

EDUCATION

Ph.D. (1983) Water Resources, Cornell University
M.S. (1979) Aquatic Science, Cornell University
A.B. (1974) Biology, Clark University

MEMBER

North American Lake Management Society
Onondaga Lake Technical Advisory Committee
NY Water Environment Association
Madison County Industrial Development Authority
Morrisville State College Council

EXPERIENCE

Dr. Liz Moran has more than 30 years of professional experience water resources, with a focus on limnology, water quality, and protecting and restoring lakes and watersheds. She has designed and implemented complex water quality and biological monitoring programs to characterize reservoirs, lakes, streams, rivers, and estuaries. Much of her experience has been directed at defining the interrelationships between land uses, point and nonpoint sources of pollution, water quality standards and the ecological integrity of surface waters. In addition to technical expertise, she has a deep understanding of the roles and concerns of local government in managing land use and infrastructure: she served as Cazenovia as Town Supervisor for two terms, as member of the Madison County Board of Supervisors, and as chair of the county's legislative committee on Planning, Economic Development, Environmental and Intergovernmental Affairs. Brief descriptions of current and recent projects where Dr. Moran served as project leader are included below to illustrate her experience in planning and interagency collaboration.

- **Cornell University Cayuga Lake Modeling Project: Communications and Outreach**
EcoLogic is working with Cornell University's Division of Energy and Sustainability to comply with the complex requirements included in the 2013 SPDES permit for operation of Cornell's Lake Source Cooling (LSC) facility, which include developing a mathematical model of the sources and fate of phosphorus in Cayuga Lake. Our role is to manage communications among the Cornell utilities and environmental engineers, academic advisors, NYSDEC senior staff, members of the modeling teams, the peer review panels convened by NYSDEC and EPA, and the large community of engaged stakeholders.
- **Agency Guidelines for Ecosystem-based Management in New York**
Ecosystem-based management (EBM) is an emerging approach to resource management that focuses on integrating human impacts and priorities with the natural world. EcoLogic was selected by the NY Department of State to assist the NY Ocean and Great Lakes Conservation Council (NYOGLCC) with the Agency Guidelines portion of the state's EBM initiative. Our assignment was to work with EBM partner agencies as they examined their programs to identify measures that would align their agency's practices more closely with the EBM guiding principles. We worked individually and collectively with senior staff from nine agencies with programmatic and/or regulatory responsibility related to resource management; each agency has a distinct mission related to environmental quality and economic development. The goal was for each partner agency to identify administrative, executive, and legislative changes that would reduce barriers to integrated resource management. The product of our efforts was incorporated into the NYOGLCC Report to the NYS Legislature.
- **Mohawk River Watershed Management Plan**
EcoLogic recently (2015) completed the Mohawk River Watershed Management Plan on behalf the Mohawk River Watershed Coalition, a group of 14 County Soil & Water Conservation Districts. In addition to writing the

Plan, EcoLogic conducted a robust stakeholder and community outreach program to ensure that the priority recommendations align with the desired future state of this unique and diverse area of New York. The need to address invasive species in both upland (terrestrial) ecosystems as well as the aquatic environment was a key recommendation of the Plan. An implementation plan included commitment from the County SWCD to continue their effective partnerships.

- **Southern Cayuga Lake Tributaries Dredging Project, City of Ithaca NY**

EcoLogic completed the planning, permitting, and design phases of a project to dredge accumulated sediment from the southern tributaries to Cayuga Lake. The City of Ithaca convened a Dredging Project Advisory Committee of agency representatives and stakeholder groups to inform our efforts and communicate the competing priorities related to completing this deferred maintenance. The EcoLogic team characterized existing conditions, tested the nature and chemical quality of sediments, drafted a site selection report, and completed the Environmental Impact Statement for siting a sediment management facility for dewatering and processing dredged material. Currently, we are supporting the design team from O'Brien & Gere Inc. as the project moves toward implementation.

SELECTED PUBLICATIONS

Moran, E.C., and D.O. Woods. 2009. **Comprehensive watershed planning in New York State: The Conesus Lake example.** Journal of Great Lakes Research 35(1): 10-14.

Moran, E.C. 2009. **Chemical treatment of milfoil in Cazenovia Lake- permitting challenges and lessons learned.** Clearwaters 39(3): 34-38.

Moran, E.C., and R. E. Gell. 2008. **Emerging contaminants in the Cayuga Lake watershed: Comparison of two water supplies.** Clearwaters 38(3): 38-41.

Moran E.C., and E. Buchak. 2000. **Thermal, Water Quality and Biological Characterization of Cayuga Lake: Findings of the Lake Source Cooling Investigations** *in* Wagenet, L. et al. {ed} A Symposium on Environmental Research in the Cayuga Lake Watershed. NRAES-121.

Butterworth, R.B., D.L. Ferlow, E.C. Moran, M.A. Arigides and W.K. Hazelton. 1999. **Constructed wetlands.** Industrial wastewater. 39-44.

Moran, E.C. 1997. **Environmental Monitoring and Permitting Challenges: Lake Source Cooling at Cornell University.** Vol. 4 pp. 593-602, Proc. Water Environment Federation 70th Annual Conference, Chicago Illinois, October 18-22, 1997.

Roebig, J.H., and E.C. Moran, 1996. **A Watershed Management Approach for the Sauquoit Creek Basin.** Proc. AWWA Symposium, Syracuse, NY, July 1996.