

# Arctic Grayling in the Swan River Watershed

## Arctic Grayling in the Watershed

Grayling need different types of habitat for overwintering, spawning, and feeding. Improperly installed culverts at stream crossings can prevent grayling from accessing these important habitats. Changes to streambank vegetation, lots of sediments in the water, and changes to water temperature also impact habitat quality.



## SRFN Arctic Grayling Project

Arctic grayling is declining in Alberta which has affected what and how we can fish.

**Goal: Help restore grayling populations in the Swan River watershed by identifying fish passage barriers and measuring grayling habitat quality.**



## What We Have Studied

Using information on the amount of grayling habitat around road crossings, we developed a list of high priority road crossings in the Swan River watershed requiring culvert repairs (or remediation) to improve fish passage. By repairing these culverts, grayling could access a large amount of upstream habitat.

We have begun to measure the quality of upstream habitat to support the prioritization of road crossing repairs. Last summer, environmental monitors completed fish habitat surveys at 21 priority crossing sites and 2 community selected sites. They placed data loggers to measure changes in temperature over time.

Four crossings with upstream grayling habitat were confirmed as passage barriers, and four other crossings were identified as potential barriers that need monitoring. Late summer water temperatures were within average temperature ranges for grayling to survive.

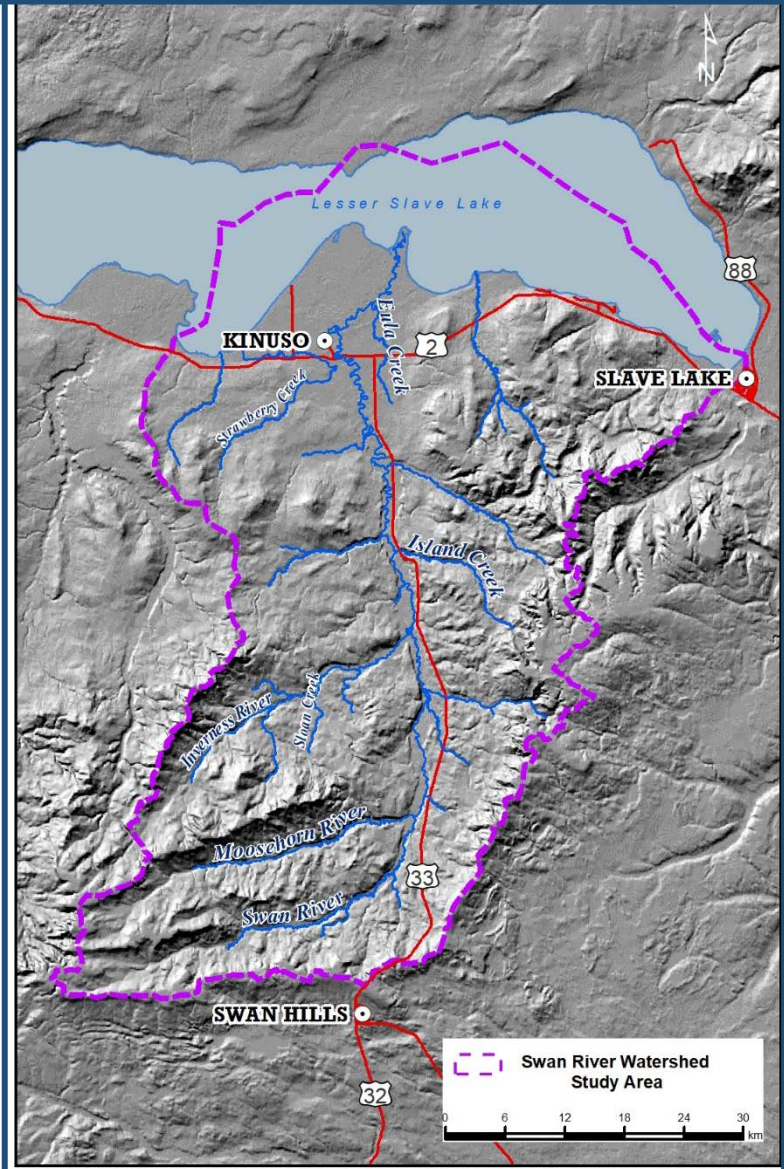
## What is Next?

Continue fish habitat surveys to measure the quality of fish habitat upstream in early spring/summer. Measure the presence of grayling in streams by detecting traces of their DNA in the water that they leave behind, called environmental DNA (eDNA). This will allow us to map what streams and tributaries grayling are using.

This knowledge will guide remediation efforts to restore grayling access to a large amount of good quality upstream habitat, which in turn helps increase grayling numbers in the Swan River watershed.



## Study Area



## How You Can Help

Your knowledge can help improve this study on grayling habitat. Can you help us with answering the following questions?

- 1) Do you find grayling in the northern parts (upper reaches) of the watershed in the summer?
- 2) What is good grayling habitat?
- 3) Where should we look for grayling? Can you recommend any streams or areas?

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