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Introduction

Location and Hazard Risk

Located on the coast of Gulf of Mexico, as well as the mouth of the Mississippi River watershed, Louisiana is prone to both coastal storms and flooding. The state's historic reliance on engineered flood protection measures such as levees, floodwalls, and forced drainage systems compound the state's vulnerability. The combination of engineered flood protection measures and natural hazards increase the frequency and intensity of flooding throughout the state. Additionally, engineered flood protection measures increase subsidence; subsidence, severe weather, lack of new alluvial sediments, and saltwater intrusion from navigation and extraction activities cause coastal erosion; and climate change causes ocean temperature and sea level to increase across the coast. All of these hazards result in more frequent extreme weather events and increased coastal land loss. Furthermore, these hazards narrow the natural buffers between the Gulf of Mexico and inhabited land, resulting in less protection from high winds and storm surge, which are the greatest threats to the state. Therefore, Louisiana is prone to natural hazards that are compounded by human activities, including engineered flood protection measures and natural resource extraction.

In light of these challenges, the state is working to reduce hazardous events. In 2004, the state began a comprehensive planning process in order to improve hazard mitigation, which resulted in the State of Louisiana Hazard Mitigation Strategy of 2005. The 2005 hurricane season highlighted Louisiana's vulnerability to hazards and disasters. Hurricanes Katrina and Rita caused astonishing damage to human life and property. Following the 2005 hurricane season, Louisiana began updating its State Hazard Mitigation Plan, which was completed in 2008. The state then conducted the required plan update in 2011, and again in 2014.

Hazard Mitigation

FEMA defines hazard mitigation as the “effort to reduce loss of life and property by lessening the impact of disasters” (<https://www.fema.gov/what-mitigation>). Creating a hazard mitigation plan allows localities to reduce the damage of future hazards and disasters. A successful hazard mitigation plan increases the knowledge of hazards, builds partnerships across communities and stakeholders to reduce risk, creates long term risk reduction strategies that coincide with other planning objectives, creates strategies that combat the greatest threats to communities, and identifies sources of funding to implement these strategies.

Figure 1 below depicts the process of developing a hazard mitigation plan, from organizing the planning process and assessing risk, to developing a mitigation strategy and adopting and implementing the plan. The hazard mitigation planning process is important to Louisiana, as the natural hazards that threaten the state will likely increase in frequency, magnitude, and impact due to climate change.



General Strategy

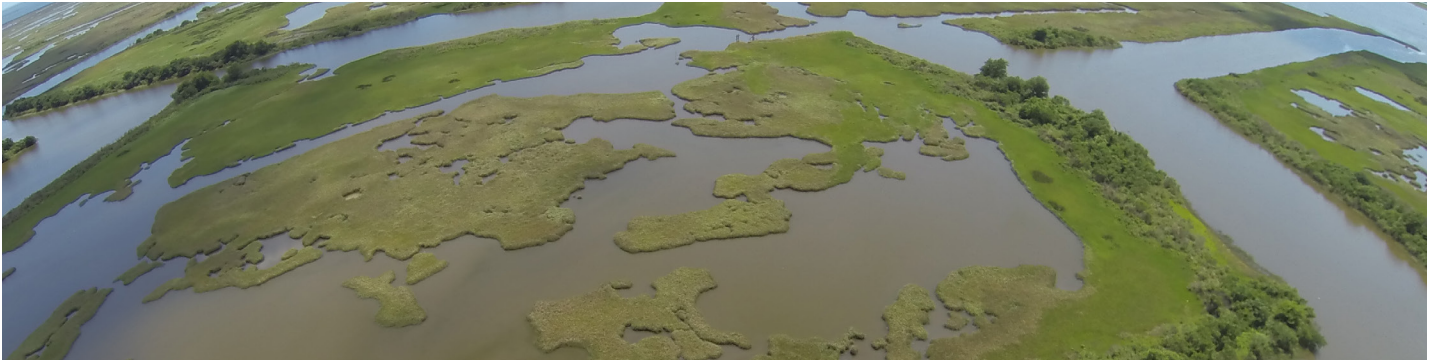
The Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP), with the assistance and cooperation of the State Hazard Mitigation Planning Committee (SHMPC), developed the comprehensive 2005 State of Louisiana Hazard Mitigation Strategy, which included four volumes:

- I. State of Louisiana Hazard Mitigation Plan
- II. State of Louisiana Hazard Mitigation Plan Appendix
- III. State of Louisiana Hazard Mitigation Program
- IV. State of Louisiana Administrative Guidelines and Procedures

During the 2005 plan update process, Katrina and Rita made landfall in Louisiana. Due to the enormity of the response effort, many of the recommendations in the 2005 plan update were not implemented. Therefore, as part of the 2011 plan update, the State Hazard Mitigation Team (SHMT) worked to better integrate the hazard mitigation strategy with other planning efforts across the state. The team broadened the strategy to include:

- JULY 2009** → State of Louisiana Emergency Operations Plan
- 2009** → State of Louisiana GOHSEP Continuity of Operations Plan
- 2005 - 2009** → Regional and community-based long-term recovery plans





The 2011 plan update maintained the organization of the 2005 and 2008 plans, which loosely paralleled the order of requirements listed in the CFR. The plan included the following sections:

Section One	Introduction
Section Two	Plan Adoption
Section Three	Planning Process
Section Four	Hazard Identification and Profiles
Section Five	Statewide Risk Assessment
Section Six	Risk Assessment for State-Owned Assets
Section Seven	Capability Assessment
Section Eight	Mitigation Action Plan
Section Nine	Coordination with Local Mitigation Planning
Section Ten	Plan Maintenance Process

After three revisions, Louisiana’s Hazard Mitigation Plan spanned nearly 1700 pages. In 2013, the SHMPC voted to revise the plan to make it more accessible to the public, and more efficient for state and local governmental use. The 2014 plan update reflected the clarity and usability goals identified by the committee, and included the following sections:

Section 1 / Introduction
Section 2 / Hazard Identification and Statewide Risk Assessment
Section 3 / State Historical Properties Risk Assessment
Section 4 / Capability Assessment
Section 5 / Mitigation Strategy
Section 6 / Mitigation in Action
Appendix
Planning Proces Plan Maintenance Mapping Methodology Plan Adoption Endnotes

The 2019 plan update continues the tradition of accessibility and clarity. Additionally, GOHSEP elected to add both a Repetitive Loss and Community Rating System strategy as appendices, in order to better combat issues of flooding and floodplain management across the state. The plan includes the following sections:

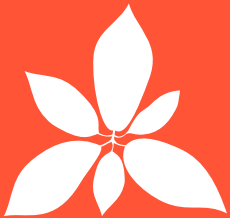
Introduction

Hazard Identification and Risk Assessment

Capability Assessment

Goals and Actions

Appendix A	Planning Process
Appendix B	Plan Maintenance
Appendix C	Mapping Methodology
Appendix D	Plan Adoption
Appendix E	Community Rating System Strategy
Appendix F	Repetitive Loss Strategy



During the 2019 plan update process, the committee decided to group the hazards that threaten the state of Louisiana into categories: temperature hazards, wind hazards, flood hazards (including coastal hazards), and geologic hazards. The temperature hazards include extreme heat, drought, wildfire, and winter storms. The wind hazards include tropical cyclones, thunderstorms (including high wind, hailstorms, and lightning), and tornadoes. The flood hazards include coastal hazards (subsidence, land loss, coastal erosion, saltwater intrusion, sea level rise, and storm surge), dam failure, levee failure, and flooding. The geologic hazards include earthquake, sinkholes, and expansive soil.

Because many local jurisdictions did not manage their plans on a routine basis, GOHSEP committed to support the update of FEMA-approved jurisdictional plans. Through this commitment, the state required all 64 parishes to submit hazard mitigation plans between October 2014 and December 2017. As of xxxx, all of the plans have been submitted and approved by FEMA. This process not only allowed jurisdictions to use similar, appropriate data sources and data processing steps, but created consistency in hazard mitigation planning across the state.

Through the 2019 plan update, the committee aims to provide an accessible, easy to use document that incorporates state and local planning goals, and provides a vehicle for local and regional cooperation for effective hazard mitigation.

