Fisheries Summary for Prize Mining Site

Diversity of fish species is low in the upper portion of the Pine Creek watershed due to a natural barrier (the falls) located on Pine Creek just upstream of the confluence of Pine and Spruce creeks at UTM (zone 8) 0577916E, 6606800N. Currently, only two fish species are confirmed to be present above the falls: slimy sculpin (*Cottus cognatus*) and Arctic grayling (*Thymallus arcticus*).

Previous habitat investigations indicate that the Pine Creek watercourse from Birch Creek downstream to the falls including the vicinity of the Prize Mine site (the mine) is generally of low habitat value and potential. This can largely be attributed to the residual effects of historical placer activity. The existing stream morphology is largely straight instead of sinuous, there is little cover and there is a lack of functioning riparian or in-stream vegetation. This produces extended riffle areas of relatively high water velocity and low channel complexity, which limits the potential for grayling rearing habitat.

On-site fisheries assessments in the immediate vicinity of the mine are few. A cursory assessment was conducted in the area during in 2004-05 as part of the Atlin Microhydro Project, at which time no grayling were captured or observed in the area of Pine Creek from the falls upstream approximately 1.5 km to the old bridge site. A total of 1756 seconds of shocking time captured 103 sculpin but no grayling.

A fish salvage operation was conducted in November 2006 as part of a project undertaken by Prize Mining Corporation to divert Pine Creek to a newly constructed channel. The intent of the salvage was to remove fish from the original stream channel and relocate them to the new channel. A total of 135 meters were salvaged capturing 278 slimy sculpin and 1 juvenile Arctic grayling.

A map from a 1982 report (Pendray) indicates a single grayling was captured in the mid reaches of Pine Creek above the confluence with Spruce Creek.

Grayling in the vicinity of the mine have likely migrated, or been washed down, from more favourable habitat areas in the upper drainage nearer the vicinity of the outlet of Surprise Lake. There are no known spawning areas in the immediate vicinity of the mine. Slimy sculpin are present throughout the Pine Creek drainage including the immediate vicinity of the mine. Groundwater entering the creek likely provides microhabitat over-wintering sites for sculpin. Grayling in upper Pine Creek are found primarily in the area near the Surprise Lake outlet downstream to the bridge on the Surprise Lake Road and then again below the falls.

Additional fish species that may utilize the lower reaches of Pine Creek (below the falls) and particularly at the outlet area into Atlin Lake include: lake trout (*Salvelinus namaycush*); round whitefish (*Prosopium cylindraceum*); lake whitefish (*Coregonus clupeaformis*); least cisco (*Coregonus sardinella*); northern pike (*Esox lucius*) longnose sucker (*Catastomus catastomus*) lake chub (*Couesius plumbeus*) and burbot (*Lota lota*).

References:

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