

MARGARET E. CLANCY, PWS

Senior Managing Associate

Margaret is a Professional Wetland Scientist with 17 years of consulting experience in the Pacific Northwest. Margaret specializes in projects involving transportation, Growth Management Act (GMA) and Shoreline Management (SMA) initiatives, watershed management and restoration. She has managed environmental studies for a variety of road, rail, and bridge improvements, utilities, parks, and private developments and has helped clients comply with environmental regulations through all phases of the project life cycle. Margaret enjoys multidisciplinary projects that blend science, planning, policy development and public outreach. She has helped numerous local jurisdictions update and implement critical area ordinances and shoreline master programs. Margaret assists clients in finding effective solutions to regulatory compliance challenges by streamlining the environmental review and permit processes. She is adept at obtaining Section 404 permits, water quality certifications, Hydraulic Project Approvals (HPAs), shoreline permits, and Endangered Species Act (ESA) section 7 concurrence.

Education

B.S., Forestry University of Vermont

Wetland Science and Management Certification, University of Washington

17 Years of Experience

Project Management and Agency Coordination

NEPA/SEPA documentation

Mitigation Planning and Monitoring

Permitting and Regulatory Compliance

Environmental Investigations

Skills and Qualifications

Experience in federal, state, and local environmental permitting requirements for planned developments. This includes HPA, Section 404, Water Quality Certifications, and Shoreline Permits.

Extensive experience in environmental investigations and assessments

Relevant Experience

Bothell Connector Project, City of Bothell, Washington

Margaret is managing all of the environmental work associated with the construction of a 2.5-mile long arterial roadway through Bothell and portions of Snohomish County. This work is being performed as a subconsultant to KPFF Consulting Engineers. The four- to five-lane Bothell Connector will provide a north-south arterial along 39th Ave SE between 240th Street SE and 228th Street SE. The proposed roadway crosses several large wetlands and numerous small tributary streams in the North Creek basin. Margaret is responsible for planning and overseeing the field delineation, report preparation, mitigation planning and permitting efforts. The project will require an individual section 404 permit from the Corps of Engineers, an HPA, a Water Quality Certification, a Stormwater General Permit, ESA Section 7 concurrence, and several local (City and County) permits. ESA Adolfson is currently preparing a detailed mitigation plan involving on-site and off-site wetland restoration, culvert replacement, and buffer enhancement. ESA is also helping to locate and design a wildlife crossing to accommodate movement of small mammals and other species across the project corridor.

Tambark Creek Park, Snohomish County Parks Department, Snohomish County, Washington

Margaret is managing the environmental studies and permitting for the proposed Tambark Creek Park near Mill Creek in unincorporated Snohomish County. The Snohomish County Parks Department is planning to create a multi-use day park with trails, playgrounds, picnic shelters, sports fields/courts and an activity center on a 40-acre site adjacent to Tambark Creek. Key environmental challenges include constructing a bridge across Tambark Creek, locating new trails/boardwalks through wetlands and buffers, and removing trees that provide nest sites for raptors. Margaret's role is to advise the Master Planning team on

Relevant Experience (Continued)

strategies to address these issue and develop approaches for developing the park that meet County, state and federal regulatory requirements. Specific activities include preparing: a critical areas report for Snohomish County, a Biological Assessment, a Joint Aquatic Resources Permit Application (JARPA), and a Notice of Intent for a Stormwater General Permit. ESA Adolfson is also preparing the final Plans, Specifications and Estimates for the mitigation component of the final design/bid package.

Deer Creek Culvert Removal and Stream Restoration, Sound Transit, Woodway, Washington

Sound Transit hired ESA Adolfson to restore the downstream reach of Deer Creek by removing non-functioning culverts on the landward side of the BNSF railroad tracks along Puget Sound near Woodway, Washington. Margaret is managing the design work which considers the geomorphic position and processes that are forming the existing up- and down-stream reaches of Deer Creek. Resource agencies are requiring the stream restoration as a condition of approval for the Sounder Commuter Rail project. This work is being performed as a subcontract to Herrera.

Regulatory Compliance Training, BP Cherry Pont Refinery, Washington

Margaret was asked to train the environmental staff at British Petroleum's (BP) Cherry Point refinery on the recently adopted Whatcom County critical areas ordinance (CAO) and Shoreline Management Program (SMP) (Whatcom County Code Chapter 16.16 and Title 23, respectively). The goals of the training were to assist BP staff in interpreting the new regulations and discuss effective strategies for CAO/SMP compliance on BP projects. Margaret provided an overview of the regulations and presented detailed information on the activities that trigger compliance, technical study and documentation requirements, required mitigation, challenges to efficient regulatory review, and the relationship to other regulatory requirements (including other applicable local, state or federal regulations).

Birch Bay Watershed Characterization and Restoration Prioritization, Whatcom County.

Margaret was the Project Manager for this Ecology- and EPA-funded pilot study of the Birch Bay watershed in Whatcom County. This project is 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 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 was the development of several build-out scenarios that examined expected changes in impervious surface due to proposed zoning and planned growth. The primary outcome of the project was 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.

Relevant Experience (Continued)

Shoreline Master Program (SMP) Update, City of Sammamish, Washington

As the lead consultant for the Sammamish SMP Update, Margaret is coordinating all aspects of the shoreline inventory and characterization, the restoration plan, and the development of policies and regulations. Other components of the project included preparing a public participation plan and a gap analysis/consistency review of the city's existing shoreline regulations. Margaret is also developing recommendations for shoreline environment designations for review and consideration by city staff, local residents, and the Planning Commission.

Shoreline Master Program (SMP) Update, City of Issaquah, Washington

As the project manager for the Issaquah SMP Update, Margaret is coordinating completion of the shoreline inventory and characterization, the restoration plan, and cumulative effect analysis to comply with the state's 2003 Shoreline Guidelines. She is also assisting with the developmental policies and regulations, including recommendations for shoreline environment designations for portions of Lake Sammamish, Issaquah Creek and the East Fork Issaquah Creek.

On-call Wetland Services, Lummi Nation, Lummi Reservation, Washington

Margaret provides wetlands expertise to the Lummi Nation on an on-call basis. She is currently assisting the Lummi Water Resources Department with a wetland mitigation bank prospectus, which, if approved, will facilitate the establishment of large wetland mitigation bank in the Lummi and Nooksack River deltas. Other assignments have included developing a mitigation plan for a proposed commercial development on the Reservation and wetland reconnaissance and function assessment in support of the Reservation-wide wetland inventory.

Peer Review Island County CAO Wetlands Update, Island County, Washington

Margaret is one of a select group of independent peer reviewers charged with reviewing the science basis for the proposed Island County wetlands regulations. Margaret reviewed the assessment methods, the best available science background document, and the proposed regulations and provided comments as a member of the science panel. Island County is using a very unique and detailed approach to updating their wetland regulations and is advancing the science of wetland policy development in Washington State.

Tacoma to Lakewood Commuter Rail Project, Sound Transit, Tacoma, Washington

Margaret is preparing a NEPA re-evaluation document and ESA consultation re-initiation letters on behalf of Sound Transit and the Federal Transit Administration (FTA) for this proposed south Sound commuter rail project. These tasks are necessary because of changes to the project design since the original Environmental Impact Statement and ESA section 7 consultation documents were prepared.

Relevant Experience (Continued)

Shoreline Master Program (SMP) Update, Jefferson County, Washington.

Margaret is serving as the Project Manager for the Jefferson County SMP Update. This work includes preparing a detailed the inventory and analysis of shoreline processes, functions and development patterns; developing a database and map folio to depict shoreline conditions using geographic information systems (GIS); developing a countywide restoration plan; and crafting policies and regulations for managing several hundred miles of marine, river and lake shorelines. Margaret facilitates the work of Technical and Policy Advisory Committees and coordinates with Department of Ecology and other state agencies to ensure that key technical issues involving marine shore processes, water quality, public access and water-dependent shoreline use are addressed. Margaret is also supporting County staff with public outreach efforts including a multi-day planning charrette focused on key shoreline planning technical and policy issues.

Qwuloolt Estuary Restoration Project, Tulalip Trustees, Marysville,

Washington. Margaret is the biological sciences lead for the Qwuloolt Estuary Restoration Project --a 380-acre salt marsh restoration project in the Snohomish Rive estuary. She is responsible for coordinating the biological studies, including baseline data collection, and is analyzing the effects of various levee breach alternatives on biological communities. Margaret is also leading the environmental documentation and permitting efforts. The project will relocate two freshwater streams to their historic locations and re-open the former Poortinga farm to tidal inundation.

Shoreline Management Program (SMP) Update, Whatcom County,

Washington Margaret lead the consultant team charged with updating the Whatcom County Shoreline Management Program. The project was the first countywide application of the Department of Ecology's landscape analysis for assessing ecosystem processes. Margaret lead the work to inventory and characterize watershed conditions in each of the County's 26 watershed management units. She also oversaw the reach-scale assessment of shoreline functions on over 600 miles of marine, riverine and lacustrine shoreline. Margaret worked closely with the County, Ecology, and a Technical Advisory Committee to develop data sources and methodologies to perform the inventory and characterization efficiently and with sufficient accuracy to allow development of policies and regulations for shoreline management. This project also included preparing a restoration plan that integrates the WRIA 1 Salmonid Recovery Plan and identifies additional opportunities for restoration that will improve degraded shoreline functions over time. The project included extensive coordination with stakeholders including a Citizens Advisory Committee that met regularly for nearly 2 years. Margaret played a key role in assisting County staff with the responses to public comment as well as the Planning Commission and County Council review processes. The Whatcom County SMP is the first countywide SMP to be adopted locally since the shoreline guidelines were updated in 2003.

Relevant Experience (Continued)

Birch Bay Beach Restoration, Whatcom County Public Works, Whatcom County, Washington Margaret is part of the consultant team planning to restore a portion of nearshore habitat along Birch Bat Drive in Whatcom County. The restoration seeks to address problems of beach erosion and coastal flooding, while also providing improved pedestrian access along this popular shoreline. Margaret is leading the public outreach efforts, which involve engaging the shoreline property owners and members of local business community in workshops to discuss and develop design alternatives. She is also handling the regulatory compliance components of the project including ensuring that the design options are consistent with local, state and federal regulations.

Shoreline Master Program (SMP) Update, City of Bellingham, Washington Margaret supported efforts of the Bellingham Planning Department staff to complete the SMP Update in compliance with the State Shoreline Guidelines. She reviewed and edited the proposed SMP to improve the format and readability, and advised city staff on approaches for streamlining the policies and regulations.

Critical Areas Ordinance (CAO) Update, Whatcom County, Washington. Margaret managed the Whatcom County CAO Update. The project involved reviewing best available science for critical areas, developing code recommendations, working with Technical and Citizens' Advisory Committees, assisting the County staff with public outreach, writing the draft code, and providing support to the County Planning Commission and Council during the adoption process. Margaret helped craft innovative provisions for managing agricultural uses, mitigation banking, and alternative mitigation.

Best Available Science Review and Code Recommendations, City of Issaquah, Washington. Margaret managed a study to review best available science pertaining to critical areas in the City of Issaquah. The review focused on answering specific questions regarding buffer standards for streams and steep slopes, management of groundwater (aquifer) resources, wetland mitigation and other issues. Responsibilities included summarizing available literature, and preparing an annotated bibliography describing the applicability of past science studies to Issaquah. In addition, Margaret prepared a summary memorandum that describes the extent to which existing critical area policies and regulations are supported by science and what specific changes/modifications/amendments might be considered to achieve a greater degree of compliance/consistency with GMA critical area mandates.

SR 520 Bridge Replacement / Trans-Lake Washington Project, WA State Dept. of Transportation, Washington. Margaret led the environmental analysis for this multi-faceted regional transportation project from 2001 to 2005. The project evaluated numerous alternatives aimed at increasing mobility across Lake Washington while avoiding and minimizing impacts to the environment. Key resources of concern included the Washington Arboretum, and the wetland and shoreline habitats along Lake Washington. Margaret was in charge of

Relevant Experience (Continued)

collecting and cataloguing existing natural resource data from all of the jurisdictions within the study area and supplementing it with field reconnaissance. These efforts laid the groundwork for a project-specific environmental impact statement (EIS) meeting NEPA requirements. The scope of the project changed numerous times during the initial EIS effort due to funding shifts.

Central Link Light Rail, Sound Transit, Washington. Margaret served as project manager responsible for oversight of all natural resources permitting activities for the Central Link Light Rail project. Margaret lead a team of biologist in identifying and assessing wetland, streams and habitats along the project corridor. She also prepared the technical reports assessing impacts to natural resources and coordinated with resource agencies to ensure compliance with applicable regulations including the state hydraulic code, federal Clean Water Act, and the Endangered Species Act. Margaret also assisted with the shoreline consistency analysis and other local permitting activities. The project included design of a mitigation site along the project corridor in Tukwila and oversight of the construction process during the initial clearing and grading activities. Margaret was also responsible for coordinating with regulatory agencies during construction regarding ongoing permit compliance effort.

Best Available Science Review and Code Restructure, Clark County, Washington. Margaret provided technical support on the restructuring of the County Code. Margaret's role was to collect and review scientific information that could be used to update and amend the environmental and critical areas policies. This involved reviewing the Office of Community Development's list of best available science and determining applicability to Clark County. The Best available science information was used as part of the code audit to assess how best to protect and manage the functions and values of the County's critical areas.

State Route 522/Fales Road Interchange Project, Washington Department of Transportation, Snohomish County, Washington. Margaret served as project manager for all environmental tasks associated with construction of a new interchange along State Route (SR) 522 at Fales Road. Responsibilities included leading identification and delineation of wetlands and streams, designing over six acres of wetland and riparian mitigation, preparing Plans, Specifications and Estimates for wetland and stream mitigation construction and coordinating all permitting and regulatory compliance efforts. The project required an individual Section 404 permit from the Army Corps of Engineers, a 401 water quality certification, and an HPA. The project also required compliance with Snohomish County Critical Areas Ordinance and Habitat Management Plan requirements, and ESA review including indirect effects analysis.

Duvall Sensitive Areas Ordinance (SAO) Update, City of Duvall, Washington Margaret was the lead for the City's SAO update. The project

Relevant Experience (Continued)

involved reviewing best available science and developing regulations specifically tailored to Duvall's resources and expected development patterns. Margaret devised a unique approach to protecting stream buffers that allows buffer reductions on some low value stream reaches in exchange for implementing specific restoration and enhancement activities on higher value reaches. The City's SAO also includes fee-in-lieu provisions to streamline the mitigation process. Margaret assisted the City in coordinating with Ecology and WDFW staff during the update process and made technical presentations to the Planning Commission and City Council.

On-call Peer Review Services, City of Duvall, Washington

Margaret assists the Duvall Planning Department in reviewing all development proposals for compliance with the City's sensitive areas regulations. This work includes reviewing sensitive area reports and mitigation plans prepared by other environmental consultants, independently confirming wetland/stream ratings, field verifying site conditions, assessing impacts, reviewing storm water management plans, and advising the City on other compliance measures.

Permitting On-call Contract, Sound Transit, King, Pierce, Snohomish Counties, Washington.

Margaret is ESA Adolfson's project manager for this on-call permitting contract. Assignments have included preparing conceptual wetland mitigation plan for the Federal Way HOV project, preparing a shoreline substantial development permit application package for a utility crossing on the Duwamish River, monitoring a wetland mitigation site at Ash Way in Snohomish County, and other tasks. Margaret assists Sound Transit in identifying permitting needs, conducting field studies and preparing environmental documentation for a wide range of projects in Sound Transit's service area.

112th Street SW, City of Everett, Washington. Margaret was project manager for wetland and regulatory compliance tasks associated with this road widening project. The project required filling portions of several wetlands in the Swamp Creek headwaters and replacing or extending culverts on tributary streams. Tasks included delineating wetlands and streams, preparing a Joint Aquatic Resources Permit Application (JARPA) and consulting with National Marine Fisheries Service regarding ESA compliance.

Stream and Shoreline Inventory and Habitat Evaluation, City of Issaquah, Washington.

Margaret was project manager for this detailed stream and shoreline inventory. The project involved documenting stream and shoreline conditions using existing data and conducting in-stream habitat surveys to assess ecosystem functions and properly functioning conditions. A primary goal of the work was to identify and prioritize restoration and conservation opportunities that addressing existing limits to species sustainability and recovery. This project also included assessing impacts of urban build-out on stream and shoreline conditions and using that information to develop initial shoreline environment designation recommendations and implement other science-based

Relevant Experience (Continued)

regulatory protections. All of the data were stored, analyzed, and displayed using GIS. Other components of the project included providing web page updates, and coordinating with the public, agencies, and other stakeholders.

Cama Beach State Park Redevelopment, Washington State Parks, Camano Island, Washington. Margaret inventoried State Park property to identify wetlands, streams, and other sensitive areas as part of the proposed Master Planning process. She prepared a report documenting results of the inventory and assessing impacts of park development activities on these resources. The report was in compliance with the Island County Critical Areas Ordinance.

Trans-Lake Washington Project Screening Process, Washington Department of Transportation and Sound Transit, King County, Washington. Margaret was the wetlands technical lead for the alternatives screening process- a pre-cursor to the Trans Lake Washington and SR 520 Bridge Replacement Projects. This project involved collecting data on wetland and stream system in the State Route 520 and Interstate 90 corridors for use in GIS analysis. Margaret developed screening criteria to use in evaluating each proposed alternative. Products of this effort included technical memoranda to the Trans-Lake Project board for review and decision-making.

South/North FEIS, Metro Regional Center, Portland, Oregon. Margaret served as task leader for wetland and ecosystems tasks in support of the Final EIS for the North Corridor Light Rail Project. This work included wetland identification and delineation, identification and evaluation of potential mitigation sites, mitigation planning and preparation of the wetland and ecosystems sections of the Final EIS.

Snohomish County On-call Services, Snohomish County Public Works, Snohomish County, Washington. Margaret was a lead technical investigator and project manager for wetland and critical area studies for this on-call contract. Task orders executed by Margaret have involved siting of transfer facilities, road widening, stream relocation, culvert replacements, and trail construction. Margaret was responsible for coordinating and conducting field investigations, preparing critical areas reports and Habitat Management Plans, assembling permit application packages, and designing mitigation sites. The goal of this work was to ensure that proposed public works projects comply with the County code requirements, including the administrative rules for salmonid habitat management.

196th Street SW/Filbert Road/ SR 524 Road Improvement Project, Snohomish County, Washington. Margaret led the environmental review for the 196th Street SW project in Snohomish County. This combined County-State road improvement project involves widening a 3.6-mile section of roadway that provides an important east-west route linking the cities of Lynnwood and Bothell. Responsibilities included identifying, delineating, and assessing critical areas; preparing portions of an Environmental Assessment; plan and design

Relevant Experience (Continued)

wetland and stream mitigation including relocating a portion of Martha Creek; and assisting with project permitting. This included working with a multi-disciplinary team of roadway designers, geotechnical engineers, planners and public involvement specialists working to achieve the project goals. The project crosses numerous wetlands and streams (including North Creek) and has the potential to impact numerous residential properties and adjacent city park land.

Tolt Bridge Replacement, King County Department of Transportation On call contract, King County, Washington. Margaret was the project manager for the environmental tasks associated with King County's proposed replacement of the Tolt Hill Road Bridge, which crosses the Snoqualmie River near Carnation. The new bridge will be constructed on a new alignment, south of the existing structure. Margaret's role was to assist the design team with design issues that minimize impacts to sensitive areas, including high quality forested wetlands and salmon streams. Margaret was also responsible for preparing documentation to support federal, state and local permitting including ESA compliance. She also led the mitigation design, which includes riparian planting along the Snoqualmie River and enhancement of the adjacent agricultural wetlands.

Baseline Road Improvements, Washington County, Hillsboro, Oregon. Margaret was the natural resources task leader for a proposed bridge replacement and road widening project near Hillsboro, Oregon. The project crosses Beaverton Creek and its associated wetlands. Responsibilities included evaluating various road alignments, delineating wetlands, preparing a wetland enhancement and restoration plan, assessing potential impacts on wetlands, wildlife habitat, and fish resources, assisting with preparation of a Biological Assessment, and coordinating permitting and regulatory compliance activities. Margaret worked closely with project engineers during the design process to ensure that impacts to sensitive resources were minimized. All documents met the Washington County's requirements for Category B (Type II) Development Review. The project received a Corps of Engineers Nationwide 12 permit, approval from Oregon DSL, and concurrence on the BA.

Critical Areas Ordinance Update, City of Battle Ground, Washington. Margaret was the lead biologist for updating and amending critical areas policies to comply with current GMA requirements. The project involved a review of existing information regarding critical areas within the city's urban growth area, conducting an inventory to identify critical areas not previously mapped, and a reviewing best available science pertaining to Battle Ground. The best available science review was used as the basis for policy recommendations concerning critical areas protection and management.

5th-9th Street Connector, City of Puyallup and Western Washington Fairgrounds, Washington. Margaret was task manager for environmental studies, permitting, and mitigation design. The project involved construction of a new road connector through the Puyallup Fairgrounds. Responsibilities

Relevant Experience (Continued)

included identification and delineation of wetlands and streams, impact assessment, preparation of permit application materials for an Army Corps of Engineers nationwide permit, a state water quality certification, an HPA, and City of Puyallup critical areas review. Her responsibilities also included wetland mitigation design, including moving 1,000 linear feet of Silver Creek out of a roadside ditch into a natural wetland floodplain system. Margaret participated in all aspects of the environmental permitting and design process including preparation of construction Plans, Specifications and Estimates.

Critical Areas Study and NEPA EA, Marine Drive, Snohomish County PUD, Washington. Margaret identified and delineated wetlands and streams along a 2.1-mile stretch of road through the Tulalip Indian Reservation. The delineation information is being used to prepare an Environmental Assessment and a Critical Areas Report, as well as to inform project design. The project also included identification and analysis of mitigation sites, coordination with the Tribe, and preparation of conceptual mitigation plans (including preliminary planting and grading plans) to compensate for project impacts.

Redwood R4300 Construction, City of Grants Pass, Oregon. Margaret inspected proposed pipeline routes and pump station locations for wetlands and other natural resources as part of the initial planning and design for the Redwood Sanitary Sewer District Wastewater Facilities Upgrade. The proposed project involved installing a new pipeline across several small tributaries to the Rogue River. Two crossings required a nationwide permit from the Corps of Engineers. Her responsibilities included assessing potential impacts of the project, coordinating with regulatory agencies, and securing required permits.

Wetland Evaluation Shaw Road Extension, City of Puyallup Public Works, Washington. Margaret identified and delineated wetlands within the proposed right of way for a new roadway extension in Puyallup. This involved assessing agricultural wetlands and prior converted croplands in the Puyallup River valley to determine jurisdictional status. It also involved assessing hydrologic monitoring data to determine wetland hydroperiod. She assisted project engineers in evaluating road alignment alternatives with the least environmental impact.

On Call Services, City of Puyallup, Washington. Margaret assists the City in reviewing proposed residential developments for compliance with the Puyallup critical area ordinance. Key issues have involved determining whether a wetland was isolated or connected to other waters for purposes of wetland rating/classification and assessing the adequacy of proposed mitigation plans. Tasks included determining the location and extent of wetlands in the field, assessing connectivity to other waters (including salmon-bearing streams), and coordinating with City staff to assess development impacts.

118th Avenue SE Wetland Monitoring, City of Bellevue, Washington. Margaret worked with the City in evaluating effects of contaminated surface

Relevant Experience (Continued)

runoff on an urban wetland. Margaret planned contaminant remediation and wetland restoration efforts for this highly disturbed system in downtown Bellevue.

On Call Services, City of Edgewood, Washington. Margaret conducted third-party review of wetland reports submitted by proponents of City development projects for compliance with the City's wetland regulations. These projects involved field review of wetland delineations performed by other consultants and preparation of technical reports advising City staff on compliance issues.

Tolt River Floodplain Reconnection and Levee Restoration, Seattle City Light, King County, Washington. Margaret helped City Light evaluate a plan for relocating levees on the lower Tolt River. The purpose of this effort was to restore natural river habitat and provide spawning and riparian habitat for threatened Puget Sound Chinook salmon. Margaret assisted City Light with the permit coordination and public outreach efforts. The existing levees restrict the river channel, causing serious habitat constraints, without providing adequate flood protection. The project design was based on salmonid habitat criteria currently being developed through the evaluation of habitat used by the species present in the Tolt River.

Critical Area Ordinance Update and Shoreline Inventory, City of Puyallup, Washington. Margaret managed this project which involved reviewing existing regulations pertaining to critical areas and shorelines within the city's urban growth area, conducting an inventory to identify and characterize critical areas and shorelines, reviewing Best Available Science, and working with a Citizens Advisory Committee to update and amend the City's land use policies and plans. Margaret worked with planners to evaluate the current code and make revisions based on sound science. The outcome of this process was a new, updated critical area ordinance and preliminary shoreline inventory.

City of Mill Creek ESA Strategy and Code Update, City of Mill Creek Community Development Department, Washington. Margaret is the City's on call critical areas consultant and assists City planners with their critical area code update. The code update was driven by GMA mandates and by the City's desire to enact more effective protections for ESA-listed species. Margaret led the effort to inventory and map existing critical areas, review the existing code and develop recommendations for code revisions based on best available science.

East Lake Sammamish Trail Master Plan, King County, Washington. Margaret delineated wetlands and streams along portions of this proposed 12-mile trail. She flagged and mapped wetlands within the existing railroad right-of-way on the west shore of Lake Sammamish. Information from the field effort was used to prepare the draft EIS. Margaret led preparation of the ecosystems discipline reports for the Draft EIS during 2003-2004.

Relevant Experience (Continued)

SR 500 Design Report, Washington State Department of Transportation, City of Vancouver, Washington. Margaret provided support and expertise to value engineering team during a 4-day evaluation of design, safety, environmental, and financial aspects of a proposed road widening project in Clark County.

On-Call Peer Review Services, City of Mill Creek, Washington. Margaret is responsible for providing third party review of development proposals in Mill Creek. The focus of this work is to assist City planners in evaluating the effects of residential and commercial development on wetlands and buffers and ensure compliance with the City's Municipal Code. Work typically involves field inspection of wetland sites, verification of wetland boundary delineations, review of conceptual and final mitigation plans, inspection of mitigation projects during construction, and monitoring of constructed wetlands. Projects reviewed to date include The Gables, Jefferson at Mill Creek, Mill Creek Town Center, Les Schwab Tire Center, and Wedgewood at Mill Creek.

Everett-Seattle Commuter Rail EIS, Sound Transit, Washington. Margaret served as assistant project manager for all natural resources tasks on this combined SEPA/NEPA EIS. She conducted resource inventories of the project area (in marine, estuarine, riparian, and terrestrial habitats), prepared relevant sections of the draft and final EISs and technical appendices; participated in scoping meetings and public hearings; and coordinated with resource agencies to define permitting and mitigation requirements. This project involved an in-depth review of project alternatives to identify a preferred alternative that was ecologically sound, permissible, and would achieve the intended transportation objectives. She served as Sound Transit's expert witness on natural resources issues at EIS appeal hearings. Margaret provided testimony in support of the project and worked with legal staff to respond to appellant's allegations and achieve a successful outcome.

SR 20 North Whidbey Island Study, Washington State Department of Transportation, Whidbey Island, Washington. Margaret assisted transportation planners in identifying natural resource impacts and permitting constraints associated with potential new vehicle access routes to north Whidbey Island. Alternatives were screened relative to wetlands, threatened and endangered species, unique natural communities (i.e., eelgrass beds), and other sensitive resources. The goal of the effort was to determine which options would be feasible given regulatory constraints, mitigation potential, and overall impact to the environment.

Spokane River Hydroelectric Relicensing Project, Avista Corp., City of Spokane, Washington. Margaret worked with the Terrestrial Resources Working Group to address natural resources issues in support of Avista's proposed relicensing of 5 hydroelectric facilities on the Spokane River. Key issues of concern included effects on rare, threatened, and sensitive plant species, effects on culturally significant plant species, infestation of aquatic

Relevant Experience (Continued)

weeds in Lake Spokane and Lake Coeur d'Alene, and loss or conversion of wetland and riparian habitats. Responsibilities included preparing an annotated bibliography of literature pertaining to issues of concern, writing a summary report documenting the literature review, and developing study plans for plant species surveys and wetland assessment and habitat mapping.

Scatter Creek Habitat Conservation Plan, Thurston Conservation District, Thurston County, Washington. Margaret reviewed federal, state, and local regulations related to natural resource protection and management to help the Conservation District define the scope of and need for a Habitat Conservation Plan for the Scatter Creek Watershed. Responsibilities included preparing a written summary of the regulatory review, which identified regulatory gaps and inconsistencies for the HCP to address and making presentations to the technical team regarding the regulatory issues.

Pacific Northwest Rail Corridor Plan and EIS, Washington State Department of Transportation, Washington. Margaret prepared a wetland biology report for this multi-segmented rail project between Vancouver and Bellingham, Washington. The report, which meets WSDOT guidelines for technical documents, was included as an appendix to an EIS and was used to support Clean Water Act permit applications.

Kent Kangley at 228th SE Intersection, City of Maple Valley, Washington. Margaret assisted roadway engineers in assessing wetland impact, mitigation, and permitting issues associated with the proposed roadway improvements at the intersection of Kent Kangley Road at White Road in the City of Maple Valley. The project involved assessing 4 potential channelization improvement options each of which would affect the adjacent wetland.

Jackson Prairie Storage Project, Washington Natural Gas Company, Washington. Margaret served as assistant project manager and technical leader for two projects involving a FERC certificate application. Work included identification and delineation of wetlands and vegetation resources, preparation of state and federal wetland and environmental permit applications, and development of construction and post-construction guidelines for impact mitigation. Projects involved construction of a natural gas pipeline and installation of test wells.

NEPA Environmental Assessments, U.S. Navy, Everett and Arlington, Washington. Margaret served as assistant project manager for evaluation of a proposed housing development that involved reviewing development proposals for compliance with federal, state, and local regulations and preparation of an EA to document potential impacts and identify practicable alternatives. Key issues involved wetlands, zoning, and traffic/transportation.

Another project evaluated the use of herbicides and other vegetation management techniques for controlling plant establishment on Navy's 928-acre

Relevant Experience (Continued)

antenna field. As the assistant project manager, Margaret conducted site investigations, consulted with regulatory agencies, assisted in defining the proposed action and alternatives, and prepared sections of the EA. Key issues addressed in the EA included the effects of aerial herbicide applications on plants, fish, and wildlife; erosion and slope stability; control of noxious weeds; and public health and safety. The goal of the project was to balance environmental management needs with national security interests.

Tansy Ragwort Biological Control, Seattle City Light, Washington.

Margaret worked with Seattle City Light right-of-way managers to monitor success of biocontrol of tansy ragwort along an existing transmission line in Snohomish County. Collected data on plant population levels and presence of control insects.

Wetland Delineation and Permitting, Sandhill Crane Resort, Alaska. The project proposed to develop a recreation resort near Glacier Bay National Park in Southeast Alaska, and required an individual 404 permit. Margaret's role included identification and delineation of wetlands; preparation of a Corps permit application and supporting materials; participation in a public hearing; and extensive consultation with local, state, and federal regulatory agencies. Key issues identified during the permitting phase included the effect of the project on wildlife (especially the lesser sandhill crane), potential hydrologic impacts on the watershed, and community concerns.

Pelton Round Butte Hydroelectric Project, Portland General Electric Company, Oregon. Margaret conducted surveys for federal and state-listed plant species as part of the relicensing effort for the Pelton Round Butte Project in Central Oregon. This work also included surveys for plant species considered to be of importance to indigenous populations (i.e., culturally sensitive species). The survey effort encompassed the spring, summer, and fall seasons during a two year period (1996 and 1997). Habitats surveyed included sagebrush-steppes, juniper woodlands, ponderosa pine forests, wetlands, and riparian areas.

Kelso Beaver Pipeline Project, Portland General Electric Company, Oregon. Margaret inventoried and delineated seventy jurisdictional wetlands and special aquatic sites along a 17-mile pipeline right-of-way. She conducted alternatives analysis for best route selection. Margaret participated in numerous meetings and public hearings with local, state, and federal agencies. She coordinated revegetation and restoration of wetland and upland habitats and implemented post-construction vegetation monitoring. This work supported FERC licensing documents and an individual Clean Water Act Section 404 permit application.

Yale Hydroelectric Project, PacifiCorp, Washington. Margaret conducted surveys for special status plant species and threatened and endangered amphibians throughout project area along the Lewis River valley near Woodland, Washington. The surveys were part of the relicensing effort for an

Relevant Experience (Continued)

existing hydroelectric facility. Amphibian surveys included identification and censusing of egg masses and adults at appropriate times of year. Plant surveys involved investigation of wetlands, old growth forests, riparian areas, and mixed forests for target species. Results of the field work were summarized in written technical reports and submitted to appropriate agencies.

Powerdale Hydroelectric Project, PacifiCorp, Oregon. Margaret conducted surveys for special status plant species throughout project area in the Columbia River Gorge. Most of the survey effort focused on riparian and wetland habitats. Pre-survey work consisted of examining herbarium specimens and preparing species lists. Field work consisted of walking all areas affected by the project and documenting plant species occurrences.

North Umpqua Hydroelectric Project, PacifiCorp, Oregon. Margaret conducted rare plant surveys throughout project area on Umpqua National Forest in central Oregon. She participated in surveys for threatened and endangered amphibian and reptile species.

Eastern Washington Main Grid Support Project, Bonneville Power Administration, Washington. Margaret mapped vegetation types along 80-mile transmission line corridor using aerial photos and ground surveys. She assessed vegetation impacts using GIS and planned mitigation strategies. Work supported preparation of an EIS by Bonneville Power.

Hood River Pipeline Project, Northwest Pipeline Corporation, Oregon. Margaret served as task leader for wetland delineation and permitting tasks. Work involved identifying and delineating wetlands and identifying rare plants along proposed pipeline route, assisting project engineers in identifying alternative routes, coordinating with state and federal agencies regarding permits for wetland fills, and developing impact avoidance strategies to meet FERC guidelines. Margaret prepared technical reports in support of FERC license application.

Chehalis Generation Project, Northwest Pipeline Corporation, Washington. Margaret identified and delineated seventeen wetlands along six miles of proposed and existing gas pipeline right-of-way in Lewis County, Washington. She assisted with route selection and impact assessment, and developed impact avoidance strategies. Margaret prepared a SEPA checklist for the project and coordinated all wetland and environmental permitting activities at the state and federal levels.

Wetland Monitoring Project, Northwest Pipeline Corporation, Washington, Oregon and Idaho. Margaret served as project manager for assessment of post-construction conditions in wetlands along Northwest's main gas transmission line. Work included development of a sampling protocol to assess vegetation cover and species survivability in wetlands affected by pipeline construction, data analysis, and preparation of technical reports to satisfy federal and state

Relevant Experience (Continued)

agency requirements for monitoring. Data were collected from more than 120 wetlands in a variety of landscape settings.

Bellingham Lateral Pipeline, Northwest Pipeline Corporation, Washington.

Margaret conducted post-construction monitoring on forty restored wetlands following pipeline construction. She assessed vegetation coverage, established photo monitoring points, and made recommendations regarding additional plantings. This work demonstrated compliance with state and federal permit conditions.

Black Creek Hydroelectric Project, Hydro West, Inc., Washington.

Margaret analyzed vegetation along two miles of river corridor in King County, Washington as part of a riparian study for compliance with FERC license. She mapped the riparian area and collected data on species composition, percent cover, and frequency.

Salinas River Basin Management Plan, Monterey County, California.

Margaret served as task leader for biological resources investigations. The purpose of the BMP was to resolve issues related to seawater intrusion and future water supply while protecting the human and natural environments. Tasks included identifying wetlands and sensitive species potentially affected by the project, assessing impacts for various water management alternatives, and preparing supporting documentation.

Folsom South Canal Connection Project, East Bay Municipal Utility District (EBMUD), California. Margaret prepared an Initial Study pursuant to Section 15063 of the California Environmental Quality Act (CEQA) for the proposed Folsom South Canal Connection Project. This effort included an extensive review of existing documentation on the effects of water withdrawal on the American River and a preliminary evaluation of the potential impacts of a new water pipeline. The initial study was being used to define the scope of a project level Environmental Impact Report.

Updated Water Supply Management Program, East Bay Municipal Utility District (EBMUD), California. Margaret investigated three proposed reservoir sites (Raise Pardee, MiddleBar, and Duck Creek) in the Sierra foothills as part of a comprehensive water supply planning program. She assessed wetlands, vernal pools, and other biological resources at each site and evaluated sites against a detailed set of screening criteria. This effort assisted EBMUD in identifying the least environmentally damaging practicable surface storage alternative.

Wetland Delineation and Hydrologic Assessment, Upper Salmon Falls, Idaho Power Company, Idaho. To assist Idaho Power in their effort to expand the existing hydroelectric facility at Upper Salmon Falls, Margaret identified and delineated affected wetlands and assessed hydrologic conditions (according to Cowardin et al. 1979) for plant communities in the project vicinity. The

Relevant Experience (Continued)

hydrologic assessment involved identifying dominant plant species in each community, defining wetland classes, and assigning hydrologic modifiers based on physical evidence of flooding or inundation. This work supported a Corps 404 permit application.

Wetland Delineation/Rare Plant Surveys, Sacramento Municipal Utility District (SMUD), California. Margaret investigated more than 100 miles of transmission lines and pipelines, and inspected numerous potential substation sites for wetlands and rare plants. She photo-delineated all wetlands (including vernal pools), assessed project impacts, and made recommendations concerning route selection. Work supported permit application and project planning efforts.

Wetland Restoration Project Ferndale Terminal, Tesoro (formerly Texaco), Washington. Margaret served as project manager and technical leader for design and implementation of a freshwater wetland restoration project at Texaco's Ferndale terminal. The project included analysis of groundwater monitoring data, completion of preconstruction Habitat Evaluation Procedure (HEP) study, development of site grading and planting plans, preparation of contractor specifications for grading and planting, selection and procurement of plant materials, construction supervision, and coordination with state and federal regulatory agencies.

Consulting Services, Tesoro (formerly Texaco), Washington. Margaret identified and delineated several wetland sites at the Texaco Puget Sound plant on March Point. She conducted groundwater monitoring, vegetation sampling, and function and value assessments on affected wetlands and potential mitigation sites. Margaret served as project manager for implementation of a wetland enhancement project on Texaco lands.

Echo Glen Children's Detention Facility, King County, Washington. The State of Washington is preparing a new master plan for Echo Glen that includes remodeling and expansion of existing facilities. Margaret worked with the Master Plan team to identify and delineate wetlands and other resources on the site in accordance with King County sensitive area guidelines and the State Environmental Policy Act (SEPA). Information from the wetland study was used by the planning team to avoid wetlands and minimize permitting needs.

Alturas Intertie Project, Sierra Pacific Power Company, California. Margaret prepared a detailed COM Plan to guide construction, operation, and maintenance activities on this 164-mile, 345-kV transmission line. The COM Plan includes a Blasting Plan, Hazardous Materials Management/Spill Prevention Plan, Transportation Management Plan, and a Visual Impact Minimization Plan that outlined specific measures to protect the environment. The COM Plan was developed to satisfy the requirements of the California Public Utilities Commission and the Bureau of Land Management, who were acting as lead agencies for the project under CEQA and NEPA, respectively.

Relevant Experience (Continued)

Wetland Mitigation Banking Case Study, Old Beaver, Acequia, & East Marsh Sites, Army Corps of Engineers, Idaho. Margaret evaluated biological and administrative conditions of three wetland mitigation banks. She prepared case histories, assessed site conditions, conducted personal interviews with key participants, and reviewed project literature.

High Rock Road and Sky River Sites, Cadman, Inc., Washington. Margaret identified and delineated wetlands and other waters of the U.S. for two Cadman (Rock), Inc., gravel mining projects. She prepared wetland and terrestrial sections of required local, state, and federal environmental documents and permits associated with expansion of gravel mining operations. Margaret provided semi-quantitative functional assessment for affected wetlands and developed wetland mitigation/restoration plans. She coordinated wetland permitting efforts with the Corps of Engineers and county planners.

Rare Plant Surveys, Savanna River Site, USDA Forest Service-Region 8, South Carolina. Margaret devised and conducted rare plant surveys on lands owned by the Department of Defense. Habitats surveyed included sandhills, Carolina bays, pine forests, and hardwood forest.

Marbled Murrelet Surveys, U.S. Forest Service-Region 10, Washington. Margaret surveyed inland forested sites to monitor marbled murrelet activity levels and use patterns, and determine occupancy of specific stands. Surveys were conducted using the protocol developed by the Pacific Seabird Group.

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