

Project Description

Storm surge in Lakes Pontchartrain and Maurepas is a common threat to residents, communities, and businesses around the broad perimeter of these lakes. Hurricanes Katrina and Isaac exemplify the risk to those both inside and outside of the regions various levee systems. With sea-level rise and loss of wetlands, the surge risk is increasing, both in terms of deeper flood waters and in terms of a wider area subject to inundation. As illustrated in the map below, even the bedroom communities of Baton Rouge are now becoming “at risk” as they sprawl further eastward and surge inundation moves further westward. Solutions are multiple and include both local and more regional projects, and they should be led by local parishes, levee boards, etc. However, surge water knows no political boundaries. A flooding solution for one place may actually exacerbate a flooding problem somewhere else. The physics of the surge should be considered regionally, but the current political subdivisions do not lend themselves to fostering a regional, watershed approach to storm surge management.

For this reason, LPBF hopes to help fill this gap with the Pontchartrain-Maurepas Surge Consortium (PMSC) with the intention of supporting flood protection for all residents of the region. To make it successful, we are pursuing robust participation that taps into local knowledge and expertise. **Therefore, the Lake Pontchartrain Basin Foundation invites all organizations with a storm surge management role to participate in this new initiative aimed at bolstering the sustainability, resilience, and overall reliability of storm surge management for those at risk due to surges in Lakes Pontchartrain and Maurepas.**

The Lake Pontchartrain Basin Foundation pioneered the [Multiple Lines of Defense Strategy](#) for protecting coastal Louisiana, which has been endorsed by the US Army Corp of Engineers, the Louisiana State Master Plan, and numerous local governments along the coast. We’ve identified and advocated for sustaining [key coastal lines of defense for the Lake Pontchartrain region](#) and we recently completed [a major system engineering assessment of the current surge defenses for the east bank of Greater New Orleans](#).

The recent storms and associated storm surge flooding demonstrate the old and new patterns of storm surges in the two lakes. They have also highlighted the need for a regional, systems-based approach to understanding and managing storm surge impacts along the diverse and dynamic Pontchartrain-Maurepas shoreline. We aim to leverage this experience into a regional consortium that will promote a broader understanding of storm surge dynamics in order to foster better surge risk reduction strategies for all communities along Lakes Pontchartrain and Maurepas.

The Consortium’s initial activities consist of a series of workshops, spread around Lakes Pontchartrain and Maurepas, dedicated to various topics important to understanding and managing storm surges for this reason. Topics include:

1. System engineering principles applied to the Multiple Lines of Defense for the GNO study
2. General patterns of hurricane surge in the lakes
3. Recent significant landscape or flood protection changes that might influence surge dynamics
4. Inventory of ongoing or planned flood protection activities around the lakes
5. The status of the New Orleans East Landbridge proposals
6. Geodetic and tidal benchmarks: Currently state of the technology
7. Subsidence, faulting, and sea level rise
8. Tools and principles of systems analysis, risk analysis, and evaluation metrics
9. New, alternative risk reduction projects

Dr.'s John Lopez and Ezra Boyd are spearheading the consortium for LPBF and Dr.'s Joe Suhayda and Hal Needham form our steering committee.

If you are interested in participating, please email Dr. Ezra Boyd at surge@saveourlake.org.

PMSC Mission Statement

The PMSC mission is to leverage local expertise and additional technical resources into a regional collaboration that will promote:

- broader understanding of storm surge dynamics in the lakes,
- better-informed storm surge risk-reduction strategies for all communities around the lakes, and
- the environmental sustainability, community resilience, and safety of residents through enhanced storm surge risk management.

Multiple Lines of Defense illustration



