

Reference Condition Approach Bioassessment of Yukon River Basin Placer Mining Streams Sampled in 2006

Non-Technical Summary

Project: Development and comparison of stream bioassessment models for the Yukon River Basin – fish and benthic macroinvertebrate Reference Condition Approach (RCA) modeling; placer mining stressor gradient analysis.

Summary:

- 44 test sites on placer mining streams in the Dawson City area of the Yukon River Basin were sampled as well as one reference site. Sites were accessed by road and helicopter. A total of 121 sites were sampled over the 2004-2006 field seasons throughout the Yukon River Basin by the University of Western Ontario sampling team.
- Yukon-based federal and territorial government staff sampled 60 additional stream sites July and August 2006 using the same field sampling protocol. This allowed for the data to be amalgamated for Reference Condition Approach (RCA) analysis. These were mainly reference sites (unexposed to stressors) and were used to re-calibrate existing RCA models.
- Geographic Information System (GIS) analysis and data assembly for all sites sampled in 2006 (UWO as well as those sampled by the government staff) was completed in late October 2006. Invertebrate and water samples analyses were completed by December 2006.
- Reference Condition Approach analysis of all data (UWO, DFO and YTG) was carried out in January 2007. Both the Classification and Regression methods for RCA analysis were used and compared.
- A report of the RCA data analyses results was submitted in March 2007 and will be used by the Yukon Placer Secretariat to plan sampling and analysis activities for the upcoming year.
- The full report recommends that the YPS adopt the Classification method for analysis of benthic invertebrate data in the future and Regression to analyze fish data. There is a further recommendation that the YPS Yukon Placer Mining Stream Watershed Health Protocol integrate with the federal Canadian Bioassessment Network (CABIN) to assist with future data analysis.