

September 19, 2013

Marie Lummiss
Executive Assistant
Ontario Waterpower Association
Sent via e-mail to mlummiss@owa.ca

Dear Ms. Lummiss:

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

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*. As an Associate of Water Systems Analysts, a Division of Natural Resource Solutions Inc., I am pleased to provide the following description of my expertise and experience with the Mollusks species group.

Mollusks

Dr. Mackie is serving his fourth term as the co- chair of the Mollusca Species Specialist Subcommittee of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). He is a member of three recovery teams for 12 mussel Species at Risk in Ontario, and has work extensively on the invasive zebra mussels. Since 2004, his consulting work has focused on relocating and monitoring survival and growth of mussel Species at Risk. In his extensive career, he has authored seven books, 10 chapters in books, 25 refereed publications, six publications in conference proceedings, 55 commissioned reports and eight government publications.

Mitigation, Effects Monitoring and Effectiveness Monitoring Plans

Dr. Mackie is the foremost consulting expert on relocation of Ontario's Species at Risk Mussels. He co- wrote the *Protocol for the detection and relocation of freshwater mussel species at risk in Ontario Great Lakes area (OGLA)* and has been involved in numerous projects permitted by government agencies. He has performed 17 relocations and surveys for Species at Risk mussels, and has authored a total of 32 reports documenting these undertakings. He is intimately familiar with the potential modes of impact on Ontario's Species at Risk mussels, and is ideally equipped to develop and implement mitigation and monitoring strategies.

Hydroelectric Sector

Dr. Mackie's extensive academic and consulting background positions him well to serve the hydroelectric sector. He has extensive experience working in thermal generating plants, especially Nanticoke Thermal Generating Station where he tested many products for their efficacy of zebra mussel control. He has co-authored two books on monitoring and control of zebra and quagga mussels at water intake structures, main cooling systems, service water systems, and safety systems including those in hydroelectric plants.

Dr. Mackie's current association with Natural Resource Solutions Inc., a firm with extensive hydro experience, puts him in an ideal context from which to server the members of the Ontario Waterpower Association.

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

Yours truly,
Water Systems Analysts
A Division of Natural Resource Solutions Inc.



Dr. Gerald Mackie, PhD

GERRY MACKIE, Ph.D.

ASSOCIATE

EDUCATION

- Postdoctorate Fellow, Canadian Museum of Nature (1973-1974), Ottawa, Ontario.
- Doctor of Philosophy (Ph.D.), University of Ottawa (1973), Ottawa, Ontario.
- Master of Science (M.Sc.), University of Ottawa (1971), Ottawa, Ontario.
- Bachelor of Science (B.Sc.), Laurentian University (1968), Sudbury, Ontario.

ACHIEVEMENTS

- Life-time achievement award by the Freshwater Mollusk Conservation Society. FMCS Meeting, Baltimore, Maryland, April 2009.
- Plaque awarded from World Wildlife Fund Canada by Minister Herb Gray. Parliament Hill, Ottawa, May 4, 2000.!

ACADEMIC POSITIONS

Professor Emeritus

Department of Integrative Biology, University of Guelph, Guelph, Ontario 2003 to Present

Full Professor

Department of Zoology, University of Guelph, Guelph, Ontario 1988 to 2003

Associate Professor

Department of Zoology, University of Guelph, Guelph, Ontario 1981 to 1988

Associate Professor

Department of Zoology, University of Guelph, Guelph, Ontario 1974 to 1981

Postdoctorate Fellow

National Museums of Canada, Ottawa, Ontario 1973 to 1974

CONSULTING POSITIONS

Associate

Water Systems Analysts, a division of Natural Resource Solutions Inc. February 2013 to Present

Sole Proprietor

Water Systems Analysts, Guelph, Ontario 1999 to February 2013

Partner

Water Systems Analysts, Guelph, Ontario 1995 to 1999

President

Mackie and Associates Water Systems Analysts Inc. 1990 to 1995

Co-Chair

Mollusca Species Specialist Subcommittee of COSEWIC 2011 to 2014

Co-Chair

Mollusca Species Specialist Subcommittee of COSEWIC 1995 to 2006