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## FLOOD RISK AND RESILIENCE PROGRAM

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# Parish Flood Risk and Resilience Capability and Capacity Assessment Executive Summary



Report: Final

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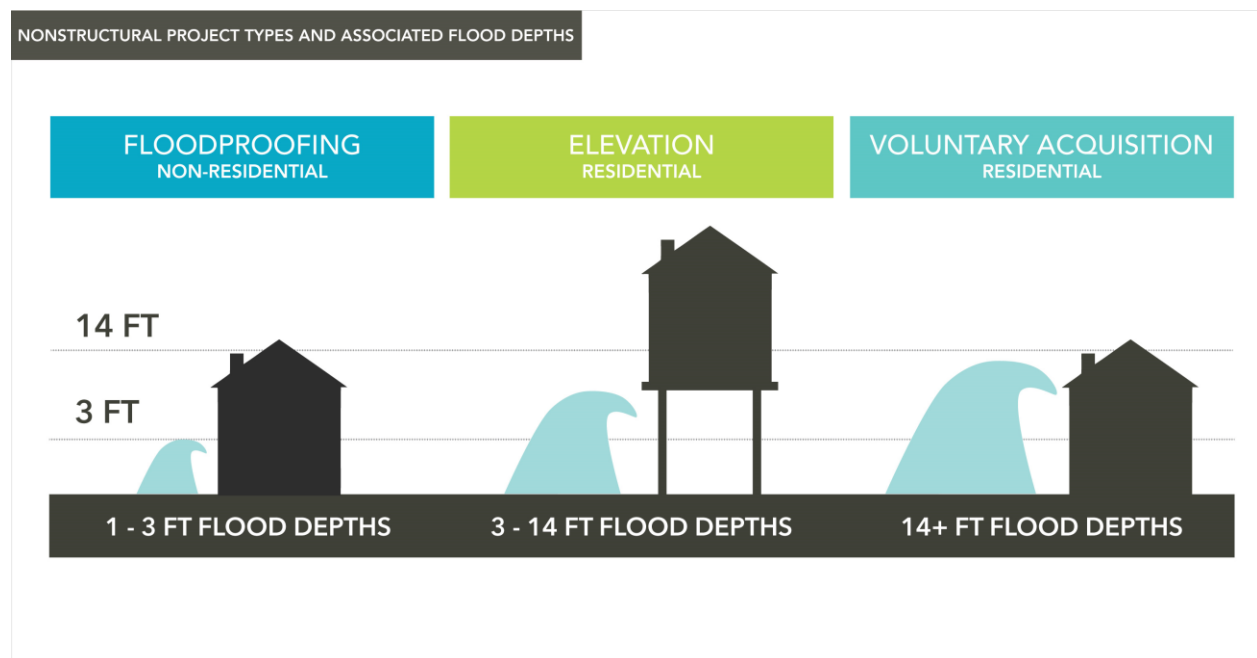
# Background

Coastal Louisiana's landscape and flood risk are changing due to factors including sea level rise, subsidence, changes in storm frequency and intensity, changes in precipitation, and other factors. Structural and nonstructural projects and flood risk reduction related programs, policies, and day to day practices will all be required to build resilience in the face of this changing landscape.

**Structural measures** focus on reducing the probability of flooding through measures, such as levees and floodwalls.

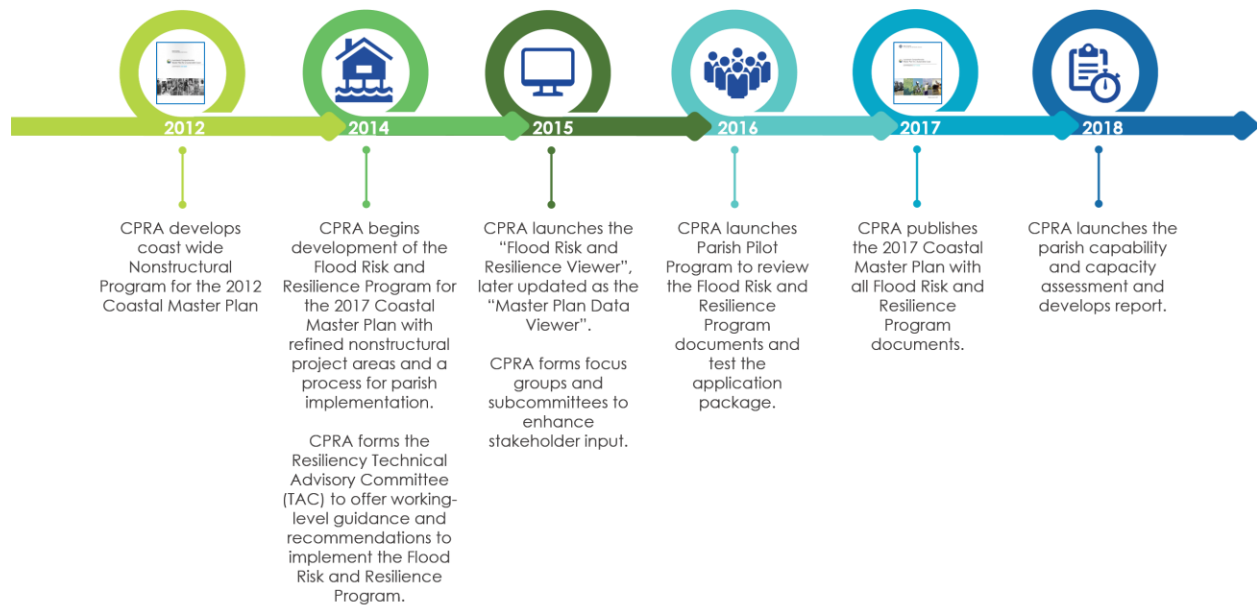
**Nonstructural measures** focus on reducing the consequences of flooding. Nonstructural measures can be physical or nonphysical. Physical nonstructural measures recommended by the Flood Risk and Resilience Program are applied directly to buildings and include floodproofing, elevation, and acquisition, as shown in Figure 1 below. Nonphysical nonstructural measures are geared toward guiding a community's actions and can include things like land-use regulations, flood insurance policies, and zoning.

(USACE, n.d.)



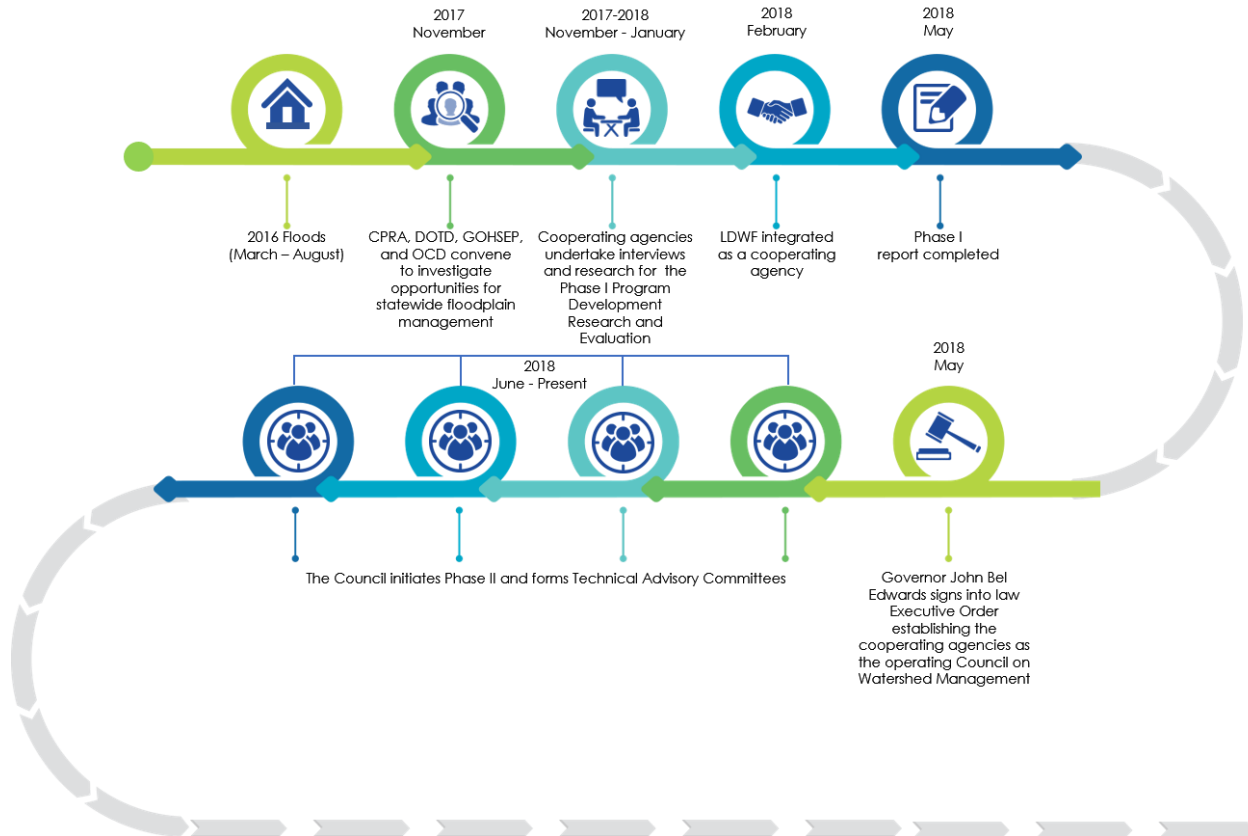
**Figure 1: Nonstructural Project Types by Flood Depth**

As part of the 2017 Coastal Master Plan, the Coastal Protection and Restoration Authority (CPRA) further developed the Flood Risk and Resilience Program to propose funding nonstructural flood mitigation projects and incentivizing flood risk reduction policies and practices among coastal parishes. The master plan recommended thousands of floodproofing, elevation, and acquisition actions in areas along the coast, depending on expected flood depths for the 1 percent annual chance flood elevation. A timeline of the Flood Risk and Resilience program is summarized in Figure 2.



**Figure 2: Timeline of the Flood Risk and Resilience Program**

Additionally, CPRA, the Office of Community Development (OCD), the Department of Transportation and Development (DOTD), the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP), and the Louisiana Department of Wildlife and Fisheries (LDWF) are in the process of developing the Louisiana Watershed Initiative in cooperation with other state agencies and with the insight and engagement of federal, local, private, and non-profit stakeholders. Together, these agencies form the Council on Watershed Management (Council). Initiated in the fall of 2017 and formalized through the [Governor's Executive Order JBE 2018-16](#) on May 29, 2018, the Louisiana Watershed Initiative is Louisiana's statewide, comprehensive watershed-based floodplain management program. The development timeline of the Watershed Initiative is shown in Figure 3.



**Figure 3: Timeline of the Louisiana Watershed Initiative**

# Developing a Capacity and Capability Assessment

## Assessment Objectives:

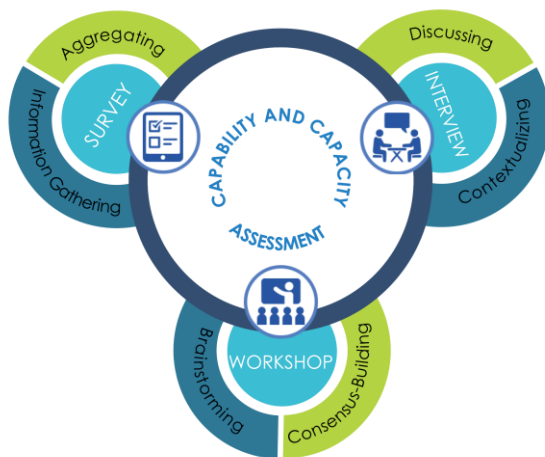
- Determine parishes' general and specific capability and capacity to implement Flood Risk and Resilience Program recommended nonstructural mitigation projects
- Determine parishes' general and specific capability and capacity to implement flood risk and resilience related policies, programs, and plans
- Provide insights on how CPRA and other state agencies – particularly those composing the Council on Watershed Management – can better support the needs of parishes in program development, project implementation, and policy alignment to mitigate the impacts of current and future flood risk

CPRA and the Louisiana Watershed Initiative have identified the need to better understand parish needs and further guide program development and State resource investment. CPRA completed a capability and capacity assessment with 24 coastal (or near-coastal) parishes. By cooperating with these parishes, the State is better equipped to understand existing capacities and capabilities to implement nonstructural and other flood risk reduction-related projects as well as flood resilience-related policies, programs, and plans. The assessment also serves as a pilot for a potential statewide assessment that could be implemented by the Louisiana Watershed Initiative in the future.

The assessment was developed by CPRA with the support of the consulting firm Arcadis, local and national subject matter experts, and the state agencies who represent the Council on Watershed Management. The assessment consisted of a three-part engagement process to better understand parish strengths and needs:

1. A comprehensive online survey collected facts about existing capacity and capabilities of the parishes
2. In-depth interviews with parish staff added nuance and local context to the online survey responses
3. In-person workshops allowed for group dialogue and building consensus across parishes

The assessment revealed capacity and capability needs at the local level, illuminated some changes that the State could make in existing programs to support parishes in their mission to mitigate flood risk, and provided important considerations and recommendations in the development of the Flood Risk and Resilience Program and the Louisiana Watershed Initiative. Figure 4 is a diagram of the assessment process.

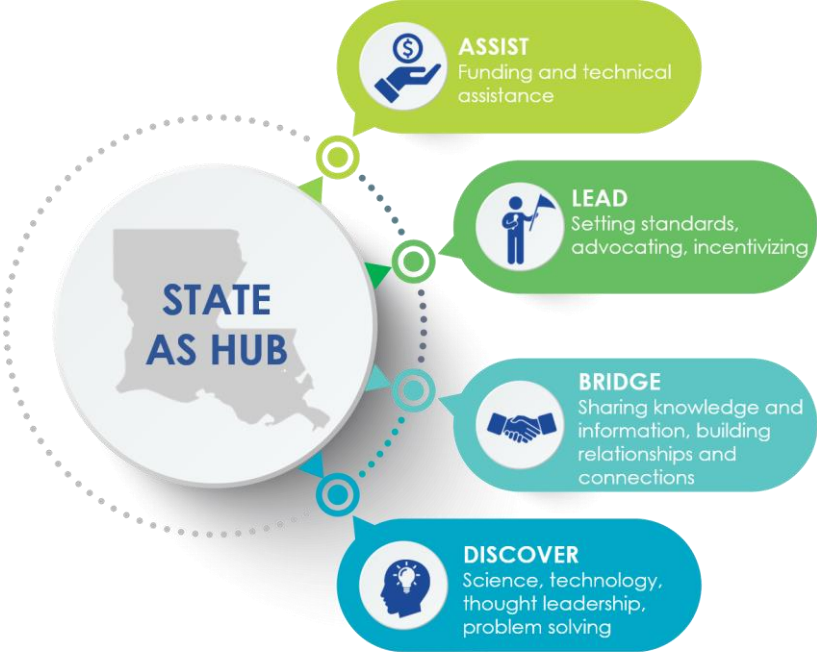


**Figure 4: The Three-Part Capability and Capacity Assessment Process**

# Rethinking the Role of the State

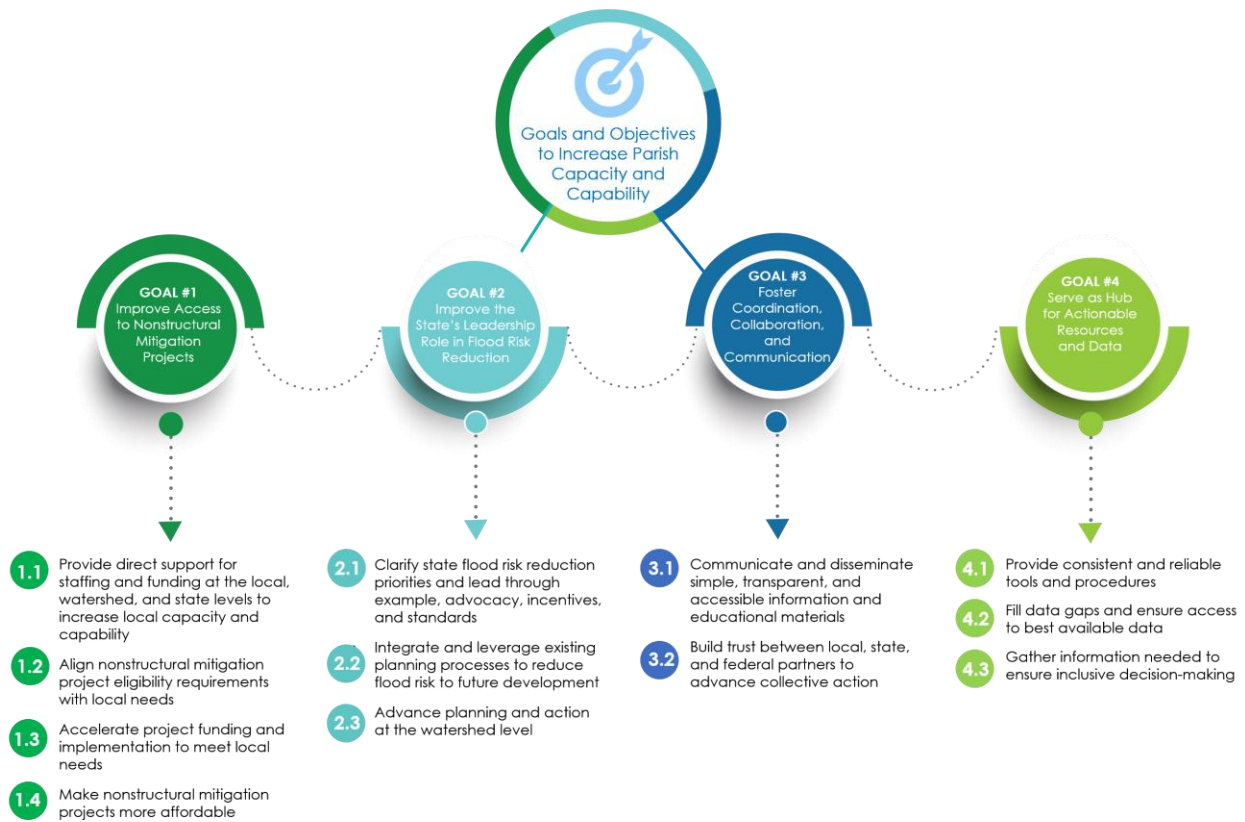
- The Assessment Engaged:**
- Permitting or planning & zoning directors, supervisors, and/or regulatory administrators
  - Floodplain managers and/or administrators
  - Coastal zone managers and/or administrators
  - Coastal and/or drainage engineers and contractors
  - Hazard mitigation specialists and/or other program managers
  - Grant management officers, directors, and/or analysts
  - Community development directors and/or analysts
  - Parish administrative officers
  - Emergency preparedness and homeland security directors
  - A levee district official
  - A watershed coordinator
  - Building code officials
  - Community Rating System (CRS) specialists

The strategies that emerged from the assessment are based on a rethinking of the State's role in building resilient communities. Many parish staff are experts in their field and community and highly capable and passionate about the work that they do. Foundational to the goals and strategies recommended in this report is recognition of the skills and knowledge that local government staff have and the importance of working with them to develop state programs. Strong coordination is needed, and the State can both lead and play a connecting role. Recommendations can be classified into four essential roles the State plays in helping parishes make the most of their capabilities and capacities. These four roles are Assist, Lead, Bridge, and Discover (Figure 5):



**Figure 5: The Four Roles of the State in Flood Risk Reduction**

Figure 6 shows the four main goals and associated objectives that emerged from the assessment. Each objective can be addressed using several possible strategies; those identified through the assessment are summarized below. The Louisiana Watershed Initiative and CPRA are in the process of developing implementation plans for, or directly implementing, multiple strategies recommended through this assessment. Other strategies must be evaluated in the long-term for appropriateness and feasibility.



**Figure 6: Goals and Objectives to Increase Parish Capacity and Capability**

## Strategies in Progress

The below strategies are currently being put into practice.

**Support local staff capacity through regional/watershed-level staff support.** The Louisiana Watershed Initiative's cooperating agencies are developing job descriptions and a funding plan to hire regional staff to support watershed-based planning and management across the state.

**Develop and implement a comprehensive, coordinated, statewide outreach, education, and engagement strategy.** The Louisiana Watershed Initiative's cooperating agencies are in the process of developing and implementing this strategy, which requires development of an engagement advisory committee comprised of state and federal agency representatives, subject matter experts, as well as regional, professional, local, and academic organizations.

**Develop an "Everything Flood-Related" website for public, local, state, and other stakeholder use.** The Louisiana Watershed Initiative's cooperating agencies are working on a plan for a website that is in alignment with the feedback received through this assessment, as well as the engagement process for the Louisiana Watershed Initiative's Phase I investigation. The website is expected to:

- Provide links to flood-related resources within and outside the state
- Provide links to data needed to understand flood risk and evaluate projects
- Provide links to flood risk and resilience-related publications

An interim website focused on supporting program transparency, engagement, and education will be live in the fall of 2018, and will include information about how to get involved in the Louisiana Watershed Initiative, as well as:

- Overview on state efforts to date
- Resources for citizens, jurisdictions, and stakeholders
- Upcoming events involving the program or cooperating agencies
- How to get involved, such as through email lists, social media, and more

**Pursue streamlined, watershed-based modeling and data gathering needed to make appropriate land use and project decisions.** The Council on Watershed Management has assembled a data technical advisory committee and is initiating an engagement process with parishes and municipalities to identify statewide and watershed-based data needs. In the fall of 2018, workshops are expected to be held around the state to discuss data.

The Louisiana Watershed Initiative's cooperating agencies are developing a funding strategy for the development of hydraulic and hydrologic modeling of watersheds statewide to help parishes address flood risk and conduct watershed-based floodplain management. The Amite watershed is in the process of being modeled, and modeling for other watersheds is expected to begin early next year if funding is appropriately allocated. Planning and policy technical advisory committees are being established in late summer/early fall to help clarify how data can and should be used in project and land use decision making. There will be workshops and engagement opportunities associated with these efforts.

Statewide collection of new, high quality LiDAR is currently in progress, as well as a plan to place stream gauges.

**Provide state-facilitated trainings and outreach to local staff.** The cooperating agencies within the Louisiana Watershed Initiative actively conduct and facilitate trainings and outreach to local staff. CPRA is communicating the findings of the assessment to help these agencies refine existing related services, as needed, and to identify needs for new initiatives.

### Example State Trainings

**GOHSEP** provides an ongoing series of trainings, events, and short courses on a variety of topics based on their focus areas, including disaster preparation, prevention, planning and management, and recovery. A calendar and registration information are continually updated on their website.

**OCD** currently holds workshops to walk participants through the application process for the Louisiana Community Development Block Grant Program.

**CPRA** conducts trainings on its Master Plan Data Viewer to guide communities and local staff through the data portal to find information on their flood risk, mitigation projects, land change, social vulnerability, and resources to reduce risk.

In addition to these, FEMA's **Emergency Management Institute (EMI)** provides trainings on a variety of topics related to hazards and disasters and covers most of the costs of travel.



## Near-Term Strategies

The Council on Watershed Management has convened a working group consisting of representatives from the five council agencies. One of the charges of the working group is to identify methods to align existing programs with the mission of the Louisiana Watershed Initiative. Two strategies that have been identified for contemplation by the working group include:

- Investigating mechanisms to accelerate funding processes
- Investigating mechanisms to unify state grant program application and implementation processes, wherever possible

Some of the options to be explored by the working group include:

- Investigating methods to unify and streamline program processes in alignment with the Louisiana Watershed Initiative goals and objectives
- Exploring the use of a unified online application and grant management portal. For the 2017 Coastal Master Plan, CPRA investigated the requirements for such a portal and has put together draft parameters that could be leveraged toward this effort
- Contemplating a centralized funding clearing house that could accept a base application and then poll or inquire throughout the state agencies to find available funding within program constraints. The working group is expected to explore the feasibility of this effort in the near-term as the “Everything Flood-Related” website and data portal are developed
- Pursue online policy and project status transparency through the “Everything Flood-Related” website and data portal. Procedures, policies, and key guidance will be posted on the website, among other resources

The Louisiana Watershed Initiative and coordinating agencies are working toward the following actions in the near-term.

**Publish materials that support capability building around flood resilience.** The Council has plans to investigate potential materials and begin developing or refining and publishing these items, as needed, beginning in early 2019.

**Develop a federal program/policy advocacy plan based on local needs.** The Council and its engagement, policy, and projects advisory committees will be making recommendations toward the development of this plan, through engagement activities, in the near-term.

**Facilitate alignment of parish policies and actions toward local, state, and regional flood risk reduction objectives.** The Council is in the process of establishing policy and planning technical advisory committees to support this strategy.

## Strategies to be Investigated for Appropriateness and Feasibility

The following strategies are more long-term and require further evaluation to better understand the appropriate options and course of action.

**Implement state actions that can increase Community Rating System credits statewide.** Further coordination with DOTD is required to determine the appropriate course of action related to this strategy.

**Pilot a university apprenticeship program to specifically support parishes and municipalities in their flood risk reduction-related activities** (projects and programs). The responsibility to implement this will likely fall on universities. CPRA has a Coastal Science Assistantship Program (CSAP) that provides assistantships for up to three years to support Master of Science students that are enrolled full-time at Louisiana colleges/universities and involved in science or engineering research relevant to Louisiana coastal protection and restoration efforts. This approach could be used as a model for other state agencies. This recommendation will be evaluated for potential piloting in the near future. Universities may partner with parishes to facilitate university-parish apprenticeships or expand existing university internship programs.

**Facilitate cross-training to build capacity.** Cross-training is an excellent way to increase capacity and reduce risks associated with staff turnover without adding significant cost. Cross-training already occurs within some state agencies and is encouraged. Further investigation is needed to understand the role the state should play, if any, in facilitating cross-training within and between parishes, between state agencies, as well as with other entities. This concept will be investigated as part of the expanded capacity and capability planning happening within the Louisiana Watershed Initiative.

**Pilot a state or sub-state regional (e.g., watershed-based) suite of experts to form a “temp agency” for local staff support.** More investigation is needed to understand the most frequent and urgent needs statewide for such support to help determine the number and types of staff required and the feasibility of this strategy long-term.

**Establish a dedicated, non-competitive multi-year (~five) or annual, proactive (state or federal) funding stream for flood risk reduction activities.** This strategy is a high priority for both CPRA and the Council. Coordination and investigation will be required to determine the feasibility of establishing annual resilience funding in the near-term. This is likely a longer-term goal.

**Develop, implement, and enforce state-level floodplain management policies.** This strategy is in the process of being investigated through the Louisiana Watershed Initiative. Extensive engagement will be required, and the Louisiana Watershed Initiative is in the process of establishing a policy technical advisory committee in the near-term to explore state-level floodplain management policies further.

**Incentivize the private market to make flood-resilient decisions.** Further investigation is required to understand what the state can and should do to help developers, homebuilders, banks and lenders, and insurers make flood resilience-related decisions. This investigation will be taking place in part within Louisiana Watershed Initiative engagement processes.

## Conclusion

The assessment revealed the strengths of the 24 coastal and near-coastal Louisiana parishes, as well as areas where additional support can be leveraged into long-term resilience against floods. Participants provided critical insight into ways existing state programs might adapt to more effectively meet the needs of parishes and how new initiatives can be built to serve Louisiana's needs. Many of the recommendations developed with participants are being actively adopted or further investigated. CPRA is continuing to share feedback with both the Louisiana Watershed Initiative and specific agencies and to investigate how further support can be provided in alignment with the recommendations. For greater detail about the methodology, findings, and recommended strategies, please refer to the full-length report.