



# North/South Consultants Inc.

## Aquatic Environment Specialists

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Mr. Richard Remnant  
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### **Expertise and experience in Fish Sampling**

I have over 35 years of experience in fish and fish habitat sampling, beginning as a summer student with DFO in 1979 to my present position as a Senior Fisheries Biologist and Principal with NSC. The first half of my career was spent in the conduct and data analysis of field studies, while in recent years I have been responsible for the design and management of fish community studies. I have worked with most gear types in the design and conduct of fish community assessments, fish habitat assessments, fish spawning studies, fish movement studies, and fish passage studies.

### **Expertise and experience in the hydroelectric sector**

I have been working with hydroelectric development/fish habitat and fish community interactions since being hired by NSC in 1991. I was responsible for the planning, design, and conduct of the aquatic environment component of the Environmental Impact Statement (EIS) and Monitoring Program for the Churchill River Weir, the planning, design, and implementation of the fish community component of the EIS and Aquatic Effects Monitoring Plan (AEMP) for the Wuskwatim and Keeyask Generating Stations, and planning, design, and implementation of the fish community component of the long-term Coordinated Aquatic Monitoring Program (CAMP) designed to monitor the ecosystem health of several waterbodies affected by hydroelectric development in Manitoba.



## EDUCATION

**1991            Master of Natural Resources Management (M.N.R.M.), University of Manitoba**

Practicum title – An assessment of the potential impact of Rainbow Smelt on the fishery resources of Lake Winnipeg.

## AREAS OF EXPERTISE

- Aquatic impact assessment, habitat assessment and enhancement, and monitoring
- Fish passage assessment
- Compensation for harmful alterations to fish habitat
- Interpretation of environmental legislation as it relates to the aquatic environment
- Traditional Knowledge

## RELATED EXPERIENCE

- **Manitoba Hydro:** responsible for the design, management, and conduct of fish community studies related to the Environmental Impact Statement (EIS) and Aquatic Effects Monitoring Plan (AEMP) for the Keeyask Generating Station (GS).
- **Manitoba Hydro:** responsible for the design and management of fish community studies related to the EIS and AEMP for the Wuskwatim GS.
- **Knight Piesold/Plutonic Power:** led the field component of a study designed to assess the fish community in 18 stream projects being considered for potential hydroelectric development.
- **Manitoba Hydro:** responsible for the design, planning, and implementation of aquatic studies for the EIS and long-term monitoring of the Lower Churchill River Water Level Enhancement Weir Project.
- **Province of Manitoba and Manitoba Hydro:** worked with fisheries biologists from the Province of Manitoba and Manitoba Hydro to coordinate and manage the fish community component of Manitoba's Coordinated Aquatic Monitoring Program (CAMP).
- **Southern Indian Lake Commercial Fishermen's Association:** managed several studies to assess fish populations and Lake Whitefish spawning habitat in Southern Indian Lake, a large lake affected by water level regulation.
- **Manitoba Hydro:** managed two studies conducted by North/South Consultants Inc., Hydroacoustic Technology, Inc. and Genivar Inc. to assess fish entrainment through turbine units and spillway gates of the Great Falls GS.
- **Manitoba Hydro:** participated in the management, conduct, and report production of two studies conducted by North/South Consultants Inc. and Normandeau Associates to assess mortality, injury, and survival rates of fish passed through an operating turbine at the Kelsey GS.