

# 3

## Capability Assessment

This chapter describes and evaluates the state of Louisiana's capabilities related to mitigation and its ability to implement its mitigation strategy. This section explores both pre- and post-disaster capabilities, including authorities, policies, programs, staff, funding, and other available resources. Information is also included on non-state stakeholder agents that collaborate with the state to reduce the impact of hazards.

This Capability Assessment not only summarizes the resources available to support mitigation, it identifies changes since the last plan update as well as opportunities for the state to improve its current capacity to reduce risk. As FEMA recognizes the connections between community resilience and areas such as the economy, housing, health and social services, infrastructure, and natural and cultural resources, these areas are addressed to the extent possible.

## State Authorities, Policies, and Programs

This section describes the legal framework that supports hazard mitigation in Louisiana. It includes summaries of laws, planning and development authorities, state agencies, programs and policies, and other tools that directly or indirectly support statewide mitigation.

Overall, hazard mitigation directives originate mostly from the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) and the Coastal Protection and Restoration Authority (CPRA). Other state entities with planning and development related authority and programs in hazard-prone areas include:

- Department of Administration (DOA) - Office of Facility Planning and Control (FPC): regulation of state-owned property
- Department of Agriculture & Forestry (LDAF): enforcement of timber laws
- Department of Environmental Quality (DEQ): permitting programs
- Department of Natural Resources (DNR): Louisiana Coastal Resources Program (LCRP) and Coastal Use Permit (CUP)
- Department of Public Safety and Correction (DPS): Uniform Construction Code
- Department of Transportation and Development (DOTD): Statewide Flood Control Program; National Flood Insurance Program (NFIP) and the Community Rating System (CRS); Permits
- Department of Wildlife and Fisheries (LDWF): Scenic Rivers Program

The mitigation related activities of these state agencies as well as others are summarized in the next sections on plans, policies and programs.

### Plans and Policies

The State of Louisiana has many mitigation related acts, plans, executive orders, and policies that support pre- and post-disaster hazard mitigation. Although some are integrated and take a holistic approach to hazard mitigation throughout the state, there is room for more coordination.

Examples of current mitigation related documents and responsible agencies include:

- Louisiana's Comprehensive Master Plan for a Sustainable Coast (CPRA)
- Louisiana State Continuity of Operations Plan (GOHSEP)
- Louisiana State Emergency Operations Plan (GOHSEP)
- Louisiana State Hazard Mitigation Plan (GOHSEP)
- Louisiana State Public Assistance Administrative Plan (GOHSEP)
- Louisiana State Uniform Construction Code (Department of Public Safety and Correction; Louisiana State Uniform Construction Code Council)
- Louisiana Unified Shelter Plan (GOHSEP)

Executive Order NO. JBE 2016-09, signed on April 4, 2016, directs all state agencies to operate in a manner consistent with Louisiana's Comprehensive Master Plan for a Sustainable Coast.

The Louisiana Homeland Security and Emergency Assistance and Disaster Act (Louisiana Disaster Act) R.S. 29:721-739 remains the driving legislation that affects preparedness, response, recovery, and mitigation programs. The Act provides structure and empowers the State and local governments to act in these phases of emergency management in the event of a natural or manmade disaster. Overall, the Louisiana Disaster Act defines roles for state, parish, local governments and non-governmental agencies and requires that emergency management functions be coordinated with those of

the federal government and other states. Additionally, the Act provides guidance related to shelters, evacuations and curfews, financing, assistance identification, interstate and intrastate cooperation, liability limitations and immunity of personnel responding to disasters.

The goals of the Louisiana Disaster Act related to mitigation are as follows:

- To reduce vulnerability of people and communities of this state to damage, injury, and loss of life and property resulting from natural or man-made catastrophes, riots, or hostile military or paramilitary action;
- To authorize and provide for cooperation in emergency or disaster prevention, mitigation, preparedness, response, and recovery;
- To authorize and provide for management systems represented by coordination of activities relating to emergency or disaster prevention, mitigation, preparedness, response, and recovery by agencies and officers of this state, and similar state-local, interstate, and foreign activities in which the state and its political subdivisions may participate.

Among its many functions, the Louisiana Disaster Act established GOHSEP and its responsibilities. The Act authorizes GOHSEP's Hazard Mitigation Section in its Disaster Recovery Division to administer the Hazard Mitigation Grant Program and the Non-Disaster Hazard Mitigation Assistance Grants. The Hazard Mitigation Section, managed by the State Hazard Mitigation Officer and a Hazard Mitigation Section Chief, conducts outreach to communities, provides technical assistance to applicants, and manages grants to sub-grantees. Sub-grantees include state agencies, local governments, federally recognized Native American tribes, and private non-profit organizations.

Another notable policy is the establishment of the Coastal Zone Boundary in Louisiana Revised Statutes Article 49, §214.24. The Coastal Zone Boundary provides for state management of coastal resources in areas with a high level of coastal influence, ensures consistency with the Coastal Master Plan, and allows for reduction of coastal hazards and wetland impacts through permit review of development proposals. This work is conducted by DNR's Office of Coastal Management - Permits & Mitigation Division, and demonstrates Louisiana's strong commitment to coastal sustainability and improves the state's chances for federal funding for mitigation.

## Programs

In addition to GOHSEP, various state departments implement programs and activities that support mitigation efforts throughout the state. Many of these programs are summarized here; although the programs often complement each other, they are not all implemented in coordination or support of one another.

Various offices under the DOA support mitigation activities throughout the state. These include the Office of Facility Planning and Control (FPC), the Office of Community Development

(OCD), and the Office of Risk Management (ORM). The Office of Facility Planning and Control (FPC) is responsible for administration of the state's capital outlay budget process, which includes preparation of a preliminary state construction plan. The state construction plan outlines state and local projects for possible funding. FPC is an effective mechanism for influencing the location of state-owned facilities within hazard areas. The DOA's regulation of state-owned property via capital outlay is effective because the funds are appropriated to FPC, and the design of the buildings is under that office's direction. For example, the FPC's location of new construction outside flood hazard areas and/or above base flood elevations actively supports the state's overall efforts to mitigate risk through land development. As the building code authority for state-owned property, FPC also enforces the International Building Code for all state buildings, whether or not they are funded through capital outlay. As the central leasing authority for all state-owned property, FPC further enforces standards in the procurement of leases and has the authority to set the geographic limits for the bidding of leases. FPC has less control over decisions related to construction of state-owned facilities because such construction usually takes place on existing state-owned sites. Decisions for such facilities are usually guided by proximity to existing facilities and similar functional concerns.

The Disaster Recovery Unit within the Division of Administration's Office of Community Development (OCD-DRU) is dedicated to helping Louisiana's residents

recover from hurricanes Katrina, Rita, Gustav, Ike, Isaac and the Great Floods of 2016. As the state's central point for disaster recovery, OCD-DRU manages the most extensive rebuilding efforts in American history, working closely with local, state and federal partners to ensure that Louisiana's recovery is safer, stronger and smarter than before. Since the last plan update, OCD-DRU has closed Road Home offices (related to Hurricanes Katrina and Rita) and have developed the Restore Louisiana Homeowner Assistance Program in response to the significant flooding that occurred in 2016. Applicants of Restore Louisiana, who are required to elevate their homes, must agree to elevate to either the local jurisdiction's elevation height requirement or two feet above the Advisory Base Flood Elevation (ABFE), whichever is higher. OCD-DRU also administers two new planning efforts, LA SAFE and the relocation of Isle de Jean Charles (see Chapter 5 – Mitigation in Action for more details on these efforts).

**The Office of Risk Management (ORM)** administers the state's self-insurance program. ORM is responsible for managing all state insurance coverage covering property and liability exposure. It offers risk management training resources through conference presentations and on its website.

**The National Flood Insurance Program (NFIP)** is another tool used by the State to mitigate the impacts of flooding through the regulation of development in vulnerable areas. All parishes in the state of Louisiana participate in the NFIP; a total of 316 communities participate in the program. LA DOTD houses Louisiana's Floodplain Management Office, which is a statewide resource for floodplain management activities to include the NFIP. Floodplain Management Office staff also serve as liaisons with FEMA Region VI and the regional NFIP office. Participation in the NFIP is required for a community to apply for Flood Mitigation Assistance (FMA) funds (administered by GOHSEP). As of June 2018, there were 489,260 NFIP policies in force across the state; an increase of 2.28% or 10,805 properties from June 2017.

LA DOTD also supports the participation of Louisiana communities in the NFIP's **Community Rating System (CRS)**. The CRS is a voluntary program that rewards communities that implement floodplain management activities that go beyond those required by the NFIP. Forty-three Louisiana NFIP communities participate in the CRS. These 43 communities represent 83% of the state's NFIP policies and enjoy over \$29 million dollars in premium savings. Since the last Plan update, two new communities have joined the CRS - the Town of Jean Lafitte and the City of Covington. Table 1 provides information on Louisiana communities that participate in the CRS along with their class ratings, related savings in NFIP premiums and the number of NFIP policies.

Table 1 - Louisiana Parish Participation in the NFIP CRS [Source: Community Information System (CIS), June 2018].

## CRS Participation in Louisiana

COMMUNITY	CRS Rating	Savings	Number of Policies
Ascension Parish	8	\$638,698	13,466
Baker	9	\$23,568	802
Bossier City	8	\$259,168	3,426
Caddo Parish	9	\$22,345	761
Calcasieu Parish	8	\$363,025	8,014
Carencro	8	\$11,715	488
Central	8	\$271,306	5,169
Covington	9	\$39,192	1,529
Denham Springs	8	\$261,747	2,127
East Baton Rouge Parish	7	\$2,911,893	36,322
French Settlement	9	\$6,825	201
Gonzales	8	\$83,739	1,312
Gretna	8	\$215,460	3,115
Harahan	8	\$36,396	2,577
Houma	7	\$197,877	4,850
Jean Lafitte	8	\$38,362	271
Jefferson Parish	6	\$11,918,167	86,875
Kenner	7	\$1,915,814	16,026
Lafayette	8	\$284,574	7,657
Lafayette Parish	8	\$329,340	11,161
Lake Charles	9	\$112,032	6,062

Livingston Parish	9	\$459,548	15,767
Lutcher	9	\$128	298
Mandeville*	6	\$243,722	3,108
Morgan City	8	\$121,564	1,694
New Orleans/Orleans Parish	8	\$2,942,832	80,824
Quachita Parish	9	\$70,783	2,415
Rayne	9	\$4,487	320
Ruston	9	\$1,618	81
Scott	8	\$86,518	984
Shreveport	8	\$324,444	4,796
Slidell	7	\$1,000,037	6,718
Sorrento	9	\$14,383	307
St. Charles Parish	8	\$455,124	11,761
St. James Parish	7	\$16,743	1,216
St. John the Baptist Parish	8	\$353,792	7,026
St. Tammany Parish	7	\$2,165,205	37,798
Tangipahoa Parish	9	\$113,875	7,577
Terrebone	7	\$854,562	11,242
Walker	8	\$100,728	1,138
West Baton Rouge Parish	8	\$18,385	917
Westwego	8	\$38,790	1,272
Zachary	7	\$65,172	1,171
<b>TOTALS</b>		<b>\$29,393,683</b>	<b>405,472</b>

\*The City of Mandeville increased to a class 6 but updated savings was unavailable.

Also following the last Plan update, the State Hazard Mitigation Officer (SHMO) attended a field deployed NFIP/CRS class demonstrating support of and potential coordination with AL DOTD and local CRS communities. Following the class, the SHMO has investigated ways in which GOHSEP can support communities in the implementation of CRS activities. The SHMO also participates in CRS Users group meetings. In addition, the State has collaborated with the University of New Orleans' Center for Hazards assessment, Response and Technology (UNO-CHART) to develop a CRS Strategy for the State that is found in Appendix D.

La DOTD also implements the **Statewide Flood Control Program**. This program supports flood risk reduction through the construction of flood control infrastructure. With funds allocated annually by the Legislature, La DOTD constructs projects that reduce or eliminate the incidence of flooding or damages in specific areas. Types of projects include channel modifications; levee, canal, and spillway construction; stormwater detention; flood proofing of structures; regulation of floodplains; relocation assistance; or other structural or non-structural measures.

FEMA is working with federal, state, tribal and local partners across the nation to identify flood risk and promote informed planning and development practices to help reduce that risk through the Risk Mapping, Assessment and Planning (**Risk MAP**) program. Since the last mitigation plan update, the State of Louisiana has become a more active participant in Risk MAP through the Cooperating Technical Partners (CTP) Program. DOTD – State Floodplain Management Office manages the CTP program with support from Dewberry Consultants, LLC. Since becoming a CTP, DOTD has been diligently planning and working with FEMA Region VI toward the release of updated flood risk information for Louisiana. LADOTD has made a significant investment in the development of the Project Prioritization Tool Decision Tool, which allows for a more efficient and effective selection and prioritization of projects based on key criteria like: (1) FEMA's Risk MAP metrics; (2) known flood risk concerns; (3) knowing where communities have conducted flood studies or produced other relevant data that can be used as leverage and count toward cash match contributions; (4) communities are at risk; and (5) the most current LiDAR data.

In 2015, the **Water Institute of the Gulf** was also selected a CTP and awarded funding to prepare a business plan describing how the organization can support FEMA's Risk Mapping, Assessment and Planning (Risk MAP) initiative, and the National Flood Insurance Program (NFIP).

Following Hurricanes Katrina and Rita in 2005, the **Coastal Protection and Restoration Authority** (CPRA) was established as the single state entity with authority to articulate a clear statement of priorities to achieve comprehensive coastal protection and create a more sustainable Louisiana. The Louisiana State Legislature charged CPRA with responsibility for "hurricane protection and the protection, conservation, restoration, and enhancement of coastal wetlands and barrier shorelines or reefs" throughout southern Louisiana's coastal zone, which is comprised of the contiguous areas subject to storm or tidal surge. CPRA's mandate is to develop, implement, and enforce a comprehensive, long-term coastal protection and restoration strategy.

This is done through the Louisiana's Comprehensive Master Plan for a Sustainable Coast, a document with a 50-year planning horizon (updated every 6 years) and the Integrated Ecosystem Restoration and Hurricane Protection in Coastal Louisiana Annual Plan, a projection of expenditures (updated yearly).

CPRA acts in direct response to both legislative and executive orders. According to the Louisiana Revised Statutes §214.1(C),

The state must act to conserve, restore, create, and enhance wetlands and barrier shorelines or reefs in coastal Louisiana while encouraging use of coastal resources and recognizing that it is in the public interest of the people of Louisiana to establish a responsible balance between development and conservation. Management of renewable coastal resources must proceed in a manner that is consistent with and complementary to the efforts to establish a proper balance between development and conservation.

Moreover, Governor Edwards' Executive Order No. 2016-09 highlights the need for the master plan to drive and expedite state action across agencies. The same need applies to the state's partners at the local and federal levels, consistent with their mandates and missions. Given the coastal erosion emergency facing Louisiana, it is imperative that all government agencies act quickly and in accordance with CPRA's Coastal Master Plan. To help achieve this, CPRA is working closely with other entities on coastal issues, including local and parish governments; the state legislature; the Governor's Advisory Commission on Coastal Protection, Restoration, and Conservation; the Louisiana Recovery Authority (LRA); LRA's Louisiana Speaks regional planning process; and Louisiana citizens and coastal stakeholders.

The Governor's executive assistant for coastal activities chairs the CPRA Board. Agency representatives on the CPRA Board include the secretaries of the: Department of Natural Resources (DNR), Department of Transportation and Development (DOTD), Department

of Environmental Quality, Department of Wildlife and Fisheries, Department of Economic Development; the commissioners of the Department of Agriculture and Forestry, Department of Insurance, Division of Administration; and the director of the Governor's Office of Homeland Security and Emergency Preparedness. Additionally, CPRA Board membership includes executive board members of the Police Jury Association, levee district presidents from coastal Louisiana, and designees of the Senate President and Speaker of the House.

CPRA also administers the Flood Risk and Resilience Program, which is described in Chapter 5 – Mitigation in Action.

Coordination between state and local authorities is vital in hazard mitigation. For instance, although the Louisiana **Uniform Construction Code (UCC)** may be enforced at the state level through the Office of State Fire Marshal (upon request for commercial construction), local education regarding the UCC is coordinated and supported by DPS through the Louisiana State Uniform Construction Code Council (LSUCCC). Since it went into effect in 2007, the UCC has had a significant impact on lowering risk by reducing exposure to wind- and flood-related hazards in hazard areas through the direct regulation of land use and development. Additionally, the UCC is adopted on the state level and all parishes are required to provide enforcement of the UCC. Recent reviews by the LSUCCC indicate that a small percentage of local officials are either not aware of UCC-enforcement, or they are inadequately equipped to provide proper enforcement. Continuing education of local officials is needed.

Since the last plan update the LSUCCC adopted the 2015 editions of the International Building Code, International Residential Code, International Plumbing Code, International Existing Building Code, International Fuel Gas Code and International Mechanical Code, and the 2014 edition of the National Electric Code. Consequently, the minimum one foot of elevated space, also known as "freeboard," that had been required for special flood hazard areas, has been removed. While many local

jurisdictions do enforce at least one foot of freeboard, many members of the State Hazard Mitigation Committee recommended a statewide freeboard requirement.

Many mitigation programs operate effectively and are integral to agency objectives. The permanent protection of wildlife habitat through cash sale acquisitions, donations, or conservation easements in the **Land Acquisition Program** is a way to help accomplish the DWF's mission and to advance hazard mitigation goals. Since its inception, the program has acquired almost 610,000 acres of wildlife habitat through fee title acquisitions, donations, or land transfers. An additional 516,167 acres are under variable-length, lease agreements between DWF and private corporations, governmental agencies, and non-governmental organizations. The leased properties represent unprotected fish and wildlife habitat. The owned and leased properties collectively make up the 61 Wildlife Management Areas and Refuges managed by DWF. The WMAs and refuges provide a wide variety of habitats that help fulfill DWF's mission. The success of the land acquisition programs depends upon several factors. Funding is the primary limiting factor and therefore, it is extremely important to have a sufficient and sustained funding source. Land prices continue to escalate, particularly within the past few years as competing interests from land development, alternative fuels, and environmental projects such as carbon sequestration have emerged. Unfortunately, DWF's funding source has been static, thereby severely limiting its ability to acquire habitat from willing sellers.

Another program related to mitigation and mission is the **Scenic Rivers Program** at DWF, which is responsible for preserving, protecting, developing, reclaiming, and enhancing the wilderness qualities, scenic beauties, and ecological regimes of certain free-flowing Louisiana streams. DWF identifies projects requiring Scenic River Permits by (1) conducting routine surveillance of these streams; (2) responding to information provided by the public and local governing authorities; and (3) reviewing notices published by those seeking other state and federal permits for potential impacts to these



streams. Channelization, clearing and snagging, channel realignment, reservoir construction, commercial clear cutting of trees within 100 feet of the ordinary low water mark, and use of motor vehicles within the stream are prohibited on designated Scenic Rivers in Louisiana. By imposing restrictive permit conditions, modifying proposed activities in ways that minimize or eliminate impacts, and enforcing the provisions of the Scenic Rivers Act to insure compliance, DWF has been very effective in preserving vegetated stream buffers, protecting water quality, and minimizing the encroachment of development and protecting the natural character and flood-mitigation capacity of these streams. There are currently approximately 80 streams, rivers and bayous in Louisiana's Natural and Scenic Rivers System, which includes approximately 3,000 linear stream miles.

Established in 1980, the DNR's Louisiana Coastal Resources Program (LCRP) requires permits for activities which have direct and significant impacts on coastal waters. Coastal Use Permit (CUP) applications are processed with respect to the consistency of the proposed use with the LCRP. Impacts to wetlands and coastal protective features, as well as hazard potentials, are elements which are evaluated during the CUP review process. The DNR developed a strategic plan pursuant to state law that requires the creation of performance measures. The LCRP's major performance measure is wetland mitigation. The goal is for the LCRP to obtain 100% compensatory habitat mitigation for permitted wetland impacts. The performance measure is reported to the Legislature on a quarterly basis, is subject to auditing, and is available to the public. The LCRP mitigation performance measure has never been less than 100% and is usually greater than 100%.

The **Louisiana Coastal Wetland Conservation Plan** also provides documentation of the state's mitigation requirements through the conditional use permit (CUP) process managed by DNR. The documentation takes the form of a biannual report to Congress composed by the U.S. Fish and Wildlife Service, EPA, and USACE. Louisiana's Coastal Zone Inland boundary was modified in the 2012 Regular Session of the Louisiana Legislature with the passage of House Bill 656 (Act 588). Boundary changes are based on the recommendations of a scientific study conducted for and approved by CPRA.

Coastal forests in Louisiana are a valuable for many reasons including serving as buffers to hurricane storm surge and winds. The goal of the **Coastal Forest Conservation Initiative (CFCI)** is to conserve and protect coastal forest resources in Louisiana. The primary objective of the CFCI is to acquire land rights (fee title or conservation servitude/easement) from willing landowners to address demonstrated threats of conversion and/or opportunities for restoration, conservation, or enhanced sustainability of coastal forest tracts that provide significant ecological value and/or provide storm damage reduction functions. The primary objective of the CFCI is to acquire land rights that meet at least one of the following criteria:

- Provide direct storm damage reduction potential or protection of hurricane/storm protection features and measures (e.g., levees, cheniers, etc.);
- Areas of high ecological significance; or
- Tracts that are in danger of conversion to non-forested uses.

To date, the CFCL program has negotiated the purchase of a servitude on a 4,728-acre property in St. Mary Parish that includes high quality bald cypress/tupelo swamp as well as bottomland hardwoods, and provides protection to a hurricane protection levee. The program was also the major contributor to the acquisition of 29,630 acres of bald cypress/tupelo and bottomland hardwood forest in the Maurepas Swamp. This acquisition increased the size of the Maurepas Swamp Wildlife Management Area to over 100,000 acres, thereby conserving the property and expanding recreational opportunities.

These findings demonstrate the commitment to mitigation, pre- and post- disaster as well as through regulation of development, by numerous state entities. While many of the programs focus on mitigation through coastal zone monitoring, permitting and restoration, a variety of programs focus on risk reduction related to riverine and backwater flooding as well as high winds, wildfires, drought, and other hazards. While many of the programs included in this table are quite successful, many are impacted by limited resources (e.g., staff, funding, and/or technical support).

Table 2 summarizes the state policies, programs, and development authorities by state agency.

Agency	Pre-Disaster	Post-Disaster	Regulation of Development
<p style="text-align: center;"><b>CPRA</b></p>	<p><b>Planning and implementation of structural and nonstructural protection programs and projects throughout coastal Louisiana</b></p> <p>Quarterly and annual inspection of federal, state, and local levees and other flood protection projects in Louisiana coastal area</p> <p>Local cost-share partner for levee construction and other structural protection measures</p> <p>Provide technical assistance, training, and certification for levee inspectors and levee owners</p> <p>Review of permits on riverine and hurricane protection activities</p>	<p style="text-align: center;">None</p>	<p style="text-align: center;">None</p>

Agency	Pre-Disaster	Post-Disaster	Regulation of Development
<p style="text-align: center;">CPRA</p>	<p>Development and prioritization of nonstructural projects in 2017 Coastal Master Plan</p> <p>Support of land use planning through: CPRA's Flood Risk and Resilience Program, publication of Best Practices Manual for Development in Coastal Louisiana and the Louisiana Coastal Land Use Toolkit</p> <p><b>Planning, engineering, design, construction, operation, maintenance, and monitoring of coastal restoration projects</b></p> <p>State-funded coastal restoration projects (e.g., sediment diversions, marsh creation, barrier island restoration, ridge restoration, hydrologic restoration, shoreline protection, bank stabilization, oyster barrier reefs, and others)</p> <p>Obtains federal cost-share funding for and implements coastal restoration programs, feasibility studies, and projects.</p> <p><b>Public outreach and education</b></p> <p>4-H Youth Wetlands Education and Outreach Program</p> <p>Coastal Science Assistantship Program (CSAP)</p> <p>LSU Center for River Studies</p> <p>Master Plan Data Viewer</p>	<p style="text-align: center;">None</p>	<p style="text-align: center;">None</p>

Agency	Pre-Disaster	Post-Disaster	Regulation of Development
GOHSEP	<p><b>State administration of federal grant programs:</b></p> <ul style="list-style-type: none"> <li>• PDM</li> <li>• FMA</li> </ul> <p>Coordination of state and local mitigation planning</p> <p>Community Education and Outreach</p> <p>Training Programs</p>	<p><b>State administration of federal grant programs:</b></p> <ul style="list-style-type: none"> <li>• HMGP</li> <li>• Individual Assistance (IA)</li> <li>• Public Assistance (PA)</li> <li>• PA/406 HMGP</li> </ul>	None
LA Department of Agriculture and Forestry (LDAF)	<p>Fire weather forecasting</p> <p>Soil and water conservation</p> <p>Animal Health Services (food security)</p> <p>Formosan Termite Initiative</p> <p>Louisiana Project Learning Tree (K-12 environmental education)</p> <p>Partner with CPRA in pre-disaster exercises</p> <p>Hazard Mitigation is taken into consideration as part of planning, development projects and timber management</p>	<p>Production of reforestation seedlings</p> <p>Livestock recovery information and activities, working with CPRA</p>	Enforcement of timber laws
LA Department of Corrections (DOC)	<p>Mass care and evacuation support for municipal and parish correctional facilities.</p> <p>Loss Prevention Unit (employee injury, property and records loss)</p> <p>State and local emergency management planning (ESF-6, housing, feeding, medical and mental healthcare)</p>	<p>General Support</p> <p>EOC Task Force</p> <p>DOC HQ Incident Management Center</p> <p>Continued mass care and evacuation support for municipal and parish correctional facilities</p> <p>Backup power generation</p> <p>Information/Business Continuity-(DOA) Living Disaster Recovery Program (LDRP)</p>	None

Agency	Pre-Disaster	Post-Disaster	Regulation of Development
<b>Louisiana Economic Development (LED)</b>	LED's Community Competitiveness Initiative offers support to community adherence to emergency preparedness principles including mitigation and emphasizes its importance in an "economic development" capacity building program.	Post-Disaster Economic Impact Analysis in coordination with LSU  Work closely with Small Business Administration (SBA) and Small Business Development Centers to provide post-disaster support	None
<b>LA Department of Environmental Quality (DEQ)</b>	Nuclear Power Plant Off-site Emergency Preparedness Program  Radiological Emergency Planning and Response  Remediation program  Ozone Action  Drinking Water Well Protection Program  Motor Vehicle Inspection and Enforcement Program  EnviroFlash	Underground Storage Tank and Remediation Division (USTRD)	Permitting Programs (Air, Water, Waste)
<b>LA Department of Health (LDH)</b>	Fight the Bite Program (West Nile Virus)  Bioterrorism Unit (training) Pandemic program	Disaster Case Management  Regional Response Team  Mobile Field Units  Immunization Teams  Evacuation Planning Requirement for Licensing Nursing Homes and Home Health Agencies  Special Needs Shelters	None
<b>LA Department of Insurance (LDI)</b>	Consumer 101 public education includes oversight "watchdog" functions for protecting policyholders with private insurance companies and providing information on the NFIP. Also is proactive in storm mitigation education via press conferences, news releases and a mitigation brochure.	Office of Consumer Advocacy receives inquiries and complaints from consumers; prepares and disseminates information to inform and assist consumers; and may provide direct assistance and advocacy via one on one presentations and consultations. Office of Property and Casualty also receives complaints from consumers and seeks to resolve complaints in a timely manner with insurance companies.	Performs regulatory permit functions and mitigation activities related to the State's coastal zone; issues Coastal Use permits

Agency	Pre-Disaster	Post-Disaster	Regulation of Development
<p><b>LA Department of Natural Resources (DNR)</b></p>	<p>Digital Mapping (Geographic Information System (GIS))</p> <p>Distributes information on causes of coastal and wetland erosion and methodologies to restore coastal and wetland areas</p> <p>Coastal Zone Management program and grants</p> <p>Coastal Wetlands Reserve Program</p> <p>Parish Coastal Wetlands Restoration program</p> <p>Prepares and plans for large scale evacuations and/or disruptions to the public fuel supply</p>	<p>Surveys coastal restoration projects for damages and seeks FEMA funding as appropriate for needed repairs</p> <p>Digital Mapping (GIS)</p> <p>Provides visibility on the public fuel supply for large scale evacuations and/or disruptions to the public fuel supply</p>	<p>Performs regulatory permit functions and mitigation activities related to the State's coastal zone; issues Coastal Use permits</p>
<p><b>LA Department of Public Safety (DPS)</b></p>	<p>Provides for the administration of the Louisiana State Uniform Construction Code Council (LSUCCC)</p> <p>Provides assistance to the LSUCCC and supports local education and training of the UCC</p>	<p>OSFM Urban Search and Rescue and Rapid Response teams assist local efforts</p> <p>Louisiana Traffic Safety Incident Management System (ICS)</p>	<p>OSFM reviews all new construction and renovation of existing structures statewide for compliance with life safety, fire protection, and accessibility regulations</p> <p>OSFM provides enforcement of the LSUCC where requested by parishes and municipalities or individuals</p>
<p><b>LA Department of Culture, Recreation &amp; Tourism (CRT)</b></p>	<p>Public education on disaster related topics are included in agency nature programs</p>	<p>Extended Recreation Sites operational hours for possible housing locations</p> <p>Sites used as staging areas</p>	<p>None</p>
<p><b>LA Department of Transportation &amp; Development (DOTD)</b></p>	<p>State management of NFIP</p> <p>Statewide Flood Control Program</p> <p>Ports Construction and Development Program</p> <p>Dam Safety Program</p> <p>Floodplain Management Program</p> <p>FEMA Cooperating Technical Partner (CTP)</p> <p>Educates and assists communities with CRS participation</p>	<p>Floodplain Management Staff contacts each community within the declared disaster area to discuss the rules and regulations of the NFIP with a special emphasis on the community's post-disaster responsibilities</p> <p>Ports Construction and Development Program</p> <p>Post-disaster damage assessments</p>	<p>Permitting for all state roads and highways including road access and easements</p> <p>Permitting for all new construction and modifications to dams in Louisiana</p>

Agency	Pre-Disaster	Post-Disaster	Regulation of Development
<p><b>LA Department of Transportation &amp; Development (DOTD)</b></p>	<p>Educates and encourages working relationships between community NFIP staff and local HMGP POCs</p> <p>Plans and conducts educational workshops for local officials</p> <p>Produces and distributes a quarterly NFIP newsletter</p> <p>LA. Emergency Evacuation Plan, including highway contra-flow and evacuation of persons without access to transportation</p>		
<p><b>LA Wildlife &amp; Fisheries (WLF)</b></p>	<p>Environmental Education Commission Courses and Programs</p> <p>Woodworth &amp; Waddill Outdoor Education Centers</p> <p>La Green Schools Program</p>	<p>Operates staging facilities for Search and Rescue (Enforcement Division)</p> <p>Utilizes building elevation and hardening in reconstruction effort</p>	<p>Land Acquisition for Wildlife Management Program</p> <p>Scenic Rivers Program</p>
<p><b>LA Division of Administration (DOA)</b></p>	<p>Construction of state-owned structures via Facility Planning and Control (FPC)</p> <p>Integrating mitigation design features when feasible</p> <p>Enforcement of State and Federal regulations for design and construction of State buildings</p> <p>Maintenance of Facilities Management database</p> <p>LA SAFE (OCD)</p>	<p>Disaster Recovery projects for state facilities (FPC)</p> <p>Designated applicant for public assistance to FEMA for all permanent repairs for Katrina and Rita (FPC)</p> <p>Administers Restore Louisiana Homeowner Assistance Program (OCD)</p> <p>Elevation, Pilot Reconstruction, and Individual Mitigation Measures (OCD)</p> <p>Administers CDBG infrastructure grants through the Office of Community Development</p>	<p>FPC is the Building Code authority for all State owned buildings (with limited exceptions)</p> <p>FPC administers development activities of all non-DOTD State owned property through administration of the capital outlay bill</p> <p>FPC is the central leasing authority for all State agencies</p>

## Hazard Mitigation Capabilities

This section describes the state's hazard mitigation capabilities, which include dedicated staff, technical expertise, and financial resources.

### Mitigation Personnel

Since the 2014 Plan Update, GOHSEP continues to streamline internal processes and maintains a relatively smaller staff. The total number of employees in the Hazard Mitigation Division is 51; this number includes only seven contractors or about 14% of the staff. The relatively low number of contractors on staff reflects the continued building of internal capacity within the Mitigation Division. Staff members as are assigned as follows:

Assistant Deputy Director: 1 State Staff  
 Executive Officer: 1 State Staff  
 Grants Management: 14 State Staff / 0 contractors  
 Closeout: 12 State Staff / 4 Contract Staff  
 Technical Services: 5 State Staff / 1 Contract Staff  
 State Applicant Liaisons: 11 State Staff / 2 contract Staff

### Hazard Mitigation Staff by Focus Area



Figure 1 - Hazard Mitigation Staff by Focus Area



The staff's areas of focus appear relatively well balanced, but as expected during the last Plan update, the closeout staff is now the largest group followed by grants management and state applicant liaisons. The technical services team is the smallest of the groups (see Figure 1). Although there are no plans for additional staff at this time, there is a need for additional capacity to review and perform benefit cost analysis.

One issue that has remained constant since the last plan update relates to salary. Salary levels for mitigation staff remain non-competitive with salaries for similar work in the private sector and at federal levels. This remains a challenge for the state to maintain staff levels.

The Mitigation Division continues to participate with FEMA in the annual State Mitigation Program Consultation. The State Hazard Mitigation Officer attends the meeting along with various state agencies. This annual meeting allows GOHSEP to check-in with its FEMA partners and to review strengths and weaknesses.

Mitigation staff also attend federal and state sponsored training and professional development classes, in person and online. In 2018, staff attended the E0212 Hazard Mitigation Assistance: Developing Quality Application Elements course and the E0273 Managing Floodplain Development through the National Flood Insurance Program course.

Although many mitigation programs are implemented at the local level (e.g., floodplain management, Uniform Construction Code (UCC) enforcement, coastal zone management, etc.), the State is prepared to offer technical assistance in various areas related to mitigation, as referenced in the list of mitigation related programs (see Figure 2). GOHSEP leads the development, implementation, and maintenance of the Hazard Mitigation Plan Updates. In addition, it is the lead agency in the administration and management of FEMA related grants. Since the last Plan update, GOHSEP has completed the development of LouisianaHM.com

(LAHM), a web-based tool designed to manage all aspects of a State's activities relative to FEMA's Hazard Mitigation Assistance (HMA) grant programs. GOHSEP

uses LouisianaHM.com for all open disasters as a tool to manage the relationship between a State or recipient and its applicants or subrecipients, and to serve as a central repository to track all data, documents and activities relative to a State's fiduciary responsibility to administer FEMA HMA grant funding. This tool also integrates with the State financial system so that payments approved and generated in the system trigger payments from the State to the subrecipients. The system also provides audit and history logs, and permissions based workflows and triggers.

In addition to staff within GOHSEP, various other state agencies and departments have staff dedicated to mitigation planning and project implementation. These include CPRA, DOTD, DNR, and OCD.

### Technical Capacity

Various state agencies collect, maintain, and share GIS data that supports hazard mitigation. These agencies include CPRA, DOTD, DOA, DNR, DEQ and others. Additionally, there are regional entities, universities, and local jurisdictions that maintain and share GIS data with the State. The Louisiana Geographic Information Council (LAGIC), composed of representatives from various state agencies and several local, regional and federal organizations, also supports the coordination of data. CPRA makes its coastal protection and restoration data publically available through CIMS (Coastal Information Management System). CIMS provides geospatial, tabular database and document access to CPRA's suite of protection and restoration projects, Coastwide Reference Monitoring System (CRMS) stations, the 2017 Master Plan, geophysical data, and coastal community resiliency information. There are three options for viewing CPRA's spatial data: a main spatial viewer, a coastal project map portal, and the Master Plan Data Viewer. The Master Plan Data Viewer is an interactive tool that connects coastal Louisiana residents with more information about their current and future risk. The Viewer includes data collected for the 2017 Coastal Master Plan and includes information on land change, flood risk and economic damage, coastal vegetation change, social vulnerability, 2017 Coastal Master Plan projects, and resources to

connect homeowners to resources to take action and further reduce risk. In addition, all of the information in the Master Plan Data Viewer is available to download. These data are a powerful resource for hazard mitigation.

Virtual Louisiana is a Google Earth Enterprise platform that serves as an information-sharing gateway for emergency management. It is available to various state agencies but is not widely used. Additional infrastructure to allow for GIS data sharing includes a Geospatial portal built by the Stephenson Disaster Management Institute (SDMI) at Louisiana State University. SDMI also developed Geospatial portal for GOHSEP in which it hosts all hazard mitigation related infrastructure data. The Geospatial portal is a one-stop shop; however, this may change as DOTD has also started a new GIS initiative.

Although the state's capacity to manage GIS data regarding risk and hazard mitigation continues to improve, areas for improvement remain since the last plan update. GOHSEP still relies on the GIS capabilities of other state agencies, as there is currently only one part-time staffer with GIS expertise. Overall, recommendations to provide better technical support for future mitigation planning and implementation remain since the last plan update:

**Increase skill-specific professional development opportunities for hazard mitigation staff**

**Increase funding for GIS and hazard modeling software maintenance and licensing**

**Build an internship program to support staffing needs**

**Participate in EMAC events to share and implement best practices**

As suggested in the last plan update, GOHSEP should continue to pursue collaborations with Louisiana universities and other state, regional and local entities to implement these recommendations and to address gaps in its technical capacity. In addition, the State should

support the interest of some GOHSEP staff to pursue professional certification under programs such as the Certified Floodplain Management administered by the Association of State Floodplain Managers (ASFPM).

## Financial Capacity

The State continues to implement hazard mitigation projects using both federal and state funding sources. These sources vary across federal and state agencies; the sources are summarized below beginning with federal programs upon which the state relies. Noteworthy is the fact that much of our funding supports hazard mitigation through coastal programs and projects; these programs are included in this section.

## Federal Sources of Funding

FEMA provides funding for eligible mitigation planning and projects through the following three Hazard Mitigation Assistance (HMA) programs: the Hazard Mitigation Grant Program (HMGP), the Flood Mitigation Assistance (FMA) Program, and the Pre-Disaster Mitigation (PDM) Program. HMA funds support the State of Louisiana in its implementation of mitigation activities that protect lives and property, and foster hazard resilience across the state. Activities that may be funded under HMA programs are described in FEMA's 2015 Hazard Mitigation Assistance Guidance and are summarized below in Error! Reference source not found. Error! Reference source not found.. Since the last mitigation plan update, the State of Louisiana has successfully applied for millions of dollars in HMA funds.

FEMA's Hazard Mitigation Grant Program (HMGP) provides grants to states and local governments/private non-profits (through the state) to implement long-term hazard mitigation measures following a presidential disaster declaration. The purpose of the program is to reduce the loss of life and property due to natural disasters and to enable implementation of mitigation measures during the recovery phase. Mitigation projects for which the state has received funding include drainage projects, structure elevations, floodwalls, road elevations, property acquisitions, development of mitigation plans, development of land-use regulations, safe rooms, and more.

Table 3 - Eligible Activities by FEMA program (Hazard Mitigation Assistance Guidance, February 27, 2015)

Eligible Activities	HMGP	PDM	FMA
<b>1. Mitigation Projects</b>	X	X	X
Property Acquisition and Structure Demolition	X	X	X
Property Acquisition and Structure Relocation	X	X	X
Structure Elevation	X	X	X
Mitigation Reconstruction	X	X	X
Dry Floodproofing of Historic Residential Structures	X	X	X
Dry Floodproofing of Non-residential Structures	X	X	X
Generators	X	X	
Localized Flood Risk Reduction Projects	X	X	X
Non-localized Flood Risk Reduction Projects	X	X	
Structural Retrofitting of Existing Buildings and Facilities	X	X	X
Non-structural Retrofitting of Existing Buildings and Facilities	X	X	X
Safe Room Construction	X	X	
Wind Retrofit for One- and Two-Family Residences	X	X	
Infrastructure Retrofit	X	X	X
Soil Stabilization	X	X	X
Wildfire Mitigation	X	X	
Post-Disaster Code Enforcement	X		
Advance Assistance	X		
5-Percent Initiative Projects	X		
Miscellaneous/Other (1)	X	X	X
<b>2. Hazard Mitigation Planning</b>	X	X	X
Planning Related Activities	X		
<b>3. Technical Assistance</b>			X
<b>4. Management Cost</b>	X	X	X

(1) Miscellaneous/Other indicates that any proposed action will be evaluated on its own merit against program requirements. Eligible projects will be approved provided funding is available.

The goal of FEMA's Flood Mitigation Assistance (FMA) is to reduce or eliminate claims under the NFIP. FMA provides funding to assist states and NFIP-participating communities in implementing plans, projects, and programs to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the NFIP. This includes acquisitions and elevations. In 2015, the University of New Orleans, in partnership with the State successfully applies for FMA funds to develop a CRS Strategy for the State of Louisiana (see Plan Appendix).

The state also successfully participates in FEMA's Pre-Disaster Mitigation (PDM) program, designed to reduce overall risk to people and structures from future hazard events, while also reducing reliance on Federal funding in future disasters. This program awards planning and project grants focused on reducing future losses before disasters occur. Louisiana continues to compete for PDM funds to update current mitigation plans and to fund projects such as flood and wind retrofits.

Since the last plan update, Louisiana has also completed projects funded by two additional FEMA programs – Repetitive Flood Claims (RFC) and Severe Repetitive Loss (SRL) - eliminated by the Biggert Waters Flood Insurance Reform Act of 2012. The RFC grant program provided funding to reduce or eliminate the long-term risk of flood damage to structures insured under the National Flood Insurance Program (NFIP) that have had one or more claim payment(s) for flood damages. RFC funds could only be used to mitigate structures that are located within a state or community that participates in the NFIP and cannot meet the requirements of the FMA program because they cannot provide the non-federal cost share, or do not have the capacity to manage the activities.

The SRL grant program provided funding to reduce or eliminate the long-term risk of flood damage to severe repetitive loss structures insured under NFIP. An SRL property is defined as a residential property that is covered under an NFIP flood insurance policy and:

Had at least four NFIP claim payments (including building and contents) over \$5,000 each, and the cumulative amount of such claims payments exceeds \$20,000; or Had at least two separate claims payments (building payments only) have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building.

For both (a) and (b) above, at least two of the referenced claims must have occurred within any ten-year period, and must be greater than 10 days apart.

Elements of the RFC and SRL programs have been incorporated into FMA. The following table provides a summary of the funding awarded from the five aforementioned FEMA programs received by the state of Louisiana since the last Plan update. Per Table 4, most of the funds were awarded by FMA followed by the HMGP.

**FEMA's Public Assistance (PA)** also includes a mitigation program. PA provides supplemental federal disaster grant assistance for the repair, replacement, or restoration of disaster-damaged, publicly owned facilities and the facilities of certain private, non-profit organizations. Eligible projects include debris removal, emergency protective measures, repair to transportation infrastructure, repair to utility infrastructure, and more. PA covers a share of the costs, up to 75%. The PA program contains a mitigation component wherein eligible damaged infrastructure can be mitigated if mitigation measures are deemed cost-effective and environmentally-sound. The State of Louisiana has demonstrated its ability to administer a significant amount of PA funding as referenced in Table 5.

Table 4 - FEMA Funding Per Program

YEAR	FMA	HMGP	PDM	RFC	SRL	Total
2015	\$12,163,017.76	\$61,709,536.00	\$5,978,405.61	\$200,080.00		\$80,051,039.37
2016	\$45,229,559.57	\$34,100,431.00	\$1,424,454.26		\$188,449.20	\$80,942,894.03
2017	\$47,263,874.71	\$8,523,103.00				\$55,786,977.71
2018	\$4,593,277.19	\$1,275,989.00				\$5,869,216.19
<b>Total</b>	<b>\$109,249,679.23</b>	<b>\$105,609,059.00</b>	<b>\$7,402,859.87</b>	<b>\$200,080.00</b>	<b>\$188,449.20</b>	<b>\$222,650,127.30</b>

**The Emergency Support Function #14, Long Term Recovery (ESF #14 LTCR)** provides a structure under the National Response Framework (NRF) to promote successful long-term recoveries for tribes, territories, states, and communities suffering extraordinary damages, where local capacity to implement a recovery process is limited. ESF #14 LTCR provides coordination and technical assistance to support federal, state, and local recovery processes.

Table 5 - Local Mitigation Tools

Year	PA Funds Obligated per Year Cat C-G	PA 406 Mitigation Funding
2015	\$269,674,050.91	\$745,029.90
2016	\$2,225,285,810.53	\$2,636,752.41
2017	\$335,385,107.76	\$4,267,735.94
2018	\$195,894,885.27	\$2,379,362.59
	\$3,026,239,854.47	\$10,028,880.84

The **Office of Community Development (OCD)** relies on grants awarded by the U.S. Department of Housing and Urban Development to improve quality of life for Louisiana residents. These funds support mitigation through two specific programs - the Community Development Block Grant (CDBG) Program and the Disaster Recovery Unit (DRU). CDBG funds help communities provide a suitable living environment and expand economic opportunities for their residents, particularly in low to moderate income areas. The state's program awards and administers these funds to local governments for improvements to public facilities, economic development, demonstrated needs projects and LaSTEP projects, which funds materials for local community projects while citizens provide a portion of the labor. OCD-DRU administers disaster recovery grants to help residents recover from hurricanes Katrina, Rita, Gustav, Ike and Isaac. Funds are distributed through other state agencies, local governments, businesses and nonprofit organizations to support and improve housing, infrastructure, economic development, planning and resilience. As such, OCD-DRU manages the most extensive rebuilding effort in American history and works closely with local, state and federal partners to ensure that Louisiana recovers safer, stronger and smarter than before. OCD-DRU has appropriated the following funding to Louisiana for recovery from the 2005, 2008, 2012 and 2016 storms as follows:

**\$13.4 billion for recovery from hurricanes Katrina and Rita in 2005**

**\$1.09 billion for recovery from hurricanes Gustav and Ike in 2008**

**\$66.4 million for recovery from Hurricane Isaac in 2012**

**\$92.6 million from HUD's National Disaster Resilience Competition in 2016**

**\$1.7 billion for recovery from the Great Floods of 2016**

**\$1.2 billion for mitigation recovery from a presidentially declared disaster since 2015 (Bipartisan Budget Act 2018)**

**Louisiana's Office of Rural Development (ORD)**, funded through the US Department of Agriculture, has a mission to reach all of Louisiana's rural communities with resources to help them grow and benefit the lives of their citizens. The organization serves as the single point of contact for rural government service providers, state and federal agencies, and individuals interested in rural policies and programs of the State. As such, it can play an integral role in the dissemination of mitigation actions.

## State Sources of Funding

The following entities and/or programs are implemented by the State but are funded by state and/or federal funding sources. Those programs that have a statewide reach are listed first, followed by those that focus on Louisiana's coastal area.

The **Capital Outlay Section** of DOA prepares the capital outlay bill that contains state budget General Fund expenditures for acquiring lands, buildings, equipment or other properties, or for their preservation or development or permanent improvement. Capital outlay planning and budgeting are directed toward the acquisition or renovation of fixed assets.

The **Clean Water Act (CWA)** establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating water quality standards for surface waters. The CWA makes it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit is obtained. Violations can result in both civil and criminal prosecutions and penalties. In 2016-2017, LDEQ reported fines totaling \$507,000 related to violations of the CWA.

The **Louisiana Department of Environmental Quality (DEQ)** administers the Clean Water State Revolving Fund (CWSRF) Program. This program provides financial assistance in the form of low interest loans to finance eligible projects, bringing them into compliance with the requirements of the Clean Water Act. Funding for this program is provided by federal grants and match funds generated by the program's interest and loan repayments. Interest and loan repayments provide a permanent source for funding in future Louisiana projects.

As mentioned, the Department of Transportation and Development (DOTD) houses Louisiana's Floodplain Management Office, which is a statewide resource for floodplain management activities to include the NFIP. This office promotes local government compliance with NFIP regulations to ensure the availability of low-cost flood insurance and to minimize loss of life and property due to catastrophic flooding. This is accomplished through on-site assessments, distribution of a quarterly newsletter, conducting workshops, providing technical assistance on local government ordinance development, and participation in post-disaster flood hazard mitigation activities. The program is jointly funded by FEMA and the state based on a 75:25 cost share.

DOTD's statewide Flood Control Program provides an average of \$10 million annually to parish and municipal governments, levee boards, and drainage districts to support projects that (1) reduce existing flood damages, (2) discourage additional development in flood-prone areas, (3) do not increase upstream or downstream flooding, and (4) have a total construction cost of \$100,000 or more. Eligible projects include channel enlargement, levees, pump stations, relocation of dwellings and business structures, reservoirs, and other flood damage reduction measures. The budget for FY 2018-2019 was \$9.9 million.

The **Natural Resources Damage Assessment (NRDA)** is the legal process used by the Louisiana Oil Spill Coordinator's Office (LOSCO) to seek compensation for damages to waterways, vegetation, or wildlife by oil spills. No new spills are listed by LOSCO since the Deepwater Horizon spill in 2010.

**Supplemental Environmental Projects (SEPs)** are tools used by the EPA and DOJ in civil settlements in environmental enforcement actions. The EPA describes SEPs as environmentally beneficial projects that a violator agrees to undertake when settling an enforcement action. The purpose of a SEP is to provide environmental or public health benefits beyond those required to remediate environmental damages.

The **Water Resources Development Act (WRDA)** refers to any of a set of public laws enacted by Congress to address various aspects of water resources including environmental, structural, navigation, flood protection, and hydrologic issues. The state is partnered with the USACE on multiple large-scale protection and restoration projects that have been authorized through past WRDA bills. Because WRDA projects are generally dependent upon Congressional appropriation for construction funding, federal fund procurement is the principal issue that affects project implementation. Other issues affecting WRDA projects include cost-share agreement issues with federal partners, land rights issues, and permitting issues.

**Berm to Barrier** is one of many coastal programs that support CPRA projects. As a result of the Deepwater Horizon oil in 2010, a significant amount of sand was pumped along Louisiana's barrier island chain to create berms to block oil threatening our marshes. CPRA continues to utilize that foundation of sand to build more substantial and sustainable barrier islands that can serve as our first line of defense against storm surge and ecosystem degradation.

The **Coastal Protection and Restoration (CPR) Trust Fund** was established in 1989 by the Louisiana Legislature to provide a dedicated source of funding for coastal restoration. Income for the fund is a dedication of a percentage of the state's mineral income and severance taxes from oil and gas production on state lands. This

trust fund pays for the coastal program's ongoing operating expenses and for continuing state efforts in coastal restoration and protection, including activities such as the CPRA/NRCS/Soil and Water Conservation Committee Vegetation Planting Program, upfront costs for projects funded through federal grant programs (e.g., CIAP, NFWF, and RESTORE), and state cost-share through programs like CWPPRA or LCA. DWH settlement payments dispersed to the state are also deposited in a trust fund that pays for NRDA project implementation and OM&M as well as NRDA-funded adaptive management efforts. CPRA is charged with developing an annual plan for these expenditures, managing, and administering the funds, and implementing coastal restoration and protection activities.

**The Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA)** was authorized by Congress in 1990 to identify, prepare, and fund the construction of coastal wetlands restoration projects. CWPPRA is managed by a Task Force comprised of the State and five Federal agencies, including the EPA, the U.S. Fish and Wildlife Service (USFWS), the Natural Resources Conservation Service (NRCS), the National Marine Fisheries Service (NMFS), and the USACE. The CWPPRA Task Force evaluates projects proposed for inclusion in the CWPPRA program and prepares a ranked list of candidate projects based on cost-effectiveness, longevity, risk, supporting partnerships, public support, and support of CWPPRA goals. From this ranked list, the Task Force annually selects a final list of projects, the Priority Project List, for implementation.

The **Coastal Impact Assistance Program (CIAP)** was authorized in 2005 as part of the Federal Energy Policy Act to help six coastal states (Louisiana, Texas, Mississippi, Alabama, Alaska, and California) mitigate the onshore effects of Outer Continental Shelf (OCS) oil and gas development. CIAP provided approximately \$495.7 million to Louisiana from the federal administrator (the USFWS). The state of Louisiana received 65% of these funds with the remaining 35% being distributed to the 19 coastal parishes. The program was completed in December 2016 with the State expending 99.7% of the authorized funds on 39 projects. The 19 coastal parishes expended 96% of the authorized funds on 95 projects. Authorized uses of CIAP funds included

projects and activities to conserve, protect or restore coastal areas, including wetlands; mitigation of damage to fish, wildlife or natural resources; planning assistance and the administrative costs of CIAP compliance; implementation of a federally approved marine, coastal or comprehensive conservation management plan; and onshore infrastructure projects and public service needs. Up to 23% of those funds can be spent on CIAP planning assistance and compliance and for onshore infrastructure projects and public service needs to mitigate OCS impacts.

The **CPRA/NRCS/Soil and Water Conservation Committee Vegetation Planting Program** ensures that native marsh vegetation is planted and monitored throughout the coastal zone of Louisiana. CPRA enters into annual cooperative agreements with the Louisiana Department of Agriculture and Forestry (DAF). It is through the DAF and the Soil and Water Conservation Committee, Soil and Water Conservation Districts (SWCD) that the planting tasks are selected, planned, evaluated, planted, and monitored. Each NRCS District Conservationist provides technical assistance to their respective SWCD throughout the planting task process.

The **Gulf of Mexico Energy Security Act (GOMESA)**, signed into law in 2006, provides four Gulf States, including Louisiana, with a share of revenues generated by oil and gas leasing in specific offshore areas of the Gulf of Mexico. GOMESA funds provide Louisiana with a consistent source of funding to address land loss. Louisiana voters constitutionally dedicated GOMESA funds to coastal protection through the Coastal Protection and Restoration Trust Fund. The state was projected to received \$82 million in GOMESA funds in 2018; \$65.6 million to be administered by CPRA and \$16.4 million to be distributed to 20 coastal parishes.

Following Hurricane Katrina, the U.S. Army Corps of Engineers constructed the \$14.5 billion **Hurricane and Storm Damage Risk Reduction System (HSDRRS)**. It is one of the most technically advanced coastal flood protection systems in the world. The HSDRRS includes a system of barriers, sector gates, floodwalls, floodgates and levees that provide a veritable “wall” around the New Orleans Metropolitan area. The System significantly reduces the risk of flooding for over 1 million residents from a 100- year storm. The system was authorized by Public Law 109 - 234 - Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 and requires non-federal cost share to pay for operation and maintenance. The state along with the local flood authorities serve as the non-federal sponsors.

As reported in the 2014 Plan, the **Deepwater Horizon oil spill of 2010** resulted in significant funding for Gulf Coast states including Louisiana. Under terms set by the US Department of Justice, BP and Transocean agreed to pay \$2.394 billion and \$150 million respectively. These payments were directed to the National Fish and Wildlife Foundation (NFWF) for natural resources restoration in the Gulf of Mexico. Approximately \$1.2 billion of the funds directed to NFWF is dedicated to targeting Louisiana impacts by using the funds to “create or restore barrier islands off the coast of Louisiana and/or to implement river diversion projects on the Mississippi and/or Atchafalaya Rivers for the purpose of creating, preserving and restoring coastal habitat.” The agreement states that NFWF must consider the Coastal Master Plan and the Mississippi River Hydrodynamic and Delta Management Study “to identify the highest priority projects, and to maximize the environmental benefits of such projects.” Final payments were made in January 2018 but work continues to restore coastal areas damaged by the oil spill.

The **Resources and Ecosystems Sustainability, Tourist Opportunities and Revived Economies of the Gulf Coast States Act of 2012 (the RESTORE Act)** dedicates 80% of the administrative and civil penalties paid under the Federal Water Pollution Control Act related to the Deepwater Horizon oil spill to the Trust Fund for the

restoration and protection of the Gulf Coast region. The RESTORE Act also outlines a structure by which the funds can be utilized to restore and protect the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, coastal wetlands, and economy of the Gulf Coast region.

The RESTORE Act sets forth the following framework for allocation of the Trust Fund:

35% to be divided equally between the five Gulf States (to include Louisiana) for ecological and economic restoration efforts in the region

30% through the Gulf Coast Ecosystem Restoration Council to implement a comprehensive plan for ecosystem and economic recovery of the Gulf Coast

30% for states’ plans based on impacts from the Deepwater Horizon oil spill

2.5% to create the Gulf Coast Ecosystem Restoration Science, Observation, Monitoring and Technology Program within the Department of Commerce’s National Oceanic and Atmospheric Administration (NOAA)

2.5% to the Centers of Excellence Research grants, which will each focus on science, technology, and monitoring related to Gulf restoration.

In 2017, the Gulf Coast Ecosystem Restoration Council and the U.S. Department of Treasury accepted the CPRA’s First Amended Multiyear Implementation and State Expenditure Plan (RESTORE Plan). This plan describes how the state intends to spend its total allocation of \$811.9 million over 15 years from both the Spill Impact Component and the Direct Component of the Gulf Coast Restoration Trust Fund (RESTORE Trust Fund).



Since the last update, **DNR's Coastal Wetland Reserve Program** no longer exists – funds were provided by a federal grant that is no longer available.

## Other Resources

Fortunately, numerous stakeholders support and collaborate with the state to plan for and implement mitigation activities. These stakeholders enhance the hazard mitigation capabilities of the state. While many are listed in this section, others are highlighted in Chapter 5–Mitigation in Action.

**APA Louisiana**, a chapter of the American Planning Association (APA), promotes the practice of community and regional planning in Louisiana by enhancing the effectiveness of planners in impacting public policy. Its' mission is carried out through community service and members services such as newsletters and professional development opportunities such as workshops and an annual state conference. Workshop and conference topics that support statewide mitigation efforts at the state and local levels include managing stormwater, coastal inundation mapping, green infrastructure, resilience and sustainability planning.

The **Capital Region Planning Commission (CRPC)** is a Council of Governments serving eleven Louisiana parishes: Ascension, East Baton Rouge, East Feliciana, Iberville, Livingston, Pointe Coupee, St. Helena, Tangipahoa, Washington, West Baton Rouge, and West Feliciana. Through planning and communication, CRPC coordinates and collaboratively addresses regional issues related to transportation, land use, economic development, and the environment. CRPS is currently working with FEMA to produce a series of webinars/ seminars focused on flood risk and resiliency. Seemingly, there is a room for more coordination and collaboration between the state and regional planning entities, such as CRPC, as they provide training for planning commissioners and planning materials parishes. These trainings and materials could include more information provided by state agencies, such as GOHSEP, on mitigation.

The **Coastal Land Use Toolkit**, a document made for public use by the non-profit CPEX, has been used in numerous Louisiana communities to guide development code amendments. The Toolkit explains the national and local best management practices (BMPs) in coastal development for Louisiana on a range of scales. It also has recommendations based on geological land types. Strategies in the Toolkit include the following: natural resource protection; wetland restoration; streetscape/ parking lot design, maintaining networks of infrastructure, and designing infrastructure in a resilient way while preserving local character. Specific zoning suggestions include the following: elevation standards, impervious land cover limitations, on-site design of elements to deal with stormwater management, and erosion control standards

**Community Rating System Users Groups (CRS Users Groups)** are informal organizations that support community representatives interested in the CRS. Four CRS Users groups currently exist in Louisiana including CRAFT, FLOAT, JUMP, and SWIFT. The Capital Region Area Floodplain Taskforce (CRAFT) includes the following communities: Ascension Parish, East Baton Rouge, West Baton Rouge Parish, City of Central, City of Denham Springs, City of Gonzales, City of Walker, and the City of Zachary. The Flood Loss Outreach & Awareness Task force (FLOAT) is made up of communities in the Greater New Orleans area including Lafourche Parish, Orleans Parish, St. Charles Parish, St. John the Baptist Parish, St. Tammany Parish, Tangipahoa Parish, Terrebonne Parish, City of Covington, City of Mandeville, and City of Slidell. The Jefferson United Mitigation Professionals (JUMP) is a Jefferson Parish based group, comprised of Unincorporated Jefferson Parish, the Cities of Gretna, Harahan, Kenner, Westwego, and the Town of Jean Lafitte. SWIFT is composed of communities in Southwest Louisiana; it is inactive as of Spring 2018.

The **Louisiana Business Emergency Operations Center (LABEOC)** is a partnership between LED, GOHSEP, and the National Incident Management Systems & Advanced Technologies (NIMSAT) Institute at the University of Louisiana at Lafayette. LABEOC focuses on providing situational awareness and resource support, supporting community recovery, mitigation, and economic stabilization within the business community.

The **Louisiana Floodplain Management Association (LFMA)** serves as a forum for parish and municipal employees, state and federal officials, and the private sector to meet and share experiences, ideas, and solutions to common flooding problems. LFMA supports comprehensive floodplain management, advocates for coordination among all levels of government and existing programs and provides and promotes training and assistance to local governance. LFMA's activities include an annual state conference, semi-annual workshops, a newsletter known as "Floodwatch", and active website.

**Louisiana Sea Grant**, part of the National Oceanic and Atmospheric Administration's (NOAA) National Sea Grant Program, works to promote stewardship of the state's coastal resources through a combination of research, education and outreach. Louisiana Sea Grant's strategic initiatives address four issues identified as especially pertinent to state, regional, and national needs: healthy coastal ecosystems, sustainable fisheries and aquaculture, resilient communities and economies, and environmental literacy and workforce development. Through educational programs and practical assistance, Sea Grant Extension agents serve Louisiana's coastal population – about 70 percent of the state's residents and connect residents to research in various areas such as coastal and wetland management. Sea Grant publications such as the Louisiana Homeowners Handbook to Prepare for Natural Hazards, helps citizens prepare for natural hazards so that risks to family and property may be reduced.

**SBP**, formerly known as the St. Bernard Project, is a national organization headquartered in New Orleans, LA. In addition to its recovery work, SBP provides free resilience training for households and businesses in communities facing disaster risks, equipping participants with information and tools to proactively identify and mitigate risks to life safety, property, and finances.

The **Stephenson Disaster Management Institute (SDMI) at Louisiana State University** conducts applied research with a focus on crisis and disaster management. Following the 2016 flooding, SDMI supported GOHSEP through its Disaster Lab. Specifically, SDMI provided statistical analyses highlighting the potential impacts of reported flooding for more than 20

parishes to help GOHSEP better understand the extent of the flooding. Additionally, SDMI, in partnership with Louisiana Sea Grant, is working to integrate SDMI's Storm Surge Consequence Model into LSU's CERA website which provides emergency managers with accurate extends and depths of storm surge. Since the last mitigation plan update, GOHSEP contracted SDMI to support Mitigation Plan updates for 56 parishes throughout Louisiana.

The mission of the **Louisiana State University Agricultural Center (LSU AgCenter)** is to provide the people of Louisiana with research-based educational information. The LSU AgCenter includes the Louisiana Agricultural Experiment Station, which conducts agricultural-based research, and the Louisiana Cooperative Extension Service, which extends knowledge derived from research to Louisiana residents. The LSU AgCenter plays an integral role in supporting agricultural industries, enhancing the environment, and improving the quality of life through its 4-H youth, family and consumer sciences, and community development programs. The Louisiana Cooperative Extension Service offers online and in-person classes, seminars, workshops, field days, publications and news releases to residents throughout Louisiana. Education efforts focus on various areas, with sustainable housing and coastal restoration as those that most support mitigation activities. The LSU AgCenter's Louisiana Home and Landscape Resource Center, also known as LaHouse, provides a model for how to build sustainable housing in the Deep South. The AgCenter also developed GIS Web Applications such as a wind speed map and elevation map and flood insurance rate maps, all of which are widely used by local and state officials as well as residents, and are accompanied by related floodplain management education. LSU AgCenter's Forestry Management Extension and Research Program conducts research and workshops focused on selection of species and genotypes resilient to drought, ice, and hurricanes. Additionally, LSU AgCenter developed the Resilient Communities and Economies Initiative Economic; administers a Master Farmer Program; and developed a youth program in hazard mitigation. LSU AgCenter staff also participate in local CRS committees and collaborates with LDAF in pre-disaster exercises.

In post-disaster times, LSU AgCenter provides general information and support regarding post-disaster recovery and related mitigation activities generated at the state level, using printed publications, web and social media; distributes recovery info by social media and to local government; state and local personnel participate in high- water mark studies; participates in Ag Crop and Animal commodity losses and damage assessments; provides food safety information; and provides livestock recovery information and activities in coordination with LDAF.

The **University of New Orleans' Center for Hazards Assessment, Response & Technology (UNO-CHART)** is an applied social science hazards research center that collaborates with and supports Louisiana communities in efforts to achieve disaster resilience with a focus on mitigation. UNO-CHART's applied research efforts address repetitive flooding, disaster mitigation planning, community resilience, coastal restoration, community continuity, risk literacy, risk management, adaptation planning and hurricane evacuation of vulnerable populations. UNO-CHART is currently the leading expert in conducting repetitive flood loss area analyses and facilitates two CRS Users groups.

The **Water Institute of the Gulf** is a not-for-profit, independent applied research and technical services institution with a mission to help coastal and deltaic communities thoughtfully prepare for an uncertain future. The Institute's focus areas include integrated watershed management; resilience lab; dynamics of rivers, deltas and coasts; ecosystem based management; and human and natural systems modeling. The Water Institute plays various roles in regional and statewide risk reduction including contributions to the Louisiana Coastal Master Plan; functions as a FEMA Cooperating Technical Partner; conducts real-time flood forecasting, flood modeling, critical facility identification, and nature-based defense planning and design. Technical data provided to the state in support of mitigation activities include 1-D, 2-D, and 3-D models, stakeholder participatory mapping, and real-time flood forecasting.

## Coordination of Local Planning

As stated in Chapter 1, the State Hazard Mitigation Planning Committee set out 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." As a first step, the project team conducted a review of the hazards covered in parish mitigation plans to ensure those were also covered in the State's plan. Coordination efforts between the State and local parishes were then examined to include technical assistance provided by the State. The team also reviewed local mitigation capacity as well as successful mitigation projects implemented at the local level (see Chapter 5). Throughout the planning process, local risk information and local capacity were considered to the extent possible in developing the state mitigation strategy (see Chapter 4).

The State of Louisiana continues to provide support to local and tribal governments with mitigation planning efforts. This support includes training, technical assistance, sharing of data, and funding. As of the writing of this Plan Update, 53 (83%) of Louisiana's 64 parishes have approved mitigation plans. The remaining parishes include seven plans that are approved and await adoption, two plans that are under FEMA review and two plans that are have been through GOHSEP's technical review process. Two tribal plans exist in St. Mary and LaSalle Parishes.

## HM Kick-off meetings

Immediately following the last plan update, GOHSEP held Hazard Mitigation Planning Workshops in New Orleans, Lafayette, Alexandria and West Monroe. These workshops were held for the benefit of local officials working on plan updates. Content included a review of the phases of hazard mitigation plans from process to risk assessment, mitigation strategy, plan review and adoption, project funding, community mitigation tools, hazard maps and critical facilities – speakers included GOHSEP, SDMI, UNO-CHART, LSU AgCenter.

Similar workshops have not continued as a majority of the current plans were developed in collaboration with

local jurisdictions, the State, and SDMI at LSU. The State contracted SDMI with FEMA funds to support local mitigation planning. As stated in the last update, this framework provided a degree of uniformity across jurisdictions and resulted in a majority of the plans using similar but appropriate data sources and data processing steps. The State may again utilize a contractor to facilitated plan updates in the future.

GOHSEP also assisted jurisdictions that chose to lead mitigation plan updates without the support of SDMI in efforts to apply for PDM grant funds to support planning processes. GOHSEP is committed to continue its support of local and regional hazard mitigation planning and project efforts.

## Local Capacity

An analysis of local mitigation capabilities reveal various existing authorities, polices and resources that reduce hazard impacts or could be used to implement hazard mitigation activities. The following table reveals a summary of the types of tools upon which Louisiana parishes rely to implement local mitigation programs.

Despite the local mitigation tools referenced in Table 6, the capacity to implement mitigation varies across Louisiana parishes and tribes. Many local entities face challenges in their attempts to implement mitigation policies and programs as they often do not have the necessary resources to implement certain mitigation activities. For

Table 6 - Local Mitigation Tools

LOCAL PLANAS
Comprehensive / Master Plan
Economic Development Plan
Local Emergency Operations Plan
Continuity of Operations Plan
Transportation Plan
Stormwater Management Plan
Community Wildfire Protection Plan
Other plans (redevelopment, recovery, coastal zone management)
LOCAL ORDINANCES
Zoning Ordinance
Subdivision Ordinance
Floodplain Ordinance
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)
OTHER
Flood insurance Rate Maps
Acquisition of land for open space and public recreation uses
Other (green infrastructure, stormwater fees, etc.)

instance, many parishes lack the time and/or expertise to carry out mitigation policies and programs. Many local municipalities have one staff member or perhaps a part-time staffer focused on mitigation policies and programs. Some do not have staff with the required expertise to include GIS, floodplain management, planning, etc., which makes it difficult to apply for funding and/or carryout mitigation tasks.

Federally recognized tribes in Louisiana include the following: Chitimacha Tribe of Louisiana, Coushatta Tribe of Louisiana, Jena Band of Choctaw Indians, and Tunica-Biloxi Indian Tribe of Louisiana. The State of Louisiana also recognizes the following tribes: Addai Caddo Tribe; Biloxi-Chitimacha Confederation of Muskogee; Choctaw-Apache Community of Ebarb; Clifton Choctaw; Four Winds Tribe Louisiana Cherokee Confederacy; Grand Caillou/Dulac Band; Isle de Jean Charles Band; Louisiana Choctaw Tribe; Pointe-Au-Chien Indian Tribe; and the United Houma Nation. The state does reach out to support tribal communities; however, only two tribal mitigation plans exist in Louisiana, one in St. Mary Parish and the other in LaSalle Parish. A major challenge here is the fact that only federally recognized tribes can act as state applicants; this right has not been exercised in Louisiana. Another challenge lies in the fact that the tribes that are not federally recognized must coordinate with the parishes in which they are located. The lack of resources and politics often make coordination difficult.

These challenges at the local and tribal level suggest additional support is needed from the State. Suggestions for this support include education and outreach related to funding opportunities, planning workshops, and reminders and site visits to local and tribal jurisdictions prior to plan expiration dates. Additional education and outreach efforts should concentrate on Louisiana tribes – both federally recognized and state recognized. These efforts should be coordinated with Louisiana’s Director of Indian Affairs, as well as the tribal leaders, to be successful. The timeframe for this review process is approximately six months. The six month timeframe does not include the time spent by parishes or municipalities to revise the plans in response to GOHSEP and FEMA comments. The timeframe is also based on the following assumptions:

Step 1 requires approximately 45 days for State review

Step 2 requires an additional 45 days for FEMA review

After resubmitting the plan for final review, the state- and FEMA are each given an additional 45-day review period

## Prioritizing Parish and Municipal Assistance

It is stated in CFR Section 2014(c)(4)(iii) that the State Hazard Mitigation Plan must include “[c]riteria for prioritizing communities and local jurisdictions that would receive planning and project grants under available funding programs, which should include consideration for communities with the highest risks, repetitive loss properties, and most intense development pressures. Further, that for non-planning grants, a principal criterion for prioritizing grants shall be the extent to which benefits are maximized according to a cost benefit review of proposed projects and their associated costs.”

The sub-sections below discuss these criteria in addition to “community commitment to mitigation”. Following are the details of how the state intends to prioritize applications for funding future planning efforts. In all cases, applicants must demonstrate that their risk is sufficient to merit grant funds, particularly when compared to the project cost, but there is often considerable uncertainty in risk determinations. Hence, the state considers a variety of factors in addition to risk and benefit-cost analysis in determining its priorities for mitigation grants.

The SHMPC had multiple discussions concerning how to prioritize funding selected mitigation projects. The committee underlined communities at highest risk as the most important priority, followed by communities with repetitive loss properties, communities undergoing development, and finally, community commitment to mitigation.

## Communities at Highest Risk

One of the primary purposes of this update is to identify the areas in Louisiana with the highest risk

Local Plan Review Process	
GOHSEP continues to use the following step-by-step local plan review process:	
STEP 1	The initial draft of a parish or municipal plan is sent to GOHSEP for review. GOHSEP staff develop and provide parish or municipal officials with comprehensive guidance for improving the format and content of the plan.
STEP 2	Parish or municipal officials revise the plan in accordance with GOHSEP guidance, and re-submit the plan for GOHSEP review. With satisfactory revisions, GOHSEP forwards the plan, with comments, to FEMA Region VI.
STEP 3	FEMA Region VI reviews the plan and forwards comments to GOHSEP. GOHSEP relays these new comments back to the parish or municipality. GOHSEP continues to interface with parish or municipal officials to discuss and clarify all review comments on a point-by-point basis.
STEP 4	The parish or municipality addresses both GOHSEP and FEMA Region VI comments, and revises the plan.
STEP 5	The parish or municipality submits a revised draft to GOHSEP for review. GOHSEP staff evaluate the revisions and forward the updated plan to FEMA Region VI.
STEP 6	FEMA Region VI reviews the revised plan, and if it addresses all comments, FEMA mails a letter stating that the plan is “approvable pending adoption” to GOHSEP and the parish or municipality. In cases where the comments were not addressed, the parish or municipality again repeats the process.
STEP 7	All participating jurisdictions then formally adopt the plan through a Resolution.
STEP 8	The Regional Director of FEMA Region VI officially approves the plan.

from natural hazards. The parishes in Louisiana have different levels of exposure and risk. In general, the state will direct mitigation grant funds to the areas with the highest risk. However, in many cases, more localized risk assessments (possibly produced in the parish and municipal mitigation planning process), as well as risk assessments and benefit-cost analyses done in support of applications, may indicate areas with high risk outside the highest-risk parishes identified in this update. The most worthwhile mitigation projects are a product of both the risk in a particular place, and the effectiveness of a project. Although risk is clearly a good initial indicator of

mitigation potential, the state will also carefully consider the effectiveness and cost of mitigation projects in determining funding priorities.

### Communities with Repetitive Loss Properties

The State presently considers the repetitive loss status of properties in determining the grants it will support (i.e., forward to FEMA for consideration and funding), and will continue to do so as additional grant funds are available. The FMA program mandates that grant funds

are directed to NFIP repetitive loss properties, and the state will continue to comply with this requirement. The Flood Insurance Reform Act of 2004, which was signed into law by the President on June 30, 2004, requires the NFIP to provide a disincentive to property owners to live in repetitively flooded areas. Rather than continue to rebuild, the program provides repeatedly flooded homeowners assistance in either elevating or moving their homes away from floodwaters.

In addition, the Biggert-Waters Flood Insurance Reform Act of 2012 called for 25% annual increases for Severe Repetitive Loss Properties insured with subsidized rates until their premium rates are full risk premiums. The Homeowner Flood Insurance Affordability Act of 2014 later confirmed this increase.

### Communities Undergoing Development

The state will also include development as a review criterion. Parish and municipal plans should provide some indication of the implications of future development, per DMA 2000 requirements for local plans. Although development is clearly a potential factor in any risk determination, development that occurs in accordance with adequate building codes, land use planning and floodplain management principles should in many cases be less risky than development that pre-dates these codes and principles. However, the state is aware that increased development does cause related increases in population, infrastructure, etc., and may in some cases have adverse impacts on existing areas. These factors will be carefully considered in GOHSEP reviews.

### Community Commitment to Mitigation

Additionally, the state will consider parish and municipality commitment to mitigation when prioritizing projects. The commitment to mitigation should be clear in the plans submitted by the parish and municipality in addition to participation in the Community Rating System (CRS). By demonstrating their commitment to mitigation, the parishes and municipalities will show the need for various projects. The state will consider this commitment as the final review criterion.

### Maximizing Benefits According to Benefit-Cost Review of Local Projects

Regulations for FEMA's HMA grant program state that proposed mitigation projects must be cost effective.

Under some pre-established conditions, certain projects may be exempt from this regulation. However, in most cases, projects include a benefit-cost analysis, either prior to submission to GOHSEP and FEMA for funding consideration, or during the grant evaluation process.

In most cases, grant applications either include a benefit-cost analysis, or GOHSEP or FEMA performs one in accordance with FEMA and the Louisiana Office of Management and Budgets regulations. Projects that do not achieve the required 1.0 benefit-cost ratio, and are not exempted from benefit-cost analysis, are rejected from funding consideration. This is the case for all FEMA HMA grants.

Prioritization of Parishes to Receive HMGP Funding  
GOHSEP shall submit recommendations to the Governor or his/her Designee for the use of available HMGP funds. These recommendations will include:

- Priority for use of funds, if any
- Allocation of funds to parishes based on their prorated share of damages as determined by the final damage assessment figures
- Allocations of available funds to State and Regional Agencies
- Use of all available initiative funds
- Other priority related issues as a result of the disaster

Funds will only be made available to those eligible applicants that have or are covered by a FEMA approved state or local mitigation plan. The parishes will submit eligible project applications to GOHSEP in prioritized order, up to the amount of their allocation. Parishes are encouraged to submit more projects than their allocation in case several projects are deemed ineligible.

### Conclusion

The State of Louisiana has great capacity to develop and implement mitigation projects that reduce the impact of hazards throughout the state. Louisiana has various plans, policies, and programs that are necessary to implement a successful mitigation program. In addition to the state's own resources, there are many stakeholders mentioned in this Chapter and in Chapter 5 that enhance the state's capacity to implement the mitigation strategy proposed in this plan update.

YEAR	AWARDS
<b>2018 Non-Disaster Grant Funding:</b> Flood Mitigation Assistance (FMA) \$43,926,442	Pre Disaster Mitigation (PDM) \$ 952,478
<b>2017 Incidents:</b> Louisiana Tropical Storm Harvey (DR-4345) Incident period: August 28, 2017 to September 10, 2017 Major Disaster Declaration declared on October 16, 2017	HMGP Award: \$ 1,139,906
Louisiana Severe Storms, Tornadoes, and Straight-line Winds (DR-4300) Incident period: February 07, 2017 Major Disaster Declaration declared on February 11, 2017	HMGP Award: \$ 561,551
<b>2017 Non-Disaster Grant Funding:</b> Flood Mitigation Assistance (FMA) \$53,213,734	Pre Disaster Mitigation (PDM) \$ 522,562
<b>2016 Incidents:</b> Louisiana Severe Storms and Flooding (DR-4277) Incident period: August 11, 2016 to August 31, 2016 Major Disaster Declaration declared on August 14, 2016	HMGP Award: \$ 261,971,744
<b>2016 Non-Disaster Grant Funding:</b> Flood Mitigation Assistance (FMA) \$44,721,674	Pre Disaster Mitigation (PDM) \$ 412,499
<b>2015 Incidents:</b> Louisiana Severe Storms and Flooding (DR-4228) Incident period: May 18, 2015 to June 20, 2015 Major Disaster Declaration declared on July 13, 2015	HMGP Award: \$ 1,216,154
<b>2015 Non-Disaster Grant Funding:</b> Flood Mitigation Assistance (FMA) \$11,246,286	Pre Disaster Mitigation (PDM) \$ 5,978,405

This Capability Assessment not only summarizes the resources available to support mitigation, it identifies changes since the last plan update as well as opportunities for the state to improve its current capacity to reduce risk. As FEMA recognizes the connections between community resilience and areas such as the economy, housing, health and social services, infrastructure, and natural and cultural resources, these areas are addressed to the extent possible.

Since the last Plan update, in collaboration with local municipalities and other non-governmental stakeholders, the State has successfully managed a mitigation program through five federally declared disasters. The following are the five Major Declared Disasters since 2014, and the HMGP award funding for each disaster in addition to non-disaster grant funding obligated since 2015.



Simultaneously, Louisiana's mitigation capacity allowed GOHSEP, with local support, to continue to address repetitive loss properties through funding of numerous mitigation projects. Table 7 demonstrates that although the number of repetitive loss properties has increased since the last Plan update, the percentage of mitigated properties remains steady at about 25%. Table 8 provides a summary of mitigation measures utilized to address repetitive loss properties throughout the state. Of course, with such high numbers of repetitive loss, these properties should remain a priority for mitigation funding. See Appendix E for the state's Repetitive Loss Strategy.

Table 7 - Repetitive Loss Numbers for Louisiana as of July 31, 2018

End of Year	Non-Mitigated RL's	Mitigated RL's	Total RL's	% Mitigated
2015	24,091	7,795	31,886	24%
2016	25,515	8,119	33,634	24%
2017	25,825	8,219	34,044	24%
2018*	25,633	8,486	34,119	25%

Table 8 - Mitigation of Repetitive Loss Properties

Mitigation Measure	Number of RL Properties
Elevations	69
Elevations - Riverine	45
Acquisitions	0
Multi-Types	10
Reconstructions	16
Demo	10

As many of Louisiana's mitigation programs focus on the coastal area, CPRA is integral to the state's mitigation strategy. CPRA projects are funded by numerous sources, federal and/or state, to include Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA), Water Resources Development Act (WRDA), Capital Outlay, CDBG, Natural Resource Damage Assessment (NDRA) Restoration, BP and Transocean Settlements, Restore Act funding, and the Gulf of Mexico Energy Security Act (GOMESA). Table 9 lists current projects, funding sources, and demonstrates the capacity of the state through CPRA to administer several projects that will play an integral role in hazard reduction across Louisiana's coastal zone.

Table 9 - CPRA Projects and Funding Sources

Project Name	CPRA Program	First Year of Implementation	Total Budget Appropriated to Date (State Dollars)	Total Expended to Date (State Dollars)
Mid-Barataria Sediment Diversion (NFWF)	NFWF	2014	44,733,557.59	22,109,346.89
Grand Isle-Fifi Island Breakwaters	State	2014	6,054,694.00	5,919,221.38
Kraemer Bayou Boeuf Levee Lift	State	2014	1,020,151.00	967,139.20
Breach Management Plan	State	2014	433,749.00	154,698.08

Caminada Headlands Back Barrier Marsh Creation	CWPPRA	2014	3,304,628.00	2,593,619.58
Bayou Grande Cheniere Marsh & Ridge Restoration	CWPPRA	2014	2,646,668.00	706,890.18
South Grand Chenier Marsh Creation - Baker Tract	CWPPRA	2014	514,349.00	19,039.45
East LaBranche Shoreline Protection	CIAP	2014	2,015,001.00	2,004,754.48
SELA	HSDRRS	2014	315,377.00	306,917.40
Central Wetlands Demonstration Expansion	HSDRRS	2014	4,503,836.00	4,215,146.11
St. Tammany Coastal Reconnaissance Study	State	2014	2,035,195.00	41,574.65
Houma Navigation Canal Lock Complex	RESTORE	2014	18,415,023.00	17,612,654.47
St. Mary Backwater Flooding	State	2014	5,062,525.00	276,167.91
Island Road Marsh Creation & Nourishment	CWPPRA	2014	2,617,827.00	1,516,234.83
Bayou Tigre Flood Control Project	State	2014	6,327,968.00	746,274.49
No Name Bayou Marsh Creation	CWPPRA	2015	2,274,059.00	1,162,010.44
New Orleans Landbridge Shoreline Stabilization and Marsh Creation	CWPPRA	2015	1,636,775.00	954,225.57
Violet Canal North Levee Alignment	State	2015	1,161,336.00	937,844.37
Larose to Golden Meadow - Larose Sheetpile	State	2015	27,815,279.00	22,361,243.34
West Fourchon Marsh Creation	CWPPRA	2015	2,789,006.00	1,330,678.16
Bayou Tigre Flood Control Complex	State	2015	6,397,287.00	192,703.31
Surplus Freshwater Bayou Bank Stabilization	State	2015	1,320,998.00	1,290,378.64
Spanish Pass Ridge and Marsh Restoration	WRDA	2016	3,296,727.00	3,290,017.98
Barataria Large-Scale Component E-Planning	State	2016	7,570,394.00	263,798.03
Caminada Headlands Back Barrier Marsh Creation Increment 2	CWPPRA	2016	2,682,148.00	767,709.54
East Leeville Marsh Creation and Nourishment	CWPPRA	2016	2,456,518.00	819,146.55
Barataria Bay Rim Marsh Creation and Nourishment	CWPPRA	2016	559,325.00	458,229.63
West Grand Terre Beach Nourishment and Stabilization	RESTORE	2016	6,228,672.00	1,477,462.87
Calcasieu Ship Channel Salinity Control Measures	RESTORE	2016	29,237,020.00	7,221,585.78
Oyster Lake Marsh Creation and Nourishment	CWPPRA	2016	2,248,882.00	408,855.21

Sediment Diversion Implementation and Program Management	NFWF	2016	6,600,890.00	4,399,080.72
Golden Triangle Marsh Creation	RESTORE	2016	2,503,636.00	1,555,370.71
Fritchie Marsh Creation and Terracing	CWPPRA	2016	344,677.00	181,320.00
Biloxi Marsh Living Shoreline Project	RESTORE	2016	2,614,706.00	1,051,925.13
Queen Bess Island Restoration	NRDA	2017	2,113,400.00	687,598.65
Barataria Basin Ridge and Marsh Creation - Spanish Pass Increment	NRDA	2017	4,059,573.00	860,863.65
Mid Breton Sediment Diversion	CWPPRA	2017	5,371,862.52	1,024,121.73
Rabbit Island Restoration Project	NRDA	2017	2,157,027.00	812,589.15
Shoreline Protection, Preservation, and Restoration (SPPR) Panel	CWPPRA	2017	586,378.00	192,036.12
Salvinia Weevil Propagation Facility	CWPPRA	2017	565,099.00	282,155.86
Bayou La Loutre Ridge Restoration and Marsh Creation	CWPPRA	2017	875,353.00	229,521.44
St. Catherine Island Marsh Creation and Shoreline Protection	CWPPRA	2017	2,160,412.00	155,833.75
Lake Borgne Marsh Creation - Increment One	NRDA	2017	3,922,892.00	462,657.54
Bayou DeCade Ridge and Marsh Creation	CWPPRA	2017	1,463,875.00	859,921.96
Terrebonne Basin Ridge and Marsh Creation - Bayou Terrebonne Increment	NRDA	2017	3,164,165.00	305,580.80
Northeast Turtle Bay Marsh Creation & Critical Areas Shoreline Protection	CWPPRA	2018	234,662.55	202,798.67
Large-Scale Barataria Marsh Creation	NRDA	2018	153,504.00	8,576.42
Mid Breton Land Bridge Marsh Creation & Terracing	CWPPRA	2018	1,157,906.99	226,366.93
East Bank Sediment Transport Corridor	State	2018	527,325.00	1,366.99
Sabine Marsh Creation Cycles 6 & 7	CWPPRA	2018	204,077.00	202,375.52
Bayou Cane Marsh Creation	CWPPRA	2018	183,692.00	175,501.60
Increase Atchafalaya Flow to Terrebonne	NFWF	2018	4,511,559.00	3,970,432.09
Terrebonne Basin Barrier Island	NFWF	2018	1,968,451.19	369,324.16

Overall, the State of Louisiana continues to demonstrate its capacity to implement its mitigation strategy. Although there are opportunities for improvement mentioned in this chapter, the State of Louisiana has many examples of mitigation success throughout the state. Specific examples of successful projects are included in Chapter 5 – Mitigation in Action.