

PACKWOOD LAKE HYDROELECTRIC PROJECT RELICENSING

EES Consulting was hired by Energy Northwest to manage and conduct environmental studies under the Integrated Licensing Process (ILP). EES Consulting has conducted extensive water quality, hydrology, fisheries, and instream flow studies, developed GIS mapping products, and EES Consulting is managing all other environmental investigations.

Chinook and coho salmon and steelhead trout are listed species under the ESA and are being introduced to the upper Cowlitz River in Washington, where the project is located. Studies are ongoing and have included:

- Analysis of fish barriers in Lake Creek and other project tributaries.
- Anadromous spawner surveys in Lake Creek, the Cowlitz River, and other project streams.
- Entrainment studies at the project intake. EES Consulting is using gillnets, video cameras and an Acoustic Doppler to investigate fish behavior around the project intake and to evaluate velocities near the screens.
- Instream Flow Studies for Lake Creek, the source of water for the project, and the tailrace slough, near the Cowlitz River. Species to be modeled include Chinook and coho salmon, and steelhead, rainbow, and cutthroat trout.
- Fisheries Investigations for population structure, distribution and species composition below, within and above the project area and effects of lake drawdown.
- Comprehensive water quality sampling of Packwood Lake, tributaries to Packwood Lake, Lake Creek, and the Cowlitz River.
- Temperature modeling
- Analysis of effects of lake drawdown on wetlands within the area of influence of Packwood Lake.



EES Consulting contracted, managed and worked closely with Devine Tarbell and Associates on environmental studies including amphibians, bald eagles and ospreys, and vegetative cover mapping.

EES Consulting contracted with Watershed GeoDynamics to conduct the geofluvial process studies for the project, including wood and gravel transport and erosion investigations.

EES Consulting contracted and worked closely with Beck Environmental Consulting regarding rare plants and noxious weeds within the project boundaries.