



Statement of Qualifications

Intertidal, Wetland, Shoreline Surveys & Assessments

Mitigation & Monitoring Plans

Biological Evaluations, Habitat Management Plans, & ESA documents

Shoreline Development Permitting & Project Management

Scientific Diving & Subtidal SCUBA Surveys

Dredging Permitting, Sampling and Analysis Plans, and Sediment
Characterization Reports

Wetland Delineations, Marbled Murrelet, and Marine Mammal
Monitoring

380 Jefferson St.
Port Townsend, WA 98368
(360) 385 - 4073

Profile

Marine Surveys & Assessments (MSA) is a certified woman-owned environmental consulting cooperative which started as a woman owned firm in 1999. We are experienced scientists who provide environmentally sound solutions to public and private clients throughout the Puget Sound. We specialize in marine science research, land use planning assistance, and permitting assistance for waterfront projects and port developments. We also design and implement mitigation, restoration, and monitoring activities. MSA is well-respected for our ability to work with regulatory agencies and clients to resolve aquatic habitat issues. MSA is an OWMBE and DBE that employs ten biologists and permitting specialists, allowing us the capacity to work on large projects, while retaining the flexibility and responsiveness of a small business.

History and Experience

Since 1999, MSA has produced over a thousand Habitat Management Plans, Mitigation and Monitoring Plans, Habitat Survey Reports, and Biological Evaluation documents for a wide range of projects throughout Puget Sound and Lake Washington. We are the on-call biological consultants for the Hood Canal Coordinating Council, Waterfront Construction, Marine Floats, and many other clients within the Puget Sound region. MSA has also worked with several Port districts (Silverdale, Brownsville, Kingston, Winslow, Tacoma, Port Angeles, and Port Townsend) as a biological consultant. MSA scientists have decades of experience using WDFW protocols for eelgrass/macroalgae surveys and geoduck surveys. More recently, due to USFWS concerns about non-commercial species, we have become certified marbled murrelet and marine mammal monitoring providers as well.

MSA maintains up to date knowledge of federal, state, and local environmental regulations, policies, and guidelines. These include NEPA/SEPA, the Endangered Species Act (ESA), the Clean Water Act (sections 401 and 404), Hydraulic (Project Approval) codes, the Shoreline Management Act and local Shoreline Master Programs, Department of Natural Resources Tideland lease requirements, Section 404(b) (1) Alternative Analysis guidance, Federal wetland laws and policies, and local critical area ordinances. We are well-versed in issues and applications of wetland, estuarine, and marine science in Washington State. MSA specializes in scientific SCUBA diving and subtidal habitat surveys, as well as eelgrass delineation and management (mitigation and monitoring). We also provide wetlands delineation, inventory, restoration, mitigation, and function assessment services. Our staff is experienced in habitat planning, management, and mitigation services using comprehensive native plant and wildlife surveys.

MSA began at the onset of the Endangered Species Act (ESA) listing of salmon in Washington State. At this time, we helped to establish the now-standard Biological Evaluation document. MSA provides ESA support on several levels ranging from informal and Section 7 consultations to formal consultation, Regional General Permits, SPIF forms, and programmatic biological assessments. We also conduct technical research to support our ESA evaluations so that agency personnel will have data with which to help make difficult permit decisions. Agencies at the local, State and Federal level trust MSA to answer technical questions related to marine issues because of our integrity and the long-standing relationships we have gained over twenty years of experience.

Environmental Services

- Survey intertidal and subtidal project areas for US Fish & Wildlife, National Marine Fisheries Service, US Army Corps of Engineers, WA Department of Fish & Wildlife, and WA Department of Natural Resources permit requirements and preliminary, intermediate, and intensive habitat and eelgrass/macroalgae surveys.
- Identify, quantify, and gather qualitative information of flora, fauna, substrate and other biological and physical characteristics of upland, riparian, subtidal, and wetland areas.
- Analyze collected data, research and analyze current literature, and write reports that provide impact analysis on habitats, species, and their forage base populations.
- Eelgrass Mitigation and Monitoring Plans, eelgrass transplants, macroalgae identification, marine plant habitat and wetland habitat rating and delineations.
- Forage fish spawning habitat surveys and reports to determine appropriate substrate matrix, and presence or absence of eggs, as well as Geoduck surveys using WDFW protocols.
- Habitat mapping, restoration and mitigation plans and planting maps, GIS and bathymetry mapping services.
- Habitat Management Plans and accompanying mitigation including native species planting and monitoring plans for land-based development in or near critical and conservation areas and buffers.
- Environmental Impact Statement, Biological Evaluations, Habitat Assessments, Wetland surveys and report, Habitat Management Plans, Critical Areas Ordinance Reports, Critical Area Stewardship Plans, and other special reports as required by local, state, and federal agencies.
- MSA has been requested to stand in a court of law as an expert witness in many biologically and technically disputed cases.
- Code, regulation, and permit research as well as permit applications for projects including Substantial Development Permits, Regional General Permits, Shoreline Development Permits.
- Biological Assessments as required by regulatory agencies (US Army Corps of Engineers, NOAA Fisheries, US Fish and Wildlife, etc.) for aquaculture projects.
- Marbled Murrelet and marine mammal monitoring.

Summary of Projects

MSA has worked with several Port districts (Silverdale, Brownsville, Kingston, Winslow, Tacoma, Port Angeles, Port Townsend, etc.) to provide necessary biological consultant work on a myriad of projects. For the Port of Port Angeles, we wrote several Biological Evaluations for the Boat Haven Marina Redevelopment Project, involving the marina railway ramp area, the Tumwater Creek Bridge Replacement Project, and the LeTourneau Boat Ramp Project. In addition, MSA wrote a Biological Evaluation Supplement with the help of Port of Port Angeles personnel pertaining to the Coffey Dam project in the old graving dock area.

MSA divers also conducted extensive dive surveys in the Dunlap Towing log storage area in Port Angeles Bay and produced a habitat report of their findings.

Some other projects for which MSA has worked on include the following:

- Over a thousand biological surveys and documents for privately owned pier/ramp/float projects, marine railways, boat ramps, mooring floats, mooring buoys, and bulkhead projects throughout Puget Sound.
- Dredging projects for several Port Districts and for the Bridgehaven Community in Jefferson County, Tahuya on Hood Canal, Quilcene Boat Haven on Quilcene Bay, the Cape George Community on Discovery Bay, the Mariners Cove Beach Community in Island County, the Port of Silverdale in Kitsap County, and the Silver King Resort in Clallam county.
- Biological research for potential aquaculture farms throughout the Puget Sound for private landholders, including shellfish negotiations with tribal entities.
- Several projects involving installation of cable lift trams from high bluffs to the beach.
- Reconfiguration and expansion of commercial marinas including Nautical Landing in Lake Union, Quartermaster Harbor Marina on Vashon Island, The Landing Mall in Port Angeles (Black Ball Ferry Terminal) and Pleasant Harbor Marina on Hood Canal.
- Worked extensively on the biological work for the rebuild of historic structures in Port Townsend. The Hasting Landing Ferry Terminal Project, a seaplane/historical rebuild of the Cannery Dock, and the Northwest Maritime Center Dock.
- Dozens of Habitat Management Plans, and associated wetland and other special reports (Critical Area Stewardship Program documents, etc.), involving construction within buffer areas or within critical areas falling outside the normal regulatory limits.
- Surveys for tribes, as well as permit interactions

Please note additional project experience is provided in staff profiles below.

References

City of Port Townsend – Outfall Replacement Project

Phil Martinez at Jacobs Engineering: (425) 233-3662, Phil.Martinez@jacobs.com

Marine Surveys & Assessments is currently partnering with the City of Port Townsend and Jacobs Engineering on an outfall replacement project for the city at North Beach Park. MSA will be conducting a Submerged Aquatic Vegetation (SAV) Survey for quantitative density data in conformance with the protocols approved by WDFW, and DNR, and USACE. The survey is anticipated sometime during the summer months of 2019. MSA will also prepare a Habitat Mitigation and Monitoring Plan that addresses the results of the SAV quantitative survey, which will include mitigation strategies and the long-term monitoring required to confirm re-establishment of the kelp, seagrass, and eelgrass habitat.

Department of Natural Resources Eelgrass Project

Jim Shannon at Hart Crowser: (206) 601-1554, jim.shannon@hartcrowser.com

Marine Surveys & Assessments partnered with Hart Crowser to provide diving support as part of an eelgrass restoration project in south Puget Sound. Using MSA divers and vessels, eelgrass was transplanted at over ten test-transplant sites with a total of 7,800 eelgrass shoots transplanted.

Mariner’s Cove Beach Club Dredge Project

Mark Buchholz: (360) 202-6024, mvislandsunset@gmail.com

Marine Surveys & Assessments worked on all aspects of a project involving dredging the entrance channel to Mariner’s Cove where sediments had accrued adjacent to an existing coffer dam. MSA developed a Sampling Analysis Plan, conducted vibratory core sampling and sample compositing for analysis, Eelgrass and Macroalgae SCUBA surveying, a Biological Evaluation report, and provided project management including site meetings with review agencies and assistance with permit applications. An eelgrass transplant and beach nourishment were conducted as mitigation.

Kayak Point Eelgrass Survey

Bill Taylor at Raedeke Associates: (206) 525-8122, btaylor@raedeke.com

In partnership with Raedeke Associates, Marine Surveys & Assessments conducted an eelgrass delineation dive and habitat survey, report and preliminary mitigation as part of a pier and boat replacement at Kayak Point Park in Snohomish County.

City of Bainbridge Island Projects

Aaron Claiborne: 206-780-3585, aclaiborne@bainbridgewa.gov

Marine Surveys & Assessments has worked on many projects for both the City of Bainbridge Island, and the Public Works Department. These projects include permitting, Site Specific Analysis reports, biological evaluations, and habitat assessments, and project management.

Additional Information

Marine Surveys & Assessments is known for our excellent communication and negotiation skills. This has given us the ability to work with private clients, county/state/federal agencies, and tribal agencies that often have differing perspectives. Because we are a smaller firm, we can provide the same services as our competitors at lower costs in addition to offering a more personal touch. Over the last twenty-plus years, MSA has built its reputation on our knowledge and experience of the local ecosystems as well as our integrity and dedication to achieving a higher environmental standard.

Turn-Around Times

Turn-around times will be specific to each project and may vary. However, turn-around times for MSA, in general, are less than a month.

On-Call Inspections

Marine Surveys & Assessments will attempt to provide immediate assistance if at all possible. If not feasible, on-call inspections are guaranteed within 48 hours.

Record Keeping

Records produced and maintained by MSA during projects included but are not limited to: contracts, site plans and maps, survey and analysis data, written reports and submitted permits. All MSA records are permanently and confidentially archived for reference in the event of future contracts and services on previously completed projects. Additionally, by request, MSA will follow the guidelines in the Washington State Retention Schedule for public records on Land Use and Permitting in conjunction with Local Government Common Records Retention Schedule (CORE) for records from projects with local governments.

Insurance Requirements

Marine Surveys & Assessments is covered by Professional and General Liability insurance; insurance limits can be determined during contract negotiations. Certificates of Liability will be provided to clients once contracts are finalized. In general, MSA is covered by liability insurance in the amounts of \$1,000,000.00 / \$2,000,000.00.

STAFF PROFILE



Education

- Master of Science, Marine Biology, Moss Landing Marine Laboratories, CA
- Bachelor of Science, Animal Science, Zoology, University of Rhode Island, RI
- Technical Fisheries Training Program (1981) University of Oklahoma
- Forage Fish Spawning Analysis training (2016) WA Dept. Fish & Wildlife
- Wetland Science Training and Delineation
- Tree and Shrub Identification for Western WA Puget Lowland Habitats

Professional Registration

Dive Training

- NAUI Basic Dive Certification
- PADI Research Dive Certification
- California Surface Supplied Air
- DAN O₂ Certification
- WA State Certified Eelgrass, Macroalgae and Geoduck Surveyor

Professional Association

- National Shellfisheries Association
- Pacific Coast Shellfish Growers Association
- Pacific Estuarine Research Society
- Wild Olympic Salmon/ North Olympic Salmon Coalition
- Northwest Algal Symposium
- Western Society of Naturalists
- Land Trust

Amy Leitman

M.Sc. Marine Biology

Senior Marine Biologist and Previous Business Owner

Biography

Amy is a senior marine biologist and scientific SCUBA diver specializing in nearshore biological analytical work. Previously, she was a shellfish biologist for the Jamestown S'Klallam Tribe in addition to working for the Washington Department of Fish and Wildlife for fourteen years as a subtidal shellfish biologist and manager. She is experienced in all aspects of waterfront and municipal projects from feasibility analysis to planning, permitting, biological monitoring, best management design, and mitigation plans and reports. Amy's nearshore experience includes commercial and port facilities, marinas, NAVY surveys and biological assistance. Amy is also trained in basic wetland delineation. She has been the project manager on numerous waterfront projects and the lead biological consultant providing cost effective solutions to difficult biological constraints for over 15 years. She has worked with many agencies to help design and finalize many of the biological requirements used to date.

Previous Project Summaries

Mariners Cove Eelgrass Management, Mitigation, and Monitoring. Whidbey Island, WA. 2014 - ongoing

Mariners Cove is a residential community located on the shores of Puget Sound. This community marina needs to be periodically dredged to maintain access and use for the community members. In the time between maintenance dredges, native eelgrass colonizes areas within the marina and because eelgrass is an ecologically important species a management and mitigation plan is being developed and implemented. Eelgrass restoration from the impact area into a suitable habitat and is probable. Monitoring parameters for eelgrass are very similar to that of terrestrial plants in which, aerial coverage and plant numbers are measured. Additionally, to satisfy permit requirements, each annual monitoring report for this project includes a statistical analysis assessing success and recovery of eelgrass between each monitoring year.

West Point Condominiums Association, Dock Reconfiguration Project. Friday Harbor, WA. 2015 - 2017

MSA provided all the biological work for the proposed project which involved extensive eelgrass/macroalgae surveys at locations for both the existing and proposed marina structures (a total of 67 transects). Amy was one of the scientific divers who conducted these surveys. She was also the project manager and oversaw the writing of the habitat map, report and a mitigation planting plan for a large property, with several ESA elements and regulatory issues.

Port Gamble FLUPSY and Point Julia Boat Ramp Projects. Port Gamble, WA. 2015 - ongoing

These projects involved the installation of a floating upweller system/shellfish nursery and boat ramps, as well as several support components in Port Gamble Bay. This project was especially complex as part of it occurred on a sovereign tribal reservation and involved many auxiliary processes (utility permitting, USGC signage...etc.). MSA was the project manager for this project where we coordinated all project activities including but not limited to: bidding and proposal, project team assembly (subcontracting) and management, oversight of various surveys (bathymetry and land), lead scientific diver for eelgrass survey, coordination and facilitation of project meetings, communication and negotiation with client and stakeholders (regulators), permitting, and report writing.

STAFF PROFILE



Education

- Master of Science, Aquatic and Fishery Science, University of Washington
- Bachelor of Science, Industrial & Environmental Health Management, Ferris State University, MI

Certification & Training

- National Environmental Policy Act Implementation
- FEMA Region X / NMFS: 2008 NMFS Biological Opinion - NFIP Puget Sound ESA compliance workshop
- Spatial Statistics Analysis in Geographic Information Systems
- U.S. EPA Environmental Geophysics/ Groundwater Investigation
- EQUIS EarthSoft Training
- ESRI ArcView GIS Training and Certification
- Boat Smart Certification
- Emergency Medical Technician-Level B, National Registry Certification
- NOAA Tides Training
- NOAA Hydrographic Training

Maureen Goff

M.Sc. Science, Aquatic and Fishery Science
GIS Analyst, Marine Scientist

Biography

Maureen is a marine scientist with over 15 years of experience in offshore oceanographic surveys, nearshore coastal marine research, and intertidal ecology studies. Maureen earned a Master of Science from the University of Washington (UW) Aquatic and Fisheries Sciences (2010) through graduate research focused on solutions to address ecological impacts of urbanized shorelines and decreasing habitat complexity. Most recently she was the Fishery Habitat Specialist with NOAA National Marine Fisheries Service for San Francisco Bay, evaluating impacts to fish habitat and developing habitat conservation recommendations for federal, regional, state, and local agencies and stakeholders. Maureen provides MSA with GIS spatial and statistical analysis, assistance with permitting, biological monitoring, and habitat and mitigation plans and reports.

Previous Project Summaries

Skyline Marina. Anacortes, WA. 2015 - 2016

Maureen developed the Biological Evaluation for a major marina renovation, including avoidance and minimization measures, BMPs, and supplemental materials to address Development Regulations and No Net Loss Analysis required by the City of Anacortes Shoreline Master Program. She attended hearings and provided client support during permit negotiations with the City of Anacortes. She helped coordinate dredging, including developing detailed dredge prism maps with volume estimations, securing an agency exemption from costly sampling and analysis, providing a Quality Control Plan, and communicating with all federal and state Dredge Material Management Office agencies and local agencies to get final approvals in place.

Saccharina latissima monitoring protocols. Puget Sound, WA. 2013 - 2016

Maureen has been working closely with clients and with the WA Department of Fish and Wildlife to design standard monitoring procedures that will identify and quantify potential impacts to the macroalgae *Saccharina latissima* from new construction of overwater structures. She has developed several individual site-specific monitoring plans and is currently working with WDFW and WDNR to develop consistent survey protocols, analysis, and reporting that can be used for new overwater construction projects.

Jefferson County No Net Loss Grant Project, WA. 2015 - 2016

MSA teamed with Coastal Geologic Services and ESA to provide consultation and deliverables to assess and improve implementation of the recently updated Jefferson County Shoreline Master Program (SMP). Maureen was integral in helping to establish marine No Net Loss indicators, consolidating and summarizing new marine GIS data to augment existing reach inventory information included in the County's 2008 Inventory and Characterization, and developing the marine elements of guidance documents, checklists, and templates to support County staff in applying No Net Loss Indicators.

STAF PROFILE



Education

- Masters of Science, Chemical Oceanography, Florida State University
- Bachelor of Science, Environmental Science, Oceanography Minor, Florida State University
- Bachelor of Science, International Affairs, Japanese Minor, Florida State University

Certification and Training

- WA Ecology Coastal Training Program: “Using the Marine Shoreline Design Guidelines for Marine Shoreline Stabilization”; “Using the Revised Wetland Rating Manual for Western Washington”
- PADI Open-Water
- NAUI NITROX
- NAUI Emergency O2 Provider
- First Aid, CPR, and AED
- AAUS Scientific Diver
- Hazwopper (40 hr)

Ioana Bociu

M.Sc. Chemical Oceanography

Marine Biogeochemist and Wetland Scientist

Biography

Ioana began her undergraduate studies at Florida State University with a double-major in International Affairs and Japanese, but felt drawn to environmental issues. She added Environmental Studies to her workload and began taking environmental science, geology, and oceanography classes. She also assisted with laboratory research, investigating oil biodegradation in the Gulf of Mexico under Dr. Markus Huettel.

After completing her undergraduate degrees, Ioana worked in the Coastal Wetlands Laboratory under Dr. Ryan Moyer at Florida Fish and Wildlife Research Institute, which solidified her passion for coastal issues and processes. She was able to take part in multiple field excursions and was involved in the Tampa Bay Blue Carbon Assessment. The study focused on climate mitigation benefits of habitat restoration in Tampa Bay, identifying management opportunities to provide regional entities with resources to support coastal management, restoration and climate adaptation planning. Afterwards, she had the opportunity to return to Dr. Huettel’s lab to begin a Gulf of Mexico Research Initiative (GoMRI) project as a master’s student. For her M.S., Ioana investigated the degradation of oil in marine sediment to further understand what is occurring in the environment after a long-term coastal disturbance like the Deepwater Horizon oil blowout. Most recently, she worked with NOAA-GFDL over the summer to analyze oceanic carbon in a state-of-the-art climate model which will be in the IPCC AR6.

Previous Project Summaries

Gulf Of Mexico Research Initiative RFP-V – Degradation of MC252 sSOAs Buried in a Gulf of Mexico Sandy Beach

After the Deepwater Horizon blowout, weathered oil of various sizes washed up on Florida shores. The scope of the project was to determine degradation rates of large standardized oil sand agglomerates (sSOAs). Ioana performed loss on ignition, volume loss, fluorescence, extraction, concentration, GC-MS analysis, among other laboratory analyses to accurately describe and characterize what occurred at the study site.

Tampa Bay Blue Carbon Assessment - Restore America’s Estuaries St. Petersburg, FL

Ioana specifically worked on the “Quantifying carbon stocks for natural and restored mangroves, salt marshes and salt barrens in Tampa Bay” section with the Coastal Wetlands Laboratory at the Florida Fish and Wildlife Research Institute. Extensive laboratory work and fieldwork was performed to accurately assess carbon storage in below ground and above ground sources, specifically mangrove, salt marsh, salt flat vegetation and sediment from 16 sites.

STAFF PROFILE



Education

- Associate of Applied Science, Forest Technology, Green River Community College, WA
- Training in Horticulture - Native Plant Identification and Propagation, Edmonds Community College, WA

Certification & Training

- Wetland Delineation Professional Certificate from Portland State University which includes:
 - Basic Wetland Delineation (March 2014)
 - Hydric Soil Indicators for Regional Supplements (April 2014)
 - Wetland Plants of the Pacific NW (June 2014)
- Wetland Hydrology Indicators & Problem Situations, Portland State University (June 2015)
- Certificates of Completion from the Coastal Training Program WA for the following:
 - Using the Revised WA State Wetland Rating System in Western WA (Sept. 2014)
 - Using the Credit/Debit Method for Estimating Mitigation Needs (Oct. 2015)
 - Tree & Shrub ID for Western WA Puget Lowland Habitats (Feb. 2015)
 - Grass, Sedge, & Rush ID for Western WA Puget Lowland Habitats (Feb. 2015)
 - How to Administer Development Permits in Washington's Shorelines (Feb. 2016)
 - How to Determine OHWM (Sept. 2016)
- Native Plant Society: Taxonomy of native plants, Port Angeles, WA

Meg Amos

A.A., Forest Technology

Wetland Specialist, Native Plant Designer, Permit Specialist

Biography

Living in the Pacific Northwest for most of her life has given Meg a wealth of knowledge of native plant horticulture, propagation of native plants, and invasive plant species identification. She has designed approximately 30 plans for mitigation planting on shorelines. Being one of our in-house wetland biologists, Meg conducts many of our site visits in which she collects information on existing plant species, slope, exposure, view issues, and any other relevant conditions. She also speaks with the property owners about plant preferences and explains the importance of native plants in the shoreline buffer when possible. In addition to being well versed in designing planting plans, Meg has experience in working with the property owner and respective agencies in the monitoring of installed plans to ensure that all standards are being met. Meg is also responsible for the coordination and facilitation of permit processes (both shoreline and upland permits) with various agencies.

Previous Project Summaries

Swanson Farm Project. Port Townsend, WA. 2016

Meg was one of the wetland specialists who conducted a delineation and rating for this newly purchased property to identify four wetlands on the site and their associated buffers to help the property owners with their site design.

City of Bainbridge Island Waterfront Park Dock Renovation & Expansion. Bainbridge Island, WA. 2014 - 2016

For this City of Bainbridge Island project, Meg completed all necessary permit applications for all agency levels: City of Bainbridge Island, Washington Department of Fish & Wildlife, Washington Department of Natural Resources, and the U.S. Army Corps of Engineers. These applications included a JARPA, SEPA checklist, and shoreline substantial development permit application.

Munn Property Wetland Delineation. Quilcene, WA. 2015

Meg was one of the wetland specialists who conducted a delineation and rating for a newly purchased property to identify wetlands on the site and their associated buffers to help the property owners with their site design. A wetland report was then written to submit to Jefferson County.

Kala Point Owners' Association. Port Townsend, WA. 2014

The client was seeking to modify plants on the bluff. Meg conducted the site visit to identify and quantify species of importance and assess the potential impacts of the project. She also wrote the habitat management plan (HMP) and designed the mitigation planting plan to ensure that slope stabilization and native species were maintained.

Adachi Land Slide Remediation Project. Hood Canal, WA. 2012 - present

This project involved the remediation of slope within a critical habitat buffer as a result of a landslide. A Critical Areas Stewardship Plan (CASP) was produced which included mitigation and enhancement planting of native plant species in disturbed areas to stabilize the slope. Meg worked with the client and regulators to develop and implement a planting and monitoring plan for this project. The goal of this project was to restore the buffer on the slope to pre-slide conditions with native plants to provide slope stabilization and habitat functions. We are currently in year 4 of monitoring for this project.

STAFF PROFILE



Kimberly McClurg

B.Sc. Biology, Marine emphasis

Marine Biologist & Permit Specialist

Biography

Kimberly is a graduate from Humboldt State University. While there, she was an intern for the Marine Mammal Education and Research Program on campus where she helped collect field data on marine mammal strandings as well as marine bird strandings. She also assisted in sampling for Dungeness Crab megalopae for the California Department of Fish and Wildlife. Before MSA, Kimberly interned at the Port Townsend Marine Science Center where she engaged public and volunteer education through the operation and interpretation of the exhibits. Since joining MSA, Kimberly assists with office operations, conducts forage fish surveys, is a certified marbled murrelet and marine mammal monitor, assists with intertidal and SCUBA surveys, and is a shoreline permitting specialist and biological report writer.

Education

- Bachelor of Science, Biology, Humboldt State University, CA
- Associate of Science, Biology emphasis, Northwest College, WY

Certification and Training

Dive Training

- NAUI Advanced Open Water Certification
- First Aid, CPR, and AED

Certifications

- Marbled Murrelet monitoring (US Fish & Wildlife Service, May 2019)
- Certificates of Completion from the Coastal Training Program Washington for the following:
 - How to Administer Development Permits in Washington's Shorelines (Feb. 2016)
 - How to Conduct Forage Fish Surveys (led by WDFW, April 2016)
 - Shoreline Management & Stabilization Using Vegetation (May 2016)
 - How to Identify OHWM (Sept. 2016)
- River Restoration Professional Certificate from Portland State University which includes:
 - Intro. to River Restoration, Part I: Physical Processes (March 2016)
 - Intro. to River Restoration, Part II: Ecological Processes (April 2016)
 - Site Evaluation & Assessment Tools (June 2016)
 - River Restoration Design (Oct. 2016)
 - Restoration & Project Management (Dec. 2016)

Previous Project Summaries

Mariners Cove Beach Club, Marine Dredge project. Oak Harbor, WA. 2018 – present

Kimberly conducted all three of the forage fish surveys in the area that would be impacted for this project (a stretch of beach approximately 300 ft in length) before the dredge could begin during the last maintenance dredge in 2015. She wrote the Biological Evaluation for the most recent dredge proposal.

Residential Dock Project. Fox Island, WA. 2018

This was a private-use dock project that Kimberly obtained state and federal permits for. She prepared and submitted all biological documents to the agencies to obtain the relevant permits needed for construction. Kimberly worked with the client, a local non-profit, state agencies, and federal agencies to calculate mitigation that would be required and to complete a mitigation plan.

Shine Boat Ramp Replacement Project. Port Ludlow, WA. 2016

Kimberly coordinated and facilitated the permits for this project at the local, state, and federal levels. This included working with the clients and the permitting agencies to design a replacement boat ramp that would have a smaller footprint with less impact to the shoreline and still serve the needs of the clients.

Residential Staircase and Float Project. Grapeview, WA. 2015

Kimberly was one of the divers who surveyed this site to document the existing habitat conditions both upland and along the shoreline. She also assisted with the permit applications for this project at the local, state, and federal levels.

STAFF PROFILE



Education

- Bachelor of Science, Environmental Sciences/Chemistry, Virginia Commonwealth University, Richmond

Certification and Training

Dive Training

- SDI Rescue Diver Certification
- PADI Open-Water Certification
- DAN Emergency O2 Provider
- First Aid, CPR, and AED
- ADC Physical

Certifications

- USCG 100TN Captain
- Hazwopper (24 hr)
- Registered TWIC

Bryan De Caterina

B.Sc. Environmental Sciences

Dive Safety Officer & Lead Scientific Diver

Biography

Bryan is a third-generation diver with a deep passion for marine science. He joined our dive team at the beginning of 2018 and has since become the Dive Safety Officer. Before joining MSA, Bryan spent over 10 years working for biofuels industry in research and production management. He is a licensed USCG captain and spends much of his free time sailing on the Puget Sound. Bryan coordinates and conducts most of MSA's underwater habitat surveys, as well as other organizational logistics for field operations. He has assisted in many Sediment Sampling, Marine Mammal Monitoring, and Wetlands projects throughout his time with MSA.

Previous Project Summaries

Port of Silverdale Sediment Analysis Project. Silverdale, WA. 2018

Working together with Research Support Services, Marine Surveys & Assessments created a Sediment Analysis Plan and collected Sediment Core Samples at the Port of Silverdale to represent and analyze bottom composition for a future dredge project. Bryan assisted in the collection of core samples and composited each unit to be further analyzed by the third-party labs. He was also responsible for all communications, as well as analyzing and processing the results from each lab.

Mariner's Cove Dredge Project. Oak Harbor, WA. 2018

Bryan conducted and led the 2018 underwater habitat survey for Mariners Cove. He navigated and recorded eelgrass, kelp and macro-algae densities as per Washington Department of Fish and Wildlife protocol. He has also assisted in the design and planning for the upcoming eelgrass transplant that will occur during the 2019 dive season.

Tesoro Eelgrass Monitoring Project. Anacortes, WA. 2018

Marine Surveys & Assessments was contracted by Tesoro Oil and Gas to conduct biennial monitoring for eelgrass densities along a 2,500 ft section of a transfer causeway. Bryan led a team of four MSA divers to survey the habitat and record eelgrass densities. He handled all preparational logistics as well as assisted in the mapping and data transcription for the monitoring reports for this project.

STAFF PROFILE



Education

- Bachelor of Science in Biology/Ecology, The Evergreen State College, WA
- Associates of Arts and Sciences, Honors, Bellevue Community College, WA

Certifications and Training

- Specialist Wildlife Tracking Certification, CA. 2019
- Open Water SCUBA certification, HI. 2009
- Wilderness Awareness School Anake Program, WA. 2005
- Permaculture Sustainable Design Certification through the Bullock's, Orcas Island WA. 2006
- PNW Coastal Foraging course through EarthWalk NW, Lopez Island WA. 2007
- Mountain Oriented First Aid certification through the Mountaineers, 2002

Jill Cooper

B.Sc. Biology/Ecology

Project Manager & Biologist

Biography

Jill is a third generation Washingtonian with a deep love of the outdoors. She has a varied background in field biology, outdoor education, operations, and outreach/marketing. Jill graduated from the Evergreen State College in 2010 with a B.Sc. in Biology after studying under Nalini Nadkarni who pioneered tree canopy science and founded the [Sustainability in Prisons Project](#). While working with SPP, Jill was involved in rearing endangered Oregon Spotted Frogs with inmates for release into the wild and studying mosses for green roof technology. Jill has a passion for Wildlife Tracking and is the third woman in the U.S. to be certified as a "Specialist" Wildlife Tracker through [Tracker Certification North America](#). In 2012 She moved to San Diego for a job as a Field Biologist/Wildlife Tracker with the Western Tracking Institute, mainly doing large mammal surveys for projects involving Bighorn Sheep, Cougars, and Wild Boar. Jill was later hired by the San Diego Audubon Society where she worked for 6 years as their Education Associate/Naturalist Guide, Volunteer Program Manager, and Office Manager. Jill bought and lived on a sailboat when she was in San Diego, and later sailed her boat up the West Coast to move to Port Townsend, where she now resides.

Previous Project Summaries

ReWild Mission Bay – A conservation project to restore up to 170 acres of wetland in San Diego, CA. 2015 - 2019

A joint collaboration of San Diego Audubon Society, USFWS, and the Coastal Conservancy, ReWild Mission Bay has finished its Restoration Alternatives Analysis phase and is in the process of negotiating outcomes with the City of San Diego. Alternatives were designed in accordance with the Mission Bay Master Plan and took place on City property which had been previously leased to Campland RV park.

Biological monitoring and surveys focusing on Endangered Peninsular Bighorn Sheep for construction of wind turbines in Ocotillo, CA. 2012 - 2013

Conducted presence absence surveys, weekly construction clearance surveys, a larger movement study of the Peninsular Bighorn Sheep seasonal range, and monitoring. This project was through Western Tracking Institute as a subcontractor of Helix Environmental Consulting Firm.

Field surveys, motion sensing camera trapping, and live-trapping of Cougars for UC Davis lead Veterinarian to study population health and habitat connectivity, San Diego, CA. 2012 - 2013

Conducted presence absence surveys and movement study using wildlife tracking and motion sensing cameras throughout San Diego County. Once presence was detected, Cougars were live-trapped and collared at which point biological data was also collected. Telemetry was used to locate collared lions.

Demonstration wetland design and construction with Friends of the Issaquah Salmon Hatchery (F.I.S.H.), WA. 2007

Designed a demonstration wetland and acquired grant funding and in-kind donations for construction at the Issaquah Salmon Hatchery in WA. Effluent from the hatchery settling ponds was re-directed into the wetland for filtration before its final destination in Issaquah Creek.