

KITSAULT RIVER HYDROELECTRIC PROJECTS DESIGN AND CONSTRUCTION SERVICES

The Upper Kitsault, Homestake and Trout Creek Hydroelectric Projects are located in northwestern Canada, near a remote abandoned mining community approximately 30 kilometers southwest of Stewart and about 150 kilometers northeast of Prince Rupert, British Columbia. The Kitsault River empties into the tidal water of Alice Arm near the town of Alice Arm.

Alice Arm connects to Observatory Inlet and is part of a narrow fjord system that has its terminus at Portland Inlet on the Pacific Ocean. At its mouth, the Kitsault River drains a watershed of approximately 260 square kilometers. The catchment faces south and is primarily fed by rainfall and glacier and snowmelt runoff from the surrounding mountain



slopes and Cambria Glaciers. Kitsault Dam and a powerhouse at the confluence of the Kitsault River and Homestake Creek were constructed in 1949 to supply power for the Dolly Varden mine. The dam and remains of the wooden flume penstock and powerhouse still exist, but the project was abandoned long ago. Pursuant to a Dam Safety Rehabilitation Order, EES Consulting assisted with rehabilitation and lowering of the dam, which impounds the 10,000 acre-feet of Kitsault Lake.

Kitsault Hydro Electric Corp retained EES Consulting to design and manage the construction of a new dam at the location of the existing Upper Kitsault Dam and associated hydroelectric facilities, and new run-of-river hydroelectric projects on nearby Homestake Creek on the same schedule as the Anyox Hydroelectric Project. New transmission lines and a new substation will deliver power from the projects to the BC Hydro transmission system connection near Kitsault, B.C. (Aiyansh Line). Trout Creek, and potentially other small projects, will be constructed later. EES Consulting staff are involved in all aspects of development of these small, low-impact hydroelectric projects from the initial field reconnaissance to hydraulic analyses and other environmental studies, project permitting, design, power sales and construction management. EES Consulting performed siting studies to determine the best locations for the dams and intakes, powerhouses, and pipelines, and managed refurbishment and construction of access roads, and transmission lines.