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CONFLUENCE ENVIRONMENTAL COMPANY

# IRENE SATO, PWS, CESCL

*Senior Biologist*

Irene has 23 years of experience specializing in wetland and stream ecology, environmental regulatory compliance, and permitting. She has extensive knowledge of local, state, and federal regulations, including local critical area ordinances; U.S. Army Corps of Engineers (Corps) Section 404 and Section 10 regulations; Washington's State Environmental Policy Act (SEPA), Shoreline Management Act, Forest Practices Act, and Hydraulic Code; and the federal Endangered Species Act (ESA) and Clean Water Act. Irene analyzes potential impacts to natural resources from various land uses and construction methods to determine effects on fish and wildlife habitat, and prepares appropriate documentation (e.g., ESA biological assessments, no effect letters, SEPA checklists, and critical area reports) to meet local, state, and federal environmental regulations. Project types for which she provides permitting and regulatory compliance include road improvements, bridge repair and replacement, fish passage improvements, transit, flood protection, and utility projects. Irene is a solution-oriented project manager who is well-respected by regulators, agency staff, and design engineers for her ability to effectively communicate and negotiate regulatory requirements. Formerly a Snohomish County Senior Planner, Irene brings a unique perspective to development proposals, having reviewed and authorized projects in a regulatory capacity and facilitated them through the regulatory process as a project proponent.

## Representative Projects

**Downtown Redmond Link Extension Project, Sound Transit, Redmond, WA.** *Lead Stormwater Inspector/Environmental Permitting.* Confluence is managing environmental compliance on the design-build project management team. Irene is leading erosion control and stormwater compliance during design and construction of the project. Work includes review of Temporary Erosion and Sediment Control plans in design, conducting site inspections, and documenting the status of best management practices on areas of active construction. She ensures environmental compliance of work near streams and wetlands and issued work windows. Irene also reviews environmental elements of design packages, and confirms critical area locations and verifies clearing limits prior to clearing and grading work.

**Ash Way Roadway Improvement, Snohomish County Public Works, Lynnwood, WA**. *Project Manager*. Irene managed and conducted a critical areas study, assessed impacts, and identified mitigation needs and avoidance/minimization measures for this proposed improvement of 2.2 miles of Ash Way between 18th Avenue W and the intersection of Gibson Road and Admiralty Way. Work included delineating 11 wetlands and documenting their regulatory classifications and mitigation needs as well as delineating the ordinary high water marks of streams. Wetlands were categorized per the Washington State Department of Ecology (Ecology) and Snohomish County Code (SCC), and stream types determined per WAC and SCC.

### EDUCATION

B.S., Oceanography, University of Washington, 1991
Certificate, Wetland Science and Management, University of Washington, Seattle, WA, 1998

### CERTIFICATIONS

Professional Wetland Scientist, #3369, Society of Wetland Scientists, 2021 - present
Certified Erosion and Sediment Control Lead (CESCL), #81606, Northwest Environmental Training Center, April 2019

### EXPERTISE

Wetland / Freshwater Ecology
Endangered Species Act Compliance
State Environmental Policy Act (SEPA)
Environmental Planning and Permitting
Mitigation and Restoration Design
Habitat Management Plans
Watershed Analysis

### AFFILIATIONS

Society of Wetland Scientists

**Port Susan Trail Wetland Delineation Study, City of Stanwood, Stanwood, WA.** *Senior Biologist.* This project proposes to construct a nonmotorized path between a park-and-ride facility and the proposed Hamilton Landing Park project. To support the 30% design, Irene conducted critical areas studies at 3 study areas in Stanwood. Wetlands were identified, delineated per Corps methodology, and rated using the Ecology rating system. Work included using soil probes to determine the wetland boundary between test plots and to determine if an area was wetland or upland.

**Culvert Replacement Corps Permitting and Engineering Review Services, Snohomish County Department of Public Works, Snohomish County, WA.** *Senior Biologist.* The purpose of project is to determine applicable Corps regulatory requirements for proposed replacement of barrier culverts with fish passable culverts. Irene conducted the following work on nearly a dozen of these projects: completed field investigations (e.g., wetland delineations) of each proposed project to determine potential impacts to Waters of the United States; evaluated culvert designs to determine the jurisdictional status of each culvert replacement project and anticipated permitting requirements;

coordinated with Snohomish County, Washington Department of Fish and Wildlife (WDFW), the Corps, and the Tulalip and Stillaguamish Indian Tribes to review and evaluate jurisdictional determinations and permit acquisition/mitigation needs; prepared applications for federal and state permits; and supported ESA documentation.

**Critical Area Report Review Services, City of Stanwood, WA.** *Senior Biologist.* As part of an on-call contract managed by Confluence, Irene provides timely and responsive peer review of critical area reports associated with development proposals and land use issues. Work includes conducting field assessments and analyzing the projects' environmental review documents for compliance with the Stanwood Municipal Code, and state and federal wetland delineation and rating requirements. An example project is the Josephine Sunset Home senior living community development, located on pastureland highly altered by past agricultural use.

**South Fork Wind Farm (SFWF) Environmental Impact Statement (EIS), Bureau of Ocean Energy Management (BOEM), Outer Continental Shelf Offshore of Rhode Island and Massachusetts.** *Senior Biologist.* Irene co-authored the Finfish resource section and incorporated updates to the Benthic Habitat, Invertebrates, and Turtles resource sections of a National Environmental Policy Act EIS for a proposed Construction and Operations Plan for the SFWF. The proposed wind energy project would construct 15 wind turbines on BOEM land leased by Deepwater Wind. Identified species impacts that could be avoided or minimized through known design features or best management practices. The analysis describes existing benthic habitat, essential fish habitat, invertebrates, finfish, and turtles near the proposed project, as well as the direct, indirect, and cumulative effects of the project on these species, habitat, and their associated physical, chemical, and biological properties that are important to species survival.

**Permitting Support for Project Work Requests (PWR), Asset Management, and Small Capital Projects, King County Wastewater Treatment Division, King County, WA.** *Senior Biologist.* Projects under this on-call include rapid response permitting analysis and permitting submittals for fast-paced projects. Examples include the 63rd Street Permanent Generator project, North Mercer Trunk Frame and Lid Replacement project, South Plant Fuel Cell Demolition project, and the South Plant Skybridge Retrofit project. Permit submittals included critical area and shoreline exemptions for commercial building upgrades. Work has included communicating directly with County project managers to develop and update project permitting requirements, permit schedules, and permit cost estimates. Other work includes completing submittal checklists and permit applications and obtaining issued permits.

**Biomonitoring for Holden Mine Remediation Project, Rio Tinto, Chelan County, WA.** *Senior Biologist.* Holden Mine was a copper mine active from 1938 to 1957. Through acquisition of former operators, Rio Tinto took over remediation of the relic copper mine required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Phase 1 of the Remedial Action (RA) encompassed 170 acres and caused both temporary and permanent impacts to "waters of the United States" (WOTUS). Confluence is conducting annual biomonitoring, including surveys of fish population, benthic macroinvertebrates, water quality, and physical habitat, in Railroad Creek to assess the performance of the Phase 1 RA relative to baseline conditions prior to RA implementation in 2013. Irene participates in the annual biomonitoring, using standard benthic macroinvertebrate sampling. She led the field effort for the macroinvertebrate monitoring in 2020 and 2021 and has participated in the fish survey. Findings are compiled into a report each monitoring year, which, in conjunction with past and future monitoring reports, is used to assess the health of Railroad Creek.

**I-5/Marine View Drive to SR 529 Peak Use Shoulder and Interchange Improvements Project, Washington State Department of Transportation, Marysville, WA.** *Senior Biologist*. The project proposes to construct a northbound and southbound peak use shoulder lane to improve mobility and increase freeway capacity, as well as a new interchange at SR529 to allow access from SR529 to southbound I-5 and from northbound I-5 to SR529. Irene supported preparation of an ESA biological assessment and prepared a mitigation use plan and 404(b)(1) analysis for Corps permits.

**Permitting for Bridge Replacement Projects, Snohomish County Public Works, Snohomish County, WA.** *Senior Environmental Planner.* Irene coordinated the environmental compliance for multiple bridge replacements in Snohomish County. She conducted field studies to determine potential resource impacts, and prepared documentation to support ESA compliance, Corps permit application, WDFW Hydraulic Project Approval submittal, and local critical areas compliance. Irene collaborated with the design team to develop projects with minimal adverse impacts to natural resources, while incorporating bridge abutment protection that also served as fish habitat elements. She worked with design engineers to put environmental permit conditions and requirements into the bid documents and special provisions. Irene also provided guidance during construction for inwater work and work isolation.