

## Study area

The project is taking place within the Indian River valley, south of Dawson City. We will be focused on sampling disturbed and undisturbed shallow open water wetlands in this area.

### For more information, please contact

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# Open water wetland health evaluation: Indian River

## Project objectives

We are conducting this project to:

1. Understand the differences in invertebrate and vegetation communities in open water wetlands between natural and disturbed wetlands.
2. Build on previous work at various Yukon open water wetland sites to assess and compare wetland health in disturbed landscapes.
3. Start to understand how previous reclamation efforts, practices, and time influence wetland invertebrate and vegetation communities.

## Project overview

Currently, we do not have a good understanding of the effects of placer mining, reclamation and cumulative effects on wetland ecosystems. Wetlands within the Indian River valley have been affected by human activities, in particular from placer mining, as well as from climate change and wildfires. We expect the combined effects of these stressors over time or space will result in changes to wetland vegetation, alteration of water quality, and shifts in invertebrate, birds and mammals presence.



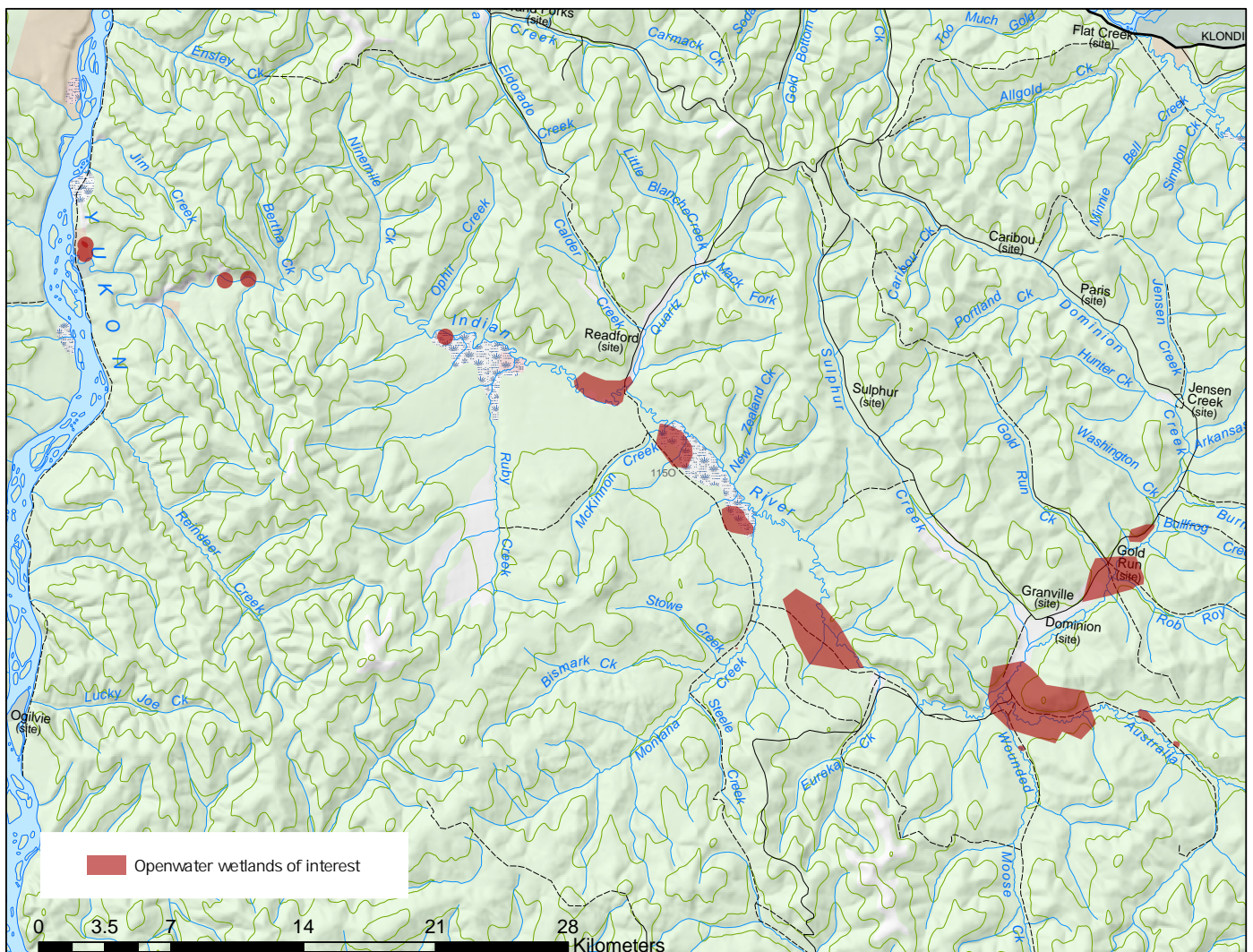
A reference wetland sampled in 2020.

We will be working in collaboration with Tr'ondëk Hwëch'in and the Department of Energy, Mines and Resources (Compliance, Monitoring and Inspections Branch) to compare multiple wetlands over a variety of wetland types, disturbance histories and reclamation activities in the Indian River. We hope to visit 30 open water wetlands and their adjacent forested components to measure water chemistry, vegetation and invertebrates.

The study will help inform placer mine project assessment and licencing, and the review/approval of wetland protection and reclamation plans. Specifically, this work will help understand the successes and limitations of current and past restoration practices, and guide development of measurable targets and best practices for future wetland management and reclamation efforts.



Field sampling of a reference wetland in 2020.



We selected the open water wetlands for this project to be spatially spread out and capture variation in the amount and time since disturbance. We have contacted existing claim holders in the area where our work overlaps, to advise them of the project.

