



**Environmental Technical Advisory Committee  
Regular Meeting  
Thursday, October 13, 2016  
3:00 PM – 5:00 PM  
City Hall  
Council Conference Room  
280 Madison Avenue North  
Bainbridge Island, WA 98110**

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## **AGENDA**

- 1. CALL TO ORDER / ROLL CALL / ACCEPT OR MODIFY AGENDA / CONFLICT OF INTEREST DISCLOSURE  
3:00 PM**  
**Chair:** Frank Gremse  
**Members:** Michael Bonoff                      Charlie Kratzer  
                    Jason Flowers                      Karl Shearer
- 2. ACCEPTANCE OF MEETING NOTES – September 22, 2016 – ETAC Members**
- 3. REVIEW SUZUKI PROPERTY ECOLOGICAL ASSESSMENT REQUEST FOR QUALIFICATIONS – All**
  - Confluence
  - Eco Access
  - Herrera
  - McLennan Design
  - The Watershed Company
- 4. COMMENTS FROM THE PUBLIC – All**
- 5. LIAISON REPORT OUT – Councilmember Roth**
- 6. MISCELLANEOUS ITEMS – All**
- 7. ADJOURNMENT  
5:00 PM**





CITY OF  
BAINBRIDGE ISLAND

Environment Technical Advisory Committee  
September 22, 2016 Meeting Notes

Present: Michael Bonoff, Jason Flowers, Charlie Kratzer, Karl Shearer. Absent: Frank Gremse. Also attending were Christy Carr & Gretchen Brown (City), Wayne Roth (Council), and Robert Dashiell.

The meeting was called to order at 3:00pm.

The August 9<sup>th</sup> meeting minutes were approved.

Gretchen Brown provided an overview and demonstration of the City's GIS Mapping and Map Gallery resources. A new web app and cloud-based data have improved response time and user navigation. The new menu choices may be consolidated or refined as used feedback is received. Christy explained how these tools will be used for the update to the Critical Areas ordinance.

Mr. Dashiell commented on stream designations and mandated culvert replacements.

The meeting adjourned at 4:15 pm.

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Frank Gremse, Chair      10/13/16



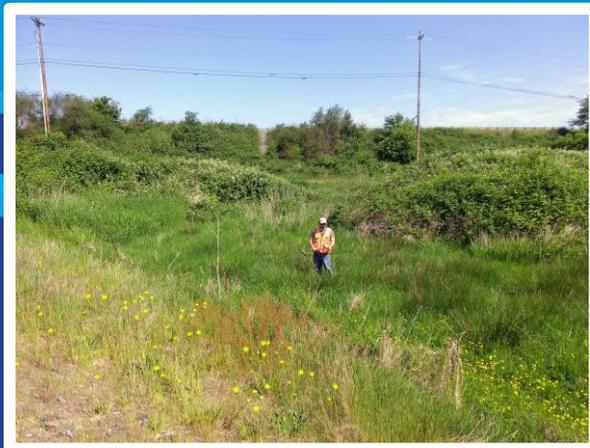


**CONFLUENCE**  
ENVIRONMENTAL COMPANY

Statement of Qualifications  
**ECOLOGICAL ASSESSMENT SERVICES FOR  
THE SUZUKI PROPERTY**

*Prepared for:*

**City of Bainbridge Island**  
September 23, 2016



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September 23, 2016

Gary Christensen, Director of Planning & Community Development  
Department of Planning & Community Development  
City of Bainbridge Island  
280 Madison Avenue North  
Bainbridge Island, WA 98110

**Re: Request for Qualifications for Ecological Assessment Services for the Suzuki Property**

Dear Mr. Christensen and Members of the Evaluation Committee:

Confluence Environmental Company (Confluence) is pleased to present our Statement of Qualifications for assisting the City of Bainbridge (City) with the ecological assessment of the Suzuki property. We have years of experience conducting the type of work required for this project. We are known for our thorough fieldwork to identify and document ecological features, our high-quality reports, our ability to collaborate and reach consensus on planning goals, and making thoughtful recommendations to balance the objectives of property development and environmental sustainability.

The Confluence team brings the following strengths to this project:

- Confluence staff proposed for this project have conducted many projects of similar nature. Project Manager, Chris Berger, and Senior Biologist, Kerrie McArthur, have 19 and 22 years of experience, respectively, in aquatic and terrestrial resources projects in this area. Principal in Charge, Scott White, has more than 20 years delivering these types of projects.
- Confluence has a long track record of providing cost-effective solutions in a timely manner for both simple and complex projects.
- Our team is locally based and highly experienced with regulatory agencies within the Puget Sound region. Our habitat biologists and certified arborist have recent and relevant experience within the City of Bainbridge Island.

Our Statement of Qualifications more fully describes our experience and why the Confluence team would be a good choice for the City for this project. We look forward to your response!

Respectfully yours,

A handwritten signature in blue ink that reads "Scott White".

**SCOTT WHITE**

Principal Environmental Planner, President  
425.345.7685  
scott.white@confenv.com

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## PROJECT UNDERSTANDING

Confluence Environmental Company (Confluence) would welcome the opportunity to assist the City of Bainbridge (City) in an ecological assessment of the Suzuki Property to inform the City's development plans.

We understand that the selected development proposal includes a mix of residential, agricultural, community-centered businesses (e.g., Boys and Girls Club, Community Center), and parking, among other features. The scope of work of the ecological assessment includes the Suzuki Property's features of interest as set forth by the Environmental Technical Advisory Committee. These include the following:

- A stream that may or may not provide important fish habitat,
- A possible riparian pathway on the property's northern border,
- A stand of trees estimated to be between 100 and 250 years old,
- An apparently manmade pond with aquatic habitat potential, and
- A wildlife corridor attributed, at least in part, to the existence of the pond.

The Confluence team would conduct an ecological assessment of the site pursuant to the protections afforded to ecological features under the Bainbridge Island Municipal Code Title 16 – Environment. The assessment would provide the City an environmental baseline including identification, inventory, mapping, description, and evaluation of the significant ecological features of the site. This work would also include evaluating the potential impacts of the proposed development plan, determining the best protection and management of the ecological resources, developing avoidance and minimization measures, and providing recommendations on site design or development standards that would protect the ecological features and functions of the site (e.g., more open space, higher density, low-impact development techniques, strategic landscaping and vegetative buffers). We anticipate that many of the recommended protection measures can be covered under provisions of Chapter 15.20 – Surface and Storm Water Management, Chapter 16.04 – Environmental Policy, Chapter 16.20 – Critical Areas, and Chapter 16.22 – Vegetation Management. The deliverable for this work would be a written report with supporting survey maps and figures.

## OVERVIEW OF THE TEAM

Confluence has assembled a lean team composed of senior and junior staff that has been right-sized to provide high-quality, efficient, and cost-effective field assessment and report preparation. The team has extensive and comprehensive experience managing and conducting wetland, aquatic, and terrestrial resource projects. In addition, we have included the consulting arborist firm Tree Solutions, Inc., to provide tree expertise. Confluence and Tree Solutions have partnered effectively on past projects. More information regarding the proposed team is provided in the next section. Brief firm overviews for both Confluence and Tree Solutions are presented in the following paragraphs.

Founded in 2007, **Confluence** is a natural resources firm (Washington State UBI #602-682-914) specializing in environmental science, project delivery, and regulatory strategy and compliance. Our team includes fish and wetland scientists, shoreline and wetland engineers, cultural resources specialists, built and natural environment planners, regulatory experts, and GIS specialists. We have extensive experience in habitat and water quality assessments, and in assessing environmental impacts and developing strategies to

protect sensitive habitats and species, including impact avoidance and minimization measures, and species recovery and conservation plans. Confluence contributes scientific and permitting strategy input to site evaluation and planning efforts in order to help clients envision what is possible and make informed decisions for the future.

**Tree Solutions, Inc.**, is a Seattle-based firm that works with our clients to resolve questions and conflicts regarding trees, with sustainability and science in mind. Tree Solutions provides a science-based, objective approach to tree evaluation and management, grounded in years of experience with land development, landscaping, and tree pruning and removal. Core services include tree risk evaluation, diagnostics, and health management; tree retention for construction sites; management of Environmental Sensitive Areas and Natural Growth Protection Areas; inventory and management plans; vegetation restoration and mitigation plans; and tree appraisal and expert witness services. Tree Solutions produces professional site plans, documentation, and reports as needed for each situation. Tree Solutions is fully insured and licensed (License# TREESS1916KJ) with the State of Washington.

## TEAM QUALIFICATIONS

### Team Organization

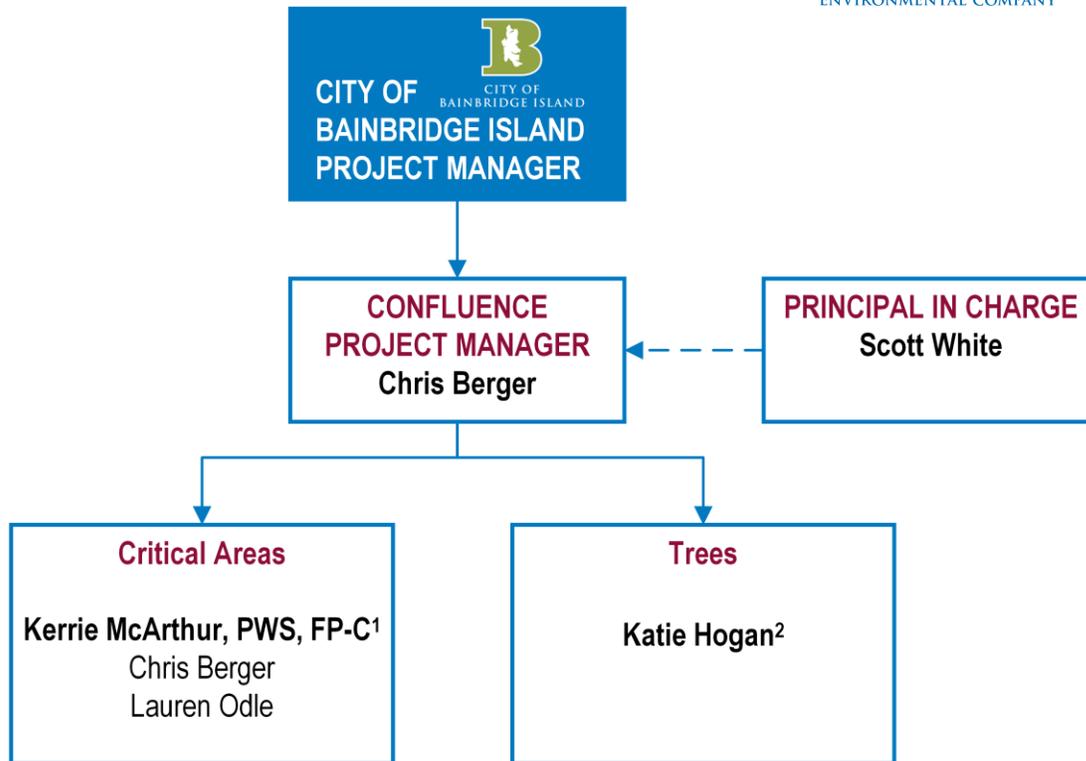
Confluence proposes a simple, cost-effective organizational structure for this project, with these individuals committed to conduct the work:

- Chris Berger, Confluence Senior Ecologist, will be Project Manager, and will provide technical assistance as necessary.
- Kerrie McArthur, PWS, Confluence Senior Biologist and Professional Wetland Scientist, will be the lead Habitat Biologist, conducting fieldwork and producing associated reports.
- Lauren Odle, Confluence Staff Ecologist, will provide support for fieldwork and report preparation.
- Katie Hogan, Certified Arborist and Associate at Tree Solutions, will evaluate the stand of old trees on the property.
- Scott White, Principal Environmental Planner and Confluence Partner, will provide an appropriate level of oversight as Principal in Charge.

The organization chart on the next page presents the anticipated lines of communication for this project. Biosketches for these key personnel are provided here, and resumes for each are provided in the Appendix.

### Resumes of Key Staff

This section provides biosketches of each of the key staff members. Resumes complete with relevant project descriptions are provided in the Appendix.



NOTES

1 = Lead for this discipline

2 = Of the firm Tree Solutions, Inc.

**Chris Berger, Confluence – Project Manager and Critical Areas Support**

A senior ecologist with Confluence, Chris has 19 years of experience in habitat biology, wetland and stream ecology, ecological restoration, and natural resources permitting / regulatory compliance. He applies his diverse skillset to a wide variety of project types, including capital improvement projects, land development, mitigation planning, third-party environmental review, and habitat restoration. Chris’s experience in environmental planning and regulation has covered a wide variety of project types, from small residential developments to large-scale forestry proposals; from culvert replacements to floodplain restorations on large river systems; and from minor bridge replacements to major roadway corridor improvements. He has field expertise in the areas of wetland delineation, wetland rating and functional assessment, ordinary high water delineation, stream assessment, and impact assessment. Chris has many years of experience managing environmental projects, including overseeing junior staff members, providing technical review of work, and ensuring schedules are met and budgets upheld. Having worked in both the public and the private sector, he has a broad perspective that he applies constructively in interactions with consultants, contractors, and government agencies. He possesses a superb ability to communicate complex technical information to technical experts, the general public, stakeholder groups, and regulatory authorities alike.

**Kerrie McArthur, PWS, Confluence – Habitat Biologist**

Kerrie McArthur, Confluence senior biologist, has 22 years of experience conducting ecological assessments and evaluating impacts to fish and wetlands from development activities, regulatory permitting and

associated mitigation, and restoration/mitigation design. She conducts wetland reconnaissance and delineations, aquatic and terrestrial habitat evaluation, wildlife research projects, biological assessments of threatened and endangered species, fisheries surveys, functional assessment of aquatic ecosystems, water quality monitoring, stream-channel characterization, and monitoring. Kerrie has written numerous wetland delineation reports, project-specific biological assessments, and aquatic and terrestrial plant and animal sections of SEPA/NEPA EISs. She has developed mitigation plans for sensitive species and habitats including salmonids and wetlands. Kerrie is a certified Professional Wetland Scientist (PWS #2655) and Certified Fisheries Professional (#3280).

***Lauren Odle, Confluence – Staff Biologist***

Lauren is a highly versatile staff ecologist at Confluence. She routinely conducts fieldwork and research in support of projects in a range of natural and built environments, including marine, freshwater, and wetland systems. She has performed a number of wetland delineation and ratings, monitored various mitigation sites, and has prepared permit applications and environmental documentation, including SEPA checklists, HPA permits, and JARPA forms. Lauren uses her knowledge in the habitat requirements and biology of fish, aquatic invertebrates, and native plant species to aid in the writing of local best available science updates and Biological Assessments. She has strong organizational skills she employs for activities such as report preparation, document production, and project archiving. She also has experience synthesizing data to create technical maps and graphics in GIS for support of SEPA and permitting documentation.

***Katie Hogan, Tree Solutions – Certified Arborist***

Katie Hogan, associate with Tree Solutions, Inc., is an ISA Certified Arborist (PN-8078A) and ISA Qualified Tree Risk Assessor. She graduated from the University of Washington in 2012 with a degree in Environmental Studies. Katie strives to practice interdisciplinary environmental management, and has studied native forest dynamics and pathology in Washington, Oregon, California, and Utah. She specializes in plant pathogens, habitat quantification, native and rare plant identification, field sampling techniques, and fire ecology.

***Scott White, Confluence – Principal in Charge***

Scott White, principal environmental planner and president of Confluence, provides leadership and strategy to planning and permitting efforts in support of development, transportation, and other capital projects for state and municipal agencies and private developers. Scott has worked since 1997 as a planner and environmental professional, and has extensive experience in transportation, habitat restoration, surface water, agricultural, and rural/urban land use and development proposals. Scott maintains in-depth knowledge of local, state, and federal laws, regulations, and policies relating to transportation, land use, surface water, and natural resource management. Scott is an expert with excellent client relationships. He has a long track record of success in negotiating with permitting and regulatory agencies on behalf of both public and private clients, and has earned a high level of professional respect and credibility with agency staff. Scott is a dynamic and highly motivated leader who delivers results by effectively managing and coordinating diverse multidisciplinary teams.

## **Familiarity with Local Conditions, Codes, and Practices**

Our staff has recent and relevant experience with the Bainbridge Island Municipal Code through our work on the Winslow Grove Subdivision and Wyatt Hills Subdivision (Weaver Creek Flow Diversion) projects. On these projects, we assisted our clients with the application of SEPA policy (Chapter 16.04), local critical areas regulations (Chapter 16.20), and stormwater management regulations (Chapter 15.20) to successfully authorize their projects.

We also understand how local code interacts with state and federal codes and regulations such as the Washington State Hydraulic Code, SEPA, Forest Practices Act, Growth Management Act (GMA), Shoreline Management Act, Coastal Zone Management, Endangered Species Act, Clean Water Act, National Historic Preservation Act Section 106 (Section 106), and other related regulations, permits, laws and processes.

We have demonstrated experience in development and land use planning. We use a multidisciplinary approach and recognize the unique character and issues of each community to successfully complete development projects. Our staff also has experience working with local jurisdictions to develop and implement regulations and code amendments. We have conducted local and regional research efforts on regulatory approaches, authored comprehensive plans, critical area regulations updates, provided evaluations of existing and proposed code language for GMA compliance, and drafted land use and environmental statutes and codes.

As an example of our regulatory experience, Confluence provided significant shoreline permitting and critical areas regulations support and leadership to the Washington State Department of Transportation (WSDOT) SR 520 Corridor Improvement and Floating Bridge Replacement for multiple jurisdictions along the SR 520 corridor.

We monitor new environmental laws, regulations, and court decisions, keeping current in an ever-changing regulatory climate.

## **History with the City of Bainbridge Island**

Confluence recently conducted services for the Winslow Grove Subdivision in the City of Bainbridge Island. This experience fostered our knowledge of local critical areas protection under Chapter 16.20, SEPA procedures under Chapter 16.04, and the importance that is placed on environmental protection in the City to preserve a quality of life that the community deeply values.

In addition, we recently completed a project to assist DeNova Northwest, LLC, with WDFW coordination and Hydraulic Project Approval (HPA) acquisition for a flow diversion to reduce peak flows in the lower reach of Weaver Creek on Bainbridge Island. This action was related to a proposed 19-lot development (Wyatt Hills Subdivision) as an alternative to a water quantity/quality facility that would impact a mature stand of trees. This flow diversion is proposed as a stand-alone project that would have benefits to the Weaver Creek system as well as preserving the existing trees at the development site.

Our proposed Certified Arborist, Katie Hogan of Tree Solutions, has conducted several projects within the City of Bainbridge Island, including working on the above-mentioned Winslow Grove Subdivision project.

## Experience in Cost-Effective Biological and Ecological Data Acquisition and Documentation

Confluence has years of experience conducting ecological assessments. With our mix of senior- and junior-level staff we have developed streamlined approaches and efficiencies that provide quality and value for our clients – from small lot developers to local, county, and state agencies. We are committed to working in an efficient manner to reduce costs, and to providing technically sound, innovative solutions that reduce client costs. We are successful in providing value to our clients through our technical expertise that enables us to apply our knowledge in an efficient manner, as well as through our approach to assigning team responsibilities. Our approach always is to right-size the mix of staff and effort to provide the most cost-effective and timely solutions to our clients.

Confluence maintains an outstanding reputation with our clients for responding quickly to multiple work authorizations, meeting production deadlines, and fulfilling requests reliably and within budget. We have many repeat clients that trust and rely upon our support services. The depth and versatility of our team of professionals enable us to respond quickly to work requests at initiation and throughout performance. Our team is solution-oriented and, in numerous situations, we have created practical solutions that saved time and minimized costs to our clients.

Our method of successful project delivery starts with an assessment of the project’s needs, then formulation of a strategy for assessing the project area, establishing objectives (e.g., for mitigation or restoration), complying with regulations, and ultimately finalizing design and obtaining all necessary permits or approvals. Throughout all phases of a project, working closely with the client and project team is essential for efficient and timely results.

We employ multiple project management techniques to ensure we remain cost efficient and within budget while delivering the highest-quality work products. Our specialized accounting software produces clear reports with information useful in tracking budget by task order and task. By submitting timesheets weekly, our project managers utilize these tracking tools with up-to-date information. Our project managers use these reports to ensure project teams are working within assigned budgets and to pro-actively identify a developing need for work efficiencies. Project managers and project teams work closely together throughout each task order, which facilitates the communication of available budget by task.

### THREE RECENT PROJECTS SIMILAR IN SCOPE

#### Ovenell Farm Wetland Delineation, City of Stanwood, WA, 2015 to Ongoing

The City of Stanwood’s Community Development Department is developing a master plan to convert a former dairy farm, the “Ovenell Farm,” into a park and historical site. To support the master planning process and future permitting for this project, Confluence conducted a critical areas study, including wetland and ordinary high water mark delineation.



*Palustrine wetland at the Ovenell Farm property.*

Confluence rated the wetlands using the 2014 Washington State Wetland Rating System for Western Washington. While conducting the delineations, Confluence also evaluated the site for mitigation opportunities and constraints. Confluence prepared a critical areas study report that met the requirements of the Stanwood Municipal Code, Washington State Department of Ecology, and the U.S. Army Corps of Engineers. This project also included an archaeological and architectural historical survey and assessment for the farm buildings, residence, and the original river dike and railway located onsite, all of which were determined eligible for the National Historic Register.

Confluence prepared a critical areas study report that included the results of the wetland and ordinary high water delineations and wetland ratings. The report also summarized the relevant regulations governing the delineated wetlands, ditches, and the Stillaguamish River on or adjacent to the site. We summarized the relevant permits potentially needed for the proposed park and discussed the potential mitigation opportunities on the site. Our findings and recommendations are integral to the continuation of the Ovenell Park master planning process.

**Proposed Key Staff Who Worked on the Project:** Chris Berger – Senior Ecologist, Kerrie McArthur – Senior Biologist, Scott White – Project Manager

**Project Budget:** \$19,000

**Reference:** Ryan C. Larsen, Community Development Director, City of Stanwood, 360.629.2181 x4509, [ryan.larsen@ci.stanwood.wa.us](mailto:ryan.larsen@ci.stanwood.wa.us)

## Habitat Management and Mitigation Plan and Tree Appraisal for Winslow Grove Subdivision, DeNova Northwest, LLC, Bainbridge Island, WA, 2015 – 2016

DeNova Northwest, LLC (DeNova), plans to install a stormwater facility outfall for the proposed Winslow Grove development site on Bainbridge Island, Washington. As the lead environmental consultant, Confluence assisted DeNova by preparing a habitat management plan and associated mitigation plans addressing the effects of placing a stormwater outfall within a stream buffer. Confluence conducted a field investigation to determine baseline conditions and ascertain potential effects of the proposed outfall, then developed the conceptual mitigation and monitoring plans to offset adverse effects to the stream buffer. Confluence also provided expert testimony to support the local hearing and SEPA appeal procedures.



*Hirawaka Creek on the Winslow Grove site.*

Under a separate contract with DeNova related to this proposed development, Tree Solutions arborist Katie Hogan completed a tree assessment on the property. Tree Solutions reviewed documents, maps, and plans, then conducted a site visit to inventory approximately 600 significant trees on site as well as trees on adjacent property with overhanging canopy that are scheduled for retention and protection through short plat development. Significant trees were tagged as needed. Tree Solutions also reviewed utility plans to determine minimum tree protection areas. The deliverable from this work was an arborist report with tree retention and protection recommendations.

**Proposed Key Staff Who Worked on the Project:** Chris Berger – Project Manager / Lead Ecologist, Lauren Odle – Staff Ecologist, Scott White – Principal in Charge; Katie Hogan – Certified Arborist,

**Project Budget:** \$8,875 for Confluence contract. \$7,000 for Tree Solutions contract.

**Reference:** John Everett, DeNova Northwest, LLC, 206.915.3095, john@denovanw.com

## Environmental Permitting for Industrial Property Development, Sierra Pacific Industries, Frederickson, WA, 2013 to Ongoing

Sierra Pacific Industries (SPI) developed industrial property in Frederickson, Washington. Confluence served as the lead consultant for site SEPA; critical areas studies; off-site wetland mitigation design and planning; Oregon white oak mitigation design and planning; environmental review; and local, state, and federal environmental permitting for the property. Confluence led the multi-disciplinary team from design of site development through design of on-site and off-site critical areas mitigation.



*Documenting white oak for preservation.*

SPI's goal was to meet required permitting for a 296-acre property proposed for industrial park and lumber mill development. Confluence led the following efforts: prepared SEPA checklists and JARPA applications to support the proposed developments; completed submittal of site development documents; prepared critical areas studies; negotiated jurisdictional determinations for on-site wetlands; managed cultural resource studies; developed plans and strategies for critical areas mitigation; managed traffic impact analyses as well as air and noise studies; coordinated with site survey and civil engineering to support project needs for site access and mitigation planning; and coordinated and managed permitting for local, state, and federal permits.

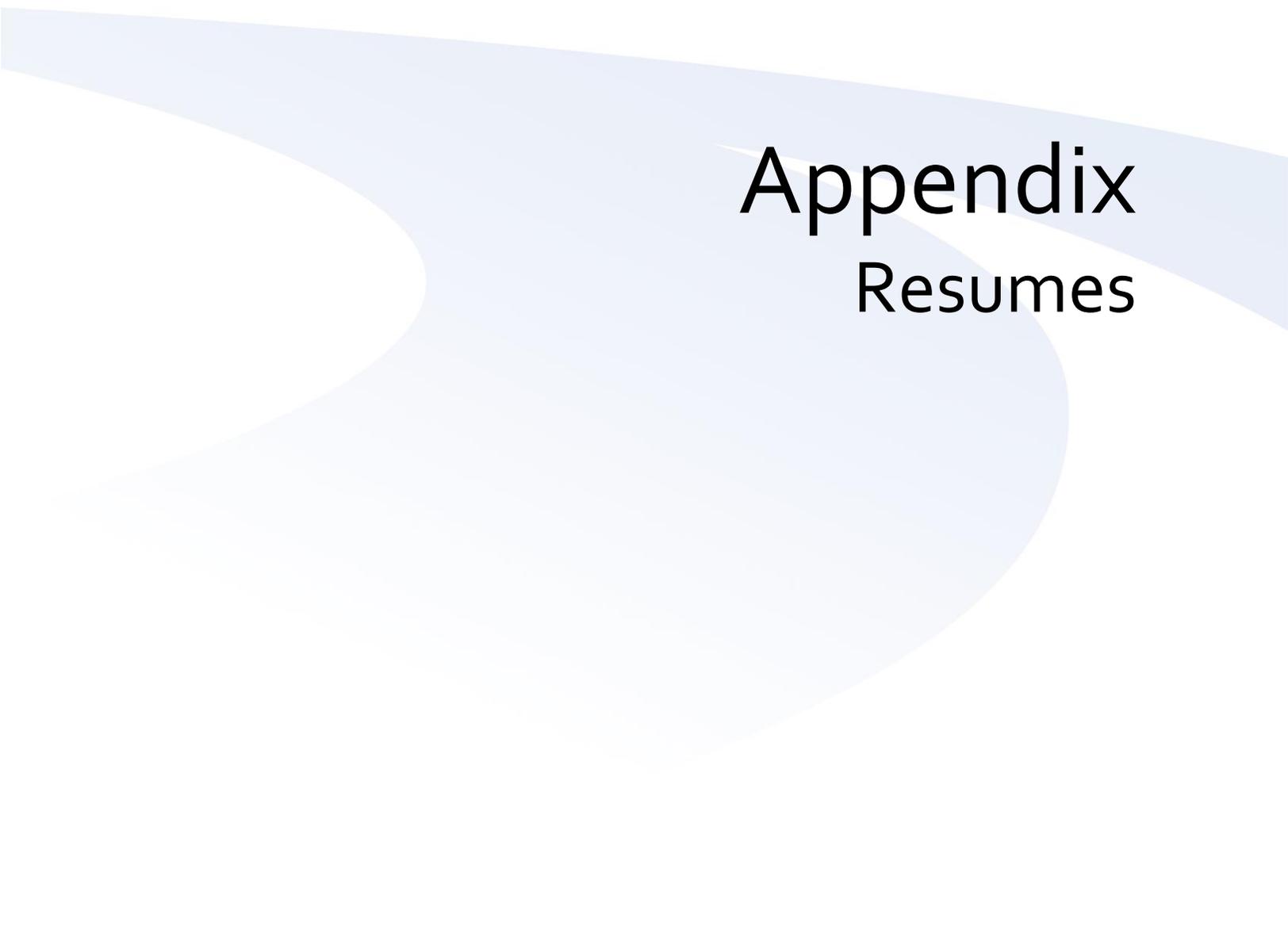
Confluence addressed the impacts of the proposed project on wetlands through development of conceptual mitigation plans utilizing Ecology's Credit/Debit tool. As part of the mitigation design, Confluence conducted critical areas studies and permitting on 40-acres of off-site property. In addition, Confluence has assisted SPI in identifying and designing off-site mitigation for impacts to Oregon White Oaks.

Sierra Pacific Industries has benefited from a unified approach to project development planning and critical areas mitigation. This approach provides a combination of on-site and off-site mitigation that supports the development of SPI's property and provides a cost-effective and ecologically beneficial solution to a variety of critical areas impacts.

**Proposed Key Staff Who Worked on the Project:** Kerrie McArthur – Project Manager, Lauren Odle – Staff Scientist

**Project Budget:** \$350,000 to date

**Reference:** Gary Blanc, Land Investment and Development, SPI, 530.378.8149; GBlanc@spi-ind.com

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# Appendix

## Resumes

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Chris has 19 years of experience in habitat biology, wetland and stream ecology, ecological restoration, and natural resources permitting / regulatory compliance. He applies his diverse skillset to a wide variety of project types, including capital improvement projects, land development, mitigation planning, third-party environmental review, and habitat restoration. Chris's experience in environmental planning and regulation has covered a wide variety of project types, from small residential developments to large-scale forestry proposals; from culvert replacements to floodplain restorations on large river systems; and from minor bridge replacements to major roadway corridor improvements. He has field expertise in wetland delineation, wetland rating and functional assessment, ordinary high water delineation, stream assessment, and impact assessment. Chris has many years of experience managing environmental projects, including overseeing junior staff members, providing technical review of work, and ensuring schedules are met and budgets upheld. Having worked in both the public and the private sector, he has a broad perspective that he applies constructively in interactions with consultants, contractors, and government agencies. He possesses a superb ability to communicate complex technical information to technical experts, the general public, stakeholder groups, and regulatory authorities alike.

## Representative Projects

### **Habitat Management and Mitigation Plan for Winslow Grove Subdivision, DeNova Northwest, LLC, City of Bainbridge Island, WA.**

*Project Manager.* Conducted field investigation to determine baseline conditions and determine potential impacts of proposed stormwater outfall in a riparian buffer for a proposed 19-lot plat. Oversaw the development of a Habitat Management Plan to mitigate the effects of the stormwater outfall on riparian buffer functions. Provided technical support and expert testimony at local hearing.

**Ovenell Wetland Delineation, City of Stanwood, WA.** *Senior Ecologist.* Conducted ecological field investigations and prepared critical areas study for the City of Stanwood's proposed Ovenell Farm park master plan. Field investigations included wetland delineation and rating, ordinary high water mark delineation, assessment of fish and wildlife habitat conservation areas, and identification of ecological mitigation opportunities. Prepared critical areas study documenting the findings of the field investigations, in addition to providing a planning-level summary of the regulatory framework for the proposed project and recommendation on compensatory mitigation opportunities and strategies.

**Technical Training Center Hamm Creek Mitigation Planning, Seattle City Light, Seattle, WA.** *Senior Ecologist.* Evaluated project site impacts and helped develop wetland mitigation conceptual design as part of overall site development plan for the Seattle City Light (SCL) Technical Training Center. Located on the Duwamish Waterway, the project involved rehabilitation of historic intertidal marsh and stream habitats to provide integrated salmonid habitat



*Role on Project: Project Manager*

#### EDUCATION

B.S., Conservation Biology, University of Wisconsin, Madison, WI, 1994  
Certificate, Wetland Science and Management, University of Washington, Seattle, WA, 1998

#### CERTIFICATIONS

Qualified Senior Writer for Biological Assessment, WSDOT, March 2013 (requalified)

#### EXPERTISE

Project Management  
Wetland / Freshwater Ecology  
Restoration / Mitigation  
Habitat Biology and Assessment  
Endangered Species Act  
Environmental Planning and Permitting  
Watershed Analysis

#### AFFILIATIONS

Society of Wetland Scientists, Member

with Hamm Creek and the Duwamish River. Coordinated closely with SCL personnel as well as architectural and civil design team to ensure on-site mitigation could be incorporated into overall site development.

**Island Crossing Endangered Species Act Assessment, GFK Consulting, Inc., Arlington, WA. Lead Wetland/Mitigation Biologist.** Prepared a critical areas study and mitigation plan for a site on the Stillaguamish River proposed for fill and development. The assessment evaluated 100 acres for the potential presence of Endangered Species Act (ESA)-listed species, the property's floodplain functions important to ESA-listed species (channel migration, large woody debris recruitment, bank stability, or riparian vegetation), and mitigation opportunities on- and off site. The assessment was used in determining the feasibility of site-altering activities, including development permits or a Federal Emergency Management Agency floodplain map amendment. The mitigation plan was developed to address the filling of several wetlands and existing floodplain storage by widening and enhancing the south slough corridor through the site to provide new wetland and floodplain storage in addition to riparian and instream habitat.

**State Route 520 Corridor Improvement and Bridge Replacement Program, WSDOT, Seattle to Redmond, and Grays Harbor, WA. ESA, Permitting, Mitigation Task Lead.** Serves as a key team member through the NEPA, ESA, mitigation planning, and permitting for the \$4.6 billion SR 520 Bridge Replacement Program. Provides technical review and input into the NEPA ecosystems discipline reports and supporting studies. Played a key role in developing a broad mitigation planning framework for the project as member of the Mitigation Technical Working Group, conducting a watershed based approach to identify several candidate sites based on appropriate opportunities for functional uplift. Served as a primary author for the biological assessment and continues to provide ongoing support for ESA compliance, including regular project updates and re-initiations with the federal Services. Provides ongoing management of a complex multi-agency permitting process for the project with the City of Seattle, WDFW, Ecology, Corps, and Coast Guard, and has permitted several ancillary prerequisite projects such as studies and exploratory activities. Participated in multiple technical working sessions with outside experts to investigate the potential project effects on focal species and habitats related to pile driving, juvenile fish migration, lake circulation, and water temperature. Played a lead role in characterizing and assessing impacts to wetlands and aquatic habitats for regulatory purposes and successfully advanced the impact assessment framework through technical work sessions with the relevant regulatory agencies and stakeholders. Facilitated jurisdictional determinations of wetland boundaries and OHWM determinations with regulatory agencies. Performed technical review for development of compensatory wetland mitigation proposals, was a primary author for the compensatory aquatic mitigation plan, and serves as an inter-disciplinary team member for the final design of compensatory mitigation projects. Participates in the integration of environmental requirements into construction Plans, Specifications, and Estimates. Coordinates environmental compliance with construction activities including environmental monitoring, fish exclusion, and change management with regulatory agencies.

**North Meander Slough Reconnection, Environmental Permitting and OHWM Delineation for Habitat Restoration, Silvana, WA. Lead Ecologist.** Managed the environmental studies and permitting for this complex habitat restoration project on a 55-acre site in the Stillaguamish floodplain. Conducted wetland and stream OHWM delineation, GPS survey, and mapping of the features using GIS and LIDAR. Conducted ratings and a functional assessment pursuant to Ecology methodologies, analyzing project impacts and developing mitigation measures, and preparing discipline reports such as a wetland study and biological assessment.



## KERRIE McARTHUR, PWS

*Confluence Senior Biologist*

Kerrie McArthur, Confluence senior biologist, has 22 years of experience specializing in conducting ecological assessments and evaluating impacts to fish and wetlands from development activities, regulatory permitting and associated mitigation, and restoration/mitigation design. She conducts wetland reconnaissance and delineations, aquatic and terrestrial habitat evaluation, wildlife research projects, biological assessments of threatened and endangered species, fisheries surveys, functional assessment of aquatic ecosystems, water quality monitoring, stream-channel characterization, and monitoring. Kerrie has written numerous wetland delineation reports, project-specific biological assessments, and aquatic and terrestrial plant and animal sections of SEPA/NEPA Environmental Impact Statements. She has developed mitigation plans for sensitive species and habitats including salmonids and wetlands.

### Representative Projects

**Ovenell Wetland Delineation, City of Stanwood, WA. Senior Biologist.**

Conducted a critical areas study, including wetland and OHWM delineation on the City's "Ovenell Farms" property, which the City is converting to a park and historical site. Prepared a critical areas report that meet the requirements of the Stanwood Municipal Code, Washington State Department of Ecology, and the U.S. Army Corps of Engineers.

**Bainbridge Island Beach Line Sewer Rehabilitation, BHC Consultants, LLC, Bainbridge Island, WA. Project Scientist.**

Evaluated four options of a sewer line repair located in a beach for permitting and mitigation requirements. Each option was evaluated to determine what local, state, and federal permits would be required, the types of studies required to obtain permits, the level of effort each study would require, and likely mitigation requirements. This information was used in conjunction with other evaluations (e.g. construction costs) by the City of Bainbridge Island to prioritize the four options.

**Frederickson Industrial Park Development Permitting, Sierra Pacific Industries, Frederickson, WA. Project Manager/Senior Biologist.**

Managed and conducted a critical areas study on 290-acres of grazed pastureland and forest proposed for industrial development and mitigation area. Wetland delineation consisted of characterizing difficult soils and grazed vegetation. Prepared Critical Areas Study, conceptual mitigation plan for the creation and enhancement of 35 acres, SEPA checklist, JARPA and County permitting package. Provided project management for multidisciplinary team.



*Role on Project: Lead Habitat Biologist*

#### EDUCATION

B.S., Biological Oceanography, Minor in Fisheries, University of Washington, Seattle, WA, 1995

#### CERTIFICATIONS

Professional Wetland Scientist, #2655, Society of Wetland Scientists, 2016  
Qualified Senior Writer for Biological Assessment, WSDOT, March 2013 (requalified)  
Certified Fisheries Professional, American Fisheries Society, No. 3280, 2006-present  
Forage Fish Spawning Habitat Surveyor, WDFW, 2006

#### EXPERTISE

Habitat Assessment  
Wetland Delineation  
Mitigation Monitoring  
Plant, Fish, and Wildlife Surveys  
Water Quality Monitoring

#### AFFILIATIONS

Society of Wetland Scientists, 2008-present  
Society for Ecological Restoration, 2012-present

**Wittman-Kent Property Development Critical Areas Study, JR Merritt Construction, Kent, WA. Project Manager/Senior Biologist.** Conducted a wetland delineation and ordinary high water mark (OHWM) survey on a 64-acre property near to Lake Youngs in King County, WA. First conducted a desktop analysis of online databases to determine the likelihood that critical areas would be present onsite. This strategy allowed a more accurate determination of the level of effort needed to conduct the critical areas study. Delineation was conducted using the 1987 Corps of Engineers Wetlands Delineation Manual and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region. Delineated the wetland edge using flagging and differential Global Positioning System. Determined OHWM according to methods in Ecology's Determining the Ordinary High Water Mark on Streams in Washington State.

**Technical Training Center Hamm Creek Mitigation Planning, Seattle City Light, Seattle, WA. Senior Biologist.** Located on the Duwamish Waterway, the project involved rehabilitation of historic intertidal marsh and stream habitats to provide integrated salmonid habitat with Hamm Creek and the Duwamish River. Assisted in evaluating feasibility and cost effectiveness of alternative restoration strategies. Contributed to development of wetland mitigation conceptual design as part of overall site development plan for the Seattle City Light Technical Training Center. Identified plants species appropriate for carrying levels of inundation and salinity.

**Hi Echo Housing Development Wetland Verifications, Delineations and Mitigation Plans, Sergey Garkusha, Snohomish, WA. Project Manager.** Conducted wetland boundary verifications and delineations on 13 lots within the Hi Echo Development. Followed the Corps Wetlands Delineation Manual (1987) and the local Regional Supplement (Corps 2010). Wetland functions were evaluated using the Western Washington Wetland Rating System (Hruby 2004 and 2014) for a proposed housing developments. Delineated wetland boundaries using flagging and used GPS with submeter accuracy to locate the wetland boundaries. Wrote delineation and mitigation reports. Mitigation options included buffer averaging, wetland and wetland buffer enhancement, and use of the local mitigation bank.

**Critical Area Studies, Numerous Developers, Snohomish County, WA. Project Manager.** Managed and conducted numerous critical area studies in Snohomish County, delineating wetlands and ordinary high water marks. For each project, evaluated mitigation opportunities, constraints, and feasibility for impacts using a watershed approach, including evaluating the use of mitigation banks. Depending on the project location and impact, mitigation included on-site mitigation and mitigation banks or a combination of both.

**Des Moines Creek Restoration Opportunities and Constraints, Port of Seattle, Des Moines, WA. Senior Biologist.** Conducted stream channel surveys, large woody debris surveys, fish habitat assessments, and geomorphic surveys in the lower 3 miles of Des Moines Creek to evaluate habitat conditions and potential restoration opportunities within the Port owned property. Evaluated stream water temperature and groundwater temperature data to determine the feasibility of augmenting low flow conditions with groundwater to improve water temperature for resident and anadromous fish using the creek. Prepared reports describing the results of the surveys and results of the low flow augmentation analysis. Assisted in preparing report describing the restoration opportunities and constraints at the site

**Lower Russell Road Levee Setback, King County, Kent, WA. Senior Biologist.** Conducted wetland delineation and wetland rating on a 68-acre site, and OHWM delineation and riparian habitat and large woody debris analysis along 1.4 miles of the Green River. Prepared report following King County requirements. Project goal is to replace the existing flood containment system of levee and revetments with a new flood protection system designed to current engineering standards and improve riparian and aquatic habitat. The information collected during the wetland delineation and riparian habitat analysis was used to evaluate mitigation opportunities and project constraints.

Lauren is a highly versatile staff ecologist at Confluence. She routinely conducts fieldwork and research in support of projects in a range of natural and built environments, including marine, freshwater, and wetland systems. She has performed a number of wetland delineation and ratings, monitored various mitigation sites, and has prepared permit applications and environmental documentation, including SEPA checklists, HPA permits, and JARPA forms. Lauren uses her knowledge in the habitat requirements and biology of fish, aquatic invertebrates, and native plant species to aid in the writing of local best available science updates and Biological Assessments. She has strong organizational skills she employs for activities such as report preparation, document production, and project archiving. She also has experience synthesizing data to create technical maps and graphics in GIS for support of SEPA and permitting documentation.

## Representative Projects

### **Habitat Management and Mitigation Plan for Winslow Grove Subdivision, DeNova Northwest, LLC, City of Bainbridge Island, WA.**

*Staff Ecologist.* Conducted field investigation to determine baseline conditions and determine potential impacts of proposed stormwater outfall in a riparian buffer for a proposed 19-lot plat. Researched Bainbridge Island Municipal Code requirements and prepared a Habitat Management Plan report to mitigate the effects of the stormwater outfall on riparian buffer functions.

**Frederickson Industrial Park Critical Area Study, Sierra Pacific Industries, Frederickson, WA.** *Staff Scientist.* Supported a critical area study for potential land development on a 250-acre site proposed for use as an industrial park. Assisted with wetland delineation following the guidelines of the Corps of Engineers Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual. Characterized soil type and hydrology and identified plants by species in test plots. Wrote test plot descriptions and produced all deliverables for Pierce County review.

**Wittman-Kent Property Development Critical Areas Study, JR Merritt Construction, Kent, WA.** *Staff Ecologist.* Assisted on a critical areas study on a 64-acre parcel near to Lake Youngs in King County, WA. The wetland delineation followed the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region. Delineated the wetland edge using flagging and differential Global Positioning System. The work included characterizing soil type as



*Role on Project: Staff Ecologist*

### EDUCATION

B.S., Environmental Science., Western Washington University, Bellingham, WA, 2013

### EXPERTISE

Wetland Delineation and Rating  
Aquatic Habitat Assessment  
Water Quality Monitoring  
Marine Ecology  
Fish Exclusion and Handling

### ADDITIONAL TRAINING

U.S. Army Corps of Engineers Wetland Delineation Certification, Wetland Training Institute, Inc., 2014  
Using the Revised Washington State Wetland Rating System in Western Washington, Coastal Training Program Washington, 2015  
Tree and Shrub Identification for Western Washington Puget Lowland Habitats, Coastal Training Program Washington, 2015  
Technical Writing, Bellevue College, 2015

well as hydrology and identifying plant species for test plots. Delineated the wetland edge using flagging and used GPS to record the wetland boundaries. Wetland functions were evaluated using 2006 Washington State Department of Ecology's Wetland Rating system for Western Washington. Analyzed elevation data and prepared critical area boundary and buffer figures using GIS.

**Lower Russell Road Levee Setback, King County, Kent, WA. Staff Ecologist.** Conducted wetland delineation and rating on a 68-acre site. Assisted in preparing a report following King County requirements. The primary project goal is to replace the existing flood containment system of levee and revetments with a new flood protection system designed to current engineering standards and that will improve riparian and aquatic habitat. Information collected during the wetland delineation was used to evaluate mitigation opportunities and project constraints.

**Squaxin Island Comprehensive Biological Recovery Plan, Squaxin Island Tribe, Thurston County, WA. Staff Scientist/GIS Technician.** Prepared a summary of recent research on the effects of water flow on temperature in stream systems. Included examples of how relevant Total Maximum Daily Load reports proposed treating high water temperature with increased water amount and flow. Created a report on the life cycle of coho salmon and their specific usage of the Deschutes River during each stage of life. Compiled watershed data from previous technical reports into a GIS database to present to the client.

**Mitigation Maintenance Site Monitoring, King County Wastewater Treatment Division, Various Locations, WA. Staff Ecologist.** Monitored several King County Wastewater Treatment Division mitigation sites to assure proper maintenance of growing vegetation. Corresponded directly with King County officials regarding mitigation site progress and suggested next steps for maintenance crews.

**Critical Area Studies, Numerous Developers, Snohomish and King County, WA. Staff Scientist.** Conducted wetland boundary verifications and delineated wetlands and ordinary high water marks on multiple lots. Followed the Corps Wetlands Delineation Manual (1987) and the local Regional Supplement (Corps 2010). Wetland functions were evaluated using the Western Washington Wetland Rating System (Hruby 2004) for proposed housing developments. Delineated wetland boundaries using flagging and used GPS with submeter accuracy to locate the wetland boundaries. Wrote delineation and mitigation reports.

**Critical Areas Monitoring, Alderwood Water and Wastewater District, Snohomish County, WA. Staff Scientist.** Conducted wetland mitigation site monitoring at four sites in Snohomish County. Sites were planted in fall of 2014. Set up monitoring transects and quadrats to collect data on native and invasive species cover to track annual monitoring goals. Collected preliminary monitoring data in the spring and final data in the fall. Submitted reports to the client to meet Snohomish County monitoring requirements. Made adaptive management suggestions regarding additional plantings, fencing, and maintenance.

## KATIE HOGAN

*Tree Solutions, Inc., Associate*

Katie Hogan, associate with Tree Solutions, Inc., graduated from the University of Washington in 2012 with a degree in Environmental Studies. Katie has studied native forest dynamics and pathology in Washington, Oregon, California, and Utah. She specializes in plant pathogens, habitat quantification, native and rare plant identification, field sampling techniques, and fire ecology. She strives to practice interdisciplinary environmental management and hopes to increase community awareness through education and research. She is an ISA Certified Arborist (PN-8078A) and ISA Qualified Tree Risk Assessor.

### Representative Projects

**Winslow Grove, DeNova Northwest, LLC, Bainbridge Island, WA, April 2016.** Inventoried, assessed, and appraised over 600 trees. Reviewed utility plans to determine minimum tree protection areas. Prepared arborist report with tree retention and protection recommendations.

**Wyatt Way Project, SvR Design Company, Bainbridge Island, WA, October 2016.** Documented tree identification number, DSH, species, root crown/flare diameter, critical root zone diameter, branching height, drip lines, risk potential, grove status, management recommendations, preservation value, species disturbance tolerance, and storm damage notes, as well as basic health and structural condition.

**City of Sammamish, On-Call Arborist Contract, Sammamish, WA, August 2016.** Assessed overall forest condition including identification of root disease pockets and high retention value trees and understory. Prepared report and site map depicting forest characteristics.

**Bellevue Airfield Park, Walker Macy, Bellevue, WA, October 2015.** Inventoried and assessed over 900 trees in undeveloped area. Provided recommendations for developing park and trail system in a manner that would have the least impact on overall forest health.

**North Campus Housing Project, University of Washington, Seattle, WA, March 2015.** Inventoried and assessed campus trees; Prepared report and detailed tree protection specification. Conducted follow-up site inspections to consult on tree protection and improvements that should be implemented.

**Westlake, The Midby Company, Seattle, WA, December 2015.** Inventoried and assessed trees on steep slope. Conducted exceptional tree and grove identification. Attended meetings with project team and city planners to determine how to best develop property around high-value trees.



*Role: Certified Arborist*

#### EDUCATION

B.A., Environmental Studies, University of Washington, Seattle, 2012

#### CERTIFICATIONS

ISA Certified Arborist, #PN-8078A  
ISA Qualified Tree Risk Assessor

#### SPECIALIZED EDUCATION

2016 Urban Forest Symposium:  
Sustaining Urban Forest During  
Densification  
2016 Defensible Tree Appraisal  
2016 Bartlett Tree Experts Client Seminar  
2015 PNW-ISA Annual Training  
Conference  
2015 Developing Field Assessment Skills  
for Common PNW Tree Diseases

#### EXPERTISE

Forest inventory and assessments  
Plant pathogen and insect identification  
Tree preservation on construction sites  
Tree risk assessments  
Plant and tree identification  
Landscape and vegetation management  
Native plant restoration  
Tree valuation and appraisal  
Stormwater assessments  
Aerial tree assessments  
Advanced decay testing including:  
- sonic tomography  
- micro-resistance drill testing  
- static integrated pull testing

**University of Washington Bothell Campus, Bothell, WA, March 2016.** Inventoried trees in area of proposed development. Assessed trees for risk pre- and post-development. Produced appraisal value for trees.

**Redmond Town Center, Lowe Enterprises, Redmond, WA, November 2015.** Prepared arborist report per City of Redmond Municipal Code including trees that will be removed, retained and impacted by proposed development. Prepared extensive correspondence with project team regarding tree retention and tree planting recommendations.

**Meany Middle School, Seattle Public Schools, Seattle, WA, August 2016.** Inventoried trees. Prepared documents for removal of hazardous trees. Met with project team to determine methods for installing utilities and removing existing impervious surfaces around trees without impacting tree health and structure.

**City of Bellevue, On-Call Arborist Contract, Bellevue, WA, 2014-present.** Conducted numerous appraisals for trees illegally removed or damaged using the Guide for Plant Appraisal. Performed basic and advanced risk assessments of trees within City of Bellevue property.

**Yard-Smart Rain Rewards, Kirkland Residential Stormwater Outreach Program, Kirkland, WA, September 2016.** Conducted site visits with homeowners to provide recommendations for installing green stormwater infrastructure. Trained and oversaw outreach staff. Reviewed reports.

**Maple Ridge, DeNova Northwest, Renton, WA, July 2016.** Inventoried and assessed over 1,000 trees to determine development potential for site.

**Faul LLC, Seattle, WA, July 2016.** Assessed site for hazardous trees, high-value trees, and native understory species. Provided low-impact-development recommendations for ecologically sensitive development. Met with contractor and project team on site to ensure valuable trees and plants are retained during site clearing.

**Northwest Team Building, City of Bellevue Parks, Bellevue, WA, July 2016.** Conducted bi-annual course and ground level inspection of active zip line course. Assessed potential risk to course from surrounding trees. Provided cultural recommendations to maintain healthy forest conditions including mulching and native plantings.

**Brookacres, Brookacres Homeowner's Association, Edmonds, WA, September 2015.** Completed bi-annual inspection of Homeowner's Association to update annual tree management plan. Provided recommendations for maintaining healthy forest conditions. Produced risk assessments and removal applications.

**Playfield Construction, Villa Academy, Seattle, WA, February 2015.** Inventoried trees within and surrounding area of proposed playfield construction. Identified exceptional trees and groves. Reviewed plans and provided tree protection recommendations. Reviewed proposed landscape plans and provided recommendations for species and planting.

**Finn Hill Meadows, Northshore Utility District, Kirkland, WA, September 2016.** Performed site inspection during excavation for sewer line near large conifer tree to determine whether tree could be retained. Provided recommendations for monitoring tree.

## SCOTT WHITE

*Confluence Principal Environmental Planner and President*

Scott White, principal environmental planner and president of Confluence, provides leadership and strategy to planning and permitting efforts in support of development, transportation, and other capital projects for state and municipal agencies and private developers. Scott has worked since 1997 as a planner and environmental professional, and has extensive experience in transportation, habitat restoration, surface water, agricultural, and rural/urban land use and development proposals. Scott maintains in-depth knowledge of local, state, and federal laws, regulations, and policies relating to transportation, land use, surface water, and natural resource management. Scott is an expert with excellent client relationships. He has a long track record of success in negotiating with permitting and regulatory agencies on behalf of both public and private clients, and has earned a high level of professional respect and credibility with agency staff. Scott is a dynamic and highly motivated leader who delivers results by effectively managing and coordinating diverse multidisciplinary teams.

### Representative Projects

**Habitat Management and Mitigation Plan for Winslow Grove Subdivision, DeNova Northwest, LLC, City of Bainbridge Island, WA.**

*Principal in Charge.* Provided oversight for project to develop a Habitat Management Plan to mitigate the effects of the stormwater outfall on riparian buffer functions. The proposed stormwater outfall was part of the design for proposed development of a 19-lot plat.

**Weaver Creek Flow Diversion Project for the Wyatt Hill Subdivision, DeNova Northwest, LLC, City of Bainbridge Island, WA. Project Manager.**

Provided permitting assistance for a proposed 19-lot development in the City of Bainbridge Island. A Hydraulic Project Approval (HPA) was required for a flow diversion to reduce peak flows in the lower reach of Weaver Creek, a strategy proposed as an alternative to an onsite water quality/quantity facility (the topography of the site necessitated the location of the facility in a mature stand of trees). Conducted site visit and prepared HPA submittal materials, including JARPA and supporting stream and aquatic life assessment report.

**On-Call Environmental Services and Ovenell Wetland Delineation, City of Stanwood, WA. Project Manager.**

Managing a number of on-call work authorizations for the City's Community Development Department. Successfully completed projects include a critical areas study, including wetland and ordinary high water mark delineation on the City's "Ovenell Farms" property, which the City is converting to a park and historical site. The project resulted in a report that meets the requirements of the Stanwood Municipal Code, Washington State Department of Ecology (Ecology), and the U.S. Army Corps of Engineers (Corps). This project included an archeological and architectural historical survey and assessment for the farm buildings, residence, and the original river dike and railway located onsite, all of which were determined eligible for the National Historic Register. Other



*Role on Project: Principal in Charge*

#### EDUCATION

B.A., Economics/ Political Science,  
Western Washington University,  
Bellingham, 1995

#### CERTIFICATIONS

Wetland Identification/Delineation,  
Everett Community College, 2000

#### EXPERTISE

Project and Program Management  
Environmental Planning and Permitting  
Environmental Documentation  
ESA Consultation  
Public Outreach  
Cultural Resources  
Transportation and Development  
Planning

work orders under this on-call included the Pioneer Highway Water Main Replacement HPA entailing preparation of a JARPA permit application and the Irvine Slough Permitting Project, entailing preparation of HPA, Corps Nationwide Permit 3, Ecology Section 401 Letter of Verification.

**SR 520 Corridor Improvement and Bridge Replacement Program, WSDOT, Seattle, WA.** *Regulatory Compliance Manager and Permitting Lead.* Managed permit acquisition, regulatory compliance, and environmental project delivery for this \$4.6 billion Program. Provided leadership and strategic planning for permitting, mitigation, ESA, and NEPA/SEPA. Worked with and obtained permitting and related approvals from over 20 different agencies and jurisdictions, including Seattle, Medina, Bellevue, and King County. The Program also included numerous field investigatory, restoration, and construction-related support projects. Developed the overall permit strategy and schedule for the Program for both Design/Bid/Build and Design/Build projects. Managed agency/stakeholder coordination and negotiation for natural and built environment permits, approvals, and compliance certifications.

**Island Crossing Endangered Species Act Assessment, GFK Consulting, Inc., Arlington, WA.** *Project Manager.* Conducted an Endangered Species Act (ESA) Site and Impact Assessment for the possible fill and development of a portion of the Stillaguamish River. Following that assessment prepared a critical areas study and mitigation plan for the site. The assessment evaluated 100 acres for the potential presence of ESA-listed species, the property's floodplain functions important to ESA-listed species (channel migration, LWD recruitment, bank stability, or riparian vegetation), and mitigation opportunities on and off site. The assessment was used in determining the feasibility of site-altering activities, including development permits or a Federal Emergency Management Agency (FEMA) floodplain map amendment. The mitigation plan was developed to address the filling of several wetlands and existing floodplain storage by widening and enhancing the south slough corridor through the site to provide new wetlands and floodplain storage in addition to riparian and instream habitat.

**McSorley Creek Pocket Estuary Restoration Project at Saltwater State Park, King County, Des Moines, WA.** *Project Manager.* This project will redesign and reconstruct the beach front, nearshore, tributary stream, and park layout of Saltwater State Park to enhance habitat for salmon, protect CCC-era structures and tribal resources, and create a better recreational park experience. Scott is managing all aspects of the project to deliver a robust site investigation, an alternatives analysis, preliminary and final design, cultural resources assessment, NEPA/SEPA review, and permitting. Planned and facilitated outreach to stakeholders including local affected tribes, park users, citizens, and other agency stakeholders. Also planned and facilitated design workshops as well as open houses for the general public, and developed mail and website outreach materials.

**Historic Resources Survey and Inventory of the University of Washington (UW) Seattle Campus, City of Seattle, Seattle, WA.** *Principal in Charge.* Providing oversight for this multidisciplinary and multifaceted project to complete an intensive-level survey and inventory that will include research and field investigations for all resources constructed prior to 1975: nearly 170 buildings and structures, 58 sculptural objects, and approximately two dozen landscape features. The survey and inventory will provide a framework for evaluating building, objects, and landscape elements in compliance with regulations, and will aid in the preservation of the University's built legacy and updating the present Campus Master Plan.

**Critical Areas Monitoring Plan, Alderwood Water Wastewater District, Lynnwood, WA.** *Project Manager.* Managing project to provide monitoring and reporting on post-construction restoration of critical areas associated with AWWD constructions projects (e.g. stream, wetlands, and associated buffers). Providing direction to the District for corrective actions and reporting to permitting agencies. Reviewed and revised the AWWD *Critical Areas/Landscape Monitoring Plan* to ensure performance measures were appropriate and could be met.





City of Bainbridge Island

# Ecological Assessment Services for Suzuki Property



09.23.16 | Statement of Qualifications



5309 Shilshole Avenue NW  
Suite 200  
Seattle, WA 98107  
206.789.9658 phone  
206.789.9684 fax

[www.esassoc.com](http://www.esassoc.com)

September 23, 2016

Gary Christensen  
City of Bainbridge Island  
Department of Planning & Community Development  
280 Madison Avenue North  
Bainbridge Island, WA 98110

**Subject: Ecological Assessment Services for Suzuki Property**

Dear Gary:

The proposed “Suzuki Farm” development is a unique opportunity to create affordable, energy efficient, and community-centered housing on Bainbridge Island, while maintaining ecological features that are important to the Island’s natural environment. A thorough and scientifically-defensible ecological assessment of the property will provide the baseline of existing conditions needed to start the development design process and meet City Council goals.

Environmental Science Associates (ESA) is thrilled to have this opportunity to work with you on this project. Our wildlife and fisheries biologists have extensive experience in evaluating terrestrial and aquatic habitats and species throughout the Puget Sound region, and regularly support site development proposals and plans. We also are familiar with your community and its ecological resources, as our project team has provided habitat assessments for several other projects on Bainbridge Island.

In addition, our biologists, working closely with our GIS staff, bring added value to the project by developing written and visual materials that will effectively translate scientific findings and ecological concepts to decision makers and the public-at-large. This ability to not only categorize ecological resources, but to place them in an understandable context, will aid in effective communication and outreach.

For this important effort we propose to team with Tree Solutions, Inc., a firm that has successfully worked as the arborist on over 20 projects for the City. Our team is available and motivated to conduct the work in an efficient and cost-effective manner. Serving as your project manager, I will bring my ecological assessment experience and leadership skills to ensure our enthusiasm and commitment are evidence in every step of the process and in the quality of the final products. Overall, our team has the expertise and experience you require and the commitment to work with you to efficiently achieve the project goals.

We look forward to your review of our Statement of Qualifications and thank you for your consideration. Please contact me at 206.789.9658 or [amerrill@esassoc.com](mailto:amerrill@esassoc.com) if you have any questions or would like additional information.

Sincerely,  
ESA

A handwritten signature in blue ink that reads "Adam Merrill". The signature is written in a cursive, flowing style.

Adam Merrill  
Project Manager & Senior Scientist

## Section 1

# Firm Profile

### Prime Consultant

Environmental Science Associates (ESA) is a multidisciplinary environmental consulting firm founded in 1969 with local offices in Seattle and Portland. ESA's Seattle office staff specialize in:

- Fisheries & wildlife biology;
- Wetland/riparian ecology;
- Watershed planning;
- Land use planning;
- Mitigation & restoration design;
- Public outreach;
- Water resources engineering;
- Permitting & regulatory compliance;
- State & National Environmental Policy Act (SEPA & NEPA) documentation;
- Geomorphology & hydrology;
- Floodplain dynamics;
- Cultural resources services; and
- Geologic Information Systems (GIS) analysis.

We understand federal, state, and local laws, policies, and regulations, and work well with government agencies, tribes, and other stakeholders on projects of varying size and complexity.

ESA's fisheries and wildlife biologists are skilled at conducting surveys and habitat assessments for fish, amphibians, birds, and small and large mammals. We offer expertise in evaluating a wide variety of wildlife habitats and species for projects in urban and rural environments across the region. Our biologists regularly support site development proposals and plans, conduct wildlife evaluations, and assess habitat conditions for both public and private sector clients. ESA also assists local government in developing policies, regulations, and other strategies for managing fish and wildlife habitat, ranging from site-specific management recommendations to regionally-recognized habitat management plans.



ESA has teamed with Tree Solutions, Inc. to provide the suite of services necessary for the Suzuki Property ecological assessment.

### Subconsultant

Tree Solutions, Inc. is a Seattle-based environmental consulting firm that focuses on tree management throughout the Pacific Northwest. Tree Solutions Inc. is a Washington corporation, originally established as Scott D. Baker Consulting Arborists in 2001, and incorporated in April 2003. Tree Solutions currently has ten employees, all in the Pacific Northwest, offering these specialized services:

- Tree risk evaluation, diagnostics, health management, & retention;
- Tree inventories, management plans, restoration and planting plans;
- Tree and landscape appraisals; and
- Tree treatments: growth regulators, systemic insecticides and fungicides.

## Section 2

# Team Qualifications

*ESA offers the City of Bainbridge Island a team of experts in wildlife habitat assessment, fisheries biology, arboriculture, and GIS data analysis and mapping. The team will be led by Adam Merrill, who will be your primary point of contact. Adam's extensive experience in analyzing ecological data and reviewing development proposals for compliance with environmental regulations provides him the insight to adeptly guide decision making on this project. He will effectively facilitate internal and client communication and ensure the delivery of a habitat assessment that meets the City's objectives.*

*Adam will be supported by the team members as shown below; team member resumes are attached to this SOQ.*

### Key Staff



#### Adam Merrill | Project Manager & Senior Scientist

Adam has over 12 years of experience in natural resource management in the Pacific Northwest, with a focus on science-based land use planning. He manages and supports a diverse set of interdisciplinary projects involving environmental permitting and compliance, aquatic habitat and watershed restoration, and community land use planning. For municipal clients throughout the Puget Sound region, Adam regularly provides expert third-party review of development proposals, to ensure compliance with cities' wetland, stream, and wildlife habitat regulations. As evident through his watershed characterization and land use planning work, Adam is adept at gathering and analyzing habitat and species data to develop workable strategies to accommodate development while maintaining habitat quality. Adam is highly experienced working closely and directly with clients, staff from regulatory agencies, and the public on complex and controversial projects.



#### Jim Keany | Wildlife Habitat Biologist

Jim brings over 32 years of experience in environmental research, with an emphasis on wildlife management, natural resources inventories, and restoration ecology. He has a diverse background with experience in terrestrial habitat surveys; landscape level analysis; wetlands inventory, delineation and mitigation; and endangered species surveys and biological assessment preparation. Jim has conducted hundreds of wildlife surveys and habitat assessments throughout the northwest, from small sites to comprehensive habitat assessments covering thousands of acres. Jim's primary role for the Suzuki Property ecological assessment project will be to develop the habitat assessment protocols and lead the field data collection effort. Additionally, Jim will assist Adam in using the collected data to develop specific recommendations to protect ecological features and wildlife species, based upon the proposed development design.

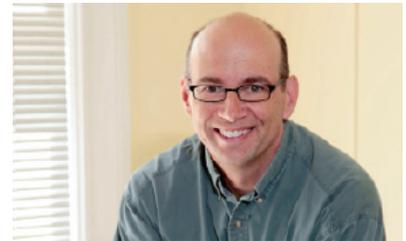
## Pete Lawson | Fisheries Biologist

Pete is a senior fisheries biologist with over 19 years of experience managing and executing projects in the disciplines of fisheries biology. He has performed extensive field studies and has knowledge of the life history and ecology of Pacific salmonids and the relationships of these species with physical instream habitat. Pete has assessed and characterized physical and chemical fish habitat parameters and is well versed in habitat and population-level assessment techniques. He has designed mitigation to offset project impacts to instream, riparian, and wetland habitat. Pete's role in this project will be to assess the habitat conditions of the onsite stream, and assist Adam in developing recommendations for onsite riparian habitat and downstream fish resources.



## Eric Schniewind | Geologist

Eric has over 20 years of experience as a geologist, hydrogeologist, and hydrologist with projects completed throughout the west coast in Washington, Oregon, and California. His projects have included aquifer recharge storage basins, groundwater management plans, septic systems, County-wide planning evaluations, and stormwater management features. Eric has analyzed and reviewed a wide variety of geotechnical issues and hazards in preparation of environmental review documents that range from site specific studies to watershed-based evaluations. For this project, Eric will analyze the aquifer recharge potential of the Suzuki Property, and provide recommendations for avoiding potential impacts to reservoirs.



## Jonathan Kemp | GIS Analyst

Jonathan (Jonny) is a GIS Analyst bringing 4 years of experience in analyzing visual data, spatial analytics, and providing GIS support for a variety of projects. Jonny possesses a unique agility in learning software and techniques to solve new and challenging spatial problems. Using ESRI and Open Source Geospatial software he has performed spatial analysis and created dynamic maps and graphics suited specifically toward each project's needs. Johnny will support the ecological assessment efforts by managing the geospatial data collected for this project, as well as producing the survey map and figures that will support the written report.



## Katie Hogan, CA | Certified Arborist

Katie is an associate with Tree Solutions, Inc. She brings 4 years of consulting experience. Katie has studied native forest dynamics and pathology in Washington, Oregon, California, and Utah. She specializes in plant pathogens, habitat quantification, native and rare plant identification, field sampling techniques, and fire ecology. She strives to practice interdisciplinary environmental management and hopes to increase community awareness through education and research. She is an ISA Certified Arborist (PN-8078A) and ISA Qualified Tree Risk Assessor.



## Recent Relevant Project Examples

*The following recent project examples demonstrate our team's experience with projects that represent many of the same capabilities required for the Suzuki Property ecological assessment project. Our team has a track record of delivering high-quality work products on-time and within budget. Please feel free to contact the references listed at the end of this section to verify their level of satisfaction with our past performance.*



**Client:** Taylor Development

**Key Staff & Role**

- Jim Keany, Project Manager

**Budget:** \$5,000 (Phase I) &  
\$67,480 (Phase II)

**Reference**

Kevin O'Brian, Taylor Development,  
425.869.1300, ko@taylordev.com

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### Oak Tree Habitat Management Plan & Preserve

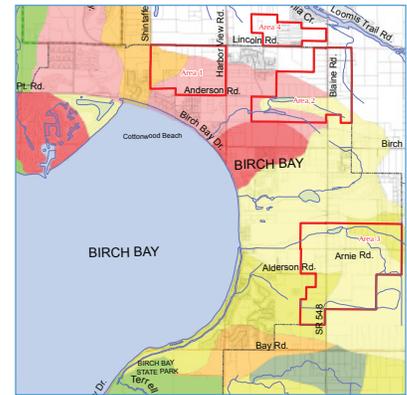
**Description of the Work:** A developer in Thurston County proposed construction of single-family residences on a 200-acre site containing Garry oak habitat. Rare Garry oak habitats are regulated as a type of critical area by Thurston County, and are therefore a major issue in terms of planning a residential development and proposing mitigation measures. ESA managed and participated in a reconnaissance of the property to map the quality and extent of oak habitats. ESA then applied a scoring system developed by the Washington State Department of Natural Resources to evaluate the quality of oak habitats based on factors such as invasive species, oak canopy coverage, surrounding land uses, and others. The rating system was applied as a cost-effective, rapid assessment tool to provide data for the long-term oak habitat management plan. After approval of this method by the County, ESA assisted the client with an oak tree survey and development of an oak habitat management plan that included preserving oak stands, removal of over-topping conifers, weed control, and restoration of select areas.

Currently ESA is assisting with creation of an Oak Tree Preserve at a development site in Thurston County. Services include creation and implementation of a Habitat Management Plan, as well as baseline and long-term habitat monitoring. In addition to authoring the improved Habitat Management Plan for the Oak Tree Preserve Site, ESA staff also oversaw baseline environmental monitoring on-site to determine habitat quality and made recommendations to preserve important habitat components and improve degraded habitat. ESA's staff is slated to conduct long-term environmental monitoring on this site to document site success.

## Birch Bay Watershed Characterization

**Description of the Work:** ESA led an Ecology- and EPA-funded pilot study of the Birch Bay watershed in Whatcom County. This project was one of several efforts sponsored by the multi-agency Watershed Group as part of the state’s “Mitigation That Works” initiative. This study applied watershed characterization tools developed by Ecology and habitat assessment models developed by the Washington Department of Fish and Wildlife (WDFW) to identify priority areas for restoration, protection, and development. The project used remote sensing techniques to assess and map wetland and riparian conditions throughout the watershed. A key component of the pilot study was development of several build-out scenarios that examined expected changes in impervious surface due to proposed zoning and planned growth. The pilot study produced a set of detailed recommendations for preserving and restoring water flow and water quality processes and maintaining high quality habitats that exist within the watershed.

Subsequently, ESA managed a second EPA grant to implement the pilot study recommendations. This phase of the project, called the Birch Bay Action Plan, involved developing market-based strategies that created incentives for voluntary restoration and protection efforts and creating new watershed-specific development standards that more accurately reflect the environmental opportunities and constraints in the watershed.



**Client:** Whatcom County

### Key Staff & Role

- Adam Merrill, Watershed Scientist

**Budget:** \$255,000

### Reference

Peter Gill, Wyoming Water Development Office (formerly with Whatcom County), 307.777.6327, peter.gill@wyo.gov

## Bellevue Airfield Park

**Description of the Work:** Tree Solutions, Inc. completed three phases of work for the Bellevue Airfield Park.

- **Phase I Inventory:** Tree Solutions reviewed all pertinent documents prior to inventory; tagged all significant trees on site 8-inches in diameter or greater; and collected data for each tree (DSH, species, health condition, structural condition, and tree risk unrelated to development). Phase I deliverables included an arborist report, table of trees, and site map with tree ID numbers using survey as the base.
- **Phase II Planning/Permitting:** For this second phase, Tree Solutions reviewed construction plans and discussed tree hazards that may be caused by construction; identified moderate and high risk trees posed by construction, in addition to tree protection zones; and assisted with the development process as needed. Phase II deliverables included a tree protection plan/arborist report addendum and other paperwork required for permitting and an amended table of trees that included risk potential and a proposed action for the tree (removal, retention, etc.).
- **Phase III Construction:** Tree Solutions served as an on-call arborist for tree protection during construction activities. Phase III deliverables included an arborist memo for each site visit documenting the unique situation and solution.



**Client:** Walker Macy Landscape Architects (prime consultant)

### Key Staff & Role

- Katie Hogan, Certified Arborist

**Budget:** \$13,625

### Reference

Chelsea McMann, Walker Macy Landscape Architects, 503.228.3122, cmccann@ealkermacy.com

## Section 3

# Past Experience with the City

The ESA team has over 20 years of experience working on Bainbridge Island, including several projects for the City. Most recently, ESA provided environmental and permit support services to the City in support of the Sound to Olympics Trail, Phase 2 project. Our work included an analysis of potential project impacts to vegetation, fish, and wildlife in the project vicinity; wetland identification and classification; and permit support services. All work was conducted in accordance with the City's Critical Areas Ordinance and other relevant land use codes.

In addition, ESA recently provided environmental documentation and permitting lead support for the Eagle Harbor Beach Sewer Main Replacement Project. ESA authored the SEPA checklist for the project, facilitated an expedited permitting and approval process, and prepared federal, state, and local permit applications. These projects, along with the others listed on this page, have given us in-depth experience and familiarity with local conditions, codes and practices, and Bainbridge Island stakeholder groups.

Tree Solutions, Inc. has worked as the arborist consultant on over twenty projects for the City of Bainbridge Island, including right-of-way improvements along Winslow Way and the development of the Bainbridge Waterfront Park. Their team is highly knowledgeable about local conditions in both shoreline and inland areas across the island. They have worked steadily on both residential and development projects on Bainbridge Island and bring an immense understanding of the history and forest characteristics unique to the City.

### Examples of ESA & Tree Solutions' Projects with the City

- Eagle Harbor Beach Sewer Mains Replacement Project
- Sound to Olympics Trail Project, Phase 2
- Waterfront Park & City Dock Design Project
- Martin Property Wetland Evaluation
- On-Call Environmental Services 1999 - 2000
- Right-of-Way Tree Assessment, Wyatt Way Improvements
- Right-of-Way Tree Assessment, Hidden Cove Road Improvements
- Tree Assessment for Olympic Vista Homes
- Tree Assessment for City of Bainbridge Island City Hall
- Waterfront Park Renovation & Vegetation Management Plan
- Right-of-Way Tree Assessment, Nisqually Way Improvements

## Section 4

# Demonstrated Experience with Biological & Ecological Data Acquisition & Documentation

### Wildlife

ESA's staff includes scientists who conduct site evaluations to determine wildlife use, map habitats, and conduct species surveys. ESA's wildlife biologists work with our planners to address single and multi-species issues on all types of projects. They have extensive experience with state and federally listed species, which includes conducting technical studies; preparing Biological Assessments (BAs) and Habitat Management Plans (HMPs); and contributing to environmental impact statements (EISs), watershed assessments, and other documents necessary for permitting projects. They are skilled in studies of mammals, birds, reptiles, amphibians, and their habitats throughout the Pacific Northwest and have addressed wildlife issues for capital improvement and residential development projects.



### Fisheries

ESA's fisheries biologists have conducted spawning surveys, assessed in-stream habitat, determined stream type, evaluated water quality, determined fish presence, and developed and implemented stream and riparian restoration plans. Our expertise includes knowledge concerning salmon, trout, and warm water fish and their habitats, as well as marine ecosystem experience. Our scientists have contributed to multiple Best Available Science (BAS) reports for a variety of project types and have worked closely with engineers on design features to avoid and minimize project impacts on fish and aquatic species.



### Aquifer Recharge

ESA's in-house staff includes geologists, hydrogeologists, hydrologists, and environmental planners who bring experience with aquifer recharge storage basins, groundwater management plans, site specific and watershed area planning evaluations, and stormwater management features.



### Arboriculture

Tree Solutions, Inc. provides a science-based, objective approach to tree evaluation and management, grounded in years of experience with tree pruning and removal, land development, and landscaping. With six highly-skilled arborists on staff, Tree Solutions has the capacity to complete projects on deadline while accommodating a variety of budgets.

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Attachments

# ■ Key Staff Resumes

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# Adam Merrill

## Project Manager & Senior Scientist

### EDUCATION

M.S., Resource Management, Central Washington University

B.S., Environmental Science, Western Washington University

### 12 YEARS OF EXPERIENCE

### CERTIFICATION/REGISTRATION

Fluvial Ordinary High Water Mark (OHWM) Certification

Washington State (Eastern and Western) Wetland Rating System (Revised) Certifications

Adam has over 12 years of experience in natural resource management in the Pacific Northwest, with a focus on science-based land use planning. He has managed and supported a diverse set of interdisciplinary projects involving environmental permitting and compliance, aquatic habitat and watershed restoration, and community land use planning. He has performed hundreds of wetlands delineations and assessments and has successfully assisted clients with obtaining Corps Section 404 permits, Ecology 401 water quality certifications, and development permits from local agencies. He has also authored NEPA/SEPA compliance documents, Shoreline Master Program regulations, and critical areas regulations. Adam is highly experienced working closely and directly with clients, staff from regulatory agencies, and the public on complex projects.

### Relevant Experience

**Birch Bay Watershed Action Plan, Whatcom County, WA.** *Task Lead.* ESA and a collaborative group of local, state, and federal agencies applied watershed characterization concepts to develop the *Birch Bay Watershed Characterization and Watershed Planning Pilot Study*. ESA provided assistance to Whatcom County to develop the “Birch Bay Watershed Action Plan;” a suite of tools used to implement the watershed planning and land use recommendations detailed in the pilot study. For this project, Adam was the primary author of a watershed-wide wetland and stream buffer mitigation plan and a Low Impact Development handbook, customized for the environmental conditions of the watershed. He also provided technical support for the development of public education materials and the selection of future aquatic habitat restoration sites.

**Riverfront Public Amenities & Environmental Restoration, Everett, WA.** *Wetlands Specialist.* ESA is supporting the City’s construction of a 2.5-mile trail system, new 3-acre waterfront park, and over 30 acres of stream and wetland enhancements. The project is part of a public/private partnership that will redevelop on the 240+ acre Riverfront parcels on the Snohomish River in south Everett, an old mill site. ESA completed wetland delineations and functional assessments for all on-site wetlands, prepared conceptual plans for proposed restoration work, and helped the City prepare grants to fund portions of the project. On-going work includes assisting with the Master Plan for the project, preparing required environmental permits for the City’s portion of the project, and preparing wetland and stream restoration and design documents. Adam conducted wetland delineations, co-authored the wetland mitigation plan, and wrote technical memoranda analyzing the potential impacts to plants, animals, streams, and wetlands resulting from the project.

**Cedar River Watershed Vegetation Surveys, King County, WA.** *Lead Biologist.*

Adam was a lead biologist in two long-term vegetation surveys of the Cedar River watershed. ESA assisted Seattle Public Utilities with a systematic vegetation survey of the 90,546-acre watershed using standard scientific methods and permanent sample plot (PSP) protocols for vegetation sampling. The upland vegetation survey was conducted at 69 permanent sampling plots located in forested areas throughout the watershed. The riparian vegetation survey was conducted at 30 permanent plots in the lower watershed. Project activities included tree age and height determination, coarse woody debris (CWD) measurements, shrub and herb identification, GPS use, and measuring canopy cover. In addition to his field work duties, Adam trained field personnel on the sampling protocol and led field crews.

**Pierce County Invasive Species & Lake Management Project, WA.** *Biologist.*

ESA inventoried over 1,000 acres of Pierce County-owned properties to document the presence and approximate extent of invasive plant species, concentrating on aquatic, wetland, and riparian species. Site-specific information was collected on GPS units and linked to an Access database. Adam conducted invasive plant field surveys and evaluated wildlife habitat suitability.

**Sapphire Skies – Forest Ridge Streams & Wildlife Habitat Study, Cle Elum, WA.**

*Biologist.* ESA performed a wildlife habitat study for the proposed Forest Ridge residential development and prepared a technical report to support Kittitas County Critical Area permit requirements. The study area encompassed approximately 483 acres of interior mixed conifer forest, streams, and wetlands within South Cle Elum ridge north of the City of Cle Elum. Adam conducted field reconnaissance for streams, plants, and overall wildlife habitat.

**Meadow Springs Residential Development, Kittitas County, WA.** *Wetlands*

*Specialist.* Adam served as wetlands specialist for this project that required wildlife and wetland studies near Cle Elum, Washington. The 250-acre project area contained undeveloped conifer forest, extensive wetlands, and required expertise in eastern Washington flora and proficiency in the use of Ecology's Wetland Rating System for Eastern Washington. Adam conducted wetland delineations, evaluations, and preparation of a wetland technical report to support permit applications.

**Birch Bay Berm & Pedestrian Trail Design, Whatcom County, WA.** *Task Lead.*

ESA is assisting Whatcom County with a soft shore berm and pedestrian trail project along Birch Bay. The overall goals of the project are to reduce storm/flood damage, improve pedestrian safety, enhance shore access, improve stormwater drainage, and protect water quality while improving natural coastal geologic and ecological process. Adam is coordinating the environmental reporting and permitting for the project, in support of a NEPA review, Corps Sections 10 and 404 review, Ecology Section 401 water quality permit, WDFW Hydraulic Project Approval, and Whatcom County critical areas review.



# Jim Keany

## Wildlife Habitat Biologist

### EDUCATION

M.S., Wildlife Ecology,  
Frostburg State College,  
University of Maryland  
Appalachian  
Environmental  
Laboratory

B.S. Natural Resource  
Management, Rutgers  
University.

### 32 YEARS OF EXPERIENCE

### CERTIFICATIONS

USFWS Habitat  
Evaluation Procedures  
(HEP)

USFWS Wetland  
Classification System

USFWS Sampling  
Techniques and  
Sampling Design

US Soil Conservation  
Service, Soil Erosion  
and Sedimentation  
Control Analysis

Society of Northwest  
Vertebrate Biologists,  
Terrestrial Amphibian  
Sampling Procedures

USFWS Marbled  
Murrelet Monitor  
Certification

### PROFESSIONAL AFFILIATIONS

The Wildlife Society

Society of Northwest  
Vertebrate Biologists

Washington Native  
Plant Society

Society for  
Conservation Biology

Jim brings over 32 years of experience in environmental research and consulting with an emphasis on natural resource inventories, restoration ecology, and wildlife management. He has a diverse background with experience in endangered species surveys and biological assessment preparation; wetlands inventory, delineation and mitigation; terrestrial habitat surveys; fisheries and stream surveys; and landscape level analysis.

### Relevant Experience

**Open Space Plan, Bainbridge Island, WA.** *Project Manager / Lead Ecologist.* While with another firm, Jim assisted the City of Bainbridge Island with development of a priority open space plan that has been used to update the City's Comprehensive Plan. The island's population is continuing to grow and the City reviewed appropriate areas to increase infrastructure and density as well as how to best preserve habitat connectivity and sensitive natural resource sites. Jim conducted habitat mapping and GIS modeling to analyze environmental sensitivity and development vulnerability across the island to identify priority areas for long-term preservation. The study concentrated on sites with a high biodiversity value and areas that facilitate habitat corridor connections between existing protected open spaces. In addition, Jim investigated the range of conservation strategies that have been used on Bainbridge Island and throughout Washington State to preserve valuable open space. The conservation strategy portion of the report recommended options for conserving open space including conservation easements, transfer of development rights, and fee purchase. Jim co-led several workshops and public meetings to both inform the public about the process and to gather community information on valuable open spaces.

**Marine Nearshore Habitat Connectivity Project, Bellingham, WA.** *Project Manager.* ESA helped the City of Bellingham assess habitat connectivity along the nearshore in conjunction with a Master Plan for the downtown waterfront. ESA assessed habitat connectivity on two axes: along the intertidal shoreline and between the marine riparian zone and the marine shoreline. ESA researched habitat connectivity issues in the nearshore environment and then developed a simple model that evaluated connectivity in each of the 28 sub-units of the City's shoreline. As project manager and lead ecologist, Jim led the team in developing the model, choosing evaluation elements (juvenile salmon, sediment input/transport, organic material transport, etc.), applying the model, and interpreting the results. A report was prepared that provided background on habitat connectivity and described the methods used for developing the model. Team members presented the model results at the annual meeting of the Society of Northwest Vertebrate Biologists Conference.

**Oak Tree Reserve Habitat Management Plan, Olympia, WA.** *Project Director.* ESA is assisting Taylor Development with the creation of an Oak Tree Preserve at a development site in Thurston County. Services include creation and implementation of a Habitat Management Plan, as well as baseline and long-term habitat monitoring. Jim directed authorship of the improved Habitat Management Plan for the Oak Tree Preserve Site. He also oversaw baseline environmental monitoring on-site to determine habitat quality and made recommendations to preserve important habitat components and improve degraded habitat. ESA's staff is slated to conduct long-term environmental monitoring to document site success.

**McCormick Woods/Calvinwood/Square Lake Park Preserve, Kitsap County, WA.** *Project Biologist.* Jim worked with the Washington State Parks Department, Kitsap County, and the McCormick Land Company in a unique public/private partnership to create an environmental learning center and associated trails network on 200 acres of land on 3 parcels. Jim's responsibilities included providing a complete characterization of the natural systems of the area, both biological and geophysical. Jim also provided a summary of the baseline studies and alternatives at public meetings. A final master plan report documented a preferred alternative and development costs.

**Endangered Species Act Lands Inventory, Northern WA.** *Project Manager/Lead Ecologist.* Jim conducted baseline natural resource surveys on land parcels purchased by Seattle City Light (SCL) to protect and enhance federally listed threatened salmonids in several northern Washington watersheds. Seventeen parcels ranging in size from one to 1,300 acres were surveyed including vegetation association mapping, weed inventories, wildlife habitat assessments, rare plant habitat assessments, aquatic habitat assessments, and road and trespass inventories. Vegetation association mapping was conducted by interpreting aerial photographs and developing GIS maps that were field verified. The study sites were located in the Skagit, Sauk, Cascade, and Tolt River basins. The information will be used to develop management plans for each site.

**Cougar Mountain Regional Park Wildlife and Habitat Studies, King County, WA.** *Project Manager/Lead Ecologist.* Jim was responsible for mapping vegetation communities, conducting wildlife surveys, and summarizing existing carnivore information for the 250,000-acre park for the King County Department of Parks and Recreation. The data generated from the natural resource studies were used to develop a park master plan and further land acquisition priorities. Primary issues included reduction of conflicts between large mammals and hikers; maintaining habitat connectivity for bear, bobcat, and cougar; and trail realignment to avoid sensitive features.

**Olympia Wildlife Habitat Inventory, Olympia, WA.** *Project Manager.* Jim inventoried, mapped, and evaluated the relative value of wildlife habitat within the City of Olympia's Urban Growth Management Zone. Aerial photographs were used to map upland and wetlands within the 28 square mile study area, and then entered into a GIS database. Jim prepared a technical memorandum on issues of managing wildlife habitat in fragmented landscapes, devised a system to evaluate the relative value of available habitat, and presented results to the public and state and federal resource agencies. A final report presented strategies for open space conservation and connectivity, and recommendations for land acquisition and management.



# Pete Lawson

## Fisheries Biologist

### EDUCATION

M.S., Environmental Science, Western Washington University

B.S., Biology, Western Washington University

### 19 YEARS OF EXPERIENCE

### CERTIFICATION/REGISTRATION

Washington Department of Transportation  
Biological Assessment  
Qualified Senior Author

### PROFESSIONAL AFFILIATIONS

American Fisheries Society

Pete is a senior fisheries biologist with over 19 years of experience. He has performed extensive field studies and has knowledge of the life history and ecology of Pacific salmonids and the relationships of these species with physical instream habitat. Pete has assessed and characterized physical and chemical fish habitat parameters and is well versed in habitat and population-level assessment techniques. He has experience in Endangered Species Act issues, including expertise in the coordination and preparation of Section 7 biological assessments and/or evaluations (BAs/BEs). He is also adept in the preparation of a wide range of local, state and national environmental documentation such as Critical Areas Studies, NEPA/SEPA documents (EISs and EAs), and Habitat Conservation Plans (HCPs). Pete has designed mitigation to offset project impacts to instream, riparian, and wetland habitat and he has designed and participated in biological and physical habitat monitoring in support of capital improvement and restoration projects. Pete also has an academic background in aquatic toxicology and risk assessment techniques, and brings a unique multi-disciplinary approach to complex environmental remediation, restoration, and rehabilitation projects.

## Relevant Experience

**City of Bainbridge Island Sewer Plan Update, WA.** *Senior Scientist.* Pete led environmental documentation and permitting for the Eagle Harbor Beach Mains Replacement project for the City of Bainbridge Island. The project consisted of failing sewer mains located along the beach in Eagle Harbor. ESA's staff facilitated an expedited permitting and approval process so the project could be constructed during the allowed work window. ESA's staff authored the SEPA checklist for the project, and prepared the federal, state, and local permit applications, including Section 404, 401, hydraulic project approval, shoreline substantial development, and NPDES Construction Stormwater General permit.

**Sound to Olympics Trail, Phase 2, Bainbridge Island, WA.** *Senior Scientist.* Pete participated in the alternative analysis and permitting process to construct a 0.8 mile segment of the regional Sound to Olympics Trail, parallel to SR 305 on Bainbridge Island, Washington. Pete conducted a site reconnaissance to identify natural resources in the analysis including habitat quality of forests, wetlands, and streams within the project area. He also evaluated several existing stream crossings, including fish passage status. Once an alternative was selected, Pete assisted in the permitting process, including preparation of multiple discipline reports to support the NEPA process.

**Diane's Faithful Lane Subdivision, Puyallup, WA.** *Senior Scientist.* ESA assisted the City of Puyallup Planning Services Department by conducting a third party environmental review for a project to develop 14 single-family residential lots in the Diane's Faithful Lane Subdivision, adjacent to Deer Creek, a perennial salmon-bearing stream. The City requested this review in response to an application to

construct an additional home within the subdivision, and in anticipation of additional residential construction in the future. Pete reviewed the potential impacts of the project under the local Critical Areas and the floodplain development code, as well as the projects consistency with FEMA Region X's Regional Guidance for NFIP compliance with the Endangered Species Act.

**Pioneer Crossing Project, Puyallup, WA.** *Senior Scientist.* ESA assisted the City of Puyallup Planning Services Department by conducting a third party environmental review for a development of a parcel through construction of five buildings, parking areas, and site landscaping with integrated rain gardens for stormwater treatment on the site. The site is currently cleared, graded, and tilled for agricultural use. Pete reviewed the potential impacts of the project under the local Critical Areas and the floodplain development code, as well as the projects consistency with FEMA Region X's Regional Guidance for NFIP compliance with the Endangered Species Act.

**Illahee Basin Assessment, WA.** *Senior Scientist.* Pete helped conduct a watershed characterization, surface water management plan, and aquifer protection plan for the Illahee Creek watershed. While the riparian areas of Illahee Creek and its tributaries are generally intact and in relatively good condition, the stream channels have been affected by increased stormwater and sediment inputs from surrounding urban development. Pete conducted physical and biological field evaluations of the watershed, including stream habitat surveys and wetland delineations, to identify existing problems and the processes that are contributing to degraded in-stream habitat conditions. The development of the watershed surface water management plan included recommendations for specific projects designed to prevent future degradation in the watershed, correct existing problems, and sustain Illahee Creek as a productive salmon-bearing stream.

**SR 522 Preliminary Stream Investigations, WA.** *Fisheries Biologist.* This large transportation project involved road widening and bridge improvements along highway SR 522 from the Snohomish River to the City of Monroe. While with another firm, Pete performed multiple stream surveys on the streams and rivers crossed by the project corridor in order to characterize their existing habitat conditions and fish use. He helped author a report summarizing the streams and fisheries resources that may potentially be affected by the project.

**East Lake Sammamish Trail Plan- Interim Trail FEIS & Master Plan DEIS, King County, WA.** *Fisheries Biologist.* This project involved preparation of a two separate environmental impact statements (EISs) for a highly controversial project involving the creation of a walking/biking/equestrian trail on the east shore of Lake Sammamish. Pete co-authored the sections of the EISs dealing with fish and aquatic resources. He conducted stream habitat assessments and verified stream classifications and fish barriers in order to characterize fish presence or absence, and identified streams that would benefit from habitat/culvert improvements as part of the trail construction process.



# Eric Schniewind

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## Geologist & Hydrogeologist

### EDUCATION

B.A., Geological  
Sciences, UC Santa  
Barbara

### 20 YEARS OF EXPERIENCE

Eric has over 20 years of experience as a geologist, hydrogeologist, hydrologist and hazardous materials specialist with projects completed throughout the west coast in Washington, Oregon, and California. His projects have included aquifer recharge storage basins, groundwater management plans, septic systems, County-wide planning evaluations, and stormwater management features. Eric has analyzed and reviewed a wide variety of geotechnical issues and hazards in preparation of environmental review documents that range from site specific studies to watershed-based evaluations.

### Relevant Experience

**Strand Ranch Groundwater Aquifer Recharge Basin, Rosedale-Rio Water District, Bakersfield, CA.** *Hydrogeologist.* Eric provided the hydrogeologic analysis for the environmental review of a new proposed aquifer recharge basin on the Kern River Fan. Issues included groundwater mounding, effects to water levels on neighboring pumping wells from pumping recharged water, and water quality.

**Kern River Water Allocation Plan, Bakersfield, CA.** *Hydrogeologist.* ESA prepared the Program EIR for Kern Delta Water District's Water Utilization Program. The Program will optimize use within the District service area of Kern River water and reapportion how water is used for aquifer recharge storage and groundwater pumping. The project would potentially result in decreased access to Kern River water supply by subordinate water rights holders. Previous environmental analysis resulted in a lawsuit, brought by North Kern Water District and the City of Bakersfield against the District, was recently resolved in the Superior Court of California. The resulting Statement of Decision requires that the Kern Delta Water District evaluate the utilization of the water pursuant to the California Environmental Quality Act (CEQA). The ESA team includes specialized support from Todd Engineers to analyze the Water Utilization Program's impacts on groundwater and neighboring water districts.

**Clark County Comprehensive Plan, WA.** *Geologist/Hydrologist.* ESA assisted Clark County with a major update of their Comprehensive Plan to comply with the GMA by June 2016. ESA prepared the EIS to evaluate impacts and identify mitigation strategies. Eric evaluated geology and soils related hazard conditions including a characterization of soils suitable for groundwater recharge.

**Sandy River Pipeline Project, Portland OR.** *Water Quality/Hazardous Materials Specialist.* Eric provided consultation of a contaminated plume discovered in tunneling spoils on this large construction project immediately adjacent to the Sandy River. In addition, Eric provided technical assistance on retained dewatering water with constituents that were outside of discharge requirements. ESA is currently providing monitoring for this long-term construction project and enforcing required Best Management Practices (BMPs) to protect water quality.

**Willamette Falls Legacy Project, Clackamas County, OR.** *Project Manager/Hydrologist.* Eric managed the initial evaluation of stormwater conditions for this 23-acre industrial property along the Willamette River that is evaluating potential development scenarios; development options would include alterations to existing stormwater treatment onsite. Project work included evaluation of existing stormwater management as well as opportunities onsite infiltration to improve offsite stormwater runoff quality to nearby receiving waters through implementation of BMPs such as bioswales, rooftop drain filters, and treatment planters.

**Grand Ronde Elder Housing, Grand Ronde, OR.** *Hydrologist.* Eric provided technical data on stormwater pollutants anticipated for a proposed housing development. The project called for converting a large area of pervious surfaces to impervious surfaces that would drain directly into a creek that is habitat for protected aquatic species. The initial work also included an evaluation of potential stormwater quality concerns during the construction phase.

**Dairy Digester & Co-Digester Facilities' Waste Discharge Requirements, Central Valley RWQCB, EIR, CA.** *Hydrologist/Hydrogeologist.* This Program EIR was prepared to evaluate the environmental effects from the development of dairy manure digester and co-digestion facilities within the Central Valley Region. Eric analyzed the potential water quality impacts to surface waters and groundwater from land application of post-processing solid digestate and liquid effluent throughout the Central Valley region where water quality impairments already exist. Among the potential pollutant loadings considered were nitrates, salts, heavy metals, pathogens, antibiotics, and growth hormones.

**Irvine Ranch Water District EIR, CA.** *Geologist and Hydrogeologist.* Eric provided technical analysis for the Hydrology section of an EIR that involved extensive regional characterization of ASR operations. The principal technical issues involved in this groundwater banking project included potential impacts of constructing groundwater recharge ponds, installing new groundwater extraction wells, pumping effects on neighboring wells, and potential impacts on groundwater supplies.



# Jonathan Kemp

## GIS Analyst

### EDUCATION

M.S., Geography,  
Western Washington  
University

B.A., Natural Resource  
Management, Western  
Washington University

### 4 YEARS OF EXPERIENCE

### SOFTWARE EXPERIENCE

ESRI stack, Adobe Suite,  
R, SPSS, QGIS, Mapbox,  
Leaflet, Excel Macros,  
Wordpress.

### SCRIPTING EXPERIENCE

R, CSS, Python, HTML,  
JavaScript.

Jonathan “Jonny” Kemp is a GIS Analyst bringing 4 years of experience in analyzing visual data, spatial analytics, and providing GIS support for a variety of projects. Jonny possesses a unique agility in learning software and techniques to solve new and challenging spatial problems. Using ESRI or Open Source Geospatial software he has performed spatial analysis and created dynamic maps and graphics suited specifically toward each project’s needs. Jonny also possesses excellent research, writing, and cartographic skills. Most recently for his Masters research, Jonny became proficient in data management using MongoDB to create a repository for community resilience data and metadata.

## Relevant Experience

**City of Duvall Watershed-Based Planning Project, WA.** *GIS Analyst.* ESA helped the City of Duvall secure Ecology National Estuary Program grant funds to develop watershed-based land use planning tools, including a stormwater strategies plan. ESA is working with the City and partners to complete a subbasin characterization extending throughout the City and surrounding areas. Characterization is being completed by ESA’s multi-disciplinary team consistent with Ecology’s Puget Sound-wide characterization. ESA will interpret characterization results to answer key land-use management questions that the City is facing: identification of “development capacity” for Duvall’s subbasins, including focus on hydrologic and water quality implications; and effective approaches to manage and improve stormwater runoff from existing and future development. ESA will develop a stormwater strategies plan that prioritizes areas to target stormwater capital investment by using a watershed-based framework that integrated watershed processes with higher resolution hydrologic, habitat, and infrastructure elements. Specific objectives of the project include the development of low-impact development and stormwater management strategies consistent with watershed processes, and initial steps toward prioritization of capital improvements and stormwater retrofit projects. Jonny worked to provide summary statistics on characterization results for various Policy Analysis Units. He worked to develop a mapbook highlighting the relevant results in relation to the city of Duvall. Jonny has also worked within Excel, Arcmap, Illustrator, and InDesign to help create stormwater strategy summary sheets.

**Skagit Climate Consortium (SC<sup>2</sup>) 2015, Skagit County, WA.** *GIS Analyst.* ESA worked closely with SC<sup>2</sup> scientists to produce dynamic flood visualization tools to allow users to interact with sea level rise and flood modeling scenarios for the Skagit river system. Using interactive web mapping tool, users can compare flooding scenarios for the 2040s and 2080s with the current regulatory floodplain mapped by FEMA (<http://www.skagitclimatescience.org/flood-scenario-map/>). We also used the projected future flood levels to create a 3D Google Earth flyover, which was incorporated into a narrated video about climate change and flood

risks in the Skagit Valley. In order to help communicate the impact of major floods on communities, we produced a set of photo visual simulations of flooding at recognizable locations in the Skagit Valley. Jonny helped *SC<sup>2</sup>* scientists convert clunky raw model outputs to rich visualizations that could be deployed to a custom built web mapping application. Jonny's knowledge of HTML and Wordpress was vital in integrating the content produced by ESA into the existing *SC<sup>2</sup>* website. In addition to providing technical GIS assistance, Jonny also attended the Northwest Climate Conference where he held a tools café to present *SC<sup>2</sup>* to the scientific community.

**Birch Bay Drive & Pedestrian Facility & Beach Nourishment, Whatcom County, WA.** *GIS Analyst.*

The seaside community of Birch Bay has experienced significant beach erosion since the Corps excavated gravel from the Bay in the 1950's and created a sediment deficit that altered the natural beach erosion and accretion processes. Bulkheads, riprap revetments, and groins constructed to stabilize the beach and protect Birch Bay Drive and adjacent development from scour and flooding have not been successful and have lowered the quality of the Bay's recreational amenities and habitat. As an alternative to constructing additional shore protection structures, ESA is designing a sustainable 1.6-mile soft shore protection berm to reduce storm/flood damage, improve pedestrian safety, enhance shore access, improve stormwater drainage, and protect water quality while improving natural coastal geologic and ecological processes. Jonny has been key in providing high quality figures. These figures illustrate the alignment of the soft shore protection berm, critical geotech locations, and relevant archeological find concerns.

**City of Edmonds Critical Areas Ordinance (CAO) Update, King County, WA.** *GIS Analyst.*

ESA is preparing an update to the City's BAS report to reflect current scientific research applicable to the Edmonds area, is reviewing the existing critical area regulations for consistency with the updated BAS report, and will recommend changes to the City's critical area regulations needed for consistency with the current scientific thinking and legal requirements, while recognizing the urban environment and state agency guidance. The consultant will also significantly assist the City with the State Environmental Policy Act (SEPA) review of the updated critical area regulations. Jonny aided in initial analyzing the city's current CAO to identify key areas that need to be updated. Specifically Jonny was instrumental in finding gap areas of potential wetlands. To accomplish this, a supervised flow analysis using LIDAR and the latest NAIP aerial satellite imagery was used.

**Mukilteo Watershed Based Stormwater Plan, WA.** *GIS Analyst.*

The City of Mukilteo is experiencing unnaturally high peak stream flows, low summer flows, and decreased water quality associated with increased levels of development. Alterations in the natural hydrologic regime and introduction of pollutants lead to higher rates of erosion and degraded habitat. To address these issues, ESA worked with the City and its project partners, City of Everett; Snohomish County Conservation District, Snohomish County Airport (Paine Field), the Mukilteo School District and Washington State Department of Ecology, have developed a Stormwater Strategy Plan to prioritize and implement regional, watershed-based stormwater strategies. Jonny worked closely with hydrologist to update drainage basin information based on the best available data.



# Katie Hogan, CA

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## Certified Arborist

### EDUCATION

B.A., Environmental Studies, University of Washington

### CERTIFICATIONS/REGISTRATION

ISA Certified Arborist, #PN-8078A

ISA Qualified Tree Risk Assessor

### PROFESSIONAL AFFILIATIONS

International Society of Arboriculture (ISA)

ISA Pacific Northwest Chapter

### EXPERTISE

- Forest inventory and assessments
- Plant pathogen and insect identification
- Tree preservation on construction sites
- Tree risk assessments
- Plant and tree identification
- Landscape and vegetation management
- Native plant restoration
- Tree valuation and appraisal
- Stormwater assessments
- Aerial tree assessments
- Advanced decay testing

Katie is an associate with Tree Solutions, Inc. She brings 4 years of consulting experience. Katie has studied native forest dynamics and pathology in Washington, Oregon, California, and Utah. She specializes in plant pathogens, habitat quantification, native and rare plant identification, field sampling techniques, and fire ecology. She strives to practice interdisciplinary environmental management and hopes to increase community awareness through education and research. She is an ISA Certified Arborist (PN-8078A) and ISA Qualified Tree Risk Assessor.

### Relevant Experience

**Winslow Grove, Bainbridge Island, WA. *Certified Arborist.*** Katie inventoried, assessed, and appraised over 600 trees; reviewed utility plans to determine minimum tree protection areas; and prepared an arborist report with tree retention and protection recommendations.

**Wyatt Way Project, Bainbridge Island, WA. *Certified Arborist.*** Katie documented tree identification number, trunk diameter, species, root crown/flare diameter, critical root zone diameter, branching height, drip lines, risk potential, grove status, management recommendations, preservation value, species disturbance tolerance, storm damage notes, and basic health and structural condition.

**Bellevue Airfield Park, Bellevue, WA. *Certified Arborist.*** Katie inventoried and assessed over 900 trees in an undeveloped area. She provided recommendations for developing a park and trail system in a manner that would have the least impact on overall forest health.

**City of Sammamish On-call Arborist, Sammamish, WA. *Certified Arborist.*** Katie assessed overall forest condition including identification of root disease pockets and high retention value trees and understory. She also prepared a report and site map depicting forest characteristics.

**University of Washington North Campus Housing Project, Seattle, WA, *Certified Arborist.*** Katie inventoried and assessed campus trees; prepared a report and detailed tree protection specification. She also followed-up with site inspections to assess tree protection and improvements that should be implemented.

**University of Washington Bothell Campus, Bothell, WA. *Certified Arborist.*** Katie inventoried trees in an area of proposed development and assessed trees for risk pre- and post-development, and produced an appraisal value for the trees.

**Redmond Town Center, Redmond, WA.** *Certified Arborist.* Katie prepared an arborist report per City of Redmond Municipal Code including trees that will be removed, retained, and impacted by proposed development. She engaged in extensive correspondence with the project team regarding tree retention and tree planting recommendations.

**Seattle Public Schools Meany Middle School, Seattle, WA.** *Certified Arborist.* Katie inventoried trees; prepared documents for removal of hazardous trees; and met with the project team to determine methods for installing utilities and removing existing impervious surfaces around trees without impacting tree health and structure.

**City of Bellevue On-call Arborist, Bellevue, WA.** *Certified Arborist.* Katie provided numerous appraisals for trees illegally removed or damaged using the Guide for Plant Appraisal. She conducted basic and advanced risk assessments of trees within City of Bellevue property.

**Kirkland Residential Stormwater Outreach Program Yard-Smart Rain Rewards, Kirkland, WA.** *Certified Arborist.* Katie conducted site visits with homeowners to provide recommendations for installing green stormwater infrastructure. She also trained and oversaw outreach staff and reviewed reports.

**Maple Ridge, Renton, WA.** *Certified Arborist.* Katie inventoried and assessed over 1,000 trees to determine the development potential for this site.

**Faul LLC, Seattle, WA.** *Certified Arborist.* Katie assessed this site for hazardous trees, high-value trees, and native understory species. She provided low impact development recommendations for ecologically sensitive development and met with the contractor and project team onsite to assure that valuable trees and plants would be retained during site clearing.

**City of Bellevue Parks Northwest Team Building, Bellevue, WA.** *Certified Arborist.* Katie conducted a bi-annual course and ground level inspection of a zip line course. She assessed the potential risk to the course from surrounding trees and provided recommendations to maintain healthy forest conditions (such as mulching and native plantings).

**Brookacres HOA, Edmonds, WA.** *Certified Arborist.* Katie provided a complete bi-annual inspection of this HOA to update the annual tree management plan. She provided recommendations for maintaining healthy forest conditions and produced risk assessments and removal applications.

**Villa Academy Playfield Construction, Seattle, WA.** *Certified Arborist.* Katie inventoried trees within the surrounding area of proposed playfield construction. She identified exceptional trees and groves; reviewed plans and provided tree protection recommendations; reviewed proposed landscape plans; and provided recommendations for species and planting.

**Northshore Utility District Finn Hill Meadows, Kirkland, WA.** *Certified Arborist.* Katie provided site inspection during excavation for a sewer line near a large conifer tree to determine whether the tree could be retained; she also provided recommendations for monitoring the tree.

## Qualifications for

# Ecological Assessment Services for Suzuki Property

Prepared by: **Herrera Environmental Consultants, Inc.**

September 23, 2016

## Statement of Interest

The City of Bainbridge Island has been considering the use of the Suzuki property for several years. It is exciting to see that a developer has been selected and plans for this unique space are starting to solidify. In addition to expressing our interest in working on this project, I would like to take this opportunity to provide a brief description of our team’s qualifications, unique capabilities we bring to this project, and our availability in the coming months to provide the services required.

Established in 1980, Herrera’s ecological assessment experience includes work in habitats in many of the ecosystems found throughout Washington State but primarily focused in the Puget Sound Region. This includes very relevant work on Bainbridge Island. A core area of our business is focused on natural resources assessments including streams and wetland areas. Our staff are involved in planning, survey, design and construction oversight support for a wide range of development endeavors. In short, this project is precisely the type of work we seek to be involved in and that we do extremely well. Employing a flexible, situation-specific approach to each project, we create solutions that best meet our clients’ project and program needs.

Our project manager will be Shelby Petro. Shelby leads ecological assessment work for a wide range of projects as a wetland scientist and habitat biologist. Based in Herrera’s downtown Seattle office, Shelby is just a short ferry ride from the Suzuki property site. Shelby will be supported by arborist Julia Munger and habitat biologist Alicia Higgs. This team is experienced in efficiently conducting habitat assessments, wetland delineations, and stream surveys to establish baseline environmental conditions.

Thank you for considering the Herrera team to work with the City of Bainbridge Island on this project. Please contact Shelby Petro at 206.787.8307 with any questions you may have on our qualifications. We look forward to hearing from you.

Sincerely,

Herrera Environmental Consultants, Inc.



José Carrasquero  
Principal Scientist, Restoration Practice Director

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# Overview of Herrera

Herrera provides expert planning, analysis, design, permitting, construction, and monitoring assistance for clients engaged in development and infrastructure and property protection throughout the northwestern United States. For nearly 40 years since incorporation as a business, Herrera has provided objective, high quality, scientifically-based services with a diverse staff of biologists, planners, engineers, modelers, and technical support specialists. We are proud to have established a reputation as creative leaders in ecological assessment and restoration who produce cost-effective, lasting project solutions that successfully enhance the natural environments in which we and our clients live, work, and play. Our award-winning work is making a real difference.

A brief overview of our firm including our familiarity with local conditions, codes, and practices as well as our past history working with the City of Bainbridge Island (City) and our experience in cost-effective biological and ecological data acquisition and documentation are included in this section.

## Familiarity with Local Conditions, Codes, and Practices

Herrera's familiarity with the City's local conditions began in 2003 with our work on the feasibility analysis and preliminary design for Manitou Beach restoration. This project included evaluating existing marsh conditions; potential effects of restoration on flooding of residential properties and associated septic systems by tidal exchange and stream runoff; potential changes that could occur in an adjacent high quality freshwater marsh; cost-effectiveness of saltwater marsh habitat improvements; and roadway culvert replacement alternatives that would optimize marsh water levels and promote fish passage. In 2005 we conducted an ecological assessment of critical habitat for Endangered Species Act (ESA) protected Chinook salmon (*Oncorhynchus tshawytscha*) and bull trout (*Salvelinus confluentus*) and prepared a technical report to assist in the selection of a preferred alternative for engineering design. In 2006 Herrera assessed the baseline conditions of wetlands, streams, and buffers; and mitigation options on a city-owned property being used as a lay down site and for utility production on Wyatt Way/Bucklin Hill Road.

Herrera developed a direct familiarity of the City's codes and practices in 2005 when our work with the City expanded to support an update to the City's critical areas regulations under Washington State's Growth Management Act. Herrera conducted a literature review and produced a technical memorandum regarding stream riparian buffers and presented a summary of current scientific thinking on natural resource protection and best available science at a City Council meeting, all of which was used to update the City's best available science. Herrera summarized current scientific thinking on natural resource protection and helped to update the City's best available science. Then in 2010 Herrera assisted the City with updates to their Shoreline Master Program. Herrera prepared an addendum to the City's existing Summary of Science that provided recent scientific information related to ecological and functional impacts of shoreline modifications, the ecological role of riparian vegetation in marine shoreline environments, and impacts to habitat that occur from development in the shoreline zone, with an emphasis on residential development. As a part of this work, Herrera prepared a shoreline mitigation manual for single-family residence property owners wishing to replace or develop structures in shoreline buffers.

## Past History with the City of Bainbridge Island

Herrera provided environmental and engineering services to the City of Bainbridge Island on several projects starting in 2003. The following list summarizes our most relevant experience:

- Manitou Beach Salt Marsh Restoration Feasibility Analysis and Preliminary Design 2003
- Rockaway Beach Shoreline Road Stabilization Study 2005
- Literature Review and Technical Memorandum Regarding Stream Riparian Buffers for Update to Critical Areas Regulations 2005

- Wetland and Stream Delineation at Wyatt Way / Bucklin Hill Road Holding Facility 2006
- Scientific/Technical Assistance: City of Bainbridge Shoreline Master Program Update 2010

## Experience in Cost-Effective Biological and Ecological Data Acquisition and Documentation

Herrera has a proven record of providing cost-effective biological and ecological data acquisition and documentation through the successful completion of similar projects for the City and other local governments. To increase efficiency on this contract, Herrera’s project manager will serve as the technical lead for stream and wetland surveys and the lead author of the ecological assessment report with support from the staff certified arborist and habitat biologist for relevant work efforts. Herrera will reduce costs by collecting and analyzing data in-house, providing the City with accurate data and maps for decision making. This compact Herrera team has worked together for over 3 years to complete several projects (including those featured on page 7), strategically utilizing each other’s knowledge and diverse skill set to maximize time and cost-efficiency in completing field surveys, data collection, analysis, and reporting.

## Team Qualifications

Our team organization is depicted in Figure 1. Our compact team will be led by Shelby Petro. Shelby has been conducting ecological assessments, wetlands delineations, and has provided regulatory support on projects for over 8 years. Shelby will be supported by Herrera staff certified arborist Julia Munger and habitat biologist Alicia Higgs. Summaries of our team members’ qualifications are included in the following pages. Detailed resumes for each of our key team members are available at your request.

Figure 1. Organization of the Herrera Team



**Shelby Petro** | Project Manager, Wetland Biologist

*MESM, Master of Environmental Science and Management, University of California, Santa Barbara, 2014*

*BS in Biology, Indiana Wesleyan University, 2007*

*WPIT, Wetland Professional in Training, Society of Wetland Scientists, 2015*

*Certificate in Wetland Science and Management, University of Washington, 2015*

*Certified Biological Assessment Junior Author, WSDOT, 2015 – present*

*Certified Wetland and Wildlife Biologist, Pierce County, 2014 – present*

Shelby Petro has 8 years of experience in environmental consulting specializing in natural resources management, wetland science, and regulatory compliance. Shelby delineates wetlands and streams; authors critical areas reports; conducts habitat assessments and field surveys for special-status plant and wildlife species; prepares technical reports and documentation for National and State Environmental Policy Act (NEPA and SEPA) compliance; and prepares mitigation plans for impacts to wetlands, streams, and buffers. Shelby coordinates with local, state, and federal agencies, completes applications, and obtains permits and approvals for project compliance with regulations including Critical Area Ordinances, Shoreline Management Act, State Hydraulic Code, SEPA, NEPA, ESA, and Clean Water Act (CWA) Sections 401 and 404.

**Recent Relevant Project Experience**

***Providence Mother Joseph Hospital Upgrade.*** As lead wetland biologist, Shelby conducted a wetland and stream delineation, completed a wetland rating, and drafted a wetland delineation report outlining existing conditions and regulatory framework to support a development feasibility analysis and design of the project site.

***Edmonds Marina Park Master Plan.*** As environmental lead, Shelby reviewed background information, conducted a site reconnaissance, and prepared an environmental checklist for compliance with the SEPA.

***Forbes Creek Stormwater Drainage Headwall Repair.*** As lead biologist, Shelby conducted a site reconnaissance to characterize baseline conditions of streams and wetlands within the project area and provided a preliminary evaluation of impacts to sensitive areas, permitting requirements and complexity, and mitigation required for project alternatives.

***Hidden Lake Dam Removal Alternatives Analysis.*** As lead biologist, Shelby conducted a site reconnaissance and reviewed existing documentation to establish baseline environmental conditions. She then compared impacts to critical areas, permitting complexity, mitigation requirements, and costs among three proposed alternatives to assist the client in selecting a preferred alternative.

***Lake Hills Trunk West Lake Sammamish Interceptor Sewer Replacement.*** As environmental lead, Shelby coauthored an existing environmental conditions assessment of the study area to characterize baseline conditions of SEPA environmental elements and compared impacts, mitigation requirements, risks, and costs among various pipeline alternatives. She authored an assessment specific to characterizing baseline conditions of, and impacts to, plants and animals.

***East Norway Hill Park Master Plan Update.*** As lead wetland biologist, Shelby established baseline wetland conditions within and adjacent to the East Norway Hill Park and provided guidance for master planning activities for the Park adjacent to the wetland and wetland buffer.

**Julia Munger | Arborist**

*BS in Environmental Science / Western Washington University, 2008*  
*ISA Certified Arborist, International Society of Arboriculture #PN-7903A, 2014*  
*ISA Tree Risk Assessment Qualified (TRAQ)*  
*WPIT, Wetland Professional in Training, Society of Wetland Scientists, 2014*

Julia Munger is an ISA Certified Arborist and natural resource scientist with 6 years of local experience. Julia participates in stream, wetland, and forest restoration; integrated pest management; wildlife surveys and habitat assessments; rare plant surveys; wetland and stream delineations; and parks maintenance and construction. She has experience in proper tree care in accordance with ANSI (American National Standards Institute) A300 standards. Her experience includes proper pruning of trees, inspection of quality nursery stock, and proper tree planting to ensure survival. This work includes the identification of significant trees and an analysis of tree impacts and tree conditions. She has authored arborist reports and tree protection plans as part of infrastructure development and improvements. Julia has been involved in the coordination of maintenance plans and initial planting lay-out of many sites, taking into account the shade and inundation tolerance of many different tree species. She also monitors the health of trees in the years after planting, making recommendations to clients on proper tree care. Her experience extends into urban forestry, including street tree pruning, invasive and hazard tree identification and removal.

**Recent Relevant Project Experience**

***Chinese Scholar Tree Compliance Inspection.*** Julia is performing monthly three health compliance inspections of a Chinese Scholar Tree located near Cal Anderson Park in Seattle, Washington. The Chinese scholar tree (*Styphnolobium japonica*) is a “heritage tree” under the City’s Department of Transportation Heritage Tree Program. Julia has prepared six Arborist Compliance Memoranda to report the tree health.

***Eastgate Interceptor Phase III Rehabilitation.*** Julia performed a tree inventory of the access road alignments which included the identification of significant trees and an analysis of tree conditions potential impacts to trees. She authored an arborist report and a tree protection plan for the project.

***Hall Creek Culvert Removal and Ballinger Lake Golf Course Sewer Replacement.*** Julia led the efforts for conducting annual vegetation monitoring and report writing. Julia also provides site maintenance recommendations to the City, including making recommendations to the client on proper tree care.

***I-5 Corridor Reinforcement Power Transmission Line.*** Julia led rare plant surveys for the Biological Assessment (2014-15) and Final EIS (2015), helping to complete the field surveys that covered 87 miles of transmission line and 120 miles of support roads. She also completed US Fish and Wildlife Service protocol surveys for marbled murrelet (*Brachyramphus marmoratus*) surveys in forest stands of potential murrelet habitat.

***East Creek and Richards Creek Fish Passage Improvement and Stream Modification.*** Julia coordinated and inspected the planting lay-out of this site, taking into account the shade and inundation tolerance of many different tree species. She oversaw crews during planting, ensuring proper planting and mulching techniques.

***Consulting Arborist for City of Edmonds Citizen Tree Board.*** Julia is the consulting arborist for the City of Edmonds Citizen Tree Board (CTB), in a role that helps connect the CTB with the City staff. Julia facilitates the organization of the CTB Arbor Day event and coordinates the re-certification efforts of Edmonds with the Tree City USA program. Julia is also present at monthly board meetings to answer citizens’ questions relating to trees and tree care.

**Alicia Higgs | Habitat Biologist**

*MS in Resource Conservation, University of Montana, 2012*

*BS in Biology, Seattle University, 2006*

*Associate Wildlife Biologist® Professional Certification from The Wildlife Society, 2016*

*Marbled Murrelet Forest Survey Certification, approved by USFWS, ODFW, and WDFW, 2016*

*USFWS Certified Observer for Marbled Murrelet Marine Monitoring, 2016*

*Certified Biological Assessment Junior Author, WSDOT, 2015 – present*

Alicia Higgs is a habitat biologist with over 7 years of diverse work experience in the disciplines of wildlife biology and natural resources. She has conducted field surveys for listed Threatened and Endangered species for several Federal agencies following interagency established survey protocols. She has experience with many wildlife taxa including raptors, amphibians, reptiles, land birds, and small mammals. With many of these species, Alicia participated in tagging, banding, and trapping activities for demographic studies. She is skilled at conducting habitat assessments and designing survey and monitoring plans, and with writing Biological Assessments for compliance with the ESA. Alicia has also worked in natural lands restoration including planting of native trees and shrubs, native plant salvaging, and invasive plant species removal. She is proficient with GIS data management and analysis, as well as geodatabase development for wildlife studies. Alicia is competent in wetland delineations, wetland ratings, ordinary high water mark determinations, vegetation monitoring, and permitting.

**Recent Relevant Project Experience**

***I-5 Corridor Reinforcement Power Transmission Line.*** Alicia contributed technical expertise on federally listed wildlife species and habitat for the Bonneville Power Administration's new power transmission line project. She conducted habitat assessments for federally listed wildlife species, both through a GIS desktop analysis with USFWS data sets and habitat reconnaissance field surveys. Alicia designed and conducted protocol surveys for marbled murrelet in areas identified to have potential habitat.

***Pierce County Habitat Conservation Plan.*** Alicia contributed to the development of a Habitat Conservation Plan (HCP) for Pierce County Department of Public Works' levee maintenance and operations program. Alicia was the primary author for sections of the HCP relating to northern spotted owl (*Strix occidentalis caurina*) and marbled murrelet.

***Ringer Site Habitat Enhancement and Recreation Management Environmental Assessment.*** Alicia conducted field assessments of habitat suitability and use by raptors, ungulates, special status species, and other common wildlife species for a project proposed by the BLM along a section of the Yakima River. She was the lead author of the wildlife sections of an Environmental Assessment, documenting the results of field surveys and assessing potential project impacts to wildlife and habitat.

***Lake Hills Trunk/NW Lake Sammamish Interceptor Sewer Upgrade.*** Alicia conducted habitat assessments and impact analysis for special status fish and wildlife species along the proposed sewer upgrade corridor. She worked with permit specialists to evaluate alternative corridors and assess impacts to wildlife and habitat.

***Eastgate Interceptor Phase III.*** Alicia assisted the staff arborist in locating trees within the proposed project area, used a handheld GPS to accurately record locations and tree identification data, and photographed and assessed tree health.

## Recent Projects

In addition to the project experience discussed in our firm overview section on page 2, Herrera has a history of conducting similar work for a wide range of clients across Puget Sound and western Washington. A visual summary of our most relevant projects with a similar scope is provided in Table 1 below. In response to your request, in the following pages we provide descriptions of three of our most recent projects along with key staff members’ roles, overall budget, and contact information for a reference person. Additional project experience and references are available at your request.

**Table 1. Past Project Experience and How it Aligns with the Scope for this Project**

Project Name	Ecological Assessment	Survey and Habitat Mapping	Impact Minimization for Development	Wildlife Corridor	Wetlands/Streams	Old Growth Trees	Ecology Habitat Protocols
Bellevue Long-Term Monitoring	✓				✓		
Eastgate Interceptor Phase III	✓	✓	✓		✓	✓	✓
FHWA On-Call	✓	✓		✓	✓		
I-5 Corridor Reinforcement Project	✓	✓	✓	✓	✓	✓	✓
Lake Hills Trunk/NW Lake Sammamish Sewer	✓	✓	✓	✓	✓		✓
Pierce County Monitoring	✓				✓		
Sound Transit Express Bus Base	✓	✓	✓		✓		
Sound Transit Shop and Yard	✓	✓	✓		✓		

### Eastgate Interceptor Phase III - Environmental Planning | King County

King County Wastewater Treatment Division is proposing to re-line two existing severely corroded sanitary sewer parallel pipelines located in the Lake Hills Greenbelt. The proposed alignment goes through environmentally sensitive areas that have potential regulatory constraints, including wetlands, Kelsey Creek, and the 100-year floodplain. Herrera collaborated on environmental review of the project, leading the efforts for the SEPA environmental checklist, a biological evaluation, and a tree retention and protection plan. This work expanded on previous studies for the alternatives analysis phase of the project.

Key Staff (including role): Alicia Higgs (habitat biologist), Julia Munger (arborist/biologist)

Budget: \$59,463

Client Contact Information: Jacob Sheppard, jacob.sheppard@kingcounty.gov, 206.477.5395

### I-5 Corridor Reinforcement Project | Bonneville Power Administration

BPA is proposing to build a new 500-kV transmission line and substations that would run for 85 miles from northwest Oregon into southwest Washington. Herrera is leading complicated ESA consultations, preparing a Biological Assessment, and conducting investigations of rare plant and wildlife species and habitats potentially impacted by the project. Herrera led the preparation of vegetation and wildlife Environmental Impact Statement (EIS) sections and the studies that supported them. In early phases of project analysis (Draft EIS), Herrera conducted assessments of several proposed transmission routes and mapped vegetation, wildlife habitat, streams, and wetlands to advise alternatives decisions. This included a project-wide remote sensing analysis and predictive modeling of wetland distribution, and a comprehensive rating analysis based on these data that was accepted by Ecology and the USACE for initial permit review. To meet an aggressive NEPA schedule, Herrera developed a GIS-based classification system to identify land cover types based primarily on aerial photography and topography interpretation. These land cover types were then used along with available data from the USFWS, Washington Department of Fish and Wildlife and Washington Department of Natural Resources to identify potential hotspots for rare plant and animal species that was accepted by these regulatory agencies as sufficient for NEPA compliance. Once the preferred alternative was determined, Herrera led detailed desktop and ground surveys, reporting to provide complete analysis for ESA consultations, and other regulatory permits.

Key Staff (including role): Alicia Higgs (habitat biologist), Julia Munger (arborist/biologist)

Budget: \$1,686,054

Client Contact Information: Nancy Wittpenn, nawittpenn@bpa.gov, 503.230.3297

### Lake Hills Trunk and NW Lake Sammamish Interceptor Sewer Upgrade | King County

Herrera is the environmental compliance lead for the Lake Hills Trunk and Northwest (NW) Lake Sammamish Interceptor Sewer Upgrade team. The team is supporting the King County Wastewater Treatment Division with fulfilling their mission of protecting public health and the environment by increasing sewer system capacity to accommodate current and future growth within their North Lake Sammamish Conveyance System Planning Basin. In support of selecting a preferred sewer alignment alternative, Herrera conducted an existing environmental conditions assessment of the study area that characterizes SEPA environmental elements including earth, air, water, plants and animals, environmental health, noise, land and shoreline use, aesthetics, light and glare, recreation, transportation, and public services and utilities. Characterization of the plants and animals elements includes regulated wetlands, streams, terrestrial habitats, and presence of special status fish and wildlife species. Based on the results of the existing conditions assessment, Herrera supported the design team in evaluating environmental impacts and mitigation requirements associated with project alternatives and the selection of a preferred alternative that minimizes impacts on the environment. During predesign phase of the project, Herrera is providing support conducting wetland, stream, and habitat surveys, preparing environmental documentation, and reviewing applications in support of obtaining permits and approvals from regulatory agencies.

Key Staff (including role): Shelby Petro (environmental lead/wetland biologist), Julia Munger (wetland biologist), Alicia Higgs (habitat biologist)

Budget: \$291,103

Client Contact Information: Meredith Redmon, Meredith.Redmon@kingcounty.gov, 206.477.5488

# Statement of Qualifications Ecological Assessment Services for Suzuki Property

23 SEPTEMBER 2016



**M<sup>C</sup>LENNAN  
| DESIGN**



I N S I T E

**Tree  
Solutions Inc**  
Consulting Arborists



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## COVER LETTER

23 September 2016

Attn, Mr. Gary Christensen  
Director of Planning & Community Development  
City of Bainbridge Island  
Department of Planning & Community Development  
280 Madison Avenue North  
Bainbridge Island, WA 98110

It is with great pleasure that our team submits this proposal to offer the ecological assessment services for the Suzuki property located at the intersection of Sportsman Club Rd NE and NE New Brooklyn Rd on Bainbridge Island.

We have reviewed the RFQ, we know the property, and understand the requirements of the project.

We are convinced that all site development can, and should, be integrated with the protection and maintenance of the ecological structure and dynamics. It is our aim in every project to begin with a scientific and ethical foundation.

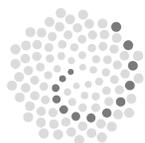
Given the location and character of the Suzuki Property, our assessment will focus on the wooded site area, the two fresh water ponds, and the ravine that flows south to Eagle Harbor. We recognize the importance of the local watersheds, including the estuaries and marine wetlands of Eagle Harbor and Murden Cove.

The team is composed of three companies committed to deep green projects and practices, with ample international and local experience. Each member of our team brings a proven history of cost-effective strategies and a distinct, rich understanding of Bainbridge Island's ecological landscape.

We are excited to submit this Statement of Qualification and look forward to working with the city of Bainbridge.

Sincerely,

Jason Wilkinson  
Architect, AIA  
McLennan Design



## BRIEF OVERVIEW OF THE COMPANIES



Located on Bainbridge Island, McLennan Design is a creative design practice seeking transformation in the places we live and work. It is our goal to help honor the 'genius of place' inherent in all locations, helping to understand and restore damaged sites, and create new opportunities for life of all kinds to thrive. Our work spans master planning, architectural design, and sustainability consulting. We seek to harness the potential of each site and find appropriate solutions that add value to the community economically, socially, culturally, and ecologically.



In Site is an ecological consulting firm that is relocating to Bainbridge Island. We are a group of trained ecologists and biologists working on projects around the world, pulling inspiration from the study of nature and the tools of biomimicry. In Site provides site analysis and consultation that contributes invaluable scientific understanding of project sites. Working with a network of experienced biologists, and designers, In Site collaborates closely with the built environment team to understand, interpret, and ultimately draw design inspiration from the ecology of a project's site. In Site aims to empower designers to do their best and most innovative work with key ecosystem intelligence drawn directly from the site.



Tree Solutions, Inc., is a Seattle-based firm that works with our clients to resolve questions and conflicts regarding trees, with sustainability and science in mind. Tree Solutions provides a science-based, objective approach to tree evaluation and management, grounded in years of experience with land development, landscaping, and tree pruning and removal. Core services include tree risk evaluation, diagnostics, and health management; tree retention for construction sites; management of Environmental Sensitive Areas and Natural Growth Protection Areas; inventory and management plans; vegetation restoration and mitigation plans; and tree appraisal and expert witness services. Tree Solutions produces professional site plans, documentation, and reports as needed for each situation. Tree Solutions is fully insured and licensed (Lic# TREESS1916KJ) with the State of Washington.



## TEAM MEMBERS



**JASON WILKINSON** | *Architect*  
AIA, LEED® AP BD+C

### Education

B.Arch, University of Oregon, 1999

### Registrations & Certifications

Architect: California 2013  
LEED BD+C Accredited Professional

### Associations

American Institute of Architects (AIA)

Jason brings over 15 years of sustainable design and consulting experience on a variety of project types, including housing, education, healthcare, commercial and civic projects. He has worked closely with biologists and arborists throughout his career as a project manager to facilitate planning and design solutions that support ecological health. He has a collaborative team attitude and a commitment to delivering high quality results that emphasize practical solutions during all project phases. Jason is skilled at balancing his passion for advancing sustainability with humor, a positive outlook and careful listening. He is also an energetic volunteer in his community and is currently serving as an appointed member of the City of Bainbridge Island Design Review Board (DRB). Jason and his family are residents of Bainbridge Island and his two teenage children are BISS students.



**JUAN ROVALO** | *Biologist*  
CERTIFIED BIOMIMICRY PROFESSIONAL, MBA

### Education

National University of México (UNAM), Biology  
Iberoamerican University (UIA), MBA  
Biomimicry Institute, Certified Biomimicry Professional

### Associations

Member of the Society for the Ecological Restoration  
International Living Future Institute

Juan is the founder and key principal of In Site and Associates Consulting, a firm focused on providing ecological services to design teams in their quest to achieve the highest ecological performance and environmental integration for projects. He is a skilled biologist whose strength lies in his ability to work with interdisciplinary teams in diverse cultural and ecological contexts. His strong communication skills and deep knowledge of biological strategies and systems enriches the processes of design that are aimed towards innovation and high performance. His growing international activity in Biomimicry-related projects, including various locations throughout Mexico, the United States, and beyond, has positioned Juan as one of best specialists worldwide. The skills he offers are a key differentiator for the creative and planning processes of architects, engineers, landscapers, urban planners, real estate developers and industrial and product designers.

Juan holds a Bachelor's degree in Biology from the National University of Mexico (Universidad Nacional Autónoma de México, UNAM). During this course of biological studies, Juan worked in a variety of research laboratories, including neuroscience, biotechnology, ecology, botany and mycology. To increase the opportunities to use applied biology, Juan also received an MBA from the Universidad Iberoamericana (UIA) and holds the title of Certified Biomimicry Professional from Biomimicry 3.8 following the completion of their inaugural two-year Biomimicry training program. This unique coupling of educational endeavors compels Juan to relay his scientific foundation and passion for the environmental topics in a way that is complemented with his sensibility towards social and economic dimensions for each project.

Juan and his family recently moved to Bainbridge Island.



## TEAM MEMBERS



Katie has over 4 years of experience studying native forest dynamics and pathology throughout the Pacific Northwest. She specializes in plant pathogens, habitat quantification, native and rare plant identification, field sampling techniques, and fire ecology. She strives to practice interdisciplinary environmental management and hopes to increase community awareness through education and research. She is also going to be the Lead Arborist on the upcoming Wyatt Way Improvements on Bainbridge Island.

**KATIE I. HOGAN** | *Associate Consultant*  
**CERTIFIED ARBORIST MUNICIPAL SPECIALIST**

### **Education**

B.A. Environmental Studies  
Program on the Environment  
University of Washington, 2012

### **Registrations & Certifications**

Certified Arborist Municipal Specialist



## STATEMENT OF TEAM QUALIFICATIONS

McLennan Design has provided regenerative design services locally and internationally, starting each project with a careful understanding of the carrying capacity of each site. We are experienced at working collaboratively with biologists and other scientists to assess the ecological baseline, prior to commencement of any design work. We understand how master planning and architectural design can integrate deep green awareness that supports ecological health. McLennan Design is skilled at facilitating productive discussions around the issues at the intersection of design and ecology. We have a strategic partnership with In Site and Associates and have worked seamlessly with them on a number of projects. Our partnership has allowed us to blend the practices of ecological assessment and regenerative design.

**In site and Associates** has coordinated and delivered ecological assessments for projects in many locations and biomes. The projects in which In Site participates cover a wide range of interests: from conservation and protected areas management to development projects that look to integrate a high environmental performance. With more than 15 years of experience, Juan Rovalo leads a team of biologists alongside designers, architects and developers.

Different projects require different solutions and expertise. In Site has the flexibility to coordinate teams to consult on diverse projects in both terrestrial and aquatic environments, and covering a broad range of habitats and ecosystems.

In an ongoing project in Belize, we have established the baseline through an assessment of the terrestrial flora, key groups of fauna, both in terrestrial and aquatic environments. We have made remote analyses with satellite and aerial images and identified the areas that host distinct vegetal communities. By establishing transects, we've identified the species composition and characteristics (size, DBH, coverage, condition), determined relative abundance and established Biodiversity indices showing population structures and abundance. Bird, mammals, reptiles, fish and major invertebrate species were identified and registered.

In urban environments and public parks, we have assessed tree species and density and offered recommendations coordinating the application of appropriate methods for risk reduction, pest management, and integration of vegetation to new or existing development.

**Tree Solutions Inc.** is a Seattle-based environmental consulting firm, with a long history of work on Bainbridge Island. We are dedicated to helping people live with trees. We provide a science-based, objective approach to tree evaluation and management, grounded in years of experience with tree pruning and removal, land



## STATEMENT OF TEAM QUALIFICATIONS

development, and landscaping. With eight highly-skilled arborists on staff, our team has the capacity to complete projects on deadline while accommodating a variety of budgets.

Tree Solutions has a great deal of experience working with the City of Bainbridge on projects of a similar nature, including providing tree assessments and vegetation management plans.



## RELEVANT RECENT PROJECTS

### CLIENT A CONFIDENTIAL PROJECT

Cresco Ventures

### KEY STAFF MEMBER'S ROLE

JASON WILKINSON: Master planning and sustainability consulting  
JUAN ROVALO: Lead biologist, coordinating scientific field data, collaborating with developer and design teams.

### OVERALL BUDGET

\$320,000usd

### REFERENCES

Renato Termale  
renato.termale@delos.com  
Jim Reilly  
jim.reilly@delos.com

Ecological assessment and base line establishment. Detailed analysis of the current flora (identification, richness, relative abundance, coverage, and dasonomic analysis of each vegetal type) and fauna of the small island including the following indicator groups: birds (native and migratory), reptiles, amphibians, mammals (including bats). In the aquatic environment flora and fauna species was also identified, benthic analysis, fish population (richness, abundance and size distribution) and in fauna assessment.

### CLIENT FOREST OF THE CITY OF MAZATLAN (*BOSQUE DE LA CIUDAD DE MAZATLAN*)

City of Mazatlán

### KEY STAFF MEMBER'S ROLE

JUAN ROVALO: Lead biologist coordinating a team of biologists, GIS specialists, gathering data on-field and working with the design team.

### OVERALL BUDGET

\$30,000usd

### REFERENCES

Martín Martínez  
mmartinez@liquen.mx

The forest of the city of Mazatlan is a public space in the city of Mazatlan Sinaloa, Mexico. It is a 20-acre urban park that has received little attention and funding in the past. In Site intervention identified, measured and assessed each one of the trees present in the 20 acres of the property (around 1,500 trees) giving the design team detailed maps with the different categories of trees, in order to consider the future management and integration with the renovation plan for the site.

### CLIENT WINSLOW GROVE, DENOVA NORTHWEST, BAINBRIDGE ISLAND, WA

DeNova Northwest

### KEY STAFF MEMBER'S ROLE

KATIE HOGAN: Appraisal valuation for all trees that may be impacted by development

### OVERALL BUDGET

\$7,000

### REFERENCES

John Everett  
Director of Land Acquisition  
206.915.3095

Review documents, maps and plans for preparation and completion of tree assessment and report. Site visit to inventory approximately 600 significant trees on site as well as trees on adjacent property with overhanging canopy that that are scheduled for retention and protection through short plat development. (Tag significant trees if needed). Document tree identification number, DSH, species, health and structural condition, appraisal value, drip lines, heritage tree status, and a proposed action for the tree (remove, retain, etc). Deliverables: Mark up survey (provided by client), table of trees with appraisal calculations, and summary report with tree protection plan. Review preliminary utility plans and determine minimum tree protection areas for retained trees.





BALANCING THE  
NEEDS OF  
PEOPLE &  
THE ENVIRONMENT

**STATEMENT OF QUALIFICATIONS FOR**

CITY OF BAINBRIDGE ISLAND

ECOLOGICAL ASSESSMENT SERVICES FOR  
SUZUKI PROPERTY



Gary Christensen, Director of Planning & Community Development  
Department of Planning & Community Development  
City of Bainbridge Island  
280 Madison Avenue North  
Bainbridge Island, WA 98110

## Table of Contents

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### Re: RFQ for Ecological Assessment Services for Suzuki Property

Dear Mr. Christensen,

The City of Bainbridge Island (City) seeks an ecological assessment of its Suzuki property, an almost 14 acre parcel known to the surrounding community as a rich wildlife corridor containing large, native trees. A successful assessment will provide the City with an understanding of the parcel's conditions that will enable it to move forward with a project that is in adherence to its community's environmental values.

Since our founding in 1982, The Watershed Company has worked to limit the impact of development on our natural resources, empowering clients with the science and design to **balance the needs of its people and environment**. Our multidisciplinary staff provides thorough and cost-effective assessments and mitigation recommendations for residential developers and public agencies alike, for both single design projects and as an on-call consultant to the cities of Kirkland, Sammamish, Bellevue, WSDOT, and the Port of Seattle.

As project manager, I look forward to continuing to work with the City in helping find ecologically-friendly solutions to its development needs. Additional information on our experience, including that on Bainbridge Island, and approach can be found in the enclosed statement of qualifications. If you have any questions, feel free to call me at (425) 822-5242.

Regards,

Sarah Sandstrom, CFP, PWS  
Project Manager

## Project Manager

**Sarah Sandstrom, CFP, PWS**

The Watershed Company

750 6th Street South

Kirkland, WA 98033

Phone: (425) 822-5242

Email: [ssandstrom@watershedco.com](mailto:ssandstrom@watershedco.com)

Website: [watershedco.com](http://watershedco.com)

# FIRM OVERVIEW

## Section A

### BALANCING THE NEEDS OF PEOPLE AND THE ENVIRONMENT

**Project Understanding.** The City of Bainbridge Island's (City) undeveloped and wooded Suzuki Property is a cherished community parcel, known to neighbors for its mature conifers, rich wildlife, and clean water. To provide affordable housing for its residents, the City seeks to develop this property in an ecologically-responsible manner befitting its local environmental values and regulations. A thorough ecological assessment and inventory will provide the City with the information needed to do this successfully.

**About The Watershed Company.** For over three decades, The Watershed Company has helped Puget Sound cities balance the needs of its people and environments, providing natural resources assessment, critical area and buffer mitigation design, and mitigation and restoration plans that help meet project goals while protecting natural resources.

Our multidisciplinary focus on our region's environment provides a "one-stop shop" for municipalities seeking regulatory agency approval and ecologically-minded design for community improvements and development projects.

### WHY CHOOSE WATERSHED?



Watershed planners reviewed Kitsap County's Best Available Science (BAS) and wrote the County and City of Bainbridge Island's Cumulative Impacts Analysis (CIA) reports – documents that not only speak to the City's past environmental conditions, but also to its future goals.



Our PM, Sarah Sandstrom, put this knowledge to use earlier this year as part of two residential projects. For each, we conducted ecological site assessments to ensure that proposed development met the City's code requirements and achieved "no net loss of ecological functions."



In addition to Sarah, our team is composed of two ecologists certified in Wetland Science and Arboriculture with extensive experience providing detailed assessments and tree inventories on an on-call capacity for agencies like Puget Sound Energy and the cities of Bellevue and Shoreline.



We regularly work with regulators like Washington Departments of Ecology and Fish and Wildlife. As such, our staff understands what kind of information is needed to quickly gain regulatory approval and move projects forward in a cost-effective manner.

Turn to the next page for more information on our project team.

For more information on our firm's experience, turn to page 9.

# TEAM QUALIFICATIONS

## Section B

### EFFICIENT ASSESSMENT, JUSTIFIABLE DECISIONS

Our ability to be an efficient environmental consultant for the City of Bainbridge Island lies in our team's multidisciplinary abilities and cultural commitment to a continuing dialogue on progress and budget.

**Our team will be led by Sarah Sandstrom**, an experienced project manager and scientist familiar with local ecological from her work on both the City of Bainbridge Island and Kitsap County's CIA and local residential development projects.

**Mike Foster and Katy Crandall will conduct the ecological assessment of the Suzuki property.** As accredited wetland scientists and International Society of Arboriculture-certified arborists, Mike and Katy are able to provide holistic assessments that detail the site's ecology and protect its trees and habitat during development. Mike and Katy recently completed inventories and assessments for residences on Mercer Island and in the City of Shoreline.

**Kenny Booth will provide permitting and regulatory compliance, as needed.** A Watershed Principal, Kenny has over 12 years of experienced with land use planning and permit processing for both public and private projects.

**Al Wald will provide the aquifer recharge assessment.** Formerly with Ecology, Al has over 25 years of experience in water resource studies and has examined critical aquifer recharge areas as part of Watershed's planning efforts for the City of Woodinville and Benton County.

**Amber Raynsford will provide GIS support and Mitigation Design guidance.** Amber has over ten years of experience with landscape architecture, mitigation design, geospatial analysis, and land use planning.



**Sarah Sandstrom, CFP, PWS**  
Project Manager

Resume can be found on page 3.



**Mike Foster, PWS, ISA Certified Arborist and Tree Risk Assessor**  
Ecologist, Arborist

Resume can be found on page 4.



**Katy Crandall, WPIT, ISA Cert. Arborist**  
Ecologist, Arborist

Resume can be found on page 5.



**Kenny Booth, AICP**  
Permitting and Regulatory Compliance

Resume can be found on page 6.



**Al Wald, CHG**  
Aquifer Recharge

Resume can be found on page 7.



**Amber Raynsford, PLA, GISP**  
GIS Analyst and Mitigation Design

Resume can be found on page 8.

The Watershed Company project team..

Our team's resumes can be found on the following pages. Additionally, our team is supported by a multidisciplinary bench of 20 ecologists, wetland scientists, arborists, planners, landscape architects, fisheries biologists, and environmental engineers.



## Sarah Sandstrom, CFP, PWS

Certified Fisheries Biologist and Wetland Scientist

### ROLE

Project Manager

### EDUCATION

Master of Science in Aquatic and Fishery Sciences, 2008, University of Washington, Seattle, Washington

Bachelor of Science in Biology (Concentration in Marine Biology), 2001, Duke University, Durham, North Carolina

### CERTIFICATIONS

Certified Fisheries Professional, 2013

Professional Wetland Scientist, 2014

“Senior Writer” for WSDOT Biological Assessments, 2013

University of Washington Extension, Wetland Science and Management Certification, 2010

Advisory Board, University of Washington Extension Wetland Science and Management Program

### CONTINUING EDUCATION

Pacific Northwest Conservation Banking Training, 2013

Wetland Rating Training for Western Washington, 2015

Science base and tools for assessing stream project proposals, 2009

Sarah is an experienced project manager specialized in leading multidisciplinary teams of scientists to expedite project delivery through thorough assessment of resources and their potential impacts. Sarah previously reviewed Kitsap County’s Best Available Science and was the main author of the County and City of Bainbridge Island Shoreline Master Plan updates’ Cumulative Impacts Assessments. Her understanding of local conditions and regulations has helped the City of Bainbridge Island find ecologically-friendly solutions to recent residential development projects.

**Residential Property Ecological Assessment and Mitigation Recommendation, City of Bainbridge Island.** Sarah, as project manager, developed a habitat management plan as part of a private Bainbridge Island resident’s effort to renovate and expand their shoreline home without impacting the parcel’s critical saltwater habitat and a large, mature forest. Sarah conducted a field analysis, wrote the final report, and coordinated with the client and project landscape architect to develop a design alternative that conserves the most sensitive ecological features and mitigates for impacts while cumulatively achieving no net loss of ecological function.

**Residential Property Ecological Assessment and Mitigation Recommendation, City of Bainbridge Island.** Sarah, as project ecologist, provided technical guidance as part of a private Bainbridge Island resident’s effort to renovate and expand their shoreline home without impacting the parcel’s protected upland and marine areas. With Watershed’s help, the residents were able to build improvements that achieved no net loss of shoreline ecologic function and complied with local regulatory ordinances and research.

**Shoreline Master Program Cumulative Impacts Analysis, City of Bainbridge Island and Kitsap County.** Sarah was the lead author on the Cumulative Impacts Analysis (CIA) reports assessing whether the County and City’s SMPs met the standard of no net loss of ecological functions. In support of CIA development, Watershed provided comments on draft SMPs and the County’s Shoreline Restoration Plan. For the County SMP, we also reformatted the document, updated graphics, and provided input on organization. The CIAs were well-received by the County, City, and Ecology.

**Comprehensive Plan Environmental Impact Statement (EIS), Kitsap County.** In support of the County’s 2016 Comprehensive Plan Update, Watershed contributed to the development of a supplemental EIS. Sarah prepared a summary of existing water resources conditions and compared those to potential future conditions of the different alternatives and UGA boundaries. The review included a description of existing surface water regulations and programs, as well as a consideration of impervious surface estimates under the different alternatives.

**Ecological Assessment, Cape Disappointment State Park, Washington State Parks.** Sarah was the lead author of an ecological assessment completed for Cape Disappointment State Park, in Pacific County, Washington. The biological assessment addressed all federally threatened and endangered species and critical habitats within the project area. The report focused on the evaluation of potential effects of tree removal and noise production on nesting and foraging marbled murrelets in marine and terrestrial habitats.





## Mike Foster, PWS, ISA Certified Arborist

Ecologist, ISA Certified Arborist

### ROLE

Ecologist, Arborist

### EDUCATION

Wetland Science and Management Certification Program, 2006, University of Washington, Seattle, WA

Bachelor of Science in Biology, 2001, Western Washington University, Bellingham, WA

### REGISTRATIONS & LICENSES

Professional Wetland Scientist (PWS), Society of Wetland Scientists Certification, 2016

Sedge Rush and Grass Identification, 2007, NW Coastal Training, Olympia, WA

Certified Arborist, International Society of Arboriculture

Qualified Tree Risk Assessor, International Society of Arboriculture

Mike brings ten years of arboriculture, mitigation design, wetland delineation, and native plant expertise to his position as lead arborist at The Watershed Company. His skill at tree identification and tree risk assessment is combined with an in-depth understanding of local ordinances and policies for tree retention and mitigation requirements. A strong background in wetland regulation, Northwest plants and field research allows him to provide accurate and knowledgeable information in a variety of settings. Before joining The Watershed Company, he operated a native plant landscaping business, giving him practical skills on plant installation and maintenance to promote survival.

**Darlington Trail Ecological Assessment and Mitigation Plan, Washington State Department of Natural Resources.** Mike provided an ecological assessment, mitigation plan, and client communication to the Washington State Department of Natural Resources (DNR) and Evergreen Mountain Bike Alliance in support of their effort to create a 20-mile non-motorized trail system in unincorporated Snohomish County. Mike's field assessment found that nearly half of the reviewed area contained wetland critical area and was overall dominated by mature native tree stands. Working with firm landscape architects, Mike provided a GIS map of the project's critical areas and created a mitigation plan that proposed "buffer averaging" and a strategic trail separation to help DNR develop a regulatory compliant design that showcased the land's natural beauty while protecting its wetlands and streams.

**Modernization and Expansion, Ardmore Elementary School, Bellevue School District, Bellevue, Washington.** Mike identified vegetation and performed post-construction mitigation monitoring as part of Watershed's environmental services for Bellevue School District's modernization and expansion of Ardmore Elementary School. Surrounded by residential development, the site was determined to have two palustrine wetlands buffered by a healthy forest that contained red alder, black cottonwood, and pacific willow trees and a combination of native and invasive understory vegetation. As part of his monitoring effort, Mike assessed the status of the new plantings, existing snags, and wetland site conditions. He also responded to District questions related to tree removal permitting and plant substitution.

**West Beach Creek Culvert Replacement, Orcas Island.** Mike provided tree retention planning, mitigation design, and construction monitoring as part of the restoration and enhancement of local stream, estuary, riparian, and wetland habitats. The design includes finding the most feasible and cost effective culvert replacement alternatives, preparing engineering drawings in AutoCAD/Civil3D, revegetation and tree retention design, gravel placement, and estuary design.

**East Link Segment "A" Critical Areas Assessments, Tree Inventory, and Environmental Permitting, Sound Transit.** As project arborist, Mike led a comprehensive tree inventory along a proposed 6 ½ mile light rail segment from Seattle to Bellevue, gathering data on species, size and health, and GPS-located all significant trees for inclusion in design and construction documents.. Watershed is currently leading project environmental permitting, including final critical areas review for wetlands, wildlife and significant trees as well as mitigation design for tree impacts.



## Katy Crandall, WPIT, ISA Certified Arborist

Wetland Biologist, Ecologist, Arborist

### ROLE

Ecologist, Arborist

### EDUCATION

Bachelor of Science in Environmental Science, 2008, Western Washington University, Bellingham, Washington

### REGISTRATIONS & LICENSES

Wetland Science and Management Certification, 2013, University of Washington Extension, Seattle, WA

### CERTIFICATIONS

Certified Arborist, International Society of Arboriculture

Marbled Murrelet Monitor, United States Department of Fish and Wildlife, 2015

Katy uses her combined experience and background in wildlife and wetland ecology to assess infrastructure impacts on critical areas. She has experience with restoration, mitigation and wildlife research and is an ISA Certified Arborist. Prior to joining The Watershed Company, Katy spent a year implementing wetland, stream, and buffer restoration projects throughout unincorporated King County with the Washington Conservation Corps. Katy most recently conducted a tree inventory and designed a tree protection plan for a Mercer Island residential client.

**Darlington Trail Ecological Assessment and Mitigation Plan, Washington State Department of Natural Resources.** Katy provided an ecological assessment to the Washington State Department of Natural Resources (DNR) and Evergreen Mountain Bike Alliance in support of their effort to create a 20-mile non-motorized trail system in unincorporated Snohomish County. Katy conducted a field assessment that found that nearly half of the reviewed area contained wetland critical area and was overall dominated by mature native tree stands. Her findings, documented in a Critical Areas Report, helped DNR develop a regulatory compliant trail design that showcased the land's natural beauty while protecting its wetlands and streams.

**Wetland Delineation and Habitat Assessment Services, Bennett Elementary School, Bellevue School District, Bellevue, Washington.** Katy conducted field visits, coordinated with Watershed and City staff, and drafted the final report as part of Watershed's wetland delineation study and habitat assessment of the City's 9.3 acre Bennett Elementary School campus. Katy conducted a habitat assessment of the areas surrounding the school facilities that included a site evaluation of the school facilities, parking lots, a sand field, and a playground area, and included specific local regulatory considerations. Katy's report included a detailed wetland delineation map for survey use and a reference overlay sketch of the habitat. Watershed's final report determined the site provided a significant forested habitat corridor for the City-classified "species of local importance."

**Nesting Bird Surveys for Seattle Arboretum Loop Trail, City of Seattle.** Katy determined the locations of active bird nests within vegetation removal areas, as part of the City's compliance with MBTA regulatory guidelines during the pre-construction of its new Arboretum Loop Trail. Field work activities include avian point-count surveys and nest searches, with active bird nests being monitored through the breeding season. Katy's effort and expertise helped reduce the project's impact on local wildlife.

**E230kv Route Reconnaissance and Delineation, Puget Sound Energy.** As part of the Energize Eastside project, PSE proposes to upgrade their transmission system in order to increase capacity and provide more dependable power for Eastside communities. Watershed, including Katy, is currently delineating, GPS-locating and mapping, all jurisdictional wetlands and streams present in this 24-mile long corridor that spans five jurisdictions from Redmond to Renton. In addition, Watershed is conducting a detailed vegetation inventory of trees and large shrubs located in the corridor.



## Kenny Booth, AICP

Senior Planner, Principal

### ROLE

Permitting and Regulatory Compliance

### EDUCATION

Bachelor of Science (BS) in Geography, 1999, University of Idaho, Moscow, ID

### REGISTRATIONS & LICENSES

American Institute of Certified Planners (AICP), American Planning Association certification, 2008

Kenny is a permitting expert with over 12 years of experience guiding Washington municipalities through local, state, and federal permitting processes. Kenny’s in-depth regulatory knowledge and relationships with agencies—such as the Washington Department of Fish and Wildlife (WDFW), Department of Ecology (Ecology), and the United States Army Corps of Engineers (Corps)—has helped project teams design and construct habitat-friendly improvements for numerous counties and cities, including the cities of Vashon, Lake Forest Park, Mountlake Terrace, Bellevue, and Issaquah.

#### **Arts Center Ecological Assessment and Mitigation Plan, Vashon Allied Arts, City of Vashon.**

Kenny was the permitting lead as part of Watershed’s support of Vashon Allied Arts’ (VAA) project to develop a new arts center and surrounding parking space. With Watershed’s help, VAA was able to decipher their tight critical area buffers and develop a design that enhanced the property’s ecological function and complied with local, state, and federal environmental regulations. Kenny coordinated with the client, provided regulatory guidance to Watershed ecologists, acquired needed permits, and drafted the project’s Critical Areas Report.

**Various Private Developments, City of Sammamish.** Kenny has worked on dozens of private development projects within the City over the last 9+ years. Work includes extensive critical area and shoreline permitting for residential development, including local, state, and federal permitting. As part of this work, Kenny has gained a broad understanding of the City’s critical areas and shoreline regulations, as well developed key relationships with City staff. This work has also resulted in extensive coordination with state and federal agencies and numerous appearances in front of the City’s Hearing Examiner

#### **On-Call Environmental and Permitting Services, City of Bellevue Parks and Community Services.**

Kenny has been the project manager and client contact for Watershed’s on-call contract and work order assignments on \$280,000 worth of permit and environmental services for parks projects in the City of Bellevue, managing more than 25 different task orders since 2008. Work has included stream evaluation and monitoring, wetland delineation and restoration, landscape design, permit review and GIS assistance. Permits have been obtained from local, state, and federal regulators for vegetation removal, trail and bridge construction, waterfront improvements and wetland restoration projects.

**Modernization and Expansion, Cherry Crest Elementary School, Bellevue School District, Bellevue, Washington.** Kenny provided permitting support as part of Bellevue School District’s modernization and expansion of Cherry Crest Elementary School. Located near a state park, Watershed’s landscape and mitigation plans helped preserve the area’s value as an urban wildlife refuge, maintaining intact forested sections and planting native and drought-resistant trees and shrubs throughout developed sections and parking areas. Kenny reviewed the City’s municipal code, provided regulatory-related guidance during the drafting of the restoration plan, and wrote the project’s critical areas report



## Al Wald, CHG

Geologist, Hydrogeologist

### PROFESSIONAL EXPERIENCE

Aquifer Recharge

### EDUCATION

Master of Science, Forest Hydrology, University of Washington, 1975

Bachelor of Science, Renewable Natural Resources Management, University of California Davis, 1971

### REGISTRATIONS & LICENSES

Geologist, Hydrogeologist, Washington State

### PUBLICATIONS

Methods for Assessing Wetland Functions, Vol 2 - Depressional Wetlands in the Columbia Basin of Eastern Washington, Part 1, Ecology

High Flows for Fish and Wildlife in Washington, WDFW, 2009

Riverine Erosion Hazard Areas Mapping Feasibility Study, FEMA

Al has over 30 years of experience as a hydrologist and hydrogeologist with extensive project work on streams and rivers, wetlands, shorelands, and fish and wildlife habitats in Washington. He brings a background in both groundwater and surface water processes, floodplains and high flows, ordinary high water mark delineation, channel morphology, and applied principles of basin hydrology. Before joining The Watershed Company, Al was senior hydrologist with the Department of Ecology, Washington State Department of Transportation (WSDOT), and Department of Fish and Wildlife (WDFW). He has taught in professional educational programs, including Ecological Significance of High Flows and Delineation of Ordinary High Water Marks (OHWM).

Al has extensive experience providing field assessments in Kitsap County, having conducted groundwater studies in Seabeck and Big Beef Creek for WDFW. He has also contributed critical aquifer recharge areas as part of Watershed's planning efforts for the City of Woodinville and Benton County.

**Hydrologic Analyses and Field Assessments, WDFW Habitat Program.** Al has conducted hydrologic analyses and field assessments for PHABSIM and IFIM instream flow studies on alluvial rivers in Washington. Project experience includes serving as instream flow representative in interagency negotiations for FERC relicensing of the Snohomish PUD, Jackson Hydroelectric Project on the Sultan River. Al has provided technical assistance and authored a WDFW publication on developing flow recommendations for high flows, sediment and wood transport, whitewater recreation, and water quality requirements. He served as lead hydrologist for the WDFW Water Team in the Habitat Program and contributed analysis and discussion on integrated approaches to riverine resource stewardship.

**Riverine Erosion Hazard Areas Mapping Feasibility Study, FEMA.** Al was a co-author of this channel migration study for FEMA Technical Services Division, Hazard Study Branch. The purpose of the study was to evaluate the technological feasibility of mapping riverine erosion hazard areas based on erosion rates, historical channel patterns, and potential avulsion paths. The study evaluated geomorphic and engineering methods and mathematical models to predict spatial and temporal changes in channel migration zones.

**Hoh River Reach Analysis, WSDOT.** Project manager for geomorphic and engineering analysis of potential erosion problems from the Hoh River along Highway 101 on Washington's Olympic Peninsula. The project included mapping historic channel migration zones, identification of existing and future problem sites, developing an action plan for each site and triggers for action, scour depth calculations, and recommended bank stabilization techniques.

**Implementation of Shoreline Management Requirements, Department of Ecology Shorelands Program.** Al provided project assistance and instruction for delineation of OHWM for shoreline projects and served as project lead for investigation of shoreline jurisdictions, including the Ecology/USGS studies for determination of upstream shoreline boundary points on streams and rivers in Washington. He was a co-author and project investigator for the interagency assessment of wetland functions for depressional wetlands in the Columbia Basin of eastern Washington.



## Amber Raynsford, PLA, GISP

Senior Landscape Architect, GIS Analyst

### PROFESSIONAL EXPERIENCE

GIS Analyst and Mitigation Design

### EDUCATION

Master of Landscape Architecture, 2010, Florida A&M University, Tallahassee, FL

Bachelor of Fine Arts, 2005, Florida State University, Tallahassee, FL

### REGISTRATIONS & LICENSES

Licensed Landscape Architect, State of Washington, No. 1376, Exp. 12/2017

Certified Geographic Information Systems Professional (GISP), No. 44530, Exp. 11/2018

Certified Real Estate Clock-hour Instructor, No. I4393, Exp. 4/2017

### CONTINUING EDUCATION

- Stormwater LID: Site Planning, Assessment, & Layout (WA Ecology)
- Contract Specification Writing (WSDOT)
- WA Invasive Plant Identification and Reporting (PNW-IPC)
- LEED 101: Green Building Basics & LEED for Neighborhood Development (USGBC)

Amber has over 10 years of experience helping project teams and municipalities visualize and select mitigation measures. Amber brings experience with landscape architecture, geospatial analysis, land use planning, and graphics that is focused in the areas of natural resources management and parks and recreation. She manages Watershed's landscape architecture team and coordinates in-house GIS capabilities. She is adept at using GIS, CAD, and Adobe design software cooperatively to produce presentation-quality deliverables, including maps and visuals.

**Darlington Trail Ecological Assessment and Mitigation Plan, Washington State Department of Natural Resources.** Amber provided an illustrated map of critical areas as part of Watershed's ecological assessment and mitigation plan of Washington State Department of Natural Resources (DNR) and Evergreen Mountain Bike Alliance's project to create a 20-mile non-motorized trail system in unincorporated Snohomish County. Watershed's finding helped DNR develop a regulatory compliant trail design that showcased the land's natural beauty while protecting its wetlands and streams.

**Arts Center Ecological Assessment and Mitigation Plan, Vashon Allied Arts, City of Vashon.** Amber created CAD maps of critical areas as part of Watershed's support of Vashon Allied Arts' (VAA) project to develop a new arts center and surrounding parking space. With Watershed's help, VAA was able to decipher their tight critical area buffers and develop a design that enhanced the property's ecological function and complied with local, state, and federal environmental regulations.

**Wetland Delineation and Habitat Assessment Services, Odle Middle School, Bellevue School District.** Amber, as landscape architect, coordinated with field ecologists on a wetland delineation at a public school campus. Her contributions including coordinating with field ecologists, downloading GPS field data and migrating it into CAD, and producing an exhibit illustrating wetlands and wetland buffer areas.

**Shoreline Restoration Design and Permitting, Madison Estates Homeowner's Association (MEHA), Cosmos Development Company.** Amber was landscape architect for the restorative design of four residential parcels along Lake Washington as part of MEHA's improvements of its shoreline. Amber helped develop landscape plans that improved shoreline habitat, aesthetics, and usability with native trees and plants, spawning gravel, and other improvements.

**Lower Nooksack Floodplain Design Charette, Whatcom County.** Amber, as landscape architect, worked with Watershed water resources staff to develop coordinated posters and handouts presenting design alternatives for the Nooksack River floodplain. Using output from a 3D hydrologic flood model, Amber assisted in creating maps detailed conditions over a range of flood mitigation scenarios. Amber also assisted in preparing detailed cost estimates for each scenario, using CAD and GIS to generate cut and fill volumes for levee construction and demolition. The maps illustrated a number of complex improvement configurations so they could be clearly interpreted and understood by project stakeholders.

# FIRM EXPERIENCE

## Section C



On the following pages, we demonstrate our experience performing assessments and providing mitigation design recommendations on projects similar to scope and goals outlined in the City's RFQ.

In addition to this experience, Watershed is an active partner to the cities of Kirkland, Sammamish, Redmond, Mercer Island, and others, helping each with ecological assessment, environmental permitting, and mitigation design. We are currently an on-call consultant to the cities of Bellevue, Sammamish, and Kirkland for environmental services, as well as WSDOT and the Port of Seattle.

Our reputation for technical expertise and customer service amongst these agencies has been built on the quality and responsiveness of our work. We encourage you to contact the references found in each project description for additional information on our service quality.

## WATERSHED'S EXPERIENCE BY THE NUMBERS



## Two Residential Properties— Ecological Assessments and Mitigation Recommendations

### City of Bainbridge Island

#### Key Staff Involved and Role:

Sarah Sandstrom, Project Manager and Ecologist

**Overall Budget:** \$3.3k, \$4.1k

#### Reference:

Christy Carr, Senior Planner

ccar@bainbridgewa.gov, (206) 780-3719

### Similarites to this project:

- Bainbridge Island development project.
- Ecological Assessment—including habitat, wetland, and streams—and conditions inventory.
- Provided mitigation recommendations that followed the City’s Shoreline Master Program’s requirement of “no net loss of ecological function.”

The Watershed Company provided an ecological assessment and a vegetation mitigation plan as part of a private resident’s effort to renovate and expand their shoreline home without impacting the parcel’s protected upland and marine areas. With Watershed’s help, the residents were able to design improvements—including adding a second story, replacing the existing deck with a patio, and removing and replacing an existing storm drain pipe—that achieve no net loss of shoreline ecologic function and comply with local regulatory ordinances and research, including Bainbridge Island Shoreline Master Program (SMP).

Prior to conducting an in-person ecological assessment of the project area, Watershed scientists coordinated with the project’s architect and geotechnical engineering consultant, Aspect Consulting, to review

plans for the .48-acre site. Of particular concern was an aging and potentially leaking stormwater pipe, located along the upland slope, which threatened eroding the shoreline habitat. Noting the steepness of the upland slope as a potential landslide hazard area due to its impermeable soil conditions, Watershed staff worked with the landscape architect to develop a regulatory compliant and habitat-friendly design that saw the pipe replaced within its existing blueprint.

Other recommendations included measures on how to avoid impacting the nearby trees and a planting plan that mitigated the expansion’s new driveway and sidewalks by enhancing the ecological function of the site’s shoreline habitat, removing invasive species and adding new native vegetation that would improve water quality and contribute to stormwater filtration and slope stability.



Watershed PM Sarah Sandstrom conducted a site assessment and worked with the client’s landscape architect to create an SMP-compliant alternative buffer approach.

Along with these recommendations, Watershed’s assessment provided the City and client with a concise summary of the residential development’s impact to the shoreline’s ecological functions and a clear explanation as to how the proposed mitigation measures would improve them, as well how each related to the City’s Municipal Codes, approved stormwater pollution prevention plan, and CIA and Nearshore Assessment Summary of BAS—the latter two of which were developed by The Watershed Company during the City’s SMP update.

**Watershed provided a similar assessment and mitigation plan for another residential shoreline development site earlier that year.** Tucked within a parcel that included a critical saltwater habitat and a

large, mature forest, Watershed was able to inventory the existing conditions—including trees, wetlands, and wildlife—and provide the client with an aggressive site-specific management plan that enabled development while protecting the site’s natural environment.

Working with the client and the project’s landscape architect, we helped guide the design toward an alternative shoreline buffer approach that allowed the planned development; improved the land’s wildlife, vegetation, and water quality; and cumulatively achieved “no net loss of ecological function.”

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## Arts Center Ecological Assessment and Mitigation Plan

### Vashon Allied Arts, Vashon Island

#### Key Staff Involved and Role:

Kenny Booth, Permitting and Regulatory Compliance  
Amber Raynsford, GIS Analyst and Mitigation Design

**Overall Budget:** \$71k

#### Reference:

Kirk Robinson, The Robinson Company (construction firm)  
kbrobinson@robinson-co.com, (206) 441-8872

#### Similarites to this project:

- Development project within an active wildlife corridor that had high public interest from environmental community.
- Ecological assessment—including habitat, wetland, and streams—and conditions inventory.
- Collaborated with client to create mitigation design that enabled development while enhancing local ecology.



The Watershed Company provided an ecological assessment and mitigation plan in support of Vashon Allied Arts’ (VAA) project to develop a new arts center and surrounding parking space. The center of Vashon Island’s art community, VAA’s new building would help the group meet a growing demand for classroom and exhibition space while demolishing unused structures. Tight wetland buffers and concern from the community’s passionate environmental community for the area’s use as a wildlife corridor necessitated a thorough ecological analysis to both protect the site’s habitat and gain community acceptance of the new development. With Watershed’s help, VAA was able to decipher their tight critical area buffers and develop a design that enhanced the property’s ecological function and complied with local, state, and federal environmental regulations.

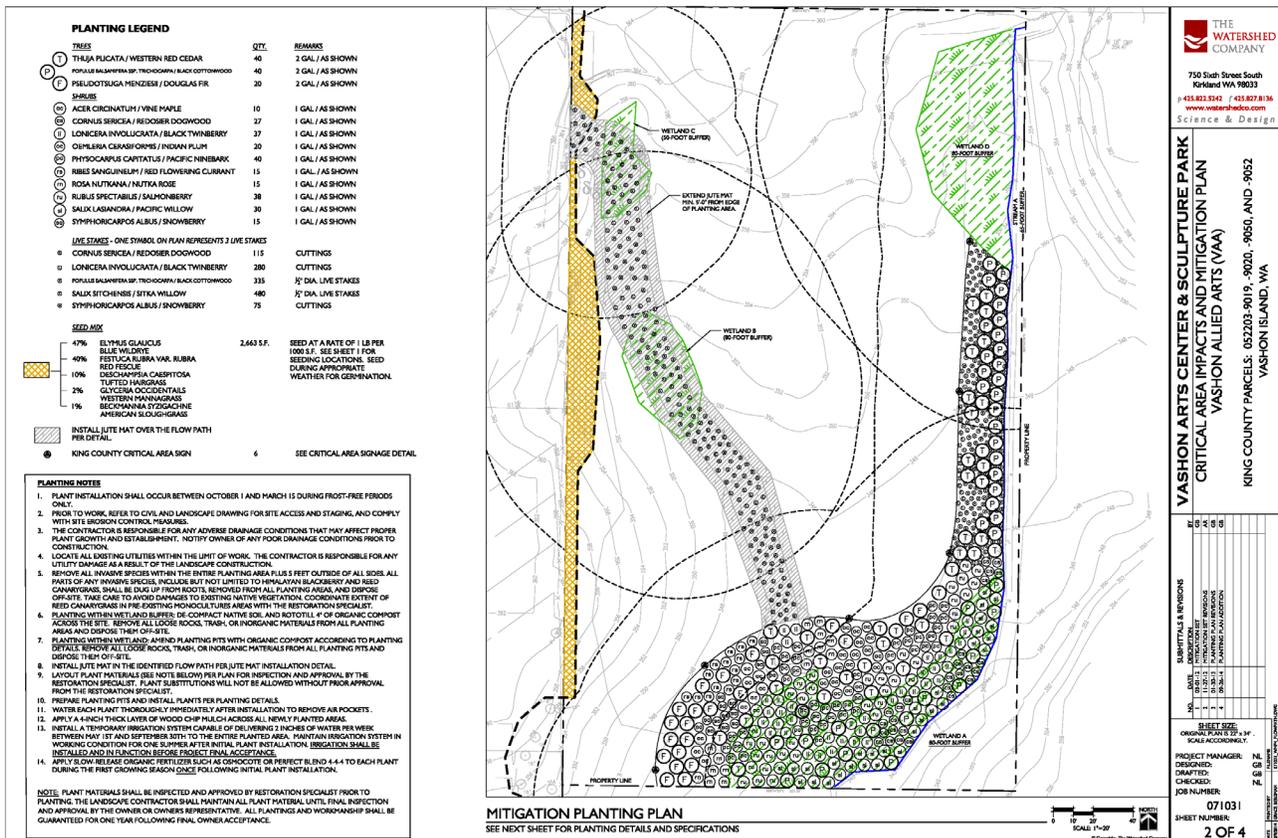
Prior to visiting the project site, Watershed staff reviewed public records—including King County Critical Areas Ordinance—to determine the current knowledge about the project site's sensitive areas and habitat. Watershed staff then screened the area for wetlands and wildlife, as well examined its vegetation, soils, and hydrology, and classified the areas according to local and state regulations.

By leaving physical markers, taking extensive photographs, and providing detailed reports and an aerial CAD illustration of the site's different critical areas, Watershed was able to provide VAA a functional map and inventory of their property's ecology.

Our ecologists' findings included four wetlands and a stream that composed nearly the entire unused eastern parcel of the property, as well as part of the developed west side. Although home to several kinds of animals, the wetlands were found to be partially separated by reed canarygrass and other herbaceous species that functionally limited the area's use as a wildlife corridor.

Working with staff landscape architects, Watershed ecologists developed a plan that, among other aspects, focused project development to the parcel's western side while strengthening the eastern side's ecological functionality by removing the reed canarygrass and replacing it with a structurally and compositionally diverse native plant assemblage. The new vegetation—including native trees and shrubs—enhances the riverine wetlands' water quality and builds the corridor's travel cover, attracting local wildlife.

In addition to the above findings and mitigation measures, our report outlined permitting requirements. Watershed staff helped VAA acquire the necessary permits and reviewed construction bids and provided monitoring of the construction period to make certain the planting plan and mitigation measures were properly executed. Our scientists are currently in the final year of a 3-year monitoring period.



Among other documentation, Watershed provided VAA with a clear mitigation planting plan that called for replacing the site's non-native reed canarygrass with more ecologically-beneficial native trees and shrubs.

Ecologist and Arborist Katy Crandall conducts an assessment in one part of the 80-acre area.



## Darlington Trail Ecological Assessment and Mitigation Plan

Washington State Department of Natural Resources

### Key Staff Involved and Role:

Mike Foster, Ecologist and Arborist

Katy Crandall, Ecologist and Arborist

Amber Raynsford, GIS Analyst

**Overall Budget:** \$22.5k

### Reference:

Glenn Glover, Lead Recreation Planner

glenn.glover@dnr.wa.gov, (360) 902-1604

### Similarities to this project:

- Undeveloped and wooded project site.
- Ecological assessment—including habitat, wetland, and streams—and extensive conditions inventory.
- Contains large, native conifers.
- Collaborated with client to create mitigation design that avoided impacts to the site's critical areas.

The Watershed Company provided an ecological assessment and mitigation plan to the Washington State Department of Natural Resources (DNR) and Evergreen Mountain Bike Alliance in support of their effort to create a 20-mile non-motorized trail system in unincorporated Snohomish County. Looking to avoid impacting the ecology of two particular Forestry-zoned parcels, DNR desired an extensive inventory and analysis of the wetlands, wildlife, and vegetation of the 80-acre area. Our multidisciplinary staff of arborists-ecologists conducted a thorough and efficient review and helped DNR develop a regulatory compliant trail design that showcased the land's natural beauty while protecting its wetlands and streams.

Prior to visiting the project site, Watershed staff reviewed public records— USDA Natural Resources Conservation Service Soil maps, Snohomish County's public GIS database, the WDFW Priority Habitat and Species online data —to determine the current knowledge about the region's sensitive areas and habitat.

Over the course of three weeks, Watershed conducted an assessment and inventory that found nearly half of the reviewed area contained wetland critical area—including patches of permanent and seasonal ponding—and was overall dominated by mature native tree stands of Douglas Fir and Western Red Cedar. A Critical Areas Report, summarizing our findings and including detailed data sheets, was provided to DNR, along with in a GIS-based map of site's different critical areas.

The included mitigation plan avoided impacts to the area's wildlife and large trees through the proposed use of "buffer averaging," thereby increasing the buffer area in the topographically flatter and more ecologically active areas, while "shrinking" the buffer area where trail construction near the area's steep slopes was determined to not affect the buffer functions. It also proposed strategically separating the trails by use to both increase the visitors' enjoyment of the trail's natural environment and limit their ability to cut through the nearby vegetation and erode the hillside.