

Executive Summary

The natural, economic, and cultural environments converge in Louisiana in ways both like other coastal areas and unique to the state. Each of these sustained significant damage from devastating hurricanes that hit Louisiana in short succession in 2020. Hurricane Laura, the strongest hurricane to hit the state since 1856, made landfall near Cameron, Louisiana on August 27th. Hurricane Laura caused an estimated \$14 billion in damage in southwest Louisiana and southeast Texas. Weakening as it moved inland, Laura continued to cause widespread damage and flooding over much of the rest of Louisiana. Then, much of the early recovery effort was put on hold or reversed when Hurricane Delta made landfall on October 20, 2020.

Louisiana has suffered multiple disasters over the last 20 years so there are many supporting structures in place to help guide recovery operations. Most state and many parish and local officials have extensive experience in working with FEMA and our federal partners. That said, one priority for conducting integrated operations to achieve recovery outcomes is to have procedures in place to ensure appropriate use of funding and other resources. This suggests the need for an increased emphasis on data and analytical tools for decision making, financial management, and delivery of legislative relief funding available to Louisiana.

Coupled with the economic and human impact of the Coronavirus pandemic, the size and scope of damage from hurricanes Laura and Delta caused leadership to identify state priorities and initiate recovery planning, and this recovery needs assessment, very early in the disaster response. As a result, the state identified seven priorities that provided the foundation for this recovery needs assessment. Those priorities include:

State Priorities

1. Housing	5. Community Wellbeing
2. Broadband	6. Education
3. Infrastructure Resilience	7. Cultural Impacts
4. Economic Stability	8. Planning and Mitigation

Because addressing each of these priorities requires crosscutting support to achieve desired recovery outcomes, field coordinators for all six federal recovery support functions (RSF) were activated and contributed to this needs assessment. It is important to note that significant outreach, research, and data analysis went into the RSF assessments. Details and statistical information is available upon request.

The expectation is that this assessment and the research behind it will be used to shape ongoing conversations with state, local, and tribal officials as we work together to identify goals, objectives, and outcomes to address the state's recovery priorities. That means that the assessment will be updated as needed and eventually will become obsolete as outcome-oriented projects come online under an integrated strategic plan.

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Crosscutting Support – A Recovery Support Function Perspective

Housing

Louisiana had a shortage of affordable housing before hurricanes Laura and Delta made landfall. Achieving the state outcomes described on page four means that multiple RSFs must collaborate and work with state and local partners to address a multitude of issues including environmental, economic, and health and social services concerns. Each of these RSFs and FEMA advisors has highlighted housing in their assessment. As the housing RSF coordinating agency, the U.S. Department of Housing and Urban Development both the field and national coordinators understand these interdependencies and coordination is underway to ensure that there is a synchronized approach to supporting the state in reaching desired outcomes.

Broadband

Restoring and expanding broadband services and internet connectivity covers at least five of the RSFs. As they have highlighted in their needs assessments, broadband includes equities for the community planning and capacity building, infrastructure, economic, health and social services and housing RSFs. It is imperative that, as the coordinating RSF, the field coordinator for infrastructure systems, ensures coordination and collaboration as state and local goals are further defined and support is aligned to meet them.

Infrastructure Resilience

While housing is the number one priority, there is little doubt that infrastructure resilience is an all-encompassing concern. Working with state and local partners and other federal agencies, the infrastructure RSF field coordinator identified three additional challenges in this area. They include restoring and building resilience for electric power and telecommunications systems and restoring and building resilient waterways and waterside infrastructure. With the infrastructure RSF as the coordinating entity, these require collaboration between RSFs including community planning and capacity building, economic, natural and cultural resources and the unified federal review, hazard mitigation and sustainment advisors as we work to support state, local, and tribal partners.

Economic Stability

Achieving economic stability has implications ranging from providing employment opportunities to ensuring movement of goods, and from having adequate housing to implementing supportive tax and building codes. As such, delivering economic stability outcomes must involve community planning and capacity building, health and social services, housing, infrastructure, and natural and cultural resources RSFs. As the coordinating RSF, the economic field coordinator has identified several challenges and has started to create processes to ensure sound collaboration and crosswalk of interests.

Community Wellbeing

The State has taskforces in place to address the most significant concerns, influence legislation, and acquire funding to bring citizens to a place of economic prosperity. Most of this work is done by the Louisiana Department of Children and Family Services and the Louisiana Workforce Commission. With that emphasis, the health and human services RSF is our coordinating entity. While most aspects center on the needs of the population as they pull their lives back together, other RSFs including housing, infrastructure, and economic have obvious supporting roles.

Education

Two key aspects of this priority for the state include displaced students and food insecurity from early childhood education to childcare. Likewise, one of the challenges identified by the health and social services field coordinator during this needs assessment is supporting an educational system that meets current student needs. The good news is that the state has several initiatives underway and our RSF coordinators for health and social services and housing are actively engaged with them to identify recovery outcomes.

Cultural Impacts

Louisiana officials identified two goals related to this priority. The first is to restore and provide stewardship to the state's natural resources. The second is to restore and preserve cultural resource values that embrace Louisiana's cultural assets. With those goals in mind during this needs assessment the natural and cultural resources RSF field coordinator identified the fact that recovery and increasing resilience will require repair, replacement, and/or mitigation of structures, historic districts, parks, and cultural resource institutions. Clearly, this effort requires additional detail and coordination with the community planning and capacity building and economic RSFs as well as with the unified federal review, hazard mitigation and sustainment advisors as they work with state and local partners to develop actionable goals, objectives and outcomes to respond to this priority.

Planning and Mitigation

FEMA Community Planning Capacity Building RSF and Mitigation works with local governments to plan, manage, and mitigate risk in a post-disaster environment effectively and efficiently. CPCB and Mitigation will work with state partners to coordinated resources / technical assistance to include technical and training assistance, data and analysis, outreach and education programs, and recovery planning and mitigation planning.

Methodology

FEMA Interagency Recovery Coordination (IRC) Cell DR-4559-LA/DR-4570-LA coordinates both internally and with external Federal agencies. The IRC is comprised of six RSF coordinating agencies (FEMA, USACE, HUD, DOI, DOC/EDA, HHS) and supporting agencies. All may be able to support wider recovery needs beyond the Stafford Act eligible programs. For Hurricanes Laura and Delta, IRC has activated all six of the RSFs.

The Federal Disaster Recovery Officer (FDRO) leads a comprehensive recovery assessment effort called the *Recovery Needs Assessment* (RNA). This effort ensures engagement with key stakeholders from FEMA programs, RSFs and the state, local, and tribal (SLTT) partners impacted by the disaster. This process helps develop SLTT profiles, identify key recovery issues, indicate level of federal support (if needed), and contributes towards a shared understanding of recovery needs.

This recovery needs assessment (RNA) process began with an initial assessment resulting in activation of all six federal recovery support functions (RSF). Because of the Novel Coronavirus (COVID) situation, RSF field coordinators deployed both virtually and to the JFO on November 2, 2020. They received an initial briefing and were asked to conduct their portion of the RNA and to submit a draft of their findings within two weeks.

Field coordinators gathered information from a variety of sources, including state officials, various state and parish commissions and organizations, other federal agencies, and private sector entities. Baseline sources used are found in Table 5: Assessment of Recovery Needs of the Interim Guide for Integrated Operations: Achieving Recovery Outcomes.

Multiple criteria were used to develop the assessment. These include, but are not limited to, the seven state priorities identified by the JFO unified coordination group, national recovery outcomes, and parish level goals and outcomes.

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Recovery Support Function (RSF1) Community Planning & Capacity Building (CPCB) Findings

Overview and Status of Recovery Operations

The IRC Cell and CPCB RSF met with a variety of key stakeholders; including GOHSEP, OCD, Imperial Calcasieu Planning Commission, Community Foundation of Southwest Louisiana, Southwest Louisiana Economic Development Alliance.

The CPCB RSF mission is to help enable local governments to effectively and efficiently plan and management in a post-disaster environment. CPCB will help to coordinated resources that include technical or training assistance, program support, or planning and capacity building-related initiatives. CPCB RSF's Community Condition Assessment (CCA) is one tool to help guide and understand where the highest levels of need may be. The CCA help to indicate which communities are most in need of planning, targeted assistance and/or capacity building support.

The CPCB RSF identified four primary needs and areas of concerns:

- **Staffing Capacity to Manage Recovery** - One of the main challenges associated with long-term recovery activities that state partners have emphasized is the need for staffing capacity, specifically as it relates to procedural knowledge in grant management.
- **Local or Regional Planning Process and Coordination** - During initial conversations with key State partners and local government leaders, it was identified that some communities may be interested in undertaking some level of recovery planning, while aligning with some of the regional planning efforts. Although plans may exist there may be a need for more inclusive and thoughtful planning process, adding a recovery addendum to existing plans; prioritizing and identifying resources for recovery projects; etc.
- **Coordination to Support Resilient Infrastructure and Redevelopment** - A recurring issue that has been present is the adverse impacts of losing internet and broadband connectivity. With broadband being so vital, community leaders need guidance from subject matter experts on how to rebuild their communities in a way that promotes growth. In addition, there will be other opportunities to look for other resilience infrastructure planning and independencies thinking for other recovery efforts.
- **Development and Enforcement of Building Codes & Higher Standards** - Disaster impacts caused widespread damage and destruction to buildings both residential and commercial structures. During initial assessments, research and conversations, some local governmental leaders recognize that communities may be more supportive of the need to develop more stronger building codes or higher building standards.

Summary

It should be noted that while the findings are indicative of informational sessions to date, continued coordination of these meetings should continue with relevant stakeholders to facilitate information sharing as the situation evolves. To summarize, the mission of the CPCB RSF is to gather information and scope potential issues/areas of concerns. This effort will involve not only confirming the issues/challenges listed above, but to include additional issues highlighted by community leaders. This ensures that critical needs for short-term support are identified immediately to meet the needs of the community. Once completed, CPCB and partners will begin scoping recovery support strategies.

Recovery Support Function (RSF 2) Economic Findings

Overview and Status of Recovery Operations

The Economic RSF recovery needs assessment effort ensured engagement and coordination with key stakeholders from FEMA programs (IA, PA, and Mitigation), other RSFs, and State and Local partners impacted by the disaster. Key stakeholders included in this needs assessment included the Small Business Administration, U.S. Department of Agriculture – Rural Development, Imperial Calcasieu Planning Commission, Acadiana Planning Commission, Kisatchie-Delta Regional Planning & Development District, The Coordinating and Development Corporation and North Delta Regional Planning & Development District.

While research is on-going this process identified seven, primary needs and concerns (listed below) which will contribute towards a shared understanding of recovery needs and will indicate the level of federal support needed.

The Economic RSF has identified seven primary needs and areas of concerns:

- **Lack of Broadband** - A review of data from the Federal Communications Commission (FCC) indicates that 100% of the population in the 23 declared parishes are served by at least two providers of 25/3 Mbps broadband. Further, portions of all the declared parishes (population) have at least three broadband providers. Even so, the most affected EDDs all listed Broadband expansion as a top priority for post hurricane recovery.
- **Business Impacts** - Local stakeholders characterized the events of 2020 as three separate events: COVID-19, Hurricanes Laura and Delta which had the ancillary impacts of significantly reducing demand for fuel due to travel restrictions, sudden decrease in demand for fuel resulted in the price of oil dropping in July 2020. As a result, Oil and gas extraction, the related support industries, and Petro-chemical manufacturing also suffered tremendously. The tourism industry has also been adversely impacted by both COVID-19 and the hurricanes.
- **Seafood and Fishing Industry Impacts** - Hurricane Laura impacted some of Louisiana's most important fishing communities and exacerbated the economic and physical difficulties of selling and harvesting seafood in Louisiana related to the COVID-19 pandemic. In the impacted parishes, the commercial and recreational fishing industry is a vital employer and an important component of the state's economy. As the largest producer of domestic seafood for the US, restoration of Louisiana's fisheries, fisheries infrastructure, and habitat is critical to the overall national economy.
- **Unemployment** - The Louisiana Workforce Commission's "Workforce at a Glance" September 2020 estimate in the aftermath of the hurricane season on the Lake Charles area, is 90,700 jobs lost. Hurricane Laura came ashore on August 27 and its initial effects on the job market are shown in this estimate. These losses were comprehensive and cut across the construction; manufacturing; trade, transportation, and utilities; retail; professional and business services; and leisure and hospitality.
- **Agricultural Industry Impacts** - Hurricane Laura devastated 757,538 acres of timber from the southwest to northeast parts of the state which totaled \$1.6 billion in losses for Louisiana agriculture. Calcasieu Parish had the highest forestry acreage damage total of 188,292 acres, but the lost timber value was estimated at \$76.7 million. There were also significant damages to rice, sugarcane, soybeans, cotton, crawfish, corn, hay, pecans, sweet potatoes, grain sorghum, and livestock, including cattle, horses, and poultry.

- **Disruptions to Transportation** - The hurricanes caused the closure of portions of major interstates, hundreds of state and local roads, and several major and short-line railroads. This caused major disruptions in the distribution of products and merchandise which included life sustaining items such as food, supplies and medicine.
- **Impact on the Tourist Industry** - Louisiana has a vibrant tourism industry. According to the U.S. Department of Labor, as of June 30, 2020, 53,293 persons were employed in the Accommodation and Food Services Industry in the declared parishes, with associated quarterly wages were nearly \$200 million. This vibrant tourism industry, and in particular Mardi Gras, which was celebrated in February 2020, just prior to the major COVID-19 outbreak in the U.S. Many attributes the Mardi Gras events as reasons for Louisiana having an especially high number of COVID-19 cases.

Summary

It should be noted that while the findings are indicative of informational sessions to date, continued coordination of meetings should continue with relevant stakeholders to facilitate information sharing as the situation evolves. To summarize, the mission of the Economic RSF is to gather information and scope potential issues/areas of concerns. This effort will involve not only confirming the issues/challenges listed above, but to include additional issues highlighted by local, state and federal governments. Once completed, the Economic RSF and partners will begin scoping recovery support strategies.

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Recovery Support Function (RSF 3) Health and Social Services Findings

Overview and Status of Recovery Operations

FEMA Interagency Recovery Coordination (IRC) Cell DR-4559-LA/DR-4570-LA coordinates both internally and external Federal agencies. IRC is comprised of six RSF coordinating agencies (FEMA, USACE, HUD, DOI, DOC/EDA, HHS) and supporting agencies. All may be able to support wider recovery needs beyond the Stafford Act eligible programs. For Hurricanes Laura and Delta, IRC has activated all six of the RSFs.

The IRC has conducted a comprehensive recovery assessment effort called the *Recovery Needs Assessment* (RNA). The effort ensured engagement with key stakeholders from FEMA programs (IA, PA, and Mitigation), RSFs, supporting federal agencies and State and Local partners impacted by the disaster. So far, this process has helped to identify key recovery issues (listed below) which contributes towards a shared understanding of recovery needs and eventually will indicate the level of federal support needed.

All six RSFs within the IRC Cell met with a variety of key stakeholders; including GOHSEP, OCD, Imperial Calcasieu Planning Commission, Community Foundation of Southwest Louisiana, Southwest Louisiana Economic Development Alliance.

Specifically to the HSS RSF, the mission of the this RSF is to assist the Louisiana HSS RSF-3 with locally-led recovery efforts through the evaluation and restoration of issue impacts across the 9 core HSS mission areas (public health, health care services, behavioral health, environmental health, food safety and regulated medical products, long-term health issues specific to responders, social services, referral to social services/disaster case management, and children and youth in disasters) to promote the resilience, health, and well-being of affected individuals and communities.

The HSS RSF has identified five primary needs and areas of concerns:

- **Capacity of providers to ensure continued access to health care** - Support state efforts to restore the capacity and resilience of essential health care providers to meet ongoing and emerging post-disaster needs.
- **Loss of essential social services** - Support state, local, and federal efforts to restore essential social services and improve operational resilience in future disasters. Essential social services include the following systems that support at-risk populations
- **Supporting an educational system that meets current student needs** - Support the continuity of and continued access to schools and the educational system. Provide appropriate HSS RSF educational systems support to Economic RSF efforts to promote retraining and other options for survivors in occupations that are not deemed sustainable. Evaluation of the impact of food insecurity, limited Recommended next steps
- **Meeting behavioral health needs of the population in the impacted area** - Provide adequate, appropriate, and accessible behavioral health services to individuals and families impacted by the hurricanes or previous disasters. This includes coordination of behavioral health services and substance abuse treatment, supporting planning to incorporate external (non-Louisiana) providers, identifying and addressing training or knowledge gaps for clinical and subclinical interventions to promote coping with post-disaster stress, and integrating behavioral health strategy with partners involved in Disaster Case Management efforts.

- **Addressing the public health issues that directly impact the population** - Assessing the impact of both hurricanes Laura and Delta is essential as many residents have been displaced and not yet returned to the community.

Summary

It should be noted that while the findings are indicative of informational sessions to date, continued coordination of these meetings should continue with relevant stakeholders to facilitate information sharing as the situation evolves. To summarize, the mission of the HSS RSF is to gather information and assist HSS RSF-3 through the evaluation and restoration of issue impacts across the 9 core mission areas to promote the resilience, health, and well-being of affected individual's ad communities. This effort will involve not only confirming the issues/challenges listed above, but to include additional issues highlighted by partners. Recovery from this disaster presents a dynamic situation for all the residents of Louisiana. As a result, although the information in this needs assessment is comprehensive, it will evolve through the ongoing assessment and update process.

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Recovery Support Function (RSF 4) Housing Findings

Overview and Status of Recovery Operations

Outreach to impacted communities and housing recovery stakeholders is a critical component of the Housing RSF's work. Input from state, regional, as well as residents of the impacted areas provides a qualitative view of disaster impacts and recovery needs, and a qualitative balance to in-depth data analysis. The Housing RSF team, with guidance from the State, the local HUD New Orleans Field Office, FEMA, and others engaged in the recovery effort, identified a vast network of partners and organizations to engage.

The Housing RSF team scheduled three Housing Impact Assessment Focus Group Zoom video conference meetings. Participants were asked to identify priority housing recovery issues, obstacles to recovery, and opportunities for new partnerships. The groups were asked to discuss capacity challenges and the complexities of recovering from recurring and concurrent disasters. Other topics included: lessons learned from past disasters, best practices in post-disaster housing construction, cross-cutting issues (health, economics, education, transportation), special-needs populations, and resilience.

As the lead agency for the Housing Recovery Support Function (RSF), the United States Department Housing and Urban Development works in concert with federal partners to identify housing recovery issues and needs, and cross-cutting concerns regarding housing recovery for impacted residents. Extensive data analysis, and ongoing discussions with federal, state, tribal and local partners, and housing stakeholder groups, informed this assessment.

The Housing RSF has identified five primary needs and areas of concerns:

- **Increasing affordable, accessible housing options** - All focus groups identified affordable, accessible housing as the number one necessity or problem to be solved regarding SW Louisiana housing recovery. Specifically, the need for mixed income developments, multifamily housing, and single-family homes.
- **Expand capacity of the affordable housing sector** - Local governments, community housing development organizations, non-profits and financial partners face a limited staff and funding. These capacity limitations present difficulties for investment in new construction projects and/or the rehabilitation of existing structures in impacted communities.
- **Improve housing quality and resiliency** - An investment in improved building materials and standards will lead to a reduction in structural and financial loss when the next disaster comes. Enhancing construction practices and codes has the potential to improve homeowner, governmental, commercial, and environmental resilience.
- **Mitigate risk and repetitive loss** - Mitigating the impacts of disasters is imperative to reduce the catastrophic community impact. A resilient housing system can help to address both the acute and the long-term challenges of a region, county, city, community, and household. Stable, affordable housing is foundational to ensuring individuals can navigate stress.
- **Enhance communication, coordination and collaboration** - The effects of COVID-19 presents the need to rethink how we share information. The loss from storm damage of technology access, internet, and broadband makes communication on all levels difficult. New ways of working together, through new structures, policies and programs, or the expansion or modification of existing activities.

Summary

Achieving the state outcomes means collaboration between multiple RSFs and state and local partners to address a multitude of issues including environmental, economic, and health and social services concerns. As the housing RSF coordinating agency, the U.S. Department of Housing and Urban Development field and national coordinators understand these interdependencies. Coordination is underway to ensure that there is a synchronized approach to supporting the state in reaching desired outcomes.

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Recovery Support Function (RSF 5) Infrastructure Findings

Overview and Status of Recovery Operations

Infrastructure Stability and Resilience will play a key role Louisiana recovery. It supports and enables vibrant communities. In evaluating, planning, and executing infrastructure projects, the following concepts will help the state and local governments, as well as other entities, prioritize projects and build more resilient infrastructure.

Resilience is a property of systems rather than assets. Resilience is the ability to adapt to changing conditions and prepare for, withstand, and rapidly recover from disruption. Its scope includes both social and economic activity and the natural environment. Mitigation is one of many components of resilience.

Infrastructure exists to enable social and economic functions. Stakeholders should first think about the desired function, followed by evaluating how infrastructure supports it and whether alternatives should also be considered. FEMA's Community Lifeline Function framework is a useful resource in linking one set of functions to supporting infrastructure.

The Infrastructure RSF has identified four primary needs and areas of concerns:

- **Resilience of Electric Power Service** - Electricity providers face challenges in two types of prioritization. First, during steady-state, providers need to prioritize limited resources to maximize their resilience investments prior to a disaster. Second, providers need to prioritize their response and restoration operations to achieve the greatest recovery impact in the shortest possible time. The difficulty and complexity of achieving these goals increases with the size of the system and the severity of the disaster. Addressing prioritization challenges can mitigate negative cascading impacts in future disasters, such as that experienced by Louisiana water systems.
- **Resilience of Waterway and Waterside Infrastructure** - Waterway and waterside infrastructure experienced several types of impacts including loss of electricity, obstructing debris, and damage to equipment. These disruptions had economic, operational and supply chain consequences. There are two interrelated considerations in evaluating recovery needs. First, there could have been additional and more severe impacts under different circumstances. Second, disruption of this infrastructure has cascading impacts to other geographic areas and parts of society.
- **Broadband Access** - The State of Louisiana has identified widespread access to broadband internet service as a priority. However, the construction, maintenance and operation of broadband faces several challenges. It is important to emphasize that affordable and resilient internet access supports an equitable community.
- **Coordination of Restoration of Communications** - While response and restoration activities were efficient and effective, reports suggest that there are opportunities to increase coordination related to communications, including broadband internet service. Issues which can benefit from better coordination include inadvertent disruption of communications services by other response and restoration activities, lack of clarity regarding curfew times and access, and unexpected damage to transport facilities and backup power systems.

Summary

Resilient infrastructure enables resolving the challenge of widespread electricity loss is particularly important to the state's most vulnerable residents, whether rural or urban. Increasing the resilience of Louisiana's waterway and waterside infrastructure will support the state's economy as well as its residents. Infrastructure owners and operators can increase their systems' resilience to future disasters by addressing challenges such as knowledge gaps and adequate funding. CISA can support resolving these knowledge gaps through technical assistance. Other federal partners bring to bear their own expertise and grant program assistance.

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Recovery Support Function (RSF 6) Natural & Cultural Resources Findings

Overview and Status of Recovery Operations

The Natural and Cultural Resources (NCR) recovery support function is coordinated by the U.S. Department of the Interior (DOI). NCR which includes both natural resources (land, wildlife, fish, and water) and cultural resources (parks, historic sites, museums, libraries, cemeteries, etc.) are a significant part of a state and local community's foundation. Damage to natural resources is often not readily apparent and takes significant time to evaluate following a disaster. However, damage to fixed cultural assets like parks and museums are more readily observed and evaluated.

In evaluating post disaster damages, NCR reaches out to state, tribal, local, and other Federal agencies to collect data and determine priorities for assessing recovery needs. The overall goal is to establish a flexible recovery plan that restores, protects, and revitalizes the natural, cultural, and environmental resources of the community and builds more resilience into projects in anticipation of reducing or eliminating damages in future natural disaster events.

The NCR RSF has identified four primary needs and areas of concerns:

- **Damage to shoreline wetlands** - Hurricane Laura caused significant damage to an estimated 125 miles of Louisiana coastline. Over seventy percent of this coastline had over wash due to the hurricane surge. The storm surge deposited sand and sediment in coastal marshes and wetlands. In addition to providing unique and valuable wildlife habitat, vibrant coastal wetlands provide a natural buffer zone that can reduce the power of a hurricane surge before it hits inland areas. Over wash of seawater during storms kills vegetation which may rot and release carbon dioxide into the atmosphere. Lingering floodwaters also may kill native wildlife species which offers the opportunity for invasive species to move in.
- **Damage to parks, historic buildings, and museums** - The recent hurricanes damaged historical structures, historical districts, and cultural institutions – museums, libraries, parks, court records, historical societies, and arts organizations throughout Southwest Louisiana. Recovery and increasing resilience will require repair, replacement, and/or mitigation of structures, historic districts, parks, and cultural resource institutions. The State currently does not have specific details on the nature and extent of damage to these cultural and historic resources. The State also indicated a need to update their 1980's era survey of all historic properties in the affected area. It is essential that emergency managers and cultural stewards know the geographic locations of historic and cultural resources to effectively respond to emergencies and begin the recovery process. The State's goal is to recover these historic and cultural treasures that Louisiana's residents have come to rely on as part of their identity and culture. These resources also support a growing tourism industry in Southwest Louisiana and an expedient recovery is needed to support the jobs and economy associated with tourism.
- **Damage to the hydrologic drainage system** - Louisiana has more than 4500 miles of drainage ditches and canals which are an integral part of the landscape. Nearly every roadway or field is bordered by a ditch or canal. Louisiana agriculture is dependent upon an effective hydrologic drainage system. Drainage canals shunt polluted stormwater directly to tidal waters allowing for natural filtration and assimilation of pollutants. The waterways also provide for increased runoff during storm events thus reducing floodwaters from surrounding lands and communities.
- **Damage to water resources and wetland ecosystems due to oil and chemical spills** - There are 913 active or orphaned oil wells in the affected area. The Environmental Protection Agency (EPA) received reports of 31 oil and chemical spills related to Hurricane Laura. Oil and chemical spills from natural disasters may impact local ecosystems for decades to come. Toxic chemicals entering the food chain may kill or negatively affect plants and wildlife and eventually work their way through the entire natural food chain

affecting food supplies including fish, shrimp, oysters, and crayfish. Toxic releases and chemical spills compound the damages of natural disasters and often affect low income, underserved communities along the Gulf Coast. Storm displaced families may be exposed to hazardous chemicals when returning to homes in the affected area.

Summary

It should be noted that while the findings are indicative of informational sessions to date, continued coordination of these meetings should continue with relevant stakeholders to facilitate information sharing as the situation evolves. To summarize, the initial mission of the NCR RSF is to gather information and scope potential issues/areas of concerns. This effort will involve not only confirming the issues/challenges listed above, but to include additional issues highlighted by community leaders related to Natural & Cultural resources. This ensures that critical needs for short-term support are identified immediately to meet the needs of the community. Once completed, NCR and partners will begin scoping recovery support strategies and identifying relevant resources.

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Unified Federal Review (UFR) Findings

Overview and Status of Recovery Operations

Federal support of ongoing or anticipated disaster recovery actions/activities in Louisiana such as with emergency protective measures, housing assistance, repair to critical infrastructure and essential services, debris removal, permanent repair, improvement, or relocation of structures and facilities, and communitywide mitigation efforts, will likely result in a large number of disaster recovery projects requiring federal permitting, consultations, or advanced coordination across multiple regulatory and resource agencies. These requirements can extend project review timelines and thereby, delay federal assistance. These recovery efforts may also result in a need to designate lead and cooperating agencies under major environmental laws and Executive Orders (EO) such as the National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA), Endangered Species Act (ESA), Executive Order (EO) 11988, or others which may further complicate the environmental compliance review process or interagency coordination efforts.

Navigating the complexities associated with federal environmental and historic preservation (EHP) compliance reviews, deconflict interagency standards, reduce duplication of efforts, improve federal decision making, streamline coordination, and expedite the overall EHP review process, means that a UFR process must be understood, established, and implemented by federal, state, and tribal partners in Louisiana, to the extent practicable.

EHP compliance issue or concern

There is a continuing need for UFR education, outreach, and implementation. Prior to Hurricane Laura and Delta, the UFR process had not been fully socialized to federal, state, tribal, and local partners in Louisiana. Many were unaware or did not fully comprehend the UFR process, its contributions, and its limitations. To ensure this process is being considered early on and utilized to the maximum extent practicable, federal, state, and tribal partners must possess an applied knowledge of the current UFR framework, application, benefits, and available tools, implementation measures, and best practices.

Summary

Through a UFR Work Group, the UFR Advisor and FEMA EHP staff can continue to bridge the education gap and lay the foundation for a coordinated and expedited review process for disaster recovery across the federal agencies, state agencies, and federally recognized tribal governments. In addition to reviewing and monitoring EHP compliance for disaster recovery activities or projects, the group will also serve as a standing forum for assessing and identifying current or future UFR needs as well as sharing and promoting the use of UFR process efficiencies.

Hazard Mitigation Advisor Findings

Overview and Status of Recovery Operations

The Mitigation Advisor has participated and supported IRC engagements and has met with a variety of key stakeholders, including GOHSEP, OCD, Imperial Calcasieu Planning Commission, Community Foundation of Southwest Louisiana, Southwest Louisiana Economic Development Alliance.

Mitigation will assist the State's priorities in the following areas:

- Coordinate the Hazard Mitigation planning activities for the State of Louisiana and support local plan updates through funding opportunities and/or technical assistance. Implement and maintain a comprehensive and effective statewide hazard mitigation plan.
- Assist and support the State in effectively administer and monitor the Hazard Mitigation Assistance grant programs to ensure the submission of complete sub applications, prompt reimbursements of eligible expenses, and submit each subaward for closeout as soon as practicable and within the established period of performance all while maintaining the highest levels of customer service.
- Enhance the cooperative working relationships with federal, state, and local partners to improve the delivery mechanisms for Hazard Mitigation Assistance programs and maximize investment opportunities to reduce the State's vulnerabilities.
- Assist the local communities in the identification and mitigation of substantially damaged (SD)/repetitive loss (RL)/severe repetitive loss (SRL) properties. The Mitigation Division will work with the FEMA IRCA and the State to provide the necessary tools to increase NFIP/GFIP participations with all communities, the mitigation of SD/RL/SRL properties, and adopting higher standards to improve the overall condition of the floodplain.
- Support the State partners in providing long-term and sustained assistance to help the State's engagements with local communities on how to become resilient and how to increase capacity.
- Improve collaboration with Federal, State and local communities to support the mitigation strategies within each agencies' perspective programs. By improved coordination and collaboration among all agencies, the increased visibilities and understanding among the various programs will reduce duplicities in project reviews.
- Facilitate the local Floodplain Administrator's ability to inspect all impacted structures for substantially damaged assessment. Collaborate with Public Assistance to explore Disaster Recovery Reform Act (DRRA) 1206 funding opportunities.
- Coordinate with IRC and Public Assistance to explore every potential mitigation project to see if 406 Mitigation can be utilized. Increasing use of 406 Mitigation should increase the number of damaged structures re-built beyond the original design, making them more resilient in future events.

Summary

The Mitigation Advisor is committed to support the State and the local communities in the long-term recovery. The coordination between the Mitigation Division and the Interagency Recovery Coordination will be vital to the success of these strategies.

The Mitigation Division wants to advance the local communities' participation in NFIP and the capacities to address the substantial damage properties in the communities by coordinating collective strategies through the Governor's Office of Homeland Security and Emergency Preparedness, the Louisiana

Department of Transportation and Development, FEMA and other Federal and State partners. In addition, the need to adopt and practice higher standards in floodplain management is vital to the future resilience for the local communities. Through planning, developing resilient mitigation projects, and reducing vulnerable housing inventories in repeatedly flooded areas will greatly improve the quality of life and financial investments in these communities.

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EPA Sustainability Advisor Findings

Overview and Status of Recovery Operations

The Sustainability Advisor function supports the IRC and its six RSF through coordination and providing technical assistance on such areas as green infrastructure, inclusion of resilience elements, low-impact development and sustainability elements as necessary in support of priority areas of concern. By bringing in the elements and resources available to the U.S. Environmental Protection Agency (EPA), the sustainability advisor advocates for inclusion of elements to protect human health, drinking water and wastewater infrastructure, healthy communities, capacity development and protection of natural resources as these are significant state and local resources and part of the community's foundation. EPA's resources via contractor support and/or technical assistance can address a multi-media and RSF priority areas of concern.

Although, EPA's authority does not directly impact affordable housing and short, medium and long-term strategies, EPA is well position to support the recovery of impacted areas through some of its community programs, technical assistance, Building Blocks workshops and its coordination with state partner agencies which receive programmatic funding. In addition to some of these resources, EPA can co-fund areas in urban runoff, water and wastewater infrastructure resilience and sustainability, outreach to vulnerable communities.

The Sustainability Advisor identified needs:

- Short, medium and long-term recovery in housing has been identified as a high priority for the state of Louisiana, CPCB and Housing RSFs. The ability to make safe and affordable housing available to address the needs of residents and communities adversely impacted, as well as the availability present a major risk. EPA's Office of Sustainable Communities has technical assistance to communities in the form of workshops/Smart Growth programs to give communities the tools to implement strategies and action plans to re-build stronger.
- Flood Resilience for water and wastewater utilities: Residents in some areas are unable to return to their homes due to lack of drinking water and/or wastewater services, other impacted areas are forced to maintain boil water notices and or intermittent service. By providing this comprehensive 4-step workshop to state of Louisiana utilities, it is anticipated that decision makers will be able to identify short, medium and long-term needs.
- Advocating and use of Smart-Growth, low-impact development, green infrastructure and sustainable elements in the re-building and recovery efforts such as mitigating damage to community structure, infrastructure and natural resources and looking for those areas where cross collaboration and cooperation is necessary.

Summary

It should be noted that while the findings are indicative of informational sessions to date, continued coordination of these meetings should continue with relevant stakeholders to facilitate information sharing as the situation evolves. The initial mission of the Sustainability Advisor is to gather information and provide advice, technical assistance and other resources/tools to address potential issues/areas of concerns. This ensures that critical needs for short-term support are identified immediately to meet the needs of the communities, regional and state.