# CURRICULUM VITAE Johan F. Gottgens, Ph.D. (May 2017)

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# EDUCATION:

Doctor of Philosophy - Environmental Engineering Sciences, specialization in Applied Aquatic Ecology (1992), University of Florida, U.S.A.

Master of Science - Ecology with specialization in Limnology, Utrecht State University, The Netherlands Bachelor of Science - Biology with specialization in Ecology, Utrecht State University, The Netherlands

### AREAS OF SPECIALIZATION:

Lake and reservoir management, neotropical wetlands, biomanipulation of aquatic systems, paleo-limnology, wetlands ecology, non-point pollution control, teaching biology and environmental science.

### PROFESSIONAL EXPERIENCE:

2007 - present. Professor and Associate Chair, Department of Environmental Sciences, Univ. of Toledo.

2006 - 2007. Professor and Graduate Coordinator, Department of Environmental Sciences (formerly Earth, Ecological and Environmental Sciences), Univ. of Toledo.

1999 - 2005. Associate Professor and Graduate Coordinator, Department of Earth, Ecological and Environmental Sciences, Univ. of Toledo.

1997 - present. Affiliate appointment, Biological Sciences, Bowling Green State University, Ohio

1993 - 1998. Assistant Professor, Department of Biology, Univ. of Toledo.

1992 - 1993. Post-Doc, Dept. of Environmental Engineering Sciences, University of Florida.

1988 - 1992. Computer Manager, Dept. of Environmental Engineering Sciences, Univ. of Florida.

1988 - 1991. Instructor, Department of Biological Sciences, Univ. of Florida.

1986 - 1992. Research Assistant, Dept. of Environmental Engineering Sciences, Univ. of Florida.

1981 - 1986. Environmental Specialist, Florida Department of Agriculture.

# **PROFESSIONAL CERTIFICATION:**

Teaching Certificate (Utrecht State University, The Netherlands); Certified Wetlands Ecologist (University of Florida, Center for Wetlands); SCUBA certified (PADI and SSI); G.I.S.-ArcView certified (E.S.R.I.)

### PROFESSIONAL SOCIETIES (past and present):

American Society of Limnology and Oceanography, Tau Beta Pi - National Engineering Honor Society, Society of Wetlands Scientists, International Association for Great Lakes Research, Societas Internationalis Limnologiae, Ohio Academy of Sciences, Sigma Xi.

# EDITORIAL BOARDS:

Wetlands Ecology and Management (Editor-in-Chief, 2006-present) Wetlands Ecology and Management (Associate Editor, 2000-2005) J. Great Lakes Law Science & Policy (Science Editor, 2002-2004)

# AD-HOC REVIEWER FOR (past and present):

Journal of Environmental Quality, Archiv fur Hydrobiologie, Ecological Engineering., J. American water Resources Assoc., Ohio Academy of Sciences, Great Lakes Research, Lake Erie Protection Fund, U.S. EPA, Environmental Science and Technology, Ecological Engineering, Water Resources Research, Limnology and Oceanography, U.S. Environmental Protection Agency STAR (1998, 2008), National Science Foundation, Prentice-Hall Publishing Company, American Chemical Society, Chemosphere, Palaeo, Environmental Pollution, Hydrobiologia, Wetlands Ecology and Management, Plant Ecology

### **PUBLICATIONS** (45, \* denotes student author):

Yan, Y. \*, Z. Ouyang\*, H. Chu\*, X. Li, Xi, J.F. Gottgens, B. Zhao, J. Chen and R.John. The validation of a satellite-based Vegetation Photosynthesis Model (VPM) to GPP estimation in a Great Lakes coastal wetland. *Agricultural and Forest Meteorology* (in review).

45. Chu, H.\*, J. Chen, J.F. Gottgens, A.R. Desai, Z. Ouyang\* and S. Qian. 2016. Response and biophysical regulation of ecosystem carbon dioxide fluxes to climate variability and anomaly in contrasting ecosystems. *Agricultural and Forest Meteorology*: 50-68.

44. Svoboda, A.D.\*, J.F. Gottgens and B.J. Zimmerman. 2016. Status and Distribution of the Least Darter (*Etheostoma microperca* Jordan and Gilbert) in Ohio: A State Listed Species of Concern. *American Midland Naturalist* 175: 128-134.

43. Chu, H.\*, J.F. Gottgens, J. Chen, G. Sun, A. Desai, Z. Ouyang, C. Shao and K. Czajkowski. 2015. Climatic variability, hydrologic anomaly, and methane emission can turn productive freshwater marshes into net carbon sources. *Global Change Biology* 21: 1165-1181.

42. Chu, H.\*, J. Chen, J.F. Gottgens, Z. Ouyang<sup>\*</sup>, R. John, K. Czajkowski, and R. Becker. 2014. Net ecosystem exchanges of  $CH_4$  and  $CO_2$  at a temperate freshwater marsh and a cropland. *J. Geophys. Res. Biogeosciences* 119: 722–740.

41. Baca, K.\*, T.G. Fisher and J.F. Gottgens. 2014. Temporally constrained eolian sand signals and their relationship to climate, Oxbow Lake, Saugatuck, Michigan, *in* Fisher, T. G., and Hansen, E. C., eds., Coastline and Dune Evolution along the Great Lakes, Special Paper 508: Boulder, *Geological Society of America*: 151–165.

40. Chu, H.S\*, S.C. Chang, O. Klemm, C.W. Lai, Y.Z. Lin, C.C. Wu, J.Y. Lin, J.Y. Jiang, J. Chen, J. F. Gottgens and Y.J. Hsia. 2013. Does canopy wetness matter? Evapotranspiration from a subtropical montane cloud forest in Taiwan. *Hydrological Processes* 28: 1190-1214

39. Becher, C.\* and J.F. Gottgens. 2012. The Impact of Dredging on Heterogeneity and Fish Communities in Agricultural Streams of the greater Sandusky River Watershed, Ohio. *Proc. National Conf. Undergraduate Research*, Ogden, Utah: 578-583

38. Tessler, N.R\*, J.F. Gottgens and M.R. Kibbey. 2012. The First Observations of the Eastern Sand Darter, Ammocrypta pellucida (Agassiz), in the Ohio Portion of the Maumee River Mainstem in Sixty Five Years. *American Midland Naturalist* 167: 198-204.

37. Crail, T.D.\*, J.F. Gottgens and A.E. Krause. 2011. Fish community response to evolving channel complexity in an agricultural headwater system. *J. Soil Water Conservation* 66(5): 295-302

36. Evans, J.E. and J.F. Gottgens. 2007. Contaminant stratigraphy of the Ballville Reservoir, Sandusky River, NW Ohio: Implications for dam removal. *J. Great Lakes Research* 33(2): 182-193

35. Gottgens, J.F. and J.E. Evans. 2007. Dam Removals and River Channel Changes in Northern Ohio: Implications for Lake Erie sediment budgets and water quality. *J. Great Lakes Research* 33(2): 87-89

34. Lawrence, P., D. Eastop, S. Leblanc, J. Gottgens and T. Klinger. 2007. The river runs through it: Planning for the Ottawa River, The University of Toledo. Proc. Ball State University, Greening of the Campus Conference, Muncie, Indiana: 284-294 (*non-reviewed*)

33. Roberts, S.J., J.F. Gottgens, A. L. Spongberg, J.E. Evans and N.S. Levine. 2007. Assessing potential removal of low-head dams: An example from the Ottawa River, NW Ohio. *Environmental Management* 39(1): 113-124.

32. Gottgens, J.F. 2005. What can we learn from sediment cores? The need for long-term data in environmental

law, science and policy. J. Great Lakes Law Science & Policy 5 (2): 101-104

31. Gottgens, J.F. and R.H. Fortney. 2004. Neotropical wetlands: Building links among wetland scientists. *Wetlands Ecology and Management* 12(6): 543-546.

30. Gottgens, J.F. and R.H. Fortney (editors). 2004. Neotropical wetlands. Special issue of *Wetlands Ecology* and *Management* containing five edited and peer-reviewed papers 12(6): 66 pp.

29. Fortney, R.H., M. Benedict<sup>\*</sup>, J.F. Gottgens, T. Walters<sup>\*</sup>, B. Leady<sup>\*</sup> and J. Rentch. 2004. Aquatic macrophyte communities along inundation gradients in two ecologically-distinct regions of the Brazilian Pantanal. *Wetlands Ecology and Management* 12(6): 575-585.

28. Spongberg, A.L., J. Gottgens and B. Muller\*. 2004. Pesticide Accumulation Rates in a Northwestern Ohio Marsh. *Water, Air and Soil Pollution* 152:387-404.

27. Evans, J.E., N.S. Levine, S.J. Roberts, J.F. Gottgens, and D.M. Newman<sup>\*</sup>. 2002. Assessment using GIS and sediment routing of the proposed removal of Ballville dam, Sandusky River, Ohio. *J. American Water Resources Association* 38(6): 1549-1565.

26. Leady, B.S.\* and J.F. Gottgens. 2001. Mercury accumulation in sediment cores and along food chains in two regions of the Brazilian Pantanal. *Wetlands Ecology and Management* 9(4): 349-361.

25. Gottgens, J.F., J.E. Perry, R.H. Fortney, J. Meyer<sup>\*</sup>, M. Benedict<sup>\*</sup> and B.E. Rood. 2001. The Paraguay-Paraná Hidrovia: Protecting the Pantanal with lessons from the past. *BioScience* 51(4): 301-308.

24. Evans, J.E., J. F. Gottgens, W.M. Gill\*, and S.D. Mackey. 2000. Sediment yields controlled by intrabasinal storage and sediment conveyance over the interval 1842-1994: Chagrin River, Northeast Ohio, U.S.A. *J. Soil Water Conservation* 55 (3): 264-270

23. Rood, B.E., J.J. Delfino and J.F. Gottgens. 2000. Bathymetry, paleolimnology and mercury accumulation in a sinkhole lake in the Florida Everglades, USA. *Verh. Int. Ver. Limnol.* 27: 2312-2316.

22. Gottgens, J.F. 2000. Wetland restoration along the southwestern Lake Erie coast line: Case studies and recommendations. *J. Great Lakes' Law, Science & Policy* 3(1): 49-65.

21. Evans, J.E., S.D. Mackey, J.F. Gottgens, and W.M. Gill\*. 2000. Lessons from a dam failure. *Ohio J. Science* 100(5): 121-131

20. Evans, J.E., S.D. Mackey, J.F. Gottgens, and W.M. Gill\*. 2000. From reservoir to wetland: The rise and fall of an Ohio dam. In: *The Earth around us: Maintaining a livable planet*. (Ed. J.L. Schneiderman), Freeman Publ., San Francisco, CA: 256-267.

19. Gottgens, J.F. 2000. The Paraguay-Paraná Hidrovia: Large-scale channelization or a "tyranny of small decisions?" In: *The Pantanal of Brazil, Bolivia, and Paraguay: Selected discourses on the world []s largest remaining wetland system*, (Ed. F.A. Swarts). Hudson-McArthur Publ.: 135-144

18. Kumar, A., V. Chigullapalli<sup>\*</sup>, K. Venkataraman<sup>\*</sup>, S. Sundaresan<sup>\*</sup>, B.S. Simmers<sup>\*</sup>, and J.F. Gottgens. 1999. Estimation of methyl mercury concentration in fish due to deposition of mercury from an urban area on water bodies. *J. Great Lakes' Law, Science & Policy* 2(1): 43-67.

17. Gottgens, J.F., B.E. Rood, J.J. Delfino, and B.S. Simmers\*. 1999. Uncertainty in paleoecological studies of mercury in sediment cores. *Water Air Soil Pollut.* 110: 313-333.

16. Gottgens, J.F., B.P. Swartz\*, R.W. Kroll, and M. Eboch. 1998. Longterm GIS-based records of habitat changes in a Lake Erie marsh. *Wetlands Ecology and Management* 6: 5-17.

15. Gottgens, J.F., R.H. Fortney, J. Meyer\*, J.E. Perry, and B.E. Rood. 1998. The Paraguay-Paraná waterway

("Hidrovia") and its impact on the Pantanal of Brazil. Bulletin Soc. Wetland Sci. 15(3): 12-18.

14. Rood, B.E., J.F. Gottgens, and J.J. Delfino. 1998. Comparison of mercury accumulation in Lake Eden and the Savannas Marsh wetland, Florida, USA. *Verh. Int. Ver. Limnol.* 26: 1365-1369.

13. Gottgens, J.F. and M.A. Liptak\*. 1998. Longterm assimilation of agricultural runoff in a Lake Erie marsh. *Verh. Int. Ver. Limnol.* 26: 1337-1342

12. Streever, W.J., J.F. Gottgens, B.E. Rood, and T.L. Crisman. 1998. Radiolimnology of the Sim's Sink permanently flooded cave, Florida, USA. *Verh. Int. Ver. Limnol.* 26: 1595-1598.

11. Kroll, R.W., J.F. Gottgens, and B.P. Swartz\*. 1997. Wild rice to rip-rap: 120 Years of habitat changes and management of a Lake Erie coastal marsh. *Trans. North Amer. Wildlife Natural Res.*, Washington: 490-500

10. Murray, T.E. and J.F. Gottgens. 1997. Historical changes in phosphorus accumulation in a small lake. *Hydrobiologia* 345: 39-44.

9. Gottgens, J.F. 1996. Radionuclide dating of sediment cores. In: *Protocol for Estimating Historic Atmospheric Mercury Deposition*, M.E. Keirstead, D.B. Porcella (Eds.), EPRI, Palo Alto, CA: 4.4-4.9.

8. Rood, B.E., J.F. Gottgens, C.D.A. Earle\*, J.J. Delfino, and T.L. Crisman. 1995. Mercury accumulation trends in Florida Everglades and Savannas Marsh flooded soils. *Water Air Soil Pollut*. 80: 981-990.

7. Liptak, M.A.\* and J.F. Gottgens. 1995. Long-term nutrient assimilation by a diked Lake Erie coastal marsh; Results of a pilot study. Proc. *National Conf. Undergrad. Res.* Union College, New York: 890-894.

6. Gottgens, J.F. 1994. Redistribution of organic sediments in a shallow lake following partial drawdown. *Arch. Hydrobiol.* 130 (2): 179-194

5. Gottgens, J.F. and T.L. Crisman. 1993. Quantitative impacts of lake level stabilization on material transfer between water and sediment in Newnans Lake, Florida. *Can. J. Fish. Aquat. Sci.* 50: 1610-1616

4. Streever, W.J., J.F. Gottgens, and T.L. Crisman. 1993. Patterns of sediment flux in a subtropical flooded cave. *Verh. Int. Ver. Limnol.* 25: 257-260

3. Gottgens, J.F., T.L. Crisman, and W.E. Bolch. 1991. Lead-210 and cesium-137 dating of soft lake sediments using low-energy gamma-ray spectroscopy. *Florida Scient*. 54 (Suppl.): 20-21

2. Gottgens, J.F. and T.L. Crisman. 1991. Newnans Lake, Florida: Removal of particulate organic matter and nutrients using a short-term partial drawdown. *J. Lake and Reservoir Manag.* 7(1): 53-60

*Dissertation*: Gottgens, J.F. 1992. Quantitative impacts of lake level stabilization on sediment and nutrient dynamics: Coupling limnology with modeling. University of Florida: 198 pp.

1. Gottgens, J.F. 1987. Water resources of the Prairie Creek area. In: Hamann, R.G and M.T. Brown (eds.): The Prairie Creek Carl Project, Alachua County Conservation and Recreation Task Force: D1-4

*Thesis*: Gottgens, J.F. 1981. Lake Alice, Florida: Zooplankton communities and their exposure to a nutrient-rich water flow. Utrecht State University, The Netherlands: 152 pp.

### GRANTS (continued funding for the past 25 years):

2016. Using restored coastal wetlands to improve water quality in western Lake Erie: Pre-restoration monitoring at the future Howard Farms Metropark wetland. Metroparks of the Toledo Area (\$3,000): P.I.

2015. Effective wetland design for water quality improvement in the Maumee River basin, NW Ohio. UT

Research Incentive Fund (\$26,000): P.I.

2014. Impacts of urban river restoration structures on the fish community in the Ottawa River, NW Ohio: Postinstallation monitoring and analysis. Ohio Lake Erie Commission (\$11,835 external): P.I.

2014-2016. FSML - Understanding the Linkages among Harmful Algal Blooms, Nutrient Loadings, and Climate Change through the Lake Erie Land-Lake Sensor Network. NSF (\$350,000): Senior collaborator

2013. Impact of urban river restoration structures on fish community composition (Phase I). U.S. Fish & Wildlife Service (\$9,200 external): P.I.

2013. Have fish communities in the Ottawa River changed following a decade of restoration projects and what are the benefits and downfalls of two different fish capturing methods used to evaluate such changes? USRCAP (with J. Moriarty and T. Crail), UT Office of Undergraduate Research (\$3,000): Faculty Advisor

2011. Do dredging practices and the resulting habitat changes affect fish communities in agricultural streams of northwest Sandusky and Seneca counties, Ohio? USRCAP, University of Toledo (undergraduate research fellowship for Cory Becher, ENSC major, \$3,000)

2011. Surveying established and newly-constructed wetlands for wastewater treatment and presenting research findings. Prague, Czech Republic. Kohler Foundation (\$1,000)

2010-2013. Responses of West Lake Erie Basin to Climate Change. NOAA (\$97,900 external) .: Co-I

2010. Beginning the Academic Journey Technology Course Development. Learning Ventures, University of Toledo (\$3,500)

2009-2011. Analysis of habitat variables on the distribution and abundance of freshwater mussels, with special emphasis on the rayed bean (*Villosa fabalis*). Lake Erie Protection Fund (total budget \$27,808; \$15,000 external): P.I. (with J. Grabarkiewicz – graduate student)

2009-2013. Inquiry masters program advancing content for teachers (IMPACT): Providing in-service middle and high school science teachers in the Toledo Public Schools with an MS in Biology-Ecology Track. U.S. Department of Education (\$921,000) – Co-I

2009-2013. Undergraduate Research and Mentoring in Environmental Biology at the Land-Lake Ecosystem Interface. National Science Foundation - Directorate for Biological Sciences (\$802,061) – Faculty Collaborator.

2008 – 2012. Graduate Teaching Fellows in STEM High School Education: An Environmental Science Learning Community at the Land-Lake Ecosystem Interface. National Science Foundation – Directorate for Graduate Education (\$2,400,000) - Collaborator

2008-2012. The Honey Creek Targeted Watershed Program Proposal. U.S Environmental Protection Agency (\$60,000 – UT share): P.I.

2007-2009. Dam Removal in the Ottawa River: A Case Study on Fish Community Response, Sediment Budget Adjustments and Public Outreach. Ohio EPA (total budget \$204,970): P.I.

2007. Status and distribution of native unionid mussels (Unionidae) in the coastal wetlands of Winous Point. Winous Point Marsh Conservancy (external budget \$5,000): P.I. (with T.Crail – graduate student)

2007. Teaching a UT field course in tropical ecology, Costa Rica. Kohler Foundation (\$500)

2006-2008. Planning Proposal for the Lake Erie Center. National Science Foundation – DBI, Biological Field Stations & Marine Labs (\$24,888): Collaborator

2006-2007. Restoring fish diversity in farm ditches: Testing the impact of vegetative encroachment. Lake Erie Protection Fund (total budget \$23,496): P.I. (with T. Crail – graduate student)

2005-2009. Phytoremediation research: Design of a passive biological treatment system for arsenic. CSREES-USDA (external \$728,882): Co-P.I.

2005-2007. Team building and training of a nationally-competitive research group at University of Toledo to participate in the NSF-National Ecological Observatory Network (NEON). Interdisciplinary Research Initiation Award, University of Toledo (total budget \$30,000): Co-Director

2004-2006. Riparian forests in NW Ohio watersheds: Relations between landscape structure, land use, and water quality in regional rivers. Lake Erie Protection Fund (total budget \$21,267): P.I. (with M. Benedict – graduate student)

2005. Teaching a UT field course in tropical ecology, Costa Rica. Kohler Foundation (\$800)

2003. Teaching a UT field course in tropical ecology, Costa Rica. Kohler Foundation (\$1,000)

2002-2003. Dam removal in the Ottawa River, Ohio: A feasibility study needed for comprehensive regional planning. Ohio Coastal Management Program (total budget \$87,515): P.I.

2002. Development of field ecology course: Costa Rica. Kohler Foundation (\$1,000): P.I.

2002. Modeling the Maumee River watershed for sustainable development. Interdisciplinary Research Initiation Program, University of Toledo (total budget \$50,000): Co-P.I.

2001-2003. Partners in "Park-It": Building community resources. Ohio Environmental Protection Agency (external \$26,000): Co-I.

2001. University of Toledo, Lake Erie Center, Faculty Summer Fellowship (\$7,500): P.I.

2001. Undergraduate research experience in wetland science. Envirosource Technologies (\$1,000): P.I.

2000. Neotropical wetlands: Building links among wetlands scientists. Special Symposium 2000 International Wetland Congress, Quebec, Canada. U.S. Geological Survey and U.S. Fish and Wildlife Service (total budget \$17,400)

2000. Organic mercury accumulation in Lake Erie food webs. Envirosafe (\$1,000): P.I.

1999-2000. Successional development of cambará (*Vochysia divergens* Pohl)-dominated forest stands in the Northern Pantanal, Brazil. Kohler Foundation, Center for International Studies and Programs, and Society of Wetland Scientists (multiple grants \$5,850): P.I.

1999. Linking spatial heterogeneity with taxonomic and functional diversity of macro-invertebrates in an open and a diked Lake Erie marsh. Lake Erie Center Student Fellowship (\$4,000): Co-I

1999. Mercury levels in fish from Lake Erie coastal marshes. Envirosafe (\$1,000): P.I.

1998. Development of environmental engineering instructional modules for middle school students. Ohio Board of Regents, Eisenhower Professional Development Program (total budget \$98,000): Co-I.

1998. Long-term vegetational changes in the landscape of northwest Ohio: A Palynological Approach. Society of Wetlands Scientists (\$1,000): Co-I.

1997-1999. Longterm nonpoint pollution abatement by a Lake Erie marsh and its implication for wetland restoration policies. Lake Erie Protection Fund (external contribution \$93,000; total budget \$178,000): P.I.

1997. Comparison of a novel sampling technique, semi-permeable membrane devices, to a Great Lakes biomonitor: *Dreissena polymorpha*. UT-Lake Erie Center (\$10,000): Co-I.

1995-1997. Viral pathogen and herbicide fate and transport in agricultural soil and runoff. U.S. Department of Agriculture (external contribution \$159,000; total budget \$231,000): Co-I.

1996. The silence of the sentinels: An investigation of wetland contaminant cycles and trophic impact. UT-Lake Erie Center (\$10,000): Co-I.

1996. Sedimentary indicators of past biological conditions. UT-Lake Erie Center (\$4,500): P.I.

1996. Patterns of mercury accumulation along food chains in the marshes of western Lake Erie. University of Toledo (total budget \$9,000): P.I.

1995-1996. Avian community responses to the Metzger Marsh coastal wetland restoration project. Lake Erie Protection Fund (external \$54,000; total budget \$114,000): P.I. (Comp. to ODNR project below).

1995. Longterm habitat changes in the Winous Point marshes, Ohio: A 120 year record of maps and aerial photographs. Winous Point Shooting Club (external contribution \$4,000; total budget \$5,000): P.I.

1994-1997. Transport and fate of organic matter from an agrolandscape: The Maumee Basin. U.S. Department of Agriculture (external contribution \$178,000; total budget \$338,000): P.I.

1994-1996. Avian community responses to the Metzger Marsh coastal wetland restoration project. Ohio Department of Natural Resources (external contribution \$15,000; total budget \$20,000): Co-I.

1994. The response of a coastal marsh to long-term agricultural runoff: Nutrient accumulation rates and floral composition. University of Toledo (\$6,750): P.I.

1993. Issues and options related to the management of Silver Springs rhesus macaques. Florida Game and Fresh Water Fish Commission (external contribution \$11,000; total budget \$15,000): Co-I.

1992-1993. Assessing the feasibility of restoring Newnans Lake. Florida Game and Fresh Water Fish Commission (external contribution \$225,000): Co-I.

1991-93. Biogeochemical partitioning of mercury in The Everglades and Okefenokee Swamp wetland systems. South Florida Water Management District/U.S. Geological Survey (external contribution \$73,000): Co-I.

1989. Newnans Lake, Florida: Removal of organic matter and nutrients using a partial drawdown. St. Johns River Water Management District (external contribution \$6,000): P.I.

1987-88. Comprehensive reconnaissance profile of the Paynes Prairie Basin, Florida. St. Johns River Water Management District and College of Engineering, University of Florida (external contribution \$7,000): P.I.

1986-87. Orange Creek Basin: Survey and preliminary interpretation of environmental research data. St. Johns River Water Management District (external contribution \$17,000): P.I.

1985. Water quality impacts of intensive agricultural production. Florida Department of Environmental Regulation (external contribution \$19,600): Co-P.I.

### FACILITIES AND EQUIPMENT GRANTS:

2009-2012. Integrating Ecosystems Science and Sustainable Technology to Improve the Human Condition. National Science Foundation - ARI (\$3.6M facility grant): Co-PI

1995-96. Mercury cold-vapor atomic fluorescence detector, Lake Erie Center (\$8,000)

1995-96. Carbon analyzer, Instrumentation Center, University of Toledo (\$23,000)

1993-95. Laboratory start-up, University of Toledo (\$80,000).

1993-96. University of Toledo Lake Erie Center. USDA (\$6.8 million): Collaborator.

# TEACHING:

# Freshman/sophomore level:

General Biology - BSC 2010, Laboratory courses (1988-1991) Human Ecology - ENV 3000 (1993), BIO 1130 (1994, 1996, 1998) Down-to-Earth: Environmental Science - EEES 1130 (2001, 2002, 2003, 2007, 2009) Environmental Problems Lab – EEES 1140 (2003) Fundamentals of Environmental Studies - IDS 201 (1995, team-taught) Introduction to Modeling of Biological Systems - BIO 216 (1995) Fundamentals of Life Science - BIO 2150 (1996, 2000, 2001) Biodiversity/Honors Biodiversity - EEES 2150 (2002, 2004, 2006, 2009-2016) Biodiversity lab – EEES 2160 (2004, 2006) Honors Biology Laboratory: Diversity and Ecology - BIO 2160 (1996-2000)

# Junior/Senior level:

Introduction to Engineering Approaches for Lake Management - ENV 4932 (1992, 1993) Wetlands Ecology – BIOL 4980 (1995) Principles of Aquatic Ecosystems Management - BIO 434 (1995, 1997) Aquatic Ecology + laboratory - BIO 4630 (1995, 1997, 1999); EEES 4730 (2001, 2003, 2007-2014, 2016) Conservation Biology- EEES 4750 (2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016) Conservation Biology Lab (2016) Reading and Writing about Biology - BIO 411 (1997), BIO 4700 (1998) Aquatic Ecology of the Tropics – EEES 4980/6980 (2003, 2005, 2007, 2009, 2011, 2013, 2015, 2017) Field Course Tropical Ecology (Costa Rica) – EEES 4790 (Summer 2003, 2005, 2007) Senior Capstone in Environmental Sciences – EEES 4970 (2014-2017)

# Graduate level:

Paleolimnology - Short course (1993) Engineering Approaches for Lake Management - ENV 6932 (1992,1993) Advanced Readings in Management of Aquatic Ecosystems - BIO 621/821 (1994) Foundations of Ecology - BIO 621/821 (1994), BIO 6600/8600 (1999; team taught) Seminar in Ecology - BIOL 6930/8930 (1995, 1996, 1998-2001), EEES 6930/8930 (2002, 2003) Advanced Wetlands Ecology – BIOL 6980 (1995), EEES 6980/8980 (2004, 2005, 2006, 2008) Management of Aquatic Ecosystems - BIO 534/734 (1995, 1997) Adv. Aquatic Ecology + lab - BIO 56/7630 (1995, 1997, 1999); EEES 57/7730 (2001, 2003, 2007-2014, 2016) Advanced Conservation Biology – EEES 57/7750 (1996, 2002, 2004, 2006, 2008, 2010, 2012, 2014) Current Topics in Ecology: Paleolimnological approaches to lake restoration - BIO 624/824 (1998) Development of environmental engineering lesson modules for middle school students - workshop (1998). Advanced Aquatic Ecology of the Tropics – EEES 6980 (2003, 2005, 2007, 2009, 2011, 2013, 2015) Field Course Tropical Ecology (Costa Rica) – EEES 5790/7790 (Summer 2003, 2005, 2007)

# GRADUATED STUDENTS (N=24, as adviser) and their current affiliation:

- Jeffrey Savino (M.S.): Paleolimnology as lake management tool (1996, Chair). Science Instructor, Toledo, Ohio
- Marci Cole (M.S.): Mercury magnification along aquatic food chains (1997, Chair).
  - Ph.D. student: Boston University Marine Science Program (Woods Hole, Mass). Presently, coastal ecologist: Save the Bay, Providence, RI
- Stephanie Kaplan (M.S.): Sedimentary records of biological change (1997, Chair).
- Science teacher: Springfield high school, Sylvania, Ohio
- Kathryn Nelson (M.S.): Floodplain forest ecology (1998, Co-Chair). Naturalist (retired): Toledo Area Metroparks, Ohio
- Michael Homsher (Ph.D): Biosentinels for sediment contamination (2000, co-chair).

Recipient of the University of Toledo Doctoral Fellowship Award (1998-2000)

Professor (with tenure), School of Environmental & Emergency Management, University of Findlay, Ohio

Michael Benedict (M.S.): Floodplain ecology in the Pantanal, Brazil (2000, Chair). Ph.D. student: Department of

Earth, Ecological and Environmental Sciences, University of Toledo.

- Barry Muller (Ph.D.): Longterm nonpoint pollution abatement in coastal marshes (2004 Chair). Radiological Engineer, Detroit Edison, Michigan and owner ERG Consult LLC.
- Kaushik Mysorekar (M.S.): LIDAR Remote sensing applications in ecology (2004, Chair) Lead, Software Product Engineer at ESRI, Los Angeles, CA
- Amanda Arceo (M.S.): The Impact of a Small Dam on Fish Community Composition and Structure in the Ottawa River, Ohio. (2005, Chair). Principal Avicenna Academy, Crown Point, Indiana

Anne Stearns (M.S.): The Management Status of Southwestern Coastal Lake Erie Marshes: Challenges and Opportunities to Maximize Natural Wetland Functions (2006, Chair) Statistical and Information Officer, Kansas State University, Kansas

Caine Kolinski (M.S.E.): Integrating wetlands ecology in secondary science education (2006, Co-Chair) Science teacher, Clay High School, Oregon, Ohio

Michael Benedict (Ph.D.): Riparian Forests in NW Ohio Watersheds: Relations among Landscape Structure, Land Use/Land Cover, and Water Quality in Streams (2006, Chair) *Recipient of the University of Toledo Doctoral Fellowship Award (2003-2005)* Associate Professor (with tenure), Environmental Studies Program, Hiram College, Ohio

Todd Crail (M.S.): Impact of Plant Colonization on Fish Communities in Agricultural Ditches of the Ottawa River, Northwest Ohio (2007, Chair). Ph.D. student: Department of Environmental Sciences, University of Toledo.

Alex Duncan (M.S.): Evaluation of *Azolla caroliniana* to phytofiltrate arsenic from contaminated water (2009, Chair). Environmental scientist, City of Austin, Texas

- Catherine Buchanan (M.S.): Phytoremediation of copper: optimization studies (2010, Chair). Staff engineer, McGinley & Assoc., Las Vegas, Nevada.
- Stacey Jackson-Harris (M.S.): Contact and Consumption Advisories on Ten Mile Creek/Ottawa River (Ohio): Rationale, Scientific Justification and Continued Need (2012, Chair). HS Teacher, Toledo Public Schools.
- Nate Tessler (M.S.): Agricultural streams as spawning and nursery habitat for northern pike (*Esox lucius*) in the North Branch of the Portage River drainage of northwestern Ohio (2012, Chair). Environmental Specialist, Ohio Department of Transportation.

Brendan May (M.S.): Optimal Wetland Design for the Removal of Pathogens from discharges into Lake Erie: Literature synthesis and evaluation of the proposed wetland at Maumee Bay State Park (2012, Chair). HS Teacher, Swanton Public Schools.

- Jeffrey Grabarkiewicz (M.S.): Habitat Use and Community Structure of Unionid Mussels in Three Lake Erie Tributaries (2012, Chair). State Ecologist, Michigan Department of Transportation.
- Todd Crail (Ph.D.): The Ecological niche of Darters (Pisces: Percidae) across Multiple Scales in the Ohio River Basin (2012, co-Chair). Lecturer, Department of Environmental Sciences, University of Toledo
- Justin Selden (M.S.): The Effect of Dredging on Fish Communities in Agricultural Streams in Crawford, Sandusky and Seneca Counties of Ohio (2013, Chair). Program Instructor, Michigan Seagrant.
- Brenda Leady (Ph.D.): Historic patterns of deposition and biomagnification of mercury in selected wetland systems (2013, Chair). Lecturer, Department of Biological Sciences, University of Toledo
- Aaron Svoboda (M.S.): Effects of urban river rehabilitation structures on the fish community of the Ottawa River, Ohio (2014, Chair). Sanitarian, Ottawa Co, Ohio.
- Housen Chu (Ph.D.): Response and biophysical regulation of carbon fluxes to climate variability and anomaly in contrasting ecosystems (2014, co-chair). Post-doc, University of California Berkeley

### GRADUATED STUDENTS (as committee member; University of Toledo unless otherwise noted):

Alfonso A. Neira (M.E.): Stream water quality modeling (1993, University of Florida).

David P. Carr (M.S.): Hazardous waste management (1993, University of Florida).

Mary J. Handy (M.S.): Human health risks of <sup>137</sup>Cs (1993, University of Florida).

Melaku Mesfin (M.S.): Algal communities as pollution indicators (1994).

Colin Jackson (M.S.): Microbial ecology (1995).

Jay Lawniczak (M.S.): Trace metal cycling by zebra mussels (1995).

Christine Foreman (Ph.D.): Microbial breakdown of phenolic compounds (1999).

Michelle Grigore (Ph.D.): Marsh restoration/avian ecology (1999).

Laura Burnett (M.S.): Chlorophyll dynamics in Antarctic lakes (2000)

Kerri McKenna (M.S.): Population biology of turtles (2000).

Aganieszka Pinowska (Ph.D.): Periphytic algal communities (2001, Bowling Green State University). Jamie Schmeling (M.S.): Carbon flow in Antarctic lakes (2001) Timothy Walters (Ph.D.): Plant community responses to burn management (2004) Courtney Paul (M.S.): Pesticide impact on ecosystem structure (2004, Bowling Green State University) Susan Tran (M.S.): Turtle population dynamics and ecology (2004) Melanie McLaughlin (M.S.): Fish communities in northwest Ohio streams (2004) Jordan Rofkar (M.S.): Phytoremediation of arsenic (2005) Kelly Wever (M.S.): Paleo-geology (2005) Jacob LaCroix (Ph.D.): Landscape Ecology (2006) Ryan David Argo (M.S.): Turtle population dynamics and ecology (2006) Kari Gervin (M.S.): Relating land use/land cover to stream biotic integrity (2006) Brian Elkington (M.S.): Larval Yellow perch response to turbidity (2006) Chris Davis (Ph.D. - BGSU): Restoration ecology of Drosera intermedia in Ohio (no longer active) Gwen Tenney (M.S.): Effects of prescribed fires on soil carbon efflux in an Ohio oak woodland (2007) Betsy Bodamer (M.S.): Effect of wetlands on the dispersal of zebra mussels (2007) Amanda Haponski (M.S.): Population genetics of the greenside darter (2007) Pam Struffolino (M.S.): E. coli dynamics in Maumee Bay (2010) Jhonatan Sepulvida Villet (Ph.D.): Population genetics yellow perch, Perca flavescens (2011) Kira Baca (M.S.): Paleostratigraphy of an abandoned meander lake (2013). Kirk Zmijewski (M.S.); Remote sensing applications to evaluate spread of invasive species (2013) Amanda Haponski (Ph.D.): Evolutionary history and population genetics of walleye (2013) Jason Ross (M.S.): Near-shore Lake Erie fish communities (2013) John Herd (M.S.): Harmful algal blooms in Western Lake Erie (2013) Adam Russell (M.S.): Relationships between round goby and fishes of Lake Erie tributaries (2014). Jeremy Pritt (Ph.D.): Fish migration as an ecolink between the Maumee and Western Lake Erie (2014) Matthew Mayher (M.S.): Sediment and phosphorus removal in wetlands (2016)

### CURRENT GRADUATE STUDENTS (as adviser):

Jennifer Siler (M.S.E, inactive): Ecology curriculum for elementary school students (co-advised with R. Schneider)

### CURRENT GRADUATE STUDENTS (as committee member):

Ryan Jackman (Ph.D.): Wetlands design for phosphorus remediation. Linda Solarek (M.L.S.): Patterns of sedimentation in reservoirs: A remote-sensed analysis.

### **RECENT UNDERGRADUATE HONORS STUDENTS (as advisor):**

Cory Becher (BS, ENSC): Impact of dredging on heterogeneity and fish communities in agricultural streams of the greater Sandusky River watershed, Ohio (2013). Now - graduate student Stephen Austin State University, Texas.

James Moriarty (BS, ENSC): Comparing the effectiveness of two fish sampling techniques (2014). Now - environmental specialist Ohio Department of Agriculture

Elizabeth Gorshoff (BS, BIOM): Habitat utilization and social behavior in whiptail lizards (*Cnemidophorus*) (2014). Now – Zookeeper, Toledo Zoo

### **TECHNICAL REPORTS:**

Gottgens, J.F., T.D. Crail and A. Svoboda. 2014. Impacts of urban river restoration on fish community. Final Report to the Ohio Lake Erie Commission Award: SG 455-13: 40pp.

Gottgens, J.F., T.D. Crail, A. Svoboda and J. Moriarty. 2014. Fish community composition pre- and postinstallation of in-stream structures to assess improvement to ecosystem function: Phase I (pre-installation). Final Report to the U.S. Fish and Wildlife Service: Award: F13AP00516: 14pp.

Moriarty, J., J.F. Gottgens and T.D. Crail. 2013. What are the benefits and downfalls of two different fish capturing methods used to evaluate fish communities of the Ottawa River, Lucas County, Ohio. Final report to The University of Toledo Office of Undergraduate Research: 18 pp.

Chu, H., J. Chen, K. Czajkowski, R. Becker and J. Gottgens. 2013. Ecosystem Responses and Societal Adaptation of West Lake Erie Basin to Climate Change: A New Initiative based on Land-Water Interactions. Third year project progress report, NOAA Award NA10OAR4170224 (10 pp.)

Chen J., K. Czajkowski, R. Becker and J. Gottgens. 2012. Ecosystem Responses and Societal Adaptation of West Lake Erie Basin to Climate Change: A New Initiative based on Land-Water Interactions. Second year project progress report, NOAA Award NA10OAR4170224 (7pp.)

Chu, H., J. Chen, K. Czajkowski, R. Becker and J. Gottgens. 2011. Ecosystem Responses and Societal Adaptation of West Lake Erie Basin to Climate Change: A New Initiative based on Land-Water Interactions. First year project progress report, NOAA Award NA10OAR4170224

Becher, C. and J.F. Gottgens. 2011. The impact of dredging on heterogeneity and fish communities in agricultural streams of the greater Sandusky River watershed, Ohio. Final report to The University of Toledo Office of Undergraduate Research: 14 pp.

Grabarkiewicz, J.D. and J.F. Gottgens. 2011. The Distribution and Abundance of Freshwater Mussels in Three Lake Erie Tributaries. Final Report to the Ohio Lake Erie Commission, SG 383-10, Final report to the Ohio Lake Erie Commission, Toledo, OH: 54 pp.

Chen, J., K. Czajkowski, R. Becker and J. Gottgens. 2011. Ecosystem Responses and Societal Adaptation of West Lake Erie Basin to Climate Change: A New Initiative based on Land-Water Interactions. Project Progress Report, NOAA Award NA10OAR4170224.

Grabarkiewicz, J.D. and J.F. Gottgens. 2010. A survey of the freshwater mussels of Swan and Tymochtee creeks and the Blanchard River with emphasis on the rayed bean (*Villosa fabalis*), candidate species for federal listing. Progress report to the Ohio Lake Erie Commission, Toledo, OH.

Gottgens, J.F. 2009. Impact of the removal of the Secor Road dam on the fish community structure and composition in the Ottawa River, Ohio. Final Report to TMACOG, Project 06(h) EPA 10: 16 pp.

Crail, T.D., J.F. Gottgens and P.T. Mathias. 2007. Status and distribution of native unionid mussels (Unionidae) in the coastal wetlands of the Winous Point Marsh Conservancy. Final Report to the Winous Point Marsh Conservancy: 21 pp.

Crail, T.D. and J.F. Gottgens. 2007. Status and distribution of native unionid mussels (Unionidae) in the coastal wetlands of the Winous Point Marsh Conservancy. Annual Report to the Winous Point Marsh Conservancy: 6 pp.

Crail, T.D. and J.F. Gottgens. 2007. Testing the impact of plant colonization on the fish community in headwaters of the Ottawa River, northwest Ohio. Final report to Ohio Lake Erie Commission: 37 pp. + appendix

Gottgens, J.F. 2005. Report of project activities - 2007 Costa Rica – Field Course in Tropical Ecology. Final Report to the Kohler Foundation.

Benedict, M. and J.F. Gottgens. 2006. Riparian forests in NW Ohio watersheds: Relations between landscape structure, land use, and water quality in regional rivers. Final report to Ohio Lake Erie Commission: 47 pp.

Crail, T.D. and J.F. Gottgens. 2006. Survey Fish Diversity: Testing the Impact of Vegetative Encroachment. First progress report to Ohio Lake Erie Commission.

Benedict, M. and J.F. Gottgens. 2005. Riparian forests in NW Ohio watersheds: Relations between landscape structure, land use, and water quality in regional rivers. 1<sup>st</sup> progress report to the Ohio Lake Erie Commission.

Gottgens, J.F. 2005. Report of project activities - 2005 Costa Rica - Field Course in Tropical Ecology. Final

Report to the Kohler Foundation.

Gottgens, J.F., J.E. Evans, N.S. Levine, S.J. Roberts and A.L. Spongberg. 2004. Dam Removal in the Ottawa River, Ohio: A Feasibility Study. Final Report to the Ohio Department of Natural Resources Office of Coastal Management: 104 pp.

Gottgens, J.F. 2003. Report of project activities - 2002 Costa Rica – Development of Field Course in Tropical Ecology. Final Report to the Kohler Foundation.

Gottgens, J.F., J. Evans, N. Levine, and A. Spongberg. 2002. Dam removal in the Ottawa River, Ohio. First Year Progress Report. Submitted to the Ohio Department of Natural Resources: 27 pp.

Gottgens, J.F. 2002. Report of project activities - 2001 International Wetland Symposium in Penang (Malaysia). Final Report to the Kohler Foundation.

Gottgens, J.F. 2000. Successional development of cambará (*Vochysia divergens* Pohl)-dominated forest stands in the Northern Pantanal, Brazil: Wet season sampling. Final Report to Kohler Foundation: 8 pp.

Gottgens, J.F., A.L. Spongberg, and B.E. Muller. 1999. Longterm nonpoint pollution abatement by a Lake Erie marsh and its implication for wetland restoration policies. Final Report to the Ohio Lake Erie Commission: 79 pp.

Gottgens, J.F. 1999. Successional development of cambará (*Vochysia divergens* Pohl)-dominated forest stands in the Northern Pantanal, Brazil. 1999. Final Report to the Kohler Foundation.

Gottgens, J.F. 1999. Wetland restoration along the Southwestern Lake Erie coast line: Brief case studies and recommendations. Technical Report, United States Army Corps of Engineers Research and Development Center, Waterways Experiment Station.

Muller, B.E. and J.F. Gottgens. 1999. Low-level radio-isotope dating of peat cores in Northern Alberta, Canada. Technical Report to the Department of Biology, University of Alberta, Edmonton, Canada.

Gottgens, J.F., D.H. Davis, and A.L. Spongberg. 1999. Longterm nonpoint pollution abatement by a Lake Erie marsh and its implication for wetland restoration policies. Report to Ohio Lake Erie Commission.

Gottgens, J.F., R.L. Sinsabaugh, E.J. Tramer, and D.B. Baker. 1998. Transport and fate of organic matter from an agrolandscape: The Maumee Basin. Final Report to the U.S. Department of Agriculture.

Gottgens, J.F., D.H. Davis, and A.L. Spongberg. 1998. Longterm nonpoint pollution abatement by a Lake Erie marsh and its implication for wetland restoration policies. Progress report to the Ohio Lake Erie Commission.

Gottgens, J.F. 1998. Mercury accumulation trends in the Brazilian Pantanal: Core studies and biological samples. Kohler Foundation and the Center for International Studies, University of Toledo, Ohio.

Grigore, M.T., J.F. Gottgens, and E.J. Tramer. 1997. The Metzger Marsh Restoration Project Phase I (1995-1996): Habitat and avian community responses to dike construction and drawdown. Final Report to The Lake Erie Commission, Project LEPF-05-94: 65 pp.

Simmers, B.S., B.E. Rood, and J.F. Gottgens. 1997. Mercury deposition and bioaccumulation in the Okefenokee Swamp. Report to the Okefenokee National Wildlife Refuge, Georgia: 13 pp.

Homsher, M.T., A.L. Spongberg, J.F. Gottgens, J. Huckins, and J. Petty. 1997. The silence of the sentinels: An investigation of wetland contaminant cycles and trophic impact. Report to Lake Erie Center, University of Toledo: 21 pp.

Kaplan, S.M. and J.F. Gottgens. 1997. Sedimentary indicators of past biological conditions. Report to Lake Erie Center, University of Toledo: 15 pp.

Cole, M.L. and J.F. Gottgens. 1997. Patterns of mercury accumulation in wetland food chains. Report to Ohio Division of Wildlife and U.S. Fish and Wildlife Service: 13 pp.

Gottgens, J.F., E.J. Tramer, and M.T. Grigore. 1996. Avian community responses to the Metzger Marsh restoration project. Report to the Lake Erie Protection Fund: 25 pp.

Gottgens, J.F., R.L. Sinsabaugh, E.J. Tramer, and D.B. Baker. 1996. Transport and fate of organic matter from an agrolandscape: The Maumee Basin. Progress Report to the U.S. Department of Agriculture.

Gottgens, J.F. 1996. Radionuclide dating of a sediment core from Ballville Reservoir, Ohio. Technical letter to Ohio Division of Geological Survey and Department of Geology, Bowling Green State University: 3 pp.

Gottgens, J.F. 1996. Radionuclide dating of a sediment core from IVEX Reservoir, Ohio. Technical letter to Ohio Division of Geological Survey and Department of Geology, Bowling Green State University: 3 pp.

Tramer, E.J., J.F. Gottgens, M.T. Grigore, and P.F. Wetzel. 1995. Avian community responses to the Metzger Marsh coastal wetland restoration project. Report to the Ohio Dept. of Natural Res., Div. of Wildlife (covering 1994 grant period): 21 pp.

Gottgens, J.F. 1995. Radionuclide dating of a sediment core from Lake Sonachi, Kenya. University of Minnesota: 3 pp.

Gottgens, J.F and B.P. Swartz. 1995. Trace metal accumulations in Telford cave sediments. University of Florida: 5 pp.

Gottgens, J.F. 1994. Radionuclide dating of a sediment core from Ballville Reservoir, Ohio. Report to Ohio Division of Geological Survey and Department of Geology, Bowling Green University: 10 pp.

Gottgens, J.F. 1994. Assessment of management issues in Lago de la Josefina and Laguna Llaviucu, Azuay, Ecuador. Report to ETAPA, Cuenca, Ecuador: 5 pp.

Delfino, J.J., T.L. Crisman, J.F. Gottgens, B.E. Rood, and C.D.A. Earle. 1993. Spatial and temporal distribution of mercury in Everglades and Okefenokee wetland sediments (Volume 1). Final Report to South Florida Water Management District and Florida Department of Environmental Regulation: 140 pp.

Delfino, J.J., T.L. Crisman, J.F. Gottgens, B.E. Rood, and C.D.A. Earle. 1993. Spatial and temporal distribution of mercury in Everglades and Okefenokee wetland sediments (Volume 2). QA/QC report to South Florida Water Management District and Florida Department of Environmental Regulation: 207 pp.

KBN Engineering and Applied Sciences, Applied Technology and Management, and J.F. Gottgens. 1993. Assessing the feasibility of restoring Newnans Lake: Conceptual engineering report. Final Report to the Florida Game and Fresh Water Fish Commission: 274 pp.

Montague, C.L., S.V. Coldwell, H.F. Percival, and J.F. Gottgens. 1994. Issues and options related to the management of Silver Springs rhesus macaques. Fla. Coop. Fish and Wildl. Res. Unit, Natl. Biol. Surv. Tech. Rep. 49. 34pp.

Gottgens, J.F. and T.L. Crisman. 1992. Newnans Lake, Florida: Removal of particulate organic matter and nutrients using a short-term drawdown. St. Johns River Water Management District: 46 pp.

Gottgens, J.F. and T.L. Crisman. 1992. Sediments of Newnans Lake: Characteristics and patterns of redistribution following a short-term drawdown. St. Johns River Water Management District: 83 pp.

Gottgens, J.F. and C.L. Montague. 1988. Comprehensive reconnaissance profile of the Paynes Prairie Basin, Florida. Final Report to the St. Johns River Water Management District: 60 pp.

Gottgens, J.F. and C.L. Montague. 1988. Categorized bibliography of the Paynes Prairie Basin, Florida. Final Report to the St. Johns River Water Management District: 30 pp.

Gottgens, J.F. and C.L. Montague. 1987. Orange, Lochloosa, and Newnans lakes: A survey and preliminary interpretation of environmental research data. Final Report to the St. Johns River Water Management District: 82 pp.

Gottgens, J.F. and C.L. Montague. 1987. Categorized bibliography of the Orange Creek Basin. Final Report to the St. Johns River Water Management District: 29 pp.

#### PRESENTATIONS AT SCIENTIFIC MEETINGS:

Czajkowski, K. and J.F Gottgens. 2017. Study of the near-shore environment on the South shore of Lake Erie. 8<sup>th</sup> Meeting of the Lake Erie Millennial Network, Windsor, Ontario, CA.

Gottgens, J.F., P. Lawrence and A. Svoboda. 2016. Rehabilitation of the Ottawa River on the University of Toledo campus and Initial Habitat and Fish Community Responses. NOAA and U.S. FWS Restoration Webinar Series.

Svoboda, A., J.F. Gottgens and T.D. Crail. 2014. Effects of Urban River Rehabilitation Structures on the Fish Community in the Ottawa River, Ohio. EcoStream Conference, NC State, Charlotte North Carolina.

Gorshoff, E. and J.F. Gottgens. 2014 Examining the relationships between thermoregulatory activity and social behavior in the captive desert grasslands whiptail lizard, *Aspidoscelis uniparens*. University of Toledo Undergraduate Honors Research Symposium, Toledo, Ohio

Chu, H., J. Chen, J.F. Gottgens, G. Sun and C. Shao. 2014. Contrasting interannual variability of evapotranspiration in a temperate Oak woodland, a freshwater marsh and a conventional cropland. American Society of Agricultural and Biological Engineers 2014 Conference: Evapotranspiration: Challenges in Measurement and Modeling from Leaf to the Landscape Scale and Beyond. Raleigh, North Carolina.

Moriarty, J., J.F. Gottgens and T.D. Crail. 2013. Comparing two different fish sampling methods to evaluate fish communities of the Ottawa River, Lucas County, Ohio. 27th Annual National Conference on Undergraduate Research, Lexington, Kentucky.

Svoboda, A., J. Moriarty, J.F. Gottgens and T.D. Crail. 2013. The Fishes of the Ottawa River, Ohio. UT Commission on the River and Celebrate our River exhibit, Toledo, OH.

Chu, H., J. Chen, J.F Gottgens. 2013. Contributions of methane and lateral carbon fluxes to a temperate marsh carbon budget. Ecological Society of America 98<sup>th</sup> Annual Meeting, Minneapolis, MN.

Moriarty, J., J.F. Gottgens and T.D. Crail. 2013. Comparing two different fish capturing techniques in the Ottawa River, Ohio. University of Toledo Undergraduate Research Symposium and Celebrate our River exhibit, Toledo, Ohio

Chu, H., J. Chen, J.F. Gottgens. 2013. Contributions of methane and lateral carbon fluxes to a temperate marsh carbon budget. Midwest Graduate Research Symposium, University of Toledo, Ohio.

Baca, K., T.G. Fisher and J.F. Gottgens. 2013. Temporally constrained aeolian sand signals and their relationship to climate, Oxbow Lake, Saugatuck, Michigan. GSA North-Central Section - 47th Annual Meeting, Kalamazoo, Michigan, USA.

Tessler, N.R., J.F. Gottgens and M.R. Kibbey. 2013. Rediscovery of an Ohio Fish Species of Special Concern in the Mainstem of the Maumee River in Northwestern Ohio. WV and OH chapter meeting of the American

Fisheries Society. Huntington, West Virginia.

Chu, H., J. Chen, Z. Ouyang, M. Deal, R. John, J. Gottgens. 2012. CO<sub>2</sub> and H<sub>2</sub>O fluxes in different ecosystems altered uniquely by similar climatic extremes. AGU Annual Conference, San Francisco, California.

Chen, J., Z. Ouyang, R. John, H. Chu, T. Zenone, M. Deal and J.F. Gottgens. 2012. Climatic extremes significantly alter carbon fluxes in time and space. AGU Annual Conference, San Francisco, California.

Tessler, N.R., J.F. Gottgens and M.R. Kibbey. 2012. Rediscovery of an Ohio Fish Species of Special Concern in the Mainstem of the Maumee River in Northwestern Ohio. NANFA Annual Conference, Salt Fork State Park, Ohio

Tessler, N.R. and J.F Gottgens. 2012. A field study of northern pike spawning and nursery habitat in headwater streams within an agricultural landscape in northwestern Ohio. Midwest Graduate Research Symposium, University of Toledo, Ohio.

Grabarkiewicz, J.D. and J.F. Gottgens. 2012. Habitat use and community structure of freshwater mussels in three Lake Erie tributaries. Midwest Graduate Research Symposium, University of Toledo, Ohio.

Tessler, N.R., J.F. Gottgens and M.R. Kibbey. 2012. Return of a pollution-intolerant fish species to the Ohio portion of the mainstem of the Maumee River in northwestern Ohio. Midwest Graduate Research Symposium, University of Toledo, Ohio.

Gottgens, J.F., N.R. Tessler, T.D. Crail and J.D. Selden. 2012. Testing Ecological Functions of Agricultural Drainage Channels. Heidelberg University/ U.S. EPA joint meeting, Tiffin, Ohio.

Tessler, N.R. and J.F Gottgens. 2012. Homogeneous vegetated farm ditches provide important nursery habitat for northern pike in northwestern Ohio. American Fisheries Society, Illinois Chapter annual meeting. Utica, Illinois.

Baca, K., T.G. Fisher and J.F. Gottgens. 2012. Temporally constrained sand signals and their relationship to climatic trends in Southwestern Michigan, USA. Geological Society of America, North-Central meeting, Dayton, Ohio

Becher, C and J.F. Gottgens. 2012. The impact of dredging on heterogeneity and fish communities in agricultural streams of the greater Sandusky River watershed, Ohio. 26th Annual National Conference on Undergraduate Research, Ogden, Utah.

Becher, C and J.F. Gottgens. 2011. Fish community richness and diversity in farm drainage channels of the greater Sandusky River watershed, Ohio. University of Toledo Undergraduate Research Symposium, Toledo, Ohio

Tessler, N.R., J.F. Gottgens, E.J. Tramer and J.M. Casselman. 2011. Agricultural streams as spawning and nursery habitat for northern pike in the North Branch of the Portage River drainage of northwestern Ohio. Midwest Fish and Wildlife Conference, Des Moines, Iowa

Gottgens, J.F., N.R. Tessler, T.D. Crail and J.D. Selden. 2011. Fishes and ditches: Enhancing ecological functions of agricultural drainage channels. Society of Wetland Scientists Annual Conference, Prague, Czech Republic.

Krajeski, C, J.D Grabarkiewicz and J.F. Gottgens. 2011. Freshwater Mussel Diversity in the upper and middle reaches of the Blanchard River, Swan Creek, and Beaver Creek in Northwest Ohio 'Posters on the Capitol'; Undergraduate student research in NW Ohio. Columbus, Ohio

Grabarkiewicz, J.D. and J.F Gottgens. 2011. Microhabitat Use and Community Structure of Unionid Mussels in

Three Lake Erie Tributaries. Oak Opening's Research Symposium, Toledo, Ohio

Tessler, N.R., J.F. Gottgens and M.R. Kibbey. 2010. Rediscovery of eastern sand darter, *Ammocrypta pellucida* (Putnam), in the Maumee River basin in northwestern Ohio with implications for conservation. Southeastern Fishes Council, annual meeting, Athens, Georgia.

Crail, T.D., J.M. Bossenbroek and J.F. Gottgens. 2010. Wind-derived seiches as a means for detecting and monitoring the unionid community in the western basin of Lake Erie. Lake Erie Millennium Network Conference, University of Windsor, Ontario, Canada.

Crail, T.D., J.M. Bossenbroek and J.F. Gottgens. 2009. A multiscale analysis of *Etheostoma* darter habitat in the Ohio River Basin. Southeastern Fishes Council Annual Meeting, Alabama.

Tessler, N.R., Selden, J.D., Crail, T.D. and Gottgens, J.F. 2009. Use of Agricultural Streams in Northwestern Ohio as Spawning Habitat by Native Fishes: Impact of Habitat Heterogeneity. Annual NANFA Convention, Tampa, Florida.

Crail, T.D., J.M. Bossenbroek and J.F. Gottgens. 2009. Niche dimension of *Etheostoma* darters in the Ohio River Basin at multiple scales. American Fisheries Society 139<sup>th</sup> Annual Meeting, Nashville, Tennessee

Duncan, A.M., J.F. Gottgens and D.F. Dwyer. 2009. *Azolla caroliniana*: A model for Arsenic Remediation. Ecological Society of America, 94th Annual Meeting, Albuquerque, New Mexico

Duncan, A.M., M.W. Gorr, J.R. Rofkar, K.D. Barnswell, J.F. Gottgens and D.F. Dwyer. 2009. Plant-Mediated Reductions of Arsenic Levels in Flow-Through Wetland Microcosms. 2009 – IAGLR Conference, Toledo, Ohio

Selden, J.D., J.F. Gottgens, T.D. Crail, P.T. Mathias and E.A. Heppner. 2009. The effect of channel heterogeneity on fish communities in agricultural streams in Sandusky and Seneca Counties of Ohio. 2009 – IAGLR Conference, Toledo, Ohio

Gottgens, J.F. A.I. Arceo and T.D. Crail. 2009. Effects of a Low-Head Dam Removal on the Fish Community in a Great Lakes Tributary. 2009 – IAGLR Conference, Toledo, Ohio

Crail, T.D., P.M. Mathias, J.F. Gottgens and J.M. Bossenbroek. 2009. Wind-derived seiches as a means for detecting and monitoring the unionid community in the western basin of Lake Erie. 2009 – IAGLR Conference, Toledo, Ohio

Gottgens, J.F. 2009. Hundreds of obsolete dams in Ohio: Science-based management of our waterways. Ohio Lake Management Society Annual Conference, Tiffin, Ohio (Invited keynote speaker) Duncan, A.M. (J. Gottgens, faculty advisor). 2008. Evaluation of the fern *Azolla caroliniana* to phytofiltrate arsenic from contaminated water. 29<sup>th</sup> Annual Sigma Xi Student Research Symposium, University of Toledo, Ohio.

Crail, T.D. and J.F. Gottgens. 2008. Testing the impact of vegetative colonization on the fish community in agricultural ditches of the Ottawa River, northwest Ohio. 93<sup>rd</sup> Annual Meeting of the Ecological Society of America, Milwaukee, Wisconsin.

Duncan, A.M. and J.F. Gottgens. 2008. Evaluation of the fern *Azolla caroliniana* to phytofiltrate arsenic from contaminated water. IUFRO International Conference, Chengdu, P.R. China

Szabo, A., C. Gruden and J. Gottgens. 2008. Designing a rain garden for campus storm water. 'Posters on the Capitol'; Undergraduate student research in NW Ohio. Columbus, Ohio

Crail, T.D. and J.F. Gottgens. 2008. Impacts of ditch management on fish communities in the upper Ottawa River, Ohio. Ohio Academy of Sciences Annual Conference, Toledo, Ohio.

Gottgens, J.F., A.I. Arceo and T.D. Crail. 2008. Dam removal: Challenges and opportunities for fish ecological research. Ohio Academy of Sciences Annual Conference, Toledo, Ohio.

Crail, T.D., J.M. Bossenbroek and J.F. Gottgens. 2007. Ohio microhabitat use of three state-listed darter species belonging to the subgenus *Nothonotus*. Southeastern Fishes Council Annual Meeting, Chattanooga, Tennessee.

Crail, T.D. and J.F. Gottgens. 2007. Testing the impact of vegetative colonization on the fish community in headwaters of the Ottawa River, northwest Ohio. 2007 ASHI Annual Conference, St. Louis, Missouri.

Evans, J.E. and J. F. Gottgens. 2007. Legacy Sediments in the Ballville Reservoir, Sandusky River, Northwestern Ohio: Implications for Dam Removal and Remediation of the Sandusky. Water Management Association of Ohio Annual Meeting, Columbus, Ohio.

Crail, T.D. and J.F. Gottgens. 2007. Testing the impact of plant colonization on the fish community in headwaters of the Ottawa River, northwest Ohio. 2007 IAGLR Annual Conference, State College, Pennsylvania.

Crail, T.D. and J.F. Gottgens. 2007. Heterogeneous farm ditches? Managing wetlands in agricultural stream segments for the benefit of fish. Society of Wetland Scientists Annual Conference, Sacramento, CA.

Crail, T.D. and J.F. Gottgens. 2007. Alternative geomorphologies in agricultural ditches: Fish community response in headwaters of the Ottawa River, Ohio. Fifth Annual Oak Opening's Research Symposium, Toledo, Ohio

Benedict, M. and J.F. Gottgens. 2006. Riparian forests in Northwest Ohio watersheds: Relations between landscape structure, land use, and water quality in regional streams. Lake Erie Conference, Lorain County Community College, Elyria, Ohio.

Crail, T.D. and J.F. Gottgens. 2006. Testing the impact of vegetative encroachment on the fish community in the headwaters of the Ottawa River, northwest Ohio. Lake Erie Conference, Lorain County Community College, Elyria, Ohio.

Benedict, M. and J.F. Gottgens. 2006. Riparian forests in Northwest Ohio watersheds: Relations between landscape structure, land use, and water quality in regional streams. Ecological Society of America Annual Meeting, Memphis, Tennessee.

Gottgens, J.F., T. D. Crail and A.I. Arceo. 2006. Quantifying the fish community response to dam removal: The case of the Ottawa River, northwest Ohio. Geological Society of America meeting, North-Central Chapter, Akron, Ohio

Gottgens, J.F., S.J. Roberts, J.E. Evans, A.L. Spongberg and N.S. Levine. 2006 Assessing Potential Removal of Low-Head Dams in Urban Settings: A Case-Study from the Ottawa River, NW Ohio. 2006 IAGLR Annual Conference, Windsor, Ontario, Canada

Crail, T.D. and J.F. Gottgens. 2006. Fish community structure and composition in two headwater habitats of the Ottawa River, northwest Ohio. 2006 IAGLR Annual Conference, Windsor, Ontario, Canada

Crail, T.D. and J.F Gottgens. 2006. Fish community response in two headwater habitats of the Ottawa River. Fourth Annual Oak Opening's Research Forum, Toledo, Ohio

Muller, B.E., J.F. Gottgens and A.L. Spongberg. 2005. Effects of long-term nonpoint agricultural runoff on phosphorus retention by a Lake Erie marsh. International Symposium on Wetland Pollutant Dynamics and Control, Ghent, Belgium.

Benedict, M and J.F. Gottgens. 2005. Riparian forests in NW Ohio watersheds: relations between landscape structure, land use, and water quality in regional streams. 48th Annual Conference of the International Association of Great Lakes Research, Ann Arbor, Michigan.

Arceo, A.I., J.F. Gottgens, T. D. Crail. 2004. The impact of a small dam on fish community composition and structure in the Ottawa River, Northwest Ohio. Society of Wetland Scientists Annual Conference, Seattle, WA.

Benedict, M. and J.F. Gottgens. 2004. Linking water quality and satellite-derived land use data in the Upper-Auglaize Basin, Ohio: Contrasting trends from the early-1970's with the late-1990's and testing management implications. Twenty-fifth Annual Sigma Xi meeting, University of Toledo, Toledo, OH.

Arceo, A.I. and J.F. Gottgens. 2004. The impact of a small dam on fish community composition and structure in the Ottawa River, northwest Ohio. Twenty-fifth Annual Sigma Xi meeting, University of Toledo Chapter, Toledo, OH.

Gottgens J.F., A.L. Spongberg, J.E. Evans, S.J. Roberts and N.S. Levine 2004. Dam Removal in the Ottawa River, Ohio, U.S.A.: A Feasibility Study. 7<sup>th</sup> Intecol International Wetlands Conference, Utrecht, The Netherlands.

Benedict, M., M. Palmer, R. Parab, J. Gottgens and K. Czajkowski. 2003. Linking water quality and satellitederived land use data in the Upper-Auglaize Basin, Ohio: Contrasting trends from the early-1970s with the late-1990s and testing management implications. Society of Wetland Scientists Annual Conference, New Orleans, LA.

Gottgens J.F. and R.W Kroll. 2003. Longterm habitat changes in Lake Erie marshes: A contribution towards maximizing wetland functions in a changed landscape. American Fisheries Society meeting, Columbus, Ohio.

Homsher, M.T., D.A. Neher', A.L. Spongberg, J.F. Gottgens, J.N. Huckins, and J.D. Petty. 2003. Time-Integrated Chemical Mixture Monitoring in an Aquatic Ecosystem with Semipermeable Membrane Devices and *Dreissena polymorpha*. Ohio Academy of Sciences Annual Meeting, University of Findlay, Ohio

Gottgens, J.F., M. Benedict, and R. H. Fortney. 2001. *Vochysia divergens*-dominated forests in the Pantanal of Brazil: Successional development of an expanding community. Asian Wetland Symposium 2001, Penang, Malaysia.

Gottgens, J.F. 2001. Channelizing Large Rivers: Short-term Economic Gain versus Long-term Wetland Loss. Asian Wetland Symposium 2001, Penang, Malaysia.

Benedict, M., R.H. Fortney, and J.F. Gottgens. 2001. Successional development of *Vochysia divergens*-dominated forests (Cambarazal) in the Northern Pantanal of Brazil. Annual Meeting, Ecological Society of America, Madison, Wisconsin.

Homsher, M.T., D.A. Neher, A.L. Spongberg, J.F. Gottgens, J.N. Huckins, and J.D. Petty. 2000. Time-integrated contaminant monitoring in an aquatic ecosystem using semi-permeable membrane devices and *Dreissena polymorpha*. 21st Annual Meeting, Society of Environmental Toxicology and Chemistry, Nashville, Tennessee, USA.

Benedict, M., R.H. Fortney, and J.F. Gottgens. 2000. Successional development of cambara (*Vochysia divergens*)-dominated forests in the Northern Pantanal. Quebec 2000 Millennium Wetland Conference and 21st Annual Meeting of the Society of Wetland Scientists, Quebec, Canada.

Leady, B.S. and J.F. Gottgens. 2000. Mercury accumulation in sediment cores and along food chains in two regions of the Brazilian Pantanal. Quebec 2000 Millennium Wetland Conference and 21st Annual Meeting of the Society of Wetland Scientists, Quebec, Canada.

Muller, B.E. and J.F. Gottgens. 2000. The effects of long-term non-point agricultural runoff exposure on nutrient accumulation in a Lake Erie marsh. Quebec 2000 Millennium Wetland Conference and 21st Annual Meeting of the Society of Wetland Scientists, Quebec, Canada.

Gottgens, J.F. 1999. The Paraguay-Paraná Hidrovia: Large-scale channelization or a "tyranny of small decisions?" Second World Conference on Preservation and Sustainable Development in the Pantanal. World University Federation, Washington D.C. (invited)

Fortney, R.H., M. Benedict, J.F. Gottgens, B.S. Simmers, and T.L. Walters. 1999. Aquatic plant community composition and distribution along inundation gradients at two ecologically distinct sites in the Pantanal region of Brazil. Second World Conference on Preservation and Sustainable Development in the Pantanal. World University Federation, Washington D.C.

Gottgens, J.F., B.E. Muller, and A.L. Spongberg. 1999. Longterm nonpoint pollution abatement by a Lake Erie marsh and its implication for wetland restoration policies. Annual Ohio Lake Erie Conference, Huron, Ohio. (invited)

Benedict, M., R.H. Fortney, T.L. Walters, J.F. Gottgens, and B.S. Simmers. 1999. Aquatic plant community composition and distribution along inundation gradients at two ecologically distinct sites in the Pantanal region of Brazil. 20<sup>th</sup> Annual Society of Wetland Scientists Conference, Norfolk, Virginia.

Muller, B.E., J.F. Gottgens, Spongberg, A.L., and N. Kusina. 1999. The effects of long-term non-point source nutrient loading on two impounded Lake Erie marshes. 20<sup>th</sup> Annual Society of Wetland Scientists Conference, Norfolk, Virginia.

Simmers, B.S. and J.F. Gottgens. 1999. Mercury accumulation trends from two sites in the Brazilian Pantanal: Core studies and biological samples. 20<sup>th</sup> Annual Society of Wetland Scientists Conference, Norfolk, Virginia

Simmers, B.S. and J.F. Gottgens. 1999. Lake sedimentary records as regional archives of mercury: A Lake Erie example. 42<sup>nd</sup> Annual Conference of the International Association for Great Lakes Research, Cleveland, Ohio.

Spongberg, A.L., J.F. Gottgens, N. Kusina, and B.E. Muller. 1999. Metal and pesticide contaminant accumulation rates at the Winous Point marshes near Sandusky, Ohio. 42<sup>nd</sup> Annual Conference of the International Association for Great Lakes Research, Cleveland, Ohio.

Gottgens J.F., S.M. Kaplan, and B. S. Simmers. 1999. Testing the usefulness of sedimentary indicators to reflect past environmental conditions. American Society of Limnology and Oceanography 1999 Annual Meeting, Santa Fe, NM.

Gottgens, J.F., B.E. Muller, A.L. Spongberg, and D.H. Davis. 1998. 100-Year records of the accumulation of sediment, nutrients, pesticides, and trace metals in a Lake Erie marsh impacted by agriculture and a reference marsh. 19th Annual Society of Wetland Scientists Conference, Anchorage, Alaska.

Simmers, B.S. and J.F. Gottgens. 1998. How reliable are sedimentary records of mercury pollution? A test case from Lake Erie. American Society of Limnology and Oceanography 1998 Annual Meeting, St.Louis, MO.

Kaplan, S.M. and J.F. Gottgens. 1997. Sedimentary indicators of past biological conditions. American Society of Limnology and Oceanography 1997 Annual Meeting, Santa Fe, NM.

Simmers, B.S., T.L. Walters, and J.F. Gottgens. 1997. Bioaccumulation of mercury in plants of the Okefenokee. American Society of Limnology and Oceanography 1997 Annual Meeting, Santa Fe, NM.

Cole, M.L. and J.F. Gottgens. 1997. Patterns of mercury accumulation in wetland food chains. American Society of Limnology and Oceanography 1997 Annual Meeting, Santa Fe, NM.

Evans, J.E., Gill W.M., Svitana A.D., and J.F. Gottgens. 1997. Flood histories reconstructed from sedimentary data from two reservoirs in northern Ohio. Ohio Academy of Sciences Annual Meeting, Bowling Green, Ohio.

Simmers, B.S. and J.F. Gottgens. 1997. Diagenesis of mercury in lake cores: A test case. Ohio Academy of Sciences Annual Meeting, Bowling Green, Ohio.

Cole, M.L. and J.F. Gottgens. 1997. Anthropogenic point sources of mercury in Ohio. Ohio Academy of Sciences Annual Meeting, Bowling Green, Ohio.

Kaplan, S.M. and J.F. Gottgens. 1997. Sedimentary indicators of past biological conditions. Ohio Academy of Sciences Annual Meeting, Bowling Green, Ohio.

R.W. Kroll, J.F. Gottgens, and B.P. Swartz. 1997. Wild-rice to rip-rap: 120 Years of habitat changes and management of a Lake Erie coastal marsh. 62nd North American Wildlife and Natural Resources Conference, Washington, D.C.

Simmers, B.S., J.F. Gottgens, and C.A. Fernandes. 1997. Mercury accumulation trends in the Northern Pantanal: Core studies and biological samples. 18th Annual Society of Wetland Scientists Conference, Bozeman, Montana.

Nelson, K.M., J.F. Gottgens, and E.J. Tramer. 1997. Environmental correlates of tree species distribution within a riparian floodplain forest in Northwest Ohio. 18th Annual Society of Wetland Scientists Conference, Bozeman, Montana.

Grigore, M.T., J.F. Gottgens, and E.J. Tramer. 1997. Restoration of a freshwater coastal marsh - Effects on avian use. Natural Areas Conference, Portland, Oregon.

Grigore, M.T., J.F. Gottgens, and E.J. Tramer. 1997. The Metzger Marsh Restoration Project Phase I (1995-1996): Habitat and avian community responses to dike construction and drawdown. Fourth Annual Ohio Lake Erie Conference, Cleveland, Ohio.

Evans, J.E., Gill W.M., Svitana A.D., and J.F. Gottgens. 1997. Use of reservoir sediment data from two impoundments in Ohio to reconstruct post-settlement land-use changes. Annual meeting Geological Society of America, Salt Lake City, Utah.

Savino, J.A. and J.F. Gottgens. 1997. Watershed development and eutrophication indicators: A paleolimnological examination of Wolf Lake, Michigan. 17th International Symposium, North American Lake Management Society, Houston, Texas.

Simmers, B.S., J.F. Gottgens, and B.E. Rood. 1996. Paleolimnological investigation of the Okefenokee Swamp. Ohio Academy of Sciences, Cleveland, Ohio.

Swartz, B.P., J.F. Gottgens, and R.W. Kroll. 1996. Longterm GIS-based records of habitat changes in a Lake Erie coastal marsh. 17<sup>th</sup> Annual Meeting of the Society of Wetland Scientists, Kansas.

Simmers, B.S., J.F. Gottgens, and B.E. Rood. 1996. Sedimentary evidence of longterm changes in the Okefenokee Swamp. 17<sup>th</sup> Annual Meeting of the Society of Wetland Scientists, Kansas.

Grigore, M.T., J.F. Gottgens, and E.J. Tramer. 1996. Bird/habitat relationships in an open Lake Erie marsh. 39<sup>th</sup> Annual Conference, International Association for Great Lakes Research, Toronto, Canada.

Gottgens, J.F., J.A. Savino, and B.P. Swartz. 1996. Sediment records of organic matter, carbon, and nutrient transport from a large agricultural watershed. 39<sup>th</sup> Annual Conference of the International Association for Great Lakes Research, Toronto, Canada.

Rood, B.E., W.J. Streever, J.F. Gottgens, and J.J. Delfino. 1996. Mercury accumulation trends in a recently characterized sinkhole anomaly of the Florida Everglades. Second EPRI International Congress on Mercury Contamination of Aquatic Systems, Hamburg, Germany.

Gottgens, J.F., B.P. Swartz, R.W. Kroll, and M. Eboch. 1996. Longterm GIS-based records of habitat changes in a Lake Erie coastal marsh. Ohio State University, Columbus.

Liptak, M.A. and J.F. Gottgens. 1995. Long-term nutrient assimilation by a diked Lake Erie coastal marsh; Results of a pilot study. National Conf. Undergrad. Res., Union College, New York.

Streever, W.J., J.F. Gottgens, B.E. Rood, and T.L. Crisman. 1995. Paleo-speleo: Radiolimnology of the Sim's Sink permanently flooded cave, Florida, USA. XXVI SIL International Congress of Limnology, Sao Paulo, Brazil.

Gottgens, J.F. and M.A. Liptak. 1995. Longterm assimilation of agricultural runoff in a Lake Erie marsh. XXVI SIL International Congress of Limnology, Sao Paulo, Brazil.

Rood, B.E., J.F. Gottgens, and J.J. Delfino. 1995. Comparison of mercury accumulation in Lake Eden and the Savannas Marsh wetland, USA. XXVI SIL International Congress of Limnology, Sao Paulo, Brazil.

Gottgens, J.F., E.J. Tramer, and M.T. Grigore. 1995. Avian community responses to the Metzger Marsh restoration. Second Annual Ohio Lake Erie Conference, Cleveland, Ohio.

Fernandes, C.A., J.F. Gottgens, T.L. Crisman, and E. Medley. 1994. Paleolimnology and chemical stratigraphy of two central Florida urban lakes. Florida Lake Management Society Annual Meeting, Orlando.

Rood, B.E., J.F. Gottgens, and J.J. Delfino. 1994. Spatial and temporal distribution of mercury and other trace metals in Florida Everglades flooded soils. American Society of Limnology and Oceanography 1994 Annual Meeting, Miami.

Rood, B.E., J.F. Gottgens, J.J. Delfino, C.D. Earle, and T.L. Crisman. 1994. Mercury Accumulation Trends in Florida Everglades and Savannas Marsh Flooded Soils. Third International Conference on Mercury as a Global Pollutant, Whistler, British Columbia.

Rood, B., J.J. Delfino, J.F. Gottgens, C.D. Earle, T.L. Crisman, K.L. Garcia and N. Ushakoff. 1993. Increased mercury accumulation rates in Florida Everglades sediment. Annual Meeting of the American Chemical Society, Denver, Colorado.

Gottgens, J.F., B.E. Rood, C.D.A. Earle, J.J. Delfino, and T.L. Crisman. 1993. Patterns of mercury accumulation in urban, agricultural, and remote wetlands. American Society of Limnology and Oceanography and Society of Wetland Scientists, Annual Meeting, Alberta, Canada.

Streever, W.J., J.F. Gottgens, and T.L. Crisman. 1992. Patterns of sediment deposition in a subtropical flooded cave system. XXV SIL International Congress of Limnology, Barcelona, Spain.

Rood, B.E., C.D. Earle, J.F. Gottgens, J.J. Delfino and T.L. Crisman. 1992. Spatial and Stratigraphic Distribution of Mercury in Everglades Sediment." Sixth Annual Poster Session, Statewide Environmental Research Expo, University of Florida, Gainesville, Florida.

Gottgens, J.F., T.L. Crisman and W.E. Bolch. 1991. <sup>210</sup>Pb and <sup>137</sup>Cs dating of soft lake sediments using lowenergy gamma-ray spectroscopy. Florida Academy of Sciences, 55<sup>th</sup> Annual Meeting, Saint Leo.

Gottgens, J.F. and T.L. Crisman. 1991. Redistribution of organic sediments in a shallow lake following partial drawdown. American Society of Limnology and Oceanography, Annual Meeting, Halifax, Nova Scotia, Canada.

Crisman, T.L. and J.F. Gottgens. 1991. Paleolimnological evaluation of the effectiveness of a constructed

wetland as a nutrient/sediment trap. 11th Annual International Symposium, North American Lake Management Society, Denver, Colorado.

Gottgens, J.F. and T.L. Crisman. 1990. Quantitative impacts of lake level stabilization on material transfer between water and sediment in Newnans Lake, Florida. American Society of Limnology and Oceanography, Annual Meeting, Williamsburg, Virginia.

Gottgens, J.F. and T.L. Crisman. 1989. Removal of organic matter and nutrients using a short-term partial drawdown. 9th International Symposium, North American Lake Management Society, Austin, TX.

# SEMINARS:

Fishes and Ditches: Mixing Ecology and Agriculture in NW Ohio. Quantum Leap program. Toledo Lucas County Public Library (2012)

The Ottawa River Watershed. Ottawa River Restoration Workshop, University of Toledo & Partners for Clean Streams (2011)

Thinking outside the banks. TECHS, University of Toledo, Scott park campus (2009)

Careers in science education. Ottawa Hills HS Career Expo, Ottawa Hills, Ohio (2009)

Fish community research on the Ottawa River. Advisory sign postings workshop, Commission on the River, University of Toledo, Ohio (2009)

Green approaches to river restoration. Ottawa Hills HS Agora Week, Ottawa Hills, Ohio (2008)

Dam mitigation and site restoration: The case of the Ottawa River. Dam mitigation and site restoration workshop, Partners for Clean Streams, Toledo, Ohio (2008)

Wetland design for water quality improvement. Department of Civil Engineering class presentation (2008)

The fishes of the Ottawa River. Ottawa River Yacht Club, Point Place, Ohio (2006)

A profile of the Ottawa River, Ohio. Stream restoration workshop, University of Toledo, Law School (2006)

The Ottawa River Dam Decommissioning Project. Stream restoration workshop, University of Toledo, Law School (2006)

Wetlands Ecology at UT. Lake Erie Center Showcase meeting (2006)

Thinking outside the banks: A brief profile of the Ottawa River on the University of Toledo campus. Campuswide charette, UT River Commission (2006)

A river runs through it: Enhancing the Ottawa River on campus. Society of Environmental Education (2006)

Restoring wetlands: The Return of the Swamp Thing. Lake Erie Center Public Lecture Series (2006)

What's going on in University of Toledo's Wetlands Research? Some Projects in the Lake Erie Basin. Northwest Ohio Regional Wetlands Forum, Maumee RAP (2005)

Dam removal: Geological, hydrological, chemical and biological considerations. Department of Geography and Urban Planning, University of Toledo, Ohio (2005)

Chemical, geological and hydrological concerns with dam removal: The case of the Ottawa River. Ottawa River Remediation Team, Toledo, Ohio (2004)

Dam Removal in the Ottawa River, Ohio: A Feasibility Study. Presentation to the Council of the Village of Ottawa Hills (2004).

Integrated approach to assessing potential dam removals: an example from the Ottawa River, NW Ohio. Presentation to the Ottawa River Action Group, TMACOG (2004).

Lake Erie Coastal Wetlands for Water Quality Benefits. Wetlands and Water Quality Workshop, Ducks Unlimited, Fremont, Ohio (2004)

Coastal Lake Erie Wetlands: Maximizing Water Quality Benefits in a Changed Landscape. Ohio State University (2004)

Thinking big: The value of Lake Erie coastal wetlands for water quality. American Chemical Society (Ohio Chapter) Earth Day presentation (2004)

Long-term Habitat Changes in Lake Erie Marshes: Maximizing Wetland Functions in a Changed Landscape. Audubon Society of Greater Cleveland, Cleveland Museum of Natural History (2004)

Graduate student research in wetlands ecology in the Brazilian Pantanal. Department of Geology seminar series, Bowling Green State University (2003).

Sediment cores as records of long-term mercury deposition. Department of Earth and Environmental Sciences, University of Budapest, Hungary (2003)

Biodiversity issues in wetlands. A U.S. Great Lakes perspective. Department of Botany, University of Veszprem, Hungary (2003)

Longterm habitat changes in Lake Erie marshes: A contribution towards maximizing wetland functions in a changed landscape. Department of Environmental Sciences, University of Godollo, Hungary (2003)

Sediment cores as records of long-term mercury deposition. Chemistry Department, University of Szeged, Hungary (2003)

Revitalizing the Ottawa River on the UT campus. Department of Geography and Planning, University of Toledo (2003)

Costa Rica summer course: Student research and field activities. Department of Earth, Ecological and Environmental Sciences, University of Toledo (2003).

Managing large rivers systems; ecological, social and economic implications. International Environmental Issues course presentation. Department of Earth, Ecological and Environmental Sciences/ Department of Political Sciences and Public Administration, University of Toledo (2003).

Biodiversity issues in wetlands. Law and Biodiversity course presentation. College of Law/Department of Earth, Ecological and Environmental Sciences, University of Toledo (2003).

Channelizing Large Rivers: Short-term Economic Gain versus Long-term Wetland Loss. University of Toledo International Education week (2002).

Proposed Removal of the Secor Road Dam: Ottawa River, Ohio. Village of Ottawa Hills, Ohio (2002).

Wetlands ecology in the Brazilian Pantanal: What some UT graduate students do during their summers. Department of Earth, Ecological, and Environmental Sciences seminar series (2002).

Get to know the wetlands in your region. American Language Institute, University of Toledo (2002)

Sediment Cores as Records of Longterm Mercury Deposition: The Case of Lake Erie. Great Lakes Aquatic Ecosystem Research Consortium. Lake Erie Center (2001).

The Paraguay-Paraná Hidrovia: Large-scale channelization or a tyranny of small decisions? Earth Fest 2001, University of Toledo, Ohio (2001)

Human impacts and management of wetlands. National Estuarine Research Reserve Coastal Science for Lawyers Workshop. Lake Erie Center, Oregon, Ohio (2001).

Wetland restoration along the southwestern Lake Erie coast line: Case studies and recommendations. Department of Earth, Ecological and Environmental Sciences seminar series, University of Toledo, Ohio (2001)

Graduate student research in the Winous Point Marshes. Winous Point Marsh Conservancy, Port Clinton, Ohio (2000)

Issues in the design of wetlands for stormwater treatment. Department of Civil and Environmental Engineering, West Virginia University, Morgantown, WV (2000)

The role of wetlands in stormwater treatment. Huron River Watershed Council, Ann Arbor, Michigan (2000)

Sedimentary records of past river water quality. Army Corps of Engineers, Pittsburgh, Pennsylvania (2000)

The role of wetlands in contaminant remediation. Legal Institute of the Great Lakes, Toledo, Ohio (2000)

The Paraguay-Paraná Hidrovia: Large-scale channelization or a tyranny of small decisions? Independent Studies Program, Mercer University, Macon, Georgia (2000).

Sediment cores as records of long-term mercury deposition. Ohio-EPA, Columbus, Ohio (2000)

Impacts of the Paraguay-Paraná Hidrovia on the Pantanal of Brazil: Large-scale channelization or a "tyranny of small decisions?" . International Environmental Studies, University of Toledo (1999).

Wetlands protection and management in the Great Lakes. Legal Institute of the Great Lakes, Toledo, Ohio (moderator) (1999).

Southwestern Lake Erie marshes: Ecological perspectives on a changed landscape. Great Lakes Studies Program. Elder Vision, Lourdes College Department of Continuing Education, Sylvania, Ohio (1998)

Winous Point virtual wetland. New opportunities in the class room. Winous Point Research Committee (1998).

Southwestern Lake Erie marshes: Past and present. Community Environmental Organization of Toledo, Toledo, Ohio (1998)

Wetlands research at the University of Toledo S Lake Erie Center. University of Toledo Board of Trustees meeting, Toledo, Ohio (1998)

Sediments and Environmental Change: Studies in Paleolimnology. University of Toledo, Department of Biology seminar series (1998)

From science to policy - Society of Wetlands Scientists International Symposium (invited panelist) (1998).

Environmental protection in the Great Lakes: Current realities and future directions. Legal Institute of the Great Lakes (invited panelist) (1998).

Environmental threats to the Brazilian Pantanal, the world slargest continuous wetland. The Audubon Society of Greater Cleveland, Cleveland Natural Museum of History (1998).

Wild rice to rip-rap: An historical analysis of habitat and functions of Southwestern Lake Erie marshes. Case Western Reserve University, Cleveland, Ohio (1997).

The role of paleolimnology in environmental science. Presentation to Biological Research class (1997).

Southwestern Lake Erie marshes: Ecological perspectives on a changed landscape. Bowling Green State University (1997).

Flooded caves as habitat islands. Department of Biology seminar series, University of Toledo (1996).

Transport and fate of contaminants in wetlands. Department of Biology seminar series, University of Toledo (1995).

Fun with bones. Ottawa Hills Elementary School, second grade classes (1995).

Air-photo interpretations of Winous Point marshes. 40th Annual meeting of the Winous Point Research Committee, Port Clinton, Ohio (1995).

Long-term habitat changes in the Winous Point marshes: A 120 year record of maps and aerial photographs. 40th Annual meeting of the Winous Point Research Committee, Port Clinton, Ohio (1995).

Radiochemical dating of sedimentary deposits. Department of Geology seminar series, University of Toledo (1994).

Aquatic ecology and ecosystem health. BIO 299 undergraduate research presentation (1994).

Dams, mercury, and cave diving: Paleolimnological perspectives on water management. Universidade de Brasilia, Brazil (1994).

The response of a coastal marsh to long-term agricultural runoff: Nutrient accumulation rates. Winous Point Research Committee, Ohio (1994).

The role of paleolimnology in environmental management. Empresa Publica Municipal de Telefonos, Agua Potable y Alcantarillado, Cuenca, Ecuador (1994).

Water-level stabilization in lakes, mercury in wetlands: Two examples of the use of paleolimnology in aquatic ecology. University of Toledo, Ohio (1993).

Environmental impacts of dams and reservoirs. Emory University, Atlanta, Georgia (1993).

The use of paleolimnology in lake and wetland management. Eastern Washington University, Cheney, Washington (1993).

A systems approach to aquatic ecology. Ecolunch, University of Toledo (1993).

Directions for research and teaching in applied aquatic ecology. Department of Biology seminar series, University of Toledo (1993).

Environmental science and humanity (undergraduate course): Guest lecturer, University of Florida (1989-1992).

Quantitative impacts of lake level stabilization on nutrient and sediment dynamics: Coupling limnology with modeling. San Francisco State University, California (1992).

Sex determination in animals. Coastal Carolina College, Myrtle Beach, South Carolina (1992).

Computer simulation in environmental management: A case-study on lake-level stabilization. Institute for Environmental Studies, Louisiana State University, Baton Rouge (1992).

Water management in Florida. Science, technology, sociology, and ecology camp. North Marion Middle School, Florida (1992).

Dams, mercury, and cave diving: Paleolimnological perspectives on water management. University of Florida (1992).

Restoration of Newnans Lake. Florida Game and Fresh Water Fish Commission, Gainesville, Florida (1991).

Subtropical, productive lakes: Water-management versus mud-management. Orange and Lochloosa lakes Technical Advisory Council, Florida (1991).

Background and logistics of <sup>210</sup>Pb and <sup>137</sup>Cs dating of sediments. Department of Environmental Engineering Sciences, University of Florida (1991).

Field study as a basis for computer representation of whole-system hypotheses. Wetlands Center Seminar Series, University of Florida (1990).

Long-term impact of dam construction in shallow lakes. Alachua County Environmental Advisory Council, Gainesville, Florida (1990).

Computational methods for environmental engineers (undergraduate course): Guest lecturer, University of Florida (1988).

Minimodels for evaluating the impact of lake level stabilization on plant biomass and the long-term effectiveness of three commonly used biomass reduction methods. Systems Ecology Seminar Series, University of Florida (1986).

Agricultural non-point source pollution: Improved control over a persistent externality. Natural Resource Economics Seminar Series, Institute of Food and Agricultural Sciences, University of Florida (1986).

Agricultural non-point source pollution in Florida: Scope and solutions. Biology-Chemistry Seminar Series. Department of Environmental Engineering Sciences, University of Florida (1985).

The role of Soil and Water Conservation Districts in solving environmental problems. Florida Association of Conservation Districts, Sarasota, Florida (1984).

### CONSULTANT SERVICES:

Village of Ottawa Hills – Remediation activities for an abandoned oil well. Village of Ottawa Hills – Floodplain/meadow rehabilitation committee (member) SmithGroupJJC; Delineating wet and low lying areas on UT campuses for the UT master plan ZDF (German National Public Broadcasting) – Pantanal documentary Village of Ottawa Hills – Mosquito control task force. Historic Woodlawn Cemetery - Stream management Hidden Harbour Lake Homeowners Association (Holland, Ohio) – Lake management Springer Publ. Comp., The Netherlands – Book reviews and book proposal reviews Toledo Metr. Area Council of Governments – Project Management Team Maumee Bay wetland restoration Ottawa River Remediation Task Force, Maumee RAP, Toledo, Ohio Village of Ottawa Hills – Dam removal, floodplain restoration Toledo Metr. Area Council of Governments – Project Management Team for Ottawa River

Prentice-Hall Publ. Co. - Text box preparation; manuscript and book reviews.

Benjamin-Cummins Publ. Co. - manuscript and book reviews

Gainesville Regional Utilities - Wastewater allocation, nutrient-water budget.

Indiana Department of Natural Resources - Evaluation of wetlands as nutrient/sediment trap.

United States Department of the Interior - Paleolimnology.

South Florida Water Management District - Peer review panel.

Fish and Wildlife Research Unit, Florida - Management of rhesus macaques in central Florida.

Florida Game & Fresh Water Fish Commission - Tussock removal from Lake Istokpoga, Florida.

E.T.A.P.A., Cuenca, Ecuador - Management of a recently formed reservoir.

Department of Environmental Services, City of Toledo - Stream contamination

Ohio Lake Erie Commission - Lake Erie Wetlands Panel

United States Army Corps of Engineers Waterways Experiment Station - Wetlands rehabilitation

# AWARDS, HONORS, AND EXTERNAL COMMITTEES:

- 2015 University of Toledo Outstanding Advisor Award
- 2014 Faculty Club Service Award
- 2014 Faculty Development Award (College), University of Toledo (\$475).
- 2012-13 Professional Service Award, College of Natural Sciences and Mathematics
- 2012 Judge Midwest Graduate Research Symposium (posters and presentations)
- 2010-13 Judge Lake Erie Center poster gala
- 2011 Faculty Development Award (College), University of Toledo (\$600).
- 2011 Kohler Foundation award for field visits and research presentation in Czech Republic (\$1,000)
- 2009-10 Faculty Excellence Award College of Arts & Sciences, University of Toledo
- 2009 Faculty Development Award (College), University of Toledo (\$400).
- 2009 IAGLR 2009 (judge student presentations, conducted rain garden tour)
- 2008-09 IAGLR 2009 organizing committee (Chair housing)
- 2008 Faculty Development Award (College), University of Toledo (\$130).
- 2008 Chair Ecology Session, Ohio Academy of Sciences, 117<sup>th</sup> Annual Meeting.
- 2008 U.S. Environmental Protection Agency STAR Grant review panel
- 2007 Kohler Foundation travel award for teaching a field course in Costa Rica (\$500)
- 2007 Faculty Development Award (College), University of Toledo (\$350).
- 2006 Organizing Committee: Watershed investigation and stream restoration workshop (May 9-11, 2006), Toledo, Ohio
- 2006 Organizing Committee: Dam decommissioning workshop (Feb 8, 2006), Toledo, Ohio
- 2005 Kohler Foundation travel award for teaching a field course in Costa Rica (\$800)
- 2004 Faculty Development Award, University of Toledo (\$550).
- 2003-04 Nominated for Outstanding Teacher of the Year, University of Toledo
- 2003-05 Recipient of the University of Toledo, College of Arts and Sciences Master Teacher Award
- 2003 Kohler Foundation travel award for teaching a field course in Costa Rica (\$1000)
- 2003 University of Toledo Small Grants Program. Assistance with publication costs (\$250)
- 2003-05 Toledo Area Metropolitan Council of Governments, Ottawa River Sediment Remediation Project Management Team (member)
- 2002 University of Toledo, Graduate Council (elected)
- 2002 Kohler Foundation travel award for the development of a field course in Costa Rica (\$1000)
- 2001 Small grant for BioScience publication, University of Toledo (\$500).
- 2001 Faculty Development Award, University of Toledo (\$850).
- 2001 Kohler Foundation travel award for work in Malaysia (\$1000)
- 2000-05 Chair SWS International Committee Gratis Membership Program
- 2000-01 Nominations and Admission Committees for Sigma Xi
- 2000 Review Panel U.S. Environmental Protection Agency (Futures Research in the Natural Sciences).
- 2000 Chair SWS Neotropical Wetland Symposium, Quebec, Canada
- 2000 U.S. Environmental Protection Agency STAR Grant review panel
- 2000. Grant Review Panel Ohio Lake Erie Commission

1999	Invited speaker. Second World Conference on Preservation and Sustainable Development in	the	
	Pantanal. World University Federation, Washington D.C.		
1999	Invited speaker. Annual Ohio Lake Erie Conference, Huron, Ohio.		
1999	Judge-Society of Wetland Scientists, 20 <sup>th</sup> International Symposium, Norfolk, VA (student papers)		
1999	Kohler Foundation travel award for studies in the Brazilian Pantanal (\$1000)		
1999	Faculty Development Award, University of Toledo (\$400).	m a ata r	
1999	Judge - American Society of Limnology and Oceanography, Santa Fe, New Mexico (student	poster	
1998.	session). Member - Wetlands Panel, Ohio Lake Erie Commission.		
	Judge - Society of Wetland Scientists, 19 <sup>th</sup> International Symposium, Anchorage, Alaska	(student	
1550	papers)	(Student	
1998	Invited panelist. From science to policy-Society of Wetlands Scientists International Symposium	۱,	
	Anchorage, Alaska.		
1998	Invited panelist. Environmental Protection in the Great Lakes; First Annual Conference on	Great	
	Lakes Law, Science, and Policy. The Legal Institute of the Great Lakes.		
	98 Nominated for Outstanding Teacher of the Year, University of Toledo		
1998	University of Toledo Center for Teaching Excellence (\$135).		
	98 Faculty Development Award, University of Toledo (\$500).		
	98 Chair - Society of Wetlands Scientists, Pantanal Committee	Daviliaa	
1997	Appointed as Graduate Faculty Professional Associate, Department of Biological Sciences,	Bowling	
1997	Green State University, Ohio. Kohler Foundation travel award for studies in the Brazilian Pantanal (\$750)		
1997	University of Toledo Small Grant Program. Wetland Mercury Research (\$500)		
1997	Faculty Development Award. College of Arts and Sciences, University of Toledo (\$800).		
1996	University of Toledo Center for Teaching Excellence. Computer-aided instruction for General	Biology	
1000	(\$200).	Diciogy	
1996	Judge - Ohio Junior Science and Humanities Symposium.		
1996	Faculty Development Award. College of Arts and Sciences, University of Toledo (\$800).		
1995	Summer Fellowship. Lake Erie Research and Education Center (\$3,750).		
1995	Session Chair for paleolimnology. XXVI SIL International Congress of Limnology, Sao Paulo,	Brazil.	
1995	Invited panel member. Electric Power Research Institute workshop on patterns of historical	mercury	
	deposition. Orlando, Florida.		
1995	Faculty Development Award. College of Arts and Sciences, University of Toledo (\$850).		
1994-	99 Institutional Representative for The University of Toledo to the Great Lakes Aquatic Ecology		
1994	Research Consortium. Visiting Professor. Cuenca Water Supply and Wastewater Company, Ecuador.		
1994	University of Toledo Center for Teaching Excellence. Honors Lab for Biology grant (\$300).		
1994	University of Toledo Small Grant Program. Great Lakes Aquatic Ecosystem	Research	
1004	Consortium colloquium (\$500).	Research	
1994	Visiting Professor - Departamento de Ecologia, Universidade de Brasilia, Brazil.		
1994.		Wildlife	
	and U.S. Fish and Wildlife Service.		
1994.	Appointed to the Graduate faculty, University of Toledo.		
1994	Nominated for National Science Foundation Young Investigator Award.		
1993-	94 Judge Poster Session. American Society of Limnology and Oceanography, Annual Meeting,	Alberta,	
	Canada.		
1993	Faculty Development Award. College of Arts and Sciences, University of Toledo (\$1,000).		
1992	University of Florida Graduate Student Council travel award (\$100).		
1991	Member, Newnans Lake Restoration Technical Advisory Group, Gainesville, Florida.		
1991 1991	Judge Engineer's Fair - Professional Section, University of Florida. Service Award for Computer Support - Society of Environmental Engineers.		
1991	Lab instructor of the year. Division of Biological Sciences, University of Florida.		
1990	American Society of Limnology and Oceanography: Graduate Student Stipend (\$300).		
1990	Member, Alachua County Lake Management Task Force, Gainesville, Florida.		
1989.			

1989. North American Lake Management Society: Graduate Student Travel Scholarship (\$600).

1988-89 General Electric Foundation Forgivable Loan (\$10,000).

1986 Member, State-Federal Interagency Task Force: Soils as indicators of Wetlands Jurisdiction, Tallahassee, Florida.

1985 Chair, Legislative Committee of the Soil Science Society of America - Florida Chapter.

1984-86 Member, Water Resources Committee of the Florida Association of Conservation Districts.

# DEPARTMENT, COLLEGE AND UNIVERSITY SERVICE:

### Present and on-going professional service:

# Department:

Associate chair, Department of Environmental Sciences – since 2009 Space/Facilities Committee (co-chair) – since 2009 (member since 2012) Curriculum Committee (chair) – since 2007 (member since 2010) Undergraduate Advisor BIOM majors – since 2009 Undergraduate Affairs Committee (member) – since 2009 Undergraduate Awards Committee (member) – since 2009 (chair since 2012) Personnel Committee, Department of Environmental Sciences (member) – since 2000 Department merit committee (chair) – since 2012 Ad-hoc committee for new faculty hires – co-chair New faculty mentor Co-chair faculty search committee (2014-2015)

### College:

Natural Sciences and Mathematics Council – Curriculum Committee: member (2011-2015) Natural Sciences and Mathematics Council (member) – since 2011; vice-chair 2016; chair in 2017 Lake Erie Center, Science Advisory Board – since 2005 Lake Erie Center Poster Gala (judge, annually)

### University:

University ad-hoc strategic planning committee on graduate education (member 2016-2017) Peace Studies Faculty Fellow (since 2015) Water Task Force (member since 2014) Outstanding University Adviser Award Selection Committee – chair 2017 President's Commission on the River, University of Toledo (member) – since 2007 Campus Beautification Committee (member) – since 2007 Graduate Council (member) – since 2013 Graduate Faculty Membership Committee (member, vice-chair) – since 2006; chair 2017 Outstanding Adviser Award Selection Committee (member) – since 2016 Wetlands management on the main campus (with UT Grounds Department)

### Past professional service:

2013-2015	Chair Curriculum Committee, College of Natural Sciences and Mathematics Council
2011-2014	Research Council (vice-chair), member review panels, member academic misconduct cte.
2014	External reviewer promotion dossier (full professor)
2013-2014	Bowman-Oddy Ohio Arts Council selection committee
2012	Hosted US EPA team for Maumee River project
2012	Celebrate Our River (registration, participant)
2012	Search Committee visiting assistant professor (member)
2012	Professional dossier review for USDA employee
2012-2013	Reviewer for UT faculty summer fellowship proposals (individual and interdisciplinary)
2011-2012	New faculty search committee (Chair)
2010-2011	UT Institutional representative to NCSE and CEDD.
2009-2011	Department future faculty positions (Adhoc- Chair)

2009-2011 UT Institutional Accreditation Committee (member Team II – Preparing for the Future) 2009 Ad-hoc committee on external departmental chair search (Chair) 2008-2009 Graduate Council Executive Committee (member) 2007-2008 Departmental ad-hoc Faculty Hiring Committee (Chair) 2007-2008 Associate Chair, Department of Environmental Sciences 2007-2008 Department of Environmental Sciences Mentoring Committee (Chair) Graduate Council (member) 2007-2010 Arts and Science Council, at-large member 2006-2009 Faculty mentor for two junior colleagues 2006-2011 Academic Assessment Committee, Department of Environmental Sciences (member) 2006-2007 Presidential Task Force on the Ottawa River (Co-Chair) 2004-2006 Search (Chair) - Watershed Ecologist, Dept. Earth, Ecological and Environmental Sciences 2004-2005 2004-2006 **Biodiversity Laboratory Coordinator** 2004-2005 Graduate School Strategic Planning Committee (member) Dean's Budget Advisory Committee (member) 2004-2006 Graduate Council Committee on Graduate Program Review (member). 2004-2005 Search Committee (member) - Lake Erie Center Director. 2004. 2004. College of Engineering, Civil Engineering faculty Search Committee (member) 2003. Chair-Policy Development Committees (Use of Dept. Vehicles and Computer/Projector). 2003. College delegation to Hungary to promote faculty and graduate student exchange (member) 2003. Ad-Hoc Committee on Vehicle and Computer Use (Chair) College of Arts & Sciences, Strategic Planning Committee on Faculty Development (member) 2003. 2003-2004 University of Toledo Graduate Curriculum Committee (member) 2002-2004. University of Toledo Graduate Council (member). 2002 College of Engineering, Civil Engineering faculty Search Committee (member) 2002-2004 College of Arts and Sciences, Public Events Committee 2002. Search (Chair), Microbial Ecologist, Dept. Earth, Ecological and Environmental Sciences 2000-2006 Graduate Coordinator (Ecology), Dept. of Earth, Ecological and Environmental Sciences 2000-2003 Seminar coordinator, Dept. of Earth, Ecological and Environmental Sciences. 2000-2007 Curriculum Committee, Dept. of Earth, Ecological and Environmental Sciences (member) 2000-2002 Faculty Search Committees, Dept. of Earth, Ecological and Environmental Sciences. 1999. **Biology Department Merit Review Committee** 1999. **Biology Department Personnel Committee** Department of Biology; Laboratory Technologist Search 1999. Colloquium and Monday Noon Seminar Committee. 1999-2001. Department of Biology, Graduate Affairs Committee. 1999-2000. University of Toledo, Department of Biology; Laboratory Technician Search 1999. 1998-2000. Representative to the Arts and Sciences Council. Acting -Director of the University of Toledo Lake Erie Center (Nov.-Dec.) 1998. 1998-2000 Chair of Space Planning Committee, University of Toledo, Department of Biology 1998. Department of Biology; Laboratory Technologist Search University of Toledo, Department of Biology; Ecologists Search 1998. Environmental Studies Program Executive Committee. 1997-2000 IGERT-NSF Grant Development group. 1997. University of Toledo, Department of Biology; Ecologists Search 1997. 1997. University of Toledo Lake Erie Center; Facility Manager Search 1996. University of Toledo, Department of Biology; Ecologists Search NSF/NEH Grant Development group. 1995. 1995-1996. Bowman-Oddy Renovation Committee. Environmental Studies Task Force. 1994-2000. 1994-2003. Advisory Council, UT Stranahan Arboretum. 1994-1997. Program and Steering Committee, Lake Erie Research and Education Center. 1994-1997. Building Committee, Lake Erie Research and Education Center. 1993-2000. Computer Facilities and Applications Committee, Department of Biology. 1993-2000. Student Affairs Committee, Department of Biology.

1993-1998 Undergraduate Committee, Department of Biology.