

Richard R. Rediske, Ph.D.  
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Annis Water Resources Institute  
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### **Academic Preparation:**

Citizen Planner Certificate, Michigan State University, 2003  
Ph.D., Environmental Health Sciences, University of Michigan, 1986  
M.S., Water Resources Science, University of Michigan, 1975  
B.S., Biology, Bowling Green State University, 1974

### **Professional Appointments:**

1994 - Professor and Senior Research Scientist, Annis Water Resources Institute  
*Research Areas: Environmental chemistry and toxicology, environmental monitoring and assessment, cyanobacteria toxins, contaminants in fish and benthic invertebrates, point of use water treatment systems, qPCR/ddPCR methods*  
1992 - 1994. Senior Vice President, Environmental Services: Earth Tech, Grand Rapids, MI  
1982 - 1991. Director of Laboratory and Environmental Science Services: WW Engineering and Science, Grand Rapids, MI.  
1980 - 1982. Chief Organic Research Chemist: Muskegon County Wastewater Management System  
1979 - 1982. Organic Laboratory Manager: Environmental Research Group  
1977 - 1979. Chemist. Anatech Services.  
1976 - 1977. Research Assistant. University of Michigan Great Lakes Research Division

### **Professional Service**

Research Fellow. Cooperative Institute for Limnological and Environmental Research.  
University of Michigan  
Visiting Scientist. Great Lakes Environmental Research Laboratory. Ann Arbor, MI Non-Resident Lecturer. University of Michigan School of Public Health  
Adjunct Instructor. University of Michigan School of Natural Resources and the Environment  
Chairman West Michigan American Chemical Society  
Governor's Environmental Monitoring Advisory Committee. State of Michigan  
Michigan Department of Environmental Quality Analytical Detection Limit Review Board  
Michigan Department of Environmental Quality Rule 57 Development and Advisory Board  
Michigan Environmental Advisory Committee  
Michigan Green Chemistry Council  
Federal Advisory Committee on Detection and Quantitation.  
Great Lakes Beach Association  
Reviewer: Aquatic Ecosystems Health and Management, Journal of Great Lakes Research, Toxins, Environmental Science and Technology, Harmful Algae, and Society of Environmental Chemistry and Toxicology

## **University Service:**

CLAS Personnel Committee, Vice Chair (2011-2017)  
GVSU Faculty Development Committee (2010-2011)  
GVSU Safety Committee (2005-2011)  
Science Olympiad (Regional and National Event Supervisor)  
Unit and University Search Committees (5)  
AWRI Equipment Committee  
Café Connect Student Life Club. Faculty Sponsor  
West Michigan Anglers Conservation Club. Faculty Sponsor  
GVSU Awards of Distinction Interviewer  
Student Scholarship Day Mentor

## **Community Service:**

Commissioner. Allendale Township Planning Commission (1995-2002)  
Chair. Allendale Township Planning Commission (2003-2010)  
Scoutmaster and Merit Badge Councilor, Boy Scouts of America (1990-2019)  
Muskegon Lake Watershed Partnership (2000 – present)  
White Lake Public Advisory Council (2000-2017) Allendale  
Schools Science and Technology Committee  
Allendale Science Olympiad Event Coach for Middle and High School  
Muskegon Lake Nature Preserve Trustee. (20014-2017)  
Concerned Citizens for Responsible Remediation. (2013 - Present).  
Michigan Environmental Hall of Fame. Board Member (2012-2016)  
Wolverine Community Advisory Group. Leadership Team. (2019)  
Michigan Water Table. 2019.  
Michigan PFAS Action Team Citizen's Forum. 2019.

## **Honors**

1995 West Michigan American Chemical Society. Distinguished Service Award  
2000 GVSU Science Olympiad 5 Year Service Award  
2000 Muskegon Environmental Coordinating Council, Lifetime Achievement Award  
2004 Michigan Public Health Partnership Award  
2006 State of the Lakes Ecosystem Conference Success Story Award  
2007 GVSU Administrative/Professional Achievement Award  
2008 Boy Scouts of America. Distinguished Service Award  
2017 GVSU College of Liberal Arts and Sciences. Graduation Marshall  
2017 GVSU Graduate School. Graduate Student Mentoring Award  
2018 C.R. Evenson Award West Michigan Environmental Action Council  
2018 GVSU College of Liberal Arts and Sciences. Outstanding Service Award  
2018 Sidney High School. Hall of Honor  
2020 GVSU Outstanding Community Service Award

## Education and Teaching

Graduate courses in Aquatic Toxicology and Water Pollution Biology (BIO 580)

Undergraduate courses in Great Lakes and Water Resources (BIO 107), Watershed and Wetland Management (NRM 452), Industrial Chemistry (CHM 311), Green Chemistry (CHM 111), Contemporary Toxicology (CHM 380) World Water Issues (HNR 280)

Major advisor MS Degree: Elaine Sterrett Isely (2005), Janel Hagar (2008), Jessica Higgins (2009), and Andrew Sisson (2012) and Sarah Stamann (2015), Brian Zuber (2016), Amanda Potter (2017), Rajesh Sigdel (2017), Tori Harris (2017), Dan Myers (2018), Molly Lane (2019), Matt Allen (2020).

Committee member MS Degree: Laurie Beth Nedervelde (2008), Whitney Nelson (2012) and Angela Defore (2013), James Smit (2014) and Steve Snyder (2015), Delilah Clement (2015), Emily Kildervarter (2018), Benjamin Giffin (Present), Andrew Pyman (Present).

Ph.D. Committee member Notre Dame: David Janetski Ph.D. (2011), Brandon Gerig (2017).

Guest lecturer: CHM 180, BIO 680, BIO 362, GEO 445, NRM 330, ENS 201, and SOC 304 University of Michigan Summer Great Lakes Ecology Class 2005 and 2006

## Peer Reviewed Publications (58):

- Lane, M.J., **Rediske, R.**, McNair, J.N., Briggs, S., Rhodes, G., Dreelin, E., Sivy, T., Flood, M., Scull, B., Szlag, D. and Southwell, B., 2020. A comparison of E. coli concentration estimates quantified by the EPA and a Michigan laboratory network using EPA Draft Method C. *Journal of Microbiological Methods*, 179, p.106086.
- Steinman, A.D., Scott, J., Green, L., Partridge, C., Oudsema, M., Hassett, M., Kindervater, E. and **Rediske, R.**, 2020. Persistent organic pollutants, metals, and the bacterial community composition associated with microplastics in Muskegon Lake (MI). *Journal of Great Lakes Research*, 46(5), pp.1444-1458.
- Myers, D.T., **Rediske, R.**, McNair, J.N. and Allen, M.E., 2020. Watershed and streambank erosion modeling in a coldwater stream using the GWLF-E model: application and evaluation. *Modeling Earth Systems and Environment*, pp.1-14.
- Lane, M.J., McNair, J.N., **Rediske, R.**, Briggs, S., Sivaganesan, M. and Haugland, R., 2020. Simplified Analysis of Measurement Data from A Rapid E. coli qPCR Method (EPA Draft Method C) Using A Standardized Excel Workbook. *Water*, 12(3), p.775.
- Myers, D.T., **Rediske, R.**, McNair, J. Measuring Streambank Erosion: A Comparison of Erosion Pins, Total Station, and Terrestrial Laser Scanner. *Water* 2019, 11, 1846.
- Sivaganesan, M., Aw, T. G., Briggs, S., Dreelin, E., Aslan, A., Dorevitch, S., Shrestha, A., Isaacs, N., Kinzelman, J., Kleinheinz, G., Noble, R., **Rediske, R.**, Scull, B., Rosenberg, S., Weberman, B., Sivy, T., Southwell, B., Sieftring, S., Oshima, K., & Haugland, R. (2019). Standardized data quality acceptance criteria for a rapid *Escherichia coli* qPCR method (draft method C) for water quality monitoring at recreational beaches. *Water Research*, 156, 456–464.
- Aw, T. Sivaganesan, M., Briggs, S., Dreelin, E., Aslan, A., Dorevitch, S., Shrestha, A., Isaacs, N., Kinzelman, J., Kleinheinz, G., Noble, R., **Rediske, R.**, Scull, B., Rosenberg, S., Weberman, B., Sivy, T., Southwell, B., Sieftring, S., Oshima, K., & Haugland, R. (2019). Evaluation of multiple laboratory performance and variability in analysis of recreational freshwaters by a rapid *Escherichia coli* qPCR method (Draft Method C). *Water Research*, 156, 465–474.

- Kovacs, D., **Rediske, R.**, Marty, S., Spencer, P., Wilson, D., & Landenberger, B. (2019). Contemporary concepts in toxicology: a novel multi-instructor general education course to enhance green chemistry and biomedical curricula. *Green Chemistry Letters and Reviews*, 12(2), 136-146.
- Cao, Q., **Rediske, R.**, Yao, L., & Xie, L. (2018). Effect of microcystins on root growth, oxidative response, and exudation of rice (*Oryza sativa*). *Ecotoxicology and Environmental Safety*, 149, 143-149
- Gerig, B., Dominic, C., Janetski, D., Moerke, A., **Rediske, R.**, O'Keefe, J., Pitts, A., & Lamberti, G. 2018. Environmental context and contaminant biotransport by Pacific salmon interact to mediate the bioaccumulation of contaminants by stream-resident fish. *Applied Ecology*. 55 (4), 1846-1859.
- Xue, Q., **Rediske, R.**, Gong, Z., X. S., Xua, H., Caia, Y., Y., & Xie, L. Spatio-temporal variation of microcystins and its relationship to biotic and abiotic factors in Hongze Lake, China. *Journal of Great Lakes Research*. 44(2), 253-262
- Steinman, A. D., Hassett, M. C., Oudsema, M., & **Rediske, R.** (2017). Alum efficacy 11 years following treatment: phosphorus and macroinvertebrates. *Lake and Reservoir Management*, 1-15.
- Wampler, P., **Rediske, R.**, & Molla, A. (2016). Transdisciplinary approaches to sustainable water resources and treatment in developing countries. *Water Resources Impact*, 18(1), 20-21
- Xie, L., **Rediske, R.**, Gillett, N. D., O'Keefe, J. P., Scull, B., & Xue, Q. (2016). The impact of environmental parameters on microcystin production in dialysis bag experiments. *Nature Scientific Reports* Nature Publishing Group, 6(1), 10, doi: DOI: 10.1038/srep38722
- Madenjian, C. P., **Rediske, R.**, Krabbenhoft, D. P., David, S. A., Chernyak, S. M., & O'Keefe, J. P. (2016). Sex differences in contaminant concentrations of fish: a synthesis. *Biology of Sex Differences* BioMed Central, 7(1), 43
- Madenjian, C. P., Jensen, O. P., **Rediske, R.**, O'Keefe, J. P., Vastano, A. R., & Pothoven, S. A. (2016). Differences in Energy Expenditures and Growth Dilution Explain Higher PCB Concentrations in Male Summer Flounder. *PLOS ONE*, 11(1), e0147223, doi: doi:10.1371/journal.pone.0147223
- Gerig, B., Chaloner, D., Janetski, D., **Rediske, R.**, O'Keefe, J., Moerke, A., & Lamberti, G. (2016). Congener patterns of persistent organic pollutants establish the extent of contaminant biotransport by Pacific salmon in the Great Lakes. *Environmental science & technology*, 50(2), 554-563.
- Stapanian, M. A., Madenjian, C. P., Cott, P. A., **Rediske, R.**, & O'Keefe, J. (2014). Polychlorinated biphenyl congener distributions in burbot: Evidence for a latitude effect. *Issue Environmental Toxicology and Chemistry* *Environmental Toxicology and Chemistry*, 33(11), 2448-2454
- Madenjian, C. P., **Rediske, R.**, O'Keefe, J., & Solomon, D. R. (2014). Laboratory Estimation of Net Trophic Transfer Efficiencies of PCB Congeners to Lake Trout (*Salvelinus namaycush*) from Its Prey. *Journal of Visualized Experiments*, 90, e51496-e51496
- Madenjian, C. P., Stapanian, M. A., Cott, P. A., **Rediske, R.**, & O'Keefe, J. (2014). Polychlorinated biphenyl concentrations of burbot *Lota lota* from Great Slave Lake are very low but vary by sex. *Archives of environmental contamination and toxicology*, 66(6), 529-537
- Stapanian, M. A., Madenjian, C. P., **Rediske, R.**, & O'Keefe, J. (2013). Sexual difference in PCB congener distributions of burbot (*Lota lota*) from Lake Erie. *Chemosphere*, 93(8), 1615-1623
- Chu, X., Neils, J., & **Rediske, R.** (2013). A Preliminary Study on the Effects of Surface Microtopography on Tracer Transport in a Coupled Overland and Unsaturated Flow System. *Journal of Hydrologic Engineering*, 18(10), 1241-1249

- Madenjian, C. P., Stapanian, N. S., **Rediske, R.**, & O'Keefe, J. (2013). Sex Difference in Polychlorinated Biphenyl Concentrations of Burbot *Lota lota* From Lake Erie. *Archives of Environmental Contamination and Toxicology*, 65(2), 300-308
- Sisson, A., Wampler, P., **Rediske, R.**, McNair, J., & Frobish, D. (2013). Long-term field performance of the Biosand Filter in the Artibonite Valley, Haiti. *American Journal of Tropical Medicine & Hygiene*, 88(5), 862-867
- Wampler, P., **Rediske, R.**, & Molla, A. (2013). Using ArcMap, Google Earth, and Global Positioning Systems to select and locate random households in rural Haiti. *International Journal of Health Geographics*, 12(3)
- Sisson, A. J., Wampler, P., **Rediske, R.**, & Molla, A. (2013). An assessment of long term biosand filter use and sustainability in the Artibonite Valley near Deschappelles, Haiti. *Journal of Water, Sanitation, and Hygiene for Development*, 3(1), 51-60
- Janetski, D. T., Chaloner, D. T., Moerke, A. H., **Rediske, R.**, O'Keefe, J., & Lamberti, G. A. (2012). Spawning Pacific salmon elevate organic pollutants in resident fish of Great Lakes tributaries. *Environmental Science & Technology*, 46(15), 8035–8043
- Madenjian, C. P., Solomon, D. R., **Rediske, R.**, Jude, D. J., & O'Keefe, J. (2012). Net trophic transfer efficiencies of polychlorinated biphenyl congeners to lake trout (*Salvelinus namaycush*) from its prey. *Environmental Toxicology and Chemistry*, 31(12), 2821-2827
- Xie, L., **Rediske, R.**, Hong, Y., O'Keefe, J., Gillett, N., Dyble, J., & Steinman, A. (2012). The role of environmental parameters in the structure of phytoplankton assemblages and cyanobacteria toxins in two hypereutrophic lakes. *Hydrobiologia*, 69, 255-268
- Madenjian, C., Trombka, A., **Rediske, R.**, & O'Keefe, J. (2012). Sex Difference in Polybrominated Diphenyl Ether Concentrations of Walleyes. *Journal of Great Lakes Research*, 28(1), 167–175
- Chu, X., & **Rediske, R.** (2012). Modeling Metal and Sediment Transport in a Stream-Wetland System. *Journal of Environmental Engineering*, 138(2), 152-163
- MacDonald, N., Mays, D. W., **Rediske, R.**, & Ruetz III, C. (2011). Environmental variation, fish community composition, and brown trout survival in the Pigeon River, Ottawa County, Michigan. *Michigan Academician*, XL(2), 135-168
- Xie, L., Hager, J., **Rediske, R.**, O'Keefe, J., Dyble, J., & Steinman, A. (2011). The influence of environmental conditions and hydrologic connectivity on cyanobacteria assemblages in two drowned river mouth lakes. *Journal of Great Lakes Research*, 37, 470-479
- Xie, L., **Rediske, R.**, Hong, Y., O'Keefe, J., Gillett, N., Dyble, J., & Steinman, A. (2011). Assessment of phytoplankton assemblages and cyanobacteria toxins in two hypereutrophic lakes. *Hydrobiologia*, 37(3), 470-479.
- Jude, D.J. **R. Rediske**, J. O'Keefe, S. Hensler, J. Giesy. 2010. PCB concentrations in walleyes and their prey from the Saginaw River, Lake Huron: A comparison between 1990 and 2007. *Journal of Great Lakes Research*. 36(2): 267-276.
- Nold, C., J., Pangborn, H. Zajack, S. Kendall, **R. Rediske**, and B. Biddanda. 2010. Benthic Bacterial Diversity in Submerged Sinkhole Ecosystems. *Applied and Environmental Microbiology*. 76(1) 347–351.
- Wiley, M.J, D.W. Hyndman, B.C. Pijanowski, A.D. Kendall, C. Riseng, E.S. Rutherford, S.T. Cheng, M.L. Carlson, J.A. Tyler, R.J. Stevenson, P.J. Steen, P.L. Richards, P.W. Seelbach, J.M. Koches, and **R.R. Rediske**. 2010. A multi-modeling approach to evaluating climate and land use change impacts in a Great Lakes River Basin. *Hydrobiologia* 657:243–262.
- Millie, D. F., G. Fahnenstiel, J. Dyble, R. Pigg, **R. Rediske**, D. Klarer, P. Tester. 2009. Late-summer phytoplankton in western Lake Erie (Laurentian Great Lakes): bloom distributions, toxicity, and environmental influences. *Aquatic Ecology* 43:915–934.

- Cooper\*, M., **R. Rediske**, D. Uzarski, and T. Burton. 2009. Sediment contamination and faunal communities in two subwatersheds of Mona Lake, Michigan. *Journal of Environmental Quality*. 38:1255-1265
- Madenjian, C., D. Jude, **R. Rediske**, and J. O'Keefe, and G. Noguchi. 2009. Gender Difference in Walleye PCB Concentration Persists Following Remedial Dredging. *Journal of Great Lakes Research*. 35(3):347-352.
- Biddanda, B., A. Steinman, L. Nemeth, **R. Rediske**, Y. Hong, and S. Kendall. 2008. Nutrient bioassays of plankton biomass and metabolism in an urbanized drowned river-mouth lake (Mona Lake, Michigan) in the Great Lakes basin. *Journal of Freshwater Ecology* 23:41-53.
- MacDonald, N. **R. Rediske**, B. Scull, and D. Wierzbecki. 2008. Landfill cover soil, soil solution, and vegetation responses to municipal landfill leachate applications. *Journal of Environmental Quality*. 37:1974-1985.
- Madenjian, C., D. O'Connor, **R. Rediske**, and J. O'Keefe. 2008. Net trophic transfer efficiencies of polychlorinated biphenyl congeners to lake whitefish (*Coregonus clupeaformis*) from their food. *Environmental Toxicology and Chemistry* 27(3):631-636.
- Steinman, A., M. Ogdahl, **R. Rediske**, C. Ruetz III, B. Biddanda, and L. Nemeth. 2008. Current status and trends in Muskegon Lake, Michigan. *Journal of Great Lakes Research* 34: 169- 188.
- Steinman, A., B. Biddanda, X. Chu, K. Thompson, and **R. Rediske**. 2007. Environmental analysis and conceptual model of groundwater in Mecosta County, Michigan. *Environmental Monitoring and Assessment* 134: 177-189.
- Biddanda, B., D. Coleman, T. Johengen, S. Ruberg, G. Meadows, H. VanSumeren, **R. Rediske** and S. Kendall. 2006. Exploration of a submerged sinkhole environment in Lake Huron. *Ecosystems*. 9(5)828-842.
- Carter G., T. Nalepa and **R. Rediske**. 2006. Status and Trends of Benthic Populations in a Coastal Drowned River Mouth Lake of Lake Michigan. *Journal of Great Lakes Research*. 32(3):578-595.
- Cooper, M., D. Uzarski, T. Burton, and **R. Rediske**. 2006. Macroinvertebrate community composition relative to chemical/physical variables, land use and cover, and vegetation types within a Lake Michigan drowned river mouth wetland. *Aquatic Ecosystem Health and Management*. 9(4):463-479.
- Hong, Y., A. Steinman, B. Biddanda, **R. Rediske** and G. Fahnenstiel. 2006. Occurrence of the Toxin-producing Cyanobacterium *Cylindrospermopsis raciborskii* in Mona and Muskegon Lakes, Michigan. *Journal of Great Lakes Research*. 32(3):645-652.
- Madenjian, C., D. O'Connor, S. Pothoven, P. Schneeberger, **R. Rediske**, J. O'Keefe, R. Bergstedt, R. Argyle, and S. Brandt. 2006. Evaluation of a Lake Whitefish Bioenergetics Model. *Transactions of the American Fisheries Society* 135(1):61-75.
- Pothoven, S., T. Nalepa, C. Madenjian, **R. Rediske**, P. Schneeberger, and J. He. 2006. Energy density of Lake Whitefish in Lakes Huron and Michigan. *Environmental Biology of Fishes*. 76(2-4)151-158.
- Steinman, A., L. Nemeth, E. Nemeth, and **R. Rediske**. 2006. Factors influencing internal phosphorus loading in a west-Michigan, drowned river mouth lake. *Journal of the North American Benthological Society* 25: 304-312.
- Steinman, A., **R. Rediske**, X. Chu, R. Denning, L. Nemeth, D. Uzarski, B. Biddanda, and M. Luttenton. 2006. An environmental assessment of an impacted, urbanized watershed: the Mona Lake Watershed, Michigan. *Archiv für Hydrobiologie* 166: 117-144.
- Madenjian, C., D. O'Connor, S. Chernyak, **R. Rediske**, and J. O'Keefe. 2004. Evaluation of a Chinook salmon (*Oncorhynchus tshawytscha*) bioenergetics model. *Canadian Journal of Fisheries and Aquatic Sciences* 61: 627-635.

- Steinman, A., **R. Rediske**, and K. Reddy. 2004. The Reduction of Internal Phosphorus Loading Using Alum in Spring Lake, Michigan. *Journal of Environmental Quality*. 33: 2040-2048.
- MacDonald, N., **R. Rediske**, and J. Van Denend. 2001. Hydrologic events and water quality in the Pigeon River, Ottawa County, Michigan. *Michigan Academician* XXXIII:153-170.
- Pugh L., **R. Rediske**, D. Peden and D. Rodgers. Activated Carbon-Enhanced Biological Groundwater Treatment. in *Biological Unit Processes for Hazardous Waste Treatment*. R.E. Hincee, R.S. Skeen, and G.D, Sayles ed. Battelle Press. 1995.
- Meier, P. and **R. Rediske**, 1984 . Oil & PCB Interactions on the Uptake and Excretion in Midges. *Bull. Environ. Contam. Toxicol.* 33:225-232.
- \* Graduate Student. \*\*Undergraduate Student

## **PUBLISHED TECHNICAL REPORTS**

- Rediske, R.**, M, Chu, D. Uzarski, G. Peaslee, J. Gabrosek. 2004. Phase II Investigation of Sediment Contamination in White Lake. EPA-905-R-04-001.
- Rediske, R.**, J. Gabrosek,, G. Peaslee, G. Carter and T. Nalepa, 2002. Preliminary Investigation of the Extent of Sediment Contamination in Muskegon Lake. EPA-905-R-02-004.
- Rediske, R.**, J. Gabrosek, C. Thompson, and P. Meier, 2001. Preliminary Investigation of the Extent of Sediment Contamination in Manistee Lake. EPA-905-R-01-004.
- Rediske, R.**, C. Bertin\*\*, J. Blunt\*\*, and M. Qi, 1999. Preliminary Investigation of the Extent of Sediment Contamination in the Lower Grand River. EPA-905-R-99-010.
- Rediske, R.**, G. Fahnenstiel, P. Meier, T. Nalepa, and C. Schelske, 1998. Preliminary Investigation of the Extent and Effects of Sediment Contamination in White Lake, Michigan. EPA-905-R-98-004.
- Demerjian, Y., T. Westman, and **R. Rediske**, 1983. Fate of Organic Pollutants in Wastewater Land Treatment System Using Lagoon Impoundment and Spray Irrigation. EPA-600/12-83-077.

## **Recent Grants Awards (Since 2010):**

- 2020 **\$318,000.** SARS-CoV-2 Wastewater Pilot Study. (PI), EGLE/MDHHS.  
**\$250,000.** ddPCR Equipment MOU (PI). EGLE/MDHHS.  
**\$9,000.** Lake Michigan and Inland Lake Beach, MDEQ/Public Health Muskegon County. (PI)  
**\$2,500.** Flower Creek Water Quality Assessment, Big Flower Creek Association. (PI)  
**\$21,000.** E. coli Assessment for Pigeon River. Ottawa Conservation District. (PI).
- 2019 **\$7,000.** Lake Michigan and Inland Lake Beach, EGLE/Public Health Muskegon County. (PI)  
**\$10,000.** Lake Michigan and Inland Lake Beach, EGLE/Public Health Muskegon County. (PI).  
**\$30,000.** qPCR Methods development. EGLE.  
**\$2,500.** Flower Creek Water Quality Assessment, Big Flower Creek Association. (PI)
- 2018 **\$8,000.** Lake Michigan and Inland Lake Beach, MDEQ/Public Health Muskegon County. (PI)  
**\$9,000.** Lake Michigan and Inland Lake Beach, MDEQ/Public Health Muskegon County. (PI)  
**\$3,500.** Flower Creek Water Quality Assessment, Big Flower Creek Association. (PI)

- \$12,000.** E. coli Assessment for Tyler Creek and Buck Creek. Shrems Trout Unlimited (PI).
- \$33,000.** E. coli Assessment for Bass River and Deer Creek. Ottawa Conservation District. (PI).
- 2018 **\$50,000** Michigan Department of Environmental Quality. Development of qPCR Methods for Beach Monitoring. (PI)
- \$12,000.** Little Flower Creek E. coli Assessment", Muskegon Environmental Coordinating Council. (PI)
- \$9,000.** Lake Michigan and Inland Lake Beach, MDEQ/Public Health Muskegon County. (PI)
- \$11,000.** Lake Michigan and Inland Lake Beach, MDEQ/Public Health Muskegon County. (PI)
- \$4,600.** Flower Creek Water Quality Assessment, Big Flower Creek Association. (PI)
- \$9,000.** Little Flower Creek Erosion Study, Muskegon Environmental Coordinating Council. (PI).
- 2017 **\$15,000.** Muskegon County Drain Commission. Little Black Creek Water Quality Survey. (PI).
- \$13,000** Public Health Muskegon County Rediske. Lake Michigan Beach Monitoring. (PI).
- \$11,000** Public Health Muskegon County Inland Lakes Beach Monitoring (PI).
- \$5,9000.** GVSU-FTLC. Modern toxicology in the GVSU General Education curriculum. (Co-PI)
- 2016 **\$5,999.** GVSU PEW-FTLC. Modern toxicology in the GVSU General Education curriculum. (CoPI).
- \$10,000** Public Health Muskegon County Rediske. Lake Michigan Beach Monitoring. (PI).
- \$12,000** Public Health Muskegon County Inland Lakes Beach Monitoring (PI).
- 2015 **\$50,000** MDEQ/Public Health Muskegon County. Rapid Beach Testing Monitoring qPCR Equipment Grant. (PI).
- \$11,000** MDEQ/Public Health Muskegon County. Rapid Beach Testing Monitoring Laboratory Supply Grant. (PI).
- \$12,000** Public Health Muskegon County Beach Monitoring (PI).
- \$129,132.** MDEQ . Development of Rapid Assessment Methods for Harmful Algal Blooms (HABs) using qPCR and Image Flow Cytometry. (PI)
- 2014 **\$4,000.** Little River Band of Ottawa Indians. Fish tissue analysis for PCBs and Mercury for Tribal Health analysis. (PI).
- \$10,000** NOAA/U of M: Oceans and Human Health Program. Microcystins and Anatoxin in Lake Erie (CoPI).
- \$7,000** USGS Analysis of Flounder Samples for PCB Congeners (PI).
- \$10,000** Public Health Muskegon County Beach Monitoring (PI).
- \$98,000** WMSRD/NOAA. Impact of Mill Debris on Benthic Invertebrates in Muskegon Lake Phase II (PI).
- \$8,000** WMSRD/MLWP. Development of a Monitoring Strategy to Delist the Degradation of Benthos Beneficial Use Impairment form Muskegon Lake
- 2013 **\$10,000** NOAA/U of M: Oceans and Human Health Program. Microcystins and Anatoxin in Lake Erie (CoPI).
- \$5,000** Tyler Creek Phase II 319 Monitoring (CoPI).



- \$19,000** Flat River Phase II 319 Monitoring (CoPI)  
**\$12,000** Public Health Muskegon County Beach Monitoring (PI).
- 2012 **\$10,000** NOAA/U of M: Oceans and Human Health Program. Cyanotoxins in Lake Erie (CoPI).  
**\$245,000** Great Lakes Fisheries Trust. Predicting the impact of contaminants delivered by Pacific salmon on fish communities in Great Lakes tributaries. (Notre Dame Lead; CoPI).  
**\$5,000** Flat River 319 Monitoring (CoPI).  
**\$6,000** Public Health Muskegon County Beach Monitoring (PI).
- 2011 **\$10,000** Muskegon Health Departments for Beach and Stormwater Monitoring (PI).  
**\$15,000** NOAA/U of M: Oceans and Human Health Program. Cyanotoxins in Lake Erie (CoPI).  
**\$50,000** Timberland RC&D. Tyler Creek 319 *E. coli* Assessment. (CoPI).  
**\$123,000** WMSRD/NOAA. Impact of Mill Debris on Benthic Invertebrates in Muskegon Lake (CoPI).  
**\$6,400** USGS Analysis of Burbot Samples for PCB Congeners (PI).  
**\$2,400** MDEQ Sediment Toxicity Testing in White Lake (PI).  
**\$21,000** MDNRE. Fish Contaminant Assessment of White, Muskegon, and Pentwater Lake (PI).
- 2010 **\$13,000** Muskegon and District 10 Health Departments for Beach Monitoring (PI).  
**\$15,000** NOAA/U of M: Develop Predictive Models for Improving Coastal and Human Health & Beach Forecasting (PI).  
**\$568,449** Observatory for Ecosystem Changes in Muskegon Lake AOC (Co-PI)

#### **Recent Presentations (Since 2010):**

- Rediske, R.**, Buday, A., DeVasto, D., Great Lakes PFAS Summit, EGLE, Virtual, "Coordinating Response Efforts at the Community Level". (October 2020).
- Molla, A., Wampler, P. J., **Rediske, R. R.**, Water and Sanitation Project In Action: A Community Based Safe Water in Rural Haiti, American Public Health Association (APHA), Philadelphia, PA, "Water and Sanitation Project In Action: A Community Based Safe Water in Rural Haiti". (November 4, 2019).
- Lane, M. , **Rediske, R.** McNair, J., Scull, B. , Great Lakes Beach Conference, International Association of Great Lakes Research, Saginaw, "Using survival analysis methods to analyze censored *E. coli* concentrations in recreational water.", Academic, peer-reviewed/refereed, published in proceedings, Accepted. (October 18, 2019).
- Rediske, R.**, Democracy 101 PFAS Panel Making Wavers, GVSU, Allendale, Academic, Invited. (September 18, 2019).
- Molla, A. R., Wampler, P. J., **Rediske, R. R.**, "A Pathway of Water Contamination in Rural Haiti – An Interdisciplinary Approach" National Environmental Health Association (NEHA)meeting Nashville, TN; July 9-12, 2019.
- Rediske, R.**, Pfizer Lunch and Learn, Pfizer and Kalamazoo Nature Center, Kalamazoo, "What would Nature do for Earth Day", Invited. (May 15, 2019).
- Rediske, R.**, Ecology Center Annual Meeting, Ecology Center of Ann Arbor, Ann Arbor, "PFAS Issues and Public Health", Non-Academic, Invited. (May 14, 2019).

- Rediske, R.** 2018. Science on Tap. PFAS in West Michigan: Environmental and Health Concerns. Grand Rapids, MI.
- Rediske, R.** 2018. Resources for PFAS Community Support are Urgently Needed. US Senate PFAS Field Hearing, Senator Gary Peters, Grand Rapids, MI.
- Scull, B., **Rediske, R.**, Lane, M\*. 2018. Comparison of Colilert and qPCR Methods for monitoring inland lake beaches in Muskegon County, MI. Great Lakes Beach Conference, EPA and MDEQ, Cleveland. OH.
- Lane, M\*., **Rediske, R.**, Scull, B. 2018. Do tributaries impact E. coli concentrations at Lake Michigan beaches when measured using Colilert™ versus qPCR methods? Great Lakes Beach Conference, EPA and MDEQ, Cleveland, OH.
- Rediske, R.** 2018. Community Support is needed for PFAS Sites. EPA PFAS Roundtable, EPA, Kalamazoo, MI.
- Rediske, R.** 2018. PFAS: why we should be concerned. GVSU Water and Health Forum, GVSU Health Sciences, Grand Rapids, MI.
- Rediske, R.** 2018. Per and Polyfluoroalkyl Substances, what are they and why we should be concerned. University of Michigan Per and Polyfluoroalkyl Substances Webinar, University of Michigan, Ann Arbor, MI.
- Rediske, R.** 2018. PFAS in West Michigan. Grand Rapids Association of Realtors Summer Update, Grand Valley State University, Grand Rapids, MI.
- Scull, B., **Rediske, R.**, Lane, M\*., Schultz, B\*\*. 2018. Comparison of Colilert and qPCR methods for monitoring inland lake beaches in Muskegon County. Michigan Academy of Arts Science and Letters Annual Meeting. Mt. Pleasant, MI.
- Allen, M\*\*., **Rediske, R.**, Lane, M\*., Thompson, K. 2018. Investigation of the spatial distribution of E. coli in a Great Lakes coastal tributary. Michigan Academy of Arts Science and Letters Annual Meeting. Mt. Pleasant, MI.
- Lane, M\*, **Rediske, R.**, Scull, B., Schultz, B\*\*. 2018. Investigation of the spatial distribution of E. coli in a Great Lakes coastal tributary. Michigan Academy of Arts Science and Letters Annual Meeting. Mt. Pleasant, MI.
- Scull, B., **Rediske, R.**, Lane, M\*. 2017. Comparison of Colilert and qPCR Methods for monitoring inland lake beaches in Muskegon County, MI (2017 Data). Great Lakes Beach Conference, EPA and MDEQ. Green Bay, WI.
- Lane, M\*., **Rediske, R.**, Scull, B. 2017. Comparison of qPCR and Colilert data for Escherichia coli in Muskegon County Lake Michigan beaches, 2017 data? Great Lakes Beach Conference, EPA and MDEQ, Green Bay, WI.
- Molla, A., Wampler, P. and **Rediske, R.** 2017. Water and Sanitation in Rural Haiti — A Public Health Perspective. American Public Health Association Annual Conference. Atlanta, GA.
- Rediske, R.** 2017. PFAS, Environmental and Health Impacts. Citizen's Environmental Forum, Solomon Law Firm and Johnson Law. Grand Rapids, MI,
- Rediske, R.** 2017. Groundwater Basics Drinking Water & Infrastructure Town Hall, Michigan Environmental Council, Grand Rapids, MI.
- Harris, V\*. and **Rediske, R.** 2017. Influences of mill debris on the benthic macroinvertebrate community in Muskegon. Society for Freshwater Sciences Annual Conference, Society for Freshwater Sciences, Raleigh, NC.
- Rediske, R.** 2017. The History of Muskegon Lake. International Water History Conference, International Water History Association, Grand Rapids, MI,
- Rediske, R.** 2017. Grand Rapids Historical Tour. International Water History Conference, International Water History Association, Grand Rapids, MI,

- Kovacs, D. and **Rediske, R.** 2017. Designing a sustainable toxicology undergraduate curriculum. ACS-National Green Chemistry& Engineering annual conference, American Chemical Society-Green Chemistry Institute, Reston, VA.
- Rediske, R.** 2017. Laboratory Methods of Analysis for Environmental Parameters. Western Michigan University Geology Field Camp, Western Michigan University. Kalamazoo, MI.
- Rediske, R.** 2017. Critical Water Quality Issues in West Michigan. Green Community Conference, Michigan Department of Natural Resources, Muskegon, MI.
- Rediske, R.** 2017. Solid Waste Management. Living Earth Environmental Studies School, National Garden Club, Holland, MI.
- Rediske, R.** Martin, V. and McWilliams, D. 2016. Results of the 2015 Muskegon Beach Monitoring Program: Comparison of Colilert and qPCR Methods. Great Lakes Beach Conference. Marquette, MI.
- Rediske, R.** 2016. Muskegon Lake History and Restoration, Lakeshore Museum, Muskegon, MI.
- Rediske, R.** 2016. Flint Water Crisis, When Science and Politics Collide, Sciencetech Club, Indianapolis, IN.
- Rediske, R.,** 2016. Watershed Management for Drowned River Mouth Lakes. Hamlin Lake Watershed Council Annual Meeting, Ludington, MI. (June 24, 2016).
- Rediske, R.** 2016. Michigan Environmental Hall of Fame Awards Meeting, Master of Ceremonies, Michigan Environmental Hall of Fame, Grand Rapids, MI.
- Rediske, R.,** 2016. Flint Water Crisis, When Science and Politics Collide. Grand Rapids Rotary Club, Grand Rapids, MI.
- Rediske, R.,** 2016. Current Status and Future Restoration Activities for White Lake," White Lake Watershed Partnership, Whitehall, MI,
- Rediske, R.,** 2016. The Importance of Outdoor Education. Muskegon Rotary Club, Muskegon, MI.
- McWilliams, D., Harris, T., Scull, B., Morgan, R., and **Rediske, R.,** 2015. Implementation of a Quantitative Polymerase Chain Reaction (qPCR) for Escherichia coli on Lake Michigan Beaches. West Michigan Regional Undergraduate Science Research Conference, Van Andel Research Institute, Grand Rapids, MI.
- Gerig, B., **Rediske, R.** Chaloner, D. Janetski, D. and Lamberti, G. 2015. Contaminant Biotransport by Pacific salmon in Lake Michigan Tributaries. State of Lake Michigan Conference Michigan Department of Environmental Quality, Traverse City, MI.
- Wampler, P. Molla, A., and **Rediske, R.** 2015. Read the Vitals of Rural Haitian Society: An Interdisciplinary Approach to Address Community Health in Haiti. Global Health Institute Conference, GVSU Public Health Department, Grand Rapids.
- Rediske, R.** 2015. Results of 2014 Monitoring Programs for the Flat River. Flat River Stakeholder Meeting. MDEQ, Lowell MI. (September 15, 2015).
- Zuber, B. and **Rediske, R.** 2015. Multi model approaches to prioritize the restoration of historic wetlands in the Lower Grand River Watershed. Michigan Green Infrastructure Conference, Michigan Department of Environmental Quality, Grand Rapids, MI.
- Rediske, R.** 2015. Status of Delisting the Degradation of Benthos BUI. Muskegon Lake Watershed Partnership, Muskegon, MI.
- Zuber, B. and **Rediske, R.** 2015. Prioritization of Restorable Wetlands in the Lower Grand River watershed. Grand Forum. Grand Valley Metro Council, Grand Rapids, MI.
- Kottutt, J. and **Rediske, R.** 2015. Biosand Filters modified with iron filings for arsenic removal, GVSU Student Scholarship Day,

- Rediske, R.**, Wampler, P., Molla, A. 2014. A Survey of Household Water Quality in Rural Haiti 142nd APHA Annual Meeting and Exposition, American Public Health Association, New Orleans,
- Wampler, P., Molla, A., **Rediske, R.**, 2014. Karst, Cholera and Public Health in Rural Haiti. West Michigan Interprofessional Education Initiative Conference, Grand Rapids Medical Education Partners, Grand Rapids.
- Rediske, R.**, 2014 Exploring Great Lakes Issues. Biennial Conference on Chemical Education, American Chemical Society, Allendale, MI.
- Stapanian, M. A., Madenjian, C. P., Cott, P. A., **Rediske, R.**, O'Keefe, J. , 2014. Polychlorinated Biphenyl Homolog Distribution in Burbot fir Great Slave Lake and Lake Erie. 5th International Symposium on Burbot (Lota lota), International Congress on the Biology of Fish, Edinburgh, Scotland.
- Gerig, B. S., Chaloner, D., Janetski, D., Moerke, A., **Rediske, R.**, O'Keefe, J., Lamberti, G., 2014. Tracing salmon-derived persistent organic pollutants in Great Lake tributaries using congener analyses. Society for Freshwater Sciences Joint Meeting. Portland, Oregon.
- Rediske, R.**, 2014. Point of use water treatment systems for developing countries. Michigan Environmental Laboratory Association, Michigan Environmental Laboratory Association, Lansing, MI.
- Rediske, R.**, 2014. GVSU's Ghana Service Learning Project – Education, Child Slavery Rehabilitation, Health and Water. Muskegon Community College Global Awareness Festival. Keynote Speaker.
- Rediske, R.** 2013. Polybrominated diphenylethers: from your couch to your dinner table in three easy steps. Michigan Green Chemistry and Engineering Conference. Grand Rapids, MI.
- Rediske, R.** 2013. Delisting beneficial use impairments in the White Lake Area of Concern. 56<sup>th</sup> Annual International Association for Great Lakes Research Conference West Lafayette, IN.
- Rediske, R.**, P. Wampler, and A. Molla. 2013. A survey of household water quality in rural Haiti. Geological Society of Americas Conference. San Juan, Puerto Rico.
- Molla, A., **R. Rediske**, and P. Wampler. 2013. Water and sanitation in Haiti – an ethnographic perspective. Geological Society of Americas Conference. San Juan, Puerto Rico.
- Wampler, P., A. Molla and **R. Rediske**. 2013. Karst vulnerability and water quality in Haiti. Geological Society of Americas Conference. San Juan, Puerto Rico.
- Madenjian, C., **Rediske, R.**, O'Keefe, J, 2012. Tenth International Congress on the Biology of Fish, Madison, WI, "Sexual difference in PCB concentrations of burbot from Lake Erie", Janetski, D., Chaloner, D., Moerke, A., **Rediske, R.**, O'Keefe, J., Lamberti, G. 2012. Pacific salmon introductions in the North American Great Lakes: Effects on spawning streams. International Conference on the Ecology and Conservation of Freshwater Fish, Villa Nova de Cerveira, Portugal.
- Rediske, R.R.**, L.Q. Xie, J.P. O'Keefe, J.A.Dyble-Bressie, and J.M. Hagar. 2011. The influence of environmental conditions and hydrologic connectivity on cyanobacteria assemblages. 54<sup>th</sup> Annual International Association for Great Lakes Research Conference. Duluth, MN.
- Tromp, E.A., **R.R. Rediske**, and J.P. O'Keefe. 2011. PBDEs in Lake Huron Fish. 54<sup>th</sup> Annual International Association for Great Lakes Research Conference. Duluth, MN.
- Molla, A., Wampler, P., and **Rediske, R.** 2011. "Ethnoscience analysis to assess drinking water quality in Bangladesh," Central states Anthropological Society Meeting, American Anthropological Association, Iowa City, Iowa.

- Sisson\*, A., Wampler, P., and **Rediske, R.** 2011. Long-term Field Performance of the Biosand Point of Use Water Filtration System in the Artibonite Valley, Haiti. 7th Annual Thirsting to Serve Conference, Rotary International, Grand Rapids, MI.
- Rediske, R.**, 2011. Biosand Filtration Research at the Annis Water Resources Institute, Grand Valley State University, 7th Annual Thirsting to Serve Conference, Rotary International, Grand Rapids, MI.
- Rediske, R.** 2010. Should Term Limits be applied to Analytical Detection? Michigan Water and Environment Association Annual Meeting. Lansing, MI.
- R. Rediske**, and J. O'Keefe. 2010. Assessment of PCBs and PBDEs in Fish from Several Trophic Levels in Western Michigan Drowned River Mouth Lakes. 53rd annual International Association for Great Lakes Research Conference. Toronto, Canada
- Janetski\*, D.T. Chaloner, A.H. Moerke, **R.R. Rediske**, J.P. O'Keefe, and G.A. Lamberti. (2010). Pollutant transport by introduced Pacific salmon to Great Lakes tributaries. 140<sup>th</sup> Annual Meeting of the American Fisheries Society. Pittsburgh, PA.
- Potter, A.\*, **R. Rediske**, and J. O'Keefe. 2010. PCB and PBDE in Lake Michigan Whitefish. Michigan Academy of Science Annual Meeting. Calvin College. Grand Rapids, MI.
- Scull, B., **R. Rediske**, and K. Thompson. 2010. Integrated nutrient assessment of Bear Lake, Michigan. Michigan Academy of Science Annual Meeting. Calvin College. Grand Rapids, MI.
- Tromp, E.\*, **R. Rediske**, and J. O'Keefe. 2010. PBDEs in the Lake Huron fish. Michigan Academy of Science Annual Meeting. Calvin College. Grand Rapids, MI.
- Tromp, E.\*, **R. Rediske**, and J. O'Keefe. 2010. PBDEs in the Lake Huron Food Web. 53rd annual International Association for Great Lakes Research Conference. Toronto, Canada.