



Anadromous Fish Habitat Surveys in Four Willamette River Subbasins

Willamette River Basin, Oregon



The Portland District of the United States Army Corps of Engineers (USACE) operates thirteen dams and reservoirs that are located within the Willamette River Basin of northwestern Oregon and constitute the Willamette Basin Project (Project). Much of the historic spawning and rearing habitat of spring Chinook salmon (*Oncorhynchus tshawytscha*) has been inundated by Project reservoirs, or is inaccessible above Project dams. The dams have also affected distributions of winter steelhead (*O. mykiss*) and bull trout (*Salvelinus confluentus*).

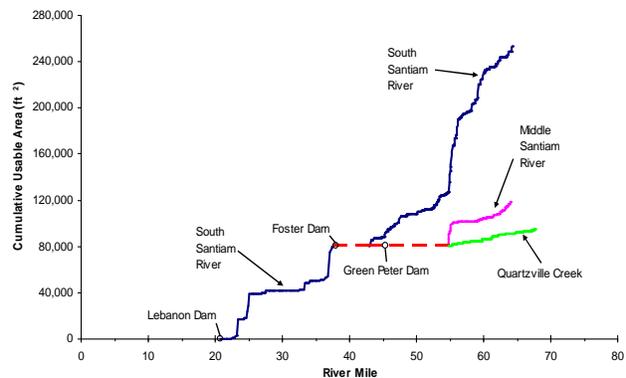
In 2005, the USACE contracted with R2 Resource Consultants, Inc. (R2) to compile and review all available Willamette Basin tributary habitat data. Results of that effort (considered Phase 1) demonstrated that the existing data were generally outdated, collected with inconsistent protocols, or were missing from critical stream sections. Thus, existing data was insufficient to assess habitats above USACE dams. The

Project Elements:

- Habitat Surveys
- ESA listed species
- Large River Habitat Protocol
- Database Development

USACE subsequently contracted with R2 to complete Phase 2 of the assessment, which entailed conducting habitat surveys in four Willamette River subbasins: North Santiam, South Santiam, South Fork McKenzie, and Middle Fork Willamette.

Phase 2 activities involved the identification of reaches to survey, and then derivation and application of a methodology/sampling protocol for conducting the surveys, which were focused on collecting data of habitat variables identified during the Phase 1 review. The habitat surveys were completed over a 2.5 month period extending from August 21 to November 1, 2006. A total of 213.7 miles of habitat were surveyed representing about 90 percent of mainstem



steelhead and Chinook salmon habitat in the nine subbasins.

R2 produced a report that described the methods used during the assessment and provided a summary of data collected to date. As part of the study, GIS map coverages of surveyed areas were produced, and a database (Willamette River Basin Habitat Access Database) developed that includes over 2,700 records that contain all data collected for an individual habitat unit. The Database was developed to be user-friendly and can automatically sort and summarize data records.