



Embracing Water to Maintain a Culturally Unique Community



Jefferson Parish National Disaster Resilience Competition Phase 1 Application



CFDA Number: 14.272
Opportunity Title: National Disaster Resilience Competition Funding
Opportunity Number: FR-5800-N-29

Appendix J: CDBG-RDR Crosswalk Checklist (Table of Contents)

Applicant Name: Jefferson Parish Government

Primary Responsible Agency: Department of Floodplain Management & Hazard Mitigation

Competition Phase: Phase 1

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B	Threshold Narrative	N/A	N/A
	General Section	N/A	N/A
	Eligible Applicant	N/A	N/A
	Eligible County	N/A	N/A
	Most Impacted and Distressed Target Area	N/A	N/A
	Eligible Activity	N/A	N/A
	Proposal Incorporates Resilience	N/A	N/A
	National Objective	N/A	N/A
	Overall Benefit	N/A	N/A
	Tie-back	N/A	N/A
	One application per Applicant	N/A	N/A
	Certifications	N/A	N/A
C	Factor 1 - Capacity	N/A	N/A
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	Subfactor: Increases resilience	N/A	N/A
	Subfactor: Model/replicable/holistic	N/A	N/A
	Subfactor: Schedule	N/A	N/A
	Subfactor: Budget	N/A	N/A
	Subfactor: Plan consistency	N/A	N/A
F	Factor 4 - Leverage	N/A	N/A
G	Factor 5 –Long-Term Commitment	N/A	N/A
No page limit	Partner Documentation for Each Partner	N/A	N/A
	Leverage Documentation	N/A	N/A
	Consultation Summary	N/A	N/A
	Optional Maps, Drawings, Renderings	N/A	N/A
	Waiver Requests	N/A	N/A
	Benefit-Cost Analysis	N/A	N/A
	Crosswalk Checklist	N/A	N/A
	SF-424	N/A	N/A
	Sources and Uses of Funds	N/A	N/A
	Comment Summary by Topic, List of Comments, and Applicant Response	N/A	N/A

Name of Exhibit: Exhibit A: Executive Summary

Name of Applicant: Jefferson Parish Government (JP)

Name of File that Contains the Exhibit: JeffersonParish_ExhibitA

Executive Summary

Jefferson Parish and incorporated municipalities within the boundaries of Jefferson Parish (herein referred to as ‘JP’) was established in 1825 and named in honor of Thomas Jefferson commemorating his role in purchasing the Louisiana territory from France in 1803. While it was once a largely rural area of farm dairies and vast tracts of undeveloped land, JP today is New Orleans’ first suburb. JP has a total area of 665 square miles, of which 296 square miles is land with the remaining 295 square miles being water or wetlands. The map on page 151 of Attachment_E demonstrates JP’s land areas in relation to the bodies of water that support and threaten the land. For resilience planning purposes, JP has divided the parish into four sections; lake, river, marsh and gulf areas. JP’s largest community, Metairie, and the city of Kenner are bounded to the north by Lake Pontchartrain and are considered the lake area. JP is divided by the Mississippi River into the East Bank (Harahan, River Ridge, and Jefferson) and West Bank (Gretna, Westwego, Marrero, and Harvey) and combined are considered the river area. Farther south located outside of the storm surge levee lays the Intercostal Waterway, Bayou Barataria, the town of Jean Lafitte, and the communities of Crown Point and Barataria referred to as the marsh area. Approximately 35 miles south is the southernmost portion of JP: the town of Grand Isle. This barrier island is bordered by the Gulf of Mexico and is considered the gulf area. In addition to the natural bodies of water, a large, expansive, and complicated system of drainage canals channel throughout JP, from areas inland to the coast. Regardless of which area a JP citizen resides; lake, river, marsh, or gulf; all residents are touched and affected by one common element – water.

Residents of south Louisiana, have a love-hate relationship with water. Known as “Sportsman’s Paradise,” the local lakes, bayous and canals of south Louisiana provide

opportunities for recreational and commercial hunting and fishing. On beautiful, warm and sunny days, recreational boats and water equipment can be spotted across Lake Pontchartrain. A charter fishing trip or a weekend stay at a quaint camp or beach house on the water are speckled in throughout JP. However, every year during the months of June through October, JP residents live with a constant and common fear – Hurricane Season. Residents’ fear stems from the history of large and small hurricanes turning the local bodies of water into a dangerous force of nature which inundates homes and destroys communities.

Striking a balance in our relationship with water has proved a challenge. After years of forcefully pumping storm water out of our communities, JP realizes the damage the pumping has caused to the land. According to the 2014 Greater New Orleans Urban Water Plan, the area “relies on forced drainage systems to keep dry. This single-purpose approach to storm water management...is also the primary cause of subsidence in the region and diminishes the value of the region’s waterways and water bodies as public assets.” Local governing bodies are charged with developing and implementing water management plans that protect both our populations and environment. JP Government desires to champion innovative multi-purpose approaches to water management from the gulf to the lake to strengthen resilience. By creating a culture that embraces water, JP seeks to shift fears and perceptions to create a resilience legacy for future generations ensuring the continuity of our communities and the economic development of our region into an environmentally friendly and culturally unique home.

Name of Exhibit: Exhibit B: Threshold Requirements

Name of Applicant: Jefferson Parish Government (JP)

Name of File that Contains the Exhibit: JeffersonParish_ExhibitB

Exhibit B: Threshold Requirements

I. Threshold Requirement Submission

In this exhibit, JP will demonstrate how it meets the housing, infrastructure, economic, and environmental threshold requirements as defined in Appendix G of the CDBG-NDR NOFA.

II. Demonstrating Most Impacted and Distressed Threshold

A. According to <http://www.huduser.org/portal/CDBGDR/Disaster-AppendixA.pdf>, JP was previously determined by HUD to be most impacted. This is the only application being submitted by JP.

B. N/A

III. Demonstrating Unmet Recovery Needs Threshold Requirement

A. JP received a previous allocation of CDBG-DR funds in response to Hurricane Isaac in 2012.

1. Housing: Prior CDBG-DR funding allocations, with other funding sources, are inadequate for addressing the remaining housing needs of JP. In its 2012 CDBG-DR Isaac Action Plan, the parish allocated \$8,653,190 for the Housing Assistance Program (HAP) and \$2,250,000 for the Elevation Support Program (ESP). Estimates include a potential for 130 households to receive up to \$60,000 in rehab assistance through HAP and 75 households to receive up to \$30,000 in elevation assistance through ESP. As of March 2015, environmental reviews are being performed on 327 program applicants. After environmental reviews are complete, damage and repair cost assessments will be performed by both JP and selected contractors. Not all of the accepted applicants will receive services, as the number of qualified program applicants well exceeds the funding capacity of these programs. The exact number of qualified applicants to be assisted through the HAP and ESP programs will not be determined until the individual home

assessments are performed. Please reference the below table for further detail demonstrating 263 households are remaining on the waitlist or were denied services and are still in need.

Program	Program Capacity	# of Applicants	# of Applicants Accepted	# of Applicants on Wait List	# of Applicants Denied Services
HAP only	130	229	139	19	71
ESP only	75	111	56	9	46
Joint App*	N/A	250	132	22	96
TOTAL	205	590	327	50	213
*Joint App = household submitted one application for both ESP and HAP assistance					

In addition to the houses referenced in the above chart, Hazard Mitigation (HM) has a Hazard Mitigation Grant Program (HMGP) wait list of 20 households that sustained damage during Isaac and have not been elevated or repaired resiliently due to a lack of funding. The list of 20 homes, elevation certificates, flood maps, contractor bids, and photos demonstrating the properties have an unmet need are included in the attachments labeled HousingThreshold_Data included at the following link: <http://jp-appserver.jeffparish.net/hazard/>.

2. Infrastructure: For damage sustained during Hurricane Isaac, the JP Department of Sewerage received \$1,367,388.94 in FEMA funds for restoration of damaged equipment and an allocation of \$4,975,957.89 in CDBG-DR Isaac funds to install Emergency Pump Out (EPO) devices at several lift stations in to mitigate the impact of power outages. Permanent sewer infrastructure remains damaged due to inadequate resources, however JP’s annual capital budget does not contain the ability to address all of the parish’s disaster recovery infrastructure needs. According to JP’s Project Engineer, Rosethorne Wastewater Treatment Facility located at 964 Jean Lafitte

Boulevard, Lafitte, LA 70067 needs to be mitigated to prevent flooding during future surge, flood, or hurricane event. During Hurricane Isaac, storm water inundated the plant resulting in damaged equipment and disruption in treatment operations. The primary unmet need identified to date includes approximately 1,200 feet of levee that needs to be raised to an elevation of +9. The estimated cost for this project is \$500,000. Accompanying reports and data labeled as InfrastructureThreshold_Data are included at the following link: <http://jp-appserver.jeffparish.net/hazard/>.

3. *Economic Revitalization:* Unmet economic revitalization recovery needs due to Hurricane Isaac in JP have not been addressed with existing resources, including CDBG-DR Isaac funds. Numerous businesses within marsh and gulf areas of JP sustained damage during Isaac and have remaining repair/resilience needs. At least five businesses in the marsh area are currently situated below Base Flood Elevation (BFE), sustained flood damage during Hurricane Isaac, and have not been flood-proofed to BFE. Communication with the business owners and community leaders confirmed that indoor flooding occurred at each of the locations during Hurricane Isaac. None of these five businesses have received Hazard Mitigation Assistance (HMA) or CDBG funds, nor are they able to afford elevation expenses through business or personal means, including insurance disbursements. Surveys of the businesses are labeled EconomicThreshold_Data located at the following link: <http://jp-appserver.jeffparish.net/hazard/>.

4. *Environmental Degradation:* Environmental damage from Hurricane Isaac that has not been addressed and cannot be addressed with existing resources remains at the Caminada Headland Shoreline project site. Coastal erosion occurred at this project site, located on Grand Isle within JP, during the incident period of August 26, 2012 through September 10, 2012. This shoreline beach and dune construction project was nearing the construction phase when Isaac hit the

Louisiana coast. The project scope was amended to include damage sustained during Hurricane Isaac in conjunction with the original shoreline and dune construction, but has not yet received funding. Project and damage details included in document number PA-06-LA-4080-PW-01513(0) as well as a certified letter from the Coastal Protection and Restoration Authority stating that the damage still exists are labeled EnvironmentalThreshold_Data located at the following link: <http://jp-appserver.jeffparish.net/hazard/>.

B. N/A

IV. Eligible Activity

All activities proposed in the Phase II application will meet all applicable CDBG-NDR eligibility requirements.

V. Proposal Incorporates Resilience

As referenced in Exhibit G, JP has been incorporating resilience measures into its daily actions for multiple years. Any CDBG-NDR award received as a result of a Phase II submission will provide JP with the tools needed to formally incorporate resilience across the whole community.

VI. National Objective

All activities proposed in the Phase II application will meet at least one of HUD's three primary national objectives.

VII. Overall Benefit

All activities proposed in the Phase II application will assist primarily LMI populations.

VIII. Tie-Back

All activities proposed in the Phase II application will have a tie-back to Hurricane Isaac.

Name of Exhibit: Exhibit C: Capacity

Name of Applicant: Jefferson Parish Government (JP)

Name of File that Contains the Exhibit: JeffersonParish_ExhibitC

Factor 1: Phase 1 Capacity

a. General Management Capacity

1. Implementation Capacity:

The JP Department of Floodplain Management and Hazard Mitigation (HM) will serve as the coordinator for the NDRC application and implementation of any proposed projects or programs that result from NDRC funding. HM has demonstrable management capacity through various methods, including but not limited to: oversight of more than \$200 million in FEMA Hazard Mitigation Assistance (HMA) grants, interpreting Flood Insurance Rate Maps (FIRMs), updating JP's Hazard Mitigation Plan (HM Plan) and coordinating the Community Rating System (CRS) program. HM reports directly to the Department of Public Works and regularly works in conjunction with the Departments of Emergency Management, Community Development, Environmental Affairs, Drainage, Planning, Sewerage, Water and many others. Individual project management, however, will fall to the applicable JP department head under which the selected project or program falls, with HM as the coordinator.

2. Comprehensive Project Management:

HM has increased its management capacity relevant to this proposal by procuring Hunt, Guillot and Associates (HGA) for assistance with Phase I of the NDRC application. If selected for Phase II, a new Request for Proposals (RFP) will be issued for technical assistance.

Internal controls and ethical procurement processes for both project management and day-to-day coordination begins with all JP departments working with the Parish Attorney and Finance offices. The JP Org Chart on page 152 of Attachment_E visually demonstrates how Parish Attorney and Finance have a role to standardize and ensure that all contracts and purchases meet applicable local, state and federal rules and regulations. Specifically, when

administrative departments need to procure services and/or materials, the finance and legal departments work with the department manager to issue purchase orders, execute contracts, and coordinate the details of implementation with any contractors, suppliers, partners, or consultants.

3. Collaborative Partnerships:

JP's experience coordinating partners in previous projects similar in scope of scale to the proposed activities is quite extensive.

JP has received more than \$570 million in state and federal grant funds over the course of ten years from agencies including but not limited to HUD, FEMA, the U.S. Army Corps, EPA, Louisiana DOTD, FTA, Louisiana Office of Community Development Disaster Recovery Unit (OCD-DRU), and Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP). Departments have used these funds to administer public service, community development, infrastructure and emergency management projects both in targeted and parish-wide areas.

JP is also a partner in intergovernmental initiatives including the Southeast Flood Control Project, the USDA Watershed Program, the Statewide Flood Control Program, the Coastal Protection and Restoration Authority (CPRA), and the Greater New Orleans Urban Water Plan. Administration of the projects associated with each of these plans is coordinated by the administrative department in conjunction with other departments that play a supporting role in the implementation of these projects.

4. Writing Process:

HM staff and an HGA consultant drafted the proposal together. HM staff led bi-weekly meetings with HGA to discuss proposed content. HM staff will lead the project throughout its lifetime, ensuring continuity of project coordination. In an effort to analyze long term resilience

efforts, HM will create a comprehensive database of all related disaster management projects. The system will allow HM staff to view the entire system and its capacity in real time, tracking assets, expenditures and on-going projects.

b. Cross-Disciplinary Technical Capacity

1. JP Capacity:

JP Government consists of 37 departments, approximately 2,650 employees, an estimated 432,552 residents, and has administered thousands of large and small scale projects/programs. Parish administrative departments required qualifications, roles, and duties are codified in the JP Code of Ordinances Div. 2 ensuring continuity of operations from one administration to the next. The departments that may be responsible for various tasks of the NDRC programs or projects have in-house expertise from directors and other personnel in the following areas:

- I. Public Information Office (PIO): Provides comprehensive information resources for citizens and visitors and also published the Natural Hazards Preparedness Survey.
- II. Finance: Responsible for the financial management and planning of JP Government including oversight of the departments of purchasing, budgeting, and accounting.
- III. Public Works (PW):
 - Capital Projects: Provides support to other PW departments by assisting in planning, programming, managing, and engineering of capital improvements.
 - Drainage: Administration, direction, coordination and implementation of major drainage and flood control programs. Direct operation, construction and maintenance of 340 miles of drainage canals and drainage ditches, 1465 miles of street subsurface drainage systems, and 53 drainage pump stations.

Engineering: Assists PW departments in matters requiring engineering design, construction supervision, and project management. Remotely monitors water, sewer, and drainage facilities. Maintains records of street and utility infrastructure, assists with field location layout and topographical information. Responsible for management and review of road and bridge construction, public utility construction, and tie-in of existing public utilities.

Environmental Affairs: Responsible for Storm Water Management Program, the Coastal Zone Management Program, and the Industrial Development and Research Program. Assists all departments in maintaining overall compliance with federal, state and local environmental regulations.

Floodplain Management and Hazard Mitigation: Responsible for flood zone determinations, compliance with FEMA FIRM, oversight of FEMA HMA programs, and coordination of disaster resilience.

Parkways Department: Maintains trees, shrubs and plants in public areas.

Sewerage Department: Oversight of all aspects of treating, pumping, and collecting untreated sewage then pumping treated wastewater to the Mississippi River for discharge.

Streets Department: Maintains road surfaces, bridges, and street drainage. Coordinates long range planning with JP Engineering, DOTD, and other agencies to facilitate improvements to roadways under municipality jurisdiction.

Water Department: Produces and delivers a potable water supply to JP residents, businesses, and industry.

IV. Operations

Emergency Management: Provides planning for departments and overall coordination during major emergencies and natural disasters.

V. Community Programs

Citizens Affairs: Provides services for the disabled, special events, Hispanic outreach and senior services.

Community Development (CD): Management of CDBG, HOME and ESG.

Jefferson Community Action Programs (JEFFCAP): Dedicated to serving the elderly, disabled, disadvantaged and youth through federal and state programs.

Transit Administration: Provides public transportation to residents.

VI. Services

General Services: Provides property management and central printing services.

Parks and Recreation: Offers recreational activities including athletic programs, senior citizen activities, community enrichment programs, and special events.

Planning Department: Responsible for all planning activities in the unincorporated areas.

Partner Capacity:

While JP has tremendous internal capacity, the expertise held by external partners adds to the capabilities of JP's resilience efforts as well. Full descriptions of services for all partners are located in Attachment_A.

- I. Economic Development – JEDCO and GNO, Inc. serve as entities that provide economic drivers to JP and surrounding communities.
- II. Water based Outreach – Bayouland, SeaGrant, Water Works and Waggoner & Ball serve in roles to provide outreach to citizens and government leaders regarding creating a culture that embraces the natural functions of water.

III. Community Liaisons – NOLA Church and Gulf Restoration Network serve to liaise information to residents of JP in a way that is inviting and understandable to all demographics of the diverse population.

2. To achieve project goals, JP will work across disciplines both internally and externally with partners. As evidenced by pages 12 through 14, JP administrative departments are able to carry out projects and have sufficient manpower to create, develop, and implement innovative resilience initiatives. When needed for a specific project, outside professional services shall be procured in compliance with applicable rules and regulations.

PW engineers serve as one of the most specialized and significant players in JP resilience efforts. The in-house engineering staff is made up of 12 professional engineers with over 183 years of combined experience. They ensure construction projects meet or exceed all required design standards.

Besides these engineers on staff, there are numerous attorneys; five Certified Floodplain Managers; a Water Quality Scientist with certifications in water treatment, production and distribution; a licensed arborist; a certified Louisiana emergency management professional; and a planning director that holds a PhD in Urban Planning with 29 years of related experience.

3. Many JP departments have comprehensive plans that address a variety of subjects including: Planning Dept. - Comprehensive Plan, CD Dept. - CDBG Entitlement Five-Year Consolidated Plan, Drainage Dept. - Master Drainage Plan, Emergency Management Dept. – Emergency Operations Plan, and HM Dept. – Five-Year HM Plan. JP is also a partner in major intergovernmental initiatives that implemented large projects as referenced on page 11 of Exhibit B.

4. The following departments and their respective scopes of work demonstrate JP's capacity to quickly launch and implement a project in the following fields: (Detailed department descriptions are listed on pages 12 through 14):

Data Analysis: Engineering and Capital Projects; Public Works: Sewerage, Water, Drainage, Streets, Parkways; Affordable Housing: CD, JEFFCAP, the Finance Authority and Housing Authority of JP; Environmental Quality: Environmental Affairs; Community Engagement: PIO, CD, JEFFCAP, Emergency Management, HM; Design and Engineering: Engineering and Capital Projects; and Economic Revitalization: Workforce Connection; JEDCO; GNO, Inc.

5. Environmental Affairs has the ability to identify and use science-based information on existing and future risks from climate change to achieve resilience initiatives. When necessary, procurement of professional service providers is attained for assistance to balance workloads. CPRA and HM also have the capacity to assess and address possible future conditions and outcomes, including resilience, of projects and programs over lifecycles.

6. The CD dept. and JEFFCAP both address civil rights and fair housing issues. Through the planning process for the CDBG Five-Year Consolidated Plan, JP's Analysis of Impediments to Fair Housing, and the Fair Housing Action Plan, racial and economic data is analyzed to identify target areas and populations for JP's CDBG programs. JEFFCAP and CD further addresses fair housing and civil rights issues when providing housing services to the citizens.

7. JP will determine and ensure excellent design quality that enhances long-term resilience through the departments of Engineering and Capital Projects. Qualifications of both departments are codified in Sec. 2-242 and 2-260 of the JP Code of Ordinances, ensuring continuity should turnover arise. In addition, employees of both departments are subject to continuing education

requirements that ensure that knowledge of all engineering and construction rules remain up to date. All JP infrastructure projects are subject to review by both departments.

8. If a partner drops out, JP will regain capacity by seeking another entity or organization that possesses a similar knowledge base to that of the former partner. If the partner was one that was required to be procured, applicable rules will be followed to re-bid or select a lower ranked firm.

9. JP determines whether a project is cost reasonable by completing a cost-benefit analysis. HM staff have completed cost benefit analyses using FEMA's BCA toolkit on dozens of FEMA HMA projects.

c. Community Engagement Capacity

1. JP has the capacity to engage community stakeholders using a variety of departments and methods:

I. CD Dept. and JEFFCAP work daily with the low-income, elderly, and disabled populations. Both departments maintain current data and information on demographics and needs of the most vulnerable populations in JP. These departments play a central role in past and future community outreach and engagement for resilience initiatives.

II. JP's HM program managers come into direct contact with those affected by past disasters on a daily basis. HM staff are supremely familiar with the most flood-prone areas of JP, as are staff members from the Drainage, Streets and Emergency Management departments. The unique knowledge of hazard-prone and vulnerable areas is beneficial to all planning, outreach, and implementation aspects of current and future resilience programs.

- III. JP PIO provides beneficial information to the public including news releases, notifications, and emergency bulletins. PIO also manages the production and broadcast of JP government access television. JP has televised council, community, and public meetings that inform the public of activities that affect the residents and communities of JP. PIO has capabilities of providing broad outreach to residents parish-wide or to specific communities in targeted areas.
- IV. The Citizens Affairs department provides services and outreach directly to vulnerable and minority populations as they administer JP's Hispanic outreach, senior citizens services, and citizens with disabilities programs.

Please refer to page 36 in Exhibit E for further details on community engagement actions taken for this application. Outreach efforts and initiatives will be maintained during and after the implementation of any and all resilience programs. JP's Website has pages and links dedicated to informing the public of economic development, infrastructure, and public service activities. Feedback obtained from outreach initiatives will be considered during all phases of resilience projects.

2. JP works regularly with formal and informal community leaders from both unincorporated and incorporated areas. During and after Hurricane Isaac, JP provided municipalities with sandbagging efforts; drinking water; levee repair; street repair; and debris removal. JP also worked with GNO, Inc. to lead a national effort to reform flood insurance, based on immediate needs presented by community leaders, local business owners, and economic development partners. The Homeowner's Insurance Affordability Act of 2014 is a positive nationwide product that started with the Southeast LA leaders.

3. JP has extensive experience working with and coordinating with diverse stakeholders in the consultation process. The geography of JP consists of 305 square miles and six municipalities seen on the map on page 153 of Attachment_E. While all of these geographic areas are located within one parish boundary, many differences exist between the geographies and populations from one municipality to another.

Outreach efforts are required to vary from one community to the next. Approximately seven months after Hurricane Isaac, JP received a Hazard Mitigation Grant allocation that required individual property owners provide documentation. Simply mailing information to the residents of marsh and gulf areas did not provide sufficient results to meet the grant requirements. Staff amended procedure and spent more than ten days in the field visiting properties to deliver friendly reminders. During these field visits, face to face communication with owners revealed some individuals could not read the letters that were mailed. By sitting with property owners, explaining documents, and fostering trust, a positive influx of required documentation resulted in too many properties for the allocation of funds. In contrast to the required field visits in the marsh areas, in river and lake areas, a mailer to Severe Repetitive Loss properties announcing the opening of a grant application resulted in more than 110 properties attending community meetings and supplying required information. Through the JP Program for Public Information (PPI) meeting in March of 2015 brainstorming with realtors, insurance agents, bankers, and community leaders on affective messages for vulnerable populations provided great insight on ways to vary a single message to meet the needs of multiple groups.

JP also has considerable experience working with local, nonprofit, and governmental entities. As a recipient of over \$250 million in federal and state grant funds, JP is required to adhere to all grant requirements that often include extensive planning, development and outreach

activities with various types of entities and communities. For example, CDBG Entitlement grant planning, requires consultation with the local housing authority, healthcare organizations, nonprofits, social service agencies, and faith-based communities. These consultations take place on an annual basis, so the framework is in place in order to engage diverse stakeholders as frequently as needed. The JP PIO assists departments by preparing documents that are visually appealing for outreach and coordinating any consultation process that is necessary.

d. Regional or Multi-Governmental Capacity

1. JP is an active member of many organizations and initiatives that address regional problems, included but not limited to: The SELA Flood Control Project, the USDA Watershed Program, the Statewide Flood Control Program, the CPRA, the SCIP and the LRA, Louisiana Sea Grant, and the Regional Planning Commission (RPC). These organizations all work to effectively remediate drainage, infrastructure, transportation, flooding, and coastal issues.

2. To address resiliency, JP must take an integrated regional-based approach as regional work is more effective in the long term. As demonstrated in the diagram on page 153 of Attachment_E, few local governments are as diverse as JP. With both affluent suburban areas and vulnerable coastal communities, JP must employ strategies as divergent as the population and geography. In the case of gulf areas, the barrier islands are literally the first line of defense for the JP and the region. Moving further inland, street flooding experienced in lake and river areas like Jefferson and Metairie must be addressed through innovative water management so that issues of subsidence and aging infrastructure can be managed. Many business owners throughout JP are also New Orleans or St. Tammany residents.

3. It is critical for communities in Louisiana to recognize their long-term success, safety and prosperity are regionally dependent. Though the geography and assets of each NRDC-eligible

applicant are vastly different, mutual experiences with each disruptive event and with coastal land loss has made it clear that changes in any one part of the region affect the other parts. Furthermore, our economies are intricately linked with community patterns and business activity that illustrates movement between communities and evidence of a cohesive economic region. Due to the flatness of the landscape and to the intertwined nature of habitats and economies alike, one diminished coastal community at the edge of the gulf area means that communities further inland are also at greater risk; and the reverse is true as well. Furthermore, decisions that may benefit a single community may actually be to the detriment of another community. However, strategic planning that involves all coastal communities and stakeholders both upstream and downstream can yield solutions that truly improve resilience across the region. JP will work together with our neighboring parishes and State to formulate a regional approach to resilience. Each jurisdiction will consult one another on evidence-based best practices to efficiently address and assist the most vulnerable populations and reduce class-related disparities. By sharing information and knowledge regarding projects that have successfully assisted vulnerable populations and/or reduced class disparities, jurisdictions can tailor those projects to meet the needs of their respective communities. Regional communications and plans that have been established via organizations such as GNO, Inc., GOHSEP, United Way, and the RPC's that are established to help reduce class-related disparities will also be utilized in leveraging successful ideas and approaches for resilience purposes.

4. While JP will oversee its proposed projects, partnerships with multi-entity organizations to carry out one or more of the specific programs will be sought. JP has the capacity to initiate and coordinate a multi-faceted approach to resilience; however other agencies and organizations will be contracted to implement specific programs or projects as needed.

Name of Exhibit: Exhibit D: Need

Name of Applicant: Jefferson Parish Government (JP)

Name of File that Contains the Exhibit: JeffersonParish_ExhibitD

Factor 2: Phase 1 Most Impacted and Distressed

JP has experienced five hurricanes since 2005 that have caused widespread damage, including Hurricane Isaac that continues to hinder resilience even today. JP has identified unmet needs from Hurricane Isaac in the gulf, marsh, river and lake areas. Housing and infrastructure repairs are needed primarily in the marsh and gulf areas; however the lake and river areas also have repair needs. This approach could provide a whole resilient community. According to FEMA's door-to-door inspections, 12,912 homes in JP endured storm-related damage and the storm surge in JP was greater than 6 feet in some areas. In addition to flooding from surge, loss of power caused wastewater back-up. Infrastructure damage was sustained on sewer lift stations, sewer lines, water plants, street lights, drainage pumping stations, parks, streets and municipal buildings from wind, rain and surge. Much of the storm damaged infrastructure has been repaired; however, necessary repairs and mitigation are needed to JP facilities that remain vulnerable to surge and sea level rise. In addition, marsh areas such as Lafitte, Crown Point and Barataria suffered substantial economic and environmental damage which is not fully recovered. While JP and its citizens have made progress since 2005 (Hurricane Katrina) in its efforts to mitigate, prepare for and recover from natural disasters in a resilient manner, there remains a great need to increase a whole community approach to resilience.

Unmet Need

As stated on page 8 in Exhibit B, 327 households have applied for JP's Housing Assistance (HAP) and/or Elevation Support (ESP) programs. Additional funding is required to ensure all 327 households receive necessary repairs and mitigation measures. The current program contains more than 125 applicants that cannot be served. These applicant numbers do not include the households that are still damaged but did *not* apply for assistance through either

the ESP or HAP programs due to either lack of knowledge or concerns about program complexity. Reference the table on page 9 in Exhibit B for further details. Resilient housing in marsh and gulf areas is important for the seafood and oil industry that employs the residents of these rural communities.

A visit in January of 2015 to the marsh and gulf areas of JP reveals that in addition to the homes remaining at risk of flooding due to the lowest floor's elevation below Base Flood Elevation (BFE), five (5) businesses also remain at risk. Conversations with business owners and employees demonstrate that these businesses remain in operation because the owners cleaned and repaired the facility with personal funds immediately after the flood waters receded. None of the five businesses have the lowest floor above the BFE. When another flood event affects any of these businesses, there is a high probability of the business closing indefinitely. Closure of any business in these small, marsh and coastal communities has a larger economic impact than it would in a larger city. Fuel stations, restaurants and grocery stores are limited in these areas and the failure of businesses could negatively affect tax bases and unemployment.

The Rosethorne Wastewater Treatment Facility located inside the town of Jean Lafitte remains at a high risk of flooding. In order to prevent high tide or coastal surge from damaging the plant repeatedly and subsequently disrupting treatment operations; the 1,200 feet of earthen berm that surrounds the plant needs to be raised to an elevation of greater than +9.

The Caminada Headlands project, as described on page 10 in Exhibit B, was damaged during Hurricane Isaac. The Coastal Protection and Restoration Authority (CPRA) estimates that Isaac caused 210,000 cubic yards of beach fill on 14,000 feet of the Caminada Headlands. Funding to repair the damages was requested and denied through FEMA's Public Assistance (PA) program.

Unmet Recovery Need as It Relates to Most Impacted and Distressed Areas

Comprehensive Risk Approach

The comprehensive risk approach that will be used to analyze need and inform the development of JP's proposed projects and programs utilizes a combination of resources that including the historical data and ranking system utilized in the development of JP's 2015 Hazard Mitigation Plan Update (HM Plan) and future data from CPRA's Flood Risk and Resilience Viewer (CPRA viewer) and a Resiliency Evaluation System that will be used by JP in evaluating future public works projects in regards to resilience.

The Mitigation Planning Team (MPT) used a science-based numerical ranking system when drafting the HM Plan Update to determine the hazards with the greatest potential to adversely impact JP. Various national, regional and local sources were used to identify and classify different hazards for JP. Each hazard received a scoring classification of low, medium or high. The criteria used for the detailed risk assessments can be found on page 8 of the HM Plan. This approach considers public health and safety, economic, social and environmental impacts. CPRA's Flood Risk and Resilience Viewer provides information on flood risk, coastal land change and impacts to communities. The viewer utilizes data from CPRA's 2012 Coastal Master Plan. JP's new pilot Resilience Evaluation System will give proposed NDRC projects a "Resilience Score" based on the risks the project will mitigate and other criteria as stated on page 154 of Attachment_E. Projects will be prioritized partially based on the score they receive on their resilience evaluation.

Threats, Hazards and Vulnerabilities

As identified during JP's 2014 HM planning process, homes, businesses, environment and infrastructure are vulnerable from floods, storm surge, coastal erosion and subsidence.

Floods: As evidenced in the HM plan and citizen responses in the NHP survey, in January of 2015, floods have been and continue to be the most frequent, destructive, and costly natural hazard facing JP. There have been 49 floods recorded in JP in the period from 1996 to 2014. Information on JP's flood history can be located on page 44 of the HM Plan. Based on a map of JP's marsh area obtained from CPRA's viewer on page 156 of Attachment_E, flood depths for a 100-year storm will increase from the current potential of 6 feet to 12 feet within the next 50 years. The map on page 163 of Attachment_E shows that, with future flood risks, there is potential for economic damages in amounts greater than \$200 million in the lake area of JP.

Storm Surge: With more than 60% of JP residents living at a first floor elevation at or below sea level, residents are particularly vulnerable to flooding and storm surge. There have been 16 instances of storm surge in JP between 1996 and 2014. Please refer to page 96 of the HM Plan for further information past effects of storm surge on JP. The intensity and frequency of storm surge will increase in the future, as stated on page 127 of the HM Plan, "Rising sea levels coupled with subsidence – known as relative sea level rise – can accelerate coastal erosion and wetland loss, exacerbate flooding, and increase the extent and frequency of storm impacts."

Coastal Erosion: Coastlines in gulf and marsh areas of JP are eroding with incoming water destroying wetlands that buffer the lake and river areas. Within the past 100 years, Louisiana's barrier islands have decreased in land area by more than 40 percent, and some islands have lost more than 75 percent of land area. JP host the only inhabited barrier island in Louisiana, Grand Isle; which has more unique natural hazard vulnerability than the rest of the state. For past effects from coastal erosion, refer to page 124 of the HM Plan. The map located on page 157 of Attachment_E obtained from the CPRA viewer shows that, 50 years in the future, there is potential for 50% or more of Grand Isle to have eroded.

Subsidence: While all areas in JP are at risk to subsidence, different land areas are sinking at different rates. According to CPRA, part of the lake area is sinking up to 35 mm a year, while the gulf and marsh areas are sinking at a rate of up to 25mm per year. Land subsidence throughout JP has caused damage to roads, sewer and drainage systems which can cause increased flooding. For past effects of subsidence, refer to page 127 of the HM Plan. According to page the GNO Urban Water Plan, “deep organic soil layers indicate the potential for continued subsidence if new approaches to managing stormwater and groundwater are not adopted.”

Data and Information

In order to gather best available data from JP and the Southeast region of LA, the data and information used to identify risks and vulnerabilities was gathered from JP’s 2015 HM Plan Update, CPRA’s Flood Risk and Resilience Viewer, CPRA’s Master Plan, the GNO Urban Water Plan and Jefferson Edge 2020 Strategic Implementation Plan: Flood Protection. Any demographic data utilized for the Phase I and Phase II NDRC applications will come directly from HUD’s FY 2014 LMISD income and demographic datasets.

Risks and Hazards

According to the HM Plan’s hazard ranking, the top 5 hazards facing JP currently are: floods, hurricanes and tropical storms, storm surge, coastal erosion and subsidence. Detailed information regarding the severity and likelihood of each risk is listed in the HM Plan, which is located in its entirety at the following link: <http://jp-appserver.jeffparish.net/hazard/>.

Insurance

As of April 30, 2014, 94,119 structures in JP maintained flood insurance policies through the NFIP with annual premiums totaling greater than \$77 million. Since 1978, NFIP policy

holders within JP have filed 101,164 insurance claims for a total loss value of approximately \$2.7 billion. As of April 2014, JP had 6,677 such unmitigated properties. Further information on insured and non-insured properties can be located starting on page 47 of the HM Plan Update. Locations of repetitive loss and severe repetitive loss properties are on page 158 of Attachment_E.

Addressing Threats and Hazards Related to Unmet Needs

By addressing floods, storm surge, coastal erosion and subsidence, JP will address unmet housing, economic and infrastructure needs.

Floods and Storm Surge: Unmet affordable housing and economic revitalization needs will be addressed through home and business elevations, while unmet infrastructure needs will be addressed through a combination of projects that include levees, green infrastructure, storm water drainage improvements and sewer improvements. Improvements made to road infrastructure to alleviate traffic during evacuations will allow residents to evacuate prior to floods or storm surge in an expedited manner.

Coastal Erosion and Subsidence: The benefits of coastal protection and restoration and subsidence projects are numerous and widespread. The objectives of CPRA's 2012 Coastal Master Plan are to "improve flood protection for families and businesses, recreate the natural processes that built Louisiana's delta, and ensure that our coast continues to be both a Sportsman's Paradise and a hub for commerce and industry." According to the GNO Urban Water Plan, alleviating subsidence through enhanced stormwater management practices will "not only lead to improved safety but also to economic vitality and enhanced quality of life in one of the most economically productive, culturally vibrant, and densely populated areas in Louisiana." If JP implements the measures suggested in the two aforementioned plans in order to mitigate

coastal erosion and subsidence houses, businesses, environment and the population will be saved future remediation costs that increase annually.

Disproportionate Effects

The population groups that are generally more affected by any disaster-related issues are the low-income and the elderly. Low-income individuals and households generally have a difficult time elevating, mitigating, or maintaining the necessary insurance for homes. Therefore, when a disaster strikes, elderly households are more likely to sustain flood damage and simultaneously not be compensated for that damage via an insurance carrier. Elderly populations are at greater risk as well as they often are unable to prepare their homes for a disaster. They may also be more sensitive to heat, water quality, and other public health hazards that occur during and after a disaster due to the lack of electricity or flooding. According to HUD FY 2014 LMISD data, 7.04% of the Barataria population is below the poverty rate and 32.48% is elderly. In the neighboring town of Lafitte, 15.47% of the population is elderly and lives below the poverty rate. If another flood event were to affect one of these marsh areas within the next few years, it would be devastating for these communities as much of the population would be financially and physically unable to return. By mitigating risks associated with floods, storm surge, subsidence, and coastal erosion the low-income and elderly households will be better protected from environmental dangers and natural disasters and will recover in a more resilient fashion.

Opportunities

According to The Data Center's December 2014 report, "The Water Workers: Workforce Opportunities in Water Management in Southeast Louisiana," the industrial field of "water management" is one of the fastest growing job sectors in Southeast Louisiana. By pursuing projects and programs that address water-related risks such as flooding, storm surge, coastal

erosion and subsidence, JP can contribute to job creation and economic growth while concurrently mitigating risks resulting in the community, region, state and nation in becoming more resilient.

Existing Conditions

The natural hazards identified previously in this section are compounded by community stressors of aging infrastructure and citizens' response to water.

Aging Infrastructure: JP infrastructure is slowly aging across the widespread jurisdiction. Connecting the marsh region and gulf region residents is a 32 mile water distribution line below the surface of water and marsh as seen in the map on page 160 of Attachment_E. One portion of the line currently has less than 5 feet of cover due to coastal erosion and is susceptible to ship traffic. This water line is the primary supply of potable water to Grand Isle residents leading to vulnerability for contamination and public health when the line is damaged from storms or ship traffic. Resilience from Hurricane Isaac in the Town of Grand Isle is slow for multiple reasons, one being the lack of reliable potable water available on the island. To mitigate this problem, the distribution line needs to be lowered to at least 20 feet below the surface of the water and marsh.

Beyond Grand Isle, the safety of JP's water supply as a whole community has been taxed during recent hurricanes as well. During Hurricane Isaac, water saturated soil plus strong winds uprooted trees, that have grown under water lines, causing multiple water line breaks on private property and parish infrastructure. Water mains then lost pressure allowing for the potential of soil borne organisms to enter the distribution system. JP has a comprehensive system for purifying water and repairing water line breaks, however recognizes the need to quickly and efficiently test the water supply for these pathogens locally to alleviate public health emergencies for the entire community.

JP has sewer lift stations in all areas that are vulnerable to flooding, surge, subsidence, and power outages. Refer to the map on page 159 of Attachment_E for reference of locations of sewer infrastructure. As a result of Isaac, approximately 98% of the 512 JP's sewer lift stations were out of service due to power outages for up to seven days. Inoperable lift stations, could lead to a secondary public health disaster for the community due to by-pass pumping or waste water back-up into homes. Although emergency pump outs and generators are being installed at many lift stations, given the increased rain and sea level rise prediction, JP will remain vulnerable to disasters until the sewer system functions manually without the need for power.

Public Opinion: After undergoing numerous large-scale disasters including hurricanes, flooding, and storm surges, most residents of South Louisiana have grown accustomed to the lake and river area's first line of mechanical defense in stormwater management: forced drainage. As evidenced by the GNO Urban Water Plan, high concentrations of impervious (as seen in the map on page 161 of Attachment_E) areas lead to excessive levels of runoff and street flooding that overwhelm the capacity of existing drainage systems. In order to implement change and revamp the region's current single-purpose approach to storm water management, the public and government personnel will need education on innovative and environmentally friendly multi-purpose approaches that encompass retention prior to pumping. JP has constructed a pilot retention pond at a community park that has alleviated some street flooding and allowed neighbors to see the benefits of retention of storm water. As seen on page 162 of Attachment_E, JP has multiple parks and recreation locations throughout the lake and river areas that will be monitored for viability of use for a communitywide resilience stormwater management plan.

Name of Exhibit: Exhibit E: Soundness of Approach

Name of Applicant: Jefferson Parish Government (JP)

Name of File that Contains the Exhibit: JeffersonParish_ExhibitE

Factor 3: Phase 1 Soundness of Approach

a. Consultation

JP attended meetings with the Louisiana Office of Community Development Disaster Recovery Unit (OCD –DRU) and with the Parishes of St. Tammany and Orleans to discuss regional approaches to resilience. Issues discussed at these meetings included subsidence, coastal erosion, economic dependency, and population loss and growth. Sharing information and experiences, analyzing data sources and evidence-based best practices were valuable in developing and implementing effective resilience projects that will assist the most vulnerable populations and provide the greatest benefit to our communities.

Strategic planning involving multiple coastal communities and stakeholders can yield solutions that improve resilience across the region and nation. Starting in 2012, JP participated in the planning and development of the Greater New Orleans (GNO) Urban Water Plan and the Coastal Protection and Restoration Authority’s (CPRA) Coastal Master Plan. These two regional plans focus on resilience from natural hazards and have provided JP with project ideas, information, and data that are being utilized throughout the NDRC planning process.

A JP Resilience Task Force was formed using representatives from JP departments, municipalities and partner organizations. The task force meetings were used as opportunities for information gathering and resilience brainstorming. Members of the task force participated in a shocks-and-stressors exercise that assisted JP in identifying hazards, events, social and environmental circumstances that hinder resilience. The task force meetings also stimulated communication between internal departments that do not routinely contact one another. Although the task force includes department heads, an additional meeting was held with field staff to ensure information was received from a bottom up approach.

In January of 2015, a Natural Hazards Preparedness (NHP) Survey was distributed via the Public Information Office (PIO) to all JP employees, made available via a press release and Website posting. This survey is being used for multiple facets of JP's resilience approach; including citizen's greatest hazard concerns per area, water-based volunteer activities, and previous resilience actions taken. Of the more than 650 survey responses received from January 15, 2015 through January 30, 2015, 30 households had incomes under \$15,000 per year (providing low-income perspective), 81 were aged greater than 66 years (adding elderly perspective), and 72 individuals were from areas outside of JP (adding regional perspective). According to survey results, the top three concerns of respondents during a rain event are house flooding, street flooding and evacuation. See Attachment_D for survey results.

JP HM staff, as founding members of Jefferson United Mitigation Professionals (JUMP), initiated the creation of a Program for Public Information (PPI) Committee. The members of this organization consisting of employees and citizens from: JP, municipalities, insurance, lending and housing sectors were charged with both completing and engaging contacts in the NHP Survey. JUMP members and PPI members will play significant roles in the community outreach efforts of JP's resilience initiatives.

JP also worked with GNO, Inc. in a follow-up to the Greater New Orleans Urban Water Plan by distributing a survey to the Elmwood Business Association asking questions about flooding, demographics, weather related business interruptions, and the importance of water infrastructure. Those who responded conveyed a variety of concerns including one-third referencing drainage or flooding as the primary infrastructure concern. The Elmwood area received significant attention in the GNO Urban Water Plan since it is an impervious commercial district that floods often. The area has previously been considered for green infrastructure

improvements that could relieve flooding and turn storm water into a benefit for the local landscape; however, lack of funding has slowed progress.

HM staff consulted with homeowners from vulnerable areas affected by Hurricane Isaac both individually in one-on-one meetings and collectively at community meetings. Through conversations and meetings with affected homeowners in flood-prone areas, JP received a rich understanding of residents' concerns regarding housing, flooding, insurance and resilience. Many homeowners in vulnerable areas make a living on or near the water through fisheries or oil production. These residents offer policy makers a unique perspective in that they need protection from the water, yet they also need to access water in order to sustain income. JP takes input from these communities very seriously as it is necessary to protect our culture and residents while learning to resiliently live with water.

JP regularly televises council and public meetings that inform citizens of activities that affect JP. Department webpages have information and links dedicated to informing the public of activities and projects. The NDRC Phase I application draft was posted on the JP Website, as was the notice for the NHP survey and public hearing.

The stakeholders for this project are internal departments, JP municipalities, other governmental bodies and nonprofits. HM has worked with these stakeholders to develop this Phase 1 proposal through interviews, conversations, meetings, public hearings, and survey distribution. If advanced to Phase 2, HM will work with stakeholders by initiating the appropriate formal agreement or contract. JP has also participated in meetings with local advocacy groups such as Bayou Land RD&C Council, JEDCO, Water Works, Louisiana Sea Grant, and Restore or Retreat.

The results of the collaboration with stakeholders, project partners, and citizens have shaped our proposal by bringing to light both regional issues that are affected by actions taken within JP and the issues of greatest concern to residents. Discussions with the aforementioned stakeholders brought attention to the following cumulative impacts of JP’s risks and vulnerabilities:

Subsidence	Coastal Land Loss	Increased Flooding
Increased Traffic Congestion	Population Decrease	Economic Loss
Decreased Housing Affordability	Aging Infrastructure	Decreased Water Quality

b. Ideas or Concepts

JP is considering a variety of ideas and concepts to improve disaster resilience within JP government. Revisions will be proposed to JP policies and procedures so that resilience measures are considered for applicable processes and projects. A benefit will be the enhanced coordination between departments throughout project development and implementation.

JP’s ideas will positively affect adjacent areas by promoting regional economic resilience, providing accessibility to important resources that are required to maintain a healthy community, relieving evacuation issues, and enhancing natural hurricane protection measures. Potential negative effects include temporary traffic and noise inconveniences that would result from the construction process.

Resilience improvements will be explored for the following areas: JP Sewer System - housing and public needs via the Sewer Capital Improvement Program (SCIP); Water Quality - comprehensive Initiative for regional public health benefits; Traffic Congestion - street and

bridge improvements to ease evacuation traffic flow; Housing - retrofit of existing homes; Economic - retrofit of existing businesses; Environmental - coastal restoration efforts.

The CPRA Coastal Master Plan and GNO Urban Water Plan both advocate for actions to remediate hazards caused by climate change that include: bank stabilization, shoreline protection, barrier islands restoration, and marsh creation. These plans will foster development of many of JP's resilience projects, as both plans advocate for actions in order.

Since September 2012, JP has worked on resilience actions as described in Exhibit G including: creating a new HM Department dedicated to hazard mitigation and floodplain management, enhancing the JP public information system, and elevating flood-prone structures. Significant drainage improvements in repetitive flood areas as referenced on page 45 of the Hazard Mitigation Plan were completed. JP has implemented and maintained the annual Christmas Tree Marsh Restoration Project since 1990 that helps combat wetland erosion in the Barataria Basin, leading to resilience. According to the NHP Survey, 30% of the respondents have participated in this one resilience wetland restoration project.

JP intends to seek avenues for existing projects as well as implement new projects that create a multi-purpose approach to resilience. Projects should transition from mitigating a single hazard/stressor to a comprehensive approach for public health, environmental protection, housing affordability, economic development, and/or public safety. Resilience projects implemented by JP will continue to address wide-ranging unmet needs, as identified in Exhibits B and D, benefiting the whole community.

While JP can positively affect unmet needs internally, JP recognizes the need to work with other regional government, non-profit, and civic groups to fully address whole community vulnerabilities. When appropriate, formal agreements with regional organizations will be

executed. As established in Exhibit C, JP has capacity for implementing large projects; therefore most activities will be managed internally. However when necessary, executed agreements with the appropriate partner be it a nonprofit, local government, or regional organization will be created.

After consulting with multiple JP employees and directors, various departments currently incorporate resilience measures into normal operations; however these resilience efforts are not continually coordinated between employees or departments. Employees of several departments take initiative to think futuristically and address resilience needs of JP in daily action. Ideally, this initiative will become second nature in JP departments as resilience is formally applied to policies and procedures.

JP's overall approach to resilience is evolving into a coordinated cyclical system of evaluation, study, outreach, planning and implementation with the primary goal being to continuously improve upon the community's ability to create a resilient culture in relation to water.

1. EVALUATE existing planning and policy documents and projects for resilience needs, benefits and best practices
2. Procure technical experts to lead new STUDIES for ways to improve resilience
3. Conduct community OUTREACH in JP's lake, river, marsh and gulf areas
4. Use policies, community feedback, and studies to develop and PLAN projects that improve resilience.
5. IMPLEMENT resilience projects

Name of Exhibit: Exhibit F: Leverage

Name of Applicant: Jefferson Parish Government (JP)

Name of File that Contains the Exhibit: JeffersonParish_ExhibitF

Factor 4: Phase 1 Leverage and Outcomes

a. Outcomes

JP is considering a variety of projects and solutions that will entail innovative adaptation to our unique water-based geography. JP will meet disaster recovery and community development objectives by pursuing a combination of infrastructure, outreach, economic and housing projects that will reduce the identified risks and vulnerabilities of the gulf, marsh, river and lake areas. By applying a holistic and comprehensive approach to resilience, multi-purpose projects will be implemented that have sweeping impacts across the region. Whether creating wetlands, sustaining coastal land, addressing aging infrastructure, or lessening subsidence; JP will decrease the storm effects that are felt further inland in Louisiana and surrounding states.

Proposed projects will be selected based on the needs established in Exhibits B and D of this application and will be as diverse as the geography of JP. Projects will be prioritized and implemented in phases; allowing JP to efficiently and effectively maximize resources. Initiatives that have a multitude of long-lasting benefits or regional impacts may receive priority assistance as opposed to smaller projects that only address one risk or hazard.

Some projects will entail a large-scale up-front effort followed by limited maintenance and others will involve a multi-phase construction project that will continue over time. Other programs are educational in nature and may be on a smaller scale but will last for an extended period of time. JP is seeking projects for public facilities as pilot projects for businesses and residents in green infrastructure, levee improvements for unprotected areas, and water quality initiatives that will serve both public health and economic development purposes.

Outcome measures will be designed to reflect the specific type of project being implemented. Each project manager, subrecipient, or contractor will be contractually obligated

to track the direct and indirect beneficiaries of the project. Direct beneficiaries examples include: individuals' receiving services, access to a facility, or whose home received assistance from a project. In contrast, an indirect beneficiary would be an economic development or housing construction boom that occurs after a neighborhood infrastructure improvement is complete. The success of a project will be evaluated through the collection of data and beneficiary demographic information. Informal observations regarding the impact of the project on the community and region will also be tracked through written narratives and reports.

b. Leverage

As referenced in Exhibit C, there is a wide breadth of environmental, infrastructure, housing, and economic knowledge that exists within the governmental, nonprofit, and professional service workforce throughout JP. By using the outreach methods listed in Exhibit E, opportunities for both financial and intellectual leverage resources have been revealed. Potential partners in JP's resilience initiatives include GNO, Inc.; Restore and Retreat; JEDCO; Gulf Restoration Network; Artovia Engineering; HGA; Bayouland; Water Works; OCD-DRU; Waggoner and Ball; and local municipalities.

Technical and subject matter experts from within JP, partner organizations, and contractors will be consulted when designing and implementing projects to leverage resources for the maximum community benefit. For example, insurance and real estate agents are working on outreach messages with JP via the JUMP-PPI committee. Implementing outreach activities that improve JP's Community Rating System (CRS) score will lead to NFIP insurance savings.

JP is expecting to leverage capital outlay and millage funds for project funding and implementation for at least the next five to ten years. One of the projects under consideration will serve as a public health benefit for the entire Southeast LA region and will become a source of

revenue and job creation for JP. This same project would provide significant cost savings to JP in water quality operations and expenses. JP has also participated in meetings with the OCD-DRU, Orleans and St. Tammany Parishes that have solidified each jurisdiction’s commitment to work with and support one another in shared resilience efforts.

Committed Leverage Resources

As detailed in Attachment_B, JP has a total commitment of direct financial assistance in an amount of \$520,245 from sources that include JP Government, the University of New Orleans Research and Technology Foundation, and FEMA. The leveraged resources have been firmly committed to JP for resilience projects via an award letter, executed agreement and/or JP Council resolution or ordinance. The funds are for four resilience initiatives that are explained in the following chart:

Project	Scope	Amount	Source
Hazard Mitigation Plan & NDRC Phase 1	Hunt, Guillot & Associates provides JP assistance with preparing resilience documents.	\$75,000	JP
Design of Force Main Extension & Lift Station Improvements	A&E of a project to address sewer backup and overflows into Lake Pontchartrain. The issues are public health hazards that prevent resilience.	\$59,000 \$50,000	JP UNO - RTF
Purchase of Generator	To install emergency generator at East Bank Consolidated Fire Department.	\$202,500 \$67,500	FEMA JP
Purchase of Generator	To install emergency generator at JP Fire Training Complex.	\$49,684 \$16,561	FEMA JP
TOTAL		\$520,245	

Name of Exhibit: Exhibit G: Long-Term Commitment

Name of Applicant: Jefferson Parish Government (JP)

Name of File that Contains the Exhibit: JeffersonParish_ExhibitG

Factor 5: Phase 1 Regional Coordination and Long-Term Commitment

In order to increase the resilience in our jurisdiction, regardless of whether we receive a CDBG-NDR award, JP has completed the actions in the below table since Hurricane Isaac in August 2012:

	Action Taken	Baseline
1	Elevated 105 houses since Isaac.	995 houses elevated from 2006 - mid 2012.
2	The Sewerage Department is analyzing the hazard risk levels of each pump station to mitigate in the most efficient order.	The risk levels associated with each pump station were not evaluated.
3	Through the CRS user’s group JUMP, steps are being taken to improve JP’s rating within the CRS by increasing resilience.	JP’s CRS rating is Class 6.
4	Distributed a Natural Hazards Preparedness Survey to JP residents and stakeholders.	No resilience survey has ever been distributed to the public.
5	The JP council commissioned a study to investigate specific issues facing the West Bank of JP, titled “West Bank Revival.”	Civic leaders and elected officials were concerned that the West Bank is moving into decline. They wanted to know ‘why.’
6	Participated in the GNO Urban Water Master Plan development process.	This plan is the first urban water plan of its kind in the United States.
7	Updated the JP Hazard Mitigation Plan.	Previous HM Plan was drafted in 2009.
8	Amended the JP Code of Ordinances Chapter to enforce two feet (+2’) of freeboard in areas outside of the hurricane levee system.	All structures on the West Bank followed the 2006 Advisory Base Flood Elevation maps without freeboard.

9	Participated in regional resilience meetings with the Louisiana OCD, the City of New Orleans, St. Tammany Parish, and GNO, Inc.	Prior to the Urban Water Plan and the NDRC NOFA, little resilience collaboration occurred.
10	Created a JP Resilience Task Force.	Interdepartmental coordination within JP lacked. A formal process or group to encourage the coordination and sharing of information did not exist for resilience.
11	Created an Investigation and Rehabilitation Section within the Department of Public Works to determine the source of PW issues prior to individual departments visiting sites.	Residents' calls to public works regarding an issue may have vague details resulting in multiple PW departments visiting the same site to address a single issue.
12	Emergency contracts are procured prior to the start of hurricane season. Vendors or services that may be required during or in the immediate aftermath of a disaster are in place readily available to begin work.	Delays in services needed after a disaster occurred because the JP procurement process would need to be followed in order to contract with a vendor to provide the necessary service.
13	JP mitigated buildings that are critical in the event of a disaster. These steps included updating windows and moving electrical equipment off of the ground floor.	Critical buildings of JP government during or immediately after a disaster would be offline due to the power failure or damaged windows.
14	Demolished 117 blighted properties since September 2012.	The blighted structures were a public health and safety hazard and decreased property values in their vicinity.

If awarded funds from Phase 2, JP will implement the following actions within one year of the award announcement:

	Action	Baseline	Outcome	Effective Date
1	Elevate 200 flood-prone structures.	1,100 structures have been elevated.	1,300 houses will be elevated	September 2016
2	Create a formal evaluation process for JP facilities and green spaces for resilience upgrades.	Various departments have improved JP buildings; however no formal process for evaluations exists.	JP buildings will suffer less damage during and come back on-line faster and more efficiently after a disaster.	June 2016
3	Amend current policies and procedures to include resilience measures.	No formal resilience measures are included in written policies and procedures.	Resilience measures will be considered into actions taken during capital improvements.	June 2016
4	Create a permanent Disaster Resilience position.	No single employee is dedicated to implementing resilience.	Review of all processes, actions, and procurement to confirm that resilience measures are incorporated.	January 2016
5	Implement a pilot program for green infrastructure at government buildings.	Runoff from buildings and flooding issues in parking lots can be mitigated with minor improvements.	Buildings will serve as a model for businesses and residents to implement small but effective resilience measures.	September 2016

	Action	Baseline	Outcome	Effective Date
6	Use the partnerships to initiate a Resilience Outreach campaign to inform citizens on resilience measures.	An outreach and education campaign for resilience does not exist.	The public will become aware of resilience and how to incorporate it into daily lives and construction practices in the community.	June 2016
7	Create a risk analysis process for prioritizing capital improvements.	At this time, a resilience oriented risk analysis is not used when funding JP projects.	Projects will be funded partially based on the score received through the resilience risk analysis.	June 2016
8	Communicate with the JP Schools to implement a program that engages students into a discussion about creating a resilient environment in JP.	Children and teenagers are often unfamiliar with conditions and issues that affect their environment.	Educating students on local environmental issues instills an appreciation for water based resilience. Youth will be involved in making JP more inventive in all water management approaches.	September 2016