



North/South Consultants Inc.

Aquatic Environment Specialists

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Expertise and experience in Fish Sampling

I have over 9 years of experience studying fish, having worked extensively with various fish species in regulated and unregulated lake and river systems. I have expertise collecting field data and authoring scientific papers and reports. More specifically, I have conducted field work and authored work on the impacts of introduced predatory fish on small lake fish communities, the current status of fish populations and communities in regulated and non-regulated systems, as well as general fish biology, egg collection, larval drift, fish ageing, standardized sampling techniques, growth, gill net selectivity, and fish species-habitat modeling.

Expertise and experience in the hydroelectric sector

As mentioned above, most of my fisheries experience has been gained through working on lakes and rivers influenced by the hydroelectric sector. For example, research conducted on Southern Indian Lake (2011-2013) was focused on Lake Whitefish biology in a large, dammed and diverted lake system. Results of this research had particular relevance to the potential influences of hydroelectric development on Lake Whitefish populations, including growth and recruitment. Another recent project assessed the status of juvenile Lake Sturgeon populations in a large regulated river. Most of my recent work has focused on monitoring waterbodies associated with hydroelectric development, and assessing how best to monitor and improve Lake Whitefish and Walleye populations that are influenced by hydroelectric facilities.



EDUCATION

- 2009** **Master of Science, Department of Biological Sciences, University of Ottawa**
Thesis: Impact of piscivorous fish introduction on small lakes in Gatineau Park, Québec, Canada
- 2003** **Bachelor of Science, Department of Geography, Brandon University**

AREAS OF EXPERTISE

- Aquatic environmental monitoring
- Cisco and Dolly Varden morphometrics and meristics
- Lake Whitefish biology
- Report preparation and editing
- Fish community data analysis and report preparation
- Literature reviews, data analysis and contributions to environmental impact statements

REPRESENTATIVE PROJECTS

- **Manitoba Hydro:** Conducted Lake Sturgeon and fish community field studies associated with the Pointe du Bois Generating Station Modernization Project, the Keeyask Generating Station and the Wuskwatim Generating Station.
- **Manitoba Hydro:** Provided literature reviews, suggestions for study design, and written contributions to the fish community sections of the Keeyask Generating Station and Pointe du Bois Modernization Project Environmental Impact Statement (EIS) and/or Aquatic Effects Monitoring Plan (AEMP).
- **Southern Indian Lake Commercial Fishermen's Association:** Conducted field studies, analyzed data and reported on several studies that assessed fish populations and Lake Whitefish spawning habitat in Southern Indian Lake, a large lake affected by water level regulation.
- **Province of Manitoba and Manitoba Hydro:** Conducted fish community monitoring programs, and analyzed six years of fish community data for Manitoba's Coordinated Aquatic Monitoring Program (CAMP).
- **Manitoba Hydro:** Conducted fish salvages as part of the Kelsey GS turbine rerunning project.
- **SaskPower:** conducted fish habitat and bathymetry mapping using Questar Tangent Corporation (QTC) sonar, and Trimble Real Time Kinematic (RTK) survey equipment, and conducted Lake Whitefish spawning and spillway mortality studies.