



# Native Char Distribution and Habitat Use of Upper Skagit River

## *Upper Skagit River Hydroelectric Project, Washington*



R2 Resource Consultants was contracted by Seattle City Light in 1995 to provide information concerning the native char (bull trout) population in Ross Lake, the Upper Skagit River, and its tributaries. This char population is isolated from other char populations by Seattle City Light's Upper Skagit River Hydroelectric Project. Seattle City Light is seeking to determine how best to manage project operations and reservoir levels to minimize impacts to the spawning population of threatened native char. The management of the upper Skagit River native char population is complicated by the fact that the largest tributary (Skagit River) is located across the border in Canada.

R2 has addressed these issues through the use of snorkel and habitat surveys, water quality

monitoring, and radio/ultrasonic telemetry. Habitat and snorkel surveys were completed on several major tributaries to locate potential spawning areas and provide detailed habitat information, including location of possible fish passage barriers. R2 has monitored water quality including temperature, dissolved oxygen, pH, and conductivity throughout the reservoir. R2 surgically implanted transmitters into more than fifty native char in the Ross Lake system, including fish residing in Canada. Fixed receiver stations have been established at the major tributary entrances to record passage of tagged fish throughout the spawning season. Mobile tracking is ongoing throughout the year. All telemetry studies were coordinated with similar research efforts in Canada. R2 biologists were responsible for training Canadian biologists in the proper surgical procedures for use on threatened and/or endangered fish species.

The information obtained from this project is proving useful for the City of Seattle in prioritizing management efforts for native char in the upper Skagit River watershed, one of the few healthy native char populations remaining in the Pacific Northwest.

### **Project Elements:**

- Radio and Ultrasonic Telemetry
- ESA Species
- Bull Trout
- Water Quality Monitoring
- Fish Surveys

