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WATER WISE MISSION

Water Wise Gulf South—Dana Brown & Associates Landscape Architects, Global Green, and Recharge NOLA—is an environmental outreach collaborative devoted to advancing and promoting green infrastructure and its associated benefits through education, events, tours, do-it-yourself workshops, demonstration projects and leadership training.

The mission of Water Wise Gulf South is to empower individuals, neighborhoods, and marginalized communities to manage stormwater, thereby reducing localized flooding and providing many other benefits. We promote community-driven, ecologically-based solutions, known as green infrastructure, to infiltrate, filter, and detain stormwater runoff and improve water quality.

Our approach is to build community leadership and demonstrate green infrastructure systems. We accomplish this by providing technical assistance, educational programming, green infrastructure leadership training, and green infrastructure implementation.
WATER WISE GOALS

Water Wise Gulf South seeks to advance the neighborhood model of community-driven green infrastructure projects, as a way to address flooding, increase water absorption into the soil, and contribute to the successful and equitable implementation of the Greater New Orleans Urban Water Plan. The Water Wise model includes building a constituency of local residents, developing leadership, planning green infrastructure projects, implementing green infrastructure plans, and providing ongoing technical assistance and community organizing support to maintain and increase capacity. The engine of the model is trust-building and collaboration among community-based organizations, the Neighborhood Champions, and the Water Wise team. This model was formed out of the success of the 2016 Citywide Neighborhood Champions Training. With seed funding from the Greater New Orleans Foundation, Water Wise has been able to implement this model in Tremé and the 7th Ward.
Parts of the Tremé are plagued by severe flooding. In 2014 and 2015, Water Wise conducted flood mapping surveys across the city and found that many residents have experienced “severe flooding” in the Tremé. In order to address flooding in this neighborhood, Water Wise Gulf South has partnered with the Greater Tremé Consortium (GTC). GTC is a community-based that was formed in 1993 with a mission to increase affordable housing opportunities for low-moderate income families and to support the development of small businesses in the Tremé’. Over the past twenty years, GTC has worked in all areas of community development to improve living conditions in the Tremé’ neighborhood, including addressing, housing, poverty, education, beautification, small business development, health, the environment, and preservation of Tremé’s unique culture. GTC has organized over 100 community meetings which led to the development of affordable housing, a community maintenance program, youth-ran restaurant, collaboration with the National American Civilian Corps, health testing, community gardens, housing and credit counseling services and most recently, stormwater management to prevent flooding. Cheryl Austin, Executive Director of GTC, has worked in the Tremé community for over twenty years. As a former businesses owner, she cofounded Women Entrepreneurs for Economic Development, which is a local nonprofit created to support start-up, women-owned businesses. As Director of GTC, she has developed and implemented affordable housing programs/projects, created a community maintenance program with emphasis on beautification, developed cultural events and activities, and organized extensively around issues important to Tremé’ residents, businesses, and nonprofits.

The partnership between the Greater Tremé Consortium and Water Wise Gulf South is known as Water Wise Tremé.

**LOOKBOOK PURPOSE**

The purpose of this Lookbook is to document the methodology that was used by Water Wise Tremé. In this Lookbook you will learn about the Neighborhood Champions, community events organized and attended by Water Wise Tremé, green infrastructure demonstration projects implemented by Water Wise Tremé and a list of priority green infrastructure projects identified by the residents of the Tremé Neighborhood.
TYPES OF GREEN INFRASTRUCTURE

Green infrastructure is a term that includes different features and facilities that manage stormwater by mimicking natural processes, whether they involve plants or not. Typical green infrastructure that utilizes plants and soil to slow, detain, and filter stormwater are rain gardens, bioswales, stormwater planters, and trees. French drains, infiltration columns, and infiltration pits are filled with coarse gravel and, although not planted, can be covered with lawn grass and still function. Pervious or permeable paving includes several different types of surfacing for patios, driveways, and sidewalks that allows water to enter the subsurface soil through the paving. Rain barrels are also a type of green infrastructure, one which collects stormwater runoff from roofs for reuse in irrigating vegetable and flower gardens, trees, and shrubs.

**DETENTION**

Detaining stormwater allows water to be absorbed by plants and soils rather than run directly into the storm drains. This decreases flooding by preventing the drainage system from being overloaded with rainwater.

**INfiltrATION**

Allowing water to infiltrate into the soil helps to balance the groundwater, which reduces the constant expanding and shrinking of our clay and rich organic soils and reduces subsidence.

**FILTRATION**

Plants roots absorb polluted water and filter out pollutants before they reach pipes. This means our lakes, bayous, and streams would receive cleaner water, benefiting public health, recreation, wildlife, and more.
BIOSWALES

Bioswales are shallow, linear channels with side slopes used to convey water from one place to another, often toward a larger green infrastructure type. They use suitable plants to slow stormwater moving through the bioswale and filter out pollutants.
Rain gardens reduce runoff by capturing rain and allowing stormwater to soak directly into the ground rather than flowing into storm drains. This in-turn decreases the amount of water-related issues such as subsidence, pollution, and flooding. Typical planting includes Louisiana Irises and other native plants.
DETENTION BASINS

A detention basin or dry pond is used to capture large amounts of stormwater and release it slowly into the ground as well as the drainage system. This slow release mitigates the intensity of storm-induced flooding on neighboring properties and roadways. Detention basins also help clean and filter the stormwater prior to entering the drainage system.
PERVIOUS PAVEMENT

Pervious pavement is any surface that allows stormwater to infiltrate through the paving into the subsurface. Pervious concrete is a type of pavement that has between 15-25% of void space to allow water and air to infiltrate. Pervious pavers are solid interlocking pavers that allow water to flow through joints between them.

EXTENSIVE GREEN ROOF

A green roof is a multi-layered roof system that is partially or entirely covered with vegetation. Extensive green roofs have a maximum depth of 6 inches containing growing media (bioretention soil,) drainage, irrigation, and a waterproofing membrane. The systems can support groundcovers and shallow plant roots, so they require less structural support and maintenance.
FRENCH DRAIN

French drains are long excavated channels filled with coarse rock or stone that is 1-1/2” to 2” in size. The purpose of an infiltration trench is to direct stormwater along a path typically away from your home and into a rain garden. In addition, infiltration trenches clean and filter the water while allowing it to soak into the soil and replenish the groundwater.
STREET TREES

Adding street trees to a corridor not only boosts aesthetic and property values, but provides air and water quality benefits, reduces stormwater runoff, sequesters carbon, and reduces urban heat island effect, and provide wildlife habitat. For proper tree health, tree species should be chosen based on site specific conditions including root zone space and potential for stormwater to infiltrate into the root zone space.

GREEN OPEN SPACE

Green open spaces slow down and treat stormwater runoff, allow for infiltration, provide wildlife habitat, reduce heat island effects, and sequester carbon. Green spaces are vital to urban environments maintaining some ecological functionality.
CISTERNS AND RAIN BARRELS

Rain barrels collect rain runoff from the roof of a structure, which can be stored for later use or held and released slowly back into the ground. Common uses for stormwater stored in rain barrels include watering gardens, irrigating agriculture, and washing cars.
**TREE CELLS**

Tree cells are modular suspended pavement systems that provide substantial subsurface space for loose soil, water, and air, which provide an ideal growing medium for tree roots, while also structurally supporting paving above. Tree cells are an ideal type of GI for a highly urban environment.

**INfiltration recreation fields**

These are multi-purpose fields designed for athletic activities and stormwater management. The fields can have modular subsurface storage systems similar to the ones used for tree cells below an aggregate sub-base and a sandy bioretention soil. This should be topped with a hardy grass species instead of sod to avoid clay soils that do not facilitate infiltration.
Bioretention cells are defined land areas, usually surrounded by pavement, planted with water tolerant plants. They are designed to detain stormwater to allow both infiltration and filtration. “Bioretention” refers to the biological processes plants use to uptake and retain pollutants.
COMMUNITY OUTREACH EVENTS

An important piece of the Water Wise Tremé model is to inform residents about green infrastructure. Below is a list of Community Outreach Events hosted or attended by Water Wise Tremé:

**Water Wise Tremé: Introduction to Green Infrastructure**
Date: 09/15/2015  
Location: Greater Tremé Consortium, 814 N Robertson Street  
People Engaged: 13

**Tremé Fall Festival**
Date: 10/01/2016  
Location: St Augustine Church, 1210 Governor Nicholls Street  
People Engaged: 28

**Water Wise Tremé Meet and Greet**
Date: 11/05/2016  
Location: Greater Tremé Consortium, 814 N Robertson Street  
People Engaged: 10

**Craig Elementary Classroom Education**
Date: Spring 2017 Semester  
Location: Craig Elementary School  
People Engaged: 20 8th grade students

**Rain Barrel Build hosted by Water Wise Tremé**
Date: 04/04/2017  
Location: Sojourner Truth Community Center at NOLA Tree Project’s Big Treesy Giveaway  
People Engaged: 26  
Rain Barrels Built: 13

**Xavier Student Canvassing for Water Wise Tremé**
Date: 04/11/2017  
Location: Throughout Tremé  
Resident Surveys Completed: 46

**Tremé 7th Ward Cultural Festival**
Date: Memorial Day Weekend 2016-2019  
Location: “Under the Bridge”  
People Engaged: 165

**Presentation at St Peter Claver Community Meeting**
Date: 11/17/2017  
Location: St Peter Claver Church  
People Engaged: 6

**Historic Tremé Sip n Stroll hosted by Water Wise Tremé**
Date: 12/16/2017  
Location: Historic Tremé  
People Engaged: 9

**Lafitte Greenway & Pumping Station Tour hosted by Water Wise Tremé**
Date: 12/28/2017  
Location: Lafitte Greenway and Pumping Station Number 2  
People Engaged: 28

**St Peter Claver Black History Month Market**
Date: 2/18/2018  
Location: St Peter Claver Church  
People Engaged: 14

**Hike the Greenway**
Date: 4/10/2018  
Location: Lafitte Greenway  
People Engaged: 15

**Tremé Center Stormwater Planter Box Meeting hosted by Water Wise Tremé**
Date: 08/16/2018  
Location: Tremé Community Center  
People Engaged: 29

**WEF Tremé Community Center Stormwater Planter Box Build Day**
Date: 09/29/2018  
Location: Tremé Community Center  
People Engaged: 15
GREEN INFRASTRUCTURE INTERVENTIONS COMPLETED IN TREMÉ

Demonstrating how green infrastructure works is another piece of the Water Wise Tremé model. Throughout Tremé, we have implemented many types of examples of green infrastructure including: rain gardens, bioswales, tree plantings, stormwater planter boxes, concrete removal, French drains and rain barrels.

Rain Garden at 1712 Bayou Road
Rain Barrel and Stormwater Planter Box at 814 North Robertson Street
Native Tree Planting at 822 North Robertson
De-paving and Native Tree Planting at 1304 Ursulines Avenue
De-paving and Tree Planting at 1725 Saint Bernard Avenue
Stormwater Planter Box at 1500 Governor Nicholls Street
Rain Garden at 1531 Dumaine Street
Rain Garden at 1222 North Dorgenois Street
Stormwater Planter Box at the Tremé Center 900 N Villere Street
French Drain at 817 N Claiborne Avenue
French Drain and Rain Garden at 1306 N Rocheblave Street
NEIGHBORHOOD CHAMPIONS

The Water Wise Tremé Neighborhood Champions are an integral piece of the Water Wise Tremé model. Through a series of training, the Neighborhood Champions become citizen experts on green infrastructure. By living, working, worshiping and playing in the Tremé, they already know the flooding issues that Tremé experiences. With their earned title as Neighborhood Champion, they are tasked with educating their neighbors about green infrastructure, installing small scale projects on their property (or another property of their choice), and creating a vision for green infrastructure in Tremé.
Mandatory Trainings to become a Water Wise Tremé Neighborhood Champion include:

- **A Water Wise 101 Workshop**: This is an introductory classroom-style presentation and discussion that provides an overview of stormwater management during which participants learn about the municipal drainage system, types and benefits of green infrastructure, and implementing do-it-yourself green infrastructure interventions on their own property.

- **A Citywide Green Infrastructure Tour**: Participants travel via charter bus to tour a variety of different green infrastructure sites on private and public property across the city. Experts on various topics also meet participants at each site to provide information about the project.

- **Visioning Session**: In these workshops participants gather to identify green infrastructure interventions on public property in their neighborhood.
Water Wise Tremé has held three Water Wise 101 Workshops in the Tremé Neighborhood. These workshops are open to the public. At recent Water Wise workshops attendees received a Water Wise Workbook. This workbook provides information about green infrastructure and how to install do-it-yourself green infrastructure interventions on your property. At a Water Wise Workshop, attendees can also win a raffle prize of either a free home assessment led by Dana Brown and Associates or a rain barrel.

**Workshop 1:** 10/28/2014  
Location: St Peter Claver Catholic School  
Attendees: 19

**Workshop 2:** 03/18/2017  
Location: St Peter Claver Catholic School  
Attendees: 15

**Workshop 3:** 04/06/2017  
Location: Greater Tremé Consortium  
Attendees: 10
HOME ASSESSMENTS

Home assessments are led by a team member at Dana Brown and Associates. During a home assessment the homeowner invites their neighbors to attend a walk-around of their site. The homeowner provides information about where they are experiencing flooding and recommendations for green infrastructure implementation are provided by Dana Brown and Associates.

Home of David and Victoria Rotman
Date: 08/01/2017
Additional Neighbors in Attendance: 2

Inn at the Old Jail
Date: 09/11/2018
Additional Neighbors in Attendance: 7
GREEN INFRASTRUCTURE TOUR

Since 2016, each spring Water Wise holds the Green Infrastructure Tour for residents to see green infrastructure projects that are already implemented across New Orleans. The tour serves as a learning opportunity in green infrastructure design, native plant selection, maintenance, community involvement, etc. It also sets up the Neighborhood Champions to visualize projects that they want to see implemented in their own neighborhoods.

The 2017 Green Infrastructure Tour was dedicated to the Water Wise Tremé Neighborhood Champions.

Date: April 22, 2017
Location: See Map on the Next Page
Participants: 20
VISIONING WORKSHOPS

The goal of the Visioning Workshops is to identify medium to large scale green infrastructure projects that can help reduce flooding in Tremé. Most of the time, these projects fall on public property. To do this, residents divided into groups based on where in their neighborhood they live. The participants identify areas that frequently flood, or hotspots, and then identify appropriate green infrastructure interventions to address these problem areas.

From there, Dana Brown and Associates map these projects and calculate the amount of stormwater that would be managed and other benefits using the Climate Adaptation Planning Tool developed by Deltares and Dana Brown & Associates. The participants reconvene in workshops to reassess their suggestions and collectively prioritize the listed projects.
**Visioning Workshop Session 1**  
Date: 08/19/2017  
Location: Tremé Center

**Visioning Workshop Session 2**  
Date: 09/23/2017  
Location: Greater Tremé Consortium

**Visioning Workshop Session 3**  
Date: 10/18/2018  
Location: St Peter Claver School
ADAPTATION SUPPORT TOOL

The Adaptation Support Tool (AST) was developed by the Dutch research institute Deltares to assist in collaborative planning of ecosystem-based adaptation. The AST allows for the input, design, and output of 71 blue-green infrastructure measures, including French drains, dry ponds, and bioretention cells. The tool provides a list of measures ranked by characteristics (adaptation targets, existing land use, surface, subsurface space); map layers and measuring tools; and estimations of performance metrics (storage capacity, runoff reduction, groundwater recharge, etc.). The AST evolved to include measures that particularly affect New Orleans: land subsidence and heat stress reduction.
The tool’s dashboard, shown in the image above, displays several options for visualizing the data being analyzed. The left panel contains tabs for setup, measurements, layers, and cases. The right panel presents overview information on contributing factors such as climate, water quality, and costs in addition to active measures; details and target specifications; and a simple feature to export data from the tool.
TREMÉ QUADRANTS

As a part of the Visioning Session, Water Wise Tremé decided to divide Tremé into four quadrants. The purpose for this was to allow participants to focus in on the areas where they live, work, worship and play in the Tremé. Participants noted flooding hot spots inside of each quadrant and from a list of green infrastructure interventions, they selected interventions to solve the flooding issue. The quadrants are as follows:

Northwest Quadrant: Bounded by St. Louis Street, North Broad Street, Ursulines Avenue and North Claiborne Avenue

Southwest Quadrant: Bounded by St. Louis Street, North Claiborne Avenue, Ursulines Avenue and North Rampart Street

Northeast Quadrant: Bounded by Ursulines Avenue, North Broad Street, Esplanade Avenue and North Claiborne Avenue

Southeast Quadrant: Bounded by Ursulines Avenue, North Claiborne Avenue, St. Bernard Avenue and North Rampart Street
## TREMÉ NORTHWEST QUADRANT GREEN INFRASTRUCTURE VISION

<table>
<thead>
<tr>
<th></th>
<th>Stormwater Storage Capacity</th>
<th>Construction Cost</th>
<th>Annual Maintenance Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Saint Ann Street Detention Basin</td>
<td>56,600 gal</td>
<td>$ 29,105 - 128,055</td>
</tr>
<tr>
<td>b</td>
<td>Saint Ann Street Bioswale</td>
<td>1,120 gal</td>
<td>$ 12,420</td>
</tr>
<tr>
<td>c</td>
<td>North Galvez Street Detention Basin</td>
<td>392,350 gal</td>
<td>$ 197,250 - 867,850</td>
</tr>
<tr>
<td>d</td>
<td>North Roman Street Bioswales</td>
<td>19,075 gal</td>
<td>$ 207,000</td>
</tr>
<tr>
<td>e</td>
<td>Saint Philip Street and North Prieur Street Tree Cells</td>
<td>16,830 gal</td>
<td>$ 273,750</td>
</tr>
<tr>
<td>f</td>
<td>Saint Philip Street and North Prieur Street Bioretention Cells</td>
<td>8,220 gal</td>
<td>$ 180,000</td>
</tr>
<tr>
<td>g</td>
<td>Saint Philip Street Street Trees</td>
<td>39,100 gal swm annual interception</td>
<td>$ 36,000</td>
</tr>
<tr>
<td>h</td>
<td>Saint Philip Street Pervious Pavement</td>
<td>45,100 gal</td>
<td>$ 308,200</td>
</tr>
<tr>
<td>Detention/Bioswale</td>
<td>Stormwater Storage Capacity</td>
<td>Construction Cost</td>
<td>Annual Maintenance Cost</td>
</tr>
<tr>
<td>-------------------</td>
<td>----------------------------</td>
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</tr>
<tr>
<td>a Saint Ann Street Detention Basin</td>
<td>56,600 gal</td>
<td>$29,105-128,055</td>
<td>$1,920</td>
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<tr>
<td>b Saint Ann Street Bioswale</td>
<td>1,120 gal</td>
<td>$12,420</td>
<td>$1,190</td>
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<tr>
<td>c North Galvez Street Detention Basin</td>
<td>392,350 gal</td>
<td>$197,250-867,850</td>
<td>$13,020</td>
</tr>
<tr>
<td>d North Roman Street Bioswales</td>
<td>19,075 gal</td>
<td>$207,000</td>
<td>$19,800</td>
</tr>
</tbody>
</table>
Saint Philip Street and North Prieur
Street Tree Cells

- Stormwater Storage Capacity: 16,830 gal
- Construction Cost: $273,750
- Annual Maintenance Cost: $4,612

Saint Philip Street and North Prieur
Street Bioretention Cells

- Stormwater Storage Capacity: 8,220 gal
- Construction Cost: $180,000
- Annual Maintenance Cost: $4,400

Saint Philip Street Street Trees

- Stormwater Storage Capacity: 39,100 gal
- Construction Cost: $36,000
- Annual Maintenance Cost: $32,400

Saint Philip Street Pervious Pavement

- Stormwater Storage Capacity: 45,100 gal
- Construction Cost: $308,200
- Annual Maintenance Cost: $3,350
## TREMÉ SOUTHWEST QUADRANT GREEN INFRASTRUCTURE VISION

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<thead>
<tr>
<th></th>
<th>Project Description</th>
<th>Stormwater Storage Capacity</th>
<th>Construction Cost</th>
<th>Annual Maintenance Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Lafitte Greenway Detention Pond</td>
<td>182,825 gal</td>
<td>$ 94,000</td>
<td>$ 6,204</td>
</tr>
<tr>
<td>b</td>
<td>Lafitte Greenway Pervious Pavement</td>
<td>326,225 gal</td>
<td>$ 2,229,330</td>
<td>$ 24,230</td>
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<tr>
<td>c</td>
<td>Saint Louis Street Pervious Pavement</td>
<td>435,250 gal</td>
<td>$ 2,973,900</td>
<td>$ 32,330</td>
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<tr>
<td>d</td>
<td>Saint Louis Street Detention Pond</td>
<td>167,250 gal</td>
<td>$ 86,000</td>
<td>$ 5,680</td>
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<tr>
<td>e</td>
<td>Mahalia Jackson Pervious Pavement</td>
<td>431,880 gal</td>
<td>$ 2,950,900</td>
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<tr>
<td>f</td>
<td>Mahalia Jackson Bioswales</td>
<td>14,775 gal</td>
<td>$ 160,425</td>
<td>$ 15,345</td>
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<td>g</td>
<td>North Villere Street Pervious Pavement</td>
<td>73,050 gal</td>
<td>$ 499,100</td>
<td>$ 5,425</td>
</tr>
<tr>
<td>h</td>
<td>Tree Cells</td>
<td>22,440 gal</td>
<td>$ 365,000</td>
<td>$ 6,150</td>
</tr>
<tr>
<td>i</td>
<td>Treme Community Center Stormwater Planter Box</td>
<td>9,100 gal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>j</td>
<td>Treme Community Center Cistern</td>
<td>2,990 gal</td>
<td>$ 4,000</td>
<td>$ 500</td>
</tr>
<tr>
<td>k</td>
<td>Armstrong Park Green Open Space</td>
<td>6.267 cfs runoff reduction</td>
<td>$ 287,250</td>
<td>$16,275</td>
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</tbody>
</table>
**Stormwater Storage Capacity**

**Lafitte Greenway Detention Pond**
- 182,825 gal
- $94,000
- $6,204

**Lafitte Greenway Pervious Pavement**
- 326,225 gal
- $2,229,330
- $24,230

**Saint Louis Street Pervious Pavement**
- 435,250 gal
- $2,973,900
- $32,330

**Saint Louis Street Detention Pond**
- 167,250 gal
- $86,000
- $5,680
Stormwater Storage Capacity | 431,880 gal
Construction Cost | $2,950,900
Annual Maintenance Cost | $5,425

Stormwater Storage Capacity | 14,775 gal
Construction Cost | $160,425
Annual Maintenance Cost | $15,345

Stormwater Storage Capacity | 73,050 gal
Construction Cost | $499,100
Annual Maintenance Cost | $5,425

Stormwater Storage Capacity | 22,440 gal
Construction Cost | $365,000
Annual Maintenance Cost | $6,150
### Stormwater Planter Box

**Treme Community Center**

- **Stormwater Storage Capacity**: 9,100 gal
- **Construction Cost**: -
- **Annual Maintenance Cost**: -

### Stormwater Cistern

**Treme Community Center**

- **Stormwater Storage Capacity**: 2,990 gal
- **Construction Cost**: $4,000
- **Annual Maintenance Cost**: $500

### Green Open Space

**Armstrong Park Green Open Space**

- **Stormwater Storage Capacity**: 6.267 CFS
- **Construction Cost**: $287,250
- **Annual Maintenance Cost**: $16,275
### TREMÉ NORTHEAST QUADRANT GREEN INFRASTRUCTURE VISION

<table>
<thead>
<tr>
<th>Project</th>
<th>Stormwater Storage Capacity</th>
<th>Construction Cost</th>
<th>Annual Maintenance Cost</th>
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</thead>
<tbody>
<tr>
<td>Governor Nicholls Street Trees</td>
<td>87,900 gal swm annual interception</td>
<td>$ 80,000</td>
<td>$ 72,000</td>
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<tr>
<td>Ursulines Avenue Curb Extensions</td>
<td>8,220 gal</td>
<td>$ 180,000</td>
<td>$ 4,400</td>
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<tr>
<td>Ursulines Avenue Bioswale</td>
<td>1,905 gal</td>
<td>$ 20,700</td>
<td>$ 1,980</td>
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<tr>
<td>Governor Nicholls Street Detention Basin</td>
<td>97,730 gal</td>
<td>$ 50,250</td>
<td>$ 3,315</td>
</tr>
<tr>
<td>Claiborne Avenue Detention Basin</td>
<td>51,050 gal</td>
<td>$ 26,250</td>
<td>$ 1,730</td>
</tr>
<tr>
<td>Bayou Road Detention Basin</td>
<td>37,625 gal</td>
<td>$ 19,350</td>
<td>$ 1,275</td>
</tr>
</tbody>
</table>
### Governing Nicholls Street Street Trees

| Stormwater Storage Capacity | 87,900 gal | Construction Cost | $80,000 | Annual Maintenance Cost | $72,000 |

### Ursulines Avenue Curb Extensions

| Stormwater Storage Capacity | 8,220 gal | Construction Cost | $180,000 | Annual Maintenance Cost | $4,400 |

### Ursulines Avenue Bioswale

| Stormwater Storage Capacity | 1,905 gal | Construction Cost | $20,700 | Annual Maintenance Cost | $1,980 |

### Governing Nicholls Street Detention Basin

| Stormwater Storage Capacity | 97,730 gal | Construction Cost | $50,250 | Annual Maintenance Cost | $3,315 |
Governor Nicholls Street Street Trees

- Stormwater Storage Capacity: 51,050 gal
- Construction Cost: $26,250
- Annual Maintenance Cost: $1,730

Ursulines Avenue Curb Extensions

- Stormwater Storage Capacity: 37,625 gal
- Construction Cost: $19,350
- Annual Maintenance Cost: $1,275
### Tremé Southeast Quadrant Green Infrastructure Vision

<table>
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<th>Stormwater Storage Capacity</th>
<th>Construction Cost</th>
<th>Annual Maintenance Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a</strong> North Villere Street Bioretention Cells</td>
<td>12,340 gal</td>
<td>$270,000</td>
<td>$6,600</td>
</tr>
<tr>
<td><strong>b</strong> Tree Cells</td>
<td>72,935 gal</td>
<td>$1,186,250</td>
<td>$19,990</td>
</tr>
<tr>
<td><strong>c</strong> Saint Bernard Street Street Trees</td>
<td>39,100 gal smw annual interception</td>
<td>$35,000</td>
<td>$31,500</td>
</tr>
<tr>
<td></td>
<td>Stormwater Storage Capacity</td>
<td>Construction Cost</td>
<td>Annual Maintenance Cost</td>
</tr>
<tr>
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<td>North Villere Street Bioretention Cells</td>
<td>12,340 gal</td>
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<td>$6,600</td>
</tr>
<tr>
<td>Tree Cells</td>
<td>72,935 gal</td>
<td>$1,186,250</td>
<td>$19,990</td>
</tr>
<tr>
<td>Saint Bernard Street Street Trees</td>
<td>39,100 gal</td>
<td>$35,000</td>
<td>$31,500</td>
</tr>
</tbody>
</table>
NEXT STEPS

Water Wise Tremé is dedicated to nurturing the Water Wise Tremé Neighborhood Champions in the following ways:

• Hosting continuing education courses around green infrastructure related topics;
• Providing technical assistance to the Neighborhood Champions to help implement green infrastructure projects in Tremé;
• And supporting advocacy and fundraising efforts to implement the Water Wise Tremé Green Infrastructure Vision.

HOW TO GET INVOLVED

If you would like to become a Water Wise Tremé Neighborhood Champion, please contact Cheryl Austin, the Executive Director of the Greater Tremé Consortium. Her e-mail is cheryl@greatertreme.org.

To learn more about Water Wise Gulf South visit www.waterwisegulfsouth.org
APPENDIX

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These context maps of the Tremé study area show the need for green infrastructure. The maps were made using the Trust for Public Land's Climate Smart Cities Tool.

This map shows elevation patterns in the study area. The areas above sea level are shown in white while the land below sea level is shown in Grey.

Image Source: The Trust for Public Land.
RECURRING FLOODING

This map shows in blue the depths of flooding anticipated by 2-year, 5-year, and 10-year floods. The flood map closely correlates with the previous elevation map, showing that there will be worse flooding in areas with lower elevation.

Image Source: The Trust for Public Land.
FEMA FLOOD ZONES

Flood zones are determined by the probability of flooding each year. Areas in purple are deemed by FEMA to have minimal risk. Whereas, areas in light blue have a 0.2% chance of a flood hazard and those in blue have a 1% chance of a flood hazard.

Image Source: The Trust for Public Land.
Locations of catch basins are depicted by black dots on the map above. All the runoff that enters the catch basins is carried out to Lake Pontchartrain. You can “adopt” a catch basin through the City’s Adopt-a-Catch Basin program to become responsible for cleaning out debris before storms and notifying the City of any issues with its function.
Impervious surfaces are shown on the map as a range from dark to light grey. The darkest color represents surfaces that are 76.1-100% impervious, examples may include concrete sidewalks or parking lots. These surfaces prevent water from reaching the soils beneath where they could be absorbed and infiltrated into the earth. Most of the continuous impervious surfaces displayed are along Claiborne Avenue, Broad Avenue, and St. Louis Street.

Image Source: The Trust for Public Land.
PAVEMENT CONDITIONS

This map shows pavement conditions from excellent condition (dark green) to structural failure (red). Pavement conditions can cause water to collect in certain areas, while at the same time water can cause pavement conditions to worsen. The majority of the pavement conditions shown are very poor to fair.

Image Source: The Trust for Public Land.