Brett McMann, PE, CFM
Project Manager
The Water Institute
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EDUCATION

University of New Orleans	New Orleans, LA	Civil Engineering, Coastal Engineering	MS, Ongoing, est. completion 2024.
Louisiana State University	Baton Rouge, LA	Civil and Environmental Engineering	BS, 2010

RESEARCH INTERESTS

Large-scale coastal restoration and risk reduction planning, engineering design and management, regional sediment management, program and project management.

PROFESSIONAL EXPERIENCE

The Water Institute	Civil Engineer, Project Manager	2019–Present
Arcadis, U.S., Inc.	Staff Engineer, Task Manager	2013–2019
Brown and Caldwell	Engineering Specialist	2010–2013

PROFESSIONAL SOCIETY MEMBERSHIPS

- Professional Engineer, Civil Water Resources and Environmental, LA No. 39894, 2015–Present

- Professional Engineer, Civil Water Resources and Environmental, TX No. 124465, 2016–Present

- Professional Engineer, Civil Water Resources and Environmental, FL No. 99072, 2024–Present

- Certified Floodplain Manager, US-21-12047, 2021–Present

- American Society of Civil Engineers, 2010–Present

- Louisiana Engineering Society, 2010–Present

NOTABLE PROJECTS

Project Manager/Louisiana Watershed Initiative: Program Management and Investigation Report   Current
Louisiana Office of Community Development
Manager for a technical staff of nearly two dozen team members charged with the development of a statewide, comprehensive $1.2B watershed-based Floodplain Management Program. The Institute provides a broad array of services to the state, including development of coastal compound flooding analysis methodologies, data and model repository development, legislative and policy support, planning and policy support, and leadership of technical stakeholder groups. Also helped with development of the LWI's data repository, consequence modeling strategy, Geographic Information Systems (GIS) and data management guidance strategies.

Project Scientist/2023 Coastal Master Plan, Statewide, LA   2019–2023
Coastal Protection and Restoration Authority
Led Arcadis' effort to develop a new database system for streamlining both the project attribute generation system. Led the effort to characterize both the likelihood and effects that disruptions to access of critical and essential facilities will have on low-lying coastal communities in future decades. This analysis focuses on the changes to access and drive times which coastal communities may have to facilities such as pharmacies, hospitals, emergency response, grocery stores, etc. due to high tide flooding.

Project Scientist/2017 Coastal Master Plan, Statewide, LA   2015–2017
Coastal Protection and Restoration Authority
Led Arcadis' effort to develop attributes for several hundred ecosystem restoration and hurricane protection projects to facilitate numerical modeling and prioritization analysis. This effort included GIS analysis, cost estimation, planning-level design, data and document production automation, and regular interdisciplinary team coordination of roughly 20 internal staff and numerous external partners such as The Water Institute, the RAND Corporation, USGS, academia, and local governmental partners.

Project Manager/Partnership for our Working Coast   2019–2021
Greater Lafourche Port Commission
Led an Institute-wide transdisciplinary team working for a public-private partnership consisting of the Greater Lafourche Port Commission and its tenants. The study team analyzed the ecological, risk reduction, and social benefits of various dredged sediment placement areas under consideration by the port as part of its federally authorized deepening project. The analysis included development of numeric ecosystem and risk models as well as social return on investment analysis to arm the port and its stakeholders with the best science available for future decision making.

Civil Design Lead, Coastal Elements/CDBG National Disaster Resilience Competition—Ohio Creek Watershed Transformation Plan   2017–2019
City of Norfolk, VA
Brett served as co-lead for all civil design of flood protection, living shoreline, and coastal engineering tasks of a $120M flood risk resiliency system funded via HUD's NRDC grant competition. Brett coordinated with and led an interdisciplinary

architectural and engineering team to synthesize storm water, nature-based shoreline solutions, and public spaces within the resiliency design.

PUBLISHED WORKS

Peer-Reviewed Publications

Hemmerling, S. A., DeMyers, C., Parfait, J., Piñero, E., Baustian, M. M., Bregman, M., Di Leonardo, D., Esposito, C., Georgiou, I. Y., Grismore, A., Jung, H., McMann, B., & Miner, M. D. (2023). A community-informed transdisciplinary approach to coastal restoration planning: Maximizing the social and ecological co-benefits of wetland creation in Port Fourchon, Louisiana, USA. *Frontiers in Environmental Science*, *11*.

Kirshen, P., Borrelli, M., Byrnes, J., Chen, R., Lockwood, L., Watson, C., Starbuck, K., Wiggin, J., Novelly, A., Uiterwyk, K., Thurson, K., McMann, B., Foster, C., Sprague, H., Roberts, H. J., Bosma, K., Jin, D., & Herst, R. (2020). Integrated assessment of storm surge barrier systems under present and future climates and comparison to alternatives: A case study of Boston, USA. *Climatic Change*.

Technical Reports

Bartlett, M., Misra, S., Roberts, H., Geldner, N., McMann, B., Saharia, A., Zou, S., Johnson, D., Villarini, G., Kim, H., Yuill, B., Wang, Y., Georgiou, I., Fischbach, J., Nadal-Caraballo, N., & Schmied, L. (2023). *Compound flood transition zone pilot study for the Amite River Basin* (p. 132) [Final]. Louisiana Watershed Institution.

Kane, P., McMann, B., Penuela Cantor, L., Tebyanian, N. (2024). *LWI Watershed Modeling Appendix D: Consequence Modeling Guidance. Baton Rouge, Louisiana.* Louisiana Watershed Initiative.

The Water Institute. (2023). *LWI Watershed Modeling Appendix B: Data Governance and Standards. Baton Rouge, Louisiana.* Louisiana Watershed Initiative.

McMann, B., Hemmerling, S. A., Bienn, H., Fischbach, J., Ellis, D., & Wang, Y. (2023). *2023 Coastal Master Plan: Attachment H3: High Tide Flooding Report. Version I.* (p. 214). Baton Rouge, Louisiana: Coastal Protection and Restoration Authority.

The Water Institute. (2023). *Lowermost Mississippi River Management Program: Regional Sediment Management Below Venice. The Water Institute.* Prepared for and funded by the Coastal Protection and Restoration Authority under Task Order 69. Baton Rouge, LA.

McMann, B., Schulze, M., Sprague, H., & Smyth, K. (2017). *2017 Coastal Master Plan* (Louisiana's Comprehensive Master Plan for a Sustainable Coast, p. 109) [Version Final]. Coastal Protection and Restoration Authority.

Conference Proceedings and Presentations

Di Leonardo, D., McMann, B., Baustian, M., Bregman, M., Esposito, C., Georgiou, I., Hemmerling, S., Jung, H., & Miner, M. (2023). *A community-informed transdisciplinary approach to beneficial use of sediment for wetland restoration in Louisiana, USA*. Proceedings of Coastal Sediments Conference.

Georgiou, I. Y., Baustain, M. M., Cobell, Z., Courtois, A., Bregman, M., Dalyander, P. S., Di Leonardo, D., Esposito, C. R., Hemmerling, S. A., Jung, H., Liu*, B., Foster-Martinez, M., McMann, B., Messina, F., Miner, M., Parfait, J., & Yuill, B. (2021, December). Coastal evolution and resiliency management for a working coast: Data and model integration for a transgressive headland: Port Fourchon, Louisiana, USA.* American Geophysical Union (AGU) fall meeting.

Kane PB, Tebyanian N, Gilles D, McMann B and Fischbach JR (2024) *Key drivers of vulnerability to rainfall flooding in New Orleans.* Front. Clim. 6:1303951. doi: 10.3389/fclim.2024.1303951