

## **DONALD SCAVIA**

Professor Emeritus  
University of Michigan  
Ann Arbor, MI 48104  
[scavia@umich.edu](mailto:scavia@umich.edu)

## **EDUCATION**

Ph.D., Environmental Engineering, University of Michigan, 1980  
MS, Environmental Engineering, Rensselaer Polytechnic Institute, 1974  
BS, Environmental Engineering, Rensselaer Polytechnic Institute, 1973

## **EMPLOYMENT HISTORY**

### ***University of Michigan***

Professor Emeritus of Environment and Sustainability, University of Michigan (2018-present)  
Professor of Environment and Sustainability, University of Michigan (2004-2017)  
Professor of Environmental Engineering, University of Michigan (2009-2016)  
Graham Family Professor of Environmental Sustainability (2009-2016)  
Special Counsel to U-M President for Sustainability (2009-2016)  
Director, Graham Environmental Sustainability Institute (2009-2016)  
Director, Michigan Sea Grant Program (2004-2009)  
Director, NOAA Cooperative Institute for Limnology and Ecosystems Research (2005-2007)  
Research Assoc. Dean, School of Natural Resources & Environment, UM (2004-2006)  
Adjunct professor, Division of Biological Sciences, University of Michigan (1980-1990)

### ***National Oceanic and Atmospheric Administration***

Chief scientist, National Ocean Service (2002 - 2003)  
Director, National Centers for Coastal Ocean Science (1998-2002)  
Director, Coastal Ocean Program Office (1990 - 1998)  
Visiting scientist, National Sea Grant College Program Office, (1987 - 1988)  
Visiting scientist, Office of the Chief Scientist (1988 - 1990)  
Research scientist, Great Lakes Environmental Research Lab, (1975 - 1990)

## **PUBLICATIONS**

Authored over 200 papers in refereed journals, including *Proceedings of the National Academy of Science*, *Science*, *BioScience*, *Frontiers in Ecology and Environment*, *Limnology and Oceanography*, *Environmental Science & Technology*, *Oceanography*, *Canadian Journal of Fisheries and Aquatic Sciences*, *Estuaries and Coasts*, *Water Resources Research*, and *Ecological Modelling*.

**Co-editor:** Ecological Modeling of Lake Ecosystems, and From the Corn Belt to the Gulf: Assessment of Alternative Agricultural Futures.

## **OTHER POSITIONS**

### **Scientific Society Journal Editor**

Associate Editor, *Frontiers in Ecology and Environment*, ESA, 2002-2006  
Associate Editor, *Estuaries and Coasts*, Estuarine Research Federation, 1998-2007.

### **Board of Directors/Trustee**

Great Lakes Observing System Board of Directors, 2009-2013  
Mpala Wildlife Conservancy Research Center, Trustee, 2011-2014  
Secretary, International Association for Great Lakes Research, 1983-1986.  
Board of Directors, American Society for Limnology and Oceanography, 1987-1990.

### **Advisory Boards**

NAS Roundtable on Science and Technology for Sustainability, 2016-present  
External Review Board, LA Center of Excellence, Water Institute of the Gulf, 2016-present  
National Wildlife Federation Great Lakes Leaders Council, 2009 – present  
Annis Water Resources Institute, Grand Valley State, 2007 - present  
Technical Advisory Committee, Healing our Waters Great Lakes Coalition, 2006-present  
Erb Institute for Global Sustainable Enterprise, University of Michigan, 2005 - 2016  
North American Nitrogen Center, Cornell University, 2005-present  
Environmental Law and Policy Center, 2010-2013  
Risk Science Center, University of Michigan, 2010-2015  
National Research Council Committee on Missouri River Recovery 2008-2010  
CLEANER/WATERS Network Science Committee, National Science Foundation, 2005-2007  
Central Michigan University Biological Station, 2008-2010  
Graham Environmental Sustainability Institute, University of Michigan, 2005 – 2007  
Key National Indicators Initiative Environment Domain Committee, 2004-2007  
State of Nation’s Ecosystems, Design Committee, Heinz Center, 1993-2004  
Science and Technology Advisory Committee, National Sea Grant College Program, 1995-2000  
Cooperative Inst. for Coastal & Estuarine Environ. Technology, Univ. of NH, 1995-2000

### **Review Committee Membership**

Georgia Sea Grant Program Review, 2015  
Hawaii Sea Grant Program Review, 2014  
EPA Science Advisory Board Panel to review the Great Lakes Restoration Initiative, 2012  
NRC Panel to review Missouri River Sediment Planning, 2011  
EPA Board of Scientific Counselors Subcommittee to Review EPA Fellowship programs, 2006  
Review of Darren Freshwater Institute, Rensselaer Polytechnic Institute, 2005  
NOAA Office of Satellite Data, Processing, and Distribution program review 2003  
Ecosystem Based Fisheries Management, Marine Fisheries Advisory Committee, 2000-2004  
Multi-scale Experimental Ecosystem Research Center, University of Maryland, 1997  
New Jersey Sea Grant Program review, 1989  
Puerto Rico Sea Grant Program review, 1988

### **Interagency, Intergovernmental, and Multi-sector Committees**

Vice Chair, National Ocean Partnership Program Working Group, 1996-1999  
Chair, Subcommittee on U.S. Coastal Ocean Science, NSTC/CENR  
Co-Chair Ecosystem Work Group, NSTC/CENR  
Co-Chair Subcommittee on Ecological Systems, CENR  
Chair, Hypoxia Assessment Team, CENR  
Co-Chair Coastal Research and Monitoring Team, Clean Water Action Plan  
Co-Chair, USGCRP Coastal Assessment Team

### **HONORS AND AWARDS**

Best Paper Award for *Journal of Great Lakes Research*, 2016  
Certified Senior Ecologist, Ecological Society of America  
Recognized as Extraordinary Commerce Employee, 2002  
Department of Commerce Gold Medal, 2001  
NOAA Administrator’s Award, 1989, 2003  
Outstanding or Sustained Superior Performance Awards, 1977, 1981-82, 1984-2004  
Best Paper Award for *Journal of Great Lakes Research*, 1987  
Tau Beta Pi, University of Michigan, 1976

Draper High School Hall of Fame, 1992

### **STUDENT ADVISING**

**PostDocs:** Awoke Teshager, Yao Hu, Rebecca Logsdon Muenich, Serghei Bocaniov, Isabella Bertani, Margaret Kalcic, Daniel Obenour, Ibrahim Alameddine, Kyung Hwa Cho, David Bidwell, Mary Anne Evans, Myriam Larose, Yong Liu

**PhD Chair/co-Chair:** Daniel Rucinski, Irem Daloglu, Daniel Obenour, James Roberts, Andrew Bell

**Other PhD Committees:** Yuntao Zhou, Jeremy Guest, Alanood Alkhaled (Civil and Environmental Engineering, U-M); Ling Cao, Haejin Han, Kendra Walker, Christine Kirchoff (SNRE/U-M)

**Masters:** Yuntao Zhou, Emily Kelly, Emily Wilke, Erica Zontek, Brian Colleran, Ken Mori, Kristina Donnelly, Daniel Fishman, Gregory Jacobs, Julie Mida, Melissa Antokal, Caitlin Ryan, Ajay Varadharajan, Nagapooja Seeba, Chelsea Ransom, Rachel Fletcher, Alicia Ritzenthaler, Steven Rippberger, Daneil Gerding, Berry Kennedy, Makely Lyon, Joshua Rego, Emily Taylor

**Undergraduate Honor Students:** Carolyn Hwang, Jennifer Kullgren; 2005; 2016 UROP Students (Jaylene Gutierrez, Steve Beattie, E'Lise Harden, Sara Hansen, Ashley Gignac)

### **MANAGED OVER \$110,000,000 IN GRANTS, CONTRACTS, GIFTS SINCE 2005**

Graham Sustainability Institute (**Graham Foundation & U-M: \$40,000,000**) Principle Investigator

NERRS Collaborative Science Program (**NOAA: \$20,000,000**) Principle Investigator

Dow Sustainability Fellowship Program (**Dow Chemical Co.: \$10,000,000**) Principle Investigator

Science support for Great Lakes restoration (**Erb Foundation & U-M: \$9,000,000**) Principle Investigator

Water Sustainability and Climate (**NSF: \$5,000,000**) Co-Principle Investigator

Integrated Ecosystem Modeling of the Causes of Hypoxia (**NOAA: \$5,000,000**) Co-Investigator

Great Lakes Integrated Sciences and Assessment Center (**NOAA: \$4,200,000**) Principle Investigator

Providing Support for Watershed-based Policy and Management Decisions: Lake Erie and City of Detroit (**Erb Foundation: \$3,000,000**) Principle Investigator

Coastal SEES: Enhancing sustainability in coastal communities threatened by harmful algal blooms (**NSF: \$3,000,000**) Co-Investigator

Great Lakes Biological Surveillance (**EPA: \$2,500,000**) Principle Investigator

Watershed-Estuary-Species Nutrient Susceptibility (**NOAA: \$2,500,000**) Principle Investigator

Forecasting Causes/Impacts of Lake Erie Hypoxia (**NOAA: \$2,200,000**) Principle Investigator

Center for Ocean Science Education Excellence-Great Lakes (**NSF/NOAA: \$2,500,000**) Principle Investigator

Climate Change Education (**NSF: \$1,000,000**) Co-Investigator

Urban Climate Adaptation (**Kresge Foundation: \$600,000**) Co-Investigator

Building cohorts of Great Lakes Scientists (**NOAA & USGS: \$549,320**) Principle Investigator

Validating and expanding the Great Lakes adaptation data suite (**GLOS: \$392,916**) Principle Investigator

Phosphorus load response modeling for Lake Erie (**EPA/Environment Canada: \$308,018**) Principle Investigator

Informing coastal adaptation in future climates: valuation of harmful algal bloom impact on

ecosystem services in Lake Erie (**NOAA: \$299,525**) Principle Investigator

Enhancing stakeholder awareness of and responses to extreme precipitation effects on Lake Erie (**NOAA: \$275,617**) Principle Investigator

Transitioning to Operations NOAA-Supported Models the Gulf of Mexico and Chesapeake Bay (**NOAA: \$200,000**) Principle Investigator

Engaging Farmers in Nutrient Management (**EPA: \$50,000**) Principle Investigator

How quickly can target phosphorus reductions be met? Robust predictions from multiple watershed and lake models. (**Ohio Sea Grant: \$23,435**) Co-Investigator

RESTOR Act Review Board (**Water Center of the Gulf: \$12,400**) Co-Principle Investigator

## **PEER-REVIEWED PUBLICATIONS**

[Links to papers since 2012 are below, others can be found [here](#)]

Muenich, R.L., M.M. Kalcic, J. Winsten, K. Fisher, M. Day, G. O'Neil, Y.-C. Wang, D. Scavia. 2017. Pay-For-Performance Conservation Using SWAT Highlights Need for Field-Level Agricultural Conservation. *Trans. ASABE*. in press

Scavia, D. 2017 Sustainability in a politically polarized society. *Michigan Journal of Sustainability*. in press.

Xu, X., Y-C Wang, M. Kalcic, R. L. Muenich, Y.C.E. Yang, D. Scavia. 2017. [Evaluating the impact of climate change on fluvial flood risk in a mixed-use watershed](#). *Environmental Modeling and Software*. <https://doi.org/10.1016/j.envsoft.2017.07.013>

Scavia, D., I. Bertani, D.R. Obenour, R.E. Turner, D.R. Forrest, A. Katin. 2017 [Ensemble modeling informs hypoxia management in the northern Gulf of Mexico](#). *Proc. Nat. Acad. Sci.* 114:8823-8828

Lipor, J., B. Wong, D. Scavia, B. Kerkez, L. Balzano, 2017. [Distance-penalized active learning algorithm using quantile search](#). *IEEE Trans. Signal Processing*. in press.

Testa, J.M., J.B. Clark, W.C. Dennison, E.C. Donovan, A.W. Fisher, W. Ni, M. Parker, D. Scavia, S.E. Spitzer, A.M. Waldrop, V.M.D. Vargas, G. Ziegler. 2017 [Ecological forecasting and the science of hypoxia in Chesapeake Bay](#) *BioScience*. doi:10.1093/biosci/bix048

Scavia, D., M. Kalcic, R. Logsdon Muenich, N. Aloysius, I. Bertani, C. Boles, R. Confesor, J. DePinto, M. Gildow, J. Martin, J. Read, T. Redder, D. Robertson, S. Sowa, Y. Wang, H Yen. 2017 [Multiple models guide strategies for agricultural nutrient reductions](#). *Frontiers in Ecology and the Environment*. 15: 126–132

Bertani, I., C. E. Steger, D. R. Obenour, G. L. Fahnenstiel, T. B. Bridgeman, T. H. Johengen, M. J. Sayers, R. A. Shuchman, D. Scavia. 2016. [Tracking cyanobacteria blooms: do different monitoring approaches tell the same story?](#) *Science of the Total Environment* 575: 294-308

Scavia, D., J.V. DePinto, I. Bertani. 2016. [A Multi-model approach to evaluating target phosphorus loads for Lake Erie](#). *J. Great Lakes Res.* 42: 1139-1150

Zhang, H., L. Boegman, D. Scavia, D. A. Culver. 2016. [Spatial distributions of external and internal phosphorus loads in Lake Erie and their impacts on phytoplankton and water quality](#). *J Great Lakes Res.* 42: 1212-1227

Bocaniov, S.A, L.F. Keon, Y.R. Rao, D.J. Schwab, D. Scavia. 2016 [Simulating the effect of nutrient reduction on hypoxia in a large lake \(Lake Erie, USA-Canada\) with a three-dimensional lake model](#). *J. Great Lakes Res.* 42: 1228-1240

- Kalcic, M., C. Kirchoff, N. Bosch, R. L. Muenich, M. Murray, J. Gardner, D. Scavia. 2016. [Engaging stakeholders to define feasible and desirable agricultural conservation in western Lake Erie watersheds](#). *Env. Sci. Technol.* 50:8135-5145
- Muenich, R.L., M. Kalcic, D. Scavia. 2016. [Evaluating the impact of legacy P and agricultural conservation practices on nutrient loads from the Maumee River Watershed](#). *Env. Sci. Technol.* 50: 8146-8154
- Rucinski, D., DePinto, J., Beletsky, D., Scavia, D. 2016 [Modeling hypoxia in the Central Basin of Lake Erie under potential phosphorus load reduction scenarios](#). *J. Great. Lakes Res.* 42: 1206-1211
- Bocaniov, S. and D. Scavia 2016 [Temporal and spatial dynamics of large lake hypoxia: Integrating statistical and three-dimensional dynamic models to enhance lake management criteria](#). *Water Resources Res. (Supplemental Information)* 52: 4247-4263
- Bertani, I, D.R. Obenour, C. E. Steger, C. A. Stow, A. D. Gronewold, D. Scavia 2016. [Probabilistically assessing the role of nutrient loading in harmful algal bloom formation in western Lake Erie](#). *J Great Lakes. Res.* 42: 1184:1192
- Scavia, D., M. Kalcic, R. Logsdon Muenich, J. Read, N. Aloysius, C. Boles, R. Confessor, J. DePinto, M. Gildow, J. Martin, T. Redder, S. Sowa, Y. Wang, H. Yen. [Informing Lake Erie Agriculture Nutrient Management via Scenario Evaluation](#) April, 2016
- Lipor, J., L. Balzano, B. Kerkez, D. Scavia. 2015. [Quantile Search: A Distance-Penalized Active Learning Algorithm for Spatial Sampling](#). Proc. 53rd Annual Allerton Conf. on Communication, Control, and Computing.
- Great Lakes Water Quality Agreement [Annex 4 Objectives and Targets Task Team Final Report to the Nutrients Annex Subcommittee](#). May 11, 2015
- Obenour, D.R., A M. Michalak, and D. Scavia 2015 [Assessing biophysical controls on Gulf of Mexico hypoxia through probabilistic modeling](#). *Ecol. Applications* 25: 492-505
- Bartolai, AM, L. He, L. Motsch, R, Paehlke, D. Scavia 2015 [Climate Change as a driver of change in the Great Lakes-St. Lawrence River Basin](#). *J. Great Lakes Res.* 41 (Supplement 1): 45-58
- Comer, B., D.A., Fera, A.S. Splawinski, K.L Laurent, K.B. Friedman, G. Krantzberg, D. Scavia, I.F. Creed 2015 [Thriving and prosperous: How we rallied to confront collective challenges in the Great Lakes basin](#). *J. Great Lakes Res.* 41 (Supplement 1): 161-170
- Friedman, K. B., K. Laurent, G. Krantzberg, D. Scavia, I. F. Creed 2015 [The Great Lakes Futures Project: Principles and Policy Recommendations for Making the Lakes Great](#). *J. Great Lakes Res.* 41 (Supplement 1): 171-179
- Kalafatis, S.E., M. Campbell, F. Fathers, K. L. Laurent, K. B. Friedman, G. Krantzberg, D. Scavia, I. F. Creed 2015. [Out of control: How we failed to adapt and suffered the consequences](#). *J. Great Lakes Res.* 41 (Supplement 1): 20-29
- Krantzberg, G., I.F. Creed, K.B. Friedman, K.L., Laurent, J.A. Jackson, J. Brammeier, D. Scavia 2015 [Community Engagement Is Critical To Achieve A “Thriving And Prosperous” Future For The Great Lakes-St. Lawrence River Basin](#). *J. Great Lakes Res.* 41 (Supplement 1): 188-191
- Laurent, K., L. B. Friedman, G. Krantzberg, D. Scavia, I.F. Creed 2015 [Scenario analysis: a tool for strategic planning to achieve a thriving Great Lakes-S. Lawrence river basin](#). *J. Great Lakes Res.* 41 (Supplement 1): 12-19
- Laurent, K..L. D. Scavia, K. B. Friedman, G K. Krantzberg, I. F. Creed 2015. [Critical forces defining alternative futures for the Great Lakes–St. Lawrence River basin](#). *J. Great Lakes Res.* 41 (Supplement 1): 131-138
- Orr, C.J., K.C. Williams, K. L Laurent, K. B. Friedman, G. Krantzberg, D. Scavia, I. Creed 2015 [Trying Hard to Adapt to a Chaotic World: How Complex Challenges Overwhelmed Best Intentions in the Great Lakes region](#). *J. Great Lakes Res.* 41 (Supplement 1):139-149

- Steenberg, J., Timm, M., Laurent, K.L., Friedman, K.B., Krantzberg, G., Scavia, D., Creed, I.F., 2015 [Living on the Edge: How we converted challenges into profitable opportunities](#). J. Great Lakes Res. 41 (Supplement 1): 150-160
- Steenberg, J., Timm, M., Laurent, K.L., Friedman, K.B., Krantzberg, G., Scavia, D., Creed, I.F., 2015 Living on the Edge: How we converted challenges into profitable opportunities. J. Great Lakes Res.
- Obenour, D.R. A.D. Gronewold, C.A. Stow, and D. Scavia 2014 [Using a Bayesian hierarchical model with a gamma error distribution to improve Lake Erie cyanobacteria bloom forecasts](#). Water Resources Res.
- Obenour, D.R., A.M. Michalak, and D. Scavia 2014 [Assessing biophysical controls on Gulf of Mexico hypoxia through probabilistic modeling](#). Ecol. Applications <http://dx.doi.org/10.1890/13-2257.1>
- Daloglu, I. J.I. Nassauer, R.L. Riolo, D. Scavia 2014 [Developing a farmer typology to link agent-based models with SWAT](#) Agricultural Systems 129:93-102
- Bosch, N.S., M.A. Evans, D. Scavia, J.D. Allan 2014 [Interacting effects of climate change and agricultural BMPs on nutrient runoff](#). J. Great Lakes Res. 40: 581-589
- Pryor, S.C. D. Scavia, C. Downer, M. Gaden, L. Iverson, R. Nordstrom, J. Patz, G.P. Robertson 2014. [Chapter 18: Midwest. Climate Change Impacts in the United States: The Third National Climate Assessment](#). J.M. Melillo, T.C. Richmond, G.W. Yohe, Eds. U.S. Global Change Research Program 18:1-18
- Scavia, D., J. D. Allan, K. K. Arend, S. Bartell, D. Beletsky, N. S. Bosch, S. B. Brandt, R. D. Briland, I. Daloğlu, J. V. DePinto, D. M. Dolan, M. A. Evans, T. M. Farmer, D. Goto, H. Han, T. O. Höök, R. Knight, S. A. Ludsins, D. Mason, A. M. Michalak, R. P. Richards, J. J. Roberts, D. K. Rucinski, E. Rutherford, D. J. Schwab, T. Sesterhenn, H. Zhang, Y. Zhou. 2014 [Assessing and addressing the re-eutrophication of Lake Erie: Central Basin Hypoxia](#). J. Great Lakes Res. 40: 226–246. <http://dx.doi.org/10.1016/j.jglr.2014.02.004>
- Lemos, M.C., C. Kirchhoff, S. Kalafatis, D. Scavia and R. Rood 2014 [Moving climate information off the shelf: Boundary Chains and the role of RISAs as an adaptive organization](#). Weather, Climate, and Society.
- Rucinski, D., D. Scavia, J. DePinto, D. Beletsky 2014 [Lake Erie's hypoxia response to nutrient loads and meteorological variability](#). J. Great Lakes Res.
- Daloglu, I. J.I. Nassauer, R.L. Riolo, D. Scavia 2014 [An Integrated Social and Ecological Modeling Framework – Impacts of Agricultural Conservation Practices on Water Quality](#). Ecology and Society
- Zhou, Y., D. Scavia, A.M. Michalak 2014 [Nutrient loading and meteorological conditions explain interannual variability of hypoxia in the Chesapeake Bay](#). Limnol. Oceanogr. 59:373-374
- Scavia, D., M.A. Evans, D. Obenour 2013 [A scenario and forecast model for Gulf of Mexico hypoxic area and volume](#). Environ. Sci. Technol. <http://dx.doi.org/10.1021/es4025035>
- Obenour, D.; D. Scavia, N.R. Rabalais; E.R. Turner; A. Michalak 2013 [A retrospective analysis of mid-summer hypoxic area and volume in the northern Gulf of Mexico, 1985-2011](#) Environ. Sci. Technol. [Supporting Information](#)
- Bosch N.S., J.D. Allan, J.P. Selegan, D. Scavia 2013 [Scenario-testing of agricultural best management practices in Lake Erie watersheds](#). J. Great Lakes. Res. [Supporting Information](#)
- Bidwell, D., T. Dietz, D. Scavia 2013 [Fostering Knowledge Networks for Climate Adaptation](#). *Nature Climate Change*. 3:1-2
- Michalak, A.M., E. Anderson, D. Beletsky, S. Boland, N.S. Bosch, T.B. Bridgeman, J.D. Chaffin, K.H. Cho, R. Confesor, I. Daloğlu, J. DePinto, M.A. Evans, G.L. Fahnenstiel, L. He, J.C. Ho, L. Jenkins, T. Johengen, K.C. Kuo, E. Laporte, X. Liu, M. McWilliams, M.R. Moore, D.J. Posselt, R.P. Richards, D. Scavia, A.L. Steiner, E. Verhamme, D.M. Wright, M.A. Zagorski 2013 [Record-](#)

- [setting algal bloom in Lake Erie caused by agricultural and meteorological trends consistent with expected future conditions](#). *Proc. Nat. Acad. Sci.* 110 (16) 6448-6452 [Supporting Information](#)
- Shriberg, M., A. Horning, K. Lund, J. Callewaert, and D. Scavia 2013 Driving Transformative Change by Empowering Student Sustainability Leaders at the University of Michigan; In : [Transforming Higher Education: Stories & Strategies for Sustainability](#), P.F. Barlett and G.W. Chase (Eds). MIT Press
- Evans, M.A. and D. Scavia 2013 [Exploring estuarine eutrophication sensitivity to nutrient loading](#). *Limnol. Oceanogr.*
- Richards, R. P., I. Alameddine, J.D. Allan , D.B. Baker, N. S. Bosch, R. Confesor, J.V. DePinto, D.M. Dolan, J.M. Reutter, D. Scavia 2013 [Nutrient Inputs to the Laurentian Great Lakes by Source and Watershed Estimated Using SPARROW Watershed Models](#). *J. Am. Water Res. Assoc.*
- Daloglu, I. K.H. Cho, D. Scavia 2012 [Evaluating causes of trends in long-term dissolved reactive phosphorus loads to Lake Erie](#). *Environ. Sci. Technol.* 46:10660-10666
- Obenour, D.R., A.M. Michalak, Y. Zhou, and D. Scavia. 2012. [Quantifying the Impacts of Stratification and Nutrient Loading on Hypoxia in the Northern Gulf of Mexico](#). *Environ. Sci. Technol.* dxdoi.org/10.102/es204481a
- EPA Science Advisory Board. 2012. [Review of Great Lakes Restoration Initiative Action Plan](#). EPA, Washington, DC 50 pg.
- Roberts, J.J., S. B. Brandt, D. Fanslow, S. A. Ludsin, S. Pothoven, D. Scavia, T. O. Höök. 2011. Effects of hypoxia on consumption, growth, and RNA:DNA ratios of young yellow perch. *Trans. Amer. Fisheries Soc.* 140:6, 1574-1586
- Lund, K., K. Dinse, J. Callewaert, D. Scavia. 2011 Benefits of using integrated assessment to address sustainability challenges. *J. Environ. Stud. Sci*, DOI 10.1007/s13412-011-0047-7
- Mida, J.L. D. J. Jude, J.S. Schaeffer, D.M. Warner, D. Scavia 2011 Response of *Mysis diluviana* lipids and fatty acids to changes in lower food webs in Lake Michigan and Huron. *J. Great Lakes res.*
- Liu, Y. G.B. Arhonditsis, C. Stow, D. Scavia 2011 Comparing Chesapeake Bay Hypoxic-Volume and Dissolved-Oxygen Profile Predictions with A Bayesian Streeter-Phelps Model. *Ecol. Modeling*. JAWA
- Roberts, J.J., S. B. Brandt, D. Fanslow, S. A. Ludsin, S. Pothoven, D. Scavia, T. O. Höök. 2011. Growth and condition of yellow perch in response to hypoxia: Synthesis of lab and field results. *Trans. Amer. Fisheries Soc.*
- Evans, M.A., G.A. Fahnenstiel, D. Scavia 2011 Incidental oligotrophication of North American Great Lakes. *Environ. Sci. Technol.* 45 (8), pp 3297–3303
- NRC 2011 [Missouri River Planning: Recognizing and Incorporating Sediment Management](#). National Academy of Sciences, Washington DC. 135 pp.
- Evans, M.A. and D. Scavia 2010. Forecasting hypoxia in the Chesapeake Bay and Gulf of Mexico: Model accuracy, precision, and sensitivity to ecosystem change. *Environ. Res. Lett.* 6 015001 doi: 10.1088/1748-9326/6/1/015001
- Bell, A., M. Lemos, and D. Scavia. 2011. Cattle, Clean Water, and Climate Change: Policy Choices for the Brazilian Agricultural Frontier. *Environ. Sci. Technol.* 44(22): 8377-8384
- Arend, K.K, D. Beletsky, J.V. DePinto, S.A. Ludsin, J. J. Roberts, D. K. Rucinski, D. Scavia, D. J. Schwab, T. O. Höök 2011 Hypolimnetic hypoxia in the central basin of Lake Erie: understanding seasonal and interannual effects on habitat quality of important fish species. *Freshwater Biology* 56(1): 366-383
- Rucinski, D.K., D. Beletsky, J. V. DePinto, D. J. Schwab, D. Scavia. 2010 A Simple 1-Dimensional Climate Based Dissolved Oxygen Model for Central Basin of Lake Erie. *J. Great Lakes Res.* 36:465-476

- Liu, Y., M.A. Evans, D. Scavia. 2010 Gulf of Mexico Hypoxia: Exploring Increasing Sensitivity to Nitrogen Loads. *Environ. Sci. Technol.* 44 (15), pp 5836–5841
- Fahnenstiel G.A., T. Nalepa, S. Pothoven, H. Carrick, D. Scavia. 2010. Lake Michigan lower food web: Long-term observations and Dreissena impact. *J. Great Lakes Res.* 36:1-4
- Fahnenstiel, G.A., S. Pothoven, T. Nalepa, H. Vanderploeg, D. Klarer, D. Scavia. 2010 Recent changes in primary production and phytoplankton in the offshore region of southeastern Lake Michigan. *J. Great Lakes Res.* 36:20-29
- Mida, J.A., D. Scavia, G. L. Fahnenstiel, S. A. Pothoven, H. A. Vanderploeg, D. M. Dolan. 2010 Long-term and recent changes in southern Lake Michigan water quality with implications for primary production. *J. Great Lakes Res.* 36: 42-49
- Liu, Y. and D. Scavia. 2010. Analysis of the Chesapeake Bay Hypoxia Regime Shift: Insights from Two Simple Mechanistic Models. *Estuaries and Coasts* 33:629–639
- Fishman, D., S.A. Adlerstein, D. Scavia, (in press) Phytoplankton Community Composition of Saginaw Bay, Lake Huron, during the Zebra Mussel (*Dreissena polymorpha*) Invasion: A Multivariate Analysis, *J. Great Lakes Res.*
- Fishman, D., D. Scavia, S.A. Adlerstein (in press) Causes of Phytoplankton Changes in Saginaw Bay, Lake Huron during the Zebra Mussel Invasion. *J. Great Lakes Res.*
- Scavia, D. and Y. Liu. 2009. Exploring Estuarine Nutrient Susceptibility. *Environ. Sci. Technol.*, 2009, 43 (10), 3474-3479
- Boesch, D., L.B. Crowder, R.J. Diaz, R.W. Howarth, L.E. Mee, S.W. Nixon, N.N. Rabalais, R. Rosenberg, J.G. Sanders, D. Scavia, R.E. Turner . 2009. Nutrient enrichment drives Gulf of Mexico hypoxia, *Eos Trans. Amer. Geophysical Union.*
- Han, H., J. D. Allan, D. Scavia. 2009. Influence of Climate and Human Activities on the Relationship between Watershed Nitrogen Input and River Export. *Env. Sci, Technol.* 43:1916–1922
- Stow, C.A. and D. Scavia 2009. Modeling Hypoxia in the Chesapeake Bay: Ensemble Estimation Using a Bayesian Hierarchical Model. *J. Marine Systems* 76: 244–250
- Daley, B.A. and D. Scavia. 2008. An Integrated Assessment of the Continued Spread and Potential Impacts of the Colonial Ascidian, *Didemnum sp. A*, in U.S. Waters. NOAA Technical Memorandum NOS NCCOS 78, 61 pp.
- Swaney, D.P., D. Scavia, R.W. Howarth, R.M. Marino 2008 Estuarine Classification and Response to Nitrogen Loading: Insights from Simple Ecological Models. *Estuarine and Continental Shelf Science* 77: 253-263.
- Scavia, D. and K.A. Donnelly 2007. Reassessing Hypoxia Forecasts for the Gulf of Mexico. *Env. Sci. Technol.* 41, 8111–8117
- Dubravko, J, V.J. Bierman, Jr., D. Scavia. R. Hetland. Forecasting Gulf’s Hypoxia: The Next 50 Years? 2007. *Estuaries and Coasts*, 30(5): 791-801.
- Nassauer, J.I., M.V. Santelmann, and D.Scavia (Eds). 2007 From the Corn Belt to the Gulf: Assessment of Alternative Agricultural Futures, Resources for the Future, Washington, D.C.
- Donner, S. D. and D. Scavia. 2007 How climate controls the flux of nitrogen by the Mississippi River and the development of hypoxia in the Gulf of Mexico. *Limnol. Oceanogr.* 52(2): 856-861
- Bierman, V.J Jr., S.C. Hinz; D. Justić, D.Scavia, J.A. Veil, K. Satterlee, M. Parker. 2007 Predicted Impacts from Offshore Produced Water Discharges on Hypoxia in the Gulf of Mexico. *SPE Facilities, Construction, and Operations.* Society of Petroleum Engineers.
- Scavia, D. and S.B. Bricker 2006 Coastal Eutrophication Assessment in the United States. *Biogeochemistry* 79: 187–208.

- Martinelli, L.A., R.W. Howarth, E. Cuevas, S. Filoso, A. Austin, L. Donoso, V. Huzsar, D. Keeney, L. L. Lara, C. Llerena, G. McIssac, E. Medina, J. Ortiz-Zayas, D. Scavia, D. W. Schindler, D. Soto, and A. Townsend 2006 The origin and fate of reactive nitrogen in Latin America and the Caribbean. *Biogeochemistry* 79: 3-24
- Scavia, D., E.A. Kelly, and J. D. Hagy III. 2006 A simple model for forecasting the effects of nitrogen loads on Chesapeake Bay hypoxia. *Estuaries and Coasts* 29(4): 674-684.
- Scavia, D., D. Justic, and V.J. Bierman, Jr. 2004, Reducing hypoxia in the Gulf of Mexico: Advice from three models. *Estuaries* 27(3): 419-425.
- Scavia, D. L. Dantzler, M. McPhaden, P. Moersdorf, and M. Sissenwine. 20004. Ocean observing at the National Oceanic and Atmospheric Administration. *Oceanography* 16(4): 61-67
- Scavia, D. N.N. Rabalais, R.E. Turner, D. Justic, and W. Wiseman Jr. 2003. Predicting the response of Gulf of Mexico Hypoxia to variations in Mississippi River Nitrogen Load. *Limnol. Oceanogr.* 48(3): 951-956.
- Rabalais, N.N., R.E. Turner, and D. Scavia. 2002 Beyond Science into Policy: Gulf of Mexico Hypoxia and the Mississippi River. *BioScience* 52:129-142
- Scavia, D., J.C. Field, D.F. Boesch, R.W. Buddemeier, V. Burkett, D.R. Cayan, M. Fogarty, M.A. Harwell, R.W. Howarth, C. Mason, D.J. Reed, T.C. Royer, A.H. Sallenger, and J.G. Titus. 2002. Climate Change Impacts on U.S. Coastal and Marine Ecosystems. *Estuaries* 25: 149-164.
- Boyles, R., and D. Scavia. 1997. Innovative Coastal Ocean Science at NOAA. *Sea Technology*.
- Scavia, D. 1997. Developing a comprehensive coastal research agenda. *Oceanography*. 10:11-13.
- Scavia, D., M. Ruggiero, and E. Hawes. 1996. Building a scientific basis for ensuring the vitality and productivity of U.S. ecosystems. *Bull. Ecological Society of America*. 77:125-127.
- Scavia, D., R.S. Winokur, and R.A. Schmittner. 1995. NOAA's Innovative Coastal Remote Sensing Program. *Sea Technology* 36 (8): 27
- Wenzel, L. and D. Scavia. 1993 NOAA's Coastal Ocean Program. *Science for Solutions*. *Oceanus* 36(1) Spring.
- Conley, D.J. and D. Scavia. 1991. Size structure of particulate biogenic silica in Lake Michigan. *J. Great Lakes Res.* 17: 18-24.
- Laird, G. and D. Scavia. 1990. Sources and distribution of labile dissolved organic carbon in Lake Michigan. *Limnol. Oceanogr.* 35:443-447.
- Pernie, G.L., D. Scavia, M.L. Pace, and H.J. Carrick. 1990. Micrograzer impact and substrate limitation of bacterioplankton in Lake Michigan. *Can. J. Fish. Aquat. Sci.* 47:1836-1841.
- Fahnenstiel, G.L., J.f. Chandler, H.j. Carrick, and D. Scavia. 1989. Photosynthetic characteristics of phytoplankton communities in Lakes Huron and Michigan: P-I parameters and end-products. *J. Great Lakes Res.* 15:394-407.
- Scavia, D., G.A. Lang, and J.F. Kitchell. 1988. Dynamics of Lake Michigan plankton: A model evaluation of nutrient loading, competition, predation. *Can. J. Fish. Aquat. Sci.*, 45: 165 - 177
- Fahnenstiel, G.L., D. Scavia, G.A. Lang, J. Saylor, G. Miller, and D.J. Schwab. 1988. Impact of internal waves on conventional primary production estimates. *J. Plankton Res.* 10: 77-87.
- Kitchell, J.F., M.S. Evans, D. Scavia, and L.B. Crowder. 1988. Food web regulation of water quality in Lake Michigan. *J. Great Lakes Res.* 14: 109-114.
- Laird, G.A., D. Scavia, G.L. Fahnenstiel, L.A. Strong, and G.A. Lang. 1988. Dynamics of Lake Michigan phytoplankton: Relationship to nitrogen and silica fluxes. *Can. J. Fish. Aquat. Sci.* 45: 1459-1466.
- Scavia, D. 1988. The role of bacteria in secondary production. *Limnol. Oceanogr.* 33:1220-1224.

- Fahnenstiel, G.L. and D. Scavia. 1987. Dynamics of Lake Michigan's phytoplankton: changes in surface and deep populations. *Can. J. Fish. Aquat. Sci.* 44: 509-514.
- Fahnenstiel, G.L. and D. Scavia. 1987. Dynamics of Lake Michigan's phytoplankton: Primary production and growth. *Can. J. Fish. Aquat. Sci.* 44: 499-508.
- Scavia, D. and G.L. Fahnenstiel. 1987. Dynamics of Lake Michigan's phytoplankton: Mechanisms controlling epilimnetic communities. *J. Great Lakes Res.* 13: 103-120.
- Fahnenstiel, G.L. and D. Scavia. 1987. Dynamics of Lake Michigan's phytoplankton: The deep chlorophyll layer. *J. Great Lakes Res.* 13: 285-295.
- Scavia, D. and G.A. Laird. 1987. Bacterioplankton in Lake Michigan: Dynamics, controls, and significance to carbon flux. *Limnol. Oceanogr.* 32: 1019-1035.
- Sonzogni, W.C., R.P. Canale, D.C.L. Lam, W. Lick, D. Mackay, C.K. Minns, W.L. Richardson, D. Scavia, V. Smith, and W.M.J. Strachan. 1987. Large lake models - uses, abuses, and future. *J. Great Lakes Res.* 13: 384-396.
- Fahnenstiel, G. L., L. Sicko-Goad, D. Scavia, and E.F. Stoermer. 1986. Importance of picoplankton in Lake Superior. *Can. J. Fish. Aquat. Sci.* 43: 235-240.
- Scavia, D., G.L. Fahnenstiel, M.S. Evans, J.T. Jude and J.T. Lehman. 1986. Influence of salmonid predation and weather on long-term Water Quality trends in Lake Michigan. *Can. J. Fish. Aquat. Sci.* 43: 435-443.
- Laird, G.A., D. Scavia, and G.L. Fahnenstiel. 1986. Phytoplankton excretory release of carbon in Lake Michigan. *J. Great Lakes Res.* 12: 136-141.
- Scavia, D., G. A. Laird, G.L. Fahnenstiel. 1986. Production of planktonic bacteria in Lake Michigan. *Limnol. Oceanogr.* 31:612-626.
- Gardner, W.S., J.F. Chandler, G.A. Laird, and D. Scavia. 1986. Microbial response to amino acid additions in Lake Michigan: Grazer control and substrate limitation of bacterial populations. *J. Great Lakes Res.* 12: 161-174.
- Fahnenstiel, G. L. D. Scavia, and C.L. Schelske. 1984. Nutrient-light interactions in the Lake Michigan subsurface chlorophyll layer. *Verh. Internat. Verein. Limnol.* 22:440-444.
- Lehman, J. T. and D. Scavia. 1984. Measuring the ecological significance of microscale nutrient patches. *Limnol. Oceanogr.* 29:214-216.
- Scavia, D., G.L. Fahnenstiel, J.A. Davis, and R.G. Kreis, Jr. 1984. Small-scale nutrient patchiness. Some consequences and a new encounter mechanism. *Limnol. Oceanogr.* 29:785-793.
- Vanderploeg, H.A., D. Scavia, and J.R. Liebig. 1984. Feeding rate of *Diaptomus sicilis* and its relation to selectivity and effective food concentration in algal mixtures and in Lake Michigan. *J. Plankton Research* 6:919-941.
- Vanderploeg, H.A. and D. Scavia. 1983. Misconceptions about Estimating Prey Preference. *Can. J. Fish. Aquat. Sci.* 40:148-150.
- Landrum, P.F. and D. Scavia. 1983. Influence of Sediment on Uptake, Depuration, and Biotransformation by the Amphipod *Hyalella azteca*. *Can. J. Fish. Aquat. Sci.* 40: 298-305.
- Henderson-Sellers, B., M.J. McCormick, and D. Scavia. 1983. A Comparison of the Formulation for Eddy Diffusion in two One-dimensional Stratification Models. *Appl. Math. Modeling* 7:212-215.
- Lehman, J. T. and D. Scavia. 1982. Microscale Patchiness of Nutrients in Plankton Communities. *Science* 216:729-730.
- Scavia, D. and M.J. McFarland. 1982. Phosphorus Release Patterns and the Effects of Reproductive Stage and Ecdysis in *Daphnia magna*. *Can. J. Fish. Aquat. Sci.* 39:1310-1314.
- Lehman, J. T. and D. Scavia. 1982. Microscale Nutrient Patches Produced by Zooplankton. *Proc. Nat. Acad. Sci.* 79:5001-5005.

- Scavia, D. and W.S. Gardner. 1982. Kinetics of Nitrogen and Phosphorus Release By *Daphnia magna*. *Hydrobiologia* 96:105-111.
- Gardner, W.S. and D. Scavia. 1981. Kinetic Approach to Examine Nitrogen Release by Individual Zooplankters. *Limnol. Oceanogr.* 26:801-810.
- McCormick, M.J. and D. Scavia. 1981. Calculation of Vertical Profiles of Lake Averaged Temperature and Diffusivity in Lakes Ontario and Washington. *Water Resources Research* 17:305-310.
- Scavia, D., W. F. Powers, R. P. Canale, and J. L. Moody. 1981. Comparisons of First-Order Error Analysis and Monte Carlo Simulation in Time-dependent Lake Eutrophication Models. *Water Resources Research* 17:1051-1059.
- Scavia, D., R.P. Canale, W. F. Powers, and J. L. Moody 1981. Variance Estimates for a Dynamic Eutrophication Model of Saginaw Bay, Lake Huron. *Water Resources Research* 17:1115-1124.
- Scavia, D. 1980. An Ecological Model of Lake Ontario. *Ecological Modelling* 8:49-78.
- Scavia, D. and J. R. Bennett. 1980. The Spring Transition Period of Lake Ontario - A Numerical Study of the Causes of the Large Biological and Chemical Gradients. *Can. J. Fish. Aquat. Sci.* 37:823-833.
- Scavia, D. and A. Robertson. (Eds.) 1979. Perspectives on Lake Ecosystem Modeling. Ann Arbor Science Publ., Ann Arbor, 330p.
- Vanderploeg, H.A. and D. Scavia. 1979. Calculation and Use of Selective Feeding Coefficients: Zooplankton Grazing. *Ecological Modelling* 7:135-150.
- Vanderploeg, H.A. and D. Scavia. 1979. Two Electivity Indices for Feeding With Special Reference To Zooplankton Grazing. *J. Fish. Res. Bd. Canada* 36:362-365.
- Scavia, D. 1979. Examination of Phosphorus Cycling and Control of Phytoplankton Dynamics in Lake Ontario With An Ecological Model. *J. Fish. Res. Bd. Canada* 36:1336-1346.
- Robertson, A. and D. Scavia. 1978. Ecosystem and Water Quality Modeling During IFYGL. *Verh. Internat. Verein. Limnol* 20:311-316.
- Scavia, D. and S. C. Chapra. 1977. Comparison of An Ecological Model of Lake Ontario and Phosphorus Loading Models. *J. Fish. Res. Bd. Canada* 34:286-290.
- Scavia, D. and R. V. Thomann. 1977. Some Comments on a Water Quality Model for Deep Reservoirs. *J. Water Pollution Control Federation* 49:507.
- Kohberger, R.C., D. Scavia, and J. W. Wilkinson. 1978. A Method for Parameter Sensitivity Analysis for Differential Equation Models. *Water Resources Research* 14:25-29.
- Scavia, D. and R.A. Park. 1976. Documentation of Selected Constructs and Parameter Values in the Aquatic Model CLEANER. *Ecological Modelling* 2:33-58.
- Scavia, D. and B. J. Eadie. 1976. Use of Measurable Coefficients in process Formulations-Zooplankton Grazing. *Ecological Modeling* 2:315-319.
- Park, R.A., R.V. O'Neill, J.A. Bloomfield, H.H. Shugart, R.S. Booth, R.A. Goldstine, J.B. Mankin, J.F. Koonce, D. Scavia, M.S. Adams, L.S. Cleseri, E.M. Colon, E.H. Dettmann, J. Hoopes, D.D. Huff, S. Katz, J.F. Kitchell, R.C. Kohberger, E.J. Larow, D.C. McNaught, J. Petersen, J. Titus, P.R. Weiler, J.W. Wilkinson, C.S. Zahorcak. 1974. A Generalized Model for Simulating Lake Ecosystems. *Simulation* 23:51-56.

#### **POLICY REPORTS AND ASSESSMENTS**

Scavia, D., M. Kalcic, R. Logsdon Muenich, J. Read, N. Aloysius, C. Boles, R. Confessor, J. DePinto, M. Gildow, J. Martin, T. Redder, S. Sowa, Y. Wang, H. Yen. [Informing Lake Erie Agriculture Nutrient Management via Scenario Evaluation](#) April, 2016

[Scenario-Based Forecasts in Support of Regional Coastal Management: Concepts of Operation.](#) Prepared for NOAA/NOS National Centers for Coastal Ocean Science

[Great Lakes Water Quality Agreement Annex 4 Objectives and Targets Task Team Final Report to the Nutrients Annex Subcommittee](#). May 11, 2015

[Great Lakes Water Quality Agreement Nutrient Annex Draft Modeling Report](#)  
Great Lakes Science Strategy, U-M Water Center, Ann Arbor, MI

Review of Great Lakes Restoration Initiative Action Plan EPA Science Advisory Board. 2012  
Washington, DC 50 pg.

Recognizing and Incorporating Sediment Management. National Academy of Sciences, Washington DC.  
135 pp.

The Gulf of Mexico Dead Zone: Mess, Problem, or Puzzle? In (I.W.H. Perry and F. Day, Eds.): Issues of the Day: 1000 Commentaries on Climate, Energy, the Environment, Transportation, and Public Health Policy. RFF press. Wash. DC 2010

Restoring the Great Lakes Ecosystems: Worth the cost? In (I.W.H. Perry and F. Day, Eds.): Issues of the Day: 1000 Commentaries on Climate, Energy, the Environment, Transportation, and Public Health Policy. RFF press. Wash. DC 2010

Grand Challenges for the Future of Environmental Modeling, 2009

Tackling Wicked Problems through Integrated Assessment: A Guide for Decision Makers, Project Leaders, and Scientists, 2009

Michigan's Great Lakes Jobs, 2009

Michigan's Economic Vitality: The Benefits of Restoring the Great Lakes, 2009

Preparing for Climate Change in the Great Lakes Region, 2009

Great Lakes Restoration and the Threat of Global Warming, 2008

America's North Coast: Benefit-Cost Analysis of a Program to Protect and Restore the Great Lakes, 2007

Prescription for Great Lakes Ecosystem Protection and Restoration: Avoiding the Tipping Point of Irreversible Change, 2006

Future of the Great Lakes: Prioritizing Prevention, Protection, and Restoration Activities, 2006

Assessment of Phosphorus Loading Goals for Review of the Great Lakes Water Quality Agreement 2006.

Assessing the impacts of oil platform produced wastes on Gulf of Mexico Hypoxia, 2006

Action Plan for Reducing, Mitigating, Controlling Hypoxia in Gulf of Mexico, 2001

Ecological Forecasting: Agenda for the Future, 2001

Potential Consequences of Climate Variability and Change for Coastal Areas and Marine Resources, 2000

An Integrated Assessment of Hypoxia in the Northern Gulf of Mexico, 2000

Coastal Ocean Research and Monitoring Strategy, 2000

Integrated Science for Ecological Challenges, 2000

National Assessment of Harmful Algal Blooms in US Waters, 2000

Setting a new course for US Coastal Ocean Science, 1999

Status of US Harmful Algal Blooms: Progress towards a National Program, 1998

Integrating Nation's environmental monitoring and research networks programs, 1997

National Harmful Algal Bloom Research and Monitoring Strategy, 1997

Building scientific basis to ensure vitality and productivity of U.S. Ecosystems, 1995

## **BOOK REVIEWS**

Scavia, D. 1988. Book Review: Systems Approach to Water Management (A.T. Biswas, Ed) Bioscience 27:688.

Scavia, D. 2001. Book Review: Muddy Coast Dynamics and Resource Management (Flemming et al, Eds). *Oceanography* 14: 132-133.

### **BOOKS AND BOOK CHAPTERS**

- Shriberg, M., A. Horning, K. Lund, J. Callewaert, and D. Scavia 2013 Driving Transformative Change by Empowering Student Sustainability Leaders at the University of Michigan; In : *Transforming Higher Education: Stories & Strategies for Sustainability*, P.F. Barlett and G.W. Chase (Eds). MIT Press
- Scavia, D. 2010. The Gulf of Mexico Dead Zone: Mess, Problem, or Puzzle? In (I.W.H. Perry and F. Day, Eds.): [Issues of the Day: 1000 Commentaries on Climate, Energy, the Environment, Transportation, and Public Health Policy.](#) RFF press. Wash. DC
- Anderson, S., J. Read, and D. Scavia 2010. Restoring the Great Lakes Ecosystems: Worth the cost? In (I.W.H. Perry and F. Day, Eds.): [Issues of the Day: 1000 Commentaries on Climate, Energy, the Environment, Transportation, and Public Health Policy.](#) RFF press. Wash. DC
- Nassauer, J.I., M.V. Santelmann, and D.Scavia (Eds). 2007 *From the Corn Belt to the Gulf: Assessment of Alternative Agricultural Futures, Resources for the Future*, Washington, D.C.
- Scavia, D. and J.I. Nassauer 2007. Policy insights from alternative futures and integrated assessments. In: Nassauer, J.I., M.V. Santelmann, and D.Scavia (Eds). *From the Corn Belt to the Gulf: Assessment of Alternative Agricultural Futures, Resources for the Future*, Washington, D.C.
- Scavia, D., W.J. Mitsch, and O.C. Doering 2007. Improving Water Quality from the Corn Belt to the Gulf, In: Nassauer, J.I., M.V. Santelmann, and D.Scavia (Eds). *From the Corn Belt to the Gulf: Assessment of Alternative Agricultural Futures, Resources for the Future*, Washington, D.C.
- Turner, R.E., G. F. McIsaac, N. N. Rabalais, and D. Scavia 2007. The Gulf of Mexico dead zone and ecological effects of agriculture in the Mississippi River Basin, In: Nassauer, J.I., M.V. Santelmann, and D.Scavia (Eds). *From the Corn Belt to the Gulf: Assessment of Alternative Agricultural Futures, Resources for the Future*, Washington, D.C.
- Doering, O.C., C.L. Kling, J.I. Nassauer, and D. Scavia 2007 Agricultural policy choices. In: Nassauer, J.I., M.V. Santelmann, and D.Scavia (Eds). *From the Corn Belt to the Gulf: Assessment of Alternative Agricultural Futures, Resources for the Future*, Washington, D.C.
- Victor J. Bierman, Jr., Scott C. Hinz; Dubravko Justić, Don Scavia, John A. Veil, Kent Satterlee, Michael E. Parker, SPE,. 2007. Predicted Impacts from Offshore Produced Water Discharges on Hypoxia in the Gulf of Mexico. Prepared for presentation at the 2007 SPE E&P Environmental and Safety Conference held in Galveston, Texas, U.S.A., 5–7 March 2007, Austin, TX
- Harris, G., S. Bigelow, J. Cole H. Cyr, L. Janus, A. Kinzig, J. Kitchell, G.E. Likens, K. Reckhow, D. Scavia, D. Soto, L.Talbot, and P. Templer. 2003. *The Role Of Models In Ecosystem Management*. In (J. Cole, C. Canham Eds): *Understanding Ecosystems: The Role of Quantitative Models in Observation, Synthesis, and Prediction*. Princeton University Press.
- Scavia, D. 2002. *From Toxic Algae To Climate Variability And Change: Impacts In The Coastal Zone*. Proceedings of the 26<sup>th</sup> International Seminars on Planetary Emergencies. World Federation of Scientists. Erice, Italy.
- Boesch, D.F., J. Burger, C.F. D’Elia, D.J. Reed, and D. Scavia. 2000. Scientific synthesis in Estuarine Management. In (J.E. Hobbie, ed) *Estuarine Science: A synthetic approach to research and practice*. Island Press pg 507-526
- Valette-Silver, N.J. and D. Scavia. 2003. Introduction to Ecological Forecasting: New Tools for Coastal and Marine Ecosystem Management. In: (Valette-Silver, N. and D. Scavia ,eds.) 2003. *Ecological Forecasting: New Tools for Coastal and Marine Ecosystem Management*. NOAA Technical

Memorandum NOS-NCCOS-1. Pg 1-4

- Valette-Silver, Nathalie J. and Donald Scavia (eds.) 2003. Ecological Forecasting: New Tools for Coastal and Marine Ecosystem Management. NOAA Technical Memorandum NOS-NCCOS-1. 120p.
- Luttenberg, D and D. Scavia 1998. Scientific input to coastal management and policy: Three models of communication. In: Proceedings of the 16<sup>th</sup> International Conference of The Coastal Society, July 12-15; Williamsburg, VA. pg 9-16.
- Gardner, W.S., M.A. Quigley, G.I. Fahnenstiel, D. Scavia, and W. Frez. 1990 Pontoporeia hoyia direct trophic link between spring diatoms and fish in Lake Michigan. In Large Lakes: Ecological Structure and Function, M.M. Tilzer and C. Serruya (eds.). Springer-Verlag, New York, 632-644.
- Scavia, D. and G.L. Fahnenstiel. 1988. From picoplankton to fish: Complex interactions in the Great Lakes. In: (S.R. Carpenter, Ed), Complex interactions in lake communities. Springer-Verlag, NY.
- Porter, D., H. Pearl, R. Hodson, M. Pace, J. Priscu, B. Riemann, D. Scavia, and J. Stockner. 1988 Microbial interactions. In: (S.R. Carpenter, Ed), Complex interactions in lake communities. Springer-Verlag, NY.
- Kitchell, J.F., S. Bartell, S.R. Carpenter, D. Hall, D. McQueen, W. Niell, D. Scavia, and E. Werner. 1988. Epistemology, experiments, and pragmatism. In: (S.R. Carpenter, Ed), Complex interactions in lake communities. Springer-Verlag, NY.
- Scavia, D. 1987 "Variance Estimates of Dynamic Eutrophication Models", "Uncertainty in Modeling Lake Ecosystems", "Water Quality Models: Lake Ontario", In:(E. Halfon, Ed.) Encyclopedia of Systems and Control, Environmental Systems. Pergamon Press.
- Robertson, A. and D. Scavia. 1984. The North American Great Lakes. In: Lake and Reservoir Ecosystems (F. Taub, Ed) Elsevier.
- Scavia, D. 1983. Use and Limits of Ecosystem Models: A Great Lakes Perspective. pg. 57-88 In: Marine Ecosystem Modeling. EDIS/NOAA Rockville, Md.
- Scavia, D. 1983. Chapter 14, Nutrient - Food Chain Models. In: Engineering Approaches to Lake Management Vol. II Mechanistic Modeling. (S.C. Chapra and K.H. Reckhow) Ann Arbor Science Publ., Ann Arbor.
- McCormick, M.J., D. Scavia and B.L. Wharram. 1982. Comparison of Growth Constructs in the Context of Vertically Segmented Plankton Profile Models. pg. 663-668. In: State-of-the-Art in Ecosystem Modeling. Elsevier, New York.
- Thomann, R. V., D. Scavia, D.M. DiToro, and A. Robertson. 1981. Ecosystem and Water Quality Modeling During IFYGL. In: The International Field Year for the Great Lakes (E.J. Aubert and T. L. Richards, Eds) National Oceanic and Atmospheric Administration, Rockville, Md. pg. 353-366.
- Scavia, D. 1980. The Need for Innovative Verification of Eutrophication Models. In: Verification of Water Quality Models (R. V. Thomann and T. D. Barnwell, Eds.) U.S. Environmental Protection Agency, Athens, Georgia, pg. 214-225.
- Scavia, D. 1980. Conceptual Model of Phosphorus Cycling. In: Nutrient Cycling in the Great Lakes (D. Scavia and R. Moll, Eds.) Great Lakes Research Division Special Report No. 83, University of Michigan, Ann Arbor, pg. 119-140.
- Scavia, D. 1979. Use and Interpretation of Detailed Mechanistic Models of phytoplankton Dynamics. In: Modeling Phytoplankton Dynamics in Reservoirs. (M.C. Lorenzen, Ed) Us. Army Corps of Engineers Report No. TC-3265 DACW 39-78-c-0088, Vicksburg, MI. pg. 196-222.
- Robertson, A. and D. Scavia. 1979. The Examination of Ecosystem Properties of Lake Ontario Through the Use of an Ecological Model. In: Perspectives on Lake Ecosystem Modeling (D. Scavia and A. Robertson, Eds) Ann Arbor Science Publ., Ann Arbor, pg. 281-292.

- Scavia, D. 1979. The Use of Ecological Models of Lakes in Synthesizing Available Information and Identifying Research Needs. In: Perspectives On Lake Ecosystem Modeling (D. Scavia and A. Robertson, Eds.) Ann Arbor Science Publ., Ann Arbor, pg. 109-168.
- McNaught, D.C. and D. Scavia. 1976. Application of a Model of Zooplankton Composition to Problems of Fish Introductions to the Great Lakes. In: Mathematical Modeling of Biochemical Processes in Aquatic Ecosystems (R.P. Canale, Ed) Ann Arbor Science Publ., Ann Arbor. Pg. 281-304.
- Scavia, D., B. J. Eadie, and A. Robertson. 1976. An Ecological; Model for the Great Lakes. In: Environmental Modeling and simulation (W.T. Ott, Ed) U.S. Environmental Protection Agency, Wash., D.C. pg. 629-633.
- Park, R.A., D. Scavia, and N.L. Cleseri. 1975. CLEANER, the Lake George Model. In: Ecological Modeling in a Management Framework (C.S. Russell, Ed), Resources for the Future, Wash., D.C. pg. 49-82.
- Bloomfield, J.A, R.A. Park, D. Scavia and C. Zahorcak. 1973. Aquatic Modeling in the Eastern Deciduous Forest Biome - IBP. In: Modeling the Eutrophication Process (E.J. Middlebrooks, Ed.) Ann Arbor Sciences, Ann Arbor. pg. 139-158.