



EDUCATION

B.S., Civil Engineering, Michigan Technological University, 1994
M.S., Civil Engineering, Michigan Technological University, 1996
WSDOT Highway Runoff Manual Training, 2019

PROFESSIONAL REGISTRATIONS & MEMBERSHIPS

Oregon Professional Engineer (#60015PE)
Washington Professional Engineer (#50331)
Certified Professional in Erosion & Sediment Control (#5749)
River Restoration Northwest

EXPERIENCE

Senior Engineer, Cascade Environmental Group, LLC,
Portland, Oregon, 2013 – Present
Volunteer Engineer, NRCS Earth Team, Portland, Oregon,
2012 – 2013
Senior Civil Engineer, URS Corporation, Portland, Oregon,
1998 – 2012
Civil Designer, Balfour Consulting, Inc., West Linn, Oregon,
1997 – 1998
Civil Designer, EMCON, Medford, Oregon, 1996 – 1997

QUALIFICATIONS

Mr. Rod Lundberg, P.E., is a Senior Engineer with Cascade Environmental Group, LLC. Rod is responsible for leading the engineering and design components of Cascade's natural resources and habitat restoration projects. He has more than 20 years of experience as a civil engineer working on habitat restoration and enhancement, stormwater management, transportation and transit, and site civil design projects. He participates in all project phases from project identification and planning; field data collection; alternatives analysis, conceptual design, and permitting; through development of final design reports, plans and specifications; and construction observation and support. Rod has designed more than 40 stormwater management facilities within the built-out urban environment of the city of Portland, including vegetated treatment and infiltration facilities ranging in size from small local rain gardens to nearly a half-acre footprint, as well as proprietary underground filtration treatment structures.

Rod has extensive experience working and communicating effectively with multi-disciplinary project teams, which are critical to the success of habitat and natural systems restoration efforts. His specific areas of expertise include stormwater management; hydrology and hydraulics; grading, erosion, and sediment control; and site design plans, specifications, and cost estimating.

SELECTED PROJECTS

Kwoneesum Dam Removal Project – Cowlitz Indian Tribe, Washougal, Washington

Permitting support to design team led by Bill Norris at Parr Excellence. Wrote the Water Quality Monitoring and Protection Plan (WQMPP) and Construction Stormwater Pollution Prevention Plan (SWPPP) to meet Department of Ecology 401 water quality permitting requirements for this complex, significant dam removal project in Southwest Washington. The project includes removal of the 55-foot tall dam, multiple upstream tributary diversions around the project site for work area isolation and dewatering, spray irrigation dewatering, fish salvage, and several dozen channel-spanning log jams within approximately one mile of channel improvements.

Ghost Dike Advance Wetland Mitigation Project – Shoalwater Bay Tribe, Tokeland, Washington

Project Engineer. Designed the Ghost Dike Advanced Wetland Mitigation Project, which is being advanced as an early project phase of the Shoalwater Bay Mitigation Bank. The Ghost Dike Project will be constructed in 2022 which includes removing a self-breached dike segment and restoring high salt marsh habitat. Project elements include dike removal, borrow ditch and incised channel filling, high marsh tidal channel establishment, and revegetation. Project elevations are located at Mean Higher High Water and above, so the design relies on a small soil wedge temporarily remaining in place along the outboard toe of the existing dike to provide work area isolation from the highest predicted tides during construction. Erosion control measures include a wave break consisting of vegetation cleared from the existing dike, bundled as a fascine to dampen small waves and ripples at the leading edge of an incoming high tide. By creating more quiescent conditions behind the fascines, freshly exposed surface soils and the embedded applied seed will be protected from erosional energy caused by these small waves, which is a significant contributor to erosion in shallow embayments such as Willapa Bay.



Yoncalla Log Pond Mitigation Bank – North Douglas Betterment, Yoncalla, Oregon

Project Engineer. Developed permit-ready design plans to restore approximately 20 acres of wetlands within an abandoned log pond along Yoncalla Creek in the Umpqua watershed. A portion of the existing open water pond will be preserved for public use through the construction of a cross-levee. The existing levee will be removed along the project area to allow the creek to completely connect with the restored floodplain. The design uses a relic creek channel segment to facilitate conveyance of floodwaters into, and drainage out of the site. Cascade collected supplemental topographic and hydrographic survey data to confirm relative elevations between the creek channel, creek floodplain and pond bottom across this very flat site. Construction began in Summer 2021 and will be completed Summer 2022.

Beaver Creek Natural Area Restoration Project – Metro, Troutdale, Oregon

Project Engineer. Developed concept-level design plans for this habitat enhancement project for Metro. More than 100 wood pieces are planned to be placed via helicopter to improve in-stream habitat conditions within an urban natural area. Downstream culverts require the use of large (2x channel width) log-and-rootwad pieces to limit wood mobility during flood events. Permit-ready plans are expected to be completed in Winter 2022, with construction planned for 2022 or 2023.

Shoalwater Bay Mitigation Bank – Shoalwater Bay Tribe, Tokeland, Washington

Project Engineer. Led the design team including surveyors, geomorphologist, hydraulic modeling, and geotechnical engineers to develop the conceptual design and preliminary construction cost estimate to restore or protect approximately 300 acres of tidal wetlands along Willapa Bay on the Washington coast. The project would include breaching a dike and removing a tidegate, construction of a setback dike, and construction of up to seven new tidegates. The setback dike and associated tidegates are required to protect a state highway and prevent flooding of adjacent properties. Cascade installed an array of water level loggers to confirm site drainage patterns across this very flat and drained former pasture property, and to calibrate local tidal datums. The water level data allowed calibration of a 2D hydraulic model in support of the design process. It also allowed the project team to specifically identify flow patterns across broad areas of this very large, flat site, and allowed development of strategies to largely restore historical flow patterns that had been interrupted by drainage improvements constructed by a previous landowner. The project is currently in preliminary design.

Dahl Beach Mitigation Project – Port of Portland, Oregon

Project Engineer. Coordinated the technical design team and developed demolition and restoration plans to remove a failed steel sheetpile bulkhead structure on the Willamette River, and to remove a portion of a paved parking lot that lies below ordinary high water at the confluence of the Clackamas and Willamette rivers. Restoration included regrading slopes to blend with existing adjacent river bank contours and revegetation above the scour line. Two rootwad structures were constructed at the parking lot site to provide high water habitat for juvenile fish and to improve site stability for the portion of remaining parking lot. The project included design of a vegetated stormwater management facility to treat runoff from an existing upslope parking lot that drains to the project area. The facility was designed using the City's PAC design tool, and oversized to treat a higher treatment design standard. Construction began in 2016 and was completed in 2017.

Portland Eastside Streetcar Loop - Portland Streetcar, Inc., Portland, Oregon

Project Engineer. Completed preliminary engineering evaluations through final design and provided construction support for a comprehensive stormwater management plan required for this major extension of the Portland Streetcar system. More than 30 stormwater facilities were constructed to meet City of Portland requirements. The significantly built-out urban environment created a considerable challenge in locating potential sites for surface treatment and infiltration facilities.

Sandy Boulevard Resurfacing Project – City of Portland, Oregon

Project Engineer. Completed preliminary engineering evaluations through final design and provided construction support for the stormwater management facilities incorporated into this major transportation project that improved traffic safety and pedestrian access along NE Sandy Boulevard. These facilities were some of the first of their type to be conceived and implemented in Portland.

Hopkins Demonstration Forest Amphibian Ponds – Forests Forever, Inc. Oregon City, Oregon

Project Engineer. An old fire pond within Hopkins Demonstration Forest had previously been breached, resulting in the loss of habitat for amphibians. Cascade started with a conceptual design developed by ODFW to create two shallow pools within the former fire pond footprint for open water habitat. Rod developed the engineering design including grading, hydrologic and hydraulic calculations and site stabilization requirements to control water flow between the two pools and exiting the site. Logs were used as grade control structures to create the specific water depth profiles requested by the ODFW biologist.