

James A. Johnson

Freshwater Scientific Services, LLC

18029 83rd Avenue North, Maple Grove, MN 55311 (651) 336-8696 james@freshwatersci.com

EDUCATION

University of Minnesota–Twin Cities

M.S. Water Resources Science – Limnology Track (2010)

University of Wisconsin–Madison

B.S. Zoology / Biological Aspects of Conservation (1995)

CERTIFICATIONS

Certified Lake Manager – North American Lake Management Society (Cert.# 13-07M)

Lake Service Provider – Minnesota Department of Natural Resources

SCUBA Certified – Professional Association of Dive Instructors

PROFESSIONAL EXPERIENCE

Freshwater Scientific Services, LLC – Water Resources Consulting

2003 - Present

Founder / Aquatic Ecologist (www.fixmylake.com)

- Aquatic plant surveys (point-intercept, sonar, biomass, scuba)
- Invasive plant bed delineations (for planning and permitting)
- Curlyleaf pondweed turion surveys (sediment samples)
- Planning and evaluation of herbicide treatments to control invasive aquatic plants
- Lake and pond bathymetric mapping (depth contours), volume calculation, and hypsographic curves
- Stormwater monitoring, analysis, and watershed/lake model development
- Stream rating curve development
- Lake nutrient and water mass balance estimation
- Lake sediment analysis (soil characteristics, sediment core incubation)
- Evaluation of motorboat impacts
- Evaluations of carp effects on aquatic plants

Three Rivers Park District – Water Resources Management

2000 - 2006

Water Resources Technician

- Evaluation of phosphorus lawn-fertilizer restriction as an urban BMP
- Primary author of Lake Independence Diagnostic Feasibility Study and TMDL report
- Conducted vegetation surveys and assessed effects of winter drawdown on turion viability in Cleary Lake
- Developed lake and stormwater computer models (FLUX, BATHTUB, PondNet, P8)
- Deployed, operated, and maintained automated lake sampling stations (www.lakeaccess.org)
- Conducted bi-weekly monitoring of over 25 metro-area lakes
- Laboratory analysis of water samples for P, N, TSS, chl-a, alkalinity

City of Maple Grove, Minnesota – Lake Quality Commission

2002 - 2003

City Commissioner

- Elected chairman of commission in 2003

Minneapolis Park and Recreation Board – Environmental Operations

1997 - 2000

Water Quality Specialist

- Responsible for monitoring of 13 urban lakes for physical, chemical, and biological parameters
- Designed, implemented, and analyzed comprehensive aquatic vegetation surveys to track invasive species
- Monitored stormwater runoff to chain-of-lakes; estimated nutrient loading and evaluated BMP performance

Wisconsin Department of Natural Resources – Bureau of Research

1995 - 1996

Natural Resources Research Technician

- Shallow lake ecology and management
- Evaluation of motorboat impacts to aquatic plants, sediment, and invertebrates
- Zooplankton sampling and enumeration
- Aquatic plant surveys (shore-transect method)
- Tested the Draft USEPA Bioassessment and Biocriteria Technical Guidance Document

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SPECIALIZED TRAINING

- Geographic Information Systems (GIS)
- Computer model development (P8, FLUX, BATHTUB, SLAMM, PondNet, MNLEAP, LTROPIC)
- Laboratory methodology for analysis of sediment, water chemistry, and biological samples
- Aquatic macrophyte sampling and identification
- Zooplankton identification and enumeration

PRESENTATIONS

Effect of Common Carp on the Survival and Growth of Wild Rice in Upper Clam Lake, WI

North American Lake Management Society 2012 Symposium – Madison, WI (2012)

Upper Midwest Invasive Species Conference – LaCrosse, WI (2012)

71st Annual Midwest Fish & Wildlife Conference – Minneapolis, MN (2010)

Wisconsin Lakes Convention – Green Bay, WI (2011)

Effectiveness of Whole-lake Herbicide Treatment for Managing Curlyleaf Pondweed in Minnesota Lakes

North American Lake Management Society 2012 Symposium – Madison, WI (2012)

Minnesota/Wisconsin Invasive Species Conference – St. Paul, MN (2010)

Wisconsin Lakes Convention – Green Bay, WI (2009)

North American Lake Management Society 2008 Symposium – Lake Louise, Canada (2008)

Minnesota Invasives Species Conference – Duluth, MN (2008)

University of Minnesota Water Resources Retreat – Sandstone, MN (2008)

Minnesota Department of Natural Resources Professional Seminar on Invasives – St. Paul, MN (2006)

Overview of Aquatic Herbicide Use for Controlling Invasive Aquatic Plants in Minnesota

Educational Seminar for Lake Associations – Coon Rapids, MN (2012)

Curlyleaf Pondweed Management Strategies in Minnesota

Beebe Lake Association Annual Meeting – St. Michael, MN (2010)

Chisago Lakes Lake Improvement District Board Meeting - (2008)

Rice County Coalition of Lake Associations Joint Annual Meeting – Faribault, MN (2005)

Restricting the Use of Phosphorus Fertilizers to Reduce Phosphorus Export from Residential Areas

North American Lake Management Society (NALMS) Annual Conference - Madison, WI (2005)

37th Annual Water Resources Conference - Brooklyn Center, MN (2004)

Minnesota Water Conference (Poster Session) - Minneapolis, MN (2004)

Society for Conservation Biology 17th Annual Conference – Duluth, MN (2004)

Minnesota Audubon Society - Minneapolis, MN (2004)

Minnesota Lakes & Rivers Conference - St. Cloud, MN (2002)

Evaluation of USEPA Draft Lake and Reservoir Bioassessment and Biocriteria Technical Guidance Document

Multi-Regional Meeting on Water Quality Standards and Criteria - Burlington, VT (1996)

PUBLICATIONS & REPORTS

Johnson JA, Jones AR, Newman RM. 2012 Evaluation of lakewide, early season herbicide treatments for controlling invasive curlyleaf pondweed (*Potamogeton crispus*) in Minnesota lakes. *Lake Reserv Manage.* **28**: 343-363.

Jones, A. R., J. A. Johnson, and R. M. Newman. 2012. Effects of repeated, early season, herbicide treatments of curlyleaf pondweed on native macrophyte assemblages in Minnesota lakes. *Lake and Reservoir Management* **28**: 364-374.

Johnson JA, Newman RM. 2011. A comparison of two methods for sampling biomass of aquatic plants. *J. Aquat. Plant Manage.* **49**: 1-8. (*Awarded 2012 Outstanding Paper Award*)

Barten JM, Johnson JA. 2007. Minnesota phosphorus fertilizer law: Nutrient management with the Minnesota Phosphorus fertilizer law. *LakeLine Magazine.* **27**:2 23-28.

Additional Research & Management Project Reports: http://www.freshwatersci.com/fw_projects.html