

2023 LOUISIANA STATEWIDE RESILIENCE ANNUAL REPORT



OFFICE *of the* GOVERNOR
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List of Acronyms

BIL - Bipartisan Infrastructure Law

BRIC -Building Resilient Infrastructure Communities

CDBG-MIT - Community Development Block Grant Mitigation

CDRZ - Community Disaster Resilience Zone

CPEX - Center for Planning Excellence

CPRA - Coastal Protection and Restoration Authority

CPRG - Climate Pollution Reduction Grant

CRO - Chief Resilience Officer

DOA - Louisiana Division of Administration

EPA - U.S. Environmental Protection Agency

FEMA - Federal Emergency Management Administration

GOHSEP - Governor’s Office of Homeland Security and Emergency Preparedness

HERO - Hubs for Energy Resilient Operations

IJA - Infrastructure Investment and Jobs Act

IRA - Inflation Reduction Act

LSU - Louisiana State University

LWI - Louisiana Watershed Initiative

NOAA - National Oceanic and Atmospheric Administration

Building Resilience in Louisiana

Introduction

This first resilience report under [Act 315 of the Regular 2023 Session](#) arrives at the end of one administration and the beginning of another. As such, it represents a status report on the establishment of the new structures and processes designed to increase coordination and communication across levels and agencies of government and a source of recommendations to drive day-one work to build Louisiana's resilience in the new administration. Practically speaking, this report also provides direct language and ideas that can be utilized to enhance federal grant applications by local, state, or non-governmental entities for both Inflation Reduction Act (IRA) and Bipartisan Infrastructure Law (BIL) programs. The larger goal, of course, is to lay out a vision for how a state with the third highest total costs from federally declared, billion-dollar disasters (\$290 billion) in the United States¹ and one facing even more significant risks from the changing climate in the future can begin to build a comprehensive strategy that moves the whole state forward together toward a more resilient future.

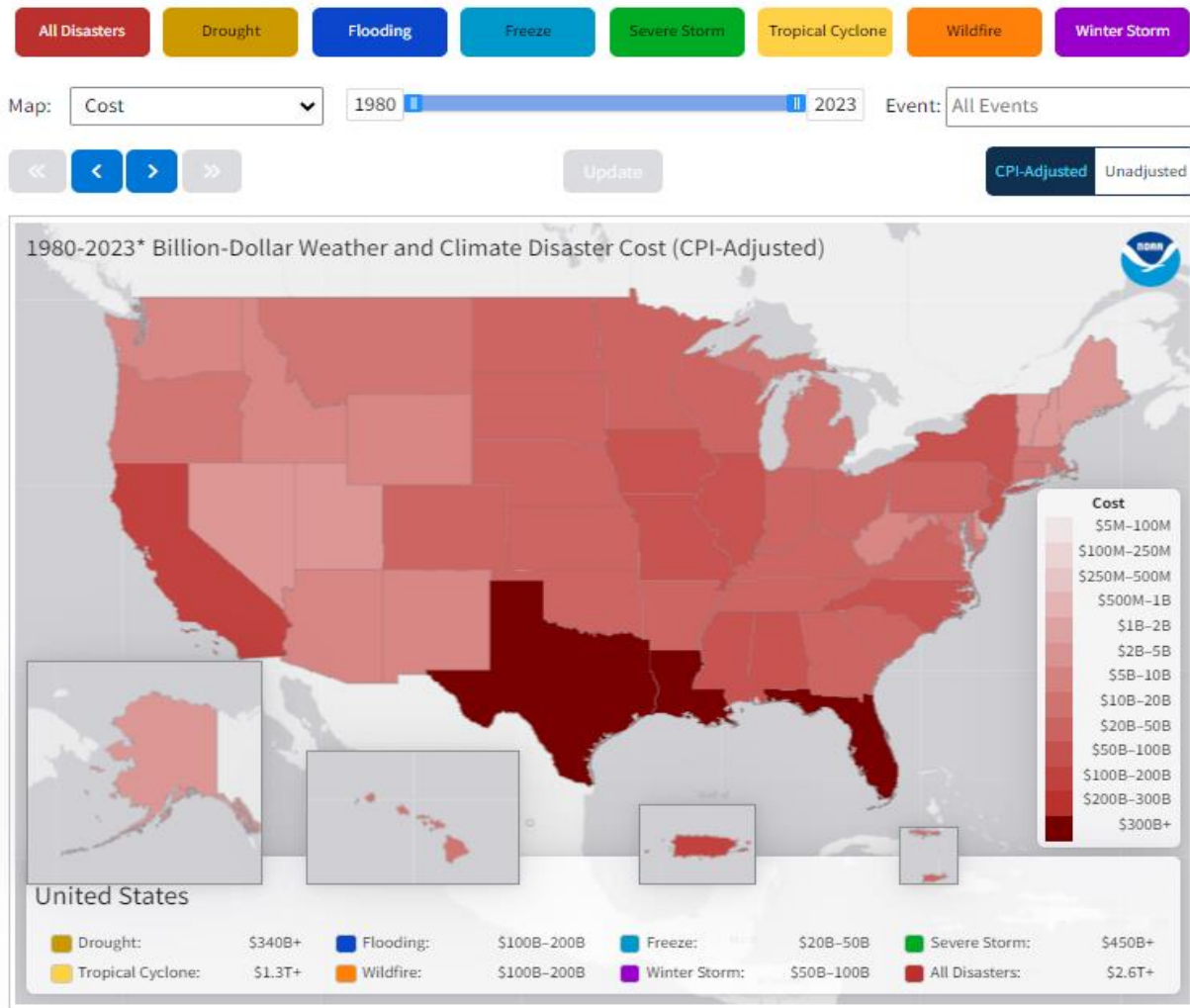


Figure 1 NOAA Billion-Dollar Weather and Climate Disaster Cost, 1980-2023

Louisiana has significant experience with disaster management and post-disaster recovery programs that rightfully focus on addressing the immediate needs of impacted communities. The state has also built up distinct efforts aimed at increasing resilience proactively with positive results—the Coastal Protection and Restoration Authority and the Louisiana Watershed Initiative are prime examples. Building resilience, however, is more than disaster response and requires more than green or gray infrastructure approaches to reducing vulnerability. The project of building resilience in Louisiana must amplify our existing skill sets while also broadening the approach to address the compounding and cascading consequences of disasters.

As the impacts of climate change arrive with greater frequency and intensity, the state will need to accelerate its efforts to adapt to additional types of environmental hazards, including extreme heat, excessive rainfall, drought, and many more that will be felt across the entire state. Working through the Chief Resilience Officer, the Interagency Resilience Coordination Team, and with direction from the Louisiana Resilience Task Force and the public, Louisiana will increase its ability to drive adaptation within each agency of government and across government all at once, no matter the hazard faced or the geography of the impact. It will create tools or templates that allow communities across the state to jump-start adaptation efforts before disaster strikes or to recover from events in a way that builds resilience in the face of future conditions.

By building resilience through intentional and coordinated adaptation throughout society and across levels of government, the state can avoid as many of the human, financial, and environmental losses as possible and carve out a pathway to a brighter future. Through efforts to build resilience, the state can fashion systems that serve all of their people effectively, where public health and quality of life are enhanced, where clean air, water, and access to nature are available today and for future generations, and where the economy provides meaningful employment and opportunity for individuals with varying skills and educational backgrounds, and where our infrastructure, homes, and businesses are built to withstand the stresses of today's and tomorrow's environmental challenges. In this more resilient Louisiana, individuals will not be forced to rely on their "resilience" as they cope with flooded homes or intense heat because the systems they rely on when the weather is good will be prepared and functional during times of adversity.

Making the Case for Resilience: New Governance and New Collaboration to Enhance Adaptation

Louisiana's people face increasing environmental threats to their livelihoods and way of life. According to the National Oceanic and Atmospheric Administration (NOAA), Louisiana had the second highest cumulative damages in the country from billion-dollar disasters between 1980 and 2021. At approximately \$290 billion, Louisiana's disaster losses are carried by a relatively small population and economy compared to Texas and Florida, the country's first and third ranked states for disaster losses. Damages from Hurricane Ida alone accounted for 15-20% of Louisiana's total 2021 economic output.⁴ The graph below shows that the average number of federally declared disasters has also been increasing decade over decade.

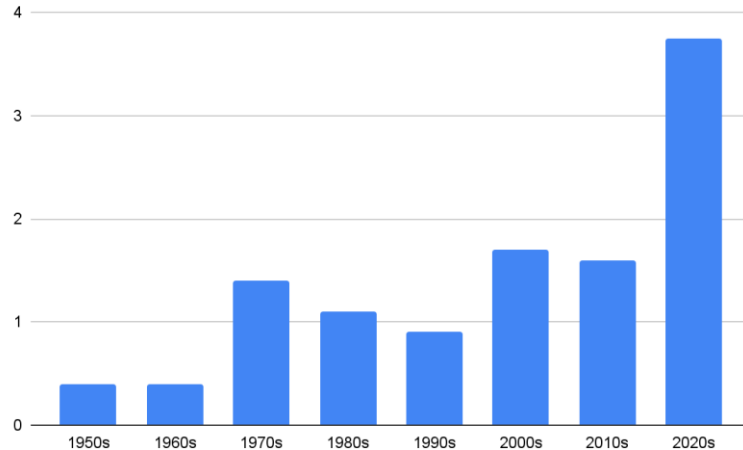


Figure 2 Louisiana's average number of federally declared disasters per year by decade

This disaster risk is not unique to coastal regions of the state, nor is it confined to tropical cyclone events or flooding. For example, from 1980-2023 of the 96 separate, billion-dollar weather and climate disasters recorded by NOAA within Louisiana, there were 14 droughts, 10 floods, 1 freeze, 37 severe storm events, 25 tropical cyclones, and 9 winter storm events (for details refer to Figure 3). Together, these disasters resulted in the deaths of 8,655 people.ⁱⁱ

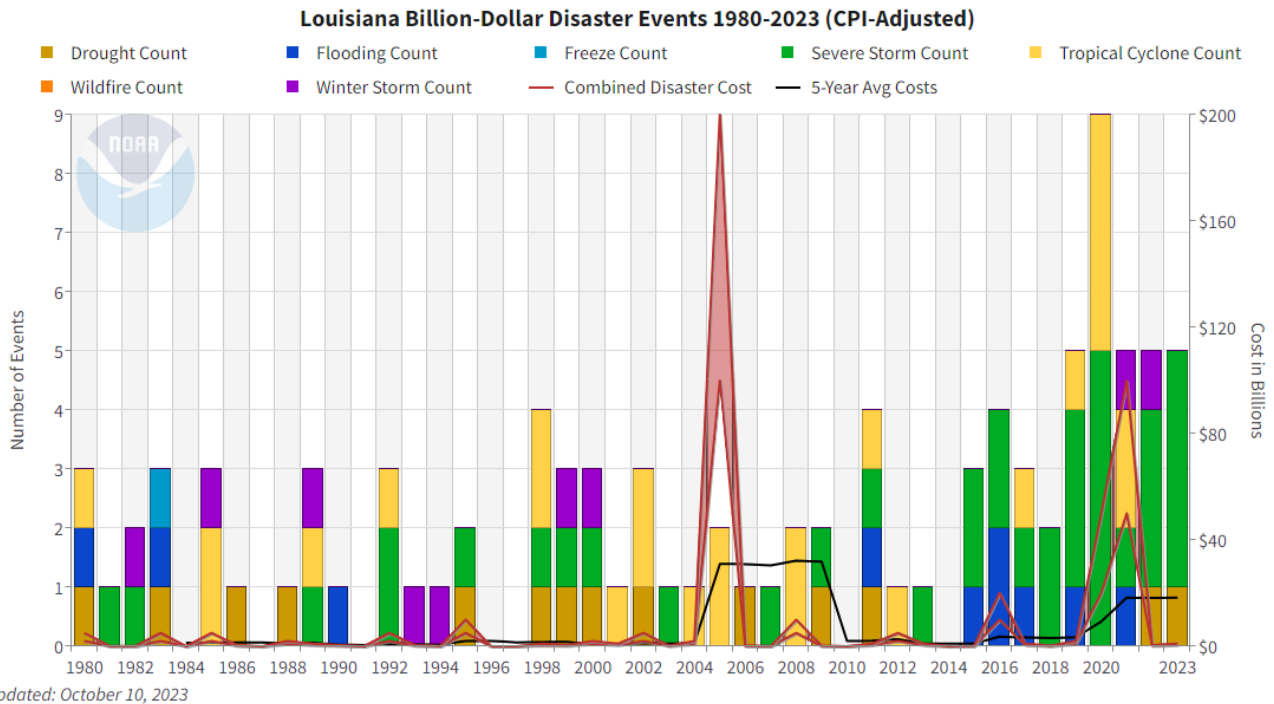


Figure 3 NOAA Billion-Dollar Disaster Events 1980-2023 (CPI-Adjusted)

The resilience challenges this reality presents looks different as you move across the state and from community to community. Disaster risk is widely considered to be made up of three different components that determine how communities experience disaster events: hazards, exposure, and vulnerability. Hazards are potentially damaging events like hurricanes, tornadoes, extreme heat, etc. Exposure describes the location, attributes, and value of critical assets that could be affected by a hazard. For example, a torrential rainfall event over a wetland area is not a disaster, but the same event on top of a community could be. Finally, vulnerability encompasses the physical, social, economic, and environmental characteristics that increase the susceptibility to impact from a hazard. Factors contributing to vulnerability could include the condition and design of homes in an area, the health of the natural environment (and its ability to absorb excess rainfall), and whether residents have the resources to adapt their homes or relocate temporarily.



Figure 4 Components of Disaster Risk

While the direct impacts of extreme weather and climate disasters are formidable, the ripple effects across and throughout communities, the state, and the nation can be overwhelming. Of course, these direct and indirect impacts are not limited to just infrastructure or the environment. These events simultaneously affect the economy, the built environment, the natural environment, and human health, well-being, and culture.

So, while Louisiana's people are resilient, the social, economic, and environmental conditions contributing to our vulnerability make it even more difficult to withstand and adapt in a world of increasing disaster frequency and severity.

The goal, then, is not simply to improve our capacity to manage disasters as they come but to strive to build resilience across all systems. Not just to update our expectations of higher rainfall or heat as a static condition or "new normal." Instead, the goal is to adapt continuously because the climate is changing and will continue to be dynamic, and for this a new governance approach is needed. This adaptation-oriented governance is one that recognizes that the implications of Louisiana's risk profile are too significant for any single state agency, organization, or level of government alone. It recognizes that extreme weather and climate impacts do not neatly follow the lanes we have created between agencies and so sets out to build connections between these different entities. And even as we build the capacity to respond to large shocks, it also looks to give attention to slower-moving challenges.

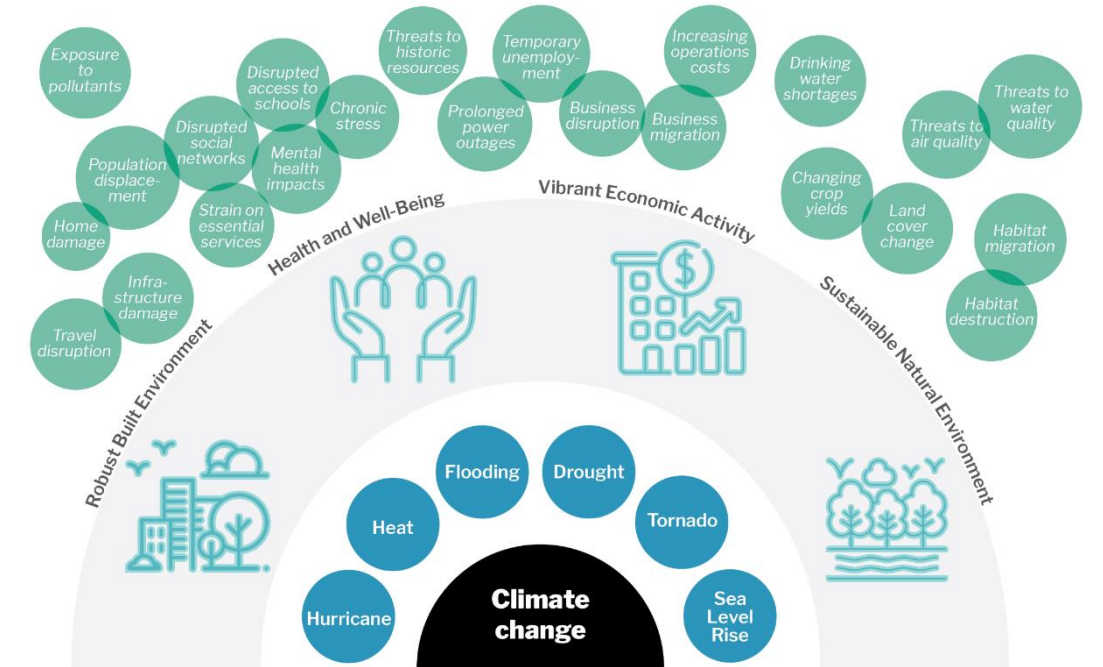


Figure 5 Direct and Indirect Impacts from Climate Change

The Shape of a More Resilient Governance

Building resilience is necessarily forward-looking and multi-faceted, and this new governance approach aims to mimic that reality. It seeks to unlock the adaptation potential of every part of government to turn adaptation into something everyone is doing and part of every mission. This governance method also helps turn everyday programs and projects into resilience programs and resilience projects and transforms budgets into resilience funding.

The Chief Resilience Officer (CRO), agency resilience officers working across government, and the Louisiana Resilience Task Force can provide lines of connection and communication between and across government, can help focus on future impacts, needs, and opportunities, and take on issues directly that demand a higher level of collaboration or that threaten to fall between the spaces between agencies or missions.

Louisiana is leading in this effort, but we are not alone. Across the globe and in the United States, more governments are working to institutionalize adaptation, and today's funding environment is poised to reward holistic approaches aimed at building resilience. Louisiana's resilience governance aligns well guidance contained in the 2023 White House [National Climate Resilience Framework](#), and the state is well-positioned to attract new resources from the Federal Emergency Management Administration (FEMA), including funding and assistance designated for communities in [Community Disaster Resilience Zones](#).

Natural disasters and the chronic effects of a changing climate are impacting critical functions and mission areas across all levels of government. Through the new governance structure created in Act 315, Louisiana can build resilience through intentional and coordinated adaptation throughout society and

across levels of government, thereby avoiding the human, financial, and environmental losses associated with disasters while carving out a pathway to a brighter future.

“Resilience” shall mean a capability to anticipate, prepare for, respond to, and recover from significant multi-hazard threats with minimal damage to social well-being, the economy, infrastructure, and the environment.

Act No. 315 of the 2023 Regular Session

Resilience Framework

Through the structures created by Act 315, Louisiana is moving to establish connections and lines of communication between local, state, and federal government and between agencies and branches within state government as we individually and collectively strive to become more resilient in the face of a varied and increasingly challenging set of environmental conditions and changes. The first step in building this new system has been to establish a framework, a working definition, which we can use to draw in agencies and expertise of different types into the project of building resilience. It defines resilience as something inherently multi-dimensional when looked at in total and also made up of pieces that can be used to organize conversations or collaborations among smaller groups of stakeholders who may share a common language or a shared collection of missions.

The four elements of statewide, multi-hazard resilience are:



- Robust Built Environment;
- Vibrant Economic Activity;
- Health, Wellbeing, Culture, and Safety; and
- Sustainable Natural Environment

Figure 6 Louisiana's Resilience Framework

The four elements of resilience create space for each agency or branch of government to identify at least one clear role in supporting the work of building a more resilient state in the near term. Over time, the framework will see resilience officers exploring the connections and relationships between agencies and missions captured in the framework as a whole.

Pillars of Resilience

With a framework to capture the missions and work of each participant in Louisiana's resilience journey, resilience officers and others must begin to take action. The pillars of resilience reflect what we value or hope to achieve as we conduct our resilience work. They represent the things we will support or that we can use to show that we are becoming a more resilient state. In future iterations of this report, the pillars will also be apparent in each agency's strategic adaptation plan. The pillars are values underpinning this work, no matter the type of environmental shock or stressor being considered.

Reduce the Vulnerability of Louisiana's Communities

Louisiana's work to build resilience must be grounded in the experiences of the people who call this state home. While everyone is exposed to some level of climate risk, the inevitable impacts are felt disproportionately by vulnerable and marginalized groups. Work to reduce the vulnerability of Louisiana's communities can include activities that:

- Prioritize the investment of state resources or programs in vulnerable communities.
- Invest in social systems and health systems that serve people.
- Include social and cultural considerations and outcomes when implementing adaptation actions.

Share and Collaborate across Government and with Communities to Take Action

Partnerships are necessary to address resilience challenges as they ripple across and throughout our state. Work to share and collaborate across government and with communities can include activities that:

- Consult with and partner with community groups, local officials, and existing resilience efforts when preparing for action.
- Prioritize the inclusion of vulnerable communities in planning processes and when conducting outreach, educational, or capacity-building activities.
- Increase understanding of resilience and adaptation issues across state agencies, within local jurisdictions, and among the public.

Utilize Data to Drive Decision-Making

The best available science and information should be the foundation for all resilience building actions. Activities associated with this pillar can include:

- Integrate current and future climate risk data into local, regional, and state planning and investments.
- Fund applied science, traditional knowledge, and the development of tools or research to assist decision-making, monitoring, and assessing progress.

Strengthen Natural and Built Infrastructure to Improve Health, Safety, and Well-being in the Face of Climate Change

A more resilient Louisiana demands homes, businesses, and infrastructure designed, sited, and built to withstand extreme weather events and other impacts from climate change. A healthy, sustainable, natural environment is an equally important aspect of a resilient state. As this pillar is implemented activities should strive to:

- Enhance the built environment to improve safety, minimize service interruption, and reduce economic losses.
- Conserve, restore, and utilize the natural environment to improve health, quality of life, and culture.

Promote a Climate Resilient Economy

Even as changes in the environment are affecting lives throughout Louisiana, so too are global and local changes to the economy that are taken in response to those environmental changes. For Louisiana to stay competitive and for individuals and the communities they reside in to build resilience, economic stability, jobs and opportunity must be fundamental considerations. Promoting a climate resilient economy includes activities to:

- Quantify and raise awareness of climate risks to businesses, workers, and government finances.
- Protect the financial systems of communities and the state as a whole and communicate those actions to external financial actors (private economic development, municipal bond rating agencies, markets, and insurers).
- Expand economic opportunity and support advantageous regional economic transitions for workers and businesses.



Louisiana’s framework for resilience and pillars of resilience can be a guide when seeking federal funding.

Resilience-focused federal grant programs like those offered by FEMA, NOAA, EPA, DOE, and others often expect the narrative to describe the applicant’s approach to resilience. Community-based organizations, local government, and state agencies should reference the framework when helpful.

Goals, Objectives, and Structures

Louisiana has multiple distinct efforts to increase resilience but needs an overarching strategy or vision for how they all fit together. The task of the Chief Resilience Officer, the Interagency Team, and the Task Force is to unify, amplify, and broaden the state’s capacity to adapt to its changing environment, reduce the vulnerability of the state’s people and systems, and seize opportunities for residents, communities, and institutions to thrive despite disruptions and threats from extreme weather and the impacts of climate change.

The State resilience objectives are:

1. To increase the wellbeing and the opportunity to thrive for all of Louisiana’s people. This includes making them safer during and immediately following a weather event, but also demands specific attention to activities that can maintain or improve their quality of life in the face of natural hazards and climate change.
2. To implement policies that lead to the reduction in economic losses resulting from natural hazards and climate change and support the evolution of the state’s economy so that opportunities to meet the demands of the future are available to all and help to support the economic resilience of families, communities, and systems across Louisiana.
3. To make government more efficient and effective so that we can avoid the opportunity cost of disaster response and recovery—by being better stewards of public resources, better delivering services despite weather conditions, becoming more coordinated so that programs and policies are complementary and consistent, and by allowing the time and resources to focus on improving Louisiana rather than on disaster recovery.

Structure

Louisiana’s hub and spoke model for building resilience is achieved with resilience officers in each executive agency, the Legislature, and the Supreme Court, all led by a Chief Resilience Officer in the Office of the Governor. It augments Louisiana’s other existing hazard mitigation and proactive resilience-related programs or agencies while creating space to tackle additional challenges. This model trusts that agencies know their programs, constituents, and stakeholders better than a centralized figure in the Governor’s Office and that the best way to turn everyday programs and budgets into resilience-building programs and resilience funding is by empowering change agents within each agency. For coordination purposes, the Chief Resilience Officer participates in existing planning processes and programs, but the lead agencies remain the same. For example, the Watershed Council is the lead on flooding, the Coastal Protection and Restoration Authority Board is the lead for the coast, and the Governor’s Office of Homeland Security and Emergency Preparedness is the lead on FEMA-specific pre-disaster mitigation programs.

The reality is that even with strong agencies leading large, effective programs, the impacts and implications from the types of hazards Louisiana is facing are too large for a single agency or level of government to solve alone, and many of the indirect impacts from climate change must be addressed collaboratively or through entirely new partnerships. Together, the CRO, Coordination Team, and Task Force can leverage existing programs, fill gaps, and seek private, philanthropic, or federal funding to implement new solutions.

An integral function of Louisiana's resilience program is to provide avenues for public participation and input. Navigating governmental programs and services can be difficult, and when a problem or solution is multi-faceted, it can be impossible to know where to engage. Four actors execute the resilience governance model, the CRO, Agency Resilience Officers, Interagency Resilience Coordination Team, and the Louisiana Resilience Task Force. The CRO, the Interagency Team, and the Task Force operate in public view and the resilience officers at each agency serve as points of contact for the public and each agency as we enhance communication and connection in effort to build a more resilient Louisiana.

The roles of the agency resilience officers, Interagency Resilience Coordination Team, and the Louisiana Resilience Task Force within the resilience governance model are as follow.

Agency Resilience Officers are leaders within their agencies. They help to move agencies forward in their ability to adapt by helping to modify programs, add new programs, conduct research or data, listen to the communities their agency serves, and educate peers about how extreme weather and climate change pose impacts to their mission. They are also the staff leads for vulnerability assessments and strategic action plans within their agency as they prioritize immediate next steps toward building resilience within their respective agencies.

Resilience officers are also leaders within the state. Together, they comprise the **Interagency Resilience Coordination Team**, which meets regularly to promote increased communication and adaptation across government and programs. Over time, this group will encourage the use of a resilience lens within individual departments and programs to better adapt to the impacts of climate change and work across multiple departments at once to make sure that issues stemming from changes in the environment are being addressed when there may not be a single agency directly responsible for it, or when a single solution can provide benefit to multiple agencies at once.

The **Louisiana Resilience Task Force** is the final new structure established by Act 315 to build Louisiana's resilience. This group is akin to a standing "blue ribbon commission" that can provide strategic direction to the state's resilience efforts and make recommendations to the CRO. It comprises cabinet-level officials, Legislators, the Commission of Higher Education, the Public Service Commission, and representatives from the Policy Jury Association, the Parish Presidents Association, and the Louisiana Municipal Association.

Projects and Priorities

In the last eight years, Louisiana experienced 23 federally-declared disasters and 50 state-declared disasters. With this level and variety of hazards and with limited resources to devote to solutions, identifying the ideal lane for the CRO and the priorities for the Coordination Team and Task Force is a necessary step. In the first meetings of the Coordination Team, with public participation, the group began identifying issues that called for attention. Among issues raised by the group were those that were slow-moving but carried significant impacts, events that caused damages but were not large enough to trigger formal disaster responses, and issues that did not neatly fit within a single agency or level of government's purview.



Figure 7 Resilience issues identified and captured as they appeared during the first meeting of the Interagency Resilience Coordination Team

As Figure 7 illustrates, many regularly occurring shocks and stressors were raised during the meeting, spanning all four elements of the resilience framework with wetland loss, land use planning, economic impacts, a living wage, affordable housing, and challenges with the electrical grid all getting attention. The list also captured the immediate concerns of agencies and people grappling with an unusually challenging summer with extreme heat, drought, and insurance featuring prominently.

During the second meeting of the Interagency Team, members prioritized the shocks and stressors identified in meeting one. When given points to assign to specific issues, natural hazards were by far the most highlighted issue (125 points), with Economic and Social Issues in second place (55 points), and Housing (49), Land Use (44), and Infrastructure (40) rounding out the top five.

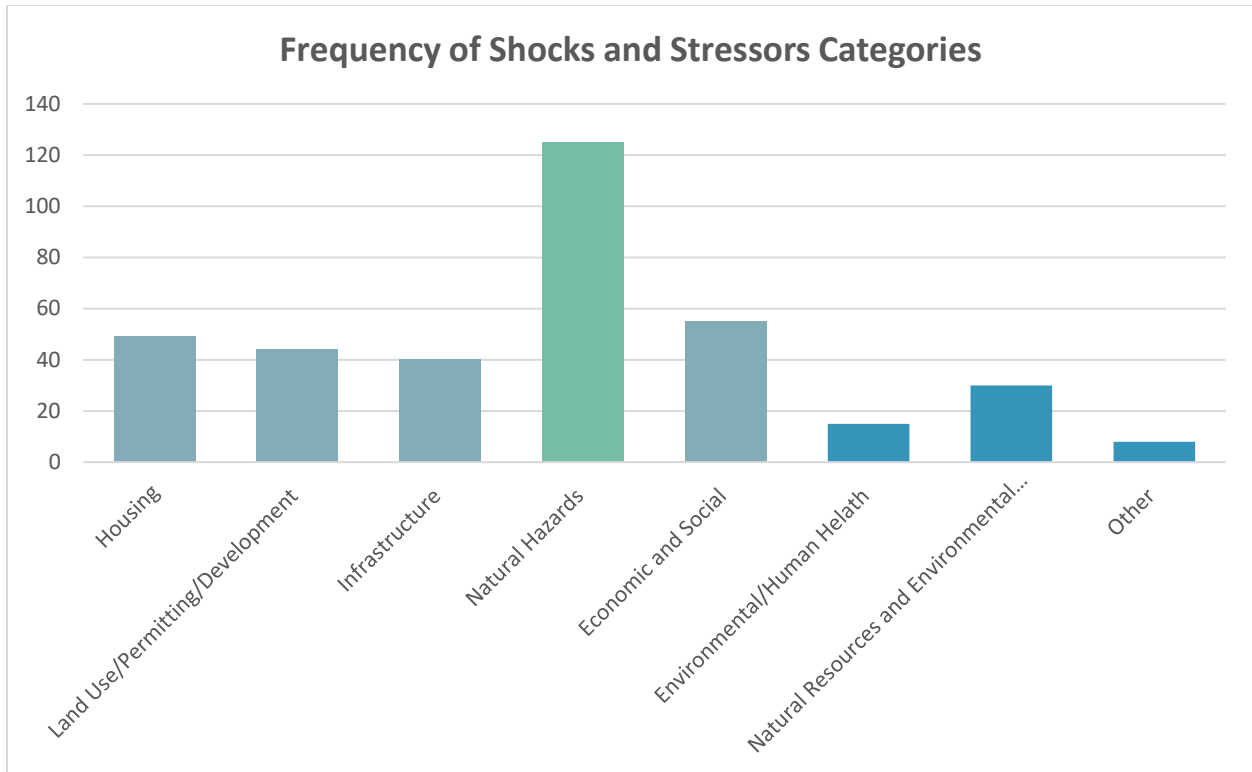


Figure 8 Ranking of Shocks and Stressors by Interagency Team

Priority Issues for 2024

In addition to supporting individual agencies with the implementation of resilience measures within their programs, plans, and projects, the CRO will also mobilize the Task Force and the Interagency Team around the specific problems of the growing insurance crisis in Louisiana, look for resources to develop a heat action plan that any municipality or parish can use to respond to the needs of vulnerable citizens, and work to develop new collaborations around the issue of migration, receiving communities, adapting in place, and cultural preservation.

Insurance Availability, Affordability, and the Problem of Risk

The impacts of extreme weather and climate change in Louisiana are simultaneously making insurance more critical for families and businesses while also stressing insurance markets, making coverage less available and more expensive. The Department of Insurance has taken necessary steps to stabilize the insurance market, reduce the number of residents reliant on the state's insurer of last resort, and to proactively fund risk mitigation through its new Fortified Homes program. However, to further preserve the economic resilience of Louisiana's communities, additional steps to mitigate risk must be taken and then communicated to insurers and reinsurers. Taking steps to reduce the risk for insurance purposes will also convey positive messages to other financial actors like bond markets and rating agencies. In 2024, the CRO, Interagency Team, and Task Force will investigate policy solutions to:

- Incorporate household, community, and larger-scale investments in risk reduction (including nature-based solutions such as ecosystem restoration projects in the coastal master plan) into insurance underwriting and pricing;
- Maximize the Department of Insurance and Louisiana Citizens' ability to help mitigate risk while ensuring that coverage remains available;
- Pilot innovative insurance models and products to improve household resilience; and
- Identify and promote building and land use policies that support long-term resilience and insurability goals.

Heat Action Plan Development

Extreme heat is the deadliest type of natural disaster in the United Statesⁱⁱⁱ and tragically, the Louisiana Department of Health reported 25 heat-related deaths across Louisiana for June, July, and August of 2023.^{iv} According to Climate Central, a nonprofit made up of an independent group of scientists and communicators, cities across Louisiana have seen between 13 and 31 additional days above 95 degrees since 1970.^v NOAA warns in its 2022 State Summary for Louisiana that this trend can be expected to continue into the future stating that "unprecedented warming is projected during this century."^{vi}



Figure 9 Days above 95 Degrees, Climate Central

As more cities and regions across Louisiana are forced to deal with potentially deadly extreme heat events, the state is overdue for a heat action plan. These plans integrate actions to respond to a heat emergency while identifying needed investments in long-term heat preparedness and adaptations. Depending on the resources identified, the CRO can help develop a statewide heat action plan as a template for local actions, or pilot an action plan in a specific region for use around the rest of the state.

Migration, Receiving Communities, Adapting in Place, and Cultural Preservation

Resettlement, relocation, and migration have been, for many people in coastal Louisiana, a fundamental part of their culture and history. As it was historically, migration today is entwined with many macro- and micro-economic, demographic, and geopolitical forces like trade, automation, or urbanization, and generational changes like the urge to leave home and create one's own opportunities. But environmental pressures from increasing levels of risk from flooding, sea level rise, drought, habitat change, and wildfire are also on the rise as potent contributing factors for an individual or community's need and desire to relocate.

The migration discussion, exacerbated by climate risk, is growing more and more acute in Louisiana, with up to 1.2 million people along the coast who may be confronted with the decision to move in one way or another over the coming decades. Many more people are implicated in the receiving communities where those moving may find new homes. In addition to the concerning, long-term trends of coastal land loss and increased flood risk articulated in the coastal master plan, each individual disaster event also presents an immediate and significant decision point for individuals, businesses, and leaders—"Should I stay and rebuild or should I start over somewhere new?" It is a fraught decision for anyone, but one made more complicated by the fact that many will not have the resources or opportunity to move even if they feel that it is a necessity or that the time is right.

Whether done person-by-person or more en masse, migration poses challenges for all involved--those who are moving, those who stay behind, the communities who lose population, and the new communities who take in these new residents. A major component of Louisiana's resilience agenda must be to come to terms with a) the assisted migration of individuals and communities, b) the strategic implementation and coordination of programs for adapting in place (where appropriate), and c) the establishment of an environment of data, support services, and policies to help people avoid flood risk, make smooth transitions to hospitable, prepared communities, and thrive in the face of growing exposure to climate-related risks.

Ongoing Statewide or Regional Projects

In addition to the many issues cited above, the CRO has also been actively supporting other specific efforts at the state to improve resilience.

Updating Capital Outlay to Improve Resilience Outcomes

Working alongside the Division of Administration (DOA) and the Center for Planning Excellence (CPEX), the CRO is developing recommendations for incorporation into the sustainability criteria required for the construction of major facility projects. In 2023-2034, just over \$3 billion was allocated for Capital Outlay projects, and half of the 980 projects were considered major facility projects. Major facility projects are those that are 5,000 square feet or greater of new construction or those that involve a renovation valued at more than fifty percent of the replacement cost or involve a change in occupancy. These projects must currently be designed and constructed to meet sustainable building standards on an Environmental Building Rating System Checklist.

By addressing how state dollars are invested in the siting and construction of large projects, the state can better ensure that these facilities last for their entire intended life, that economic damages from

natural disasters are reduced, and that closures to the facility because of damages from disaster are minimized. Recommendations for updates to the Checklist are projected to be completed by January 2024.

NOAA Climate Resilience Regional Challenge

In the late summer of 2023, NOAA accepted letters of intent for its Climate Resilience Regional Challenge, a competitive, \$575 million nationwide grant opportunity to build resilience in coastal communities from extreme weather and other impacts of climate change. NOAA received approximately 870 eligible letters of intent requesting over \$16 billion in funding. Louisiana CPRA submitted three letters of intent for suites of projects in three regions in coastal Louisiana. Two of the three, its Terrebonne and Lafourche and its Greater New Orleans submittals, were among the 40 nationwide to be accepted into the next round of the competition.

Each of these two proposals demonstrates the pillars of resilience in action by targeting vulnerable communities for project benefits, partnering with local governments and community-based organizations, incorporating green and gray infrastructure approaches, supporting or protecting economic activity in their regions, and is built on a science and data-rich understanding of the multiple climate hazards facing the communities within the project area.

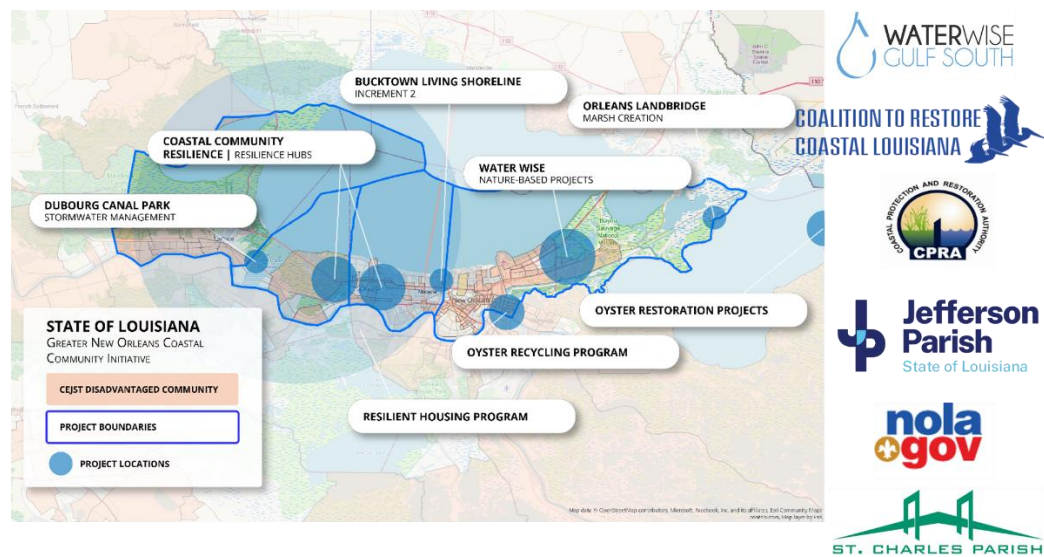


Figure 10 Map of Projects and Partners for CPRA's Greater New Orleans Coastal Community Initiative

Hubs for Energy Resilient Operations (HERO)

In October 2023, the U.S. Department of Energy awarded Louisiana \$250 million to build out a program that plans to invest up to \$500 million in "resilience hubs" across the state. These facilities will be refuges for communities when the electric grid goes down because of extreme weather, powered by carbon-free energy generation and storage.

The HERO program is led by the Louisiana Department of Natural Resources and supported by a large team from across government, utilities, nonprofit organizations, and universities, all committed to improving community resilience. The project will begin by constructing a first round of pilot facilities, then will involve intensive community-energy planning to allow for ground-up decisions on how and where to deploy additional resources, and then follow with a significant investment in resilience hubs in vulnerable communities across the state.

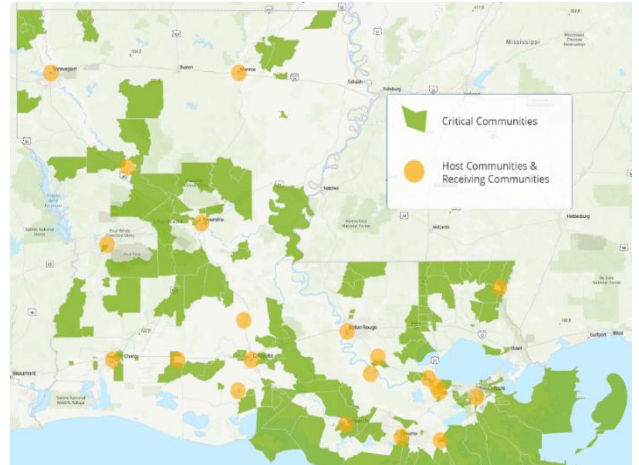


Figure 11 Proposed Critical Communities and Host Communities for Resilience Hub Investments

Climate Pollution Reduction Grant Opportunity

In July the state received funding from the Environmental Protection Agency’s Climate Pollution Reduction Grants program to support climate planning and implementation. The CRO has been working to support the drafting of the state’s Priority Climate Action Plan and the development of implementation grant proposals that integrates adaptation approaches alongside greenhouse gas mitigation. The final priority climate action plan for Louisiana will help guide the state’s application for up to \$500 million of implementation funds that will be awarded through a competitive process.

State Agency Actions

In addition to statewide priorities and updates, Act 315 also calls for individual state agencies to report out on their progress building resilience. Beginning in 2024, resilience officers will help lead their agency through the development of strategic resilience plans that grapple with the essential question,

“How does the changing climate affect the programs, assets, and services offered or owned by your department today and in the future?”

Armed with the knowledge of where the impacts are most critical, adaptation options can then be pursued either individually or together with others.

Operating under Executive Order 2020-19 on Coastal Resilience, the Adaptive Governance Initiative worked with state agencies to conduct vulnerability assessments, plan adaptation options, and report on priorities related to the impacts of coastal change that can be replicated statewide and across more hazards.

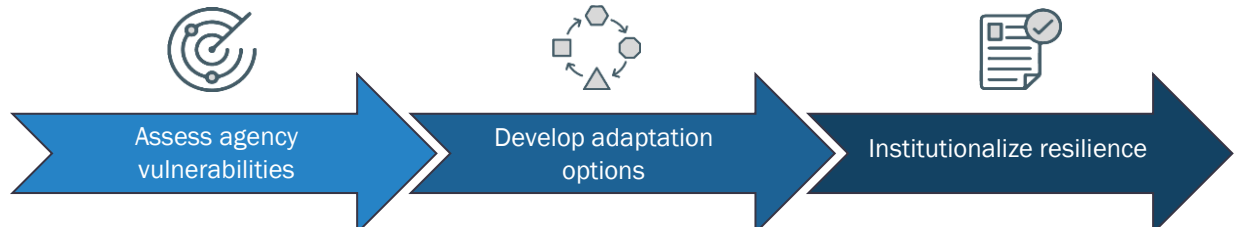


Figure 12 State Agencies Adaptation Process

In 2024, after agencies have completed these assessments, they should then turn to action: of all the needs and impacts, what are the things that need to be funded or done first? Together with the CRO and the other members of the interagency team, needs and actions from different agencies can be paired or combined. Projects can be improved through collaboration with other types of agencies to enhance more elements of resilience.

Conclusion

The year 2024 is one of political transitions across Louisiana, but there is nothing partisan about coming together to lessen the negative impacts of disasters on the people of this state or collaborating to help our residents and communities thrive in the face of a changing environment. Act 315 creates structures that are relevant and urgent no matter which party controls the Governor's Office or the Legislature. Newly elected officials or those taking on new responsibilities should be educated about processes and systems and communications pre-, during, and post-emergency, and existing efforts to be more proactive in the face of increasing disaster risk should be continued.

Louisiana has taken bold action in response to environmental challenges before. In the aftermath of Hurricanes Katrina and Rita in 2005, Louisiana reformed government, committed to new ways of using data and science to make decisions, partnered more closely with local governments, and built the capacity to implement projects at the scale needed to address a seemingly insurmountable coastal problem. The challenge for this generation is to translate that success to climate risk more broadly and to communities all over the state. Not every hazard has to lead to disaster. By working together through these new governance models, Louisiana can build its ability to adapt and its ability to move toward the future it wants and the future its people deserve.

Appendix A: Public Participation

To effectively formulate this Resilience Annual Report, the CRO garnered public input and participation by requesting comments, reviews, and feedback on the contents of the annual report and on priorities that the CRO should address. Prior to submission of this report, the CRO launched an integrated outreach methodology, which included leveraging partnerships with key stakeholders and organizations and outreach efforts, such as facilitating webinars, conducting public feedback mechanisms, uploading online content, and disseminating key outreach materials.

To ensure that the public had an opportunity to review and provide feedback on the Resilience Annual Report, the draft was available to the public throughout the month of November 2023, posted on the Office of the Governor website and shared with members of the Chief Resilience Officer's list serve.^{vii} This period of access for comment and review was held "open" for four weeks through November 2023. State entities and the citizens were given the chance to review the plan, provide comments and feedback on its language and priorities, and raise concerns directly to the CRO.

The public comments received during this process underscored a strong emphasis on addressing longstanding issues relating to distrust of government and emphasized the need for positive collaboration and communication. There was a notable call for the inclusion of flood mitigation and insurance topics in the report, and a request to rank or prioritize the four elements of resilience, with a specific focus on health, well-being, culture, and safety as top priorities.

Additionally:

- Urgency was expressed in addressing health disparities, with a call for an equity and inclusion lens in resilience planning.
- There was a request for clearer articulation of geographical priorities, acknowledging areas such as Lake Charles, Houma, and New Orleans that have been severely impacted by climate disasters.
- Concerns were highlighted related to the initial lack of references to strengthening the electrical grid.
- There was an emphasis on the importance of addressing electrical outages, drought, excess heat, and flooding, particularly in northeast Louisiana.
- Other notable points included a focus on strategies for supporting disadvantaged individuals during disasters, calls for enhanced community engagement, replicability of resilience task forces, and collaboration with diverse cultural knowledge bearers.
- The need for the involvement of environmental NGOs and coalitions in resilience planning was underscored, along with a request for clearer explanations of economic benefits.
- Concerns about potential loss of people/companies due to storms and strategies for retention or return were raised, along with questions about outreach, incentive programs, and the involvement of non-profits, churches, and faith-based organizations in resilience efforts.
- Public comments called for a communication strategy, regular updates, and public access to Task Force/Interagency Team meetings, as well as suggestions for programs addressing LWI's future, flood hazard mitigation, and resilience workforce development.

- Finally, there was a request for a more detailed timeline, information on Task Force meeting frequency, and the availability of a dashboard for monitoring progress.

ⁱ NOAA National Centers for Environmental Information (NCEI) U.S. Billion-Dollar Weather and Climate Disasters (2023). <https://www.ncei.noaa.gov/access/billions/>, DOI: 10.25921/stkw-7w73

ⁱⁱ NOAA National Centers for Environmental Information (NCEI) U.S. Billion-Dollar Weather and Climate Disasters (2023). <https://www.ncei.noaa.gov/access/billions/>, DOI: 10.25921/stkw-7w73

ⁱⁱⁱ National Weather Service. “Weather Related Fatality and Injury Statistics.” Weather Fatalities 2022. <https://www.weather.gov/hazstat/>

^{iv} LDH updates Heat-related deaths during heat emergency. August 22, 2023. Accessed on 10/30/2023. <https://ldh.la.gov/news/7134>

^v Baurick, T. (2020, August 5). These Louisiana cities are getting more weeks of “extreme heat” than 50 years ago. Retrieved December 12, 2023, from NOLA.com website: https://www.nola.com/news/environment/article_62d2f2c0-d68b-11ea-b380-47e14569dcf6.html

^{vi} Frankson, R., K.E. Kunkel, S.M. Champion, and J. Nielsen-Gammon, 2022: Louisiana State Climate Summary 2022. NOAA Technical Report NESISDIS 150-LA. NOAA/NESDIS, Silver Spring, MD, 6 pp. <https://statesummaries.ncics.org/chapter/la/>

^{vii} [Building Cross-Government and Statewide Resilience | Office of Governor John Bel Edwards \(louisiana.gov\)](#)