



Statement of Qualifications

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Introduction

MSA Environmental is a certified worker-owned small business and environmental consulting cooperative, established in 1996. Our team of seasoned scientists have decades of experience in conducting critical areas habitat surveys, preparing technical reports, developing permit applications, leading mitigation planning, and implementing monitoring protocols. We are experts at navigating complex regulatory requirements across aquatic, shoreline, wetland, and sensitive terrestrial environments throughout western Washington.

MSA is recognized for our collaborative approach and ability to effectively communicate with diverse stakeholders, tribes, and regulatory agencies. Our close-knit team of scientists and project managers combines the agility and responsiveness of a small firm with expertise and capacity for successful large-scale projects. With a dedicated, full-time Financial Manager, we ensure fiscal accountability and deliver projects within scope and budget.

Clients trust MSA for our high-quality environmental consulting and swift project delivery, fostering enduring partnerships. We proudly serve as repeat consultants to a variety of organizations including Washington State Parks, City of Port Townsend, Jefferson Land Trust and the Northwest Watershed Institute. As niche specialists, we frequently subcontract with larger engineering and construction firms, and provide comprehensive biological services to public ports, conservation districts, tribes, and local non-profits.

Visit our website at www.msaenvironmental.com

Small Business Certifications

WBE: W2F0025713

DBE & SBE: D2F00025713

HUB Zone: 75358

NAICS: 541620, 541370, 541690

UEI: MMDDC53ABYE5

Cage Code: 7TWf6

King County SCS: 2694

Services

MSA offers a comprehensive suite of environmental consulting services, distinguished by our deep understanding of federal, state, local, and Tribal environmental regulations. For over two decades, our team has produced thousands of biological and environmental reports, emphasizing clarity, regulatory compliance, and seamless agency coordination.

Our services include:

- SCUBA and Shoreline Surveys
- Ecological Monitoring & Monitoring Plans, including:
 - Marbled Murrelet Monitoring
 - Marine Mammal Monitoring
 - Eelgrass Transplants and Monitoring
 - Restoration and Mitigation Plans and Monitoring
 - Aquaculture/Shellfish Monitoring
 - Avian Protection Plans
 - Water Quality Monitoring
 - Forage Fish Surveys
- Wetland Delineation & Stream Typing Determinations
- Ordinary High Water Mark (OHWM) Surveys & High Tide Line (HTL) Determinations
- Environmental Permitting for local, state, Tribal, and federal agencies from research to issuance
- Biological Reporting, including Critical Area Assessments & Reports
- Sampling Analysis Plans (SAP) and Sediment Characterization Reports (SCR)
- Habitat Restoration & Habitat Management Plans
- Mitigation & Monitoring Planning and Design
- GIS Mapping & Analysis
- Elevation Surveys
- FEMA Habitat Assessments
- Comprehensive Dredge Planning & Permitting
- Wildlife & Habitat Surveys
- Fish Exclusion/Electroshocking
- 24-ft Covered Dive Research Vessel & 10-ft Rigid Inflatable Boat

Expertise

MSA excels at communicating technical findings clearly and concisely, with senior staff directly managing fieldwork and reporting. We are committed to efficiency, cost-effectiveness, and responsiveness which consistently earns us repeat business and enduring client relationships. Our scientific expertise includes:

Subtidal and Aquatic Surveys: Specialized in scientific SCUBA diving, eelgrass delineation, mitigation, transplanting, and monitoring. Our certified staff conducts forage fish spawning habitat surveys, geoduck surveys (per WDFW protocols), and subtidal habitat assessments.

Wetlands, Waterways, & Terrestrial Services: Wetland ratings and delineations, Ordinary High Water Mark (OHWM) determinations, stream typing, restoration planning, native plant mitigation design, FEMA Habitat Assessments, and ecological impacts analyses.

Wildlife and Habitat Monitoring: Remote camera surveys, wildlife tracking for presence/absence studies; marbled murrelet and marine mammal monitoring plans and implementation, and Avian Protection Plans including bird collision mortality monitoring.

Dredging Expertise: Extensive experience in planning, analysis, implementation, and reporting to comply with regulatory guidelines such as the Army Corps' dredge material management program (DMMP) and the Clean Water Act (CWA).

In addition to habitat surveys, environmental analysis, and mitigation and monitoring, we also offer comprehensive permitting support, helping clients meet environmental regulatory requirements while moving their projects forward efficiently. Direct permitting experience includes:

Regulatory Frameworks: State Environmental Policy Act (SEPA), National Environmental Policy Act (NEPA), Clean Water Act (CWA), WA State Administrative Code (WAC), Revised Code of Washington (RCW), Coastal Zone Management Act (CZMA), Rivers and Harbors Act (RHA), Migratory Bird Treaty Act (MBTA), Marine Mammal Protection Act (MMPA), Shoreline Management Act (SMA), and Endangered Species Act (ESA) compliance, as well as local critical area ordinances and Shoreline Master Programs. If a wetland is federally regulated, we are familiar with the latest Waters of the United States (WOTUS) ruling.

Regulatory Agencies: We are familiar with permitting compliance processes involving multiple regulatory agencies including Washington Department of Ecology (ECY), Washington Department of Fish and Wildlife (WDFW), Washington Department of Natural Resources (DNR), U.S. Army Corps of Engineers (USACE), the Environmental Protection Agency (EPA), National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), Tribal jurisdictions, and local cities and counties.



Permitting Processes:

- Pre-application meetings
- Joint Aquatic Resources Permit Applications (JARPA)
- State Environmental Policy Act (SEPA) checklists
- National Environmental Policy Act (NEPA) support
- County/city applications for shoreline substantial development permits conditional use permits, shoreline variance permits, shoreline exemption permits, building permits, and floodplain development permits
- Public hearings with hearing examiner
- WDFW Hydraulic Project Approval (HPA)
- DNR forest practices applications
- DNR tideland lease regulations
- Section 401 & 404 CWA permit applications through USACE and ECY
- Section 10 RHA permit applications through USACE
- National Pollutant Discharge Elimination System (NPDES) permit applications
- Programmatic processes and mitigation calculations for streamlining permitting projects through the USACE
- Puget Sound Nearshore Habitat Conservation Calculator (NMFS & USFWS)
- Navigating Section 7 ESA Formal and informal consultations with NMFS and/or USFWS
- Bald and Golden Eagle Protection Act (BGEPA) permits through USFWS

Project Examples



Mariners Cove Beach Club, Eelgrass Transplant and Dredge, Whidbey Island, WA (2018 – Present)

- Managed multiple dredge cycles: planning, sampling, permitting, execution
- Prepared SAP, supervised fieldwork, authored SCR, BE, Water Quality Monitoring Plan, and Dredge and Disposal Plan
- Secured JARPA, SEPA, DNR ROW, Island County CUP, and Master Land Use permits
- Led eelgrass mitigation: SAV surveys, transplanting, ongoing monitoring
- Conducted forage fish spawning surveys



Tesoro Refinery Eelgrass Monitoring for Marathon Petroleum Corporation, Anacortes, WA (2014 – Present)

- SCUBA-based habitat and macroalgae surveys on 5.7 acres of subtidal land
- Developed WDFW-approved eelgrass mitigation and monitoring plan
- Performed baseline surveys and 10+ years of ongoing monitoring for endangered eelgrass (*Z. marina*) beds



Olallie State Park, Trail Expansion Project, King County, WA (2023-2025)

- Biological and environmental support during the permitting phase of bicycle trail expansion
- Identified critical areas and their buffers to aid in locating the trails outside of any sensitive areas.
- Prepared and attended pre-application meeting with King County to discuss critical areas reports and permit applications.



Jefferson County PUD, Chimacum Creek Horizontal Directional Drilling, Chimacum, WA (2022 – 2024)

- Conducted wetland delineation (non-functioning historic wetland); prepared a Habitat Management Plan and wetland report (Jefferson County Code)
- Mapped OHWM of Chimacum Creek; assessed critical habitat/species impacts (e.g., ESA-listed species Puget Sound Steelhead)
- Provided pre-construction habitat assessments, with BMP recommendations



Custom Plywood Subtidal Sediment Cleanup Project for WA Department of Ecology, Anacortes, WA (2021 – Present)

- SCUBA-based eelgrass and SAV surveys across >20 acres of restoration area
- Collected sediment core samples to evaluate toxicity and monitor thin-layer capping effectiveness
- Performed multiple monitoring events (eelgrass biomass/density, sediment samples)
- Provided monitoring reports and GIS-based deliverables to support the WA Toxics Cleanup Program



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

- Provided year-5 monitoring for a 1,100-foot remnant channel and wetland floodplain (Sammamish River Park's Off-Channel Habitat Restoration Site)
- Monitored goals: connecting off-channel habitat for salmonid rearing/thermal refuge habitat; reestablishing wetland and riparian functions
- Performance standards: stream channel surveys/water quality/fish/vegetation monitoring, ecosystem function assessments



Pierce Conservation District (PCD) Bulkhead Removal Habitat Restoration, Gig Harbor, WA (2024)

- Partnered landowner for 720 linear feet of shoreline armoring (bulkhead) removal and marine riparian zone restoration
- Completed a Critical Area Site Assessment and prepared a Nearshore Habitat Restoration Plan (site prep, invasive species removal, native planting, maintenance, cost estimates) for restoring habitat along the shoreline within 100 feet upland of the Ordinary High Water Mark (OHWM)



Jamestown S'Klallam Tribe Woodcock Road Housing Development Project Wetland Study, Clallam CO., WA (2023)

- Conducted full wetland delineation and rating study for a 5-acre parcel of historically disturbed farmland adjacent to the Jamestown S'Klallam Tribe golf course.
- Delivered GIS shapefile data, PDF map figures detailing critical habitat locations and associated buffers, and a formal report that met Tribal, federal, and local critical areas regulations.

Client Testimonials

“Thank you so much for meeting and exceeding our project expectations and goals. Your team was fast and efficient and very thorough. We had a very small window of opportunity to complete this project and yet your team accommodated all that was requested. We will use your services again if the need should arise and have already highly recommended your company to others within the industry.”

“We received outstanding service throughout the project.”

“We unreservedly recommend MSA. Communication with us and coordination with the maintenance team for our mitigation area was outstanding; monitoring and reporting met our permit requirements efficiently and completely. It was a pleasure working with them.”

“All that was requested to be completed was done so with excellence.”

“MSA comes highly recommended and is great to work with!”

Additional Information

Client Relationships & Company Values

MSA is recognized for strong communication and negotiation skills, enabling effective collaboration with private clients, agencies at all levels, and Tribal governments—even when interests diverge. As a small firm, MSA offers competitive rates without sacrificing quality, and priding ourselves on a personalized, responsive approach. Our reputation, built over two decades, rests on deep local ecosystem knowledge, scientific integrity, and a commitment to high environmental standards.

Turnaround Times

Project turnaround timelines vary depending on scope, but MSA strives to complete deliverables within 30-60 days of receiving all necessary project information. We collaborate with clients on timelines and expectations.

Record Keeping

MSA maintains thorough, confidential, and permanent records for every project, including contracts, site plans, maps, field data, written reports, and permit documentation. Upon request, we adhere to the Washington State Retention Schedule for land use/permitting records and complies with the Local Government Common Records Retention Schedule (CORE) for projects involving public agencies.

Insurance Coverage

MSA carries Automotive, Professional and General Liability insurance (\$1,000,000 per occurrence, \$2,000,000 aggregate). Certificates of Insurance are available upon contract finalization, and additional coverage can be negotiated based on project needs.

Key Staff Member Roles and Qualifications*

Role	Team Member					
	Amy Leitman	Meg Amos	Kimberly McClurg	Bryan DeCaterina	Jill Cooper	Maureen Goff
Project Manager	X	X	X	X	X	X
Permitting Specialist	X	X	X	X	X	
Reporting	X	X	X	X	X	X
GIS			X		X	X
Mitigation Plans & Restoration	X	X	X		X	X
Marine Mammal Monitor	X	X	X	X	X	X
Certified Marbled Murrelet Monitor		X	X	X	X	
Certified Forage Fish Surveyor	X	X	X	X	X	X
Ordinary High Water Mark (OHWM) Surveyor	X	X	X	X	X	X
Wetland Rating & Delineation, Stream Determination	X	X			X	
Scientific SCUBA Diver	X			X		
Licensed UAV Pilot				X		

**See staff bios for more detailed information*

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Amy Leitman

Founder, Principal Marine Biologist

Biography

Amy is the founder of Marine Surveys & Assessments, a principal marine biologist, and a scientific SCUBA diver with a focus on nearshore biological assessments. With over 27 years of experience, she has managed all stages of waterfront and municipal project development, from feasibility analysis and planning to permitting, biological monitoring, mitigation planning, and reporting. Amy specializes in providing cost-effective, innovative solutions to complete environmental challenges. Her consulting expertise spans commercial and port facilities, marinas, and biological support for diverse projects. A significant portion of her work centers on eelgrass mitigation, monitoring design, and transplanting within and outside contaminated sites. Amy has also collaborated with numerous regulatory agencies, helping to design and implement biological requirements that are now industry standards.

Education

Master of Science, Marine Biology Moss Landing Marine Laboratories, CA

Bachelor of Science, Animal Science, Zoology, University of Rhode Island, RI

Years with Company: 30

Certifications and Trainings

- 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
- NAUI Open Water Dive Certification
- PADI Research Dive Certification
- California Surface Supplied Air
- DAN O₂ Certification

Professional Associations

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

Project Summaries

Wyckoff Subtidal Sediment Clean Up Project Bainbridge Island, WA 2023

MSA was subcontracted by Jacobs Engineering to conduct eelgrass delineations and macroalgae assessments around the Wyckoff/Eagle Harbor Superfund Site. The team developed the Eelgrass & Macroalgae Delineation Work Plan, followed by a large-scale baseline eelgrass survey completed in the summer of 2023. The work provided critical data for the ongoing sediment cleanup efforts in this sensitive area.

Project 2020 WDNR, South and Central Puget Sound, WA 2016-2019

MSA collaborated with Hart Crowser and Research Support Services (RSS) on the large-scale WDNR Eelgrass Restoration Project (Project 2020), aimed at increasing eelgrass coverage by 20% in south and central Puget Sound. MSA successfully harvested and transplanted approximately 200,000 shoots of *Zostera marina* from healthy donor beds to both test and large-scale restoration sites. The team conducted annual monitoring of shoot density at donor and transplant locations. Donor site selection involved rigorous desktop analysis and field verification to assess aerial coverage, bed health, and dive conditions.

Mariners Cove Beach Club Maintenance Dredge Project Whidbey Island, WA 2010– Present

Under Amy's leadership, MSA has executed two successful large-scale eelgrass transplants (totaling 100,000 shoots) for the Mariners Cove maintenance dredging project. MSA continues to support the ongoing dredge activities, focusing on identifying transplant and reference sites, removing eelgrass from the dredge prism, and conducting subsequent monitoring to ensure the health and viability of the transplanted eelgrass.

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Bryan DeCaterina

Senior Marine Scientist | Dive Safety Officer

Biography

Bryan joined MSA in 2018, bringing over a decade of experience in the environmental sector with a specialization in nearshore habitats & marine benthic ecology. As the lead of MSA's scientific dive program, he has successfully managed numerous large-scale, complex marine projects. His expertise spans eelgrass transplantation design and implementation, macroalgae impact assessments, mitigation monitoring, and critical habitat evaluations under the Endangered Species Act and Section 404(b) of the Clean Water Act. With an in-depth knowledge of local, state, and federal regulations, Bryan facilitates seamless collaboration between clients, stakeholders, and regulatory agencies, ensuring practical and effective environmental solutions.

Project Summaries

Wyckoff Beach Intertidal Eelgrass Assessment and Transplant Pilot Study for US Environmental Protection Agency, Bainbridge Island, WA (2022–2024)

MSA partnered with Jacobs Engineering to complete a baseline assessment of eelgrass and submerged aquatic vegetation surrounding the Wyckoff Beach remedial area. As Project Manager, Bryan worked closely with engineers to develop survey and transplant methodologies for an eelgrass transplant pilot study within the active cleanup footprint, including approximately 0.6 acres of transplant test plots.

Mariners Cove Beach Club Eelgrass Transplant Project Whidbey Island, WA (2018– Present)

As Field/Dive Lead, Bryan oversaw all in-water operations for two large-scale eelgrass transplant efforts supporting maintenance dredging at Mariners Cove Beach Club on Whidbey Island. He assisted with transplant design and lead dive crews during harvest and planting activities, ensuring proper handling and placement of approximately 40,000 *Zostera marina* shoots across 2x 0.25 acres sites (0.5 acres in total) MSA is still currently annually monitoring to evaluate transplant success and bed recovery over time.

Custom Plywood Subtidal Sediment Cleanup Project for WA Department of Ecology, Anacortes, WA (2024- Present)

In partnership with Haley & Aldrich, MSA biologists are supporting subtidal remediation efforts by monitoring eelgrass health and coordinating with engineers to transplant and reestablish approximately 0.5 acres of *Zostera marina* (roughly 60,000 shoots) outside the thin-layer cap restoration area. This work supports long-term habitat recovery within this Department of Ecology cleanup site.

Tesoro Refinery Eelgrass Monitoring Project for Marathon Petroleum Corporation, Anacortes, WA (2018– Present)

MSA has monitored sensitive eelgrass habitat surrounding the Tesoro East Causeway for over a decade to support regulatory permitting for routine maintenance activities. Since joining MSA, Bryan has led the Scientific Dive Team through four rounds of SCUBA-based monitoring surveys and contributed to the development of a WDFW-approved eelgrass mitigation and monitoring plan covering 5.7 acres of subtidal habitat surrounding the Causeway.

Education

B.S. Environmental Science
w/ minor in Chemistry,
Virginia Commonwealth University,
Magna Cum Laude

Years with Company: 8

Certifications and Trainings

Dive Training

- PADI | Open Water Diver (2008)
- SDI | Rescue Diver (2020)
- SDI | Nitrox Diver (2024)
- SDI | Drysuit Diver (2024)
- DAN | CPR, First Aid, O2 (2025)
- ADCI | Diver Fitness Exam (2025)

Certifications

- OSHA 40-Hr HAZWOPER (2023)
- OSHA 8-Hr HAZWOPER refresher (2025)
- MRSC Spill Response Training (2025)
- FAA Licensed UAV Pilot – Part 107 (2023)
- USCG 100TN Mariner Credential (2018)
- Registered TWIC (2025)
- Wetland Delineation Course Certificate, Portland State University
- WECY OHWM Training (2021)
- USFWS Marbled Murrelet Monitor (2024)
- WDFW Forage Fish Certified (2020)
- USACE Eelgrass Delineation Training (2025)

MSA Environmental



Jill Cooper

Senior Ecologist & Business Development Manager

Biography

Jill has over 15 years of experience in the environmental field, including a varied background in field biology, outdoor education, project management, outreach and science communication. Jill is a well-rounded ecologist with a strong knowledge of native plants, wildlife, wetlands, and shoreline ecology. Jill wears many hats at MSA, as a wetland and wildlife biologist, project manager, lead report writer for upland critical areas reports (including wetland reports, stream assessments, Habitat Management Plans, FEMA Habitat Assessments, Biological Evaluations, and mitigation & monitoring plans), and is a restoration and mitigation design specialist. Jill is also MSA's Business Development Manager, leading the firm's marketing efforts. In the field, Jill enjoys performing wetland delineations and ratings, stream typing, Ordinary High-Water Mark (OHWM) surveys, forage fish surveys, electrofishing, and is certified as a Marbled Murrelet monitor.

Project Summaries

WA State Parks, Olallie State Park Mountain Bike Trail Construction Project. King County, WA. 2023-2025

Jill and the MSA team conducted an ESA habitat survey for a proposed mountain bike trail project at Olallie State Park, delineating critical areas located within 300 feet of the proposed trail site. The survey included delineating and rating one wetland and performing OHWM and stream typing on a seasonal stream. Once the trail design was finalized, MSA prepared a SEPA application, and critical areas report for Parks' submission to King County as part of the permitting process.

Jefferson County PUD, Ripley Creek Directional Boring Project. Quilcene, WA. 2024 - Present

MSA is assisting Jefferson PUD with permitting for an underground utility line installation under Ripley Creek, a fish-bearing stream, using horizontal directional drilling (HDD). MSA provided wetland and OHWM studies in 2024 and is now coordinating geotechnical work and engineering design for the permit application process.

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

Jill managed the MSA team in providing monitoring services for a 1,100-foot-long remnant channel and wetland floodplain at the Sammamish River Park's Off-Channel Habitat Restoration Site, located along the Burke-Gilman Trail. Site goals included connecting off-channel habitat to the Sammamish River to create accessible salmonid rearing and thermal refuge habitat, as well as re-establishing the critical functions of the wetland and riparian habitat along the river. Performance standards included stream habitat and channel surveys, water quality monitoring, fish surveys, vegetation monitoring, and ecosystem development.

Education

Bachelor of Science in Biology/Ecology
The Evergreen State College, WA, 2010
Associates of Arts and Sciences, Honors
Bellevue Community College, WA

Years with Company: 7

Certifications and Training

Wetland Delineation Professional
Certificate, Portland State University,
(2020-2023)

Electrofishing Principals & Safety
Certification – Smith Root, WA, (2025)

Waters of The US (WOTUS) Federal
Regulations course, Swamp School,
(2023)

Certificates through the Dept. of Ecology
Coastal Training Program:

- Using the 2014 Wetland Rating System, (2021)
- Wetland Classification (2021)
- SEPA Administration (2020)
- OHWM determination (2021)
- How to conduct Forage Fish surveys, (2021)
- Designing & Installing Mitigation & Restoration Projects (2023)

Marbled Murrelet monitor, USFWS
(2020)

Specialist Wildlife Tracking Certification,
CA (2019)

PADI Open Water SCUBA (2009)

First Aid, CPR, AED (2025)

Wilderness Awareness School Immersion
Program, WA (2005)

Permaculture Design Certification through
the Bullock's Orcas Island WA (2007)

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Kimberly McClurg

Senior Marine Biologist

Biography

Kimberly has been with MSA since 2014, supporting a variety of shoreline projects for both public and private clients throughout the Puget Sound region. She serves as the lead report writer for these efforts, ensuring alignment with local critical area regulations, no net loss policies, and federal Endangered Species Act (ESA) requirements. Kimberly regularly collaborates with state agencies—including the Washington Department of Fish & Wildlife (WDFW), Department of Ecology (ECY), and Department of Natural Resources (DNR)—to develop project-specific water quality monitoring and eelgrass transplant/monitoring plans. With deep expertise in shoreline permitting and mitigation, she helps clients navigate complex local, state, and federal review processes. Kimberly also has extensive experience using NOAA’s Salish Sea Nearshore Programmatic (SSNP) calculator and has worked directly with NOAA over the years to refine and improve its application for project-specific use.

Project Summaries

***Liberty Bay Marina Maintenance, Poulsbo, WA* 2024 – Present**

Kimberly is the permitting specialist for the proposed maintenance work in the marina, including pile replacement and floating walkway remodeling, that will occur over a five-year period. She worked with the applicants ahead of time, using the SSNP calculator, to determine the best path forward to reduce permitting review time and mitigation requirements. Kimberly is handling the permit applications for all local, state, and federal regulatory agencies to ensure that permits are acquired in a timely manner.

***Port of Coupeville Wharf and Moorage Maintenance Projects, Coupeville, WA* 2020 – 2026**

Kimberly has worked with the Port during multiple phases of maintenance work to repair and replace piles and moorage floats on the historic Coupeville Wharf. She has written a Biological Evaluation report and associated marine mammal monitoring plans for each phase. Kimberly also worked with the Port and their contractor to replace a section of failed rock bulkhead adjacent to the Wharf; she wrote the biological report necessary for permitting and worked with NOAA to complete the SSNP calculator to determine mitigation needs.

***Alderbrook Float Replacement, Union, WA* 2024 – 2025**

Kimberly was the project manager and permitting agent for the Alderbrook Resort and Spa to aid them in their partial marina reconfiguration. She completed all necessary local, state, and federal permit applications, including shoreline permits from Mason County, an HPA from WDFW, and a Section 10 permit with the US Army Corps of Engineers which included completion of the SSNP calculator to determine mitigation needs. She provided agency coordination, planning, and communication to ensure the project moved forward seamlessly.

Education

Bachelor of Science, Biology
Humboldt State University, CA

Years with Company: 12

Certifications and Training

Nearshore SAV (2024)

Permitting in Pierce County (2024)

Advance Shoreline – No Net Loss and Mitigation (2023)

Marbled Murrelet monitoring (certified by US Fish & Wildlife Service since 2015)

Certificates through the Dept. of Ecology Coastal Training Program:

- Shoreline Management & Stabilization Using Vegetation
- How to Administer Development Permits in Washington’s Shorelines
- How to Conduct Forage Fish Surveys
- How to Determine OHWM

River Restoration Professional Certificate from Portland State University including:

- Physical Processes
- Ecological Processes
- Site Evaluation & Assessment Tools
- River Restoration Design
- Restoration & Project Management

NAUI Advanced Open Water SCUBA Certification

First Aid, CPR and AED (Annually)

MSA Environmental



Maureen Goff

Senior Marine Scientist and GIS Analyst

Biography

Maureen is a senior scientist and project manager specializing in aquatic habitat regulatory compliance throughout the Salish Sea. She excels at authoring complex environmental documentation—including Biological Evaluations, Assessments, and Habitat Management Plans—to mitigate project impacts on federal and state priority species. A technical lead for aquatic biota surveys and restoration, Maureen manages Sampling and Analysis Plans (SAP) and Sediment Characterization Reports (SCR) for dredging operations, alongside eelgrass and kelp monitoring programs. She also serves as a GIS lead for spatial impact assessments and has successfully directed large-scale marina replacements, overseeing everything from field surveys and permit applications to long-term mitigation strategies.

Project Summaries

Sandy Hook Yacht Club Estates, Whidbey Island, WA 2023-present

MSA has been hired to plan and manage the dredge, including completing all biological surveys, reports, mitigation planning, and permitting applications required by all agency levels and tribes. Maureen has worked closely with the client to plan and refine dredge areas in a way that meets project goals while keeping mitigation requirements and costs as low as possible. Her role includes mapping eelgrass to support permitting and impact assessments, coordinating closely with bathymetric surveyors to develop volume calculations and dredge design plans for permitting, and collaborating with state and federal agencies to develop best management practices to avoid the spread of European green crab during dredging and disposal.

Boat Ramp and Floating Moorage Dredge Project, Port of Silverdale, Kitsap County, WA 2018 - Present

MSA was the lead project manager for this multiple components dredging and moorage reconfiguration project. Maureen wrote a Biological Evaluation report and Alternatives Analysis; developed a Water Quality Monitoring Plan and developed a Sampling Analysis Plan (SAP) for proposed dredging. She was also responsible for GIS mapping of habitat data and bathymetric survey data, developing DMMUs based on surveyed depths and volumes, identifying optimal coring locations and methods for characterizing dredge material, and post chemical analysis calculations and reporting in the Sediment Characterization Report. MSA assisted in coordination with coastal engineers and completed all environmental permit applications for County, State, and Federal agencies (Kitsap County, DNR, WDFW, USACE, WECY, NMFS).

Education

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

Years with the Company: 11

Certifications & Training

- National Environmental Policy Act Implementation
- Spatial Statistics Analysis in Geographic Information Systems
- ESRI Spatial Data Science: The New Frontier in Analytics
- 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

MSA Environmental



Meg Amos

Senior Ecologist

Biography

Meg possesses over forty years of experience working across diverse ecosystems in Washington State. Prior to joining MSA in 2004, she served as a field biologist for the U.S. Forest Service. As MSA's lead permit coordinator, Meg specializes in navigating local, state, and federal jurisdictional processes. Her expertise includes wetland delineation, data collection for marine and terrestrial critical area assessments, and restoration planning. She also frequently prepares No-Net-Loss reports to ensure environmental compliance. Meg views MSA as a vital link between environmental preservation and human development. She is committed to collaborating with both clients and regulatory agencies to achieve successful project outcomes.

Education

Associate of Applied Science, Forest Technology, Green River Community College, WA

Training in Horticulture - Native Plant Identification and Propagation Edmonds Community College, WA

Years with Company: 22

Certifications & Training

Waters of The US (WOTUS) Federal Regulations course, Swamp School, 2023

Wetland Delineation Professional Certificate from Portland State University, 2014

Marbled Murrelet monitoring, USFWS, WA, 2015

Certificates through the Dept. of Ecology 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 WA's Shorelines
- OHWM Determination
- How to conduct Forage Fish Surveys
- SEPA Administration
- Alternative to Bulkheads
- Designing & Installing Mitigation & Restoration Projects

Project Summaries

Lagoon Point Maintenance Dredge Project. Whidbey Island, WA, 2023 – Present

Meg is project manager and permitting specialist for this community marina dredge project, which is occurring in an area with abundant endangered eelgrass (*Zostera marina*) presence. MSA has been hired to plan and manage the dredge, including completing all biological surveys, reports, mitigation planning, & permitting applications required by all agency levels and tribes.

Ike Kinswa State Park, Boat Launch Extension, Lewis County, WA, 2024 to Present

Meg is providing environmental and permitting services to support State Parks' bulkhead replacement and boat ramp extension projects, including a Critical Habitat Areas Survey & Report, wetland delineations and ratings, a Federal Biological Evaluation (BE) addressing ESA criteria, and mitigation plan to ensure no net loss of habitat function, GIS-based mapping, supporting figures, and attend agency pre-application meetings to facilitate permitting and regulatory compliance.

Pierce Conservation District (PCD) Habitat Restoration, Gig Harbor, WA, 2024

MSA completed a Habitat Survey and Restoration Design and Planting Plan which included the necessary steps for restoring the habitat along the shoreline within approximately 100-foot upland of the Ordinary High Water Mark (OHWM), including instructions for site preparation, invasive plant removal, restoring native habitat by planting a diverse array of plants, maintenance recommendations, and cost estimates.

Fish Passage Culvert Replacement Project at Libby Road; Woodard Creek Tributary, Thurston County, WA, 2025

Meg provided wetland delineation and report, OHWM determination, and habitat assessment services to inform smart, cost-effective culvert design to meet regulatory permitting requirements.