



Statement of Qualifications

Intertidal, Shoreline & Wetland Surveys

Mitigation, Monitoring, & Habitat Restoration Plans

Wetland Rating & Delineation, OHWM, & Stream Typing

Ecological Monitoring including Marbled Murrelet and Marine Mammal

Biological Evaluations, Habitat Management Plans, & ESA documents

Regulatory Compliance

Permitting Assistance & Project Management

Scientific Diving, & Subtidal SCUBA Surveys, Eelgrass Transplant

Dredge Planning & Permitting

Wildlife Surveys, Remote Camera Traps, Tracking

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History and Approach

Marine Surveys & Assessments (MSA) is a certified woman-owned small business and environmental consulting cooperative, founded in 1996. Our scientists have decades of experience performing biological surveys, writing biological reports, developing government permit applications, and implementing monitoring protocols and complex regulatory requirements for aquatic, shoreline, terrestrial, and wetland ecosystems throughout western Washington. MSA is well known for our ability to work with a wide variety of stakeholders and agencies to communicate in an effective manner. Our close-knit team of biologists and project managers retain the flexibility and responsiveness that is possible with a smaller group while maintaining the capacity to work on large projects. With a full-time financial manager as part of our crew, we have the ability to execute complex projects and ensure that budgets do not exceed their contracted amounts or scope. Because we are known for our quick turn-around times and quality service, we have been chosen as the on-call biological consultants for many land use, construction, and development companies throughout the area, including WA State Parks, WDFW, Port of Seattle (w/ Reid Middleton), Waterfront Construction, and Marine Floats Inc. MSA also has experience working with several Port districts (Brownsville, Silverdale, Kingston, Winslow, Port Angeles, and Port Townsend) to provide biological consulting services.

Visit our website at www.msaenvironmental.com

Expertise

Marine Surveys & Assessments' expert team of consultants maintains up-to-date knowledge of federal, state, and local environmental regulations, policies, and guidelines. For over 20 years, MSA and its partners have produced thousands of environmental and biological reports for a wide range of projects where clear understanding and application of regulatory mandates are paramount. We provide documentation that is concise, clear, and to the point. With our prior permitting experience guiding us, we are able to navigate through complex regulatory compliance issues among multiple agencies.

We specialize in scientific SCUBA diving and subtidal habitat surveys, as well as eelgrass delineation and management, mitigation, transplanting, and monitoring. If your project is within a forage fish spawning area, we have several team members who are certified to conduct forage fish surveys. MSA also has experience in dredge projects, including dredge material management program implementation, planning, analysis, and reporting. MSA scientists have decades of experience implementing official protocols for eelgrass/macroalgae, forage fish, and geoduck surveys.

Our upland team can provide wetland ratings and delineations, Ordinary High Water Mark (OHWM) determinations, elevation surveys, restoration, mitigation planting plans, and function assessment services. Our staff is experienced in Habitat Management Plans (HMPs), including FEMA flood plain criteria. We also provide comprehensive native plant and wildlife surveys, and can implement presence/absence wildlife surveys using remote camera traps, wildlife tracking, and/or telemetry.

With over 18 years of environmental permitting experience, we are experts in regulatory compliance. Some of the regulatory codes and rules we are proficient with include the Washington Administrative Code (WAC), Washington Hydraulic Code, Federal Rivers and Harbors Act, Coastal Zone Management Act (CZMA), Shoreline Management Act (SMA), and local Shoreline Master Programs. We are experienced in Endangered Species Act (ESA) compliance, including the Marine Mammal Protection Act, and can provide marine mammal and marbled murrelet monitoring (including monitoring plans and implementation) as well as eelgrass mitigation and monitoring. Our team also works regularly with the Growth Management Act (GMA), including critical areas, local zoning, and floodplains.

Our permitting experience includes:

- Joint Aquatic Resources Permit Applications (JARPAs),
- State Environmental Policy Act (SEPA) & National Environmental Policy Act (NEPA),
- Clean Water Act Section 401 water quality certifications and Section 404(b)(1) alternative analysis guidance,
- Hydraulic Project Approvals (HPAs),
- Shoreline permit applications,
- Department of Natural Resources (DNR) Tideland lease requirements,
- U.S. Army Corps of Engineers Section 404 and Section 10 permit applications, Regional General Permits (RGPs) & Specific Project Information Forms (SPIFs)
- Federal wetland laws and policies,
- and local critical area ordinances.

We get local, state, and federal agencies the information they need by using our expertise, paired with our clear communication style. We have a unique team of high-level staff members who self-manage and effectively work together, who are also well versed in the biological work that regulatory agencies require. We will work with the necessary agencies to resolve issues to our best ability, and suggest forms of mitigation that can reduce impacts and assist with project feasibility so that your work can move forward effectively. We have years of experience conducting complex alternatives analyses, designing and implementing mitigation plans, using Best Management Practices (BMPs), and coordinating between multiple agencies.

Additionally, if training or outreach assistance is needed, MSA has capable and friendly staff with education and conservation backgrounds who are happy to provide engaging programs focused on any of the services described above.

MSA's founding coincided with the Endangered Species Act (ESA) listing of salmon in Washington State. At that time, we helped to establish the format of the Biological Evaluation document which has since become the standard in biological reporting. MSA provides ESA support on several levels ranging from biological assessments to technical research so that regulatory entities have the most recent data to make difficult permitting decisions. Agencies at the local, state, and federal level trust the integrity of MSA because of the long-standing relationships we have cultivated throughout our history.

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 on flora, fauna, substrate, and other biological and physical characteristics of intertidal, subtidal, upland, riparian, and wetland areas.
- Wetland ratings and delineations, Ordinary High-Water Mark (OHWM) surveys, and stream determinations.
- 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.
- 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/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.
- Reports: Environmental Impact Statements, Biological Assessments, Biological Evaluations, Habitat Assessments, Wetland Delineation and Rating Reports, 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 services.
- Regulatory assistance and communication between local, state, federal, and tribal organizations.
- Wildlife surveys and movement studies using tracking, remote camera traps, and telemetry.
- Biological research for aquaculture farms, including shellfish negotiations with tribal entities.

Summary of Projects

Mariners Cove Dredge Project

Mariners Cove Beach Club; Whidbey Island, WA: 2018 – Present

Mariners Cove is a residential community whose marina requires periodic dredging to maintain access. MSA has handled all the dredge planning, logistics, and project management, including conducting Submerged Aquatic Vegetation (SAV) surveys to ensure minimal habitat impact. MSA developed and implemented an eelgrass (*Zostera marina*) management and mitigation plan, which includes restoration of eelgrass habitat after dredging as well as annually monitoring the success and recovery of eelgrass through statistical growth analyses. Before dredging, MSA supervised sediment coring; completed a sediment Sampling Analysis Plan (SAP); conducted a Chemical Analysis; and produced a Sediment Characterization Report (SCR), a Biological Evaluation (BE), a Water Quality Monitoring Plan, and a Dredge & Disposal Plan. Permits handled for this project include a JARPA, a State Environmental Policy Act (SEPA) analysis, a DNR Right of Way permit (ROW), an Island County Conditional Use Permit (CUP), and a Master Land Use Application. MSA coordinated the beneficial reuse of dredged sediment when feasible to reduce mitigation debit. Future surveys, including forage fish spawning surveys, will be conducted prior to the placement of dredge spoils as beach nourishment.

Port of Silverdale Dredge Project

Port of Silverdale; Kitsap County, WA: June 2019 – Present

MSA is the lead project manager for this multiple-component dredging and moorage reconfiguration project that has included writing a Biological Evaluation report and Alternatives Analysis; developing a Water Quality Monitoring Plan and a SAP for the dredging; conducting SCUBA habitat surveys of the dredge area; and overseeing vibratory core sampling, sample compositing for analysis, and post chemical analysis reporting. MSA provided assistance in the coordination of engineering and the site meetings with the review agencies, as well as handled all environmental permitting for the County, State, and Federal applications (Kitsap County, DNR, WDFW, USACE, NMFS). Post permit receipt, MSA is working with the Port through the final stages to provide RFPs for dredge planning and contractor selection, as well as working with the agencies to allow for a moorage push-out.

North Beach Outfall Replacement Project

City of Port Townsend; Port Townsend, WA: 2019 – Present

Prime: Jacobs Engineering

MSA partnered with Jacobs Engineering on an outfall replacement project for the City of Port Townsend at North Beach Park. MSA conducted a SAV Survey for quantitative density data in conformance with the protocols approved by WDFW, DNR, and USACE. The SAV Survey results were used to determine where the new outfall pipe should be placed to have the least amount of environmental impact on the native beds' vegetation. GIS mapping and data analysis helped refine the placement of the proposed pipe. Eelgrass, kelp, and surf grass transplantation surveys were done, and a Habitat Mitigation and Monitoring Plan was developed to ascribe the least temporal and most successful transplant methodologies to return the impacted site to its

previous condition. Long-term monitoring will be required to confirm the re-establishment of the kelp, seagrass, and eelgrass habitat.

Jefferson PUD Project

Jefferson County, WA: June 2022 - Present

MSA has been working with Jefferson PUD on multiple projects involving critical areas assessments, reporting, and permitting. Currently, Jefferson PUD is applying to install an underground utility line that will connect an existing substation in Chimacum to a new utility line that will assist in serving the Port Ludlow community with much-needed additional power. The utility line installation will involve boring underneath Chimacum Creek, which is a documented fish-bearing stream. MSA biologists provided a wetland study, OHWM determination, and Habitat Assessment for the project, in addition to assisting with stormwater and permitting applications (County, State, and Federal level) to move the project forward.

Haley State Park Critical Habitat Areas Survey

WA State Parks, Vaughn, WA: 2023 - present

MSA performed a wetland, stream, shoreline, and ESA biological survey for a proposed new development of facilities at Haley State Park, which is located in Pierce County on the Key Peninsula. Proposed development includes constructing a new parking lot, bathroom, ADA accessible trail system, and observation lookout kiosk at this 178-acre park that currently consists of undeveloped forested lands and a dirt footpath leading down to a scenic lagoon and shoreline. MSA biologists delineated and rated several wetlands, conducted OHWM determinations on all streams, and provided the Parks with GIS mapping of all critical areas and their associated buffers. MSA is now working on writing the Habitat Management Plan, Wetland Report, and designing a Mitigation Planting Plan to assist with the permitting of this project.

Bainbridge Island Ferry OHW Replacement Project

WSDOT; Bainbridge Island, WA: 2022 – 2023

Prime: Contrack Watts, Inc.

MSA was subcontracted by Contrack Watts to do the species monitoring for the Washington Department of Transportation's project of replacing the Bainbridge Island ferry terminal's overhead walkway. MSA conducted Marine Mammal Monitoring (MMM) and Marbled Murrelet Monitoring (MaMu) during impact and vibratory installation of piles, as well as sampling the beach adjacent to the pile driving for forage fish spawning events.

Sammamish River Side-Channel Restoration Monitoring Project

City of Bothell, Bothell, WA: 2022 – 2023

MSA provided year-5 monitoring services for a 1,100-foot-long remnant channel and wetland floodplain at the Sammamish River Park's Off-Channel Habitat Restoration Site. Site goals included connecting off-channel habitat to the Sammamish River to create accessible salmonid rearing and thermal refuge habitat, as well as reestablishing the critical functions of the wetland and riparian habitat along the Sammamish River. Performance standards included channel surveys, water quality monitoring, fish surveys, vegetation monitoring, and ecosystem development.

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 entities 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

Turnaround times will be specific to each project and may vary. However, in general, the turn-around times for MSA 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 Washington State Retention Schedule guidelines 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.

Key Staff Member Roles and Qualifications*

Roles	Team Member								
	Amy Leitman	Meg Amos	Kimberly McClurg	Bryan De Caterina	Jill Cooper	Darby Flanagan	Madalyn Walker	Winn McEnergy	Shawn Grisel
Project Managers	X	X	X	X	X				
Permitting Specialists	X	X	X	X	X		X		
Reporting	X	X	X	X	X		X	X	
GIS			X		X			X	
Mitigation Plans & Restoration	X	X	X		X	X	X		
Marine Mammal Monitors	X	X	X	X	X	X	X	X	X
Certified Marbled Murrelet Monitors		X	X		X				
Certified Forage Fish Surveyors	X	X	X	X	X	X	X	X	X
Ordinary High Water Mark (OHWM) Surveyors	X	X	X	X	X		X	X	
Wetland Rating & Delineation, Stream Determinations	X	X			X				X
Scientific SCUBA Dive Team	X			X		X		X	

*See resumes for more detailed information



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
- Basic Wetland 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
- North Olympic Salmon Coalition
- Northwest Algal Symposium
- Land Trust

Amy Leitman

Founder, Marine Biologist & Lead Project Manager

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 four 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, dredge projects, Navy surveys, as well as biological assistance in local, state, and federal jurisdictions. Amy has been the project manager on numerous waterfront projects and the lead biological consultant providing quality service to clients for 25 years. She has worked with many state and federal agencies to help design and finalize many of the regulatory requirements used to date.

Previous Project Summaries

Harbor Village Marina Dredge & Renovation Project. Kenmore, WA. 2007 – Present

Amy managed all aspects of marina maintenance dredge project in 2007, and is currently working with HVM on a plan for another potential dredge as well as a complete marina revamp. MSA completed the previous dredge design and bathymetry mapping, prepared a technical memorandum for the DMMO, handled all environmental permitting applications for City, State, and Federal (City of Kenmore, DNR, WDFW, ACOE, NMFS), conducted necessary habitat surveys, and wrote a Biological Evaluation report.

Mariners Cove Beach Club Maintenance Dredge Project, Whidbey Island, WA. 2018 – Present

Prior to dredging, Amy directed the sediment core sampling & analysis, a biological/habitat survey & assessment, the development of an ESA-compliant eelgrass management & mitigation plan, and the securement of all required environmental permits. She was part of the water quality monitoring team for the maintenance dredging that occurred in the MCBC marina in 2022 to ensure compliance with the permitting agencies.

City of Port Townsend North Beach Outfall Replacement. Port Townsend, WA. 2018 – present

Amy led a Submerged Aquatic Vegetation (SAV) Survey for quantitative density data. The SAV, along with GIS and data analysis, were used to determine where the new outfall pipe should be placed. Eelgrass, kelp and surf grass transplantation surveys were done, and a Habitat Mitigation and Monitoring Plan were developed.



Meg Amos - Certified Wetland Specialist & Permit Coordinator

Biography

Meg has lived in Washington exclusively, with over 35 years of field experience in the PNW. Before starting her family, she worked in the forests of the eastern cascades and eastern Olympics collecting data on plants and animals, including extensive field survey work with Spotted Owls. She eventually landed at MSA in Port Townsend. Being one of our in-house biologists, Meg conducts many of our site visits to collect pertinent data for marine and upland projects. After completing the Professional Comprehensive Certificate in Wetland Delineation at Portland State University, Meg has been our primary wetland biologist. In addition to delineating wetlands, Meg has designed numerous restoration plans for mitigation planting on shorelines with follow-up monitoring to ensure all performance standards are being met as per multi-agency requirements. Meg is also responsible for the coordination and facilitation of permit processes (both shoreline and upland permits) with local, state, and federal agencies.

Previous Project Summaries

Port of Silverdale Dredge/Moorage Push-Out Project. Kitsap County, WA. 2019 – Present

For this project, Meg completed the necessary permit applications on the local, state, and federal levels (Kitsap County, WDFW, WA DNR, NMFS, and USACE), including working with these agencies to get extensions for dredging and major modifications to the permit allowances for moorage push-outs so that this complex project could move forward.

Mariners Cove Beach Club Maintenance Dredge Project. Whidbey Island, WA. 2018 – Present

Meg completed the necessary permit applications on this community dredge project for all agency levels, including a JARPA, SEPA checklist, a DNR Right of Way, Island County Conditional Use Permit and Master Land Use Application.

Peninsula Trails Coalition Wetland and Stream Delineation for New Public Viewpoint Construction Project, Jefferson County, WA. 2021 - 2022

Meg led a wetland and stream delineation, which included two wetland ratings and three critical area buffer assignments as determined by the Jefferson County Critical Areas Ordinance. The survey area had been previously farmed and disturbed, making the delineation work more complex. Along with the required Habitat Management Plan (HMP) and Wetland Report, Meg prepared a Mitigation Planting Plan for the project to move forward effectively.

Schutzler, Dowell and Foster Emergency Bulkhead Repair & Replacement Project, Anacortes, WA. 2019 - 2021

Meg led the environmental permit application process for a complex multi-owner bulkhead replacement project in Anacortes that spanned three separate parcels. Along with working with all proponents and agencies involved, Meg conducted the necessary Forage Fish surveys prior to construction.

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 (2014)
- Wetland Hydrology Indicators & Problem Situations, Portland State University (2015)
- Marbled Murrelet monitoring (US Fish & Wildlife Service, 2015)
- Certificates through the Coastal Training Program:
 - Wetland Classification
 - Using the Revised WA State Wetland Rating System in Western WA,
 - Using the Credit/Debit Method for Estimating Mitigation Needs,
 - Tree & Shrub ID for Western WA Puget Lowland Habitats,
 - Grass, Sedge, & Rush ID for Western WA Puget Lowland Habitats,
 - How to Administer Development Permits in Washington's Shorelines
 - OHWM Determination
 - How to conduct Forage Fish Surveys
 - Alternatives to Bulkheads Series



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

- Wetland Delineation Professional Certificate, PSU, 2021
- Hydric Soil Indicators for Regional Supplements, PSU, 2021
- Certificates through the Coastal Training Program:
 - Wetland Classification
 - SEPA Administration
 - OHWM determination
 - How to conduct Forage Fish surveys
- Marbled Murrelet monitor, USFWS, WA, 2020
- Specialist Wildlife Tracking Certification, CA. 2019
- PADI Open Water SCUBA certification, HI. 2009
- First Aid, CPR, AED, 2021
- Wilderness Awareness School Immersion Program, WA. 2005
- Permaculture Sustainable Design Certification through the Bullock's, Orcas Island WA. 2006

Jill Cooper – Lead Wetland Report Writer

Wildlife / Wetland Biologist & Project Manager

Biography

Jill is a fifth-generation Washingtonian with a deep love of the outdoors. She has a varied background in field biology, outdoor education, project management, and outreach/marketing. Jill is a well-rounded naturalist with a strong knowledge of native plants, wildlife, wetlands, and ecology. She graduated from the Evergreen State College with a B.Sc. in Biology after studying under Nalini Nadkarni, who pioneered tree canopy science and founded the Sustainability 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 was a Field Biologist/Wildlife Tracker with the Western Tracking Institute in San Diego, 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/Lead Naturalist, Volunteer Program Manager, and Office Manager. Jill joined the MSA upland team in 2019 where she conducts wetland surveys, designs mitigation planting plans, as well as assists with permitting, biological reports, marketing, and project management.

Previous Project Summaries

Ocean City State Park, Wetland and Hydrological Study, WA. 2021

Along with two other wetland biologists, Jill surveyed approximately 200 acres of land at Ocean City State Park for wetlands, streams, and critical habitat features. This project was part of a wetland, stream, groundwater, and habitat study to gather data to help determine the root cause(s) of Ocean City State Park's history of flooding problems. By gaining a better understanding of the surface water hydrology system, the park is hoping to develop a more informed management plan for the future.

Northwest Watershed Institute (NWI), Discovery Creek Wetland, Stream, and Habitat Survey, Jefferson County, WA 2021

Jill, along with her wetland team members, conducted a thorough habitat survey on the upper and lower Discovery Creek watershed areas with the purpose of finding and documenting all streams, wetlands, unique habitat features, and wildlife sign to assist NWI in making a case to apply for grant funding to purchase and preserve these land parcels. To cover such a large area, georeferenced aerial maps of the survey area were created with a grid overlay and used to map out habitat features while on site. Soil, vegetation, and hydrology observations and photographs were collected in the field, and a report was provided post field survey.

Thorndyke Rd LLC Wetland Delineation and Rating, Jefferson County, WA. 2021 - Present

Jill delineated and rated a riverine wetland located on a private residential property located on the Coyle peninsula so that a single-family-home, which had previously been removed, could be replaced. The foundation of the previous home site was located entirely within the wetland buffer and was no longer grandfathered in by the county critical areas ordinance. Thus, a full wetland report, Habitat Management Plan, and Critical Area Stewardship Plan were required.



Education

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

Certifications and Training

- River Restoration Professional Certificate from Portland State University (2016), including:
 - Physical Processes
 - Ecological Processes
 - Site Evaluation & Assessment Tools
 - River Restoration Design
 - Restoration & Project Management
- Certificates through the Coastal Training Program:
 - Shoreline Management & Stabilization Using SEPA Administration
 - OHWM determination
 - How to conduct Forage Fish surveys
 - How to Development Permits in Washington's Shorelines
- Marbled Murrelet monitoring (US Fish & Wildlife Service, 2020)

Training

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

Kimberly McClurg

Marine Biologist & Report Writer

Biography

Kimberly is MSA's lead shoreline mitigation specialist and marine biological report writer. She is also proficient with all shoreline permit applications that are required by local, state, and federal agencies, and assists with MSA's office operations. When Kimberly has the chance to get out into the field, she conducts forage fish surveys, is a certified marbled murrelet and marine mammal monitor, and assists with intertidal and SCUBA surveys. Kimberly also holds a certificate in River Restoration from Portland State University. Before MSA, Kimberly worked at the Port Townsend Marine Science Center where she engaged public and volunteers through outdoor education and interpretation of the exhibits. At Humboldt State University, she worked as an intern for the Marine Mammal Education and Research Program on campus where she helped collect field data on marine mammal and bird strandings. She also assisted in sampling for Dungeness Crab megalopae for the California Department of Fish and Wildlife.

Previous Project Summaries

Biologist and Mitigation Specialist for Marine Floats Inc. construction projects. WA. 2016 - Present

Kimberly is an on-call biologist and mitigation specialist for many Marine Floats residential dock and marina construction projects. Kimberly assists with federal permit applications and prepares biological reports for submittal to local, state, and federal agencies. When necessary, Kimberly also handles mitigation calculations using the National Marine Fisheries Service (NMFS) conservation calculator and works with all parties involved to complete a mitigation plan so that complex projects can move forward.

Poulsbo Yacht Club Marina Replacement Project. Poulsbo, WA. 2020 - present

Kimberly worked with Poulsbo Yacht Club to complete all necessary biological documents and permits for a marina replacement. This included a habitat report, Biological Evaluation report (BE), all necessary local, state, and federal permit applications, and as well as agency coordination, planning, and reporting.

Bulkhead Replacement Project. Anacortes, WA. 2020 - 2021

For this project, Kimberly prepared the biological reports for the local, state, and federal agencies. She worked with the clients and federal agencies to navigate the early versions of the Nearshore Programmatic's Conservation Calculator that NMFS released in order to calculate the amount of mitigation that the project owed.



Education

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

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

- Certificates through the Coastal Training Program:
 - How to Determine OHWM
 - How to Conduct Forage Fish Surveys
- WA Wetland Rating System
- Wetland Credit/Debit Mitigation
- USCG 100TN Captain
- Hazwopper (24 hr)
- Registered TWIC
- Basic Wetland Delineation (Portland State University)

Bryan De Caterina

Dive Safety Officer & Lead Scientific Diver

Biography

Bryan is a third-generation diver with hundreds of hours logged underwater. He has developed a deep appreciation for Washington's delicate marine shorelines and underwater habitats. As an AAUS-certified scientific diver, he joined MSA's dive team at the beginning of 2018 and has since become the Dive Safety Officer. He is a licensed USCG captain and coordinates most of MSA's underwater habitat surveys, as well as other organizational logistics for field operations. During his time with MSA, he has assisted in many Sediment Sampling, Marine Mammal Monitoring, and Wetlands projects as well.

Previous Project Summaries

Mariners Cove Beach Club Maintenance Dredge Project. Whidbey Island, WA. 2018-Present

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

Marathon Oil Eelgrass Monitoring Project. Anacortes, WA. 2018-Present

MSA was contracted by Marathon 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.

WA Dept. of Ecology, Custom Plywood Restoration Project. Anacortes, WA. 2021-Present

Teaming with Hayley & Aldrich, MSA Biologists monitored the eelgrass health and sediment toxicity within a Department of Ecology restoration Superfund site. As Project Manager, Bryan led MSA's Scientific Dive team on multiple monitoring events to collect eelgrass biomass and bed density data, in addition to sediment core samples within the restoration project site. He was responsible for all preliminary planning, on-site management, and data deliverables to the client.



Education

- Bachelor of Science, Oceanography, Humboldt State University, CA

Certification and Training

Certifications

- Certificates through the Coastal Training Program:
 - How to Determine OHWM
 - How to Conduct Forage Fish Surveys
 - Alternatives to Bulkheads Series
 - Navigating SEPA
 - Advanced Shoreline Permitting

Training

- NAUI Master Diver Certification
- First Aid, CPR, and AED
- Fish Passage Inventory & Assessment Training (WDFW)
- Fish Passage Habitat & Prioritization Training (WDFW)
- European Green Crab Molt Survey Training (WSG)

Madalyn Walker

Marine Biologist & Report Writer

Biography

Madalyn is a marine biologist, report writer, and project manager for MSA, specializing in shoreline stabilization and water quality monitoring. She prepares biological reports for submittal to local, state, and federal agencies, including Habitat Management Plans (HMP), Habitat Assessments (HA), Site-Specific Impact Analysis (SSA), and Biological Evaluations (BE). She has experience coordinating and leading field sampling efforts in various aquatic environments whether by land, boat, or underwater, as well as experience processing samples in the laboratory. Prior to joining MSA, Madalyn worked as a lab manager for an ecological macroinvertebrate consulting firm, as an outdoor environmental educator, and as a salmonid fisheries technician.

Previous Project Summaries

City of Bothell Sammamish River Side-Channel Restoration Monitoring Project, Bothell, WA. 2022 – 2023

Madalyn was part of the MSA team providing year-5 monitoring services for a 1,100-foot-long remnant channel and wetland floodplain at the Sammamish River Park's Off-Channel Habitat Restoration Site. Site goals included connecting off-channel habitat to the Sammamish River to create accessible salmonid rearing and thermal refuge habitat, as well as reestablishing the critical functions of the wetland and riparian habitat along the Sammamish River. Performance standards included channel surveys, water quality monitoring, fish surveys, vegetation monitoring, and ecosystem development.

Bulkhead Repair Project. Burien, WA. 2022 - Present

For this project, Madalyn prepared the biological reports for the local and state, and federal agencies for an after-the-fact bulkhead repair. She worked with the client and agencies to determine the amount of mitigation that the project owed to offset the impacts with shoreline jurisdiction.

Mariners Cove Beach Club Maintenance Dredge Project, Whidbey Island, WA. 2018 – Present

Madalyn coordinated the water quality monitoring field efforts, as well as the Dredge and Disposal Plan, for the maintenance dredging that occurred in the MCBC community marina in 2022-2023. She was part of the water quality monitoring team that deployed a YSI multimeter at various stations during dredging activities to ensure compliance with the permitting agencies, sampled the adjacent beach for forage fish spawning, and communicated with agency leads as necessary.

Harbor Village Marina Dredge & Renovation Project. Kenmore, WA. 2007 – Present

Madalyn is part of the MSA team currently working with HVM on permitting another maintenance dredge, as well as a marina repair and breakwater reconfiguration. MSA managed all aspects of the marina maintenance dredge in 2007.



Education

- Bachelor of Science, Oceanography, Humboldt State University, CA
- Master of Science, Applied Marine Science, California State University Monterey, CA

Certifications and Training

Certifications

- Certificates through the Coastal Training Program:
 - How to Conduct Forage Fish Surveys

Dive Training

- NAUI Rescue Diver Certification
- First Aid, CPR, and AED

Winn McEnery

GIS Specialist & Marine Scientist

Biography

Winn is a GIS specialist and a marine scientist working for MSA. He manages MSA's geospatial needs through data management, analysis and cartographic production. In addition, Winn is a seasoned field scientist and has conducted various surveys in marine, estuarine and freshwater environments while diving, aboard research vessels, and on land. Prior to his time with MSA, Winn worked for the California Department of Fish and Wildlife as a Research Data Specialist where he comanaged the Marine Region geospatial department. One of his priorities included developing R code that conditions fisheries data for geospatial application. Prior to this he worked for Applied Marine Sciences, where learned how to manage and coordinate field efforts. This included field efforts focused on measuring and monitoring mercury and turbidity levels before, during and after dredging operations in the San Joaquin River. Moreover, he maintained and deployed various oceanographic and freshwater instruments.

Previous Project Summaries

Mariner's Cove Beach Club Maintenance Dredging Project. Oak Harbor, WA. 2022 - 2023

Winn helped lead a team in monitoring water quality during dredging activities as well as managed field equipment. Water quality parameters monitored for this project included turbidity, temperature, and dissolved oxygen. In addition, he was responsible for creating weekly monitoring reports, and conducting forage fish surveys for this project. Winn also synthesized permitting details and deadlines to help facilitate the project's success.

Marathon Oil Eelgrass Monitoring. Anacortes, WA 2022 - 2023

Winn was part of a biological dive team that conducted an eelgrass survey off the Tesoro Causeway that covered a 5.7-acre area. In addition, Winn comanaged geospatial efforts that calculated final statistics and maps for the monitoring report.

Contract Watts: Marine Mammal Monitoring. Bainbridge Island, WA. 2023

Winn was part of a team responsible for monitoring for marine mammals during the construction of the new walkway at Bainbridge Island Ferry Terminal.

Port of Silverdale Moorage Pushout. Silverdale, WA. 2022

Winn managed the geospatial efforts that mapped the biological survey data collected by MSA. In addition, he calculated the area impacted by the moorage pushout.



Education

- Bachelor of Science, Biology/ Ecology, Evolution, and Conservation, University of Washington, WA

Certification and Training

- SCUBA: Advanced Certification (2015), AAUS Scientific (2016), Rescue Diver (2016), Dive Master (2017)
- Lifeguard certification, CPR certification, and Diving First Aid/CPR/AED/Oxygen Administration
- WFR certification (2017)
- USCG Captains License, Masters Inland 50 GT (2020)
- Certificates through the Coastal Training Program:
 - How to Conduct Forage Fish Surveys

K. Darby Flanagan

Scientific Diver, Biologist

Biography

Darby has been working with MSA as a scientific diver since 2018. Darby grew up sailing around the Pacific and Atlantic Oceans with her family on their schooner but was based out of Port Townsend, WA. She graduated with honors from the University of Washington in 2017 with a B.Sc. in Ecology, Evolution, and Conservation Biology and a Marine Biology minor. During her time at UW she spent two summers at Friday Harbor Labs in the San Juan Islands where she did ecology research focusing on subtidal algae. Since graduating, she worked a variety of different jobs focusing on marine education taking her from the Bahamas to Southern California. She currently works with MSA during the field season and is also a coach of the local high school sailing team during the spring and fall. She is an AAUS-certified Scientific Diver, a PADI DM, and holds a USCG Captains License.

Current Position

Scientific Diver with MSA (2019 – Present)

Darby is part of the AAUS-certified scientific divers that do inter- and subtidal habitat surveys for MSA. She is also certified to conduct forage fish spawning surveys.

Previous Experience

Marine Science Instructor & Aquarist CIMI Toyon Bay (2018 – 2019)

Collections of and care for marine animals in aquariums at Marine Science facility. Habitat construction, animal enrichment, feeding, cleaning, maintenance and installation of systems. Worked within Aquarist team. Guided snorkeling, hiking, and kayaking trips and taught hands-on labs focused on marine life including fish, shark, algae, oceanography, plankton, invertebrate, and deep sea.

Education Programs Intern, Cape Eleuthera Institute (2018)

Worked with a team of environmental educators leading multi-day programs teaching courses in marine ecology, fish ID, and sustainable living along with assisting leading activities such as snorkeling and scuba. Worked as Dive Master on diving programs.

Scientific Diver with the University of Washington (2016 – 2017)

AAUS certified diver affiliated with the University of Washington. Collaborated on projects with Smithsonian and other researchers, performed personal research. Led Diver for a Day programs instructing grade and high school students about SCUBA and performing filmed dive explorations. Worked with the Seattle Aquarium youth programs.



Education

- Bachelor of Science, Design and Visual Communications, ITT Technical Institute, VA
- Professional Environmental Wetland Delineation, Portland State University, OR

Certifications and Training

Certifications

- Certificates through the Coastal Training Program:
 - Using the Washington State Wetland Rating System of (2014) in Washington State
 - Winter Tree & Shrub Identification for Western WA Puget Lowland Habitats
 - Grass, Sedge, and Rush Identification for Western WA Puget Lowland Habitats
 - How To Conduct Forage Fish Surveys
- PADI Dive Certification
- Wilderness First Responder & CPR

Shawn Gisriel

Wetland Biologist, Marine Mammal Monitor & Field Technician

Biography

Shawn grew up around the Chesapeake Bay and then along the James River and Potomac River systems in Maryland & Virginia for many years before heading directly to Washington to experience other natural ecosystems and alpine environments he was drawn to explore. As a dedicated ecology professional, with passion for botanical and marine sciences as well as skills surrounding horticulture and wetland restoration, this allows him to excel working with native plant ecosystems and riparian habitat understanding. He has assisted in many wetland delineation and marine mammal monitoring projects as well as forage fish surveying and analysis. After attending Portland State University and acquiring certification in wetland science, he joined the MSA upland team as a Wetland Biologist in 2023 and since then, applies knowledge-based wetland reporting and in field technician pursuit.

Previous Project Summaries

WA State Parks Haley State Park Critical Habitat Areas Survey, Vaughn, WA: 2023 - present

Shawn, with two other MSA wetland biologists, performed a wetland, stream, shoreline, and ESA biological survey for a proposed new development at Haley State Park on the Key Peninsula. MSA biologists delineated and rated several wetlands, conducted OHWM determinations on all streams, and provided the Parks with GIS mapping of all critical areas and their associated buffers. Proposed development includes constructing a new parking lot, bathroom, ADA accessible trail system, and observation lookout kiosk at this 178-acre park that currently consists of undeveloped forested lands and a dirt footpath leading down to a scenic lagoon and shoreline.

Contract Watts: Marine Mammal Monitoring. Bainbridge Island, WA. 2022-20233

Shawn was part of a team responsible for monitoring for marine mammals during the construction of the new walkway at Bainbridge Island Ferry Terminal.