

2018 – 2019 WASHINGTON SEA GRANT STATE FELLOWSHIP PROJECT DESCRIPTIONS

MAKAH TRIBE

DEVELOPING THE OCEAN POLICY STRATEGIC IMPLEMENTATION PLAN, THE CLIMATE CHANGE ADAPTATION PLAN AND CONTINUED DEVELOPMENT OF MARITIME DOMAIN AWARENESS (NEAH BAY, WA AND/OR SEATTLE, WA)

Host and Mentor

Makah Tribe – Marine Affairs and Ocean Policy

- Chad Bowechop, Manager, Office of Marine Affairs
- Katie Wrubel, Natural Resource Policy Analyst, Fisheries Management

Overview

The Makah Tribal Council has developed a Makah Ocean Policy to facilitate coordination between federal, tribal, state and public interests, as the tribe works to enhance its governing capacity to present treaty, cultural and sovereign tribal authorities and interests to address ocean management issues. The 2018-2019 Makah Fellow will assist with the development of the Makah Ocean Policy implementation plan and assist with associated marine planning efforts. S/he will support the development of maritime domain awareness policy and guidance documents for both internal and external use as well as assist in the development of the Makah Tribe's Climate Change Adaptation Plan.

This will require a wide breadth of engagement in the areas of oil spills, vessel traffic, climate change, marine planning, community education and outreach and partnership building. S/he will be exposed to ocean policy, the process of government-to-government consultation, cultural knowledge perspectives as part of climate change adaptation and marine planning. The location of the Fellow is flexible between Seattle, Port Angeles and Neah Bay.

Specific Tasks and Major Project Components

1. Support the Makah Tribe's maritime domain awareness efforts by:

- Assist in implementing a Makah Oil Spill Response Plan in collaboration with relevant staff and Makah Tribal Council to aid in tribal response efforts. This will include synthesizing new research on response methods and standards (Oil Pollution Act of 1990, boom, in-situ burning, and dispersants) and developing policy briefing and decision memos, understanding the NW Area Response Plan, the Incident Command System and response procedures, developing internal geographic response plans, and natural resource damage assessment.
- Contribute to the implementation of the Canadian Ocean Protection Plan by engaging tribal interests and experience in the US/Canadian Joint Response Plan, participating in the development and implementation of the Canadian Coast Guard Strait of Juan de Fuca Regional Spill Response Plan.

- Contribute to the development of the US/Canadian Transboundary Vessel Safety Forum by engaging tribal interests and experience.
 - Support continued efforts with federal partners including navigational channel improvements with the Army Corps of Engineers and a number of spill related efforts with the US Coast Guard.
 - Attend relevant oil spill forums such as the Regional Response Team/Northwest Area Committee, Puget Sound Harbor Safety Committee, and others.
 - Compile lessons learned report on working across Makah Tribe's natural resource departments in developing guidance to inform the Makah Ocean Policy Implementation Plan.
2. Assist in the development of the Makah Ocean Policy Implementation Plan with staff.
 3. Assist in ongoing Makah Marina projects, including work related to environmental impact assessments and derelict vessel removal.
 4. Participate in the Climate Change Adaptation Plan and work with policy and science staff in both the Office of Marine Affairs and the Makah Fisheries Management Department and contribute to the ongoing develop a climate change adaptation plan.
 5. Track potential emerging natural resource, climate, vessel safety and oil pollution legislation and participate in developing as appropriate.
 6. Support the Makah Tribe's efforts in developing a tribal marine spatial plan.
 7. Support the Makah Tribe's engagement in international, transboundary, state and regional marine planning and climate adaptation forums, such as MRAC, the West Coast Regional Planning Body, and the West Coast Ocean Partnership.
 8. Collaborate with Makah Tribal staff to produce grant proposals, reports, presentations, and outreach efforts that support the above.

Interagency and Private Sector Connections

- Natural resource and fisheries agencies of treaty tribes in Washington State
- Federal and state agencies engaged in oil spill prevention/response, climate change adaptation and ocean policy, particularly those with jurisdiction on ocean and coastal waters: US EPA, US Coast Guard, Bureau of Indian Affairs, NOAA, USDA, Washington Department of Ecology, Puget Sound Partnership, Regional Response Team/Northwest Area Committee, Puget Sound Harbor Safety Committee
- Non-governmental organizations, such as The Nature Conservancy and the Washington Environmental Council.
- Regional partnerships, federal and state forums that address ocean health and planning potentially including the Regional Planning Body, the West Coast Ocean Partnership, the Marine Resources Advisory Committee, Washington Coastal Marine Advisory Council, Northwest Indian Fisheries Commission, and the Governance Coordinating Committee of the National Ocean Council
- Academic groups focused on climate change and ocean acidification such as the Climate Impacts Group and Washington Sea Grant

THE NATURE CONSERVANCY

COASTAL RESILIENCE, COMMUNITY OUTREACH, AND TRIBAL ENGAGEMENT (SEATTLE, WA)

Host and Mentor

The Nature Conservancy - Washington Field Office (Seattle)

- Jodie Toft, Senior Marine Ecologist
- Molly Bogeberg, Marine Conservation Coordinator
- Garrett Dalan, Coast Conservation Coordinator
- Kat Morgan, Associate Director, Puget Sound Conservation Program

Overview

The mission of The Nature Conservancy is to conserve the lands and waters on which all life depends. Since our founding in 1951, the Conservancy has protected more than 117 million acres of land and 5,000 miles of rivers worldwide — and we operate more than 100 marine conservation projects globally. We have more than 1 million members and dedicated staff working in all 50 United States and more than 30 countries around the world. We are committed to broadening who we work with and how we work, and to creating a welcoming, inclusive and supportive work environment, and are actively working to diversify our workforce.

In Washington we are working to make sure people and nature both thrive in the face of climate change and increasing demands on nature. Our programs on land, water, oceans, cities and climate leverage science, partnerships and our connections around the world to work at scale and have the biggest impact possible on our state.

The 2018-19 Washington Sea Grant State Fellow will participate in one or more of the projects listed below as they align with the Fellow's interests, knowledge, and skills. The Fellow will also be fully integrated across all departments of the Washington chapter, and will work with staff to produce grant proposals, reports, presentations, and outreach and marketing materials that support the projects below and general chapter operations.

Specific Tasks and Major Project Components

1. For the past 2 years, the Conservancy has been a core member of the **Washington Coastal Resilience Project (WCRP)**. We have focused on identifying resilience ambassadors and communities throughout the state, and developing materials for them to use so that they can incorporate sea level rise projections into coastal resilience projects and planning. In the upcoming final year of WCRP, the Fellow will add capacity to get us through the finish line. Project work will include:
 - Developing a variety of types of content to train resilience ambassadors
 - Using content in targeted outreach with resilience ambassadors and coastal communities; and

- Refining content based on resilience ambassador feedback and finalizing a community of practice database with case stories of climate resilience projects for inclusion on the Coastal Hazards Resilience Network website.
2. The Conservancy is deeply engaged in community well-being and economic development through the **Community, Economy and Place Initiative (CEPI) in the Emerald Edge** region. The Emerald Edge region is the coastal temperate rainforest and adjacent marine ecosystem that stretches from the Washington/Oregon border into Southeast Alaska. The Fellow will have the opportunity to work on CEPI in the following ways:
 - Engage in the facilitation of meetings and conversations with a diverse cohort to seek creative ways to improve economic opportunities that will also have long term conservation and community benefits;
 - Assist in the implementation of specific projects selected by the previously mention cohort; and
 - Build the network and support of a Coast Works Alliance to engage new and existing business to engage in a Triple Bottom Line (Profit, People, Place) approach.
 3. The Conservancy has acknowledged a need to develop a **Tribal engagement strategy for our Floodplains by Design (FbD)** program. Through FbD, the Conservancy and partners create and fund multiple-benefit projects that improve flood protection for towns and farms, restore salmon habitat, improve water quality and enhance outdoor recreation. Key to FbD's enduring success is for partners to lead local, on-the-ground work. To do so, we need to increase cultural awareness and aptitude within the floodplain management and practitioner community. We anticipate the Fellow will work to:
 - Build relationships, build trust and co-create a vision that supports tribal priorities and sovereignty with healthy floodplain systems - this may involve recruiting tribal leaders (Chairs or their appointees) for a FbD Leadership Council;
 - Ensure strong tribal engagement in areas supporting an integrated floodplain management approach;
 - Build capacity, through intercultural communications on how to effectively engage tribes and bridge cross-cultural issues;
 - Connect FbD work to a review currently underway of the Conservancy's engagement with indigenous peoples in Canada and the Emerald Edge to recommend what can be done in FbD to have more robust relationships with tribal partners; and
 - Assist in development of a tribal engagement training for staff in Washington.

Interagency and Private Sector Connections

The projects listed above will give the Fellow the opportunity to expand her/his network by working with the following groups:

- Global and North American operating units of the Conservancy, and other non-governmental organizations;

- Industry groups representing fishermen, shellfish growers, and other coastal and marine uses;
- Tribal natural resource planning staff and governments;
- Marine Resource Committees and county staff (e.g., shoreline planners, county contractors and conservation district staff);
- State policy advisory bodies, including the Washington Coast Marine Advisory Council and the Marine Resource Advisory Council;
- State agencies, particularly the Department of Ecology, Department of Natural Resources, and Department of Fish and Wildlife; and
- University of Washington's Climate Impacts Group and Washington Sea Grant.

OLYMPIC COAST NATIONAL MARINE SANCTUARY
DEVELOPING AN OLYMPIC COAST OCEAN ACIDIFICATION SENTINEL SITE
(PORT ANGELES, WA)

Host and Mentor

Olympic Coast National Marine Sanctuary

- Kevin Grant, Deputy Sanctuary Superintendent

Overview

The selected Fellow will serve a variety of roles at NOAA's Olympic Coast National Marine Sanctuary (OCNMS), requiring a combination of scientific understanding and policy coordination. Primarily, the Fellow will co-lead the formation of a steering committee for an Olympic Coast Ocean Acidification (OA) Sentinel Site, and then assist this body in developing the Sentinel Site management goal(s) and defining priorities and activities for future ocean acidification work on Washington's outer coast.

Seasonal upwelling of colder, nutrient-rich water onto the continental shelf makes Washington's waters particularly vulnerable to OA, making the Olympic Coast an ideal candidate to serve as an OA sentinel site.

Sentinel sites are places where a variety of partners coordinate observations and applied science enabling detection and tracking of conditions that are changing due to natural events and human threats. The value of a sentinel site is not in simply collecting sound scientific information. It will join, align, and focus capabilities for monitoring, research, data analysis, education, and outreach to raise awareness and inform our actions in response to OA. <https://sanctuaries.noaa.gov/science/sentinel-site-program/>

Specific Tasks and Major Project Components

As part of this exciting opportunity, the selected Sea Grant Fellow will be tasked with helping to establish a Sentinel Site Steering Committee, including the Terms of Reference for the body. In addition, once the Steering Committee has been established, the Fellow will collaborate with the Committee to:

- Develop overall management goal(s) of the sentinel site;
- Articulate the desired core components and capabilities of an OA sentinel site; and
- Define priorities and activities for future OA work

The selected Fellow will also provide technical support for Sanctuary engagement in regional oil spill prevention, preparedness and response planning efforts. Preventing, preparing for, and responding to hazardous spills continue to be high priorities for OCNMS. Additionally, support for the damage assessment and restoration process is also a high priority.

Finally, the Fellow will assist in the analyses of biological impacts as related to Sanctuary permits and develop appropriate documentation, which may include NEPA analysis and mitigation recommendations.

Interagency and Private Sector Connections

The selected Fellow will be encouraged to think creatively while cultivating and maintaining partnerships. They will gain invaluable experience in:

- Working with a Federal agency in a hands-on environment that necessitates constant learning;
- Collaborating in team settings and with individuals that are geographically separated;
- Facilitation, including experience working with committees and/or interagency teams; as well as
- Analyzing options and developing recommendations for action by senior management or a committee.

WASHINGTON STATE DEPARTMENT OF ECOLOGY
SHORELANDS AND ENVIRONMENTAL ASSISTANCE PROGRAM: ENHANCING
COASTAL COMMUNITY RESILIENCE (LACEY, WA)

Host and Mentor

Washington State Department of Ecology, Shorelands and Environmental Assistance Program

- Bobbak Talebi, Coastal Planner
- Brian Lynn, Coastal Program Manager

Overview

Washington was the first state in the Nation to earn federal approval for its Coastal Zone Management Program (Coastal Program), established under the authority of the 1972 Coastal Zone Management Act (CZMA). The Coastal Program, housed within the Department of Ecology, meets the goals of the federal law through a comprehensive approach to coastal resource management. This work requires us to balance the often competing — and occasionally conflicting — demands of coastal resources use, economic development, and conservation. We partner to achieve this mission and focus our efforts on key priorities, which include:

- Protecting and restoring coastal wetlands.
- Preventing or reducing threats from coastal hazards.
- Attaining increased opportunities for public access.
- Partnering to manage the impacts of growth and development.
- Planning for the use of ocean resources.

Specific Tasks and Major Project Components

While this year has a focus on community resilience to coastal hazards, we value growth and development of fellows in all areas of coastal management. The fellow will have the opportunity to explore interests and build on important tools developed during graduate studies through practical application across the different scales of governance.

Depending on the fellow's interests and the program's activities, the fellow's work could involve research and writing, policy analysis, strategic planning and project management, event planning and facilitation, partnership building and coordination, web design and maintenance, and internal and external communications.

Coastal flooding, wave damage and shoreline erosion will increase as climate change continues to raise sea levels and create more severe storms along Washington's coast. The 2018-2019 fellow will play an active role in Washington's Coastal Resilience Project — a three-year effort to rapidly increase the state's capacity prepare for natural events that threaten the coast. The project will improve risk projections, provide better guidance for land use planners, and strengthen capital investment programs for coastal restoration and infrastructure. Specifically, the fellow will work with other state agencies, organizations, and local planners to develop state-level guidance for local governments that are using shoreline planning to address sea level rise. The fellow will

also manage the Washington Coastal Hazards Resilience Network, a network of more than 75 practitioners working in hazards resilience around the state.

Interagency and Private Sector Connections

The Fellow will work with the Shorelands and Environmental Assistance Program at the Department of Ecology in Olympia, WA. The fellow will have a mentor and a supervisor that will oversee activities and guide development. The fellow will have a tailored Performance and Development Plan that provides a comprehensive and integrated approach to managing the relationship between mentors and fellows, evaluating fellows' progress on tasks and professional growth, and ensuring clear and open discussions about opportunities for improvement - using goal-setting, self-evaluation, and supplemental information. These elements establish the foundation for a successful fellowship and career.

The fellow will also be supported by a range of coastal management experts, including ocean policy, shoreline management, coastal geology and engineering, floodplain management, wetlands and critical areas, and legislative engagement professionals.

Primary Partners

- Washington Sea Grant
- Federal Emergency Management Agency
- Island County
- City of Tacoma
- University of Washington Climate Impacts Group
- Western Washington University
- Oregon State University
- Washington Floodplain Management
- Washington Department of Fish and Wildlife
- U.S. Geological Survey
- Washington Emergency Management Division
- Padilla Bay National Estuarine Research Reserve
- NOAA Office for Coastal Management
- Washington State Department of Transportation
- Department of Commerce
- The Nature Conservancy

The Fellow will be encouraged to attend relevant coordination meetings, trainings or other opportunities to gain exposure and understanding of how government and non-governmental organizations work on regional coastal management. When opportunities arise, the Fellow will be encouraged to present work to a variety of regional audiences. This experience will connect the fellow to state, regional, and national partners and encourage coordinated participation in larger resilience conversations centered on fundamental and unified approaches to protecting resources, people, and systems.

WASHINGTON STATE DEPARTMENT OF ECOLOGY

OIL SPILL PREVENTION, PREPAREDNESS, AND RESPONSE (LACEY, WA)

Host and Mentor

Washington State Department of Ecology, Spills Program

- Rob Dengel, Spills Program, Statewide Section Manager

Overview

Ecology's mission is to protect, preserve, and enhance Washington's environment, and promote the wise management of our air, land, and water. Ecology's goals are to prevent pollution, clean up pollution, and support sustainable communities and natural resources. The Spills Program's mission is to protect Washington's environment, public health, and safety through a comprehensive spill prevention, preparedness, and response program. The Spills Program's vision is to prevent, prepare for, and respond aggressively to oil spills, and to be our best for the State of Washington. Our Spills goal is "zero spills".

Specific Tasks and Major Project Components

The selected fellow will focus primarily on coordinating the initial development of a legislative report regarding spill prevention, preparedness, and response activities throughout state government, and funding for those activities. Funding for these activities has been an ongoing issue for nearly two decades, with the legislature using fund transfers and other one-time fixes to address shortfalls, while at the same time directing the state to do more to prevent and prepare for oil spills. We are looking for a person with good judgment, strong policy and writing skills, who can work collaboratively with a diverse group of staff and stakeholders to gather information, conduct analysis, and develop key documents.

The fellow will be involved with developing the first of two phases of a legislative report, which will stretch over two years in total. The first phase will gather initial data and information from state agencies and use it to develop supporting documents to feed into the larger final report. The second phase of the project will focus on stakeholder outreach regarding funding options, finalizing the report, and supporting the development of legislative options related to the final report.

The report work for this first phase will include: gathering and analyzing oil spill risks across various industries, and public modes of transport and recreation; describing historical changes to state oil spill policy, and the state and national spill incidents, which created impetuses for such change; working with staff in multiple state agencies to fully and accurately describe oil spill prevention, preparedness and response activities, along with their relative scope and legal authority; performing data analysis to measure the effectiveness of oil spill prevention, preparedness and response activities; scoping and analyzing potential future oil spill activities to address emerging risks; and researching and evaluating various funding options for oil spill prevention, preparedness, and response activities.

This fellow may also work on vessel and rail traffic risk assessment analyses, which seek to provide a better understanding of oil spill risk in a given geographic area, in

order to work with a partnership of government, industry, and public organizations to develop and implement risk prevention recommendations.

Legislative Background on the Report

Earlier this year the State Legislature passed into law The Strengthening Oil Transportation Safety Act (Act), E2SSB 6269, which provides an additional step forward to help protect the environment and Washingtonians from new oil spill risks, such as oils that may sink or submerge in water. The Act directs the Department of Ecology's Spills Program to undertake multiple policy initiatives to help address these new risks. One key initiative of the Act was directing Ecology to develop a report to the State Legislature by July 1, 2020, regarding state spill prevention, preparedness, and response activities, and funding for those activities. The report must address the following:

- a. A description of activities conducted by the Department's oil spill program that are expected to continue after fiscal year 2019, and activities that are not expected to continue after fiscal year 2019;
- b. Recommendations regarding potential sources of funding for Ecology's oil spill program;
- c. Recommendations regarding the allocation of funding from the taxes established in RCW 82.23B.020 among various state agencies, including whether funding should be discontinued or reduced for any agency; and
- d. A forecast of Ecology's oil spill program funding needs after fiscal year 2019.

Interagency and Private Sector Connections

This position will be directly supervised and mentored by the Statewide Resources Section Manager who will oversee activities and guide development. The fellow will have a tailored Performance and Development Plan that provides a comprehensive and integrated approach to managing the relationship between mentors and fellows, evaluating fellows' progress on tasks and professional growth, and ensuring clear and open discussions about opportunities for improvement - using goal-setting, self-evaluation, and supplemental information. These elements establish the foundation for a successful fellowship and career.

The fellow will interact with a wide range of oil spill experts throughout the program and state government as a whole. Other state agencies and decision makers that this position will interact with will include: Washington Sea Grant, Washington Department of Fish and Wildlife, Washington Department of Natural Resources, Washington Military Department, and the Governor's Office. The fellow will be encouraged to attend relevant meetings, trainings, and other opportunities to gain exposure of how government organizations work on oil spill issues. When opportunities arise, the fellow will be encouraged to present work to a variety of internal and external audiences. This opportunity will provide the fellow an understanding of the many facets of oil spill policy, which the state is involved with, while at the same time helping inform decision makers about how best to fund and direct oil spill policy into the future.

WASHINGTON STATE DEPARTMENT OF HEALTH
EVALUATING AND BUILDING CAPACITY FOR STATE SUPPORT OF POLLUTION
IDENTIFICATION AND CORRECTION (PIC) PROGRAMS (TUMWATER, WA)

Host and Mentor

The Washington State Department of Health - Environmental Public Health Division

- Todd Phillips, Deputy Director, Office of the Environmental Health and Safety
- Emily Sanford, Supervisor of the National Estuary Program Shellfish Section
- Scott Berbells, Manager of the Shellfish Growing Area Section
- Lawrence Sullivan, Manager of the Licensing and Certification Section

Overview

The Washington State Department of Health (DOH) Shellfish Program ensures shellfish that make it to the commercial market are safe to eat and that recreational shellfish harvesters have current information about which beaches are safe to harvest from. To accomplish this, we:

- Monitor shellfish for biotoxins, pathogens, and other contaminants. We also classify growing areas based on water quality and current and potential pollution sources.
- Test water quality routinely in shellfish growing areas and check shorelines and surrounding areas for pollution sources. We close shellfish areas when spills, stormwater runoff, biotoxins or other events compromise safety.
- License and inspect companies that harvest and sell shellfish commercially, ensuring they follow strict state and federal sanitation standards.
- Provide recreational harvesters with up-to-date information through signs, the internet, Facebook, and a toll-free hotline on which beaches are safe for shellfish harvest.
- Administer grant funding under two federal assistance awards from the EPA to projects that seek to restore and protect shellfish beds. This work is part of the National Estuary Program, a place-based initiative to protect and restore the water quality and ecological integrity of the estuaries of national significance funded through the U.S. Environmental Protection Agency. We are also active partners in related policy and planning efforts.

Specific Tasks and Major Project Components

We propose that the 2018-2019 Fellow will assist the Shellfish Program in completing the near-term action (# 2016-0220) from the 2016 Puget Sound Action Agenda titled: "Explore options, assign responsibilities and build program capacity for state oversight of PIC programs." This project would aim to improve support for Pollution, Identification and Correction (PIC) programs in the Puget Sound region, which are coordinated in each county through different management structures. PIC programs are a key approach for protection and restoration of water quality and shellfish acreage in Puget Sound. They are one of the most effective tools for achieving the Shellfish Bed Vital Sign target of restoring 10,800 acres and for protecting acres classified as "Approved." Currently, approximately 70% of "Conditionally Approved" acres available for shellfish

harvest are impacted by non-point pollution sources such as onsite sewage systems, boats and insufficient farm waste management. We are seeking a Fellow to analyze the current management platform for PIC programs around Puget Sound to identify common operational barriers and regional science, education and policy needs using qualitative and quantitative research methods.

1. Collaborate with DOH, local health jurisdictions, Treaty Tribes, the commercial shellfish industry, other state shellfish programs, the Canadian shellfish program partners, and researchers.
2. Facilitate a committee of state and local partners for oversight in evaluating current PIC programs and defining key components of successful programs. Define criteria to supplement less complete PIC programs.
3. Identify the need for PIC programs where there are none or where local capacity for PIC work is limited. Informed and empirical measures of success will identify gaps in PIC programs and result in recommendations for effective and sustainable programs. Consider factors including geography, partners, environmental quality, funding, regulatory authority, political will and climate change to help understand where and how to best focus PIC resources.
4. Research other state and national policies for effectiveness of PIC programs.
5. Attend conferences, produce reports, and give presentations of research findings and policy recommendations.
6. Organize and execute 1-2 regional workshops in partnership with state and local partners on PIC program development, strategies and implementation.
7. Develop an overall strategy for integrating climate change considerations in PIC programs. The Fellow could potentially explore ways to build a better picture (or map) of climate-sensitive vulnerabilities for regional onsite sewage systems (OSS). Also, the Fellow could work on developing a picture (and map) of what resilience actions look like (e.g., resilient infrastructure), and where it could be implemented, including Large OSS and municipal wastewater plants where heavy precipitation leads to overflows.

Interagency and Private Sector Connections

The fellow will build on their graduate studies through the following networking activities: coordinating with partners, tribes, and the commercial shellfish industry; analyzing existing policies and developing policy proposals; developing communication materials; and making recommendations to the Shellfish Program. The specific components will be determined in coordination with the Fellow considering their interests, knowledge, and skills. There will also be ample opportunities for the Fellow to gain greater familiarity with other aspects of the Shellfish Program and DOH. The location of this Fellowship is Tumwater, WA.