



# JASON CUROLE, Ph.D.

THE WATER INSTITUTE  
OF THE GULF



## Experience Profile

Jason Curole, Ph.D., Director of Project Management, has over a decade of experience in the project management of large coastal restoration projects and large-scale data analytics.

Born and raised in New Orleans, Curole's work includes managing large-scale Louisiana coastal restoration projects with total budgets ranging from \$4 to \$242 million, developing innovative and data-driven methods for evaluating the success of restoration projects, and extensive experience in managing projects from development to construction.

Curole received his bachelor's and master's degree in zoology from Louisiana State University and his Ph.D. in genetics from the University of New Hampshire. After his postdoctoral research at the University of Southern California, where his work concentrated on the collection and analysis of large data sets, Curole took a year sabbatical and traveled throughout southeast Asia before returning home to New Orleans.

Curole joined the Louisiana Coastal Protection and Restoration Authority in 2013 where he was responsible for monitoring and adaptive management of large-scale coastal restoration projects. Curole then served five years as a project manager for work ranging in scale from \$242M to \$4M.

In 2018, Curole joined GHD, a global professional services company specializing in engineering, construction, and architecture, and used his project management and data skills to spearhead novel methods for large-scale environmental data analysis for the U.S. Army Corps of Engineers and helped build a team dedicated to maritime and coastal work across the Gulf of Mexico coast.

## Company Role

Director of Project Management

## Focus Areas

- Project Management
- Advanced Analytics
- Large-scale coastal restoration, remediation, and protection

## Education

- Ph.D. – Genetics, University of New Hampshire, 2003
- M.S. – Zoology, Louisiana State University, 1997
- B.S. – Zoology, Louisiana State University, 1995

## Skills

- Data Analysis: R, PERL, AWS, MySQL, C++, Azure

## Professional Membership

- Project Management Professional, Project Management Institute

## Professional Experience

The Water Institute of the Gulf

- *Director of Project Manager* Jan. 2021-Present

GHD

- *Maritime and Coastal Business Group Leader* Jan. 2018-Jan. 2021

Louisiana Coastal Protection and Restoration Authority

- *Project Manager* Dec. 2013-Jan. 2018
- *Supervisor* Jan. 2013-Nov. 2013
- *Coastal Resource Scientist* 2011-2013

University of Southern California

- *Postdoctoral Researcher* 2003-2008

University of California Davis

- *Postdoctoral Researcher* 2003

## **Selected Projects**

***Savannah Harbor Expansion Project, USACE, Savannah District (2020-2021)***. The Savannah Harbor Expansion Project is a long-term harbor expansion and mitigation project. As part of the mitigation for the project, the USACE has performed several modifications to the system and constructed two oxygen injection systems along the Savannah River. Dr. Curole wrote a custom algorithm to analyze data from several USGS gages (millions of observations) showing that the injection station Test Run successfully increased oxygen levels in the Savannah River, a requirement of the mitigation plan. In addition, Dr. Curole has supported the hydraulic and water quality modeling.

***Mitigation of Coastal Erosion Hot-Spots, Miami-Dade Division of Environmental Resources Management, Miami-Dade County, FL (2019)***. Analyzed decades of wave data to identify an “average” year for the purposes of transport modeling. The team was tasked with performing sediment transport modeling to evaluate coastal erosion hotspots along the coast. As part of the effort to identify an average year for modeling, Dr. Curole analyzed decades of WIS wave data to determine which year was most similar to the overall average. These results were used to justify the choice of an average year.

***Section 404 Assumption Endangered Species Act Programmatic Consultation, Florida Department of Environmental Protection, State of Florida (2020)***. Dr. Curole served as the senior data scientist for the preparation of a biological assessment (BA) for the state of Florida. The BA was required as part of the state of Florida’s application to assume the Clean Water Act Section 404 Program. Dr. Curole analyzed years of permitting data to estimate the frequency of the 236 endangered, threatened, candidate, and under review species in the state of Florida, to better understand the potential effects of state assumption of section 404 permitting. The effort included coordination with USFWS, USEPA, and multiple state agencies in addition to the client.

***Mid-Breton Sediment Diversion Third-Party Environmental Impact Statement, Coastal Protection and Restoration Authority and USACE New Orleans District, Plaquemines Parish, LA (2020-2021)***. Dr. Curole served as the Project Controls Manager for the preparation of a 3<sup>rd</sup> Party environmental impact statement (EIS) which addresses the public interest review requirements of US Army Corps of Engineers Regulatory Program Regulations. Dr. Curole was responsible for development of scope, cost, and quality management procedures.

***Hamriyah Port Expansion, Sharjah Port Authority, Abud Dhabi (2019)*** Dr. Curole served as the senior data scientist for a community analysis of infaunal data for an environmental baseline study for a port expansion. Dr. Curole examined Shannon diversity, Peilou’s evenness, and Margalef richness of the infaunal community. Dr. Curole also performed a dendrogrammatic and multi-dimensional scaling analysis using Bray-Curtis indices with significant relationships identified using a similarity profile analysis. Abiotic factors (depth and habitat type) were examined as well to determine the relationship between diversity and these factors.

## **Selected Publications**

1. Ding, B, Curole, JP, Husemann, M, and Danley, PD, Habitat complexity predicts the community diversity of rock-dwelling cichlid fish in Lake Malawi, East Africa, *Hydrobiologia* (2015)
2. Brown, K, and Curole, J, Longitudinal changes in the mussels of the Amite River: endangered species, effects of gravel mining, and shell morphology, *Conservation and Management of Freshwater Mussels* (1997)
3. Curole, J, Foltz, D, and Brown, K, Extensive allozyme monomorphism in a threatened species of freshwater mussel, *Margaritifera hembeli* Conrad (Bivalvia: Margaritiferidae), *Conservation Genetics* (2004)
4. Curole, JP, Universal primers for the specific amplification of the male mitotype of the Unionoidea (Bivalvia), *Conservation Genetics* (2004)

## **Other Relevant Experience**

1. Curole, JP, Review of “Status of the Eastern Oyster (*Crassostrea virginica*)”, National Oceanic and Atmospheric Administration Review.
2. Lear, E, Curole, G, Curole, J, and Ledet, A, 2013 Operations, Maintenance, and Monitoring Report for West Lake Boudreaux Shoreline Protection and Marsh Creation (TE-46), Coastal Protection and Restoration Authority.
3. Lear, E, Babin, B, Curole, G, and Curole, J, 2013 Operations, Maintenance, and Monitoring Report for GIWW (Gulf Intracoastal Waterway) to Clovelly Hydrologic Restoration (BA-02), Coastal Protection and Restoration Authority.
4. Hubbell, T and Curole, J, Monitoring Plan for North Lake Mechant Landbridge Restoration - Construction Unit 2 (TE-44), Coastal Protection and Restoration Authority.
5. Curole, J, Darin, L, and West, J, 2012 Operations, Maintenance, and Monitoring Report for East Timbalier Island Sediment Restoration, Phase 1 and 2 (TE-25 and TE-30), Coastal Protection and Restoration Authority.