

**Grantee: Shelby County, TN**

**Grant: B-13-US-47-0002**

**October 1, 2016 thru December 31, 2016 Performance**

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**Grant Number:**

B-13-US-47-0002

**Obligation Date:****Award Date:****Grantee Name:**

Shelby County, TN

**Contract End Date:****Review by HUD:**

Reviewed and Approved

**Grant Award Amount:**

\$60,445,163.00

**Grant Status:**

Active

**QPR Contact:**

Jim Vazquez

**LOCCS Authorized Amount:**

\$60,445,163.00

**Estimated PI/RL Funds:**

\$0.00

**Total Budget:**

\$60,445,163.00

## Disasters:

### Declaration Number

No Disasters Found

## Narratives

### Executive Summary:

Utilizing URN identified in Phase 1 of the NDR Competition and additional refined data compiled during Phase 2 of the NDR Competition, Shelby County will expend a total of \$60,445,163.00 in CDBG-NDR funds in Phase 3 of the NDR application to implement and develop long-term resilience strategies to fortify the county against future floods by "MAKING ROOM FOR THE RIVER" within Shelby County and the Region. Copies of the NDR application documents can be found at [www.resilientshelby.com](http://www.resilientshelby.com)

Also, as described in the NDR Phase 2 application, both Memphis and Shelby County are committed to carrying out Fair Housing activities. Shelby County's Department of Housing, a partner team member in the NDR application, is the County agency operating HUD Community Planning and Development (CPD) entitlement grants and oversees housing programs which directly impact LMI residents which include infrastructure development, housing rehabilitation/construction, down payment assistance, lead-based paint hazard reduction, CDBG Disaster Recovery activities, and fair housing counseling. Likewise, the City of Memphis, a partner in the NDR application operates similar activities through its Division of Housing and Community Development. Both agencies are currently working to promote Fair Housing and Fair Housing Initiatives under their Fair Housing Assessments.

Additionally, as part of the GREENPRINT, the Memphis Shelby County Office of Sustainability completed a Fair Housing Equity Assessment (FHEA) in partnership SCDH, HCD, community and business leaders and other housing partners and addressed fair housing impediments under the Greenprint and recommended various solutions to improve fair housing education and compliance.

Under the NDR grant, Shelby County will continue to promote and further Fair Housing utilizing the Shelby County Department of Housing, Memphis HCD, and the Greenprint's FHEA to further assess Fair Housing impediments and incorporate Fair Housing initiatives into the NDR Resiliency Plan and the NDR projects in North (Big Creek), Central (Wolf River Greenway), and South (Cypress Creek) Shelby County. Currently, efforts are underway by Memphis and Shelby County to develop a new AFH Plan under new Fair Housing guidelines by 2018 to more effectively carryout Fair Housing initiatives on a joint/countywide basis in order to more efficiently address fair housing issue. The NDR administrative staff will work directly with SCDH, HCD, the Office of Sustainability to insure that Fair Housing is a key component of the NDR Resiliency Plan, long term resiliency efforts, and the long range Greenprint 2040 (which was the base platform for the NDR application in Phase 1 and Phase 2).

The NDR team understands that long term resiliency, social, economic, and environmental issues are a part of any long term Fair Housing Initiatives. Through the activities of the NDR grant; and both Memphis and Shelby County's HUD funded grants (CDBG, HOME, Lead Hazard Control, etc.) Shelby County will insure that fair housing is a central part of long term resilience efforts resulting from NDR efforts and projects.

NDR activities will focus on three geographical areas (one in each of the local watersheds) and the development of a Regional Resilience Plan to create a framework for resilience to provide detailed guidance for future r

### Executive Summary:

allow Shelby County to focus on creating a resilient community both locally and regionally. All four of the NDR funded actions utilize 4 guiding values to guide each activity. Specifically, these values are:

- (1) People (Health & Well Being) - protect lives, improve quality of life and promote social cohesion, accomplished through creation of wetlands and other flood storage to protect communities and create green assets;
- (2) Organization (Economy & Society) - reduce community burden of vacancy and vulnerable housing by removing residents from homes at risk of continued flooding and developing an approach to reduce Memphis' 47% vacancy rate;
- (3) Place (Infrastructure & Environment) - build new and establish connectivity to opportunities and community assets, building on the GREENPRINT with nearly 30 miles of new trails or bike paths to connect greenspace, housing, and jobs; and
- (4) Knowledge (Leadership & Strategy) - implement the regional sustainability plan by creating innovative, scalable, and resilient



solutions for flood prone communities across the region.

Each of these values is directly linked to a county-wide resilience imperative - - to live with water by "making room for the river." Utilizing \$60,445,163.00 (CDBG-NDR funds), \$31,600,000.00 (direct leverage from the Wolf River Conservancy), and \$4,100,000.00 (direct leverage from the City of Memphis), Shelby County will invest a total of \$96,045,163.00 in infrastructure, planning, and administration of the NDR project. Furthermore, a total of \$44,870,179.00 in supporting leverage from other partners (\$57,000.00 from the Memphis Chamber of Commerce, \$34,423,302.00 from Memphis Public Works, \$157,000.00 from the Hyde Family Foundation, \$4,338,696.00 from the Memphis MPO, \$72,000.00 from Shelby County, and \$5,822,181.00 from Shelby County) will be utilized to support approved activities associated with the "making room for the river project" concept. The following table breaks out funds and costs by area of activity.

NDR Projects CDBG-NDR Funds Direct Leverage Supporting Leverage  
Regional Resilience Plan  
\$2,100,000.00 CDBG-NDR Funds  
South Cypress Creek Watershed and Neighborhood Development  
\$8,988,097.00 CDBG-NDR Funds \$1,600,000.00 Direct Leverage  
Wolf River Wetland and Restoration Greenway  
\$18,260,842.00 CDBG-NDR Funds \$34,000,000.00 Direct Leverage  
Big Creek Wetland and Recreation Area  
\$29,447,227.00 CDBG-NDR Funds  
Administration  
\$1,648,997.00 CDBG-NDR Funds

Greater Memphis Chamber of Commerce \$57,000.00 Supporting Leverage  
City of Memphis Division of Public Works (Wolf River Wetland Greenway) \$2,500,000.00 Direct Leverage  
City of Memphis Division of Public Works (South Cypress Creek) \$1,500,000.00 Direct Leverage and \$34,423,302.00 (Main to Main) Supporting Leverage  
City of Memphis Division of Housing \$100,000.00 Direct Leverage  
Hyde Family Foundations \$157,000.00 Supporting Leverage  
Memphis MPO \$4,338,696.00 Supporting Leverage  
Shelby County (Big Creek) \$72,000.00 Supporting Leverage  
Wolf Creek Conservancy \$31,500,000.00 Direct Leverage  
Shelby County (Trails) \$5,822,181.00 Supporting Leverage  
TOTAL \$60,445,163.00 CDBG-NDR Funds \$35,600,0

### Executive Summary:

0.00 in Direct Leverage and \$44,870,179.00 in Supporting Leverage

Sources of Accepted Direct Leverage Amount Activity

Wolf River Conservancy \$31,500,000.00 Wolf River Wetland and Restoration Greenway

City of Memphis's Division of Public Works \$2,500,000.00 Wolf River Wetland and Restoration Greenway

City of Memphis's Division of Public Works \$1,500,000.00 South Cypress Creek Watershed and Neighborhood Development

City of Memphis's Division of Housing and Community Development \$100,000.00 South Cypress Creek Watershed and Neighborhood Development

Total Direct Leverage \$35,600,000.00

Other Anticipated Support (Not Direct or Supporting Leverage) Amount Activity

State of Tennessee \$6,000,000.00 Big Creek Wetland Restoration Project

Shelby County \$3,000,000.00 Big Creek Wetland Restoration Project

City of Millington \$1,000,000.00 Big Creek Wetland Restoration Project

Total Other Support \$10,000,000.00

The 5 NDR activities funded by CDBG-NDR and Direct Leverage focus on infrastructure, planning, and administration activities which will provide flood protection for areas that were flooded in the 2011 disaster, most of which are in LMI communities; address environmental degradation, particularly along damaged stream channels; create a long-term strategy for infrastructure resilience and protection from storm and flood damage; and create co-benefits of recreation, transportation choice, community health, and economic and community revitalization. This represents \$96,045,163.00 in grant funds and direct leverage.

These activities utilize NDR funds and Direct Leverage to combine for total activity cost as follows:

(1) Big Creek Wetland Restoration (\$29,447,227.00) – The \$29,447,227.00 in CDBG-NDR funds will provide flood protection, recreational amenities, and urban agriculture along Big Creek in Millington, Tennessee benefitting LMI residents and the U.S. Naval Support Activity Command Center;

(2) Wolf River Wetland Restoration (\$18,260,842.00) – Will provide flood protection, recreational amenities, and connectivity through greenways and complete streets to increase access to economic opportunity in Wolf River communities of Memphis, Tennessee; and

(3) South Cypress Creek Watershed Development (\$10,588,097.00) – Will provide flood protection, vacant lot remediation, food production, and community programs to increase economic and social capital in South Cypress Creek in Southwest Memphis, Tennessee.

(4) Regional Resilience Plan (\$2,100,000.00) – Will further Shelby County's efforts to expnsrlecetruhut the region by developing hydraulic models of thre watesesaoshebCutdterein, providing scientific data to identify ways to increase resilience in the region; and make Shelby County more resilient to other risks such as heavy wind, extreme heat, drought, and severe snow and ice.

(5) NDR Administration (\$1,648,997.00) – Will provide for the direct administration and staff costs associated with the NDR activities identified under the "Making Room for the River Project" over the term of the NDR timeline.

The above activities as outlined under the NDR award to Shelby County represents 94% of the NDR funds being used for direct infrastructure development under activities 1-3 and 6 of the funds benulzoritaoad



## MID-URN Areas:

ired from Kennedy Park. The borrow area in Kennedy Park will be converted to soccer fields that can serve as a detention basin during flood events.

(c) The Orchi Road component is a pivotal local connector between the low-income Hispanic community south of the road and other key economic epicenters within the region. The proposed activity entails berms in strategic locations to prevent future flooding to homes that were damaged when the road overtopped in similar storm events to the 2011 flood. A land parcel owned by Shelby County north of Orchi Road will be utilized to create a wetland pond to serve as a detention facility to prevent future residential flooding by storing stormwater that was flooding the roadway. Excavated material will provide fill for new berms. Orchi Road will be reconstructed as a Complete Street with bicycle facilities along the north side of the road to provide a direct connection between the surrounding LMI neighborhoods and the Wolf River Greenway via protected bike lanes on Highland St., a key GREENPRINT on-road connector.

The total cost for the Wolf River Wetland Restoration and Greenway is \$52,260,842.00 and is composed of \$34,000,000.00 in direct leverage from local sources and an NDR award of \$18,260,842.00.

Activity 3: South Cypress Creek Watershed and Neighborhood Redevelopment. The South Cypress Creek Watershed and Neighborhood Redevelopment (South Cypress Creek) is based on the key concept of "Making Room for the River" through a series of open space and infrastructure activities. Rather than create a wall between people and water, the activity embraces the water, increases awareness of risk, and steps down that risk with a series of wetlands to buffer against flooding and accommodate storm water. The South Cypress Creek activity seeks to strengthen community and social cohesion by (1) establishing community programs and (2) repurposing vacant lots through a relationship to community and economic development (retail services, social programs, and access to fresh, healthy foods). All of which were goals articulated by the community.

The service area for this activity is located in the southwestern quadrant of Memphis, Tennessee in a community that was (and has been) impacted by heavy flooding during the period governed by the 2011 disaster declaration. Specifically, the targeted service area encompasses the entirety of Census Tract 222.20 along a stretch of Mitchell Road. Key landmarks/structures located in and/or adjacent to the activity area are: T.O. Fuller State Park, Pidgeon Industrial Park, Port of Memphis, President's Island, Mitchell High School, Ford Road Elementary School, Roosevelt Park, and Mitchell Community Center.

The South Cypress Creek activity seeks to strengthen community and social cohesion by (1) establishing community programs and (2) repurposing vacant lots through a relationship to community and economic development (retail services, social programs, and access to fresh, healthy foods). All of which were goals articulated by the community.

The vacant lot program will be a comprehensive, scalable, and replicable program for reusing vacant lots for the community to: (1) to remove blight and help knit together the physical environment of the community in order to increase property value and provide benefits from flood mitigation to food production by building capacity for urban agriculture and improved food access and

## Executive Summary:

planning (2.7% and 3.5% respectively).

Supporting Commitments (\$44,870,179.00)

In addition to the five NDR activities funded by NDR and Direct Leverage; Supporting Leverage will be expended during the grant term to carry out other activities not funded by NDR but which will support Shelby County's long term commitment to resilience as outlined in both Phase 1 and Phase 2 of the competition. All of the following were approved by the U.S. Department of Housing and Urban Development as supporting commitments for the Shelby County NDR competition and the Phase 3 NDR grant award.

Shelby County's supporting commitments drew heavily from the ongoing implementation of the GREENPRINT plan, whose goals and approach formed the framework for the development of the Greenprint for Resilience's "Making Room for the River Project" as outlined in the NDRC application. These approaches will enable Shelby County to design a replicable and scalable series of interventions throughout the county and region both currently and in the future. The following provides a description of these supporting leverage activities identified under the competition.

(1) GREENPRINT Implementation Support (\$214,000.00) - The Hyde Family Foundations, a local philanthropy, gifted \$157,000.00 and the Greater Memphis Chamber of Commerce committed an additional \$57,000.00 to fund a coordinator position to transition the GREENPRINT (the platform for the NDRC competition) from plan to implementation. This leverage also supports the Regional Resilience Plan activity developed in this application.

(2) GREENPRINT Network Activities (\$44,584,179.00) - Multiple ongoing projects are integral to the development of the GREENPRINT network and platform on which the NDR applications was based. These include proposed trail corridors and regional parks which connect communities within Shelby County and the Region as shown below:

a) Shelby Farms Greenline and Park Trails. These trail corridors identified within the GREENPRINT will be developed and specifically include the Shelby Farms Greenline and park trails. The Greenline system connects Shelby Farms Park directly to an access point which will allow for linkage to the NDR's Wolf River Wetland and Restoration Greenway activity and ultimately provide for a green trail system from central Shelby County to the Frayser community and Rodney Baber Park. The park trails will further connect to other recreational access points within Shelby Farms and will create a network for Shelby County citizens to access the park amenities without the need for a motorized vehicle (Total Support: \$5,822,181.00);

b) The Main-to-Main Multimodal Connector Project. Managed by the City of Memphis, the Main-to-Main connector provides direct bicycle and pedestrian access from downtown Memphis, TN to the City of West Memphis, Arkansas via the Harahan Bridge. The project creates a pedestrian corridor across an active railroad/highway bridge connector over the Mississippi River which allows individuals to directly bike, run, or walk from Tennessee to Arkansas across the Mississippi River. (Total Support: \$34,423,302.00)

c) Greenline and Trail Connectors - The following Greenline and trail connectors will further develop the overall platform on which the NDR application was overlaid. The Fletcher Creek Greenway, Overton Park Cooprtreet TrailanderetTrl, eatwrewayChleanu

## Executive Summary:

Greenline, South Memphis Greenline, Shelby Farms Greenline Bridge, and Arlington Bike/Pedestrian Trail are funded through the Memphis Urban Area Metropolitan Planning Organization, a Department of DPD. The connectors provide further access to areas of Shelby County using a more passive system of trails/greenways which allow individuals a form of alternate travel throughout



the community via walking, running, or bicycling. (Total Support: \$4,338,696.00).

d) Big Creek Drainage Study – As a result of the 2011 qualifying disasters, Shelby County conducted a drainage study for innovative and resilient approaches to address potential future impacts from flooding along Big Creek. This study provides for baseline guidance in the design and development of the Big Creek Wetland and Restoration Greenway activity proposed in Phase 2 of the NDR application. (Total Support: \$72,000.00)

The “Making Room for the River Project” which includes all five direct NDR activities and the activities identified as Supporting Leverage activities are targeted for completion by September 2022.

Also, Shelby County has invested its time and effort into insuring that Shelby County and its partners focus on four long term commitments to resiliency within Shelby County and the surrounding Region. The four commitments agreed to and approved by HUD during the NDR Competition are outlined as follows:

The Mid-South Regional Greenprint – The largest long term commitment to resilience, GREENPRINT 2015/2040 is a 25 year plan that envisions a region of connected communities united in creating a high quality of life, where the physical and social environments are sustainable for future generations, and where all people can access abundant economic, social and natural opportunities. During the two year planning process, over 300 residents of the Mid-South Region (representing 82 organizations) formed the Mid-South Regional Greenprint Consortium tasked to develop the GREENPRINT 2015/2040.

Throughout the process over 3,000 residents of the region shared their thoughts, priorities, and values on the Greenprint during the public engagement process. The plan focuses on 8 strategic areas directly linked to resilience and sustainability within the region as a whole. The strategic areas were: (1) an interconnected network of parks, greenways, and open spaces, (2) equitable participation and community ownership, (3) enhanced access through transportation choices, (4) healthy and safe communities, (5) improved neighborhoods and fair housing choices, (6) sustainable resources and a quality environment, (7) a productive and resilient economy. The measure used to show the commitment of Shelby County and its Regional Partners in support of the long term commitment to resilience, sustainability, and long term cooperation is the adoption of the GREENPRINT 2015/2040 by all of the regional participants involved in the development of the plan by the end of 2016. The full Greenprint can be found at the following link: <http://midsouthgreenprint.org/greenprint-20152040/greenprint-final-plan/>

Wolf River Conservancy Land Conservation Efforts – A long term commitment identified and approved under the Phase 2 application is the Wolf River Conservancy’s (WRC) land conservation efforts. Prior to the publication of the NDR NOFA, WRC protected 13,500 acres of wetlands a

### Executive Summary:

and watershed along the Wolf River in Shelby County. Since Shelby County’s Phase 1 submission, and as identified in the Phase 2 submission, the WRC has earned national recognition by the Land Trust Accreditation Commission; this prestigious status signifies WRC’s conservation strategy for the Wolf River watershed is well-designed, implementable, and long-lasting. At that time, WRC had protected an additional 481 acres in the Wolf River watershed at a cost of \$1.22 million following the conservancy’s science-based land conservation strategy. Acquisition of properties for conservation purposes upstream in the Wolf River watershed provides critical long-term resilience for activities downstream proposed in the Wolf River activity of this application. As identified in Phase 2, WRC and partners will protect an additional 900 acres in the Wolf River watershed through 2016 at a cost of \$2 million.

Ready Shelby Community Preparedness Program. Also, identified as a long term commitment to resilience, the Ready Shelby community preparedness initiative educates and works with communities to prepare and respond to disasters. Ready Shelby is a collaborative initiative with support by Shelby County Government, all municipalities within the county, and the Assisi Foundation to improve emergency preparedness. The goals of the initiative are to educate Shelby County residents on how to prepare for an emergency, with specific attention given to the first 72 hours after an emergency, and to partner with public, private, faith-based, and non-profit sectors to share the guidelines and the overall importance of emergency preparedness with Shelby County residents.

Ready Shelby is a public awareness and education campaign to provide a rallying cry that inspires everyone to take positive, simple steps towards being prepared. Since October 2014, Ready Shelby has reached 100,000 households with public awareness materials and reached an additional 5,000 people through their events. They have spent \$750,000 on this awareness initiative since October 2014. The measurement utilized to show commitment to resilience is directly tied to the number of individuals reached during 2016, Shelby County committed to reaching another 100,000 households and making them aware of the program and providing them with access to materials under the Prepared Program.

City of Memphis Complete Streets Project Delivery Manual. Finally, the fourth activity identified as a long term commitment to resilience, involved the City of Memphis’ Complete Streets Project Delivery Manual. The City of Memphis developed its project delivery manual for an existing Complete Streets policy at a cost of \$48,000. The manual was funded through the HUD Regional Planning Grant awarded to Shelby County for the GREENPRINT. This manual includes design guidelines for streets that include safe accommodations for vehicular, pedestrian, bicycle, and transit users of all ages and abilities. Once complete, all street improvements will be required to consult the manual for design and engineering treatments. This long term commitment will be measured by the adoption of the Complete Streets Project Delivery Manual in 2016.

### MID-URN Areas:

After a complete evaluation of Unmet Recovery Needs (URNs) in Phase 1, Shelby County developed a set of four (4) activities designed to protect Shelby County’s communities from natural hazards while increasing environmental, economic and social opportunity for all residents of the region, especially vulnerable communities.

In Phase 2, the County identified three target areas that were hardest hit by the 2011 disasters: along Big Creek (Northern Shelby County), the Wolf River (Central Shelby County), and South Cypress Creek (Southern Shelby County). Activities within these areas will create additional greenway trails and enhanced recreation areas as well as areas for local food production. A fourth activity will create a Regional Resilience Plan (which includes a hydraulic study of the three main tributaries in the county) over a three-year period to provide a means to tie these and other similar efforts to the GREENPRINT, which was developed with the support of a HUD Sustainable Communities Regional Planning Grant. Each of these activities will lead to replicable interventions that will be transferrable to other areas throughout the region. Furthermore, the goal of each activity was to ensure that the designs are not only cost effective; but provide the highest resilience value (i.e. social, economic, environmental, etc.) and ensure that the proposed resilience solutions within the activities are both scalable and replicable throughout the region.

Activity 1: Big Creek Wetland and Recreation Area. Located in North Shelby County within the City of Millington, this area is home to a high percentage of LMI households as well as the Naval Support Activity Mid-South, a key military asset and employer for the



area. This activity spans an area within the City of Millington running along Big Creek between the Naval Support Activity (NSA) on the East, along Paul Barret Parkway and Big Creek, and culminating at Hwy 51 North on the West.

The overall service area is composed of the following Census Tracts:

0201.02 Block Group 1 0201.02 Block Group 2

0202.10 Block Group 1 0202.10 Block Group 2 0202.10 Block Group 3

0202.10 Block Group 4 0202.21 Block Group 1 0202.21 Block Group 2

0202.22 Block Group 1 0203.00 Block Group 1 0203.00 Block Group 2

0203.00 Block Group 3 0204.00 Block Group 1

The 2011 storms caused at least \$5 million in damages and displaced community members within the City of Millington. Using a flood control practice common to the Corps of Engineers, the primary activity will create a new floodplain by lowering an area along the creek to allow flood waters to flow into the floodplain while lowering water surface elevations. Lower water surface elevations will prevent future flooding in adjacent communities. If the floodplain had been constructed prior to the 2011 storms, the majority of flooding in the Millington area would not have occurred preventing more than \$4.5 million in losses. If this activity had been complete prior to the May 2010 floods, \$79 million of property damages would have been prevented.

This activity will also create sustainable natural wildlife areas, with native vegetation, wetlands, and other natural features. Other amenities will include development of walking trails, small-scale agriculture, ball fields, lakes, and camping areas to provide increased recreational and entrepreneurial opportunities.

### **MID-URN Areas:**

While creating the new floodplain will require the removal of trees to improve water conveyance, a tree canopy plan will be implemented to offset tree removal by four-to-one. Shelby County, the City of Millington, and other jurisdictions will work together to set aside approximately 500 acres for tree mitigation. Some of these areas will be utilized to provide an educational experience for school children from LMI areas. Tree mitigation areas will also provide a cooling effect by expanding the tree canopy to counter the increasing heat-island effect. Construction of this activity will increase resilience by lowering expected water surface elevations during future floods that may occur in Millington. Lowering water surface elevations will reduce or eliminate flooding of homes, businesses and public buildings compared to what would occur presently in a flood event and will greatly decrease the amount of public and private funds necessary to recover from such disasters. In addition, nuisance flooding which may not cause extensive permanent damage, but could cause significant disruption of the use of public and private infrastructure will be reduced or eliminated. Flooding not completely eliminated by this activity will be greatly reduced in extent and duration. The concept behind the Big Creek activity can be incorporated into an integrated approach to flooding problems in other areas. The model provides more room for a swelling stream during extreme storm events resulting in resilient, environmentally compatible solutions in the same space as recreational amenities for residents to use when the area is not flooded. This concept can be replicated in areas where flooding persists along a waterway and undeveloped land adjacent to the stream can be managed to increase flood flow capacity. Hydraulic studies can be performed to appropriately scale the extent of the work required to overcome the flooding problem resulting in a cost-effective investment of public funds. For example, the solutions proposed for Big Creek can be replicated along Fletcher Creek in suburban Bartlett at a much smaller scale. This intervention would have prevented damage to a nursery and nearby road flooding in the 2011 disaster, but which has since recovered. The total cost for the Big Creek Wetland and Recreation Area is \$29,447,227.

Activity 2: Wolf River Wetland Restoration and Greenway. The Wolf River Greenway will establish open space and infrastructure elements to help make Shelby County more resilient in future disasters and floods. The average household income in the neighborhoods surrounding Rodney Baber Park is approximately 48% below the national average of \$50,157, while the residents surrounding Kennedy Park are roughly 40% to 50% below the national average thus distinguishing it as LMI according to data collected by the 2010 Census Geographies. The geographic location of this activity is located in Central Shelby County and ties together activities in and around Rodney Baber Park, Kennedy Park, Orchi Road, and surrounding communities in the Wolf River Greenway.

The service area of this overall activity is designated by all block groups in the following Census Tract locations:

0206.21 0088.00 0089.00 0091.00

0205.12 0205.11 0206.10 0009.00

0011.11 0013.00 0102.20 0205.41

0205.42 0101.20 0006.00 0008.00

0111.00

The Wolf River Wetland Restoration and Greenway functions as

### **MID-URN Areas:**

36 miles from the Mississippi River through Memphis, Germantown, and Collierville in Shelby County and into Fayette County. Once complete, roughly 100,000 people will live within a 10 minute walk of the greenway and will allow both Rodney Baber and Kennedy Parks to serve as a destination for commuters and will encourage other means of transportation by providing a safe route to schools and to jobs for commuters, with direct connections to the Wolf River Greenway and enhanced access to transit shelter facilities. In conjunction with the Wolf River Conservancy's plans to improve N. Highland Street from Orchi Road to Chelsea Avenue, it will provide a direct path for the neighborhood and adjacent Jackson Avenue neighborhoods to access the Greenway.

The Wolf River Wetland Restoration and Greenway activity as a whole will become a multi-use activity center for an array of interests and educational purposes. The festival grounds will promote social cohesion by providing an alternative venue for events within the city and community while attracting individuals from different demographic areas and socioeconomic backgrounds for a common purpose. Added park amenities will offer a sense of community ownership within the area as well as provide further beautification to a neighborhood fighting to reduce blight. Finally, the activity will provide connections to the Wolf River Greenway via on and off street bike lanes and potential trails throughout the park and within the green space along TVA right-of-way.

Specific efforts within each component of this activity are as follows:

(a) Rodney Baber Park - The approximately 56 acre site will be raised above the floodplain to ensure resilience from future floods. This will include relocation of mechanical and electrical equipment above the flood elevation to prevent future flood damage. A terraced landscape approach will allow water to raise one level at a time, dissipating the initial inundation surge while



excavation east of the site will add flood storage capacity and increase stormwater detention. Proposed wetlands will also collect stormwater and provide further storage capacity for flood water to infiltrate the ground or evaporate. In the future, bioswales and permeable pavers could be used in order to reduce and filter stormwater runoff.

Following the infill, the proposed concept plan for Rodney Baber Park will consist of soccer fields, a baseball diamond, and a fishing lake, a public pavilion with festival grounds, trails, a new wetland area, preservation of existing wetlands, and other recreational facilities. The site will be terraced and tie into the existing grades along adjacent TVA transmission line right-of-way. The concept plan clearly identified these amenities, and designates which ones were included in the Phase 2 application and which ones are identified for future projects.

(b) John F. Kennedy Park - The primary goal of activities at Kennedy Park is to reduce flooding downstream of the park in areas along the Wolf River with URN from the 2011 disasters. In order to reduce flooding downstream of the park and promote resilience along the river, expansion and addition of wetlands in this park will provide areas for detention and serve as a water quality buffer before water subsides. Lowering the elevation of the ground surface in existing soccer fields will create

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## **MID-URN Areas:**

potential increase in retail within the community; (2) create room for housing relocation to areas that are high and dry, (3) implement stream restoration which will restore ecological connectivity along Cypress Creek to expand stormwater capacity in order to protect the important Mitchell Road connector from closing in a flood event as it did in 2011 and (4) create a flood resilient neighborhood.

The total cost for the South Cypress Creek Watershed and Neighborhood Redevelopment is \$10,588,097.00 and is composed of \$1,600,000.00 in direct leverage from local sources and an NDR award of \$8,988,097.00.

Activity 4: Regional Resilience Plan. Development of the Shelby County Regional Resilience Plan will provide a means to tie the three NDR Activities and other similar efforts in the community to the GREENPRINT. The plan will focus on Shelby County as a whole and will identify future local and regional activities that increase resilience to shocks caused by severe storms and flooding and will consider recommendations to make Shelby County more resilient to other types of climate risk, such as heavy wind, severe snow and ice, extreme heat or cold, and drought.

The plan includes the development of a HEC-RAS model of the Loosahatchie, Wolf, and Nonconnah drainage basins, including their major tributaries extending in adjoining counties and states (Tipton County, TN, Fayette County, TN, DeSoto County, MS). The model will provide information on the effect a wetland or retainage basin upstream would have on the potential flooding in the lower portions of the drainage basin. The model will be used to leverage the development of future green space and wetlands with the long term effect of reducing flooding in the areas with the most vulnerable populations.

Additionally, the model will also include methodology to predict areas that will be inundated during future flood events, including the influence of a changing climate. By incorporating prediction of rainfall in a given area, the HEC-RAS model can be used as a tool to provide a map of the potential areas which are most subject to flooding prior to storm events.

The process also includes community engagement, development of recommendations for resilience projects, design scenario development, implementation and finance strategies, and final plan development. DPD will reconvene eight working groups of partners, modeled after the GREENPRINT planning process, for two years to ensure the plan addresses interrelated strategic directions identified in the GREENPRINT plan. The Resilience Plan and its HEC-RAS Model will allow the county to recommend future projects that can serve to minimize the effect of severe storms and floods and maximize the ability to recover in Shelby County and the Region.

The total cost for the Regional Resilience Plan is \$2,100,000 and is totally funded by the NDR Grant award.

## **Key Agencies, Partners, Positions, Personnel:**

nment within the South Cypress Creek community to create a stronger and healthier neighborhood.

10. A resource to Shelby County since Phase 1, and a partner in the development of Phase 2, the University of Memphis Center for Applied Earth Science and Engineering Research (CAESER) will continue its role in assisting Shelby County in its resilience efforts through the Hydraulic study portion of the Resilience Plan. CAESAR will continue to provide assistance to Shelby County through its applied research, education, and leadership in sustaining community ground water resources, analysis and creation of GIS databases, and tools designed to anticipate and provide solutions to reduce the effect of risk when a flooding occurs.

11. Chickasaw Basin Authority (CBA), also a partner in Phase 3, was created as a State of Tennessee Agency as the Regional Development Authority for the Chickasaw Basin in Tennessee. The CBA develops flood control projects in the Loosahatchie and Wolf Rivers and Nonconnah Creek watersheds. The CBA is authorized by the State of Tennessee by TCA 64-1-201. Its role under Phase 3 will be to assist Shelby County and other partners in securing support and approval for wetland restoration activities under the Big Creek Wetland and Restoration Activity; an area within Shelby County where the CBA has been very active in developing flood control methodology and projects.

12. The University of Tennessee Agricultural Extension, a partner in Phase 3; provides a gateway to the University of Tennessee as the outreach unit of the Institute of Agriculture. UT Extension delivers educational programs and research-based information to citizens throughout the state. Additionally, in cooperation with Tennessee State University, UT Extension works with farmers, families, youth and communities to improve lives by addressing problems and issues at the local, state and national levels. As a partner to Shelby County in implementing the NDR award, UT Extension's role will be to serve as a resource in the development of community programs (especially in Big Creek and South Cypress Creek) which will educate the community about food and gardening and the creation of community gardens as alternative food sources within the community.

13. Memphis Center for Food and Faith (MCFF) and Grow Memphis (which recently merged to become Memphis Tilth) are local nonprofit organizations identified in Phase 2 who will work with Shelby County during Phase 3 implementation to engage in urban agriculture and community gardening activities designed to bring fresh and healthy food alternatives to citizens residing in the Big Creek and South Cypress Creek communities. As partners, they will work to establish community gardens and healthy food options for these areas to enhance greater access to fresh food.

14. The Hyde Family Foundations (a local philanthropy) and the Greater Memphis Chamber gifted \$157,000 and \$57,000 respectively to support a coordinator position to transition the GREENPRINT from plan to implementation. Their roles in the NDR through support of this position provide additional support for the Regional Resilience Plan funded under the NDR award.



## Key Agencies, Partners, Positions, Personnel:

The following outlines the partners who will work directly with or provide support to Shelby County in its efforts to carry out NDR projects and activities as well as their roles in the implementation of "Making Room for the River" concepts.

1. Shelby County's role, through the Divisions of Planning and Development and Public Works (and their associated Departments), is as that of the lead on the NDR award. Shelby County will actively administer the NDR grant, oversee activity design and development, and implement the 4 activities funded under the NDR award (Big Creek, Wolf River, South Cypress, and the Regional Resilience Plan). The County will work closely with each identified partner to insure that activities move forward, are fiscally feasible, and that NDR funds are properly utilized and accounted for throughout the grant award which ends September 2022.

Additionally, Shelby County in its role as the lead on Phase 1, Phase 2, and subsequently the NDR award implementation lead is responsible for insuring that the following supporting leverage commitments are met:

- a) Projects integral to the development of the GREENPRINT network involving the development of proposed trail corridors of the GREENPRINT network including the Shelby Farms Greenline and park trails (\$5,822,181);
- b) Fletcher Creek Greenway, Overton Park Cooper Street Trail and Perimeter Trail, Germantown Greenway, Chelsea Avenue Greenline, South Memphis Greenline, Shelby Farms Greenline Bridge, and Arlington Bike/Pedestrian Trail funded through DPD's Memphis Urban Area Metropolitan Planning Organization (\$4,338,696); and
- c) The Shelby County's drainage study for resilient approaches to address impacts from the 2011 qualified disasters and future flooding along Big Creek (\$72,000).

2. City of Memphis, a partner since Phase 1 of the NDRC process, is the largest municipality in Shelby County with a population of nearly 650,000. Two of the NDR activities (Wolf River and South Cypress Creek) are directly located within the Memphis city limits. Under Phase 3, Memphis will play a key role in assisting in the overall design and implementation of the both of these projects. As a partner in the NDR grant, Memphis is providing a total of \$4,100,000 in direct leverage through its Public Works Division and Division of Housing and Community Development (HCD). This leverage can be broken out as follows: \$2,500,000 for the Wolf River Wetland and Restoration and \$1,600,000 for the South Cypress Creek Activity (\$1,500,000 from Public Works and \$100,000 from HCD). The City is also a partner in the Shelby County Resilience Council (SCRC) a multi-disciplinary team appointed by Shelby County Mayor Mark H. Luttrell, Jr. to formalize development and implementation of the Greenprint for Resilience Project. Also, the City of Memphis is filling a developmental role in support of the NDR application and activities by providing \$34,423,302 for construction and completion of the Main-to-Main Multimodal Connector Project managed by the City of Memphis, connecting Memphis to the City of West Memphis, Arkansas, including the Harahan Bridge connection across the Mississippi River; which furthers regional interconnectedness of the Greenprint.

3. GCR Inc. has also been involved in the NDR grant since the Phase 1 application and prior to the Phase 3 award. GCR will continue to provide project management and technical assistance

## Key Agencies, Partners, Positions, Personnel:

contract period with HUD which terminates in September of 2022. GCR staff members have worked with several state clients to develop, implement, and monitor CDBGDR programs. GCR possesses extensive expertise in developing systems that track stages of recovery from immediate response, program development and management, public visibility of expenditures, and progress of recovery resources. Their role will be to provide direct grants management technical assistance to Shelby County to insure compliance, public access to information, and effective administration of resources.

4. Another partner, the Community Development Council of Greater Memphis (CD Council) is a coalition of community and housing development organizations, non-profits, and individuals who support the development and redevelopment of vibrant and economically sustainable neighborhoods. Livable Memphis, a program within CD Council, promotes the same priorities with a special focus on growth and development issues – including land use and transportation – and on increasing public participation in planning and development decisions. As a partner under Phase 3, the CD Council (and Livable Memphis) will provide direct community outreach and awareness efforts to assist Shelby County in its efforts to fully engage the community. Its close ties with CDCs, Neighborhoods, and other non-profits will provide Shelby County and the other NDR partners with direct links in the community to enhance input into the Resilience Plan as well as the other three NDR activities approved under Phase 3.

5. Pique PR is a full-service PR agency based in Memphis, Tennessee who has been involved with Shelby County's NDR application from the beginning of Phase 1. Pique will continue its partnership through Phase 3 of the grant and will continue to provide Shelby County with support for public events associated with public outreach, community engagement, and marketing efforts under the NDR award.

6. Kimley-Horn; Barge Waggoner Sumner and Cannon; and Sasaki and Associates are the team of consultants who have been involved in the NDR grant since the Phase 1 application and prior to the Phase 3 award. These partners have combined expertise in architecture, urban design, landscape architecture, civil engineering, environmental reviews, permitting, water resources, and other services to support the proposed resilience project. Furthermore, these partners have specialized experience in stormwater modeling, GIS-based applications, creation and permitting of wetlands at both the state and federal levels, and design and implementation of green infrastructure in Memphis and Shelby County as well as nationwide.

a) Kimley-Horn will continue their partnership with Shelby County to carry out environmental reviews and architectural/engineering designs associated with the Wolf River Wetland Restoration and Greenway activity, which includes the components of Kennedy Park, Rodney Baber Park, and Orchi Road Improvements. All of these activities comprise the activity along the Wolf River Conservancy's Wolf River restoration area in Central Shelby County and the greenway trail system tying these activities together.

b) Barge Waggoner Sumner and Cannon will continue their partnership role in carrying out environmental reviews and architectural/engineering designs associated with the Big CreeWtnRstrtoPoet.Tesdsgsnspwlvveoraogns;iCeadwifcuowtadrstrton

## Key Agencies, Partners, Positions, Personnel:

development of proposed amenities, and the interconnectedness of public access throughout the development.

c) Sasaki and Associates will continue their partnership role in carrying out environmental reviews and architectural/engineering designs associated with the South Cypress Creek Watershed and Neighborhood Redevelopment. The designs will focus on both wetland restoration designs which strengthen community and social cohesion, repurposing vacant lots to accomplish community and economic development, and increase access to fresh, healthy foods.





7. The Wolf River Conservancy (WRC) has been a key participant and partner during the development of both Phase 1 and Phase 2 of the NDR competition. A non-profit that protects habitats within the Wolf River watershed, spearheads the Wolf River Greenway project along the urban Wolf River, connects people of all ages to the Wolf River through education, and provides outstanding recreational opportunities for the community; WRC has helped to protect 18,000 acres in the Wolf River corridor in order to enhance the entire Wolf River floodplain and protect critical aquifer recharge areas for public drinking water. As a key partner providing \$34 million in leverage under Phase 3 of the NDR award, WRC will continue the same efforts outlined above along (and within) the Wolf River Wetland Restoration and Greenway Activity. WRC's direct role will be developing the portion to the Greenway which will link Kennedy Park, Orchi Street, and Rodney Baber Parks and enhances overall access to parks and amenities within the activity area (and larger parts of Shelby County as the Greenway continues to grow). A key role of WRC in Phase 3 of the NDR award is the provision of \$31,500,000 in direct leverage for the Wolf River Greenway and Restoration Activity.

8. United Housing Incorporated (UHI), as identified in Phase 2, is a local nonprofit organization engaged in homebuyer education, community development, down payment assistance, and housing rehabilitation and construction who will serve as a partner in the South Cypress Creek activity. United Housing, a part of the Neighbor Works America Network, will provide support in developing and retaining housing in South Cypress Creek in order to stabilize and improve the housing stock of the area and assist in relocating residents from flood prone housing into new and/or rehabilitated housing in the neighborhood. This newly created housing will, to the greatest extent possible, incorporate energy efficiency, renewable energy, and low impact development into the designs. In this role, UHI will work closely with Shelby County and Habitat for Humanity of Greater Memphis to carryout activities to stabilize and enhance the living environment within the South Cypress Creek community to create stronger and healthier neighborhood.

9. Similar to UHI, Habitat for Humanity of Greater Memphis (HFHGM) is a nonprofit housing ministry dedicated to eliminating substandard housing from the city of Memphis and surrounding areas, while making decent housing for all people a matter of conscience and action. Identified as a partner in Phase 2 of the NDR competition, HFHGM will play a role in the implementation of Phase 3 by providing one or more of the following: homebuyer education, counseling, housing repairs, and/or new construction. In this role, HFHGM will work closely with Shelby County and UHI to carry out activities to stabilize and enhance the living environment.

Overall	This Report Period	To Date
<b>Total Projected Budget from All Sources</b>	N/A	\$140,165,341.00
<b>Total Budget</b>	\$0.00	\$60,445,162.00
<b>Total Obligated</b>	\$0.00	\$0.00
<b>Total Funds Drawdown</b>	\$0.00	\$0.00
<b>Program Funds Drawdown</b>	\$0.00	\$0.00
<b>Program Income Drawdown</b>	\$0.00	\$0.00
<b>Program Income Received</b>	\$0.00	\$0.00
<b>Total Funds Expended</b>	\$0.00	\$0.00
<b>Match Contributed</b>	\$0.00	\$0.00

## Progress Toward Required Numeric Targets

Requirement	Required	To Date
<b>Overall Benefit Percentage (Projected)</b>		74.85%
<b>Overall Benefit Percentage (Actual)</b>		0.00%
<b>Minimum Non-Federal Match</b>	\$0.00	\$0.00
<b>Limit on Public Services</b>	\$9,066,774.45	\$0.00
<b>Limit on Admin/Planning</b>	\$12,089,032.60	\$0.00
<b>Limit on State Admin</b>	\$0.00	\$0.00

## Progress Toward Activity Type Targets

## Progress Toward National Objective Targets

National Objective	Target	Actual
<b>Low/Mod</b>	\$30,222,581.50	\$42,437,409.00



## Overall Progress Narrative:

No activities to report due to contract signing on December 21, 2016 and Action Plan approval on May 1, 2017.

## Project Summary

Project #, Project Title	This Report Period	To Date	
	Program Funds Drawdown	Project Funds Budgeted	Program Funds Drawdown
1 - NDR, Regional Resilience Plan - NDR	\$0.00	\$0.00	\$0.00
2 - NDR, South Cypress Creek Watershed & Neighborhood	\$0.00	\$0.00	\$0.00
3 - NDR, Wolf River Wetland & Restoration Greenway - NDR	\$0.00	\$0.00	\$0.00
4 - NDR, Big Creek Wetland & Recreation Area - NDR	\$0.00	\$0.00	\$0.00
5 - NDR, Administration - NDR	\$0.00	\$0.00	\$0.00
6 - LTC, Long Term Commitments - LTC	\$0.00	\$0.00	\$0.00
7 - SL, Supporting Leverage - SL	\$0.00	\$0.00	\$0.00
8 - OV, Outcome Values - OV	\$0.00	\$0.00	\$0.00



