

Curriculum Vitae

Martha L. Carlson Mazur, PhD

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ACADEMIC MISSION	In my service, I support people, organizations, and efforts that work for lasting change toward an equitable and just society and toward improving the natural world through environmental responsibility. In my research, I use observational data and statistical analyses to study ecosystem process and function in transition zones among landscapes and aquatic ecosystems in order to better understand human impacts and improve restoration effectiveness. In my teaching, I use high-impact techniques—such as field lab excursions, service learning, and student-centered research—to supplement lecture- and discussion-based instruction and engage students in participatory learning and critical and creative thinking to foster effective environmental problem-solving.	
EDUCATION	PhD 2009	Resource Ecology and Management (Aquatics) , University of Michigan School of Natural Resources and Environment, Ann Arbor, MI Dissertation: “Ecohydrology of a Great Lakes Ridge-Swale Coastal Wetland System” Graduate Advisors: Dr. Michael J. Wiley, Dr. Douglas A. Wilcox
	MS 2002	Resource Ecology and Management (Aquatics) , University of Michigan School of Natural Resources and Environment, Ann Arbor, MI Thesis: “Ground-water discharge to stream channels: Test of a topographic ground-water model” Graduate Advisor: Dr. Michael J. Wiley
	BA 1998	Geology , Carleton College, Northfield, MN Thesis: “Knickpoint migration and tufa accretion in five South River tributaries, Central Virginia” Undergraduate Advisors: Dr. Clint Cowan, Dr. Mary Savina, Dr. David Harbor, Dr. Dorothy Merritts, Dr. Tom Gardner
PROFESSIONAL EXPERIENCE	2019-present	Chair of Environmental Studies Department College of Arts & Sciences, Bellarmine University
	2018-present	Associate Professor, with tenure School of Environmental Studies, College of Arts & Sciences, Bellarmine University
	2013-2017	Assistant Professor School of Environmental Studies, Bellarmine University
	2012-2013	Visiting Assistant Professor , Environmental Studies Program Earth & Environmental Sciences Department, Boston College
	2011	Lecturer School of Natural Resources and Environment, University of Michigan
	2010	Climate-Change Scientist (Temporary Assignment) U.S. Geological Survey (USGS) National Headquarters, Reston, VA
	2009-2011	Research Ecologist USGS Great Lakes Science Center (GLSC), Ann Arbor, MI
	2004-2009	Research Scientist in Training

		USGS GLSC, Ann Arbor, MI
RESEARCH EXPERIENCE	2007-2009	Graduate Student Research Assistant , Muskegon River Ecological Modeling System University of Michigan, Ann Arbor, MI
	2004-2005	Graduate Student Research Assistant , EPA Multi-Stressor Analysis University of Michigan, Ann Arbor, MI
	2002-2004	Wetland Ecology Consultant USGS GLSC, Ann Arbor, MI
	2000-2002	Researcher , Muskegon River Ecological Modeling System University of Michigan, Ann Arbor, MI
	2000	Researcher , Flow Alteration in Great Lakes Basin Rivers University of Michigan, Ann Arbor, MI
HONORS & AWARDS	2021-22	Diversity, Equity, and Inclusion Faculty Fellowship
	2021	Dr. Doris A. Tegart Teaching Excellence Award Recipient
	2020	Special Guest of Biruk Araya, Bellarmine Multicultural Graduation Celebration
	2016	Wilson Wyatt Fellowship of Academic Excellence Faculty Award, Bellarmine University
	2015	Bellie Award for Global Sustainability, Bellarmine University
	2014-2016	Presidential Merit Award, Bellarmine University
	2010-2011	Outstanding Research Mentor Award, Undergraduate Research Opportunity Program, University of Michigan
	2010	USGS Special Thanks for Achieving Results (STAR) Award
	2009	Coach of the Year, Great Lakes Region, Ultimate Players Association
	2008	Commitment to Excellence Award, US Army Corps of Engineers, Great Lakes Division
	2007	Superior Teaching Award, University of Michigan
	2004	Merit-based scholarship, University of Michigan
	1998	Graduated Cum Laude from Carleton College
GRANTS	2018	Flow and sediment research to support effective low-head dam removal, Indian Creek, Indiana. Faculty Development Fellowship, Bellarmine University. Total Award: \$3,000. Principal investigator
	2017	Kentucky Academy of Science Undergraduate Summer Research Grant (awarded to student E. Brown). Total Award: \$2,975. Faculty sponsor
	2015	Blue River darter and macroinvertebrate research for conservation. The Nature Conservancy. Total award: \$10,000. Principal investigator
	2014	Project Connect. Teaching and Learning Stipend for pedagogical enhancement of ENVS 340: Aquatic Ecosystems, Bellarmine University. Total award: \$500. Principal investigator

- 2014 Impact Grant for work with the Chickasaw neighborhood, Bellarmine University. Total Award: \$500. Co-principal investigator
- 2014 Kentucky Academy of Science Undergraduate Summer Research Grant (awarded to student G. Gabhart). Total Award: \$1,717. Faculty sponsor
- 2013 Stressors to Ohio River tributary ecosystems. Faculty Development Fellowship, Bellarmine University. Total Award: \$3,000. Principal investigator
- 2013 Mapping and forecasting the invasive *Phragmites* spread in the Great Lakes Basin with remote sensing and crowd-sourcing. NASA Research Opportunities in Space and Earth Sciences. Unfunded. Co-investigator
- 2012, 2013 Undergraduate Research Fellowship. Boston College. Total Awards: \$1,425 and \$1,140. Principal investigator
- 2011 Humans, hydrology, climate change, and ecosystems: An integrated analysis of water resources and ecosystem services in the Great Lakes Basin. National Science Foundation Water Sustainability and Climate grant. Unfunded. Co-investigator
- 2010-2012 Forecasting potential *Phragmites* invasion corridors. Great Lakes Restoration Initiative, USEPA Great Lakes National Program Office. Total Award: \$983,000 (\$14,318 to Boston College). Co-principal investigator
- 2010-2012 Characterizing habitat and food web structures across Great Lakes rivermouth estuaries. Great Lakes Restoration Initiative, USEPA Great Lakes National Program Office. Total Award: \$1,600,000. Co-investigator
- 2010-2011 New Strategies for Restoring Coastal Wetland Function. Great Lakes Restoration Initiative, USEPA Great Lakes National Program Office. Total Award: \$1,300,000. Co-principal investigator
- 2006 Evapotranspiration and Ground-Water Flow Systems in a Fresh-Water Coastal Ridge-and-Swale System. Sigma Xi Grants-in-Aid-of-Research. Total Award: \$700. Principle investigator

PEER-REVIEWED
PUBLICATIONS

1. **Carlson Mazur, M. L.**, B. Smith, B. Bird, S. McMillan, M. Pyron, and C. Hauswald. 2021. Hydrologic connectivity and land cover affect floodplain lake water quality, fish abundance, and fish diversity in floodplain lakes of the Wabash-White River basin. *River Research and Applications* 38: 160-172. DOI: [10.1002/rra.3888](https://doi.org/10.1002/rra.3888)
2. Wilcox, D.A., **M.L. Carlson Mazur**, and T.A. Thompson. 2020. Groundwater controls on wetland vegetation of a ridge-and-swale chronosequence in a Lake Michigan embayment. *Wetlands* 40:2425-2442. DOI: [10.1007/s13157-020-01336-y](https://doi.org/10.1007/s13157-020-01336-y)
3. **Carlson Mazur, M.L.**, D.A. Wilcox, and M.J. Wiley. 2020. Hydrogeology and landform morphology affect plant communities in a Great Lakes ridge-and-swale wetland complex. *Wetlands* 40: 2209-2224. DOI: [10.1007/s13157-020-01312-6](https://doi.org/10.1007/s13157-020-01312-6)
4. **Carlson Mazur, M.L.**, J. Schaeffer, J.E. Granneman, N. Goldstrohm, F.A. Fitzpatrick, J.H. Larson, P.C. Reneau, K.P. Kowalski, P.W. Seelbach. 2019. Seasonal patterns in hydrochemical mixing in three Great Lakes rivermouth ecosystems. *Journal of Great Lakes Research* 45:651-663. DOI: [10.1016/j.jglr.2019.03.009](https://doi.org/10.1016/j.jglr.2019.03.009)

5. Xu, W., P. Collingsworth, B. Bailey, **M.L. Carlson Mazur**, J. Schaeffer, and B. Minsker. 2017. Detecting spatial patterns of rivermouth processes using a geostatistical framework for near-real-time analysis. *Environmental Modelling & Software* 97:72-85. DOI: [10.1016/j.envsoft.2017.06.049](https://doi.org/10.1016/j.envsoft.2017.06.049)
6. McLaughlin, D., **M.L. Carlson Mazur**, D.A. Kaplan, M.J. Cohen. 2014. Estimating effective specific yield in inundated conditions: a comment on a recent application. *Ecohydrology* 7:1245-1247. DOI: [10.1002/eco.1522](https://doi.org/10.1002/eco.1522)
7. **Carlson Mazur, M.L.**, K.P. Kowalski, and D. Galbraith. 2014. Assessment of suitable habitat for *Phragmites australis* (common reed) in the Great Lakes coastal zone. *Aquatic Invasions* 9:1-19. DOI: [10.3391/ai.2014.9.1.01](https://doi.org/10.3391/ai.2014.9.1.01)
8. **Carlson Mazur, M.L.**, M.J. Wiley, and D.A. Wilcox. 2014. Estimating evapotranspiration and groundwater flow from water-table fluctuations for a general wetland scenario. *Ecohydrology* 7:378-390. DOI: [10.1002/eco.1356](https://doi.org/10.1002/eco.1356)
9. Larson, J.H., A. Trebitz, A.D. Steinman, M.J. Wiley, **M.L. Carlson Mazur**, V. Pebbles, H. Braun, and P. Seelbach. 2013. Great Lakes rivermouth ecosystems: Scientific synthesis and management implications. *Journal of Great Lakes Research* 39:513-324. DOI: [10.1016/j.jglr.2013.06.002](https://doi.org/10.1016/j.jglr.2013.06.002)
10. Bourgeau-Chavez, L.L., K.P. Kowalski, **M.L. Carlson Mazur**, K.A. Scarbrough, R.B. Powell, C.N. Brooks, B. Huberty, L.K. Jenkins, E.C. Banda, D.M. Galbraith, Z. Laubach, and K.D. Riordan. 2013. Mapping invasive *Phragmites australis* in the coastal Great Lakes with ALOS PALSAR satellite imagery for decision support. *Journal of Great Lakes Research*: 39:65-77. DOI: [10.1016/j.jglr.2012.11.001](https://doi.org/10.1016/j.jglr.2012.11.001)
11. 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, and J.M. Koches. 2010. A multi-modeling approach to evaluating climate and land use change impacts in a Great Lakes tributary river basin. *Hydrobiologia* 657:243-262. DOI [10.1007/s10750-010-0239-2](https://doi.org/10.1007/s10750-010-0239-2)
12. **Carlson, M.L.**, K.P. Kowalski, D.A. Wilcox. 2009. Promoting species establishment in a *Phragmites*-dominated Great Lakes coastal wetland. *Natural Areas Journal* 29:263-280. DOI: [10.3375/043.029.0306](https://doi.org/10.3375/043.029.0306)
13. Wilcox, D.A., K.P. Kowalski, H.L. Hoare, **M.L. Carlson**, and H.N. Morgan. 2008. Cattail invasion of sedge/grass meadows in Lake Ontario: Photointerpretation analysis of sixteen wetlands over five decades. *Journal of Great Lakes Research* 34: 301-323. DOI: [10.3394/0380-1330\(2008\)34\[301:CIOGMI\]2.0.CO;2](https://doi.org/10.3394/0380-1330(2008)34[301:CIOGMI]2.0.CO;2)
14. Wilcox, D.A., M.J. Sweat, **M.L. Carlson**, and K.P. Kowalski. 2006. A water-budget approach to hydrologic restoration of a sedge fen. *Journal of Hydrology* 320: 501-517. DOI: [10.1016/j.jhydrol.2005.07.026](https://doi.org/10.1016/j.jhydrol.2005.07.026)
15. Baker, M.E., M.J. Wiley, P.W. Seelbach, and **M.L. Carlson**. 2003. A GIS model of subsurface water potential for aquatic resource inventory, assessment, and environmental management. *Environmental Management* 32:706-719. DOI: [10.1007/s00267-003-0018-1](https://doi.org/10.1007/s00267-003-0018-1)
1. Waters, C., C. Combs, and **M.L. Carlson Mazur**. Increasing potential for utility of class water quality data through partnership development. In preparation, Journal of College Science Teaching

IN REVIEW,
REVISION &
PREPARATION

2. **Carlson Mazur, M.L.**, N. Goebel, S. Neupane, C.G. Gomez, J. Glaser, and M. Holmes. Riparian vegetation and hydrologic routing affect water quality and habitat viability in two restored urban wetlands. *In Preparation, Journal of Environmental Quality*
3. **Carlson Mazur, M.L.**, C. Hauswald, N. Nowacki, R. Baskett, C. Copley. Landscape influences on water quality in the Blue River, southern Indiana. *In Preparation, Journal of Soil and Water Conservation*
4. **Carlson Mazur, M.L.**, K. Kowalski, E. Hernandez, K. Prats, S. Antonelli, R. Baskett, and J. Schaeffer. Understanding interactions between hydrogeomorphic structure and wetlands in Great Lakes rivermouth ecosystems. *In Preparation, Journal of Great Lakes Research*

WEBSITE

Carlson Mazur, M.L., K.P. Kowalski, D. Galbraith. 2012. Great Lakes Restoration Initiative *Phragmites* Decision Support Tool Mapper. <http://cida.usgs.gov/glri/phragmites/>. Accessed 25 May 2017 (*USGS peer reviewed*)

DISSERTATIONS AND THESES

1. **Carlson, M.L.** 2009. Ecohydrology of a Great Lakes coastal ridge-swale wetland system. Doctoral dissertation, University of Michigan, Ann Arbor, MI. Handle: [2027.52/64715](https://hdl.handle.net/2027.52/64715)
2. **Carlson, M.L.** 2002. Groundwater discharge to stream channels: a test of a topographic groundwater model. Master's thesis, University of Michigan, Ann Arbor, MI. Handle: [2017.52/101643](https://hdl.handle.net/2017.52/101643)
3. **Carlson, M.L.** 1998. Knickpoint migration and tufa accretion in five South River tributaries, Central Virginia. Senior Integrative Exercise, Carleton College, Northfield, MN.

TECHNICAL REPORTS

1. **Carlson Mazur, M.L.**, N. Nowacki, and R. Baskett. 2016. Ecological Assessment of the Blue River in Southern Indiana. Report to The Nature Conservancy. Bellarmine University, Louisville, KY.
2. Kowalski, K.P., M.J. Wiley, D.A. Wilcox, **M.L. Carlson Mazur**. 2014. 2011 Summary: Coastal Wetland Restoration Research. [Cooperator Report](#) to the U.S. Fish and Wildlife Service. U.S. Geological Survey, Great Lakes Science Center, Ann Arbor, MI.
3. Wilcox, D.A., J.W. Ingram, K.P. Kowalski, J.E. Meeker, **M.L. Carlson**, Y. Xie, G. P. Grabas, K.L. Holmes, and N.J. Patterson. 2005. Evaluation of water level regulation influences on Lake Ontario and Upper St. Lawrence River coastal wetland plant communities. [Final Project Report](#) to the Lake Ontario-St. Lawrence River Study, International Joint Commission.
4. Wilcox, D.A., K.P. Kowalski, and **M.L. Carlson**. 2004. Relationships between Lake Ontario water levels and wetlands. [Year 3 Report](#) for the Wetland Habitat Quantity Performance Indicator Study, International Joint Commission.
5. Wilcox, D.A., K.P. Kowalski, and **M.L. Carlson**. 2004. Evaluation of invasive species control techniques at Crane Creek wetland, western Lake Erie. Report for 2003 USFWS Coastal Program Grant.
6. Wilcox, D.A., K.P. Kowalski, H. Roten, and **M.L. Carlson**. 2003. Relationships between Lake Ontario water levels and wetlands. Year 2 Report for the Wetland Habitat Quantity Performance Indicator Study, International Joint Commission.

PRESENTATIONS

1. Hernandez, E., and **M.L. Carlson Mazur**. 2022. Great Lakes rivermouth wetlands: Impacts of lake levels and river flows on wetland area. Geological Society of America North-Central/Southeastern Joint Section Meeting, Cincinnati, OH.
2. **Carlson Mazur, M.L.**, B. Smith, S. McMillan, B. Bird, M. Pyron, C. Hauswald. 2021. Hydrologic connectivity informs restoration of water quality and fish abundance and diversity in floodplain lakes of the Wabash-White watershed. Ecological Society of America conference, virtual.
3. Brown, E., **M.L. Carlson Mazur**, C. Hauswald, and J. Sweeten. 2019. Effect of sediment deposition and toxicity on low-head dams in Indian Creek in southern Indiana. Kentucky Academy of Science annual meeting, Berea, KY.
4. **Carlson Mazur, M.L.**, N.M. Goebel, S. Neupane, C.G. Gomez, J. Glaser. 2019. Unexpected restoration outcomes in two urban wetlands resulting from differential groundwater flow. Kentucky Academy of Science annual meeting, Berea, KY.
5. **Carlson Mazur, M.L.** and C. Waters. 2019. Connecting Ecology. Ecological Society of America, Earth Stewardship Initiative Workshop, Louisville, KY. (*invited*)
6. **Carlson Mazur, M.L.**, N. Goebel, S. Neupane, C.G. Gomez. 2019. Riparian vegetation and hydrologic routing affect water quality and habitat viability in two restored urban wetlands. Ecological Society of America meeting, Louisville, KY.
7. Neupane, S., **M.L. Carlson Mazur**. 2019. Effects of flow regime on water chemistry and soil of restored wetlands. Ecological Society of America meeting, Louisville, KY. (*poster*)
8. Gomez, C.G., **M.L. Carlson Mazur**. 2019. Water quality implications for macroinvertebrate communities in restored urban wetlands. Ecological Society of America meeting, Louisville, KY. (*poster*)
9. **Carlson Mazur, M.L.**, C. Copley, C. Hauswald. 2018. Sinkholes and their riparian buffers influence water chemistry in the Blue River, southern Indiana. Geological Society of America meeting, Indianapolis, IN.
10. Schaeffer, J.S., S. Friedline, **M.L. Carlson Mazur**, J. Granneman, N. Goldstrohm, J. Larson. 2016. Larval fish communities differ among Great Lakes rivermouths, American Fisheries Society Annual Meeting, Kansas City, MO
11. **Carlson Mazur, M.L.**, C. Hauswald, R. Baskett, and N. Nowacki. 2016. Effects of riparian wetlands and forested land cover on lower watershed recovery from upstream stressors. Society of Wetland Scientists annual conference, Corpus Christi, TX
12. Baskett, R., N. Nowacki, **M.L. Carlson Mazur**. 2015. Monitoring of fish and macroinvertebrate biodiversity along the Blue River in southern Indiana. Kentucky Academy of Science annual meeting, Northern Kentucky University, Highland Heights, KY (*poster*)
13. **Carlson Mazur, M.L.** 2015. Professional branding in an early-career transition to academia. Society of Wetland Scientists annual conference, Providence, RI
14. **Carlson Mazur, M.L.** 2015. The footprints our food choices create. Kentucky Academy of Nutrition and Dietetics, Louisville, KY (*invited*)

15. **Carlson Mazur, M.L.**, R. Clemons, and G. Mican. 2014. Nutrient Dynamics and Water Quality in Ohio River Tributary Ecosystems. Kentucky Academy of Science Annual Conference. Lexington, KY
16. Gabhart, G. and **M.L. Carlson Mazur**. 2014. Industrial discharges of dissolved metals into Ohio River tributaries and consequential effects on benthic macroinvertebrate communities. Kentucky Academy of Science Annual Conference. Lexington, KY (*poster*)
17. Collingsworth, P., W. Xu, B. Minsker, J. Schaeffer, and **M.L. Carlson Mazur**. 2014. Characterization of river plumes in Lake Michigan using a towed multisensor array. American Fisheries Society Annual Meeting, Quebec City, Canada
18. Kern, M., M.L. Carlson Mazur, and M. McGregor. 2014. Comparison of algal diet size in juvenile *Ligumia recta*, Kentucky Department of Fish and Wildlife Resources 9th Annual Freshwater Mollusk Conference, Frankfort, KY
19. **Carlson Mazur, M.L.**, K. Kowalski, D. Galbraith. 2013. *Phragmites* expansion in the Great Lakes coastal zone: Current trends and future predictions. Society of Wetland Scientists meeting, Duluth, MN
20. **Carlson Mazur, M.L.**, S. Antonelli, E. Idleman, K. Kowalski, K. Prats, and J. Schaeffer. 2013. Wetland distribution and habitat dynamics in rivermouth ecosystems of the Great Lakes. Society of Wetland Scientists meeting, Duluth, MN
21. Bickford, W., **M.L. Carlson Mazur**, D. Galbraith, and K. Kowalski. 2013. Predicting *Phragmites* expansion in the Laurentian Great Lakes: Combining radar mapping and habitat suitability modeling in an online decision support. Society of Wetland Scientists meeting, Duluth, MN
22. Bourgeau-Chavez, L.L., K. Scarbrough, L.K. Jenkins, K. Riordan, R. Powell, C.N. Brooks, K.P. Kowalski, **M.L. Carlson Mazur**, Z. Laubach, E.C. Banda, and B. Huberty. 2013. Coastal Great Lakes detection and mapping of the invasive *Phragmites australis* wetland species with ALOS PALSAR Imagery. International Association of Great Lakes Research, Purdue, IN
23. Reneau, P., F. Fitzpatrick, and **M.L. Carlson Mazur**. 2013. Role of spatial and temporal interactions of water levels and flows in determining physical habitat structure of Great Lakes rivermouths. International Association of Great Lakes Research, Purdue, IN
24. Prats, K. and **M.L. Carlson Mazur**. 2013. Relationships among hydrogeomorphology, wetland distribution, and water levels over time in estuarine environments. Northeast Geological Society of America 48th Annual Meeting, Bretton Woods, NH (*poster*)
25. Schaeffer, J.S., **M.L. Carlson Mazur**, J. Granneman, N.A. Amoroso, J. Allen, P. Reneau, D. Bennion, R.F. Gaugush, and P. Seelbach. 2012. Freshwater rivermouths are just like marine estuaries, just without all that salt. Annual Meeting of the American Fisheries Society, Minneapolis-St. Paul, MN
26. **Carlson Mazur, M.L.**, K.P. Kowalski, D.M. Galbraith, L.L. Bourgeau-Chavez, L. Jenkins, and C. Brooks. 2012. Predicting *Phragmites* expansion in the Laurentian Great Lakes. INTECOL and Society of Wetland Scientists meeting, Orlando, FL

27. **Carlson Mazur, M.L.**, F.A. Fitzpatrick, J. Granneman, N.A. Amoroso, J. Allen, P. Reneau, D. Bennion, R.F. Gaugush, and J. Schaeffer. 2012. Understanding hydrogeomorphic influences on rivermouth ecosystem structure. International Association of Great Lakes Research, Cornwall, ON
28. Schaeffer, J.S., **M.L. Carlson Mazur**, J.H. Larson, P.W. Seelbach, W.B. Richardson, K.P. Kowalski, F.A. Fitzpatrick, J.C. Nelson, D.W. Schloesser, R.F. Gaugush, J.B. Waide, L. Fogarty-Nelson. 2012. Three presentations: Lake Huron Citizen's Advisory Board, Roscommon, MI; Michigan Sea Grant central region spring workshop, Alpena, MI; Michigan Sea Grant southern region spring workshop, Port Huron, MI
29. Schaeffer, J.S., **M.L. Carlson Mazur**, J.H. Larson, P.W. Seelbach, W.B. Richardson, K.P. Kowalski, F.A. Fitzpatrick, J.C. Nelson, D.W. Schloesser, R.F. Gaugush, J.B. Waide, L. Fogarty-Nelson. 2012. Rivermouths and the Great Lakes: freshwater estuaries in freshwater seas. Society for Ecological Restoration, Ann Arbor, MI
30. **Carlson Mazur, M.L.**, J.H. Larson, P.W. Seelbach*, W.B. Richardson, J. Schaeffer, K.P. Kowalski, F.A. Fitzpatrick, J.C. Nelson, D.W. Schloesser, R.F. Gaugush, and J.B. Waide. 2011. Characterization of habitat and food webs in Great Lakes rivermouth ecosystems. State of the Lake and Great Lakes Beach Association Conference 2011, Michigan City, IN (* presenter)
31. Bourgeau-Chavez, L., R.B. Powell, L.K. Jenkins, C.N. Brooks, T. Erickson, **M.L. Carlson Mazur**, K.P. Kowalski, B. Huberty, and K. Riordan. 2011. Large-scale invasive *Phragmites* mapping. *Phragmites* Invasions in Michigan: A Symposium to Build Capacity for Management, East Lansing, MI (*invited*)
32. Larson, J.H., W.B. Richardson, **M.L. Carlson Mazur**, K.P. Kowalski, and P.W. Seelbach. Characterizing habitat and food web structures across Great Lakes rivermouth zones to support restoration. 2011. Coastal Zone Conference. Chicago, IL
33. **Carlson Mazur, M.L.**, G. Ito, F. Fitzpatrick, R. Gaugush, and D. Bennion. 2011. Understanding hydrogeomorphic influences on wetland habitat structure in rivermouth ecosystems of the Laurentian Great Lakes. Joint Meeting of Society of Wetland Scientists, WETPOL and Wetland Biogeochemistry Symposium, Prague, Czech Republic (*poster*)
34. **Carlson Mazur, M.L.**, K.P. Kowalski, D. Galbraith, L.L. Bourgeau-Chavez, R. Powell, and C. Brooks. 2011. Mapping *Phragmites* and predicting corridors of invasion in the coastal zone of the Laurentian Great Lakes. Joint Meeting of Society of Wetland Scientists, WETPOL and Wetland Biogeochemistry Symposium, Prague, Czech Republic
35. Kowalski, K. P., **M. L. Carlson Mazur**, S. Doty, S. Hoyt, and J. Molenhouse. 2011. Coastal wetland ecosystem rehabilitation through hydrologic reconnection: Diked wetlands in western Lake Erie. Joint Meeting of Society of Wetland Scientists, WETPOL and Wetland Biogeochemistry Symposium, Prague, Czech Republic
36. Bourgeau-Chavez, L., R.B. Powell, C.N. Brooks, **M.L. Carlson Mazur**, K. Kowalski, and K. Riordan. 2011. Detection and monitoring of invasive *Phragmites* in the coastal Great Lakes. Coastal Zone 2011 Conference, Chicago, IL

37. **Carlson Mazur, M.L.**, J.H. Larson, W.B. Richardson, J. Schaeffer, K.P. Kowalski, D.W. Schloesser, J.D. Allen, R.V. Gaugush, F.A. Fitzpatrick, P.W. Seelbach, and J.B. Waide. 2011. Science for effective restoration of rivermouth ecosystems: Controls on biophysical structure and food-web processes. International Association of Great Lakes Research Annual Meeting, Duluth, MN
38. Bourgeau-Chavez, L.L., R.B. Powell, L.K. Jenkins, C.N. Brooks, T. Erickson, **M. L. Carlson Mazur**, K. Kowalski, B. Huberty, and K. Riordan. 2011. Mapping and monitoring of invasive *Phragmites* in the coastal Great Lakes using Radar imagery. International Association of Great Lakes Research Annual Meeting, Duluth, MN
39. Jenkins, L., L. Bourgeau-Chavez, R. Powell, K. Riordan, K. Kowalski, **M. Carlson Mazur**, and B. Huberty. 2011. Updated invasive *Phragmites* mapping methods and results for the Great Lakes region. Soil and Water Conservation Society Annual Meeting, Washington, DC
40. Galbraith, D., **M.L. Carlson Mazur**, K.P. Kowalski, and J. Shaeffer. 2010. Using remote sensing to predict invasion paths of invasive wetland plants and their impact on wetland fish communities. American Fisheries Society, Pittsburgh, PA (*invited*)
41. **Carlson Mazur, M.L.**, D.A. Wilcox, M.J. Wiley, and G. Ito. 2010. Hydrologic drivers governing Great Lakes wetland plant community response to climate change. Society of Wetland Scientists Annual Meeting, Salt Lake City, UT
42. **Carlson Mazur, M.L.**, D.A. Wilcox, and M.J. Wiley. 2010. Water-balance interactions of plants and groundwater in a Lake Huron coastal wetland complex. International Association of Great Lakes Research, Toronto, ON, Canada
43. Kowalski, K P. and **Carlson Mazur, M.L.** 2010. Forecasting *Phragmites* invasion corridors along the Great Lakes coast. USGS Climate Change Conference. Denver, CO
44. **Carlson, M.L.**, D.A. Wilcox, and M.J. Wiley. 2009. Dynamics among vegetation, hydrology, and underlying geology of a ridge-swale wetland of the Laurentian Great Lakes. Society of Wetland Scientists Annual Meeting, Madison, WI
45. **Carlson, M.L.**, M.J. Wiley, and D.A. Wilcox. 2009. Techniques for measuring wetland hydrology with implications for restoration. The Stewardship Network Conference, East Lansing, MI
46. **Carlson, M.L.** 2008. Hydrology and vegetation in ridge-and-swale wetlands. US Army Corps of Engineers Lakes and Rivers Division Regulatory Project Managers Conference, Traverse City, MI (*Invited*)
47. **Carlson, M.L.**, D.A. Wilcox, and M.J. Wiley. 2008. Evapotranspiration and ground-water flow in a fresh-water coastal ridge-and-swale system: Preliminary results. Society of Wetland Scientists Annual Meeting, Washington, DC
48. **Carlson, M.L.**, K.P. Kowalski, and D.A. Wilcox. 2007. Evaluation of secondary treatments for *Phragmites australis* in Crane Creek wetland, western Lake Erie. Society of Wetland Scientists Annual Meeting, Sacramento, CA
49. Kowalski, K.P., **M.L. Carlson**, and D.A. Wilcox. 2007. Evaluation of control techniques for *Phragmites australis* in coastal wetlands, Ottawa National Wildlife Refuge, Ohio. Invasive Plant Council Research Conference. Delaware, OH

50. Wilcox, D.A., S.J. Baedke, and **M.L. Carlson**. 2006. Ground-water controls on wetland plant community response to climate change. Society of Wetland Scientists Annual Meeting, Cairns, Australia
 51. **Carlson, M.L.**, D.A. Wilcox, and K.P. Kowalski. 2005. Evaluation of *Phragmites australis* control techniques in a degraded coastal wetland, western Lake Erie. Society of Wetland Scientists Annual Meeting, Charleston, SC
 52. Wilcox, D.A., Y. Xie, K.P. Kowalski, J. Ingram, and **M.L. Carlson**. 2005. Modeling wetland response to proposed changes in hydrologic regulation of Lake Ontario. International Association of Great Lakes Research Annual Conference on Great Lakes Research, Ann Arbor, MI (*invited*)
 53. Wilcox, D.A., M.J. Sweat, **M.L. Carlson**, and K.P. Kowalski. 2005. Planning hydrologic restoration of small streams in a large, ditched and diked peatland. 135th Annual Meeting of the American Fisheries Society, Anchorage, AK (*invited*)
 54. Wilcox, D.A., K.P. Kowalski, and **M.L. Carlson**. 2004. Role of fluctuating water levels on Lake Ontario coastal wetlands. Celebrating the 25th Anniversary of the Wetland Protection Act Conference, Traverse City, MI (*invited*)
 55. Wilcox, D.A., Y. Xie, K.P. Kowalski, J. Ingram, and **M.L. Carlson**. 2004. Modeling wetland response to proposed changes in hydrologic regulation of a large reservoir–Lake Ontario. Geological Society of America Meeting, Denver, CO
 56. Wilcox, D.A., J.E. Meeker, K.P. Kowalski, J. Ingram, **M.L. Carlson**, and T.L. King. 2004. Wetland plant communities vs. lake-level regulation: developing a new regulation plan for Lake Ontario. Society of Wetland Scientists Annual Meeting, Seattle, WA
 57. Kowalski, K.P., D.A. Wilcox, H.L. Roten, and **M.L. Carlson**. 2003. Evaluation of coastal wetland plant community responses to regulated Lake Ontario water levels using aerial photographs and GIS. Society of Wetland Scientists Annual Meeting, New Orleans, LA
 58. Wilcox, D.A., M.J. Sweat, **M.L. Carlson**, and K.P. Kowalski. 2003. A water-budget approach to hydrologic restoration of a sedge fen. Geological Society of America Annual Meeting, Seattle, WA
 59. **Carlson, M.L.** 1998. Knickpoint migration and tufa accretion in five South River tributaries, Central Virginia. Eleventh Keck Research Symposium in Geology Proceedings: Amherst College, Amherst, MA (*invited*)
- STUDENT
PRESENTATIONS
MENTORED

 1. Hernandez, E. 2022. Great Lakes rivermouth wetlands: Impacts of lake levels and river flows on wetland area. Celebration of Student Research and Creativity, Bellarmine University, Louisville, KY. (*poster*)
 2. Glaser, J. 2020. Stressors to urban wetlands. Celebration of Student Research and Creativity, Bellarmine University, Louisville, KY. (*poster, cancelled due to COVID*)
 3. Holmes, M. 2020. Groundwater geochemical research for wetlands. Celebration of Student Research and Creativity, Bellarmine University, Louisville, KY. (*poster*)
 4. Kotarski, M. 2020. Anthropogenic effects on wetland macroinvertebrates. Celebration of Student Research and Creativity, Bellarmine University, Louisville, KY. (*poster*)

5. Neupane, S. 2019. Effects of flow regime on water chemistry and soil of restored wetlands. Celebration of Student Research and Creativity, Bellarmine University, Louisville, KY. (*poster*)
6. Gomez, C.G. 2019. Water quality implications for macroinvertebrate communities in restored urban wetlands. Celebration of Student Research and Creativity, Bellarmine University, Louisville, KY. (*poster*)
7. Crone, E. 2018. Comparison of habitat and water quality in the Blue River's Salem and South Forks in Southern Indiana to support watershed management. Celebration of Student Research and Creativity, Bellarmine University, Louisville, KY (*poster*)
8. Brown, E. 2018. How do low-head dams affect sediment deposition and toxicity in Indian Creek in southern Indiana? Celebration of Student Research and Creativity, Bellarmine University, Louisville, KY (*poster*)
9. Copley, C. 2017. Riparian buffered sinkholes in the Blue River watershed. Senior Honors Thesis Symposium, Bellarmine University, Louisville, KY
10. Copley, C. 2017. Riparian vegetated sinkholes in the Blue River watershed and their effect on pollution and macroinvertebrates. Celebration of Student Research and Creativity, Bellarmine University, Louisville, KY (*poster*)
11. Ricketts, D. 2017. Environmental injustice in Louisville's urban neighborhoods. Celebration of Student Research and Creativity, Bellarmine University, Louisville, KY (*poster*)
12. Nowacki, N. and R. Baskett. 2016. Biodiversity of the Blue River in southern Indiana with a focus on macroinvertebrates and fish. Celebration of Student Research and Creativity, Bellarmine University, Louisville, KY (*poster*)
13. Baskett, R. 2016. Water level and stream flow impacts on riverine wetlands of Lake Michigan. Celebration of Student Research and Creativity, Bellarmine University, Louisville, KY (*poster*)
14. McEachern, T. 2016. Determining the most efficient type of growth light for an aquaponics system using yellow lantern chilies. 2016. Celebration of Student Research and Creativity, Bellarmine University, Louisville, KY (*poster*)
15. McEachern, T. 2016. Determining the most efficient type of growth light for an aquaponics system using yellow lantern chilies. 2016. Senior Honors Thesis Symposium, Bellarmine University, Louisville, KY
16. Gilmore, E. and M.L. Carlson Mazur. 2015. Water quality and sediment deposition of Beargrass Creek State Nature Preserve. Celebration of Student Research, Bellarmine University, Louisville, KY (*poster*)
17. Clemons, R. and M.L. Carlson Mazur. 2015. Effects of geomorphic alterations on nutrient processing capabilities of Ohio River tributary ecosystems. Celebration of Student Research, Bellarmine University, Louisville, KY (*poster*)
18. Gabhart, G. 2015. The effects of coal-fired power plants on Ohio River tributaries. Senior Honors Thesis Symposium, Bellarmine University, Louisville, KY
19. Ito, G. and **M.L. Carlson Mazur**. 2011. Lake and river water interaction in a Great Lakes river-mouth ecosystem. Undergraduate Research Opportunity Program Research Symposium, University of Michigan, Ann Arbor, MI (*poster*)

20. Ito, G. and **M.L. Carlson Mazur**. 2010. Response of wetland plant communities to climate change. Undergraduate Research Opportunity Program Research Symposium, University of Michigan, Ann Arbor, MI (*award for best poster*)

TEACHING &
MENTORSHIP

- 2017-2019 **Research Advisor**, E. Brown
Bellarmine University, Clare Boothe Luce Research Scholars Program
- 2017-present **Academic Advisor for Majors in Honors**
Bellarmine University, School of Environmental Studies
- 2015-present **Honors Thesis Reader**, A. Lamb (2019-20), K. Erwin (2018-19), K. Wegenast (2016-17), R. Clemons (2015), S. Hall (2017-18), K. Erwin (2018-19); Bellarmine Honors Program
- 2015-present **Academic Advisor for Majors**
Bellarmine University, School of Environmental Studies
- 2014-present **Internship Advisor**, N. Wilkey (2020), C. Severance (2019), L. Miles (2017), Z. Laughlin (2017), K. McDermott (2017), E. Crone (2016), A. Adam (2006), J. Dalzell (2016), M. Simms (2015-16), N. Nowacki (2015-16), R. Baskett (2015-16), V. Freter (2015), R. Clemons (2014-15), G. Mican (2014-15), K. Keisker (2014), C. Cornelius (2014); Bellarmine School of Environmental Studies
- 2013-present **Honors Thesis Advisor**, S. Pardieu (2022-23), E. Hernandez (2021-22), E. Crone (2017-18), C. Copley (2016-17), T. McEachern (2016-17), G. Gabhart (2013-14)
Bellarmine Honors Program
- 2013-present **Research Advisor**, J. Ferrell (2022), H. Carter (2022), J. Bailey (2021), M. Holmes (2020), M. Kotarski (2020), C. Combs (2020), C. Waters (2020), J. Glaser (2019-2021), C. Gomez (2019), S. Neupane (2018), N. Goebel (2018), H. Mattingly (2018), D. Ricketts (2017), N. Wilkey (2017), N. Nowacki (2015-16), R. Baskett (2015-16), E. Gilmore (2015), M. Kern (2014), L. Gad (2014), L. Graham (2013-14); Bellarmine University
- 2013-present **Professor**, Environmental Science (ENVS 111), Understanding Environmental Systems (ENVS 151), Sustainable Development (ENVS 330), Aquatic Ecosystems (ENVS 340), Environmental Internship (ENVS 390), Ecology (ENVS 408), Water and Society (IDC 401), Water: The Last Drop (HONR 401), Independent Research (ENVS 420), Environmental Seminar (ENVS 490); Bellarmine University
- 2012-2013 **Professor**, Environmental Systems: Ecosystems (GE 202), Environmental Systems: Water Resources (GE 203), Ecohydrology (GE 420), Senior Environmental Seminar (GE 580)
Boston College, Earth & Environmental Sciences Department
- 2012-2013 **Undergraduate Academic Advisor**, Environmental Geoscience Majors
Boston College, Earth & Environmental Sciences Department
- 2012-2013 **Honors Thesis Advisor**, K. Prats
Boston College, Earth & Environmental Sciences Department
- 2012-2013 **Undergraduate Research Fellow Advisor**, S. Antonelli
Boston College, Earth & Environmental Sciences Department

- 2012 **Undergraduate Research and Readings Advisor**, E. Idleman
Boston College, Earth & Environmental Sciences Department
- 2012-2013 **Graduate Thesis Committee Member**, S. Ahmed (2012-13), B. Hildum (2012-13), J. Anderson (2012-13)
Boston College, Earth & Environmental Sciences Department
- 2012-2013 **Graduate Academic Advisory Committee Member**, E. Kristiansen
Boston College, Earth & Environmental Sciences Department
- 2011 **Lecturer**, Wetland Ecology (NRE 508)
University of Michigan, School of Natural Resources and Environment
- 2009-2011 **Research Sponsor**, Gen Ito
Undergraduate Research Opportunity Program, University of Michigan
- 2007 **Graduate Student Instructor**, Field Methods in Fluvial Ecosystems (2007); Fluvial Ecosystems (2006); Rivers, Lakes, and Wetlands (2006); Introduction to Aquatic Ecosystems (2001-02)
University of Michigan, School of Natural Resources and Environment
- 2001-2009 **Head Coach**
University of Michigan Women's Ultimate Frisbee
- 1997-1998 **Laboratory Assistant, Introductory Geology**
Carleton College
- 2021 REMOTE Connected Faculty Summit
Bellarmine MLK Day Event
Bellarmine Faculty Development Workshop: Keeping Creative Energy Going
- 2020 REMOTE Connected Faculty Summit
Association for the Advancement of Sustainability in Higher Education Conference
Louisville Sustainability Summit
NSF RIVER Field study workshop
Scholarship of Teaching and Learning Conference
Sustainability Curriculum Consortium webinar
Bellarmine Reboot Camp
Bellarmine While Allyship Webinar
Bellarmine Microaggressions Workshop
EPIC Supervisor Training
Constitution Day panel event
- 2019 Ecological Society of America's Earth Stewardship Initiative,
Louisville Sustainability Summit,
NetVUE workshop
Clifton Strengths workshop
Academic Women's Writing Collective
Webinars by the National Association of Geoscience Teachers and the Association for the Advancement of Sustainability in Higher Education,
Pedagogical continuing-education workshops at the Ecological Society of America conference
CiC Chairs conference

RECENT
PROFESSIONAL
DEVELOPMENT

PROFESSIONAL MEMBERSHIPS	2015-present	Association for Environmental Studies and Sciences
	2013-present	Kentucky Academy of Science
	2013-present	National Association of Geoscience Teachers
	2010-2014	International Association of Great Lakes Research
	2007-present	Geological Society of America
	2005-present	Society of Wetland Scientists
	2004-present	American Association for the Advancement of Science
	1998-present	Sigma Xi, Scientific Research Society
CERTIFICATION	2011	U. S. Department of Interior Motorboat Operator Certification
SERVICE	2022	Reviewer, University of Wisconsin Water Resources Institute
	2021	Faculty Farm Steward, Bellarmine University Farm
	2021-2022	Co-Chair, Bellarmine Community of Practice in Community Engagement
	2021-present	Co-Chair, Bellarmine University Sustainability Committee
	2021-present	Member, Salt River Collaborative
	2020-2021	Member, Louisville Community Grocery
	2019-2020	Co-Coordinator, Sustainability Taskforce, Bellarmine University
	2019	Tenure scholarship review, external institution
	2018-present	Coordinator, Sustainability Series, Bellarmine University
	2018-present	Member, Origins Speaker Series Planning Committee, Bellarmine University
	2017-present	Member, Book in Common Selection Committee, Bellarmine University
	2017	Member, Beargrass Creek Consortium
	2016	Reviewer, Wisconsin Groundwater Council Research and Monitoring Grant funding proposal
	2015-2016	Member, Honors Program Review Board, Bellarmine University
	2015-2016	Member, National Summer Institute on Learning Communities on-campus team, Bellarmine University
	2015	Reviewer, Minnesota Sea Grant funding proposal
	2015	Co-Coordinator, Beargrass Creek Alliance Winter Speaker Event
	2014-2017	Incoming Chair, Chair, Past-Chair Women in Wetlands Section, Society of Wetland Scientists (SWS)
	2014-present	Member, Honors Council, Bellarmine University
	2014-2019	Member, Liberal Education Task Force, Bellarmine University
	2014, 2016	Beargrass Creek Alliance Storm Drain Marking Program, class participation
	2014-2015	Member, Faculty for Social Innovation and Chickasaw Federation Neighborhood Development Planning Committee
	2013-present	Member, Beargrass Creek Alliance
	2013	Advisory Committee, Sustainability Living-Learning Community, Boston College
	2012-2013	Board Member, Environmental Studies Program, Boston College
	2012-2013	Faculty Advisor, Outdoors Club, Boston College
	2012-2013	Faculty Advisor, Net Impact charter chapter, Boston College
	2010-2012	Member, Great Lakes Rivermouths Collaboratory, Great Lakes Commission
	2010-2011	Member, Awards Committee, USGS GLSC
	2009-2011	At-Large Board Member, North Central Chapter, SWS
2009-2011	Chair, Education and Outreach Committee, North Central Chapter, SWS	
2009	Reviewer: Ohio Sea Grant funding proposal	

2008-2011 Treasurer, Rewarding Environment Committee, USGS GLSC
2008-present Reviewer: *Journal of Hydrology, Wetlands, Journal of Ecology and the Natural Environment, Hydrological Processes, Aquatic Invasions, Journal of Hydrometeorology*, USGS internal reviews
2006-2011 Chair, Bylaws and Standing Rules Committee, North Central Chapter, SWS
2006 Book Review: *Rivers and Floodplains, Wetlands* 26: 283-286
2004-2005 Volunteer, Huron River Watershed Council