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

Shellfish and Estuarine Assessment of Coastal Oregon (SEACOR)

all projects are subject to change without notice

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 a study of shellfish populations and estuarine habitats in Tillamook Bay, Oregon's 2nd largest outer coast estuary. Shellfish in Tillamook 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 regions of Tillamook Bay. In addition to the Tillamook Bay estuary survey, the scholar will also be involved in a collaborative project using unmanned aircraft systems in partnership with the Career Tech Coastal Drone Academy (Lincoln City, OR) evaluating the use of this technology to map eelgrass beds in Netarts and Tillamook Bays. The primary role and responsibility of the scholar will be collecting and analyzing field and laboratory data as an important member of the team. 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. The scholar may also interact with recreational harvesters and engage the public at any outreach events the team attends. Depending on their interests and skills, the scholar may also conduct an independent data project under guidance of a mentor. Opportunities include small scale mapping of bivalve populations, analyzing habitat-species associations, or assisting in the spatial analysis of UAS imagery from the eelgrass mapping project.

Field work: 75-85%, Office work: 15-25%

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 and work from small boats)
- attention to detail
- ability to drive to off-site locations

Other optional qualifications

- strong communication skills
- experience with small motorized boats (<25') or other water craft (e.g. kayak, canoe)
- experience with statistics, data entry, and/or GIS

Eligibility: Open to US citizens only

2. Oregon Coastal and Ocean Information Network (OCOIN), various locations, OR

Lead ongoing engagement efforts, optimize survey and mapping tool

all projects are subject to change without notice

The [Oregon Coastal and Ocean Information Network](#) (OCOIN) is a partnership of Portland State University, Oregon State University, Oregon's Coastal and Marine Data Network, and the Oregon Coastal Management Program. OCOIN is a virtual network without a physical location. This policy/science network was established to facilitate long-term collaboration among policy makers, managers, and researchers working on coastal and marine projects to promote the use of scientific data in decision making. OCOIN balances community engagement and outreach, with technical GIS to assist in science-based policy making. A Sea Grant Scholar would lead our ongoing engagement efforts, and work with a technical team to optimize the user survey and streamline OCOIN's GIS tool (all necessary GIS skills will be provided as 'on the job training').

As a direct report of OCOIN and member of the Steering Committee, the Scholar would work to further our mission of "facilitating long-term collaboration among policy makers, managers, and researchers working on coastal and marine projects to promote the use of scientific data in decision making." Specifically, the scholar, with supervision and guidance from the Steering Committee, would: 1) Establish new and maintain existing relationships with stakeholders in ocean and coastal related fields in Oregon, 2) Update and improve on our existing infrastructure and services, the Coastal Explorer Tool and the Oregon Marine and Coastal Network Directory, 3) Plan and execute OCOIN's annual meeting, which requires interaction with ocean and coastal professionals throughout the region, 4) Interface with members of our Outreach, Technical, and Executive Committees, 5) Coordinate development of the next issue of the online newsletter, and 6) Implement original ideas from the Scholar to further our mission.

Office work: 100%, (50% outreach and engagement, 30% technical and map coordination, 20% coordinating events and newsletter)

Minimum qualifications

- strong interpersonal skills: outgoing, comfortable web conferencing, calling, and emailing with ocean and coastal professionals
- self-starter: Scholar will likely be working remotely; should not need daily direction

Other optional qualifications

- comfortable or familiar with updating an online survey
- basic knowledge of policy and science funding processes
- interest in learning some basic GIS

Eligibility: International students are eligible to apply

3. & 4. (TWO POSITIONS) Oregon Department of Fish and Wildlife (ODFW), Newport, OR

Socioeconomic Impacts of Marine Reserve Implementation

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The [Oregon Department of Fish & Wildlife](#) (ODFW) [Marine Reserves Program](#) conducts human dimensions research to monitor the socioeconomic impacts of marine reserve implementation. **Two** Summer Scholars 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. The scholars may also occasionally work on other marine reserve projects such as outreach and science communications or ecological data collection in the field.

The scholars will work together collecting data for: 1) a survey of visitors to Oregon's five marine reserves (beach surveys), and 2) a survey of business owners in towns located near the reserves. The purpose of the visitor survey is to assess marine reserve awareness, support, and knowledge among coastal visitors. The purpose of the business survey is to determine local business owners' perceived impact of reserve implementation on their businesses and communities. Data collection will involve conducting interviews using very brief questionnaires at the reserves and local communities. Scholars may also work with coastal community volunteers conducting the interviews in some locations. Later during the summer, data entry, data analysis, and/or report writing are potential responsibilities. The scholars will present the preliminary results of these studies at the end of the summer.

Field work: 80%, Office work: 20%

Minimum qualifications

- comfortable with public speaking and performing interviews
- willingness to participate in field work at various ocean shore and beach locations (traversing sand beaches, spending many hours out of doors)
- ability to drive to off-site locations

Other optional qualifications

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

Eligibility: Able to be employed in the U.S.

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

Citizen Science Data Collection, Coordination, and Analysis

all projects are subject to change without notice

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 35 years. Much of our mission and aim is now to apply Citizen Science to our education practices. The scholar will conduct surveys, analyze the results, and report their findings to different research groups. Our scholar will balance their time working with HRAP staff, and conducting outreach with volunteers and partnering agencies, such as US Fish and Wildlife Service, Oregon State Parks, Oregon Department of Fish and Wildlife, SOLVE Oregon, Audubon Society of Portland, Friends of Cape Falcon Marine Reserve and local and state Aquariums, creating a detailed Citizen Science Outreach Plan and Protocol.

The scholar will be responsible for obtaining in-depth information and analytics based on our current participation and dataset, creating an overall plan, strategy and protocol. The scholar will work primarily with staff and volunteers who have backgrounds in environmental education and outreach. In addition, the scholar will be invited to various outreach events, Board meetings including, but not limited to, the Friends of Haystack Rock, Friends of Cape Falcon, and the Wildlife Center of the North Coast, where they will have opportunities to work with and engage professionals in various marine education and science fields.

Field work: 60% Office work: 30% Meeting/conferences/special events: 10%

Minimum qualifications

- background and/or interest in marine-based environmental education, field-based studies focus
- ability to drive their own vehicle to and from work
- willingness/ability to spend time out of doors

Other optional qualifications

- interest in studying environmental factors and trends in the marine ecosystem

Eligibility: Open to US citizens only

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

Habitat use of shellfish aquaculture by fish and invertebrates

all projects are subject to change without notice

The [USDA-ARS](#) program at the Hatfield Marine Science Center (HMSC) is designed to address problems experienced by the shellfish aquaculture industry in US west coast estuaries. The current ecology portion of this program has 3 overlapping foci: 1) 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; 2) monitoring burrowing shrimp populations in US West Coast estuaries and examining their ecology and factors that control these populations because they are a pest to the aquaculture industry; and 3) Examining juvenile oyster survival and growth in these estuaries as it relates to growing threats including ocean acidification and disease.

The summer scholar will assist with field surveys and experiment deployments. Those efforts are expected to include shellfish bed surveys and fish sampling efforts in Willapa Bay, as well as predation experiments using staghorn sculpins and shrimp at HMSC. They would also assist with monitoring ghost and mud shrimp populations in Yaquina Bay and Tillamook Bay, OR and Willapa Bay, WA. They would assist in data collection in the field and in processing and analyzing that data when we return to HMSC. If interested, the scholar will develop an individual project to work on a subset of the data collected. The scholar may engage with stakeholders from the shellfish aquaculture industry, other state and federal management agency personnel, and other researchers.

Field work: 40% (including 4-5 day overnight trips) Office work: 45%, 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

Other optional 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: US citizens preferred

7. South Slough National Estuarine Research Reserve, Charleston, OR

Implement summer camp programs, enhance outreach and education materials

all projects are subject to change without notice

Oregon's [South Slough National Estuarine Research Reserve](#) is made up of 5,900 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 Reserve hosts five summer science day camps for children ages 5-18.

The summer scholar will work with the South Slough Reserve education and science staff to implement summer camp programs and enhance and design outreach and education materials about estuarine ecosystems and Reserve research for existing Reserve programs. The summer scholar will participate in summer science camp training, be actively involved in the planning for at least 2 camp weeks, and assist with the delivery of 4 summer camps. The scholar will use the weeks in between science camp to create education materials for at least one existing Reserve program in need of improvement. The scholar will work with the mentor, as well as science and education staff, to identify the program topic that matches best with their skills and interests. The scholar will have opportunities to join other education programs, research teams and monitoring teams in the field throughout the summer.

Field work: 55% Office work: 45%

Minimum qualifications

- creative, resourceful and able to work independently
- comfortable working with children as well as adults
- interest in marine science and science communication
- ability to work in remote, challenging outdoor settings
- ability to drive their own vehicle to and from work

Other optional qualifications

- basic understanding of ecology, biology or natural resources
- coursework in visual communication, journalism, graphic design or elementary education

Eligibility: Open to US citizens only

8. Environmental Protection Agency Coastal Ecology Branch, Newport, OR

Coastal Acidification in Estuaries of the U.S. Pacific Northwest

all projects are subject to change without notice

The U.S. EPA's [Pacific Coastal Ecology Branch](#), located at the Hatfield Marine Science Center in Newport OR, is currently conducting research on coastal acidification in estuaries of the U.S Pacific Northwest (PNW). This research includes 1).Monitoring of carbonate chemistry in estuaries, 2).Attribution of natural and anthropogenic carbon and nutrient cycling utilizing a variety of modelling techniques and biogeochemical tracers, and 3). Development of chemical and biological indicators to improve our understanding of estuarine ecosystem's response to coastal acidification stressors. The goal is to improve our understanding of the in-situ chemical conditions which are more and less favorable for juvenile oyster development and bio-calcification using co-located time series of oyster growth metrics and water chemistry. Results from this monitoring effort will be used to explore the utility of simple water quality models for predicting the timing and location of waters favorable and unfavorable for juvenile oyster development. The project will be conducted in collaboration with the U.S. Department of Agriculture and part of a larger research effort monitoring oyster growth in multiple estuaries throughout Oregon and Washington.

The scholar would have the opportunity to help 1). install the monitoring equipment in the field, 2). collect and organize data streams resulting from the oyster growth, CaCO₃ crystal blocks, and chemical sensor monitoring, and 3). Analyze the datasets to help support the overall goal of the project. The scholar will have a broad exposure to field techniques for biological and chemical monitoring, analysis of water samples for inorganic carbon, calibration and maintenance of state-of-the-art biogeochemical sensors (e.g. SAMI pCO₂, SeapHOX), and quantitative techniques for analysis of complex biological and chemical datasets. The scholar's project will focus on helping to collect the field data during their tenure in the program and preparing an analysis of the chemical monitoring and oyster growth datasets to explore potential quantitative relationships amongst these. The scope and complexity of this analysis will be dependent upon and tailored to the scholar's background skills and current research interests.

Field work: 20% Office work: 40% Lab work: 40%

Minimum qualifications

- comfortable working from small boats in estuaries
- basic quantitative skills and experience with Excel
- interest in ecology of marine environments

Other optional qualifications

- coding skills (e.g. R, Matlab)

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

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

National Coastal Condition Assessment Survey

all projects are subject to change without notice

This summer the US [Environmental Protection Agency](#) will be participating in a national survey called the [National Coastal Condition Assessment Survey](#). As part of this survey we will be piloting an ocean acidification indicator, which includes total alkalinity and pH measurements. For this work, in collaboration with EPA colleagues in Narragansett, RI, we will be analyzing water samples collected from coastal waters around the United States. In addition, we will sample alongside the Oregon Department of Environmental Quality staff when they are collecting samples for the survey. We will collect additional water samples and make pH measurements using an iSAMI or seaFET to evaluate carbonate chemistry and to assess data quality. The scholar will participate in field work to collect samples and will analyze water samples using an Apollo Alkalinity titrator. The scholar will also assist with sample tracking, data entry, and data analysis including exploring relationships in total alkalinity. The data generated during this internship will be incorporated into the 2020 National Coastal Condition Assessment Survey report and reports evaluating the feasibility of this acidification indicator in the national survey. The scholar will conduct some experiments to evaluate the impact of filtration on alkalinity and sample preservation.

The Sea Grant scholar would participate in all components of scientific research, including conducting the field sampling, analyzing samples in the laboratory, and analyzing the data. We are certain that the scholar would have results to present at the Symposium. The scholar would gain experience in field sampling, laboratory analyses of water samples for total alkalinity (and possibly pCO₂ and TCO₂), usage of water quality instrumentation, and data analysis.

Field work: 33% (possibly including overnight trips) Office work: 33% Lab work: 33%

Minimum qualifications

- ability to perform physically-demanding field work (including traversing through mud, working on a boat, and possibly long field days)

Other optional qualifications

- experience in chemistry, oceanography, and or freshwater/steam ecology
- experience with field/lab research

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

10. Travel Southern Oregon Coast (TSOC), and the Oregon State University Extension Tourism Program, Bandon, OR

South Coast Know Your Community Sustainable Tourism Program

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[Travel Southern Oregon Coast](#) (TSOC) is a non-profit destination management organization largely funded by the Bandon Dunes Golf Resort. TSOC is responsible for making strategic investments in development projects, promotions and relationships that lead to the South Oregon Coast becoming a “bucket list destination” — especially for outdoor recreation enthusiasts. Ultimately, the goal is to help communities create new tourism offerings in culinary and agritourism, outdoor recreation, bicycling tourism, cultural heritage tourism and more. The [OSU Extension Tourism Program](#) provides continuing education, applied research and community needs assessments that enhance the efforts of local stakeholders to successfully implement triple bottom line (environmental, social, and economic) tourism and outdoor recreation business development.

The scholar will work with these and other organizations to support sustainable coastal tourism efforts by engaging with community visitor industry workers, guides and other stakeholders. The student will be writing regular blog posts supported by photo and video content for the OSU Extension Sustainable Tourism & Outdoor Recreation Blog. This content may also be used by the Oregon South Coast Rural Tourism Network. The student will also assist with inviting people from multiple communities to participate in the OSU Extension online [Know Your Community Training Program](#). The student will visit the communities, talk with local tour operators, guides and tourism organizations, and work to compile the required information that may be used to update or enhance online training courses. The student may assist directly in modifications of content in one or more online courses. The student will help to plan a community network live training to be held after completion of the internship in the fall of 2020. The student may be involved in photo/video asset development and management, meetings or agency and non-profit organizations and participation in local visitor experiences.

Field work (possible overnight travel): 40% Office work: 60%

Minimum qualifications

- creative, resourceful and able to work independently and adapt to changing project parameters
- interest in sustainable coastal communities, coastal tourism and outdoor recreation
- ability to work in rural communities, and maybe at times in remote, challenging outdoor settings
- strong verbal and written communication skills, attention to detail and data management
- driver’s license & ability to drive to project locations in their own vehicle or rented vehicle

Other optional qualifications

- knowledge of coastal wildlife and ecosystems, outdoor recreation, and tourism
- interest in photo/video editing
- social media, blog and video production and editing experience

Eligibility: International students are eligible to apply