

**Melissa M. Baustian, Ph.D.**  
**Coastal Ecologist, The Water Institute of the Gulf**

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**Education**

**Ph.D. in Oceanography and Coastal Sciences, August 2011**  
Louisiana State University, Baton Rouge, Louisiana

**M.S. in Oceanography and Coastal Sciences, August 2005**  
Louisiana State University, Baton Rouge, Louisiana

**B.S. in Biology, May 2003**  
Iowa State University, Ames, Iowa

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**Research Interests:**

Coastal ecology; aquatic ecology; benthic ecology, benthic-pelagic coupling, eutrophication, hypoxia

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**Professional Experience:**

<b>The Water Institute of the Gulf</b> <ul style="list-style-type: none"><li>• <i>Coastal Ecologist</i></li></ul>	<b>2013-Present</b>
<b>Center of Excellence for Louisiana</b> <ul style="list-style-type: none"><li>• <i>Deputy Director</i></li></ul>	<b>2017-Present</b>
<b>Louisiana State University, Department of Oceanography and Coastal Sciences</b> <ul style="list-style-type: none"><li>• <i>Adjunct Faculty</i></li></ul>	<b>2015-Present</b>
<b>Center for Water Sciences, Michigan State University</b> <ul style="list-style-type: none"><li>• <i>Post-doctoral Research Associate</i></li></ul>	<b>2011-2013</b>
<b>Louisiana State University</b> <ul style="list-style-type: none"><li>• <i>Co-coordinator of EnvironMentors</i></li></ul>	<b>2010-2011</b>
<b>Louisiana State University &amp; Louisiana Universities Marine Consortium</b> <ul style="list-style-type: none"><li>• <i>Graduate Research Associate (Ph.D.)</i></li></ul>	<b>2005-2011</b>
<b>Louisiana State University &amp; Louisiana Universities Marine Consortium</b> <ul style="list-style-type: none"><li>• <i>Graduate Research Associate (M.S.)</i></li></ul>	<b>2003-2005</b>
<b>Limnology Laboratory, Iowa State University</b> <ul style="list-style-type: none"><li>• <i>Undergraduate Research Associate</i></li></ul>	<b>2002-2003</b>
<b>Boston University Marine Program</b> <ul style="list-style-type: none"><li>• <i>Research Experience for Undergraduates (REU)</i></li></ul>	<b>summer 2002</b>
<b>Limnology Laboratory, Iowa State University</b> <ul style="list-style-type: none"><li>• <i>Limnology Laboratory Technician</i></li></ul>	<b>2001-2002</b>

**Recent Research Projects:****Impact of Climate-driven Shifts in Vegetation on Carbon Dynamics in Marsh Food Webs***The Water Institute of the Gulf, Baton Rouge, Louisiana*

In Louisiana, continued winter warming and drought conditions are projected to influence the spread of tropical mangrove species in coastal marshes leading to ecosystem-level shifts between salt marsh grass (*Spartina alterniflora*) / black mangrove (*Avicennia germinans*) ecotones. While mangroves are already present in coastal Louisiana, it is unknown how they might alter the structure and function of food webs at the salt marsh edge, which is an essential nursery habitat for commercially and recreationally important fish, shrimp and crabs. We are measuring stable isotope abundance of  $\delta^{13}\text{C}$ , and  $\delta^{15}\text{N}$  of specific primary producers and consumers to determine if the importance of available carbon sources in marsh food webs differ along a coastal salt marsh/mangrove gradient. Therefore, as mangroves expand, it is critical to determine if shifting basal carbon sources (plant material, phytoplankton, and soil organic matter) for marsh consumers will alter food web structure in marsh habitats. Collaborating with Dr. Mike Polito (Louisiana State University), Ms. Christina Powell (MS student, Louisiana State University) and Mr. Brandeus Davis (BS student, Louisiana State University). Funded by Louisiana Sea Grant.

**Modeling Diversion Related Nutrients***Louisiana Coastal Protection and Restoration Authority (CPRA), Baton Rouge, Louisiana*

Basin-wide Model Development. Coordinated and oversaw project activities related to modeling (Delft3D) the potential nutrient effects from diverted Mississippi River water. Implemented and led estuarine field and laboratory data collection (estuary open water and sediments, wetland vegetation and soils) to help validate the current basin-wide conditions (Barataria and Breton Basins, Louisiana) and for future nutrient effects from proposed sediment diversions. Led collaborative efforts with sub-contractors (e.g., Deltares, ULL, LSU) to meet project deadlines. Developed and led worksessions with external experts to gain input on nutrient-related modeling progress. Managed project budget as well as junior staff, research interns and undergraduate workers. Collaborated with researchers and their teams from The Water Institute of the Gulf, including Dr. Ehab Meselhe and Dr. Mead Allison.

**Incorporating Nutrient Effects into Modeling***Louisiana Coastal Protection and Restoration Authority (CPRA), Baton Rouge, Louisiana*

Provided technical expertise on the potential impacts of nutrients from sediment diversions to the coastal ecology of Louisiana. Elicited expert input about the influence and uncertainties of nutrient enrichment to wetland vegetation, soils and estuarine pelagic and benthic habitats. Used experts, literature and available data to develop a work plan that incorporated nutrient dynamics into a simulation model. Collaborated with researchers from The Water Institute of the Gulf, including Dr. Ehab Meselhe and Mr. Leland Moss.

**Decomposition and Accumulation of Organic Matter Across a Salinity Gradient***The Water Institute of the Gulf's Science and Engineering Plan, Baton Rouge, Louisiana*

Investigating potential climate change effects on coastal vegetation and ecosystem processes in coastal Louisiana. Estimating coast wide decomposition and carbon accumulation rates from four main, salinity driven, marsh habitats within coastal Louisiana to better understand how climate change or management actions could influence long-term changes in salinity and associated ecological processes. Collaborating with scientists from The Water Institute of the Gulf, including Dr. Tim Carruthers and Mr. Leland Moss as well as collaborators from U.S. Geological Survey National Wetland and Aquatic Research Center (Dr. Camille Stagg) and Gulf South Research Corporation (Ms. Carey Perry).

**Benthic-pelagic Coupling in Aquatic Ecosystems***Center for Water Sciences, East Lansing, Michigan State University*

Researching the ecological effects of nutrient enrichment on the benthic-pelagic coupling mechanisms in lakes by analyzing data from the 2007 USEPA National Lakes Assessment (n = 1000 lakes). Organized large data set with MS Access and SAS. Applying structural equation modeling with software SPSS AMOS and SAS to test hypotheses. Lead author on a review paper that discussed benthic-pelagic coupling mechanisms in fresh and marine ecosystems and their likely ecological responses to common stressors. Collaborated with Dr. Jan Stevenson from Michigan State University.

### **Coupling Socioeconomic and Ecological Systems for Water Sustainability**

*Center for Water Sciences, Michigan State University, East Lansing, Michigan*

Collaborating with interdisciplinary water researchers at the MSU Center for Water Sciences to determine and synthesize the essential contemporary and historical factors that couple human and aquatic systems, funded by the NSF Water, Sustainability and Climate program. Developing a systems dynamic model with an environmental economist to couple human and ecological systems by studying the impacts of anthropogenic nutrient and fecal pollution from Clinton River watershed to the ecosystem services of Lake St. Clair, Great Lakes. Synthesizing data for model parameters. Hosted a one-day stakeholder workshop (May 2012) to gain knowledge and refine conceptual model. Led the team in project management, including field collection of sediment vibracores from Lake St. Clair and Clinton River and for analyses of ecological and water-borne pathogenic paleoindicators. Collaborated with Dr. Joan Rose (Michigan State University), Dr. Jan Stevenson (Michigan State University) and Dr. Georgia Mavrommati (Dartmouth University).

### **Microphytobenthos in the northern Gulf of Mexico Hypoxic Area**

*Louisiana State University & Louisiana Universities Marine Consortium, Baton Rouge, Louisiana*

Conducted benthic ecological research to determine the composition and distribution of microphytobenthos (benthic algae + cyanobacteria) in northern Gulf of Mexico hypoxic region. Developed sampling protocol and experimental set-up to test hypotheses of presence of microphytobenthos and oxygen dynamics in the bottom water. Analyzed sediment and water samples for phytopigments and taxa composition of microalgae and cyanobacteria from water and sediment samples. Collaborated with Dr. Nancy Rabalais (Louisiana Universities Marine Consortium) and Dr. Eugene Turner (Louisiana State University).

### **PEER REVIEWED PUBLICATIONS**

Google scholar link: <https://scholar.google.com/citations?user=Gp7ZFvoAAAAJ&hl=en>

- **Baustian, M. M.**, Stagg, C. L., Perry, C. L., Moss, L., Carruthers, T., and Allison, M. A. 2017. "Relationships between salinity and short-term soil carbon accumulation rates from marsh types across a landscape in the Mississippi River Delta." *Wetlands*. <https://doi.org/10.1007/s13157-016-0871-3>
- Brooks, Y.M., **Baustian, M.M.**, Baskaran, M., Ostrom, N.E. and J. B. Rose. 2016. "Historic associations of fecal indicator marker concentrations to anthropogenic activities and climate in freshwater sediment cores." *Environmental Science and Technology*. 50:6902-6911. <http://pubs.acs.org/doi/abs/10.1021/acs.est.6b01372>
- Price, A., **Baustian, M.M.**, Turner, R.E. Rabalais, N.N., Chmura, G. 2016. "*Melitasphaeridium choanophorum* – a living dinoflagellate cyst fossil in the Gulf of Mexico." *Palynology*. <http://www.tandfonline.com/doi/abs/10.1080/01916122.2016.1205676>
- Bargu, S., **Baustian, M.M.**, Rabalais, N.N., Del Rio, R., Von Korff, B., and R.E. Turner. 2016. "Influence of the Mississippi River on Pseudo-nitzschia spp. Abundance and Toxicity in Louisiana Coastal Waters." *Estuaries and Coasts*. <http://link.springer.com/article/10.1007/s12237-016-0088-y>
- **Baustian, M.M.**, Hansen, G., de Kluijver, A., Robinson, K., Henry Norton, E., Knoll, L., Rose, K, and C. Carey. 2014. "Linking the bottom to the top in aquatic ecosystems: mechanisms and stressors of benthic-pelagic coupling." Invited Eco-DAS X chapter for ASLO e-book. [http://www.aslo.org/books/ecodas10/ecodas10\\_025.pdf](http://www.aslo.org/books/ecodas10/ecodas10_025.pdf)
- Monk, M.H., **Baustian, M.M.**, Saari, C.R., Welsh, S., D'Elia, C., Gaston, S., and J.E. Powers. 2014. "EnvironMentors: mentoring at-risk high school students through university partnerships." *International Journal of Environmental and Science Education*. 9:385-397. <http://www.ijese.com/ijese.2014.223a.pdf>
- Hansen, G.A., Sadro, S., **Baustian, M.M.**, and B. Stauffer. 2014. "Shifting career pathways of Ph.D. ecologists: Is it time to redefine the "alternative" career?" *Limnology and Oceanography Bulletin*. 23:2-5. [http://aslo.org/bulletin/issues/14\\_v23\\_i1.pdf](http://aslo.org/bulletin/issues/14_v23_i1.pdf)
- **Baustian, M.M.**, G. Mavrommati, et al. 2014. "A one hundred year review of the socioeconomic and ecological systems in Lake St. Clair, North America." *Journal of Great Lakes Research*, 40:15-26. <http://dx.doi.org/10.1016/j.jglr.2013.11.006>

- Mavrommati, G., **M.M. Baustian**, and E. Dreelin. 2013. "Coupling socioeconomic and lake systems for sustainability: a conceptual analysis using Lake St. Clair region as a case study." <http://dx.doi.org/10.1007/s13280-013-0432-4>
- **Baustian, M.M.**, Rabalais, N.N., Morrison, W.L. and R.E. Turner. 2013. "Microphytobenthos along the Louisiana continental shelf during mid-summer hypoxia." *Continental Shelf Research*.52:108-118. <http://dx.doi.org/10.1016/j.csr.2012.10.014>
- **Baustian, M.M.**, Rabalais, N.N., Morrison, W.L. and R.E. Turner. 2011. "Seasonal microphytobenthos on the hypoxic northern Gulf of Mexico continental shelf." *Marine Ecology Progress Series*. 436: 51–66. <http://dx.doi.org/10.3354/meps09262>
- Qian, S.S., Craig, J.K., **Baustian, M.M.** and N.N. Rabalais. 2009. "A Bayesian hierarchical modeling approach for analyzing observational data from marine ecological studies." *Marine Pollution Bulletin*. 58:1916–1921. <http://dx.doi.org/10.1016/j.marpolbul.2009.09.029>
- **Baustian, M.M.**, Craig, J.K. and N. N. Rabalais. 2009. "Effects of summer 2003 hypoxia on macrobenthos and Atlantic croaker foraging selectivity in the northern Gulf of Mexico." *Journal of Experimental Marine Biology and Ecology*. 381:S31-S37. <http://dx.doi.org/10.1016/j.jembe.2009.07.007>
- **Baustian, M.M.** and N.N. Rabalais. 2009. "Seasonal composition of benthic macroinfauna exposed to hypoxia in the northern Gulf of Mexico." *Estuaries and Coasts*. 32:975–983. <http://dx.doi.org/10.1007/s12237-009-9187-3>
- **Baustian, M.M.**, Bentley, S.J. and J.H. Wandersee. 2008. "Innovative assessment tools for a short, fast-paced, summer field course." *Journal of College Science Teaching*. 37:37-43. [http://learningcenter.nsta.org/product\\_detail.aspx?id=10.2505/4/jcst08\\_037\\_06\\_37](http://learningcenter.nsta.org/product_detail.aspx?id=10.2505/4/jcst08_037_06_37)
- **Millman, M.**, Teichberg, M, Martinetto, P and I. Valiela. 2002. "Response of shrimp populations to land-derived nitrogen in Waquoit Bay." *Biological Bulletin*. 203:263-264 <http://www.biolbull.org/content/203/2/263.full.pdf+html>

#### **Awards, Honors:**

- Awarded travel funds to attend the ASLO-sponsored *Ecological Dissertations in Aquatic Sciences* (Eco-DAS X) week-long symposia that fosters sustained, cross-disciplinary interactions among the top new researchers in ecological oceanography and limnology, Honolulu, HI, October 2012
- Joseph Lipsey, Sr. Memorial Scholarship Award, "For Excellence in the Studies of Marine Sciences," Department of Oceanography and Coastal Sciences, LSU, Spring 2009
- Dr. Theodore B. Ford Memorial Scholarship, Department Oceanography and Coastal Sciences, LSU, Fall 2008
- Second place for excellent presentation at Graduate Student Symposium, LUMCON, Spring 2008
- SEASPACE, Inc. scholarship for academic excellence, Spring 2006
- Honored in the "Top 50" student presentations at the Estuarine Research Federation conference, Norfolk, VA, Fall 2005
- "Honorable Mention" for an excellent presentation at Graduate Student Symposium, Cocodrie, LA, Spring 2005
- "Outstanding Undergraduate Student Award", Iowa Water Resources Research Institute, Spring 2003 (given to only one undergraduate in the state of Iowa per year)
- "Outstanding Upperclassman Award," ISU Biology/Zoology/Genetics Club, ISU, Fall 2002
- Iowa State University Study Abroad Scholarship, ISU, Fall 2002
- Nominated for "Student Employee of the Year" by Animal Ecology Department, ISU, Fall 2001
- Beta, Beta, Beta Biological Honor Society, ISU, 2001 - 2002
- Mortar Board Honor Society, ISU, 2001 - 2002
- Iowa State University Dean's list: Fall 2001, Fall 2002, Spring 2003
- Iowa Veterans Foundation scholarship, Fall 2000
- *Culver's* restaurant VIP Leadership scholarship, Fall 1999

**Teaching Experience:**

Environmental Issues & Public Policy  
EnvironMentors  
Introduction to Oceanography  
Marine Field Geology

**Professional Memberships:**

Member, Association for the Sciences of Limnology and Oceanography (ASLO)  
Member, Coastal and Estuarine Research Federation (CERF)  
Member, International Association of Great Lakes Research (IAGLR)

**Committee Memberships:**

Member, Education Committee, Coastal and Estuarine Research

**Science Service and Outreach:**

- Peer-reviewer for journals: Marine Ecology Progress Series, Ecosystems, Freshwater Biology, Marine Pollution Bulletin, Global Change Biology
- Peer-reviewer for proposals: National Science Foundation, Florida Sea Grant, The Water Institute of the Gulf, Louisiana Sea Grant
- Invited seminar. Bayou Vermilion Water quality of Bayou Vermilion: potential impacts and lessons learned from other models and case studies.” Bayou Vermilion Preservation Association. Lafayette, LA. November 2016. Co-presented with Ehab Meselhe.
- Answered questions via Skype about careers in science from high school girls of McGehee High School ( via Ms. Annie Tete), New Orleans, LA, Nov. 2016
- Interviewed for a documentary about nutrient pollution in Mississippi River watershed and impacts to coastal Louisiana led by Water Quality Indiana, a class project from Ball State University. Baton Rouge, LA. Sept. 2016. waterqualityin.com
- Guest speaker at Pre-K classroom (4-5 year olds) for their ocean theme, developed 3 activities about the ocean, Southdowns PreK, Baton Rouge, LA, May 2015
- Discussed coastal Louisiana habitats and common organisms to general public as part of The Water Institute of the Gulf exhibition at the 2015 Kenilworth STEM Expo, February 2015
- Baton Rouge Earth Day Festival volunteer. The Water Institute of the Gulf’s activity, *Testing our Coastal Waters*, April 2015
- Answered emailed questions about marine science careers from a student at Southeastern University, Hammond, LA, July 2014
- Guest lecturer for Coalition to Restore Coastal Louisiana and Brown University about *Coastal Hypoxia*, Annunciation Mission, New Orleans, LA April 2014.
- Guest lecturer at Mason Area Historical Society about *History of Water Quality in the Great Lakes*, Mason, MI, May 2013. <http://www.masonmuseum.org/Home.html>
- Guest speaker at preschool classroom (2-3 year olds) for their ocean theme, Michigan State University Child Development Laboratory, East Lansing, MI, Feb. 2013
- Mentor for the ASLO Multicultural Program at Aquatic Sciences Meeting. Met with minority students daily to help navigate the meeting and to help meet other scientists. New Orleans, LA, Feb. 2013.
- Conference Judge for student oral and poster presentations:
  - Association for Sciences of Limnology and Oceanography, New Orleans, LA, Feb. 2013
  - Coastal and Estuarine Research Federation, Daytona Beach, FL, Nov. 2011
- Participant in the development and planning of the state of Louisiana *Environmental Literacy Plan* part of the *No Child Left Inside* initiative, July 2010 to Aug. 2011
- Science Fair Judge:

- LSU Chapter of *EnvironMentors*, Scotlandville Magnet High School, Baton Rouge, LA, April 2014, 2015
- Scotlandville Magnet High School, Baton Rouge, LA, Nov. 2010
- Terrebonne Parish Science Fair (Jr. High), Baton Rouge, Louisiana, Dec. 2008
- St. Joseph's Academy, Baton Rouge, Louisiana, 9<sup>th</sup>-12<sup>th</sup> grade, Spring 2007
- Louisiana State Region VII, 9<sup>th</sup> -12<sup>th</sup> grade, LSU Field House, Spring 2007
- Baton Rouge Earth Day Festival volunteer at LUMCON's interactive animal specimen display, April 2010
- Volunteer scientist for LUMCON's weekend-long workshop titled *From H-2-O* that helped local science teachers develop lesson plans and activities that engage students in the importance of water quality, Jan. 2009
- Answered emailed questions about careers in science from a student of St. Amant High School, Ascension Parish School District, Louisiana, Jan. 2009
- Mentored an international high school science fair recipient on a research cruise to learn more about hypoxia in aquatic systems, Summer 2008
- Volunteer scientist for the NSF funded program, Centers for Ocean Science Education Excellence (COSEE) - Central Gulf of Mexico Teacher/Scientist Institute, a week-long intensive workshop at LUMCON, Summer 2007
- Education Outreach Coordinator for Marine Environmental Researchers (MER), LSU, Fall 2006 - Spring 2007
- Active volunteer for Louisiana Sea Grant sponsored event, *Ocean Commotion*, Fall 2004 – 2010, 2014, 2016
- Taught first graders at University Laboratory School about the ocean, Baton Rouge, LA, Fall 2007
- Co-lead MER to create a booth at Polk Elementary School Science Fair, Baton Rouge, LA, Fall 2005
- Educated the public about the *Dead Zone* at LUMCON's open house, 2004, 2006, 2008
- Invited K-12 students into the LSU laboratory to teach them about marine macrobenthos, Baton Rouge, LA, Spring 2004

#### **Training Courses:**

- Macrobenthic Organisms as Indicators of Estuarine Health. November 2016. Pensacola Beach, FL.
- Compass: Communicating Your Science. September 2016. Lacombe, LA.
- R Software Training Workshop, January 14, 2015
- Delft3D Water Quality Modeling Workshop, March 16-17, 2014, New Orleans, LA
- Aquatic GIS course, St. Louis University, June 12-14, 2013
- Write Winning Grants course, Michigan State University, January 4, 2012

#### **CONFERENCE PROCEEDINGS AND PRESENTATIONS**

- **Melissa M. Baustian**, Hoonshin Jung, Ehab Meselhe, Scott-Duke Sylvester, and Jenneke Visser. Simulating Ecological Responses to Coastal Ecosystem Restoration: A Case Study of Proposed Sediment Diversion Operation on the Lower Mississippi River. Restore America's Estuary Summit. New Orleans, December 2016.
- Leland C. Moss, **Melissa M. Baustian**, Camille L. Stagg, Carey L. Perry, Tim Carruthers, Mead A. Allison. Carbon Accumulation Rates Across Four Marsh Habitats in Coastal Louisiana. Restore America's Estuary Summit. New Orleans, LA. December 2016.
- Ehab Meselhe and **Melissa M. Baustian**. Development and application of a basin wide biophysical model. Presented at Establishing a Cooperative Hypoxic Zone Monitoring Program. Stennis Space Center, MS. September 2016.
- **Melissa M. Baustian**, Christina Powell, Brandeus Davis, Mike Polito. 2016. Moving on Up:
- The role of black mangroves in introducing and mediating basal carbon sources in estuarine food webs. Gulf Estuarine Research Society Meeting. 3-5 Nov. Pensacola Beach, FL.
- **Melissa M. Baustian**, Hoonshin Jung, Ehab Meselhe, Johannes Smits. 2016. Model Development for Deltaic and Coastal Ecosystem Restoration: Nutrients, Pelagic Primary Production and Sedimentary Processes. State of the Coast. 1-3 June. New Orleans, LA.

- Leland Moss, **Melissa M. Baustian**, Camille Stagg, Carey L. Perry, Tim Carruthers, Mead Allison. 2016. Current and historic carbon storage in four marsh habitats in coastal Louisiana. State of the Coast. 1-3 June. New Orleans, LA.
- Ehab Meselhe, **Melissa M. Baustian**, Kazi Sadid, Fei Xing, Katelyn Costanza, Hoon Jung, Mead Allison, Elizabeth Jarrell, A. Carol Parsons Richards, James Pahl. Morphologic and Ecologic Analysis of a Proposed Network of Mississippi River Sediment Diversions. Ocean Sciences Meeting. 21-26 February. New Orleans, LA.
- **Melissa M. Baustian**, Camille Stagg, Carey L. Perry, Leland Moss, Tim Carruthers, Mead Allison. 2016. Historic and current carbon storage in four marsh habitats of coastal Louisiana: Insight into potential responses to future global climate change and coastal restoration. Ocean Sciences Meeting. 21-26 February. New Orleans, LA.
- Mike Polito, Johnson, J., Mauney, M.T., Davis, B., **Melissa M. Baustian** Olin, J.A., Jensen, O., Lopez-Duarte, P., Able, K., Fodrie, J. 2016. Tracking carbon flow through marsh food webs using compound specific-stable isotope analysis. Gulf of Mexico Oil Spill and Ecosystem Science Conference. 1-4 February 2016. Tampa, Florida.
- **Melissa M. Baustian**, Leland Moss, Camille Stagg, Carey L. Perry, and Tim J.B. Carruthers. 2015. Current and historic carbon storage in four marsh habitats in coastal Louisiana. Coastal and Estuarine Research Federation Biennial Meeting, 8-12 November, Portland, Oregon.
- Ehab Meselhe, **Melissa M. Baustian**, Hoon Jung, Ashok Khadka, Kazi Sadid, Mead Allison, Cyndhia Ramatchandirane, Denise Reed, Elizabeth Jarrell, and James Pahl. 2015. Predictive Modeling for Planning the Operation of a Proposed Network of Diversion Projects across the South Louisiana Landscape. Coastal and Estuarine Research Federation Biennial Meeting, 8-12 November, Portland, Oregon.
- Carruthers, Tim J.B., **Melissa M. Baustian**, Camille Stagg, Carey L. Perry, Kelly M. Darnell, and Ann C. Hijuelos. 2015. Integrated Ecosystem Function: Using Habitat Suitability Index Models to Assess Linkages to Emergent and Submerged Aquatic Habitats. Coastal and Estuarine Research Federation Biennial Meeting, 8-12 November, Portland, Oregon.
- Stagg, Camille, L., Sarai Piazza, **Melissa M. Baustian**, Carey L. Perry., Tim Carruthers, Don Schoolmaster, and Greg Snedden. 2015. Identifying Controls on Organic Matter and Decomposition in Coastal Wetlands along a Landscape Salinity Gradient. Coastal and Estuarine Research Federation Biennial Meeting, 8-12 November, Portland, Oregon.
- Ramatchandirane, C., Brendan Yuill, Mead A. Allison, **Melissa M. Baustian**, and Ehab Meselhe. 2015. Observational network studies of receiving basin dynamics along lower Mississippi River in coastal Louisiana. Coastal and Estuarine Research Federation Biennial Meeting, 8-12 November, Portland, Oregon.
- **Melissa M. Baustian** and Hoon Jung. 2015. Mississippi River Hydrodynamics and Delta Management Study Basin-Wide Model Development: Fate of Nutrients. Diversion Expert Panel Workshop, 27 October, Baton Rouge, Louisiana.
- Duke-Sylvester, Scott .M., Jenneke Visser, and **Melissa M. Baustian**. 2015. Mississippi River Hydrodynamics and Delta Management Study Basin-Wide Model Development: Vegetation Changes. Diversion Expert Panel Workshop, 27 October, Baton Rouge, Louisiana.
- Davis, Brandeus, Mike Polito, and **Melissa M. Baustian**. 2015. Impact of Climate-Driven Vegetation Shifts on Carbon Dynamics In Marsh Food Webs. Louisiana State University Undergraduate Research Conference. 6 November, Baton Rouge, Louisiana.
- Allison, Mead A. and **Melissa M. Baustian**. 2015. Recent Water Institute observational studies at legacy diversions: Bonnet Carré, West Bay, Davis Pond and Caernarvon. NGO Workshop on Legacy Diversions, 7-8 October, Hammond, Louisiana.
- Ramatchandirane, Cyndhia, Brendan Yuill, Mead A. Allison, **Melissa M. Baustian** and Ehab Meselhe. 2015. Observations of basin-wide dynamics along the lower Mississippi River via in-situ and remotely sensed data. American Shore and Beach Preservation Association Meeting, 14-16 October, New Orleans, Louisiana.
- **Melissa M. Baustian** and Ehab Meselhe. 2015. Basin Wide Delft3D Model Development for Delta Management Study. Diversion Expert Panel Workshop, 4-5 August, Plaquemines Parish, Louisiana.

- Duke-Sylvester, Scott M., Jenneke Visser, **Melissa M. Baustian** 2015. The Water Institute of the Gulf Delta Management Vegetation Models. Diversion Expert Panel Workshop, 4-5 August, Plaquemines Parish, Louisiana.
- Allison, Mead A. and **Melissa M. Baustian**. 2015. Data collection in support of basin-wide model development for the Delta Management Study. Diversion Expert Panel Workshop, 4-5 August, Plaquemines Parish, Louisiana.
- Carruthers, Tim J.B., **Melissa M. Baustian**, Camille Stagg, Carey L. Perry, Kelly M. Darnell, and Ann C. Hijuelos. 2015. Linking fisheries to emergent and submerged aquatic habitats using habitat suitability index models. Louisiana American Fisheries Society, 28-29 May, Baton Rouge, LA.
- Jamal Mathurin, **Melissa M. Baustian**, and Sibel Bargu. Comparison of Phytoplankton Community Composition in Two Coastal Louisiana Estuaries. LSU Discover, Undergraduate Research Forum. Baton Rouge, LA. April 2015.
- **Melissa M. Baustian**, Ehab Meselhe\*, Mead Allison, et al. 2014. Large Scale Nutrient, Wetland Vegetation and Morphodynamic Modeling for the Lower Mississippi Delta and Surrounding Receiving Basins. Delft Software Days, Delft, The Netherlands, November 2014. \*Presenter
- **Melissa M. Baustian** and Leland Moss. Diverting More than Sediment and Water: Nutrient Effects From Proposed Mississippi River Sediment Diversions. Joint Aquatic Sciences Meeting, Portland, OR. May 2014
- Ehab Meselhe, Eric White, **Melissa Baustian**, Brady Couvillion, Scott Duke-Sylvester, Mandy Green, Emad Habib, Alaina Owens, James Pahl, Jenni Schindler, Denise Reed, Mallory Rodrigue, Jenneke Visser, Brendan Yuill. Developing Future Uncertainty Scenarios. State of Coast. New Orleans, LA. March 2014.
- **Melissa M. Baustian** and R. Jan Stevenson. Impacts of nutrient enrichment to the benthic-pelagic coupling mechanisms in the Nation's freshwater lakes. Aquatic Sciences Meeting. Association for the Sciences of Limnology and Oceanography. New Orleans, LA. February 2013.
- **Melissa M. Baustian**. Benthic-pelagic coupling in aquatic ecosystems: identifying the mechanisms and stressors. Ecological Dissertations in Aquatic Sciences (Eco-DAS X). Honolulu, HI. October 2012.
- Stephen Gasteyer, **Melissa M. Baustian**, Peter Esselman, and Georgia Mavrommati. Learning from adaptable water systems a 100-year perspective of the Lake St. Clair watershed: Gathering data sets for linking complex models in the Great Lakes. NSF Water, Sustainability and Climate PI meeting. Arlington, VA. November 2011.
- **Melissa M. Baustian**, Nancy N. Rabalais, Wendy L. Morrison, and R.E. Turner. Microphytobenthos and their potential role in the northern Gulf of Mexico hypoxic zone. Coastal and Estuarine Research Federation conference. Daytona Beach, FL. November 2011.
- **Melissa M. Baustian**, Melissa H. Monk, Susan Welsh, Lauren Land, Christopher D'Elia, and Suzan Gaston. EnvironMentors: a successful multidisciplinary environmental science mentoring program. Coastal and Estuarine Research Federation conference. Daytona Beach, FL. November 2011.
- **Melissa M. Baustian**, Nancy N. Rabalais, Wendy L. Morrison, and R.E. Turner. Presence of microphytobenthos on the Texas-Louisiana continental shelf during summer hypoxia. Benthic Ecology Meeting. Mobile, AL. March 2011.
- **Melissa M. Baustian**, Nancy. N. Rabalais, and Wendy L. Morrison. Benthic primary producers on the eutrophic northern Gulf of Mexico continental shelf. School of Coast and Environment Graduate Student Seminar. Baton Rouge, LA. November 2009.
- **Melissa M. Baustian**, Nancy. N. Rabalais, and Wendy L. Morrison. Benthic primary producers on the eutrophic northern Gulf of Mexico continental shelf. Coastal and Estuarine Research Federation conference. Portland, OR. November 2009.
- **Melissa M. Baustian** and Nancy. N. Rabalais. The effect of light on hypoxic bottom-water oxygen concentrations in the northern Gulf of Mexico. Ocean Sciences meeting. Orlando, FL. March 2008.
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  - c. Louisiana State Museum, Patterson, LA, 5-27 January 2007
  - d. LUMCON, Cocodrie, LA, March 2007
  - e. Cité des Arts, Lafayette, LA, April – July 2007
  - f. Acadian Memorial, St. Martinville, LA, September - November 2007
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  - h. Permanently housed at the Acadian Museum, Erath, LA, March 2010 - current
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