



2023 COASTAL MASTER PLAN

CASE STUDIES

ATTACHMENT H6

REPORT: VERSION 01

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COASTAL PROTECTION AND
RESTORATION AUTHORITY
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COASTAL PROTECTION AND RESTORATION AUTHORITY

This document was developed in support of the 2023 Coastal Master Plan being prepared by the Coastal Protection and Restoration Authority (CPRA). CPRA was established by the Louisiana Legislature in response to Hurricanes Katrina and Rita through Act 8 of the First Extraordinary Session of 2005. Act 8 of the First Extraordinary Session of 2005 expanded the membership, duties, and responsibilities of CPRA and charged the new authority to develop and implement a comprehensive coastal protection plan, consisting of a master plan (revised every six years) and annual plans. CPRA's mandate is to develop, implement, and enforce a comprehensive coastal protection and restoration master plan.

CITATION

Coastal Protection and Restoration Authority of Louisiana. (2023). 2023 Coastal Master Plan: Attachment H6: Case Studies. Version I. (p. 3). Baton Rouge, Louisiana: Coastal Protection and Restoration Authority.

OVERVIEW

This report introduces “Case Studies” conducted as part of the 2023 Master Plan process. These Case Studies fall under the Exploratory Analysis appendix as they present analyses that utilize master plan models, but do not directly relate to the Master Plan project evaluation and selection process. The case studies support narratives in the Master Plan and help better illustrate how the coast is changing and how that will affect coastal residents and resources. The case studies also test model sensitivities which helps inform future model and process improvements.

- Supplemental Material H6.1-H6.5 are Historic Storm Case Studies. The master plan typically presents future storm surge and flood risk probabilistically. The historic storm case studies provide an additional way to help citizens understand future flood risk and exposure. These analyses ask the question: What would the impacts of specific historical storms (i.e., Ike, Rita, Lili, Barry, Ida, and Isaac) be if those storms occurred on the current or future landscape? How would storm surge and risk impacts change when specific projects are implemented on the landscape or as existing levee systems are improved?
- Supplemental Material H6.6 and H6.7 test the sensitivity of storm surge and risk modeling to alternative environmental conditions. H6.6 compares storm surge and wave impacts between degraded and restored barrier islands. H6.7 tests the ability of coastal forests to attenuate storm surge and reduce flood risk.
- Supplemental Material H6.8 evaluates the impact of the proposed master plan restoration projects on storm surge and flood risk.