

## 2019 Summer Scholars Program – position descriptions



1. **Oregon Department of Fish and Wildlife (ODFW), Charleston, OR**  
Shellfish and Estuarine Assessment of Coastal Oregon (SEACOR)
2. **Oregon Department of Fish and Wildlife (ODFW), Newport, OR**  
Ecological monitoring of Oregon's Marine Reserves
3. **Oregon Department of Fish and Wildlife (ODFW), Newport, OR**  
Monitoring the socioeconomic impacts of Marine Reserve implementation
4. **Haystack Rock Awareness Program (HRAP), Cannon Beach, OR**  
Human dimensions research and evaluation during peak tourism season
5. **US Department of Agriculture–Agricultural Research Service (USDA-ARS), Newport, OR**  
Habitat use of shellfish aquaculture by fish and invertebrates
6. **South Slough National Estuarine Research Reserve, Charleston, OR**  
Creating a digital media library for science education and outreach
7. **Oregon Coastal Management Program (OCMP), Newport, OR**  
King Tides Photo Gallery 10<sup>th</sup> anniversary outreach display and materials
8. **United States Environmental Protection Agency (USEPA), Newport, OR**  
Quantifying the impact of anthropogenic inputs in Oregon Estuaries
9. & 10. **(TWO POSITIONS) Wild Rivers Coast Alliance (WRCA) and Oregon South Coast Regional Tourism Network (OSCRTN), Bandon, OR**  
Sustainable coastal tourism development projects

### 1. Oregon Department of Fish and Wildlife (ODFW), Charleston, OR

#### **Shellfish and Estuarine Assessment of Coastal Oregon (SEACOR)**

The [Oregon Department of Fish & Wildlife](#) (ODFW) Shellfish Program is responsible for conducting shellfish and habitat assessments for each estuary in Oregon, and monitoring shellfisheries for the state. These efforts inform resource management decisions and are also used to track changes in Oregon's estuaries and shellfisheries. The Scholar will work primarily on the [Shellfish and Estuarine Assessment of Coastal Oregon \(SEACOR\)](#) Project. SEACOR will be conducting the 3rd year of a three-year study of shellfish and estuarine habitats in Coos Bay, Oregon's largest outer coast estuary. Shellfish in Coos Bay are an important cultural, economic, and food resource for people in this area.

The Scholar will work collaboratively on a team to collect shellfish and estuary habitat data in various intertidal regions of Coos Bay. The primary role and responsibility of the Scholar will be collecting and analyzing field and laboratory data (tasks include participating in team meetings, preparing field gear, traversing intertidal flats and collecting environmental and biological data with a partner, extracting and measuring shellfish, and entering and analyzing data). In addition, the Scholar will also participate in additional SEACOR studies including acoustic mapping of seagrass habitats in Coos Bay and Unmanned Aerial System (UAS, i.e., drone) flights in Netarts Bay (Netarts, Oregon) to develop maps of estuarine habitats (primarily seagrasses). The Scholar may also interact with recreational harvesters by conducting creel surveys and engage the public at any outreach events the team attends.

Field work: 70-80%, Office and lab work: 20-30%

#### **Minimum qualifications**

- basic background in biology and ecology
- comfortable working independently and as part of a team
- willingness to work outdoors in all weather conditions (ability to traverse unstable substrates)
- attention to detail
- ability to drive to off-site locations

#### **Preferred qualifications**

- strong communication skills
- experience with statistics, data entry, and/or GIS

**Eligibility:** Open to US citizens only

### 2. Oregon Department of Fisheries and Wildlife (ODFW), Newport, OR

#### Ecological monitoring of Oregon's Marine Reserves

Oregon's marine reserves are areas in the ocean that are dedicated to conservation and scientific research. The [Oregon Department of Fish & Wildlife](#) oversees the management and scientific monitoring of these areas. Each marine reserve is named after a local natural landmark: [Cape Falcon](#), [Cascade Head](#), [Otter Rock](#), [Cape Perpetua](#), and [Redfish Rocks](#). Within the marine reserves all removal of marine life is prohibited, as is ocean development.

The Scholar's primary duty will be to contribute to collaborative research projects between Oregon State University and ODFW at Oregon's Cascade Head, Otter Rock, and Redfish Rocks Marine Reserves. Projects include intertidal surveys (monitoring sea stars and mussel beds), community ecology research, and fish recruitment surveys using SMURFs (Standard Monitoring Unit for Recruitment of Fishes) and SCRUBs (Standard Collectors for Recruitment of Urchins above the Benthos). This Scholar will assist in field work, lab processing of specimens, data analysis, and science communication efforts related to fieldwork activities.

Field work: 45%, Office work: 45%, Travel: 10%

#### Minimum qualifications

- valid driver's license and good driving record
- willingness to spend many hours outdoors
- ability to drive to off-site locations
- ability to traverse long sections of sand and rocky intertidal areas

#### Preferred qualifications

- experience with intertidal field survey protocols and species identification
- knowledge of intertidal community ecology, intertidal invertebrates, and juvenile marine fishes
- comfort at sea and using skin diving gear in the open ocean
- experience using MS Excel and Access databases for data entry and summarization
- good organization skills
- experience using blogs or social media for science communication

**Eligibility:** Open to US citizens only

### 3. Oregon Department of Fish and Wildlife (ODFW), Newport, OR

#### **Monitoring the socioeconomic impacts of Marine Reserve implementation**

The Oregon Department of Fish & Wildlife's Marine Reserves Program conducts human dimensions research to monitor the socioeconomic impacts of marine reserve implementation. In natural resource management, human dimensions research looks at how humans value, use, and depend on the natural environment. Our research is focused on understanding the different ways that people and communities are affected by the marine reserve sites over time, including what the effects of the reserves are at different scales — from how regions are affected down to how individuals are affected.

The Summer Scholar will work with [ODFW Human Dimensions](#) Project staff to gain professional experience and practical skills in interdisciplinary natural resource social science, with a focus on marine reserve management. Using standardized brief questionnaires, the Summer Scholar will conduct self-administered intercept interviews of coastal visitors at marine reserves and/or small business owners and managers in adjacent communities. The purpose is to understand the subjects' knowledge of and attitudes about marine reserves. The Scholar will have the opportunity to participate in both data collection and quantitative analysis related to these projects. When the Scholar arrives, the first stage of the project will involve only data collection. Later during the summer, data entry and analysis, and/or report writing are potential responsibilities.

Field work: 70%, Office work: 30%

#### **Minimum qualifications**

- comfortable with public speaking and performing interviews
- ability to multi-task
- must be self-directed
- willingness to participate in field work at various ocean shore and beach locations (traversing sand, spending many hours out of doors) and the associated travel, is required
- excellent writing skills
- ability to drive to off-site locations

#### **Preferred qualifications**

- familiarity with statistical analysis (SPSS or similar) software
- familiarity with data entry (Microsoft Excel)

**Eligibility:** Open to US citizens only

### 4. Haystack Rock Awareness Program (HRAP), Cannon Beach, OR

#### **Human dimensions research and evaluation during peak tourism season**

The [Haystack Rock Awareness Program](#) (HRAP), is a marine-based environmental educational program, focused on stewardship and outreach at Haystack Rock in Cannon Beach for the past 34 years. Much of our mission and aim is now communicated through social media and associated messaging. As our communication efforts have grown over time, the need for a thoughtful engagement and communication plan has become apparent. The summer scholar would spend the majority of their time working with HRAP staff, volunteers and partnering agencies to create a Social Media Outreach Plan and Protocol.

The scholar would be responsible for obtaining in-depth information and analytics based on our current social media utilization and trends, creating an overall plan, strategy and protocol for future use of social media platforms. The scholar will work primarily with staff and volunteers who have backgrounds in environmental education and outreach. In addition, the scholar will interface with partner organizations such as Friends of Cape Falcon Marine Reserve and Northwest Aquatic and Marine Educators, where social media and outreach plans are currently being considered.

Field work: 40% Office work: 50% Meeting/conferences/special events: 10%

#### **Minimum qualifications**

- background and/or interest in marine-based environmental education
- interest in communications
- willingness/ability to spend time out of doors

#### **Preferred qualifications**

- interest in studying social media trends
- interest in how visitors interact and engage with online messaging
- ability to drive to off-site locations

**Eligibility:** Open to US citizens only

### 5. US Department of Agriculture–Agricultural Research Service (USDA-ARS), Newport, OR

#### **Habitat use of shellfish aquaculture by fish and invertebrates**

The [USDA-ARS](#) program at [Hatfield Marine Science Center](#) (HMSC) is designed to address problems experienced by the shellfish aquaculture industry in US west coast estuaries. The focus of the current portion of this program is comparing fish and invertebrate use of intertidal estuarine habitats where shellfish aquaculture occurs in order to address regulatory issues faced by the industry and managers. We use underwater video and traps to capture fish and invertebrates in oyster aquaculture, eelgrass, and open mudflat or edge habitats. We also map these habitats and design experiments using field mesocosms and tethering prey to test their function as a nursery for important species.

The Scholar will assist with field surveys and experiment deployments in Willapa Bay, Washington and Yaquina Bay, Oregon. The Scholar will also assist with monitoring ghost and mud shrimp populations in Yaquina Bay and Tillamook Bay, Oregon, and Willapa Bay and Grays Harbor, Washington and deployments of juvenile oysters in Willapa Bay. In addition to assisting with data collection in the field, the Scholar will also participate in processing and analyzing that data when we return to HMSC.

Field work: 30% (including 4-5 day overnight trips) Office work: 55%, Lab work: 15%

#### **Minimum qualifications**

- ability to work under sometimes harsh field conditions (including rain, cold weather, and lots of soft estuarine mud and saltwater)
- ability to work well with others

#### **Preferred qualifications**

- prior experience with boating, fish and invertebrate capture, and field experimentation
- data entry and analysis skills
- ability to drive to off-site locations

**Eligibility:** Open to US citizens only

### 6. South Slough National Estuarine Research Reserve, Charleston, OR

#### **Creating a digital media library for science education and outreach**

Oregon's [South Slough National Estuarine Research Reserve](#) is made up of 4,771 acres and provides habitats for salmon, great blue herons, bald eagles, migrating ducks, elk, oysters, and crabs. The Reserve offers a diverse landscape of open waters, emergent islands, streams, salt marshes, and conifer-forested uplands. Through research, education, and stewardship programs, Reserve staff promote scientific and public knowledge of estuaries and how to manage them.

The scholar's primary role will be to enhance the Reserve's capacity to communicate with digital media. The Scholar would work with both the education and science programs at South Slough Reserve to create digital communication resources that aid in education and outreach goals. These resources will contribute to a digital media library that will be used to share stories about the reserve's impact in the community and strengthen science education efforts. The scholar will employ video editing software to develop digital products that support reserve management goals and objectives, demonstrate local and global values of estuaries, share stories about why people love these habitats, and fun facts from our reserve.

Field work: 60% Office work: 40%

#### **Minimum qualifications**

- creative, resourceful and able to work independently
- comfortable working with children as well as adults
- rudimentary understanding or strong interest in marine science, science communication, and basic social media concepts
- experience with Microsoft Office Suite
- ability to work in remote, challenging outdoor settings, including traversing steep terrain, sand, saltmarsh and mudflat habitats.
- ability to drive state vehicles to regional offsite locations for programs or research

#### **Preferred qualifications**

- familiarity with cameras, video and video-editing software, or experience communicating with digital media

**Eligibility:** Open to US citizens only

### 7. Oregon Coastal Management Program (OCMP), Newport, OR

#### **King Tides Photo Gallery 10<sup>th</sup> anniversary outreach display and materials**

The [Oregon Coastal Management Program](#) (OCMP) co-coordinates the [Oregon King Tides Photography Project](#) every year with [CoastWatch](#) (a volunteer group of the Oregon Shores Conservation Coalition). The Oregon King Tides Photography Project invites citizens to capture photos of their coastal environments during the highest high tides (known as “king tides”) of the winter season, in order to portray change over time, potential impacts of sea level rise, and areas most vulnerable to erosion or flooding ([www.oregonkingtides.net](http://www.oregonkingtides.net)). This will be the tenth season since the project began in Oregon, and OCMP would like to develop outreach and display materials, using the best photos collected, to highlight and celebrate this project.

The Scholar will lead the development of a king tides traveling photo exhibition, and envision ways in which this exhibition could be displayed and used to connect the public with the potential impacts of climate change. Their responsibilities would include: learning about and reviewing past king tides seasons; highlighting the accomplishments of the program over the past decade; identifying the best photos for display; interviewing staff and volunteers involved in the king tides project; reaching out to other state king tides projects for ideas; connecting with local partners for exhibition display and promotion; and creating king tides outreach material to highlight the ten seasons of the project.

Field work: <15% Office work: >85%

#### **Minimum qualifications**

- Strong creative and outreach skills
- Willingness to think outside the box
- Self-starter, comfortable working independently
- Ability to drive to off-site meetings

#### **Preferred qualifications**

- Experience with social media content development and visual tools (Canava or Adobe Creative Suites)
- Interest in or knowledge of natural resource policy and management
- Interest in or knowledge of public education and outreach

**Eligibility:** Any students authorized to work in the US

### 8. United States Environmental Protection Agency (EPA), Newport, OR

#### **Quantifying the impact of anthropogenic inputs in Oregon Estuaries**

The [US EPA](#) at [Hatfield Marine Science Center](#) is conducting a study in Tillamook Estuary focused on identifying the role of anthropogenic drivers (such as agricultural activities and point and non-point inputs) on the occurrence of coastal acidification and low oxygen within the estuary. The Scholar will work on two projects, one focused on identifying the role of land-based factors on increasing carbon delivery to Oregon estuaries and another quantifying carbon sequestration by salt marsh communities in Oregon estuaries. Scholar will participate in all components of scientific research, including study design, conducting the field and laboratory studies, usage of water quality instrumentation, and data analysis. They will collect water samples in different systems and analyze them for carbonate chemistry and sample sediments in marshes to quantify carbon storage in the soils.

Field work: 33% Office work: 33% Lab work: 33%

#### **Minimum qualifications**

- ability to perform physically-demanding field work (including traversing down steep slopes to sample rivers, working on a small boat, and possibly long field days)

#### **Preferred qualifications**

- experience in freshwater/stream ecology, marine or estuarine biology, chemistry, or field/lab research
- experience with laboratory methods (especially chemistry)

**Eligibility:** International students are eligible to apply; student must be currently enrolled at a US college or university

**9. & 10. (TWO POSITIONS) Wild Rivers Coast Alliance (WRCA) and Oregon South Coast Regional Tourism Network (OSCRTN), Bandon, OR**

**Sustainable coastal tourism development projects**

[Wild Rivers Coast Alliance](#) (WRCA) is a grantmaking organization committed to supporting communities along the south coast of Oregon. We look for opportunities to foster community collaboration that drive economic opportunities in a way that preserves and respects the health and integrity of the region's natural resources and local community values. The mission of the [Oregon South Coast Regional Tourism Network](#) (OSCRTN) is to cultivate collaboration that drives an increase in the economic impact of visitors to the region through triple bottom line development (social equity, environment and economy).

Two Scholars will work together to create an online set of 6 short Extension education courses on the Oregon Marine Reserve System that will be integrated into the existing Guide and Outfitter Recognized Professional (GORP) Program. The Scholars will engage with the tourism industry, attend industry and community meetings, and travel to the 5 marine reserves. With OSCRTN Scholars will assist with project development for the South Coast cycle and kayak trail systems. The work will include convening meetings to gather and share community input, determining cost estimates for the systems infrastructures, and creating publications.

Field work (possible overnight travel): <50% Office work >50%

**Minimum qualifications**

- responsible, attentive to detail, professional and respectful in public settings
- good organizational, multi-tasking, and time-management skills
- proficient in web-based research and Microsoft Excel
- ability to drive a vehicle to field sites

**Preferred qualifications**

- knowledge of coastal wildlife and ecosystems, outdoor recreation, and tourism
- interest and experience with photo and video editing
- interest and experience with social science research

**Eligibility:** International students are eligible to apply