

North Yukon Freshwater Fish Monitoring Study

The objective of the study was to gather data on freshwater fish and their distribution in selected lakes, rivers and streams to improve understanding of species presence and diversity.

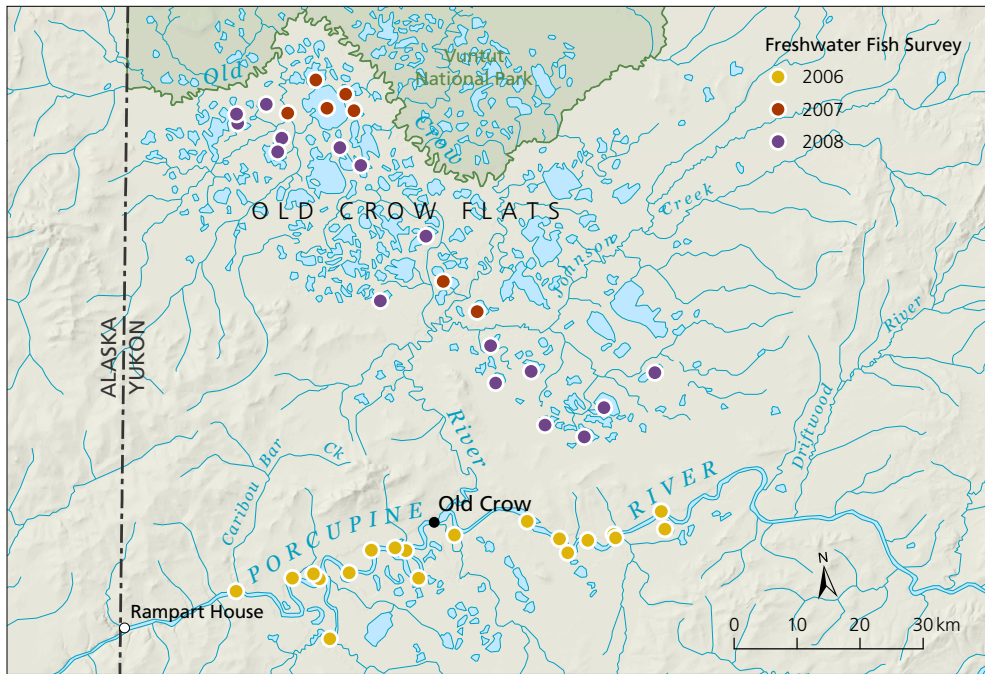
VUNTUT GWICH'IN FIRST NATION TRADITIONAL TERRITORY

Project Description

Elders and community members selected sampling sites. Priority was based on areas that were fished by community members or where a limited amount of information was available. Environment Yukon selected additional lakes to collect widespread information on species presence and diversity.



OLD CROW FLATS (J. MEIKLE, YG)



Fish Survey Methods

LAKE SURVEYS

GILLNETTING

- Small mesh gillnets were set at random locations around the lake-shore for varying periods of time.
- Nets used were 22.9 m x 2.4 m (75 ft x 8 ft) with three mesh sizes.
- Fish captured were measured for length and weight and released at the sampling location.
- Fish killed purposely were sampled for sex and maturity and stomach contents and ageing structures were taken.
- Determined depth, assessed for inlets and outlets and collected water parameters such as conductivity, pH and temperature.



GILLNETTING (S. THOMPSON, YG)

CREEK SURVEYS

MINNOW TRAPPING & BEACH SEINING

- Selected because of interest from community members.
- Sites sampled were tributaries to the Porcupine and Old Crow Rivers.
- Sites were assessed by boat in 2006 and by helicopter in 2007.
- Minnow traps were set overnight.
- Beach seining was conducted when suitable habitat was found.



MINNOW TRAPPING (S. THOMPSON, YG)

Summary

LAKE SURVEYS (3 lakes sampled)

Cadzw Lake	Fish caught – northern pike and lake whitefish
Dennis Lake*	No fish caught (shallow)
Stephen Lake*	Dry lake

CREEK SURVEYS

Minnow Trapping	16 sites sampled Fish caught – northern pike and slimy sculpin
Beach Seining	3 sites sampled Fish caught – round whitefish, arctic grayling, longnose sucker and slimy sculpin

2006 KEY FINDINGS

- Cadzw Lake: sustaining populations of northern pike and lake whitefish with adequate depth and a good outflow.
- Stephen & Dennis Lakes: dry or shallow and likely do not contain any fish.

LAKE SURVEYS (7 lakes sampled)

Fish caught – arctic grayling, northern pike and least cisco. A number of fish were tagged with small numbered juvenile tags in Vanajoho* and Big Whitefish Lake to look at possible migration into the Old Crow River during the winter. Both lakes have an outlet into the Old Crow River.

CREEK SURVEYS

Minnow Trapping	3 sites sampled. No fish caught.
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2007 KEY FINDINGS

- Lakes ranged in depth from 0.5 to 3.4 m (1.5 to 11 ft).
- Very healthy fish populations were found in four lakes.
- Survival through the winter was confirmed.

* Local name

LAKE SURVEYS (16 lakes sampled)

Fish caught – northern pike, least cisco and longnose sucker

2008

2008 KEY FINDINGS

- Lakes ranged in depth from 0.8 to 5.0 m (2.5 to 16 ft).
- Very healthy fish populations were found in five lakes.
- Survival through the winter was confirmed.



NORTHERN PIKE (S. THOMPSON, YG)

Key Findings - All Years

- 26 lakes and 17 creeks were sampled.
- Seven species of freshwater fish were identified.
- Although shallow, ranging from 0.5 to 5.0 m deep (1.5 to 16 ft), fish over-winter in many of the lakes sampled.
- Healthy presence of aquatic insects and amphipods (freshwater shrimp) for fish to eat.



Members of the Vuntut Gwich'in and the North Yukon Renewable Resource Council participated in this study.

