

Sammamish River Tributaries Habitat Survey, U.S. Army Corps of Engineers
Michael Wolanek
Jones & Stokes

In the late summer and fall of 2001, Jones & Stokes conducted fish habitat surveys of 13.3 miles of small tributary streams to the Sammamish River. Project objectives were to quantify and describe existing habitat quality; provide a baseline for evaluation of future trends; and identify restoration opportunities. Some of the larger streams surveyed included tributaries to Swamp, North, and Little Bear Creeks (near the north end of Lake Washington) and Peters Creek (in Redmond). Crews implemented the 2001 King County habitat assessment protocols so that results would be compatible with methods used in 1999 by the County on the mainstems of Swamp, North, and Little Bear Creeks. The combined data will support habitat enhancement efforts of the Corps and King County as part of the Sammamish River Ecosystem Restoration Study.

Of the approximately 27 miles of small tributaries originally estimated in the Sammamish River basin, 23.3 miles were recorded in the 1975 Catalog of Washington Streams and Salmon Utilization, and 21.9 miles were included in the Salmon and Steelhead Habitat Inventory Assessment Program (SSHIAP) coverage. The 4 to 5 miles of “missing” streams are a result of channel modifications by urban development, golf course development, and the North Creek channel relocation. Crews attempted to survey most of the streams that could be located, but only about 13.3 miles (61%) of the SSHIAP network could be surveyed. The four most common reasons that surveys of the remaining 8.6 stream miles were aborted included overall very poor habitat; very low or intermittent streamflow; very dense invasive vegetation, such as Himalayan blackberry; and presence of a downstream barrier whose removal was unlikely to be included in a restoration project. These results are not necessarily unexpected because of urban impacts and the limited fish habitat afforded in the headwaters of small watersheds. We estimate about 0.7 miles of the 8.6 unsurveyed stream miles contain fish habitat.

Similar to King County’s survey results for Swamp, North and Little Bear Creeks, data indicate degraded tributary conditions relative to properly functioning conditions. Riparian vegetation reflected highly urbanized conditions, frequently choked with invasive species. LWD frequencies were low.

Nevertheless, we identified fair to good juvenile rearing habitat in tributaries to Swamp and Little Bear Creeks, including the headwaters of Scriber Creek, and in Peters Creek in Redmond. Rearing coho were common in these streams. Scriber Creek (WRIA 080061) and tributary 080060 are the primary channels providing significant spawning habitat. Other tributaries which discharge directly into the Sammamish River, except Peters Creek (080104) and tributary 0102, provide no accessible habitat for salmonids due to complete barriers where the streams pass through the levee.

We present a prioritized list of recommended restoration opportunities. We utilize a “refuge” approach to restoration, where most efforts are placed in watersheds with the best available existing habitat, and in proximity to “natural” conditions” or existing habitat improvements.