



St. Tammany Parish Government

Application to the US Department of Housing and Urban Development's

National Disaster Resilience Competition

Draft for Public Comment

March 5, 2015

EXHIBIT A – EXECUTIVE SUMMARY

St. Tammany Parish is located on the north shore of Lake Pontchartrain, separated from the major population centers of New Orleans and Jefferson Parish by a 6-mile bridge on the eastern edge of the lake and the 24-mile Lake Pontchartrain Causeway in the center. Construction of the Causeway some fifty years ago began the transformation of St. Tammany from a rural, agricultural area with very low population into a bedroom community for commuters to the south shore.

St. Tammany has a rich history dating back to early Native American settlements. In 1810, President James Madison claimed West Florida as part of Louisiana and sent William C. C. Claiborne to claim the territory. Claiborne established the boundaries of the Florida Parishes. He created St. Tammany Parish and named it after Delaware Indian Chief Tamanend.

St. Tammany remained a bedroom community for surrounding urban areas, maintaining the rural and agricultural areas, until the 1980's and 1990's as businesses began relocating to the Parish, beginning to diversify the community. Hurricane Katrina dramatically accelerated St. Tammany's transition to the fastest growing parish in the State, with the fifth largest population, highest average housing costs in the area, and the best public schools in Louisiana. It is the effects of the accelerated growth over the last decade for which the Parish is requesting assistance and that is most relevant to the objectives of the National Disaster Resilience Competition (NDRC).

St. Tammany has been impacted by five major named hurricanes over the last ten years – Katrina and Rita in 2005, Gustav and Ike in 2008, and Isaac in 2012 (the Qualified Disaster). While



damage from Hurricane Isaac was substantial in its own right, its impact was particularly tragic to a community still recovering, economically and physically, from previous storms. The direct impacts of multiple disasters and the indirect impacts caused by the influx of population migrations from vulnerable low-lying and coastal communities throughout South Louisiana have forced St. Tammany to re-examine how it plans for sustainable growth and how it envisions its place and role in the larger region. In recognition of the Parish's transition from a suburban New Orleans community to a cultural and economic hub in its own right and in anticipation of further population migrations, St. Tammany has identified specific initiatives in order to be prepared for future growth, adjust to sea level rise, and address environmental stressors. Hurricane Isaac's effects on the Parish's housing, infrastructure, water quality, and economy were significant and the Parish realizes the need for a comprehensive resilience program in order to address remaining recovery needs and position the Parish to serve as a critical component of Louisiana's overall strategy for increasing disaster preparedness and resilience. Specifically, the Parish will approach resilience in a manner that addresses storm water management and flood protection along with water quality, while developing a resilient economic development infrastructure, and a plan for smart growth along the Interstate 12 corridor (in coordination with its regional neighbors). St. Tammany has diligently faced the challenges from each disaster and the impacts of each on the Parish's communities. St. Tammany has developed plans, completed studies, enlisted partners, engaged citizens and stakeholders, and adjusted organizational structures to be more resilient and prepared to recover from future events. The Parish's efforts, as related to NDRC, build upon a decade of recovery planning and project design and implementation. St. Tammany understands,



however, that NDRC does not represent a culmination of those efforts; rather, it is an opportunity to leverage the momentum and the myriad projects already in progress and build upon the current framework to promote a strong economy with innovative development while investing in our natural resources and cultural diversity to preserve the quality of life that continues to make St. Tammany Parish a vibrant and unique place to live.

EXHIBIT B – THRESHOLD REQUIREMENTS

Introduction

Hurricane Isaac made landfall on the Gulf Coast of Louisiana on August 28, 2012 and remained over Southeast Louisiana for three days with winds of 80mph which expanded to a span of over 200 miles. The slow moving storm produced unprecedented amounts of rain, producing significant flooding throughout the Parish, specifically the low lying areas of Slidell, Mandeville, Madisonville, and Lacombe. Power outages, debris covered streets, and business closures lasted weeks due to the inability of pumping stations to keep up with the amount of rainfall. Hurricane Isaac caused widespread damage to housing, businesses, infrastructure and exacerbated environmental degradation in St. Tammany Parish. St. Tammany was designated a most impacted county (parish) via public notice on May 29, 2013 by the U.S. Department of Housing and Urban Development. Hurricane Isaac further exacerbated damage from previous disasters including Hurricanes Katrina and Rita in 2005, Hurricanes Gustav and Ike in 2008, the Deepwater Horizon oil spill in the Gulf of Mexico in 2010.

Eligible Activity: Specific activities are not included in the Phase I NDRC Application, but St. Tammany Parish will meet all eligibility criteria for all Phase II activities.



Incorporate Resilience: St. Tammany Parish's commitment to resilience is demonstrated in Exhibit G: Long-term Commitments. Despite no specific projects identified in the NDRC Phase I application, St. Tammany Parish will continue to incorporate resilience into all Phase II projects.

Meet a National Objective: St. Tammany Parish will meet national objective requirements through low-and moderate income, slum or blight or urgent community development need for its Phase II submission or projects.

Meet Overall Benefit (or provide a compelling need to receive a waiver): St. Tammany Parish's Phase II projects will primarily benefit LMI populations.

Establish Tie-Back: All activities proposed in Phase II will have a direct tie-back to Hurricane Isaac, the federally qualified disaster for NDRC eligibility.

Benefit-Cost Analysis (Phase II Projects): St. Tammany Parish will perform Benefit-Cost Analysis for all projects identified during Phase II.

Execute Certifications: All required certifications can be found in Appendix C.

Meet General Section Administrative Threshold: St. Tammany Parish meets all Threshold requirements outlined in HUD's FY2014 NOFA for Discretionary Programs.

Demonstrating Most Impacted and Distressed Threshold

According to <http://www.huduser.org/portal/CDBGDR/Disaster-AppendixA.pdf>, St. Tammany Parish is designated by HUD to be a most impacted county (parish).

Unmet Recovery Needs



Housing

The Federal Emergency Management Agency (FEMA) conducted an assessment of homes damaged during Hurricane Isaac in 2012. The assessment revealed 3,812 owner occupied households with damage, and 1,472 renter households with damage within St. Tammany Parish. (STPG 2013 Action Plan). According to the National Flood Insurance Program (NFIP), there are 1,358 insured properties that filed flood claims for Hurricane Isaac. St. Tammany Parish did not allocate Hurricane Isaac CDBG-DR funding for a recovery housing program; however, the Parish has dedicated CDBG-DR funding from previous CDBG-DR allocations from Hurricane Katrina for housing programs while also funding housing programs annually with CDBG Entitlement funds. St. Tammany has utilized over \$30 million dollars from both the Hazard Mitigation Grant Program (HMGP) and Flood Mitigation Assistance (FMA) towards eliminating or drastically reducing future flood claims to residences throughout the Parish. Furthermore, FEMA approved \$6,734,674 in housing assistance to renters, and \$8,708,405 to homeowners for Hurricane Isaac. Despite significant Federal and private investment in repairing homes damaged by Hurricane Isaac, there are still significant unmet repair needs for homes in St. Tammany Parish, including homes that were demolished and not rebuilt, homes that were flooded and are now vacant, and homes with visible repair needs. On February 11, 2015, St. Tammany Parish conducted a windshield survey of homes still in disrepair and/or not served by existing programs due to inadequate funding. St. Tammany Parish surveyed 72 homes and 39 have remaining damage or are in need of mitigation as a result of Hurricane Isaac. Of these surveyed homes, 10 residents certified that the remaining damage or need for mitigation is due to Hurricane Isaac and



identified that they received inadequate resources from insurance/FEMA/SBA to complete the needed repairs or mitigation measures to their home (Appendix [X]).

Infrastructure

Public infrastructure damage caused by Hurricane Isaac included water control facilities, roads, bridges, and levees. St. Tammany Parish has made significant progress in addressing damage caused by Hurricane Isaac and previous federally declared disasters. As of 2013, St. Tammany Parish had 29 Parish infrastructure projects underway using Isaac and pre-Isaac CDBG-DR funds, 125 in planning stages, and 36 completed infrastructure projects including drainage, levee repairs, roads, water and sewer repair and conservation. Since 2009, St. Tammany Parish has invested \$50 million in disaster recovery drainage projects. Despite this progress, St. Tammany Parish still faces unmet infrastructure recovery needs caused by Hurricane Isaac. The Parish sustained damage to the Drainage District No. 2 Lakefront Pump Station and Levee Segments 1 & 3B in Slidell, LA. The project costs for replacing these two critical pieces of infrastructure are \$520,000 for the Lakefront Pump Station and \$67,019 for Levee Segments 1 & 3B, for a total of \$587,019 in total costs to return these facilities to their previous states. Replacement costs exceed the total amount of funding needed to replace Levee Segment 1 & 3B and the Lakefront Pump Station. To date, \$22,678 in FEMA Public Assistance has been allocated to Slidell Levee Segments 1& 3B. A total of \$163,875 in FEMA Public Assistance has been allocated to Drainage District No. 2's Lakefront Pump Station. The total unmet infrastructure need for both Lakefront Pump Station and Levee Segments 1 & 3B is \$400,466.46. (See appendix [X] for certifications from Paul Carroll P.E. for Lakefront Pump Station, and Slidell Levee Segment 1&



3B demonstrating the total unmet recovery need for infrastructure is \$400,446.)

Economic Revitalization

The economic impact from Hurricane Isaac consisted of flood and structural damage to businesses, loss of inventory, and business interruption (revenue loss) due to road closures and power outages. Since the Parish relies on sales tax revenue for operations and capital projects, the economic damage caused by Hurricane Isaac impacted the Parish's ability to recover and rebuild. All types of commercial and industrial businesses were negatively affected by Hurricane Isaac including restaurants, food suppliers, service providers, industrial manufacturers, and retailers. The St. Tammany Economic Development Foundation housed a Small Business Administration (SBA) Recovery Center that received and accepted 184 applications for disaster loan assistance.

Colonial Pinnacle, a local retail shopping center, reported that over \$1,000,000 in sales was lost due to business interruption during and after Hurricane Isaac. Colonial Pinnacle's loss equates to approximately \$90,000 lost tax revenue by the state and municipalities. STPG's Fishing Pier, built on one of the old Katrina-damaged twin span bridges in eastern St. Tammany over Lake Pontchartrain, sustained major structural damage, suffered severe damage due to Hurricane Isaac, and was forced to close as a result. In its first three months of operation (May 2012 until Hurricane Isaac struck in August 2012), an estimated 18,000 individuals had accessed the Pier. The Pier has been a catalyst for economic revitalization for East St. Tammany. While in its own right the Fishing Pier is not a significant dollar loss, however the public traffic the Pier generates to the local surrounding businesses is in itself significant. The Pier reopened January 2014 and is



on its way to Pre-Isaac figures.

Parish staff surveyed small businesses in the most heavily impacted areas (i.e. the cities of Slidell and Mandeville and the Town of Madisonville). A total of 52 business owners were contacted to discuss remaining repair and mitigation needs as well as continued loss of revenue as a result of Hurricane Isaac. Five of the fifty-two business owners have certified that remaining damages and/or mitigation needs are a result of Hurricane Isaac and they have inadequate resources to complete the needed repairs or mitigation measures, the remaining certifications are pending at this time. (Appendix X) Based on the surveys, local businesses received funding from various sources, both private and public, including insurance companies. The total amount of funding received by area businesses in total is still being determined; however, based on discussions with business owners, the Parish has confirmed that there are significant remaining recovery and mitigation needs.

Environmental Degradation

At approximately 850 square miles, St. Tammany Parish is one of the largest parishes in Louisiana. Combined with the fact that more than half of the land in St. Tammany is designated as wetlands, that three rivers and several more substantial bayous are located in a watershed that drains across 65% of the Parish into Lake Pontchartrain coupled with the Pearl River watershed draining on the remaining 35% along the Mississippi border, there is a need for smart and strategic planning for the vast growth and development currently experienced by St. Tammany. Located along Lake Pontchartrain and proximate to the Gulf of Mexico, St. Tammany Parish is vulnerable to natural disasters due to increasing loss of coastline and marshland. As a result of its



location and the number of federally qualified disasters that have damaged St. Tammany Parish, the sustained damage from Hurricane Isaac exacerbated the loss to wetlands, land, and environmental protections from previous storms. The environmental damage from Hurricane Isaac has not fully been addressed and it will take significant resources to fully recover and create additional resilience for St. Tammany Parish. The Parish has extensive experience in disaster recovery and is currently working on an array of environmental projects that will increase its resilience for future storms. Projects include: the Madisonville Bulkhead Project, St. Tammany Parish Watershed Management Initiatives, Goose Point/Point Platte Marsh Creation, Bayou Bonfouca Marsh Creation, North Shore Hurricane/Flood Protection and Restoration Plan, Tchefuncte Shoreline Protection, and Tchefuncte Marsh Wetland Assimilation. The Fritchie Marsh (Fritchie), located near Slidell, LA experienced loss during Hurricane Isaac, and is one of the first environmental projects to receive grantor approval. The Fritchie project will strengthen flood control measures and recreate marsh lost during the qualified disaster.

Fritchie is an area of intermediate to brackish marsh near Slidell, La. Fritchie is approximately 6,291 acres in size and bound to the east by Highway 90, to the south and west by highway 433 and to the north by portions of the W-14 canal, as well developed and undeveloped land below the city of Slidell. For an approaching storm, Fritchie Marsh is the final land mass before reaching the residents of Slidell. Fritchie is comprised of US Fish and Wildlife Service property as well as privately owned land. Both the W-14 and W-15 canals, as well as part of the Pearl River via Salt Bayou, outfall into the Fritchie. Fritchie provides many environmental and storm protection benefits for lower St. Tammany Parish and as such, the Parish believes protecting this



area is of vital importance. According to an analysis prepared by GCR Inc. (appendix A), Fritchie lost approximately 273 acres of land from 2010 to 2012, largely due to Hurricane Isaac. St. Tammany Parish is proposing a project aimed at reducing the marsh loss rates by improving the hydrologic conditions in the area through management of available freshwater and building new marsh with material removed from conveyance channels. The total project cost for the restoration of Fritchie Marsh to create stronger protection for future storm events is \$5,041,000. The Parish has applied for FEMA funding to cover 75% of the cost (or \$3,795,873). In addition, the Parish has received \$400,000 from the State Coastal Protection and Restoration Authority. St. Tammany does not have funding to cover the remaining \$845,127 (Appendix [X]).

EXHIBIT C – CAPACITY

General Management Capacity

Government Agency to Implement the Proposed Activities

St. Tammany Parish Government (STPG) has the ability, experience, and cross-disciplinary technical capacity to plan, implement and manage the proposed National Disaster Resilience Competition (NDRC) activities. STPG's Department of Grants (DOG) will serve as the lead agency in the planning, implementation, and management of activities proposed within the NDRC. STPG has an annual budget of \$123 million. STPG manages approximately \$100 million in grant awards and administers \$15-\$20 million in grant funded projects and programs annually. St. Tammany Parish has sustained damage from multiple disasters over the past ten years, including hurricanes Katrina and Rita (2005), Gustav and Ike (2008), and Isaac (2012) and



withstood indirect, yet still significant, impact from the Deepwater Horizon Oil Spill (2010) and the Pearl River Fish Kill (resulting in massive wildlife and environmental degradation impacts) due to unauthorized discharges from a paper mill (2011). As a result of multiple disasters and major events, St. Tammany has become proficient in the ability to manage both small and large-scale disaster recovery projects and programs. The DOG serves as STPG's central administrative unit responsible for:

- Securing external resources through grants and other funding mechanisms
- Ensuring fiscal and programmatic accountability of all grant funding
- Establishing a system of internal control to insure program delivery, regulatory compliance, and inter-departmental coordination for grant funded projects/programs
- Serving as the Parish's liaison to funding agencies, auditors, and other external agencies as it relates directly to grant funding

Capacity

The DOG consists of ten professional grant managers and grant administrators whose sole purpose is to support STPG departments by facilitating grant funded projects or programs, ensuring program delivery, compliance and multi-departmental coordination, and providing capacity for all grant awards due to recent disasters and all other grant funding awarded or allocated to the Parish. The DOG is also responsible for ensuring that all grant funded projects and programs are administered efficiently, effectively, timely, and in accordance with all applicable rules and regulations. DOG is supported by several departments on a daily basis

within St. Tammany Parish Government (STPG), including the Project Management



Office (PMO), Departments of Procurement (DOP), Engineering (DOE), Health and Human Services (DHHS), Intergovernmental Relations (IGR), and Economic Development (EDD), Development and Planning (DDP), and Emergency Preparedness (DEP). Together these departments work as a team to design and implement both disaster and non-disaster related projects and programs for the Parish. Specifically related to disaster funding, DOG currently manages over \$33.5 million in FEMA Hazard Mitigation Grant Program (HMGP) funding and over \$55 million in CDBG-DR funding, allocated from disasters occurring over the course of the past several years. STPG's PMO office is currently facilitating over 190 projects of various sizes and complexities totaling over \$194 million. To ensure internal control and quality assurance, STPG institutes thru its procurement office and thru various policies and procedures guidelines for how projects are administered. These guidelines include but are not limited to: STPG Procurement Manual, STPG Federal Procurement Manual, CDBG Sub-recipient Procurement Manual, STPG Finance Policies and Procedures Manual, Grants Procedures Manual, , CDBG Sub-recipient Manual, and Monitoring Plan: Ensuring CDBG Compliance. Through its adherence to the aforementioned policies and procedural manuals, STPG and the DOG are fully confident in their ability not only to quickly launch major projects but to do so in a manner that is compliant with all applicable regulations.

Agency's Experience

Furthermore, STPG has demonstrated substantial capacity and experience launching both small-scale, targeted initiatives and large-scale efforts through its planning and implementation of recovery and resilience programs and projects as a result of the series of recent disasters in the



region. Examples of post-disaster initiatives undertaken are:

- A Louisiana Recovery Authority grant in 2007 to initiate the St. Tammany Long Term Community Recovery Program which included housing and community development planning for eight municipalities in the parish;
- A HUD and Louisiana Office of Community Development – Disaster Recovery Unit grant in 2009 to develop the St. Tammany Parish Community Resiliency Program updating their 2003 comprehensive plan to focus on sustainable future urban development;
- Multiple CDBG-DR allocations following Hurricanes Katrina/Rita and Gustav/Ike to address a wide-range of unmet recovery needs such as: drainage, sewer and water, disaster response, and economic development;
- A HUD grant of CDBG-DR funds and the development of an Action Plan in 2013 to address long-term recovery needs;
- Working with the Louisiana Coastal Protection & Restoration Authority to develop the St. Tammany Watershed Management Study to address water quality issues - including wastewater consolidation plans - and flood infrastructure issues;
- Participating with Tangipahoa Parish in a Northshore Protection and Planning Study, conducted by the Louisiana Coastal Protection & Restoration Authority, to catalogue all flood protection needs and initiatives for the entire northern shoreline of Lake

Pontchartrain



- Coordinating with a multi-disciplinary team to develop the Environmental Corridor Study to better manage natural resources and provide a framework for smart growth planning.

Through each of these initiatives the Parish and its partners have undertaken significant outreach and engagement activities across the areas impacted by these recent disasters. These efforts have included consultation with local governments, advocacy groups, state and local agencies, universities, engineering and design consultants, and other entities that are in regular contact with the individuals and institutions in the recovering communities. The Parish's Department of Intergovernmental Relations (IGR) primary role is to maintain and enhance existing relationships between identified stakeholders and STPG. IGR works with parish and municipal governments and officials, boards and commissions, political districts, subdivisions, and agencies. IGR also works with non-governmental agencies to ensure cooperative work on parish initiatives.

Application Development

This application was written by the STPG DOG staff and its implementation partner, GCR Inc. STPG and GCR Inc., held weekly onsite meetings to develop this application. Through these meetings and with the contributions from public and private stakeholders and partners, the applicant staff and GCR project team have formed the direction and tenor of the application.

Cross-Disciplinary Technical Capacity

To account for the specific goals and objectives of the NDRC, STPG will build upon previous efforts, additional consultations and outreach activities, stakeholders, community leaders, in a continued endeavor toward accomplishing the Parish's approach to increasing resilience.



Capacity of Each Partner

St. Tammany Parish has established significant depth in expertise and capacity within several departments and through its private and public partnerships. STPG's NDRC partners will serve to augment the Parish's internal capacity.

St. Tammany Parish Department of Health & Human Services

St. Tammany Parish Department of Health & Human Services (DHHS) administers the Community Development Block Grant (CDBG) for the Entitlement program, the Community Action Agency, and oversees several programs funded through the Parish's health mileage. St. Tammany Parish was designated as an entitlement community in 2008. These CDBG funds are used to provide decent, safe and sanitary housing, a suitable living environment, and expand economic opportunities for low and moderate-income citizens. DHHS projects include: The North shore Housing Initiative Community Land Trust, The Groves at Mile Branch (LIHTC Housing), multiple low-to-moderate income (LMI) homeowner rehabilitation projects, Family Promise emergency sheltering program, suicide prevention, and oversight and administration of the special needs shelters during a during emergency events for individuals with special needs.

St. Tammany Parish Department of Engineering

St. Tammany Parish Department of Engineering's (DOE) main responsibility is to support the STPG administration by managing public improvement projects that require technical assistance. The DOE is responsible for technical review and monitoring of residential and commercial developments which must meet a set of standards that have been adopted by STPG to ensure



public interest and safety. DOE staff range from professional construction, drainage and traffic engineers; professional land surveyor and survey crew; environmental specialist; drainage and construction inspectors; land abstractor, engineering interns, and administrative support staff.

St. Tammany Parish Department of Economic Development

St. Tammany Parish Department of Economic Development's (EDD) role is to advocate for the Parish as a business-friendly community that values innovation and entrepreneurialism. It promotes the parish's competitive advantages including high quality of life, qualified workforce and growth potential. EDD supports St. Tammany by providing expertise on the regional business climate, potential growth industries, sustainable economic growth, quality of life issues and workforce training needs for vulnerable populations. EDD has recently created seven Economic Development Districts and is in the beginning stages of developing an Economic Development Plan for the Parish as well as defining guidelines for the newly created districts to promote economic stability and growth. The EDD initiatives will directly incorporate the NDRC approach of developing a portfolio of increased revenue while embracing the multi-faceted, culturally rich, economically diverse environment reinvesting in areas with vulnerable populations.

Duplantis Design Group

The Duplantis Design Group (DDG) is a multi-disciplinary regional firm offering professional civil engineering, architecture, and landscape architecture design services. DDG supports STPG in the development of storm drainage systems, urban infrastructure, and sustainable design guidelines that can respond to and accommodate anticipated growth scenarios and



flood protection issues presented by climate change and land loss factors. DDG has provided program management on the Parish's storm water regional detention program projects which was initiated in 2009. Further, DDG has previously provided guidance with regard to STPG's coastal initiatives, including the completion of the Parish's 2017 Coastal Master Plan (in conjunction with the State's overall coastal planning efforts) and the Fritchie Marsh Creation project.

Design Workshop

Design Workshop (DW) provides landscape architecture, planning, urban design and strategic services with an emphasis on sustainability. Their proprietary methodology seeks to imbue every project with a balance between environmental sensitivity, community connection, artistic beauty and economic viability that demonstrates measureable results. DW supports STPG in the development of sustainable infrastructure systems and urban design guidelines that can respond to and accommodate anticipated growth scenarios and flood protection issues presented by climate change and land loss factors.

Northshore Community Foundation

The Northshore Community Foundation (NSCF) began in 2007 and their assets have grown to \$15 million. NSCF has provided over \$5 million in grants to non-profit organizations since its inception. NSCF unites human and financial resources to enhance the quality of life in the Northshore region. NSCF projects vary in scope from land-use planning to providing daily necessities to local residents in need and engaging community leaders to develop appropriate responses to emerging opportunities and challenges specifically regarding vulnerable



populations. The NSCF also supports STPG with housing development expertise and philanthropic initiatives.

St. Tammany Levee, Drainage and Conservation District Board

STLDCD, made up of gubernatorial appointees from various communities throughout the Parish, has the primary duty to establish, construct, operate, and maintain flood control works related to hurricane protection, tidewater flooding, saltwater intrusion, and conservation. It is a political subdivision of the state and has taxing authority. The Board acts in an advisory capacity for STPG and will assist in leveraging STPG projects within the scope of its By-Laws.

St. Tammany Economic Development Foundation

The St. Tammany Economic Development Foundation (STEDF) leads economic development initiatives in the Parish, attracting new businesses and employment opportunities to the area. STEDF seeks to improve Parish residents' quality of life by strengthening and supporting the business climate. STEDF focuses on business retention and attraction, supports entrepreneurship, and small business development. STEDF supports STPG by providing expertise on the regional business climate including data on businesses affected by Hurricane Isaac, potential growth industries, sustainable economic growth strategies, quality of life issues and workforce training needs for vulnerable populations.

Greater New Orleans, Inc.

Greater New Orleans, Inc. (GNO, Inc.) is a regional economic development alliance serving a ten parish region within Southeast Louisiana as a catalyst for wealth creation. GNO, Inc. pursues



an aggressive agenda of business development—marketing the region—and product development—improving regional business conditions through policy, workforce, and research initiatives. GNO, Inc. supports STPG by providing regional expertise in the areas of the regional business climate including data on industries affected by Hurricane Isaac, resources of government agencies supporting economic development, liaison services to businesses seeking to relocate within and from outside of the region, potential growth industries, sustainable economic growth strategies, quality of life issues and workforce training needs for vulnerable populations.

Volunteers of America of Greater New Orleans

Volunteers of America of Greater New Orleans (VOA) has been serving the most vulnerable populations since the 1890s. VOA extends a hand up to children, families, seniors, veterans and persons living with disabilities through a wide array of programs in sixteen parishes in South Louisiana. Since Hurricane Katrina, VOA has initiated programs to rebuild and meet the human needs and challenges of the times. VOA assists STPG in identifying reinvestment opportunities for the most vulnerable populations and provides expertise on affordable housing needs for LMI households, the homeless, families with children, the elderly, and people with disabilities, including physical and mental disabilities and veterans and their families. VOA has worked successfully with the Parish on several housing rehabilitation programs.

Habitat for Humanity: St. Tammany West and St. Tammany East

Since its inception in 1981, Habitat for Humanity St. Tammany West (HFHW) has built over 230 affordable new homes with low income families across western St. Tammany. In



2013, HFHW constructed 13 homes with local working families. Habitat for Humanity St. Tammany East (HFWE), began operations in 1992 and has served 133 families in Eastern St. Tammany. Both HFHW and HFHE are successful due to the development of strong partnerships with more than 100 businesses and churches on both a local and national level, focusing on the needs of families and veterans in the Parish. HFHW and HFHE assist the Parish in directing its projects to the most vulnerable populations.

GCR Inc.

GCR, an international professional services firm, partners with government and commercial clients to deliver consulting services and technology solutions in aviation, disaster management services, elections, nuclear power, public safety, right-of-way, transportation, and urban planning.

GCR works on behalf of local and State governments to manage all aspects of Community Development Block Grants (CDBG), both disaster and non-disaster related. The GCR team of planners and project managers assist clients in the full lifecycle of the CDBG process. The firm designs programs, competitively selects developers and other vendors, and oversees financing and CDBG compliance during all phases of a project or program. GCR reviews the construction process to ensure that the development meets CDBG regulations and adheres to the goals set forth in the plan. The GCR team includes subject matter experts in compliance and monitoring, systems support, procurement, application processing, auditing oversight, and grant closeout. Vital experience has been gained through leading and supporting disaster recovery and community rebuilding efforts in New York, Louisiana, Illinois, Alabama, Texas and North



Dakota. GCR will assist St. Tammany with program management services across all aspects of their CDBG-NDRC application and implementation efforts. GCR Inc. also provides urban planning and demographic analysis expertise to help the parish understand future population and development growth and how to employ smart growth strategies to ensure long term sustainability of urban development in the parish. GCR, Inc. has worked in coordination with STPG in the areas of CDBG-DR program management and public transportation planning.

Municipalities - City of Slidell, City of Mandeville, and Town of Madisonville

As specific projects are potentially developed and funded through the Phase II application, the municipalities will contribute resources (funding or otherwise) towards implementation and maintenance of projects to leverage the initial investment. The municipalities will, if possible, extend the projects and concepts developed through the NDRC process to other geographic areas beyond the target area, especially where the developed project concepts can improve quality of life and resilience for vulnerable populations.

Working across Disciplines

STPG and its partners' previous successes demonstrate their ability to develop an apparatus to collect, share, and assess scientific data working across disciplines to achieve specific NDRC project goals and objectives. As defined under frequently asked questions on The Rockefeller Foundation website, "Resilience is a term that emerged from the field of ecology to describe the capacity of a system to maintain or recover functionality in the event of a disruption or disturbance. Resilience describes an area's capacity to prepare for, withstand, and recover from exogenous and unpredictable shocks with minimal impact to people, infrastructure,



environments, and economies. In practice, resilience provides a framework for guiding planning, investment, and actions to reduce vulnerabilities. Building a resilient community requires more than taking a series of prescribed steps; it requires adopting a new way of thinking. It requires engaging a broad base of community and expert stakeholders, integrating planning processes across disciplines and government silos, and aligning capital investment decisions with resilience needs.”

STPG will work closely with its partners and local municipalities, to develop projects that strike a balance between environmental sensitivity, community connection, artistic beauty, and economic viability and demonstrate measureable results. These partnerships will deliver a level of analysis that provides the basis for design concepts and innovative ideas enhancing regional resilience. This approach will ensure the achievement of the project goals of improved storm water management and flood protection along with water quality, while developing a resilient economic development infrastructure, and a plan for smart growth in St. Tammany. STPG and its partners will accomplish the project goals by implementing co-benefit designs that provide effective and efficient approach to creating resilient communities’ parish wide.

Capacity

STPG is well-versed in working across disciplines to complete projects. STPG, in partnership with the Trust for Public Land, created St. Tammany Greenprint (“Greenprint”). Greenprint identifies the areas of the Parish that are the most ecologically and environmentally sensitive and valuable and recommends areas to be preserved for protection from floods and other natural disasters. The St. Tammany New Directions 2025 Plan (ND 2025) sets forth the foundation for a

comprehensive development plan that promotes environmentally conscious recreational projects and smart growth development, as well as public access to scenic streams and rivers. STPG's Environmental Corridor Plan focuses on: 1) creating a unified vision for the future of the Parish; 2) protecting and enhancing natural and cultural resources; 3) providing recommendations for a physically connected open space network; and 4) providing financial sustainability for new open space. This study involved the coordination of experts in the fields of urban planning and design, quality assurance, stakeholder engagement, economic development, GIS analysis, operations and management, and ecology science to evaluate how to better manage natural resources and provide a framework for smart growth planning in the Parish.

In addition, as part of its recovery from Hurricane Isaac in 2012, the Parish is working with multiple partners on the design and construction of the St. Tammany Advanced Campus (STAC) project. Utilizing both FEMA and HUD funding and partnerships with various federal, state, and local entities, and a number of private entities, the STAC project involves the coordination of multiple disciplines, including education, environmental, engineering, design, and construction. The STAC project will house multiple educational facilities of the Northshore Technical Community College but is envisioned to include both a new local public high school, a multi-purpose emergency center that will house the Parish's Emergency Operation Center, 911 operations center, and a community safe room designed to protect individuals in the event of a disaster.

Experience

The Parish has a proven track record of launching and implementing major projects, as



evidenced by its many successes resulting from recovery efforts following the multiple disasters it has sustained over the past ten years. Other multi-disciplinary projects include: Covington Fairgrounds renovation and expansion (economic revitalization and emergency preparedness), Camp Salmen and Tammany Trace Connections (environmental conservation, alternate transportation, and cultural diversity), the St. Tammany Levee System Alignment (coastal restoration and flood protection), and the Mandeville Bypass Road (infrastructure and coastal restoration).

STPG actively participates in several internal and external multi-disciplinary platforms that provide a mechanism for data sharing and coordination on a regional scale. These platforms include: the National Association of Counties, Police Jury Association of Louisiana, University of New Orleans Institute for Economic Development and Real Estate Research, Capital Resource Conservation and Development Council, Florida Parishes Human Services Authority, Tourist and Convention Commission, Center for Planning Excellence, Coalition for Sustainable Flood Insurance, Southeast Super Region Symposium, Pearl River Commission, and the LaPACE (Parishes Against Coastal Erosion).

Capacity to Identify and Assess Science-Based Information

In recognition of the importance of developing projects and programs that account for both existing and future risks, the Parish has enlisted DDG and the Design Workshop as partners on its NDRC related efforts. Both firms have a history of working with the Parish on critical watershed and storm water management challenges. As an example, the Parish worked with the Design Workshop to develop an Environmental Corridor Study, the catalyst to the STPG



resilience efforts, which evaluated how to better manage natural resources and provide a framework for smart growth planning in the Parish.

Experience Working with Civil Rights and Fair Housing Issues

As a standard business practice, STPG incorporates civil rights and fair housing into the planning, evaluation, design, and implementation of all projects and programs. Multiple partners will be involved in providing further expertise, data analysis, and expertise in working with affordable housing issues, including DHHS, NSCF, HFHW/HFHE, and VOA. STPG also coordinates with the Greater New Orleans Fair Housing Action Center which analyzes data on fair housing issues and assists enforcement of fair housing. It conducts the region's Analysis of Impediments to Fair Housing and regularly publishes reports on racial disparities and housing discrimination issues.

Design Quality

STPG implements a formal mechanism that ensures all projects are in compliance with local zoning ordinances that mandate the inclusion of resilience measures in all projects. Through an internal quality assurance process, the Parish is able to enforce these requirements during both the design and implementation phases.

STPG has established processes and procedures with regards to design quality. The DOE has a design review process to enforce adherence to land use and building code regulations as well as to ensure aesthetic quality and suitability to architectural context and community needs. This process also evaluates the impact of new construction on drainage, flood protection

infrastructure, and water quality as well as water natural features and open space land



uses. By determining that new construction does not overtax or exacerbate flooding or water quality issues, the design review process helps ensure long-term resilience of its wetlands and of the community against natural disaster.

Plan to Regain Capacity

In regard to regaining capacity, the Parish will select replacement partners based on needed expertise and qualifications. The criteria for qualifications are determined through its annual Statement of Qualifications (SOQ) process. Each November, the Parish DOP solicits SOQs from persons or firms in various disciplines interested in providing services on an as-needed basis for projects in the Parish. This pre-approved list of firms and organizations will serve as a qualified pool for the Parish to look to should the need arise.

Determining Cost Reasonableness

The DOG performs all cost reasonableness calculations for grant funded projects. DOG has performed myriad BCA (Benefit Cost Analysis). STPG also calls upon its partners at the state level and from the private sector to ensure that cost-reasonableness evaluations are appropriately performed. In addition, the Parish has enlisted GCR as a partner to aid in performing BCAs due to its industry-specific expertise that will enlighten the process, particularly given their experience in utilizing the FEMA BCA software platform (Benefit Cost Toolkit Version 4.5.5/4.8/5.0). Furthermore, STPG has a strong degree of familiarity with the cost-efficiency analysis requirements of DOTD and CDBG programs and the Parish is well-positioned to execute cost-reasonableness evaluations for all potential NDRC projects.



Community Engagement Capacity

Capacity to Engage Community Stakeholders

As demonstrated by the extensive stakeholder and community engagement that has taken place during the development of the Phase I application, STPG and its NDRC partners possess the capacity to ensure that outreach efforts are effective, relevant, and account for the needs and risks that face the most vulnerable populations in the Parish. One recent example is the North Slidell Revitalization Plan, which brought together a diverse group of local and regional stakeholders and representatives from various community groups, including parish government officials, homeowners' associations, religious organizations, real estate professionals, property owners, and local industry to address commercial development and infrastructure challenges the area still recovering from Hurricane Isaac.

Through the combined efforts of STPG departments and its NDRC partners, the Parish is able to ensure engagement efforts are educational (with respect to the impacts of climate change as well as other risks and vulnerabilities), informative (with respect to the community and stakeholders providing their feedback on the Parish's project approach), and all-inclusive (with respect to the meaningful involvement of all Parish residents, particularly those most vulnerable when disasters strike).

The Parish has been transparent during all NDRC outreach and engagement efforts with respect to its project approach as well as its target areas and priority initiatives in order to solicit meaningful and relevant feedback from those involved in the meetings and discussions. The input received was used to shape the direction of the application, expand thinking related to

unmet needs, risks, and vulnerabilities, and broaden the Parish's perspective regarding how residents and stakeholders perceive resilience.

STPG is committed to ongoing engagement with citizens and stakeholders throughout the duration of the NDRC process and beyond, regardless of whether STPG is invited in the implementation phase of the competition. The approach, ideas, and concepts set forth in this application are in line with the Parish's overall goals related to disaster recovery and increasing resilience. As such, maintaining a robust level of engagement on topics germane to this application process is a part of STPG's standard operating procedure.

Work with Community Leaders

Engaging community leaders has also been a priority in the Parish's design and implementation of past projects and the recovery from Hurricane Isaac (Qualified Disaster) has been no exception. As an example, due to the multi-faceted use of the location of the aforementioned STAC project, the Parish has brought together community leaders in education, emergency response, and housing development, among others, through regular and frequent coordination meetings that involve all parties, the Parish is able to understand how best to utilize available funding in order to accomplish a broad-ranging set of objectives.

During the 2015 update to the Parish's Natural Hazards Mitigation Plan, STPG collaborated with municipal leaders to identify greatest risks and vulnerabilities and prioritize projects for potential post-disaster funding. In addition, the Parish's Transit Task Force was developed to assess the state of the current transit system and determine how best to expand transportation options throughout the Parish, particularly to accommodate special needs populations. The



Task Force is comprised of community stakeholders, elected officials, experts in the field, and other key community leaders.

Working with Diverse Stakeholders

As has been described previously, the Parish and its NDRC partners bring to bear significant experience and current capacity with respect to organizing diverse stakeholders and their contributions in order to develop a cohesive narrative for the Parish’s project approach, ideas, and concepts. The Parish’s NDRC public meeting offers a recent example as those in attendance represented different areas of interest and came to the meeting with different priorities. Through providing a framework within which a collection of thoughts and ideas could be distilled, the attendees were able to focus their comments and questions to address the key objectives of the NDRC.

Regional or Multi-Governmental Capacity

Experience Addressing Regional Problems

STPG’s active participation within the multi-disciplinary platforms mentioned previously enable the Parish to account for and address regional issues that have direct impacts on St. Tammany. A prime example is the Parish’s collaboration with CPRA and Coastal Wetlands Planning, Protection, and Restoration Act managing agencies. STPG coordinates with its regional partners to identify areas with the greatest need and prioritize proposed projects accordingly. This structure provides a forum for STPG to engage with other jurisdictions facing similar coastal challenges and determine how best to develop effective solutions that provide the greatest



regional benefits.

Regional Resilience Work

STPG understands that its long-term success, safety, and prosperity is regionally dependent.

Historically, the Parish's experiences with each disruptive event and with coastal land loss have made it clear that changes in any one part of the region affect the other parts. Furthermore, STPG recognizes that economies are inextricably linked with community patterns and business activity that illustrate movement between communities and evidence of a cohesive economic region. Due to the flatness of the landscape and the intertwined nature of habitats and economies alike, a diminished coastal community at the edge of the Gulf means that a community further inland is 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.

With respect to the cost effectiveness of regional solutions, STPG and its regional partners recognize that the projects proposed to address regional challenges – coastal restoration in particular – is typically cost prohibitive due to the size and scope of the projects. As such, a phased, yet regionally agreed upon approach, is viewed as the most cost effective option. The Parish works with its partners to identify and prioritize individual projects that produce benefits across the region.

Regional Approach

In recognition of the interconnectivity among the NDRC-eligible applicants in Louisiana and their common challenges, STPG participated in multiple discussions with Orleans Parish, Jefferson Parish, and the State of Louisiana to determine how each applicant's respective project



approaches can be coordinated to address regional issues. The conversations generated a narrative relative to the migration of the State's residents from vulnerable lower lying communities to areas further inland. St. Tammany, based on its more northern proximity to the Gulf of Mexico, is projected become the recipient of many temporary evacuees and migrants. St. Tammany experienced an influx of residents following Hurricane Katrina in 2005 due to the storm's devastating impacts on the low-lying and coastal communities throughout South Louisiana. Subsequent storms, such as Hurricanes Gustav and Ike and most recently Isaac, have amplified the influx of residents to St. Tammany Parish, in turn, increasing the population. Assuming no significant storm over the next five years, the Parish population is forecasted to increase by approximately 25,000 residents. The Parish's project approach is intended to address the impacts of past migrations and prepare the Parish for the migratory effects of future disasters. In St. Tammany, preparing for population growth involves the development of resilient infrastructure and a diverse housing stock, planning for economic growth along the I-12 corridor, and addressing water management and water quality issues. Through its work in addressing the aforementioned initiatives, STPG will create opportunities for all individuals that move to the Parish, vulnerable populations in particular.

Multi-Entity Organization

STPG will utilize its internal departments, particularly the DOG, DOE, and PMO, to carry out proposed projects. The Parish's NDRC partners will be brought in to provide specific expertise, as needed, to ensure that all activities proposed through this process are of the highest quality, innovative, science-based, and able to be launched quickly, efficiently, and effectively.



EXHIBIT D – NEED/EXTENT OF PROBLEM

Summary

Hurricane Isaac made landfall on the Gulf Coast of Louisiana on August 28, 2012, and remained over Southeast Louisiana for three days. The slow moving storm led to widespread damage to housing, businesses, infrastructure and exacerbated environmental degradation in St. Tammany Parish. Despite a significant recovery efforts, St. Tammany Parish has remaining unmet recovery needs resulting from Hurricane Isaac including homeowners lacking funding to rebuild, unfunded infrastructure projects, and persistent issues due to coastal land loss and environmental degradation. The storm further exacerbated damage to the Parish from previous disasters in the region including Hurricanes Katrina and Rita in 2005, Hurricanes Gustav and Ike in 2008, and the Deepwater Horizon oil spill in the Gulf of Mexico in 2010.

Despite the setbacks presented by Hurricane Isaac, St. Tammany Parish continues to experience rapid growth, with an influx of residents and businesses from coastal and flood-prone areas of Southeast Louisiana. To create a more resilient community, STPG must address the current unmet recovery needs as well as proactive plan for additional population shifts from neighboring Parishes due to sea level rise and coastal land loss. As a resilient community, St. Tammany Parish will be well prepared to receive the natural influx of residents by addressing water quality, flood protection, economic development and planning for smart growth.

Primary Risks and Vulnerabilities

The most damaging effect of Hurricane Isaac was coastal land loss. The Parish lost approximately 273 acres of land due to the amount of rainfall and slow moving nature



of the storm. Furthermore, Hurricane Isaac caused increased riverine levels, blockages in drainage canals, and severe flooding to residential and commercial properties Parish-wide. STPG received federal funds following Hurricane Isaac to repair direct damage to public facilities, elevate residential properties, begin a localized marsh creation project, and fund small-scale economic revitalization projects. This funding provided a foundation for STPG's strategic resiliency plan. STPG's four pronged approach to resiliency focuses on water quality, flood protection, coastal restoration, and economic diversity while considering the long term effects of climate change and sea level rise directly related to the Parish experiences following Hurricane Isaac. As stated in the Environmental Corridor Study prepared by STPG partner Design Workshop, "St. Tammany is blessed with abundant natural resources and beautiful small town and rural aesthetics that attract new visitors and residents each year. As more people choose to come to the Parish to work, live, and play, a balance must be struck between encouraging the development of roads, homes, and businesses that allow commerce to thrive and preserving the natural environment." The ultimate goal is to design resilient projects that reinvest in the natural assets of St. Tammany and create an environment that promotes innovative economic development while embracing the cultural diversity and quality of life that is St. Tammany.

In 2005, Hurricane Katrina was the first major event to instantly change the climate of St. Tammany Parish, in population size, environmentally and geographically. Over the past decade, STPG has invested significant local and disaster recovery dollars to identify our most impacted and distressed areas. Collectively, these efforts not only identified the focus areas, but also provided the road map toward recovery and sustainability. NDRC is the platform that will allow



STPG to consolidate planning efforts to prepare for the ordinary and extraordinary events moving forward.

Hurricane Isaac in particular presented Parish-wide damage due to heavy rains and strong winds, directly effecting lower lying coastal areas, drainage canals, and the most vulnerable communities outside of flood protection, specifically Slidell, Madisonville, Mandeville, and Lacombe. Due to climate change and sea level rise, these most vulnerable areas will become more susceptible to these risks unless STPG is able to implement projects through resiliency to protect them.

Data Utilized

STPG used a comprehensive data set compiled from planning efforts dating back to 1995 to identify patterns indicating the greatest risks and vulnerabilities. These data sets identify the progression and need for a consolidated focus on the four identified areas of water quality, flood protection, coastal restoration, and economic diversity as the most significant risks and vulnerabilities. Data sets include: FEMA flood Insurance Studies (1985-present), STP Watershed Management Plan, The Northshore Hurricane and Flood Protection Plan, STP MS4 Permit Data, STP Water Quality monitoring sites, Environmental Corridor Study, and a collection of data from our partners (see Appendix [XX] for a comprehensive data set).

The STPG comprehensive data set was amassed in coordination with and incorporates regulations from and local, state and federal agencies. Specifically, the data sets include information compiled from: LA Department of Environmental Quality, U.S. Army Corps of Engineers, U.S. Geological Survey, Lake Pontchartrain Basin Foundation, Coastal



Protection and Restoration Authority, U.S. Environmental Protection Agency, Federal Emergency Management Agency, Trust for Public Lands, and The Nature Conservancy. All data systems confirm the most significant risks and vulnerabilities are in the areas of water quality, flood protection, coastal restoration, and economic diversity, all of which will be continuously degraded/negatively impacted as a result of climate change and sea level rise.

Known Unknowns

St. Tammany's known unknowns are related to the rate of sea-level rise and climate change, the severity of future storms, and effects on population in regard to mental health and affordable housing.

Insurance Challenges and Opportunities

Biggert-Waters Flood Insurance Reform Act of 2012 presents the biggest risk to both individuals and businesses in St. Tammany as well as the region. STPG has played an integral part in the work that was done to pass legislation that would prevent the rate hikes as expected last year. The Coalition for Sustainable Flood Insurance (lead by NDRC partner GNO, Inc.) continues to monitor the issue. STPG recently joined the coalition for a visit to Washington DC to participate in educational briefings with congressional delegation members on the need for continued work and cooperation from FEMA. It is critical to the Parish's resilience approach that St. Tammany residents are able to maintain sufficient insurance. STPG dedicates significant resources and has specifically assigned the STPG regulatory manager to the NFIP Community Rating System (CRS) which is a voluntary program for recognizing and encouraging community floodplain management activities that exceed NFIP's minimum standards. STPG is a community



in full compliance with the NFIP's minimum floodplain management requirements. As stated on FEMA.gov, "Lower cost flood insurance rates are only one of the rewards a community receives from participating in the CRS. Other benefits include: Citizens and property owners have increased opportunities to learn about risk, evaluate their individual vulnerabilities, and take action to protect themselves, as well as their homes and businesses; CRS floodplain management activities provide enhanced public safety, reduced damage to property and public infrastructure, and avoidance of economic disruption and loss and allows communities to evaluate the effectiveness of flood programs against a nationally recognized benchmark. CRS is a huge initiative that ensures the residents have equal opportunities to be insured." STPG Incorporates the CRS standards into all current and future planning efforts specifically in the areas of water quality, flood protection, coastal restoration, and economic diversity. St. Tammany's most effected population groups are defined by their geographic location due to their vicinity to rivers, Lake Pontchartrain and other tributaries. Repetitive disasters have caused the cost of living in these areas to rise while property values and economic opportunities have declined. Of particular concern are the elderly, disabled, and low income populations during storm related events, based to their mobility and accessibility challenges.

Impacts of Addressing Risks and Vulnerabilities

Addressing water quality, flood protection, coastal restoration, and economic diversity will protect vulnerable residents and businesses from future flooding and other disaster related damages. Furthermore, addressing these specific risks and vulnerabilities directly improves Parish infrastructure and environmental quality and prepares STPG for future growth.



Coastal restoration, watershed management, and diversifying STPG's tax base will provide a holistic approach to preemptive disaster planning. This approach will allow the community to not only recover from Hurricane Isaac but also from previous disasters by utilizing a forward looking plan to prepare for the unknown. Addressing these risks and vulnerabilities will also provide a framework for St. Tammany to be the premier community along the I-12 corridor with a strong economy promoting innovative development while investing in natural resources and cultural diversity to preserve the quality of life.

Impacts from the identified risks and vulnerabilities are important to not only St. Tammany Parish but also to the State and region specifically relating to climate change and sea level rise. As sea level rises and the effects of climate change come to bear, St. Tammany is primed to receive future population migration, both permanent and temporary, and to absorb the after effects of such.

St. Tammany has been impacted by five major named hurricanes – Katrina and Rita (2005), Gustav and Ike (2008), Isaac (2012- Qualified Disaster). While damage from Hurricane Isaac was substantial in its own right, its impact was particularly tragic to a community still recovering, economically, and physically from previous storms. The direct impacts of multiple disasters and the indirect impacts caused by an influx of residents resulting from population migrations to the Parish from vulnerable low-lying and coastal communities throughout South Louisiana have forced St. Tammany to re-examine how it plans for sustainable growth and how it envisions its place and role in the larger region. In recognition of the Parish's transition from a suburban New Orleans community to a cultural and economic hub in its own right, and in



anticipation of further population migrations, St. Tammany has identified specific initiatives in order to be prepared for future growth, adjust to sea level rise, and address environmental stressors.

Actions Completed or Underway

STPG has invested approximately \$100 million dollars in disaster recovery towards drainage, sewerage and water, and economic revitalization projects. STPG has elevated over 300 residences, qualifying either by the direct effects from a disaster and/or from repetitive flood claims. STPG has also invested millions of dollars and significant staff time in comprehensive planning which has culminated in defining the resilience approach. The exacerbation over multiple presidentially-declared disasters and the limits on federal, state, and local resources has left STPG with unmet recovery needs. In addition to rebuilding and comprehensive planning efforts, STPG has also invested in project concepts that include alternate transportation, cultural arts, education and connectivity of the Parish's vast green areas and water bodies. The diversification of the project concepts, coupled with comprehensive planning, provides for a sound approach to resilience.

EXHIBIT E – SOUNDNESS OF APPROACH

Consultation

Outreach Plans

STPG drafted and implemented an NDRC Outreach and Engagement Plan (O&E Plan) at the start of the development of this Phase I application to guide all collaboration, outreach, and communication with Parish residents and identify all stakeholders and application partners.



While working to develop this application, STPG engaged key partners to evaluate the disaster planning needs of the community and the opportunities and barriers of disaster and resiliency planning for households, organizations, and businesses across the parish. The Parish hosted a series of community engagement and outreach events with participants representing residents, council members, advocates, and local coalitions. Additional public involvement included outreach to various stakeholder and advocacy groups.

The stakeholder collaboration and community outreach strategy involved two main methods of engagement. First, a Parish-wide public meeting was held on February 4, 2015 to solicit direct feedback on the expressed needs and concerns of citizens, especially from vulnerable populations. Secondly, a presentation on the application process, proposed resiliency concepts, and feedback from the public meeting was given to Parish executive staff members for concurrence and approval.

The draft application was posted on the parish website on March 5, 2015, to receive public comments through March 19, 2015. Input collected from these meetings along with public comments on the application will be compiled, considered, responded to and included in the final application submitted on March 27, 2015.

Stakeholders

The list of NDRC stakeholders includes residents, business owners, property owners, local housing authority, boards and commissions, advocacy groups, environmental agencies, local and state government agencies, and others with a vested interest in the resilience initiative.

Stakeholder meetings embraced a wide range of representation providing trenchant



intercommunication. Input received at these meetings was critical to the development of this proposal.

STPG understands the importance of community and stakeholder engagement in preparing an effective NDRC application. Citizen participation and consultation efforts for the Parish's NDRC application will be carried out in such a way as to comprehensively assess the Parish's recovery needs, risks, and vulnerabilities while focusing on the elderly, displaced, and low income populations. By enacting the above mentioned O&E Plan, STPG will design an approach that will directly address these needs during Phase II of the application process.

Moreover, the NDRC O&E Plan allows STPG to promote sound, sustainable long-term recovery planning informed by a post-disaster evaluation of hazard risk by adhering to its Natural Hazards Mitigation Plan and its comprehensive planning document, New Directions 2025 Future Land Use Plan. As stated in New Directions 2025, the Parish will coordinate with other local and regional planning efforts by continuing "its efforts, working with officials of incorporated areas and all affected citizens, to achieve cooperative long-term relationships that protect the interests of all jurisdictions and affected citizens with respect to public safety, land use, public facilities and services, revenue sharing, landscape and structure design quality, and other areas of public concern."

Furthermore, the Parish's current Natural Hazards Mitigation Plan was adopted in 2009 and an update is scheduled to be completed by August 2015. This Parish-wide plan, adopted by STPG and local municipalities, will serve as a guide to allocating post-disaster hazard mitigation funds. updated plan will Parish-wide plan Once the new plan is adopted by the Parish, local



municipalities will likely pass resolutions adopting the Plan as well. The municipalities have been encouraged to participate in the development of the NDRC application at all stages.

In addition to its NDRC public meetings, STPG reached out to the St. Tammany Commission on Families, which includes representatives from the Youth Service Bureau, National Alliance on Mental Illness, VOA of Greater New Orleans, Catholic Charities of Greater New Orleans, Florida Parishes Human Service Authority, and Habitat for Humanity St. Tammany West via a presentation at the Commission's board meeting as well as worksheets soliciting feedback on needs, risks, and vulnerabilities facing the most vulnerable populations in the Parish.

Additional community involvement included ongoing meetings with the North Slidell Revitalization Plan (NSRP) group on January 20, 2015; the Hazard Mitigation Plan Update Public Meeting on September 17, 2014; the Hazard Mitigation Plan Update meeting with STPG staff and municipalities on January 28, 2015; and a series of Environmental Corridor Study public meetings, culminating with a final meeting on December 4, 2014. These essential initiatives will continue throughout the NDRC process.

STPG and its NDRC partners have undertaken significant outreach and engagement activities across the areas impacted by Hurricane Isaac. These efforts have included consultation with local governments, advocacy groups, state agencies, universities, and other entities that are in regular contact with the individuals and institutions in the communities recovering from the storm. To account for the specific goals and objectives of the NDRC, the current engagement was designed to build upon those previous efforts through the completion of additional consultations and outreach activities.



The common thread of all stakeholder discussions is the risk of flooding and high winds during regularly occurring rain events and during major events such as hurricanes and tropical storms. Low lying areas and those in close proximity to waterways are extremely vulnerable during rain events due to rise in riverine levels, storm surge, drainage back-up/failure. Direct effects of these events include flooding of streets, homes, and businesses, storm debris in Parish waterways, roadways and private property, downed power lines, and sewage back-up in homes. Cumulative local impacts range from the inability to access homes and businesses, temporary or permanent displacement, repair expenses, costs of mitigation, loss of revenue for businesses, loss of shoreline, and marsh protection. In addition, the influx of persons from lower lying areas during evacuation and permanent resettlement, places a strain on infrastructure and poses cumulative regional impact to the Parish.

North Slidell Revitalization discussions evidenced the impacts of Brownfields and potential remediation strategies. Additionally, discussions took place at public and partnership meetings to inform the public and solicit feedback regarding the U.S. Environmental Protection Agency total maximum daily load standards for contaminants in the Parish's waterways and STPG's initiatives to address the changing regulations through water quality and flood control. All stakeholder meetings have directed discussions towards the reduction of shocks and stresses to the community during both extraordinary and ordinary events in relation to water quality, coastal restoration, flood protection, economic diversity.

Consultation Process

The STPG consultation process involved community outreach and stakeholder meetings that



provided a surfeit of information that was shared with internal and external team members compiling ideas and concepts that formed an integral part in framing the overall project approach. The Parish has been transparent during all outreach and engagement efforts with respect to its project approach as well as its target areas and priority initiatives in order to solicit meaningful and relevant feedback from those involved in the meetings and discussions. The input received was used to shape the direction of the application, expand thinking related to unmet needs, risks, and vulnerabilities, and broaden the Parish's perspective regarding how residents and stakeholders perceive resilience. Specifically, some of the ideas that came from the public outreach and are now incorporated into the project approach include: debris in drainage canals and waterways, mental health as a result of disaster, and the interest in co-benefits as it relates to projects in specific communities. The public outreach also provided significant assistance in creative avenues to collect data to identify unmet recovery needs.

Ideas or Concepts

St. Tammany Parish experienced rapid growth over the last several years due to an influx of residents and businesses from coastal and other flood-prone areas of Southeast Louisiana. STPG will strengthen its resilience efforts by building upon strategies set forth in its hazard mitigation comprehensive land use plans to stay one step ahead of future growth, sea level rise, and environmental stressors. Hurricane Isaac's effects on the Parish's housing, critical infrastructure, water quality, and the economy were significant. STPG realizes the need for a comprehensive resilience framework that not only addresses remaining recovery needs but also positions the Parish to serve as a critical component of Louisiana's overall strategy for increasing disaster

preparedness and resilience. Specifically, STPG will approach resilience in a manner that addresses:

- **Water quality and flood protection.** Without centralized drainage infrastructure, rain and storm events have adverse environmental impacts on St. Tammany’s water system, which impact the fragile coastal areas that serve as a storm buffer.
- **A vibrant economic development infrastructure.** St. Tammany can change the structure of its sales tax to provide more flexibility in the use of local tax revenue. STPG will also encourage economic development in designated districts that provides a portfolio of industries and opportunities for a skilled workforce.
- **Smart Growth along the Interstate 12 corridor.** Each recent hurricane has accelerated population and business growth in St. Tammany Parish and that trend is expected to continue as coastal land loss impacts communities further inland. The I-12 corridor is home to higher land that must be sustainably densified to accommodate more population and business growth.

The stresses of population growth can exacerbate stress on the environment, while environmental degradation such as coastal land loss can reduce the ability to plan appropriately for this growth. St. Tammany is in a prime location to receive future population migration, both permanent and temporary and to absorb the resulting impacts. STPG is determined to face these issues in developing its resilience framework.

STPG is committed to addressing the effects of population growth, coastal land loss, and water quality and is dedicated to ensure that the projects and policies are not only resilient



but address these issues. The Parish recently completed the Environmental Corridor Study as well as the Water Management study. These studies form the basis of the Parish's plans, along with statewide plans like the Coastal Master Plan, to address environmental degradation and coastal issues.

St. Tammany would like to augment the existing actions taken at the regional and state levels to address coastal land loss. The Parish has several marsh creation and shoreline protection projects that are part of the state's Coastal Master Plan and are critical lines of defense for future storms. However, the Parish recognizes the need to undertake additional projects to address drainage, runoff, and water quality, and most notably a comprehensive update to the ordinances controlling discharges to surface water bodies. The ordinances will balance water quality protection and economic development. This is important as the I-12 corridor becomes the focal point of smart growth. The intent is to ensure that permitted development shall be designed to conserve natural drainage features and vegetation, prohibit the introduction of pollutants into Parish water levels which could degrade water quality, and to further protect the overall quality of the Parish water and resources.

STPG proposes to rededicate its existing sales tax revenue, which is currently limited to roads and drainage projects only, for a broader purpose that can focus on community resilience. The Parish enlisted a Parish Vision Task Force, made up of internal staff of varying levels, to lead this endeavor as a step towards long-term funding for resilience projects within the Parish.

Furthermore, STPG will seek out a portfolio of industries to the Parish that will not only provide a security blanket during tragic events but will also provide opportunities for a skilled workforce



and improve quality of life all around.

In a general sense, smart growth principles are a long-term commitment to sustainable population growth. By emphasizing infill in future development projects and lessening impacts on fragile, yet critical, environmental corridors, St. Tammany will be able to accommodate future decades of growth in a resilient manner. Smart growth involves locating housing near the places where people go: retails, schools, jobs, entertainment. In St. Tammany, it also means preserving the rural character of parts of the Parish, while concentrating development in communities that can accommodate it. This approach makes financial, environmental, and aesthetic sense for St. Tammany.

The estimated growth for the Parish has forced STPG to address resiliency in relation to hurricanes while identifying unmet housing, transportation, and water quality. St. Tammany Parish's approach to addressing the unmet needs of Hurricane Isaac and becoming a more resilient Parish capitalizes on the co-benefits of sustainable development and smart growth.

The I-12 Corridor is home to thriving, growing communities including Covington, Mandeville, and Slidell. These communities host global headquarters, essential retail services, and thousands of residents. They are also natural destinations for new residents moving from Louisiana parishes experiencing coastal land loss and devastation, partially due to St. Tammany's economic and educational assets. However, St. Tammany has experienced sprawling housing development patterns that consume productive agricultural land, increasing the infrastructure requirements for the Parish. Smart growth principles can change this dynamic and set the Parish. on a sustainable financial future while making it more resilient to storms.



Planning for future population growth in St. Tammany will maximize the return on investments in projects related to flood protection and coastal restoration. The Parish's transportation infrastructure can be maximized to provide alternative routes to jobs, retail, and recreational amenities, such as expansions and connections to the St. Tammany Trace. Alternate transportation routes will decrease particulate emissions and wear and tear on Parish roads, requiring less upkeep. The reduction in road maintenance costs allows both the state and the Parish to focus limited capital dollars on coastal and flood protection for the region.

Many of the residents from coastal Parishes facing rapid land loss and flooding from repeated storm events seek shelter, temporarily and permanently, in the Parish. St. Tammany is a regional destination for population growth because of its elevation, growing economy, and housing stock. St. Tammany is well prepared and has the capacity to manage the aftermath of disaster events, the influx of residents from varying income levels and backgrounds, and the social and cultural complexities of such. The Parish will maintain and preserve focus on preserving its coastal defenses while building smart along the prosperous I-12 corridor.

Communities in Louisiana recognize that their long-term success, safety and prosperity are regionally dependent. Though the geography and assets of each NRDC-eligible applicant in Southeast Louisiana are vastly different, experiences with each hurricane and with coastal land loss have made it clear that changes in any one part of the region affect the other parts.

Furthermore, our economies are inextricably linked with community patterns and business activity that illustrate movement between communities and evidence of a cohesive economic region. A diminished coastal community at the edge of the Gulf means that a community further



inland like St. Tammany Parish is also at greater risk. Furthermore, decisions that may benefit a single community may actually be to the detriment of another community. However, strategic planning that involves the coastal communities as well as the stakeholders both upstream (farmers, manufacturers, refineries, and other urban areas throughout the Mississippi River Watershed) and downstream (offshore entities such as international shipping, oil and gas, and fishing industries) will yield resilient solutions across the region.

St. Tammany Parish's proximity to Lake Pontchartrain, various wetlands and south-flowing rivers impacts Parishes farther south. The series of fortifications and resilience strategies employed by neighboring Parishes will influence the strategies considered by STPG as water pushed out by one system can enter another. St. Tammany is a critical component to the region's overall economic growth as more people choose to come to the Parish to work, live, and play. St. Tammany is dedicated to striking a balance between encouraging the development of roads, homes and businesses that allow commerce to thrive and preserving the natural environment.

The Parish's approach to NDRC application shows the interdependencies between environment, housing, transportation, economic growth, and resilience to future storms. Additionally, the co-benefits extend regionally and statewide. By concentrating future growth in the Parish in already developed areas, STPG can prepare for future growth in a way that strengthens the economic and transportation networks of the region, while preserving and strengthening coastal areas.

St. Tammany Parish is part of a dynamic region with leadership that is aligned to address the long-term issues facing the Louisiana coast. St. Tammany's governmental partners on this initiative include the Parish Departments of Economic Development, Grants, Health & Human



Services, and Engineering. STPG is also partnering with Design Workshop, Duplantis Design, Greater New Orleans, Inc., Habitat for Humanity, the North Shore Community Foundation, St. Tammany Economic Foundation, St. Tammany Levee Board, and Volunteers of America. Finally, the communities of Madisonville, Mandeville, and Slidell are also partners with the Parish Government on this initiative. St. Tammany will continue to reach out to implementation partners as the project concepts are developed further in Phase II.

St. Tammany Parish has undergone extensive resiliency planning, including the Hazard Mitigation Plan update, the Environmental Corridor Study, the Stormwater Management Plan, amongst others. St. Tammany participates in the NFIP Community Rating System and is a Class 7 community as of January 2014. Three other communities in St. Tammany participate separately: Mandeville (Class 7), Slidell (Class 7), and Covington (Class 10). There are 35,516 NFIP policies in St. Tammany with a premium of over \$19.5 million. The CRS discounts in St. Tammany total \$1.78 million.

St. Tammany is also part of a CRS Users Group in the Lake Pontchartrain area known as FLOAT: Flood Loss Outreach and Awareness Task Force. The three communities in St. Tammany that are separate CRS participants are also members of FLOAT. Members of FLOAT hold 42% of NFIP policies in the state and earned 34% of the CRS discounts in Louisiana. FLOAT has developed a Program for Public Information (PPI) with the goals of making the public aware of flood threats in their community, promoting an all-hazard approach to public outreach, educating local officials, providing comprehensive coverage for public outreach, developing consistent messaging from public entities, and promoting public awareness of flood



insurance rate maps. A critical partner in the FLOAT task force is the University of New Orleans' Center for Hazards Assessment, Response & Technology (UNO-CHART).

St. Tammany is also part of the Louisiana Coastal Master Plan, a \$50 billion plan developed to restore the loss of coastal lands that protect the state's communities, economy, and environment.

In summary, STPG's resilience approach incorporates four main focuses, water quality, flood protection, economic development and smart growth along the I-12 corridor. This four-pronged approach will provide the greatest impact to the most vulnerable communities while reducing the impact of repetitive shocks and stressors that have become more frequent as we continue to feel the effects of sea level rise and climate change on the community.

EXHIBIT F – LEVERAGE AND OUTCOMES

Outcomes

St. Tammany Parish seeks long-term resilience through watershed management and coastal restoration through strategic development of the I-12 corridor that promotes interconnectivity of environmental resources and enhanced recreational amenities funded through Parish tax revenues along with state and federal grant opportunities. These long-term projects include marsh creation and restoration, water quality protection efforts, storm water control, and other scenic streams and greenways initiatives. The best way to maximize the co-benefits of these projects is to encourage and steer population growth toward identified areas in the Environmental Corridor study reducing infrastructure costs and allowing for a reduction in per capita expenses, freeing local and state tax revenues for regional marsh creation projects. Other co-benefits include a more resilient transportation infrastructure that better connects residents to jobs and



amenities, improved water quality from sewer upgrades and reduced runoff, more “lines of defense” along the coast from marsh creation projects, and aesthetic quality of life improvements stemming from the preservation of rural areas of St. Tammany.

STPG’s approach to resilience is to increase the environmental sustainability of the expected population growth. To finance the improvements needed in water quality and coastal marsh creation, the Parish proposes a rededication of the sales tax allowing for a broader spectrum of projects including those aligned with the NDRC application. STPG will work with the St. Tammany Economic Development Foundation and their workforce training partners to include unemployed and disconnected workers on projects as is feasible. STPG will seek a portfolio of industries to the area, providing new opportunities for skilled workforce and retaining the residents and preserving the quality of life that is St. Tammany.

A successful St. Tammany Parish will embrace the forecasted increase in population and a slowdown of sprawling developments on the urban fringe. Success will also mean that the Parish has an enhanced regulatory system providing for improved water quality, coastal restoration, and increased sources of tax revenue.

Leverage

STPG leaders have expressed a willingness and desire to revise the sales tax structure to provide funds to resilience projects. Currently, the Parish’s sales tax revenue is restricted for use on road and drainage projects. Parish leaders would like to expand the uses of local tax revenue to



implement and maintain projects that will be developed in Phase II. This recurring revenue stream will be leveraged by projects funded through the state's Coastal Master Plan, which is likely to see some funding through the RESTORE Act (directing BP Oil Spill fines and penalties to coastal restoration). STPG will also continue to build relationships with other partners during Phase II as specific project concepts are developed, as well as continuing to apply for state and federal grant opportunities.

As a member of the NFIP CRS and the FLOAT CRS Users Group, STPG actively encourages public awareness of flood risk, mitigation strategies, insurance rates, and addressing repetitive loss properties. The Parish's current and future marsh creation and storm water management projects are designed to lessen the risk of flooding in communities and reduce the number of repetitive loss properties, improving the Parish's CRS class and reducing premiums. St. Tammany's goal of combining smart growth planning along I-12 with "multiple lines of defense" along the coast is to improve the risk assessment for property owners. This goal is echoed in the state of Louisiana's Coastal Master Plan and other CPRA projects designed to bolster coastal defenses against flooding and storms, protecting inland communities and lessening flood risk. Louisiana's multiple disasters and recovery periods have left local officials with extensive experience in addressing insurance considerations, and the cost of premiums.

Louisiana and St. Tammany's, experience has shown that preventing floods through a "multiple lines of defense" strategy that includes coastal resilience, storm water management infrastructure, and flood control structures is an approach that realizes significant cost savings as future damage is mitigated. The cost savings include electricity savings from switching to



passive drainage and storm water retention infrastructure, reduced flood damage from future storms, reduced insurance premiums, increased home values, and increased water quality.

Smart growth development, where housing is co-located in developments with active transportation infrastructure, employment opportunities, retail and entertainment amenities, and recreational opportunities, has been a proven method of cost savings for many municipalities across the country. Encouraging innovative development saves infrastructure costs, both for initial investment and future maintenance. As more household trips are taken by foot, car, or public transportation, the wear and tear on roads is lessened and maintenance costs decrease. Finally, smart growth patterns have been shown to increase home and property values while providing housing options that decrease transportation costs.

STPG is focused on addressing the coastal areas of the Parish, as well as encouraging smart growth development in the built-up areas along I-12. However, as demonstrated, changes in coastal ecology are regional in nature, and lessening flood risk in one place can sometimes affect the flood risk elsewhere in the region. Southeast Louisiana is a dynamic region, and STPG's proposed approach to accommodate population growth from lower-lying and damaged coastal communities will have regional and statewide effects, even if the project concepts and implementation remains local to the Parish.

EXHIBIT G – LONG-TERM COMMITMENT

St. Tammany Parish has an inherent depth of long-term commitment to resilience and regional coordination, given its geographic location and ever more so with the recent uptick in higher-intensity hurricanes. Situated among an interconnected system of bayous, lakes, rivers and



outlets to the Gulf of Mexico, St. Tammany is unsurprisingly vulnerable to natural disaster. In just the last ten years, higher-intensity hurricanes have ravaged the area, from Hurricanes Katrina and Rita in 2005 to the most recent, Hurricane Isaac in 2012. There has been a groundswell of activity focused on long term resilience and sustainability, with contributors to the effort ranging from state/federal/local officials, conservation groups, business leaders, and numerous members of the public. The following examples demonstrate the significant degree of regional coordination and the long-term commitment of St. Tammany Parish in disaster resilience efforts.

North Slidell Revitalization Plan

Slidell, LA is the most populous community in St. Tammany Parish, and is a vital part of the economic structure of the region. The North Slidell Revitalization Plan (NSRP) is one of the most recent initiatives in St. Tammany Parish that is focused on enhancing long-term resilience, and is demonstrative of the collective of entities and individuals focused on the future of St. Tammany Parish. Those currently involved are community residents, HOA leaders, business leaders, and parish and city officials. Formulated in July 2014, the NSRP is focused on resolving a number of challenges in an important portion of the parish, located between three major routes of travel (two interstates, one highway).

North Slidell is flood prone, and home for numerous vulnerable populations. In addition, this area is the site of a major business that are still recovering and are the key economic driver in the area. Currently, FEMA has committed to funding a 26-acre retention pond mitigation project, which will increase flooding protection for residents and businesses. Other items upon which the NSRP will focus include direly needed infrastructure improvements which will enhance



resilience and safety for its residents. These action items include repairing and improving capacity of antiquated, problematic storm/sewage and water systems, and enhancing means of ingress and egress for the growing population. While the area is bounded by major transportation arteries, there are insufficient access points proximate to the region and the internal roads are under capacity in the event of evacuation. The plan is currently in its nascent stages, but it has demonstrated significant means of incorporating the full spectrum of stakeholders, and is currently leveraging financial resources to meet its goals.

The St. Tammany Parish Environmental Corridor

St. Tammany Parish is currently undertaking a major initiative to comprehensively evaluate, identify, and kick-start implementation of a broad array of resiliency and sustainability measures. The St. Tammany Parish Environmental Corridor Study focuses on four main areas: 1) Creating a unified vision for the future of the parish within the corridor; 2) Protecting & enhancing natural and cultural resources; 3) Providing recommendations for a physically connected network of open spaces; 4) Providing financial sustainability for new open space. Specifically within the corridor investigation, the plan focuses on sustainable natural resource management which will enhance disaster resilience, and addresses key needs with respect to hydrology, environment, land use, and economic/social components as follows.

1. *Hydrology*: addresses flood zones/plains, watersheds, surface flow, impervious surfaces, blueways, aquifer recharge, and shoreline loss.
2. *Environment*: identifies action needed with respect to soils & water table, coastline adjacency, tree canopy, restoration projects, and landscape types.



3. *Land uses*: focuses on property mitigation, circulation & access, protected & public lands, land use, zoning, historic & cultural sites, and utility easement.
4. *Economic/Social*: parks/recreation, land value, scenic value, redevelopment costs, existing/needed infrastructure, and connectivity.

This undertaking incorporates a broad array of additional studies and plans, and works in concert with a multitude of stakeholders. Some of these include the 2025 St. Tammany Parish Comprehensive Plan, St. Tammany Parish Economic Development Plan, regional projects of the Coastal Protection and Restoration Authority (CPRA), Natural Hazards Mitigation Plan, transportation plan, and restoration/conservation initiatives.

Coastal Protection and Restoration Initiatives

As mentioned previously, St. Tammany Parish is geographically situated in such a way that it has a significant amount of coastline along Lake Pontchartrain and is in close proximity to the Gulf of Mexico. This positioning is in some senses a double-edged sword, in that it is a great resource for the parish, but also presents an increased level of vulnerability to natural disaster. As a remedy to the latter in St. Tammany Parish (and other parishes), the Louisiana CPRA is the state agency charged with developing and implementing comprehensive resiliency measures.

The following list of projects is currently scheduled for St. Tammany Parish:

- *Madisonville Bulkhead Project* – engineering & design for hurricane protection; cost est. \$2.1B, funded via US Fish & Wildlife Coastal Impact Assistance Program (CIAP); construction improvements to existing bulkhead along the shore of Lake Pontchartrain and the Tchefuncte River at the Madisonville Marina.



- *St Tammany Parish Watershed Management Study* – engineering and design; est. cost \$1.3M funded via CIAP; An assessment of natural water resource features in the Parish and their interactions with existing man-made infrastructure for water resource management (storm water management, interior drainage, storm surge protection) is needed to gain a comprehensive understanding of the water management system and the dynamics between its various natural and man-made components. This assessment would then be used to evaluate project and/or program priorities within the whole system.
- *Goose Point/Point Platte Marsh Creation* – engineering & design; est. cost \$22.1M; funded via Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA); create about 437 acres of marsh and nourish about 114 acres of degraded marsh along the northern shoreline of Lake Pontchartrain.
- *Bayou Bonfouca Marsh Creation* – engineering & design; est. cost \$29.2M; funded via Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA); the project objectives are to restore and nourish approximately 621 acres of interior marsh and reestablish the lake rim shoreline.
- *North Shore Hurricane/Flood Protection and Restoration Plan* – engineering & design; est. cost \$1.2M funded via State of LA; project will use 2009 Surplus Funding for the development of a hurricane protection plan and design for certain segments for the North Shore.

Legislative Action

A significant development occurred during the 2014 legislative session, with respect to St.



Tammany Parish obtaining the ability to secure long-term autonomy for itself with respect to its levee, drainage, and conservation system. The Louisiana State Legislature passed legislation which allowed for the creation of the St. Tammany Levee, Drainage and Conservation District. In the past, St. Tammany Parish was bundled into a district with the south shore, which included the much larger New Orleans metropolitan area. While at face value this may seem to go in the opposite direction of regional coordination, this action in fact was a necessary step for St. Tammany Parish to focus and prioritize critical measures for protecting its citizens and assets. The formulation of the St. Tammany district will allow the parish to manage, implement and regulate its future in terms of flood control measures and initiatives.

Historically, the Parish has not realized any benefits from being in the previous flood protection authority, in part because it did not have its own levee tax district. The creation of the St. Tammany district will allow the parish to create new funding sources, and partner with outside funding agencies to implement long awaited vital projects come to fruition. Some of the critical areas which the new district will address are flood control, tidal and riverine drainage, reservoir construction, diversion canals, erosion control, and marsh management. In addition, the district has the authority to buy and sell property and execute contracts, and source engineering services as needed.

Overall, STPG is dedicated to bring to fruition the results of comprehensive planning efforts. STPG is relying on the NDRC to provide the financial leverage for the four critical project areas of water quality, coastal restoration, flood protection, and economic diversity. Financial leverage, coupled with STPG's capacity and experience will result in the most resilient St.



Tammany Parish.

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