

DESCRIPTION OF EXPERTISE

American eel – *Anguilla rostrata*

Michelle has conducted surveys for American eels using boat electrofishing, backpack electrofishing and hoop nets within the St. Lawrence, Ottawa, South Nation, Mississippi and Bonnechere rivers. This work has been completed for conservation authorities, researchers and private proponents. The purposes of the field investigations have included: abundance and distribution studies, collection of presence/absence data, description of habitat use and monitoring. She has written reports on the potential to impact eels as well as developed mitigation measures and monitoring plans. She provides advice and expertise for a variety of producers in meetings with agencies and First Nations.

Lake Sturgeon – *Acipenser fulvescens*

Michelle has studied and/or assessed the potential to impact lake sturgeon on the St. Lawrence, Bonnechere, South Nation and Montreal rivers. She has worked with developers, agencies and First Nations to create sampling programs to located Lake Sturgeon spawning beds. Using the outcomes of these studies she has determined the likelihood of the proposed projects to impact this species or its spawning habitat. She conducted visual spawning surveys as well as a larvae studies using neuston nets.

Turtles

Mrs. Lavictoire has completed many surveys for various turtle species including Blanding's, eastern musk, spotted and wood turtles. The surveys have been completed for a variety of sectors including: waterpower, aggregate, water purification projects and subdivisions. She has assessed the potential for these species to be present within land to be developed and has provided mitigation measures where appropriate to allow projects to go forward. This work was undertaken in many parts of Ontario (i.e. Picton, Peterborough, Renfrew, Cornwall, Almont, and Ottawa).

Mollusks

Mrs. Lavictoire has had training working with both marine and freshwater mussels. She took the Ontario Freshwater Mussel Workshop provided by DFO in southwestern Ontario which included identification and field sampling of several Species at Risk mussels. She has conducted surveys to map mussel habitat in the Strait of Georgia (British-Columbia) and has complete mussel surveys on the Bonnechere River.

Dragonflies – Rapids Clubtail (*Gomphus quadricolor*)

Michelle has routinely provides information on the presence/absence of dragonflies for a variety of projects (i.e. subdivisions, solar and waterpower). These projects have included the assessment of the potential for this species to be present and for impacts to occur. To date, she has been able to determine that the species was unlikely to be impacted and has not had to develop mitigation measures.

EXPERTISE and EXPERIENCE IN DEVELOPMENT OF MITIGATION, EFFECTS MONITORING and EFFECTIVENESS MONITORING PLANS

Michelle has conducted impact assessment in many sectors since 1997 determining potential impacts and developing mitigation, compensation and monitoring plans (including pre, during and post monitoring). Her work on American Eel mitigation measures and monitoring plans for waterpower began in 2010. In addition, she has written Mitigation Plans for four waterpower producers for eels for the new requirements of the *Endangered Species Act*. Other recent monitoring work has included assessing the effectiveness of the mitigation measures and presence of several species/groups including turtles for solar projects and fish kills and fish habitat compensation monitoring programs for various clients.

EXPERTISE and EXPERIENCE in the HYDROELECTRIC SECTOR**Michelle Lavictoire (Nunas), M.Sc. Natural Resources – Biologist/Principal**

Michelle Lavictoire began as an ecologist in the consulting field in 1997 and is the principal of Bowfin Environmental Consulting. Her first experience in waterpower was at South River in 2003. Since that time she has continued working on various small waterpower projects in Ontario (Douglas, Renfrew, Almonte, Ottawa, Casselman) and Quebec (Ouje-Bougoumou). She has been involved in several projects from conception to completion offering natural sciences input at various stages to minimize potential impacts. Her involvement often includes the determining the appropriate ecological residual flow values and developing monitoring pre- and post-construction for adaptive management strategies.

CURRICULUM VITAE

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MICHELLE L. (NUNAS) LAVICTOIRE

Michelle Lavictoire began as an ecologist in the consulting field in 1997 and is the principal of Bowfin Environmental Consulting. She has completed assessments and inventories in New Brunswick, Quebec, Ontario, Alberta, British Columbia and Nunavut. She completed her masters on a part-time basis in 2011.

EDUCATION

M. Sc. Natural Resources, Macdonald Campus, McGill University – Supervisor Dr. Curtis, 2011

B. Sc. Wildlife Biology, Macdonald Campus, McGill University, 1997

EXAMPLES EXPERIENCE with WATERPOWER PROJECTS

- Natural heritage assessment for the development of the:
 - Latchford Dam, northern Ontario
 - South River Hydroelectric Facility in northern Ontario
 - Thomas Low Generating Station in Renfrew, Ontario
 - Re-development for Multistream Power Corp. in Douglas, Ontario
 - Re-development Enerdu Generating Station

Roles included: agency and aboriginal consultation, terrestrial and aquatic habitat descriptions, reptile surveys, breeding birds inventories, benthic macroinvertebrate and fish community sampling, species at risk assessment, development of mitigation measures and assessment of impacts

- Natural heritage assessment for a proposed waterpower project in northern Quebec on behalf of the Cree community of Ouje-Bougoumou. In addition to the roles described for the Ontario projects above, this project also included conducting interviews with various members of the community in order to obtain information on environmentally and socially valued features within the study area.
- Collection terrestrial and aquatic baseline data for the proposed First Chute small hydroelectric facility on the Bonnechere River (near Renfrew, ON). Work included: terrestrial and aquatic habitat descriptions using ecological land classification, and Ontario wetland evaluation system, inventories (plant, species at risk, breeding birds, reptile, fish, molluscs and benthic invertebrates), spawning surveys (lake sturgeon and walleye).
- Species at Risk assessment and permitting for the Laplante Generating Station in Casselman, Ontario. This project also involved the creation and implementation of a post-construction monitoring plan for the American eel.
- Mitigation Plans for American Eel for Renfrew Power Corporation, Energy Ottawa, Enerdu and Mississippi River Power Corporation.
- Expertise and advice on American eels for Renfrew Power Generation, Enerdu and Energy Ottawa in meetings with the Algonquins of Ontario.

Other Species at Risk Projects

- Designed and is monitoring Golden-winged Warbler breeding and habitat for a 20 year period (solar facility)
- Completed inventories for butternut, bobolink, whip-poor-will, chimney swifts, least bittern and barn swallow (central, western and eastern Ontario)
- Completed turtle nesting surveys, overwintering surveys and inventories in eastern and central Ontario
- Conducted lake sturgeon surveys on South Nation (adult) and Bonnechere (spawning, larvae and adult) rivers.
- Boat electrofishing, and hoop netting surveys for American eel on South Nation, St. Lawrence, Raisin, Mississippi, Ottawa and Bonnechere rivers.