



# **ZACKUSE CREEK FISH PASSAGE AND STREAM RESTORATION PROJECT**

## **Public Open House**

### **March 29, 2017**

#### **Agenda**

<b>6:00</b>	<b>Refreshments</b>
<b>6:15</b>	<b>Staff Presentation</b>
<b>6:45</b>	<b>Discussion with Project Team at Project Displays</b>
<b>8:00</b>	<b>Doors Close</b>

#### **Project Overview**

Spawning areas for native kokanee salmon now include only a handful of tributaries to Lake Sammamish compared to historic spawning grounds that once existed throughout Lake Washington, the Sammamish River, and Lake Sammamish. The decline of the local population has been of special concern to Sammamish residents, fisheries, and native tribes. Without diversity in available spawning habitat, a single localized event, whether natural or anthropogenic, could destroy the entire population. The Zackuse Creek Fish Passage and Stream Restoration project will aid in the reestablishment of Zackuse Creek as a kokanee spawning area. The project includes two primary objectives:

1. Replace the existing culvert under East Lake Sammamish Parkway (ELSP) so that it is fully fish passable and with design elements that emulate a natural stream bed.
2. Regrade, realign, and restore through reconstruction the existing creek channel upstream from the East Lake Sammamish Parkway culvert.

Two other fish passage culvert projects located downstream at the King County Trail and East Lake Sammamish Shore Lane NE are concurrently being designed by King County and will be replaced with the East Lake Sammamish Parkway culvert. The City of Sammamish and King County are closely coordinating on these projects.

#### **Project Status**

The project team has collected preliminary data and completed analysis on Zackuse Creek. This work is being synthesized to prepare documents for permitting. The project team has completed the following tasks:

- Field reconnaissance to characterize stream and wetland, and to analyze the fluvial geomorphology (stream/sediment interaction and the resulting change in the landscape);
- Topographic survey to obtain stream cross sections and profile, terrain of adjacent landscape, wetland boundaries, and dimensions of ELSP and location of utilities;
- Geotechnical exploration to support culvert and stream restoration design;
- Hydrologic modelling to estimate stream flow rates, channel forming flows (in order to predict sediment transport), and more extreme peak discharges to design culvert;

- Hydraulic modelling of existing conditions including two-dimensional analysis in area of stream restoration coupled with one dimensional analysis below ELSP and above restoration area;
- Analysis of two alternatives for stream realignment using the preliminary results to refine alternatives;
- Meetings with resource agencies and representatives from Snoqualmie and Muckleshoot tribes in the field to review findings of field work and discuss preliminary alternatives of stream restoration and culvert sizing;
- Ongoing work on the design of culverts for fish passage typically based on hydraulic analysis and geomorphology. The agencies and tribes have agreed with the design approach; and
- Active coordination with King County on concurrent trail and East Lake Sammamish Shore Lane culvert design.

## Project Schedule

February/Ongoing	Coordinate with Stakeholders and Partners
March 29, 2017	Public Open House 1
April 2017	Preliminary design completed and submit for permits
May 1, 2017	Update to Sammamish City Council
November 2017	Public Open House 2
February 2018	Final Design and Permitting Completed
March 2018	Construction Advertisement and Bid Award
July – October 2018	Construction
November 2018	Project Completed

## Funding

King County Waterworks Grant	\$157,400
King County Flood Reduction Grant	\$175,000
King County Sub-Regional Opportunity Grant	<u>\$190,000</u>
<b>TOTAL GRANTS</b>	<b>\$522,400</b>
<b>CITY MATCH</b>	<b><u>\$677, 600</u></b>
 <b>PROJECT ESTIMATE</b>	 <b>\$1.2 MIL</b>

## Project Team

Tawni Dalziel, P.E, City Sr. Stormwater Program Manager  
 Andrew Zagars, P.E., City Engineer  
 Greg Laird, P.E. Otak Project Manager  
 Courtney Moore, Otak Water Resource Analyst  
 Kevin O'Brien, Otak Senior Ecologist

## **Project Partners**

*City of Sammamish*  
*King County*  
*Lake Sammamish Kokanee Work Group*  
*Snoqualmie Tribe*  
*Trout Unlimited*  
*Private property owners*