



KELLY MUETHING

Project Ecologist

Kelly has a strong foundation in the biology and ecology of marine ecosystems. From her involvement in a wide variety of science and research endeavors, Kelly has experience in aquaculture and eelgrass, estuarine field sampling, taxonomic identification, standardized sampling, and data collection. She also uses GIS for data management, analysis, and mapping of natural resources. Kelly is also familiar with state and federal regulations surrounding marine resource management. Kelly excels at communicating science to the public in an accessible manner.

Representative Projects

Skokomish Enatai Creek Hatchery Improvements Permitting and Biological Assessment, Skokomish Indian Tribe, Mason County, WA.

Staff Scientist. Prepared a biological assessment for Endangered Species Act (ESA) consultation to help the U.S. Army Corps of Engineers evaluate the project's potential effects on species listed as threatened or endangered, and their associated critical habitat. The hatchery facility, located at the outlet of Enetai Creek into Hood Canal, manages the fall chum salmon run to support commercial, subsistence, and cultural practices of the Skokomish tribal members. Proposed improvements to the spawning operations facility include updates to safety and sanitation systems, and construction of a second raceway.

Biomonitoring for Holden Mine Remediation Project, Rio Tinto, Lucerne, WA.

Staff Scientist. Project involved extensive fish and macroinvertebrate sampling along Railroad Creek to assess the effectiveness of Rio Tinto's remediation efforts at Holden Mine—a former copper mine active between 1938 and 1957. Provided extensive field assistance to senior staff in both the macroinvertebrate and fish sampling, which required an understanding of standard benthic macroinvertebrate sampling methods and electrofishing technique. The work has also involved data analysis and reporting following the field event.

North Mercer Interceptor and Enatai Interceptor Upgrade Project Final Design, King County Wastewater

Staff Scientist. Working with the project engineering team on environmental planning and permitting for a 14,000-foot sewer line replacement. The project includes evaluating potential impacts to sensitive resources along Lake Washington's shoreline and the Mercer Slough Wetland Complex in relation to ESA-listed species, critical habitat, and essential fish habitat. The work, to date, has included an assessment of environmental conditions throughout the project corridor; development of permitting documents for federal, state, and local land use permits; completion of impacts analyses for the local jurisdictions (City of Mercer Island and City of Bellevue); and development of figures and maps to accompany the various permitting documents and reports. Work on the final permitting documents will continue through 2019.

Coastal Streams and Embayments Prioritization along Puget Sound Shores with a Railroad, Washington

Department of Fish and Wildlife Puget Sound National Estuary Program, Blaine to Olympia, WA. *Staff Scientist.* This grant-funded project is to develop a prioritization framework for evaluating coastal embayments and streams



EDUCATION

M.S., Marine Resource Management, Oregon State University, Corvallis, 2018
 B.A., Environmental Biology; Minor: Anthropology, Washington University, St. Louis, 2014

CERTIFICATIONS

U.S. Department of Transportation, Remote Pilot License (Certificate #4384681)

EXPERTISE

Marine Biology
 Estuarine Ecology
 Shellfish Ecology
 Marine Plant Ecology
 Data Collection and Analysis
 Standardized Sampling
 Quantitative Analysis using R, ArcGIS, and Microsoft Access
 Statistics

AFFILIATIONS

National Shellfisheries Association



along 125 miles of railroad-impacted shoreline between Blaine and Olympia, Washington. The project will consider local and regional restorations goals, and improve the ability of the funders to evaluate the benefits among restoration projects, as well as inform mitigation planning along the railroad. Completed analysis and processing of GIS data to score assessed stream crossings within the prioritization framework.

Upper Quinault River Sustainable Floodplain Management Planning Project, Quinault Indian Nation, Quinault, WA. *Staff Scientist.* Project involves developing a Roads Management Plan as part of project to identify and prioritize actions that will improve channel migration and other geomorphic and habitat-forming processes. Prepared maps in ArcGIS for inclusion in presentation materials for public meeting.

Quilcene Bay Mussel Raft Expansion Project Regulatory Compliance, Penn Cove Shellfish, LLC, Coupeville, WA. *Staff Scientist.* Reviewed and organized public comments concerning the mussel expansion project. Assisted with responding to these comments regarding selected biological and environmental issues as part of a final report to aid in the permitting process.

18827 Yew Way Delineation and Permitting, United Recycling and Container, Snohomish, WA. *Staff Scientist.* Conducted investigations to determine the ordinary high water mark (OHWM) of Evans Creek to assist with permitting of a project to place a pre-fabricated bridge over the stream. Following the fieldwork, used GIS tools to develop a map as part of a letter report documenting the OHWM to be submitted to Washington Department of Fish and Wildlife as supporting documentation of the SEPA checklist and Hydraulic Project Approval application.

Nearshore Acquisition Strategy Development, Whidbey Camano Land Trust. *Staff Scientist.* The project is to develop a science-based prioritization of shoreline parcels in Water Resource Inventory Area (WRIA) 6 (Island County) for use in acquiring parcels for conservation (and associated restoration, where applicable) of nearshore and estuarine processes and in aiding the recovery of salmonid populations that use the nearshore areas of WRIA 6. Assisting with compiling a geodatabase of parcels and relevant data sets to support the prioritization. Using this spatial data, developing a framework to prioritize parcels to inform future conservation and restoration efforts.

Marine Mammal Stranding Network, SeaDoc Society, Orcas Island, WA. *Intern.* Helped manage a busy marine mammal stranding network in a county with 407 miles of shoreline. Used small boat or vehicle to respond to calls about stranded pinnipeds, assess animal, and plan for rehabilitation, necropsy, or tagging of animal. Educated the public on marine mammal natural history and stranding response.

Oyster Aquaculture Research, U.S. Department of Agriculture Research Service at Oregon State University, Newport, OR. *Faculty Research Assistant.* Participated in fieldwork related to presence of oyster aquaculture in Pacific Northwest estuaries. Work required small boat use and sampling of fish, invertebrates, and seagrass in the intertidal zone. Organized necessary field equipment and materials to plan for field research trips. Assisted in post-processing and analysis of data (including use of R, ArcGIS, and Microsoft Access).