Hozomeen Creek Brook Trout Spawning Survey 2015

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Introduction

Hozomeen Creek was investigated during late summer/early fall 2015 for the presence of spawning brook trout. Brook trout are an introduced char species and present in Ross Reservoir (aka Ross Lake) which is transboundary between British Columbia and Washington State. The investigation was a precursor to a potential brook trout removal program.

The brook trout population in Ross Reservoir is thought to have originated from Hozomeen Lake, which is a small alpine lake located east of the reservoir in Washington State. The lake outlet, Hozomeen Creek, flows westerly into Ross Reservoir (Map 1). Brook trout were introduced into Hozomeen Lake as part of a past stocking program and thought to have subsequently migrated and distributed into downstream waters.

Ross Reservoir supports naturally reproducing populations of 2 native char species, bull trout and Dolly Varden. The concern is that brook trout will spawn with indigenous char and produce undesirable hybrids. Char are a fall spawning fish species.

Methods

A short section of Hozomeen Creek was visually inspected for the presence of adult brook trout during late summer 2015. A section of stream was walked from Ross Reservoir upstream for approximately 50-100m to a naturally occurring fish barrier/obstacle consisting of a debris jam with elevated stream bed (Photo 1). The length of stream inspected varied as reservoir levels decreased during the observation period. Water levels in the reservoir are managed by Seattle City Light.

No attempt was made to survey the shoreline of Ross Reservoir, in the vicinity of the mouth of Hozomeen Creek, for fish that may be shore spawning in deeper waters.

Field investigations were completed by South Coast fisheries staff (D. Jesson and I. Lunn). Temperatures were taken using a digital thermometer (DeltaTRAK No. 11066).

Results

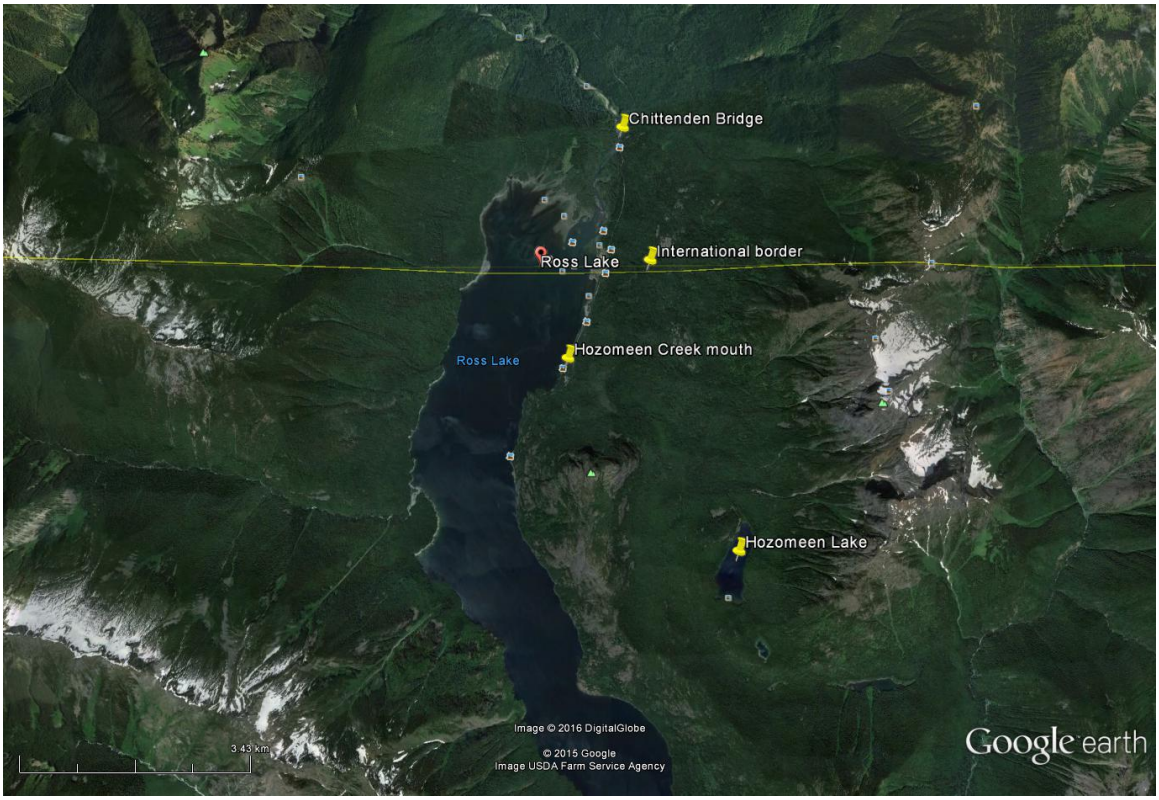
A total of 7 site visits to Hozomeen Creek were completed between August 28th and October 16th, 2015. Table 1 summarizes field observations for each visit. Photos 2, 3 and 4 depict site conditions over the survey period.

Overall, suitable spawning habitat was limited in the accessible length of creek; however, there were some pockets of spawning gravel in the vicinity of the foot bridge, between the debris jam and the natural obstacle.

No fish, including brook trout, were observed during any of the site visits.

Discussion

It is recommended that any plans for a brook trout removal program in lower Hozomeen Creek be deferred. It is possible that brook trout have selected other Ross Reservoir tributary streams for spawning, as observations of brook trout have been made in the BC Skagit River, in the vicinity of Chittenden Bridge, during early September snorkel surveys. It may also be worthwhile to monitor lower Hozomeen Creek for a second year in 2017, extending visits further into the fall season.



Map 1. Map of project location.

Date	Time (24 hr clock)	Water Temp (°C)	Air Temp (°C)	Observations
Aug 28	1230	10.3	n/r	No fish observed
Sept 4	1300	8.0	n/r	No fish observed
Sept 11	1330	10.5	17.0	No fish observed
Sept 18	1400	9.0	15.0	No fish or redds observed; lake level dropping
Oct 2	1852	9.3	11.0	No fish observed; lake level still dropping
Oct 9	1400	9.1	15.5	No fish or redds observed; lake level dropping; low flow in creek
Oct 16	1500	7.6	14.3	No fish or redds observed

n/r=not recorded

Table 1. Hozomeen Creek Observations Late Summer/Early Fall 2015 at lower foot bridge crossing.

Photo 1. Naturally occurring fish migration obstacle located approximately 50 - 100 meters upstream of Ross Reservoir and just upstream of the foot bridge.

Photo 2. View upstream of debris jam, located just downstream of foot bridge, on Hozomeen Creek.

Photo 3. View downstream of Hozomeen Creek from foot bridge with Ross Reservoir in background.

Photo 4. View upstream of Hozomeen Creek from Ross Reservoir.