



## FERC Relicensing Aquatic Services Clackamas River Hydroelectric Project

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### *Clackamas and Oak Grove Fork Rivers, Oregon*

R2 is currently involved in a multi-year relicensing effort of the Clackamas River Hydroelectric Project, providing the Federal Energy Regulatory Commission (FERC) with technical expertise relative to study plan development in fisheries, fisheries engineering, hydrology, and geomorphology. The Clackamas River supports viable runs of a number of anadromous salmonids including winter steelhead, spring and fall Chinook salmon, coho salmon, and coastal cutthroat trout. Summer steelhead have also been introduced into the basin. Two species of lamprey native to the system are also present, including Pacific lamprey and western brook lamprey. The Clackamas River Hydroelectric Project includes a complex of dams and reservoirs that are located within the Clackamas River and the Oak Grove Fork of the Clackamas River.

R2 has provided technical input into a number of study plans that will be completed by Portland General Electric (PGE), including those pertaining to fish and habitat sampling, instream flow and geomorphology studies, project operations, and downstream and upstream fish passage. R2 recently completed a detailed review of all available information and data pertaining to upstream and downstream passage



studies for the project, and subsequently developed an ACCESS document database of all reference materials reviewed and an Existing Information Analysis (EIA) report that summarizes salient information from the studies. Most recently, R2 developed a flow-sensitive computer model that was used to evaluate effects of project operations on downstream smolt mortality. The model was developed to assist in evaluating various passage alternatives at each of the mainstem project components.

R2 technical scientists and engineers are participating as part of the collaborative relicensing process that PGE has elected to use for the project. This has involved meeting with agency and stakeholder groups during the scoping process, identifying technical issues, and assisting in developing and reviewing study plans. R2 has completed a detailed impact analysis and sections of an Environmental Impact Statement for the FERC pertaining to project operations on the fish and aquatic resources of the Clackamas system.

#### **Project Elements:**

- Hydropower
- Fish Passage
- ESA Species
- Instream Flow
- Geomorphology