing the work. Standard software employed by DEQ includes Microsoft Office (Word, Excel, Access, and PowerPoint), and ESRI products. The agency is PC-based with each staff member having a desktop computer, as well as access to an equipment pool that includes laptops, printers, scanners, a projector, a digital camera, and a handheld GPS unit. Travel costs to in-state destinations in performance of the work program will be reimbursed by DEQ in accordance with the state travel rules. The work space, supplies and services, and travel support will be provided for the entire two-year period of the Fellowship. Because the CSC Fellow will be part of the DEQ staff he or she will have equal access to all training offered to permanent staff as well as special training identified as needed.

Strategic Focus Areas

The proposed fellowship will aid in accomplishing something that has eluded Oregon for the past two decades: the update of coastal Geographic Response Plans. The update and publishing of the Geographic Response Plans for the coastal zone will also support of the following NOAA strategic focus areas:

- **Healthy Coastal Ecosystems** – Geographic Response Plans should utilize the best available science to support emergency response decision making. The process of identifying spill sources, and identifying and prioritizing response measures is enhanced when the public and local resource managers are brought together to review and approve the proposed strategies. This project will enable the protection of critical coastal ecosystems and habitat by integrating priories and interests across agencies and the partnering organizations, by utilizing the geospatial tools developed and by publishing the resultant plans that incorporate the best newly available science.

- **Resilient Coastal Communities** – Geographic Response Plans are focused on protection of natural, cultural and economic resources at risk from spills of oils or other hazardous materials which may impact waterways. The creation of GRPs builds coastal resilience by creating plans to protect these resources based on integrated data that federal and state agencies have prepared specifically to meet these needs. Through the engagement process used to create and vet the plans, the public and local stakeholders are made aware of the risks and the proposed actions that will be used to protect local resources should an incident occur. This increased awareness of resource protection priorities and modern strategies ultimately improves a community's overall ability to successfully navigate a response effort and emerge in a better position than would otherwise have been possible.

U.S. Department of Homeland Security
United States Coast Guard

Commander
United States Coast Guard
Sector Columbia River

2185 SE 12th Place
Warrenton, Oregon 97146
Symbol: s
Phone: (503) 861-6206
FAX: (503) 861-6355

16450
OCT 12 2016

NOAA Coastal Services Center
2234 South Hobson Avenue
Charleston, South Carolina 29405-2413

Dear Sir or Madam,

I am writing to convey my full support of the NOAA Coastal Management Fellowship Proposal submitted by the Oregon Department of Environmental Quality's Emergency Response Program and the Oregon Department of Land Conservation's Coastal Management Program. As the Federal On-Scene Coordinator and Co-Chair of the Region 10 Response Team with the EPA, I can affirm that updated, accurate Geographic Response Plans (GRPs) play a vital role in our efforts to protect our coastline from spills of oil and other hazardous materials. Geographic Response Plans are the primary mechanism for providing emergency responders the pre-determined strategies and priorities they need to quickly, efficiently, and effectively respond to spills in the coastal zone.

The United States Coast Guard supports the development of Geographic Response Plans to protect the coastline in the Northwest through partnerships with the States of Oregon and Washington. However, a lack of resources for updating and validating existing plans means they may not accurately reflect many of changes in environmental priorities since their initial development over two decades ago.

This proposal seeks to fill a crucial need in developing a streamlined and efficient means of publishing the GRPs, and provide assistance in the coast planning process that will result in updated and more effective response strategies. I strongly support the goal of updating the Geographic Response Plans for the Oregon Coast and hope to see this fellowship advanced for the potential selection of a NOAA Coastal Fellow to support that effort.

Any questions regarding this matter should be referred to Lieutenant Commander Drew Madjeska of my staff at (503) 861-6141.

Sincerely,

D. F. Berliner
Captain, U.S. Coast Guard
Acting Captain of the Port
Sector Columbia River

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Response and Restoration
Assessment and Restoration Division
7600 Sand Point Way N.E.
Seattle, Washington 98115

October 11, 2016

TO: NOAA Coastal Management Fellowship Proposal Review Team

This letter is written in support of the NOAA Coastal Management Fellowship Proposal submitted by the Oregon Department of Environmental Quality's Emergency Response Program and the Oregon Department of Land Conservation's Coastal Management Program. NOAA's Office of Response and Restoration (OR&R) provides technical expertise to protect the nation's coasts from spills of oil and hazardous materials that could threaten habitat and the environment. OR&R's Assessment and Restoration Division is the natural resource trustee for NOAA trust resources on behalf of the public. Through both of these roles, the development of response plans are a critical component in the ability to quickly, efficiently, and effectively respond to spills in the coastal zone. Geographic Response Plans are the primary mechanism for guiding emergency responders in understanding the resources at risk and the strategies pre-designed to protect them.

OR&R has been working with States, the U.S. Coast Guard, and other federal entities to update Geographic Response Plan (GRP) standardization for visualization in NOAA's web-mapping application – ERMA – The Environmental Response Management Application. NOAA has worked with the States of Oregon and Washington to incorporate some GRP data into ERMA. However, the lack of resources to update GRPs has limited their use in Oregon. GRPs for the Oregon Coast have not been significantly updated in two decades, and no longer adequately support response to spills in Oregon. A key part of the GRP decision-making includes the use of Environmental Sensitivity Index (ESI) maps and ShoreZone. Both of these key data sets have been recently updated and can be leveraged to update and improve the strategies laid out in new GRPs for Oregon.

The proposal seeks to fill a crucial need in developing a streamlined and efficient means of publishing the GRPs, and provide assistance in the coast planning process that will result in updated response strategies. We strongly support the goal of updating the Geographic Response Plans for the Oregon Coast and hope to see this fellowship advanced for the potential selection of a NOAA Coastal Fellow to support that effort. As we have worked collaboratively with the Oregon Department of Environmental Quality, we know this will be a mutually beneficial and will be happy to work with the NOAA Coastal Fellow on training needed to update the GRPs and incorporate them into Northwest ERMA.

Sincerely,

Amy A. Merten, Ph.D.
Chief, Spatial Data Branch
206.526.6829 or amy.merten@noaa.gov

Oregon
Kate Brown, Governor

Department of State Lands
South Slough National Estuarine
Research Reserve
P.O. Box 5417
61907 Seven Devils Road
Charleston, Oregon 97420
(541) 888-5558
FAX (541) 888-5559
www.southsloughestuary.org

State Land Board
Kate Brown
Governor

Jeanne Atkins
Secretary of State

Ted Wheeler
State Treasurer

October 4, 2016

Margaret Allen, Fellowship Coordinator
NOAA Office for Coastal Management
2234 South Hobson Avenue
Charleston, SC 29405

Re: Support for NOAA Coastal Management Fellow

Dear Ms. Allen:

We would like to convey our support for the proposal entitled, "Towards a Resilient Coast, Modernizing Oregon Spill Response Plans for the 21st Century." Spill response along the Oregon Coast is an issue of significant concern for coastal resiliency, resource conservation, and coastal management in the State of Oregon. At the same time, the development and updates of spill response plans has not kept pace with the development of Oregon's coast and the collection of information on natural resources that have occurred over the last 20 years. Therefore, it is extremely important to our coastal ecosystems, the scope of future changes, and the likely effectiveness of local actions in forestalling impacts, to plan and prioritize steps to address spill responses.

The goals of the proposed activities by Patty Snow of the Oregon Coastal Management Program, and Bruce Giles of the Oregon Department of Environmental Quality are directly in line with concerns that we have expressed and been identified by other resource managers in the State of Oregon. These include: 1) accelerating technical capability to implement an effective network of spill response plans in state waters; 2) providing place-based understanding of the areas and times of greatest risk to exposure from spills; 3) evaluating the effectiveness of local measures in managing spills and associated impacts. This collaborative project between the Oregon Coastal Management Program, and the Oregon Department of Environmental Quality would build on and strengthen partnerships that have already begun to increase State readiness in confronting the challenges posed by potential spills. We look forward to receiving new and much-needed information from this project, and working together to make this information and subsequent plans successful as possible.

Sincerely,

Gary D. Cooper

Gary Cooper
Reserve Manager

Tillamook Estuaries Partnership
A National Estuary Project

613 Commercial Street, PO Box 493, Garibaldi, OR 97118 *Phone (503) 322-2222 Fax (503) 322-2261*

October 7, 2016

Margaret Allen , Fellowship Coordinator
NOAA Coastal Services Center
2234 South Hobson Avenue
Charleston, SC 29405

Re: NOAA Grant proposal

Dear Ms. Allen,

The Tillamook Estuaries Partnership (TEP) is pleased to offer support for the NOAA Coastal Management Fellowship joint proposal of the Oregon Department of Land Conservation and Development (DLCD) and the Oregon Department of Environmental Quality (DEQ). The proposed project: "**Towards a Resilient Coast,** Modernizing Oregon Spill Response Plans for the 21st Century" should provide a challenging fellowship experience as well as an extremely valuable public product.

The Tillamook Estuaries Partnership (TEP) is a 501(c)(3) non-profit organization and part of the National Estuary Program, created through the Clean Water Act. In 1994, the Tillamook Bay was designated a "bay of national significance." The four key areas that we focus on are 1) key habitat loss, 2) water quality, 3) minimizing flood impacts, and 4) citizen involvement. TEP has since expanded it study to area to not only include Tillamook Bay but all five bays in Tillamook County. With a mandate driven by the Clean Water Act, our understanding of how to address manmade disasters and the partnerships that need to be in place to implement actions is critical. Situated on a working port, responses are critical for fish and wildlife, public health and safety, and our local economies.

We are excited about the potential uses of the information gathered from this proposed project and how it can be applied to actual work on the ground.

We are happy to support this project both by this letter and to provide any assistance as seems appropriate. We also look forward to receiving the final reports and data.

We strongly urge you to support this effort. If you have any questions, please feel free to contact me at 503-322-2222 or by email at lphipps@tbnep.org.

Sincerely,

Lisa Phipps, Executive Director

Oregon
Kate Brown, Governor

Department of Fish and Wildlife
Wildlife Division
4034 Fairview Industrial Dr. S.
Salem, OR 97302
(503) 947-6301
FAX: (503) 947-6330
Internet: www.dfw.state.or.us

October 10, 2016

Margaret Allen, Fellowship Coordinator
NOAA Office for Coastal Management
2234 South Hobson Avenue
Charleston, SC 29405

The Oregon Department of Fish and Wildlife (ODFW) lends its strong support to the Coastal Zone Management Fellow proposal submitted by the Oregon Department of Land Conservation and Development (DLCD) and the Oregon Department of Environmental Quality (DEQ). The State of Oregon has several outdated oil spill response plans that do not adequately identify important natural resources that should be protected during a hazardous materials spill event. New data on coastal zone natural resources and advancements in geographic information systems technology offer better ways to strategically guide emergency responders during a hazardous materials spill event.

In their proposal document titled "*Towards a Resilient Coast – Modernizing Oregon Spill Response Plans for the 21st Century*," DLCD and DEQ have identified three areas that a Coastal Zone Management Fellow could address which would fill significant voids:

- Shoreline segmentation according to Shoreline Cleanup and Assessment Technique (SCAT) protocols
- Updates to Oregon Coast Geographic Response Plans
- Development of dynamic Geographic Response Plan summary reports

ODFW believes that this work, as detailed in the DLCD and DEQ proposal, would greatly improve the State's ability to respond to a coastal zone hazardous materials spill event. Again, ODFW lends its strong support to the DLCD and DEQ Coastal Zone Management Fellow proposal.

Sincerely,

Jon Germond
Habitat Resources Program Manager
Wildlife Division

Oregon
Kate Brown, Governor

Parks and Recreation Department
Headquarters
725 Summer St NE Ste C
Salem, OR 97301-1266
(503) 986-0980
Fax (503) 986-0794
www.oregonstateparks.org

October 12th 2016

Margaret Allen, Fellowship Coordinator
NOAA Coastal Services Center
2234 South Hobson Avenue
Charleston, SC 29405

Dear Ms. Allen,

The Oregon Parks and Recreation Department (OPRD) would like to acknowledge our support for the NOAA Coastal Management Fellowship proposal of the Oregon Department of Environmental Quality (DEQ) entitled "Towards a Resilient Coast: Modernizing Oregon Spill Response Plans for the 21st Century". Oregon Parks and Recreation Department (OPRD) is charged with the protection and preservation of the recreation, scenic, and natural resource values found on Oregon's Ocean Shore State Recreation Area (Ocean Shore) which includes the land lying between extreme low tide of the Pacific Ocean and the statutory vegetation line or line of established vegetation, whichever is furthest inland (ORS 390.605). OPRD authority, jurisdiction, and responsibility exists on the Ocean Shore and the over 70 adjacent state park properties owned by OPRD.

Recent information and data collection efforts such as NOAA's digital Environmental Sensitivity Index (ESI) and natural resource inventories conducted as part of the joint DLCD/ODFW ShoreZone process have improved Oregon's knowledge about the location of our sensitive coastal resources. A focused effort to use the new information to improve and update Oregon's spill response strategies in the coastal zone is an important next step. OPRD looks forward to continuing our partnership with agency and non-governmental groups interested in improving Oregon's spill preparedness to protect our coastline.

Sincerely,

Trevor Taylor
Stewardship Manager