

Fish Use of Stream Drainage Basins in the City of Bellevue

April 2009

Background and Data Sources

Current knowledge of the species of fish in Bellevue's streams and their distribution is based on stream typing work conducted in the summer of 2001 (The Watershed Company 2001) that involved assessing culverts as to whether fish could pass upstream and electrofishing; an electrofishing survey conducted at five sites in the Kelsey Creek basin in 2007 (City of Bellevue, unpublished data) and fish moved prior to sediment removal from two sediment ponds along Coal Creek (The Watershed Company 2007a); salmon spawning surveys conducted annually during the fall between 2001 and 2008 (Taylor Associates 2002; The Watershed Company 2003, 2004, 2005, 2006, 2007b, 2009); and peamouth surveys and spawning observations conducted by Bellevue staff and volunteers between the late 1990s and 2008 (City of Bellevue, unpublished data). Lake Washington shore use by warm water fish was documented by Washington Department of Fish and Wildlife in June of 2005 (Personal Communication, Chad Jackson, July 18, 2007). Fish use of the lake shore along Lake Sammamish has not been documented by the City of Bellevue.

South Sammamish Area

In the westernmost stream, (unnamed, 08-0160) resident cutthroat trout were observed in 1999 (Morgenroth, B., pers. comm., 2000). Anadromous fish are blocked from the stream by a 716-foot long culvert, which discharges into Lake Sammamish, and a culvert under I-90. Above the lower culvert a large sedimentation pond exists, and pool-riffle and step pool sequences suitable for fish were available further upstream. With an average bankfull width of greater than 10 feet and suitable pool habitat, these two segments would likely support significant cutthroat populations if access were improved. The middle stream (unnamed) also contains step-pool sequences. However, steep cascades, between three and five feet tall, contribute to isolation among many of the pools, which averaged less than four inches in depth. Due to barriers, steep gradients up to 19%, and a lack of sufficient stream flow, fish use in this stream is considered possible but unlikely.

The easternmost stream (unnamed, #08-0161) contained gentle riffles and suitable pools up to eight inches deep through the lower segments, where fish use is expected. Upstream, the gradient increased and stream flow was insufficient to support fish. A field survey of the headwater segments and upper tributary found poorly defined channels that apparently had seasonal flow, and were incapable of supporting fish.

See Bellevue's Basin Fact Sheet main web page for additional fish use information for Bellevue streams.

References Cited

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