

Thomas H. Johengen

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Education:

Ph.D. 1991, Oceanic Science, University of Michigan, Ann Arbor, Michigan
M.Sc. 1986, Oceanography, The Florida State University, Tallahassee, Florida
B.Sc. 1981, Biology, Michigan State University, East Lansing, Michigan

Positions held:

Chief Scientist, Alliance for Coastal Technologies. July 2006 to present.
Research Scientist, Cooperative Institute for Limnology & Ecosystem Research, University of Michigan, Ann Arbor, MI. 1995 to present.
Director, Cooperative Institute for Limnology & Ecosystem Research, University of Michigan, Ann Arbor, MI. Sept. 2000 to Dec. 2004
Post-doctoral Research Fellow, Cooperative Institute for Limnology & Ecosystem Research, University of Michigan, Ann Arbor, MI. 1991 to 1994.

Research Interests:

Nutrient cycling and lower food-web dynamics in the Great Lakes with an emphasis on the ecological impacts of non-indigenous species. Assessment of ballast water as an invasion vector for nonindigenous species and the development of treatment technologies to control such introductions. Use and development of *in situ* sensors and observing systems for improving research and monitoring in coastal environments.

Professional Activities

Co-Chair of 48th annual conference of International Association for Great Lakes Research
Member of International Association for Great Lakes Research, 1992 - present
Member of American Society of Limnology and Oceanography, 1986 - present
Board member of International Association for Great Lakes Research, 2002 - 2005
Committee member of Great Lakes Aquatic Nuisance Species Panel, 2001 – present
Committee member of State of Michigan Aquatic Nuisance Species Council, 2002 - 2005
External reviewer for proposals and scientific manuscripts for various funding agencies and journals.

Recent Publications

- H. A. Vanderploeg, H.A., Johengen, T.J., Lavrentyev, P.J., Chen, C., Lang, G.A., Agy, M.A., Bundy, M.A., Cavaletto, J.F., Eadie, B.J., Liebig, J.R., Miller, G.S., and S.A. Ruberg (2007). *Anatomy of the recurrent coastal sediment plume in Lake Michigan and its impacts to light climate, nutrients, and plankton*. Journal of Geophysical Research, 112, C03S90, doi:10.1029/2004JC002379.
- D. Gray, T. Johengen, D. Reid, and H. MacIsaac (2007). *Eficiency of open-ocean ballast water exchange as a means of preventing invertebrate invasions between freshwater ports*. Limnol. Oceanogr., 52(6).
- Biddanda, B. A., D. F. Coleman, T. H. Johengen, S. A. Ruberg, G. A. Meadows, H. W. VanSumeren, R. R. Rediske and S. T. Kendall (2006). *Exploration of a submerged sinkhole environment in lake Huron*. Ecosystems, 9: 828-842.
- Ruberg, S.A., D.F. Coleman, T.H. Johengen, G.A. Meadows, H.W. Van Sumeren, G.A. Lang, B.A. Biddanda (2005). *Groundwater Plume Mapping in a Submerged Sinkhole in Lake Huron*. Marine Technology Series, 39(2):65-69.
- Bailey, S., I. Duggan, K. Nandakumar, I.C. Duggan, C.D.A. van Overdijk, T.H. Johengen, D.F. Reid, and H.J. MacIsaac (2005). *In situ hatching of invertebrate diapausing eggs from ship' ballast sediment*. Biodiversity Research, Diversity Distrib., 11:453-460.

- Chen, C., L. Wang, J. Qi, H. Liu, J. W. Budd, D.J. Schwab, D. Beletsky, H.A. Vanderploeg, B.J. Eadie, T.H. Johengen, J. Cotner, and P. J. Lavrentyev (2004). *A modeling study of benthic detritus flux's impacts on heterotrophic processes in Lake Michigan*. Journal of Geophysical Research, 109(C10S11):13.
- Lohrenz, S. E., G.L. Fahnenstiel, D.F. Millie, O.M. Schofield, T.H. Johengen and T. Bergmann (2004). *Spring phytoplankton photosynthesis, growth and primary production and relationships to a recurrent coastal sediment plume and river inputs in southeastern Lake Michigan*. J. Geophysical Research, 109:C10S14 13.
- Nassauer, J.I., J. D. Allan, T.Johengen, S. Kosek, and D. Infante (2004). *Exurban Residential Subdivision Development: Effects on Water Quality and Public Perception*. Urban Ecosystems, vol 7(3): 267-291.
- Gardner, W.S., P.J. Lavrentyev, J.F. Cavaletto, M.J. McCarthy, B.J. Eadie, T.H. Johengen, and J.B. Cotner (2004), *Distribution and dynamics of nitrogen and microbial plankton in southern Lake Michigan during spring transition 1999-2000*. J. Geophysical Research, 109.
- Bailey, S.A., I. Duggan, C. van Overdijk, T. Johengen, D. Reid, and H. MacIsaac (2004). *Salinity tolerance of diapausing eggs of freshwater zooplankton*. Freshwater Biology, 49:286-295.
- Millie, D. F., Fahnenstiel, G. L., Lohrenz, S. E., Carrick, H. J., Johengen, T. H., & Schofield, O. (2003). *Physical-biological coupling in southern Lake Michigan: influence of episodic resuspension on phytoplankton*. *Aquatic Ecology*, 37: 393-408.
- Eadie, B., D. Schwab, T. Johengen, P. Lavrentyev, G. Miller, R. Holland, G. Leshkevich, M. Lansing, N. Morehead, J. Robbins, N. Hawley, D. Edgington, and P. Van Hoof (2002). *Particle transport, nutrient cycling, and algal community structure associated with a major winter-spring resuspension event in southern Lake Michigan*. J. Great Lakes Res.: 28(3):324-337.

Additional Relevant Publications:

- Johengen, T., O. Johannsson, G. Pernie, and E. Millard (1994). *Temporal and seasonal trends in nutrient dynamics and biomass measures in lakes Michigan and Ontario in response to phosphorus control*. Canadian J. Fisheries and Aquatic Sciences, 51: 2570-2578.
- Johengen, T. and P. LaRock (1993). *Quantifying nutrient removal processes within a constructed wetland designed to treat urban stormwater runoff*. J. Ecological Engineering, 2: 347-366.
- Johengen, T.J. 1991. *Characterization and control of agricultural nonpoint source pollution*. PhD. Dissertation, Department of Oceanic Science, University of Michigan, 157pp.

Current Grants

- NOAA Great Lakes Environmental Research Lab, *NOBOB Salinity Tolerance (NOBOB-S): Eradicating aquatic nuisance species from the residual ballast water of NOBOB vessels using salt solutions*, May 2006 – Dec 2007.
- NOAA Coastal Service Center, *Alliance for Coastal Technologies*, May 2003 – April 2008.
- NOAA Great Lakes Environmental Research Lab, *Nutrient dynamics and trophic conditions in association with Lake Erie Hypoxia*, May 2005 – June 2008.
- US EPA GLNPO, *Great Lakes Biological Monitoring*, March 2007 – February 2012.
- NOAA Coastal Services Center**, *Adaptive Integrated Framework: a new methodology for managing impacts of multiple stressors in coastal ecosystems*, July 2007 – June 2012.
- Great Lakes Fishery Trust, *Mapping the Conditions of Diporeia: Insights into Mechanisms of Declines*, January 2008 – January 2011.