

September 19, 2013

Marie Lummiss  
Executive Assistant  
Ontario Waterpower Association  
Sent via e-mail to [mlummiss@owa.ca](mailto:mlummiss@owa.ca)

Dear Ms. Lummiss:

**Re: Request for Qualifications for Species Expertise, Regulation 242/08,  
*Endangered Species Act, Dragonfly Species Group***

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I am writing in response to the Request for Qualifications for species expertise in relation to Regulation 242/08 of the Ontario *Endangered Species Act*. I am pleased to provide the following description of my expertise and experience with the Dragonfly species group.

#### Dragonflies

As a biologist and naturalist with 8 years experience researching insects, Nathan has carried out Odonate surveys for renewable energy and Environmental Impact Studies across a wide range of habitats including aquatic and upland habitat for both adult and larval Odonates. Nathan is experienced in the capture, handling and identification of Odonate species developed during his time as an OMNR Algonquin Naturalist. Nathan has carried out extensive monitoring of a wide variety of rare odonate species including clubtails, shadowdragons and *Somatochlora* emeralds among others. Nathan's research on insects has been published in scientific journals, magazines and news articles.

#### Mitigation, Effects Monitoring and Effectiveness Monitoring Plans

Nathan also regularly provides guidance in the development of various mitigation plans for renewable energy projects and Environmental Impact Studies (EIS) that involve odonates. This includes providing information on how proposed developments will impact various odonate populations and how to minimize such risks at all life stages.

#### Hydroelectric Sector

Nathan does not have specific experience in working in the hydroelectric field. However, the skills noted above are directly transferrable to a hydroelectric project as the required skill set is specific to dragonflies on the landscape and not restricted to hydroelectric projects alone. Nathan has worked on renewable energy projects in the same parts of Ontario (i.e. central and northern) and is therefore quite familiar with the landscapes and regional habitats in which these SAR dragonflies exist.

I trust the above information provides an appropriate description of my qualifications to provide Ontario Waterpower Association's members with expertise within the dragonflies species group. I thank you for this opportunity and look forward to providing my services to the members.

Yours truly,  
Natural Resource Solutions Inc.

*Robert f. Steele* for

Nathan Miller, MSc.



# NATURAL RESOURCE SOLUTIONS INC.

Aquatic, Terrestrial and Wetland Biologists

**NATHAN MILLER, M.Sc.**

**TERRESTRIAL AND WETLAND BIOLOGIST**

## EDUCATION

- Master of Science, Integrative Biology (2010); University of Guelph, Guelph, Ontario.
- Honours Bachelor of Science, Wildlife Biology (2008); University of Guelph, Guelph, Ontario

## AREAS OF PROFESSIONAL EXPERIENCE

Nathan specializes in surveys for insects and other wildlife species. He routinely completes inventories of odonate and other insect species for Environmental Impact Studies (EIS) and renewable energy projects. Nathan has conducted surveys for both larval and adult odonates in wetland, lake, riverine and upland habitats. He regularly submits records to the NHIC Odonate database.

Nathan provides expertise in the following areas:

- Identification of odonates/insects and their critical habitat
- Capture and handling of odonates and other insect species
- analysis of environmental impacts on odonates and other wildlife and natural features

## EMPLOYMENT HISTORY

### Terrestrial and Wetland Biologist

Natural Resource Solutions Inc., Waterloo, Ontario. 2011 to present -carried out inventories for rare odonate species for REA projects, EIS's and Natural Heritage Characterizations. Also conducted studies on birds, amphibians, mammals, butterflies and other insect species.

### Field Biologist

Stantec Ltd., Guelph, Ontario. 2010 to 2011 -carried out raptor and waterfowl surveys in south eastern Ontario.

### Park Naturalist

Ministry of Natural Resources, Algonquin Provincial Park 2005 to 2008 -monitored park odonates in a wide diversity of boreal and temperate habitats through the capture of larvae, exuvium and adults.

## PUBLICATIONS

- Hanley, D., N. Miller, T. Flockhart, D. Norris. 2013. "Natal origin and sex influences wing coloration of wild-caught migratory monarch butterflies (*Danaus plexippus*)". Behavioral Ecology.
- Miller, N. G., L. I. Wassenaar, K. A. Hobson, D. R. Norris. 2012 "Testing century old hypotheses about spring re - colonization patterns in the migratory monarch butterfly (*Danaus plexippus*)". Public Library of Sciences One 7(3): 1-6.
- Hayward, C., B. Jones, O. Molenda, M. D'Aguiar, N. G. Miller, K. Cottenie, L. Rye. 2011. "Patterns of tree diversity in response to logging in Algonquin Provincial Park". Studies by Undergraduate Researchers at Guelph 4: 56-62.
- Miller, N. G. 2010. "The Bumble Bees of Algonquin Provincial Park: A Field Guide". Toronto Entomologists Association & Ontario Parks.
- Miller, N. G., L. I. Wassenaar, K. A. Hobson, D. R. Norris. 2010. "Monarch butterflies cross the Appalachians from the west to re-colonize the east coast of the U.S". Biology Letters 7: 43-46

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