

Nathan S. Bosch

Director, Kosciusko Lakes and Streams, www.water.grace.edu

Assistant Professor, Environmental Biology, Grace College, www.grace.edu/environment

Phone: (574)372-5100 ext 6447 Email: boschns@grace.edu

Education:

2002 – 2007 University of Michigan Ann Arbor, MI

Ph.D.: School of Natural Resources & Environment

Program of study: Resource Ecology & Management - Aquatics

1998 – 2002 Trinity Christian College (TCC) Palos Heights, IL

Bachelor of Arts: Biology and Chemistry, highest honors

Graduated from Honors Program

Summer, 2000 Au Sable Environmental Institute Mancelona, MI

Courses: Environmental Chemistry and Limnology

Teaching experience:

2009 - Present Environmental Biology, Grace College Winona Lake, IN

Assistant Professor – Introduction to Chemistry, General Ecology

Winter, 2006 Program in the Environment Ann Arbor, MI

Graduate Student Instructor - Introduction to Environmental Analysis

Fall, 2005 University of Michigan Ann Arbor, MI

Graduate Student Instructor - Global Change 1

Winter, 2005 Program in the Environment Ann Arbor, MI

Graduate Student Instructor - Introduction to Environmental Analysis

Other related work experience:

2009-Present Kosciusko Lakes and Streams, Grace College Winona Lake, IN

Director – Local water quality research and education program

2008-2009 Cooperative Institute for Limnology and Ecosystems Research
Ann Arbor, MI

Research Investigator – Watershed modeling for Lake Erie catchments

2007-2008 Cooperative Institute for Limnology and Ecosystems Research
Ann Arbor, MI

Research Fellow – Watershed modeling for Lake Erie catchments

2006 Stantec Inc. Ann Arbor, MI

Modeling consultant – SWAT modeling for watershed management plan

2002-2004 Great Lakes Environmental Research Laboratory Ann Arbor, MI

Research Assistant - Aquatic nutrient chemistry analyses

1999-2002 Argonne National Laboratory Argonne, IL

Laboratory Technician - Chromatographic analyses for phytoremediation project

Summer, 2001 Environmental Resources Management Holland, MI

Aquatic Toxicology Laboratory Intern - Whole Effluent Toxicity testing using aquatic organisms

Summer, 2001 Macatawa Area Coordinating Council Holland, MI

Macatawa Watershed Community Education Intern – Watershed public education tasks

Leadership and service:

Volunteer with Huron River Watershed Council as part of their Stream Monitoring Program, 2003-2007.

Au Sable Graduate Fellow as designated by the Au Sable Environmental Institute, 2003-2007.

Board Member of the International Association for Great Lakes Research Board of Directors. Elected by Association membership as the student member from the U.S., 2004-2006.

Student Representative on the SNRE Promotion and Tenure Committee, 2004-2005.

Student Representative on the Communications Advisory Committee, part of the University of Michigan Faculty Senate Assembly, 2004-2005.

Volunteer for National Ocean Sciences Bowl in the Midwest Regional Competition. This is a national competition put on by the National Oceanic and Atmospheric Administration for teams of high school students, 2003-2004.

President of TCC Science Club, 2000-2001.

Vice President of TCC Student Association, 2000-2001.

Student Representative on TCC Alumni Board, 2000-2001.

Resident Assistant in TCC residence hall, 1999-2000.

Awards, grants, and fellowships:

Army Corp of Engineers grant - \$100K, 2008-2009.

Karl F. Lagler Award – awarded to signify achievement and research promise to graduating student from the School of Natural Resources and Environment, 2007.

Rackham Dissertation Fellowship – awarded to support the writing of doctoral dissertation for one academic term, 2007.

Rackham Discretionary Funds – awarded to fund travel costs incurred by field sampling program and partially offset lab analysis costs associated with dissertation research, 2005.

SNRE Travel Award – awarded based on financial need associated with presentation at Gordon Research Conference, 2005.

Rackham Travel Grant – awarded to support attendance and presentation at Gordon Research Conference, 2005.

SNRE Research Grant - for travel and supply costs with field sampling associated to dissertation research, 2004.

Rackham Discretionary Funds – awarded to help cover research costs associated with lab analyses and field sampling pertaining to dissertation research, 2003.

SNRE Research Grant - for travel costs associated with field sampling necessary to dissertation research, 2003.

SNRE Recruitment Fellowship – awarded to exceptional incoming graduate students to cover tuition costs, 2002.

Lincoln Laureate Award - inducted into Lincoln Academy of Illinois for being selected as the top TCC senior for academic excellence and leadership, 2002.

VanderVelde Scholarship - presented by VanderVelde Scholarship Committee for research I proposed aimed at correlating nutrient input into small lake with invertebrate population fluctuation, 2001.

Founders' Scholarship - full tuition scholarship awarded to two incoming TCC students per class; renewable for 4 years, 1998-2002.

Publications and professional presentations:

- Han, H., Bosch, N.S., and J.D. Allan. 2010. Spatial and Temporal variation in phosphorus budgets for 24 watersheds in the Lake Erie and Lake Michigan basins. *Biogeochemistry* [in press].
- Bosch, N. S., Johengen, T. H., Allan, J. D., and G. W. Kling. 2009. The Influence of River Impoundment on Nutrient Transport. *Lake and Reservoir Management* 25:389–400.
- Bosch, N.S., H. Han, R.P. Richards, and J.D. Allan. 2009. Evaluating the impact of agricultural BMPs on riverine nutrient export to Lake Erie. 57th Annual Meeting of the North American Benthological Society. Grand Rapids, Michigan.
- Bosch, N. S. 2008. The influence of impoundments on riverine nutrient transport: An evaluation using the Soil and Water Assessment Tool. *Journal of Hydrology* 355:131-147.
- Bosch, N. S., and J. D. Allan. 2008. The influence of impoundments on nutrient budgets in two catchments of Southeastern Michigan. *Biogeochemistry* 87:325-338.
- Bosch, N.S., Allan, J.D., Johengen, T.H., and H.J. Han. 2007. The Influence of Natural Lakes and Artificial Impoundments on the Transport and Fate of Nitrogen and Phosphorus in two Southeastern Michigan River Catchments. North American Benthological Society 55th Annual Meeting. Columbia, South Carolina.
- Bosch, N.S. 2006. Tributary Loading Estimation Protocols. Alliance for Coastal Technologies workshop – Evaluating Approaches and Technologies for Monitoring Organic Contaminants in the Aquatic Environment. Ann Arbor, Michigan.
- Bosch, N.S., Han, H.J., Allan, J.D., and T.H. Johengen. 2006. The Influence of Natural Lakes and Artificial Impoundments on the Transport and Fate of Nitrogen and Phosphorus in two Southeastern Michigan River Catchments. 49th Annual Conference of the International Association for Great Lakes Research. Windsor, Ontario.
- Judd, K.E., H.E. Adams, N.S. Bosch, J.M. Kostrzewski, C.E. Scott, B.M. Schultz, D.H. Wang and G.W. Kling. 2005. A case history: Effects of mixing regime on nutrient dynamics and community structure in Third Sister Lake, Michigan during late winter and early spring 2003. *Lake and Reservoir Management* 21(3):316-329.
- Han, H. and N.S. Bosch. 2005. Spatial and Temporal Trends in River Nutrient Export to Lake Michigan. 2005 Gordon Research Conference on Catchment Science: Interactions of Hydrology, Biology and Geochemistry. Waterville, Maine.
- Bosch, N.S. and H. Han. 2005. Nutrient Budgets for Two Lake Erie Watersheds. 48th Annual Conference of the International Association for Great Lakes Research. Ann Arbor, Michigan.

Professional memberships:

- International Association of Great Lakes Research, 2004-2006, 2010-Present.
- Indiana Lake Management Society, 2009 – Present.
- Indiana Academy of Science, 2009 – Present.
- Indiana Water Monitoring Council, 2009-Present.
- North American Benthological Society, 2003-2004 and 2007-2009.
- American Association of Science, 2007-2009.
- American Fisheries Society, 2007-2008.