

12 SEPTEMBER 2018 S&WB TASK FORCE JAIME RAMIRO DIAZ ARCHITECTURAL/URBAN DESIGNER



Living With Water New Orleans

Post-Katrina Catalytic Plans





Documents

Greater New Orleans Urban Water Plan

Greater New Orleans **Urban Water Plan**

Vision

Waggonner & Ball Architects September 2013

Greater New Orleans **Urban Water Plan**

Urban Design

Waggonner & Ball Architects September 2013

Implementation Waggonner & Ball Architects September 2013

+ System Design, District Plans, Demonstration Projects, and Resources

www.livingwithwater.com



Team & Partners Greater New Orleans Urban Water Plan

Waggonner & Ball **Manning Architects Dana Brown Landscape Architects FutureProof CDM Smith Nelson Engineers** Dewberry GCR **Eustis Engineering Sherwood Design Engineers Tulane University LSU Coastal Sustainability Studio Bright Moments**

Arcadis Deltares Royal Haskoning City of Rotterdam City of Amsterdam H+N+S Landscape Architects Bosch Slabbers Landscape Architects Robbert de Koning Landscape Architect Palmbout Urban Landscapes Technical University Delft







WAGGONNER &BALL greater regional economic alliance

Problems Identified Greater New Orleans Urban Water Plan



Drainage systems are regularly overwhelmed by too much runoff, causing flooding.



2 Excessive pumping causes the land to sink by lowering groundwater levels. 3 (k l





Critical water assets are wasted, hidden behind walls, buried underground, or pumped out of sight.

Pluvial Flooding Greater New Orleans Urban Water Plan





Pluvial Flooding





Repetitive Flood Loss











Greater New Orleans Urban Water Plan

Estimated Damages Due to Subsidence Over Next Fifty Years: \$2.19 Billion

High Subsidence Potential

Moderate Subsidence Potential





Greater New Orleans Urban Water Plan



Broad Street Canal Construction, 1930's

Reduced Capacity + Flood Risk





Pile Supported Drainage + Subsidence =









International Water Cities

Water Figure-Ground



Amsterdam, Netherlands



Rotterdam, Netherlands



Value of Water: Hidden Assets

Orleans Canal, New Orleans





Value of Water: Integrated Flood Protection

Westersingel, Rotterdam





Infrastructure = Investment

Amsterdam



Infrastructure Investment + Amenity

Living with Water Principles

Greater New Orleans Urban Water Plan

Improved Safety Economic Vitality Enhanced Quality of Life

Planning Approach

One Water

Existing Approach

Paradigm Shift

Greater New Orleans Urban Water Plan

Slow

Store & Use

Drain (when necessary)

Landscape Typologies

Greater New Orleans Urban Water Plan

Wetlands

Lowlands

Bowls

Backslope & Ridge

Regional Plan

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Gulf of Mexico

Living Water System

Greater New Orleans Urban Water Plan

System Components: Green Streets, Circulating Canals, Parklands, and Waterfronts

Living Water Scales + Project Types Greater New Orleans Urban Water Plan

Backslope Streets

Interceptor Streets: Existing

Interceptor Street: Potential

Lakeview and Bucktown

Floating Streets: Dry

Greater New Orleans Urban Water Plan

source: Bosch Slabbers

Floating Streets: Wet

Greater New Orleans Urban Water Plan

source: Bosch Slabbers

Underutilized Right of Ways Greater New Orleans Urban Water Plan

Lowland Canals: Existing

Lowland Canals: Potential

Hoey's Basin / Monticello Canal

Hoey's Basin / Monticello Canal

Greater New Orleans Urban Water Plan

source: Bosch Slabbers, Waggonner & Ball

Hoey's Basin / Monticello Canal

Greater New Orleans Urban Water Plan

source: Bosch Slabbers, Waggonner & Ball

Lafitte Blueway: Dry

Greater New Orleans Urban Water Plan

source: Bosch Slabbers

Lafitte Blueway: Wet

Greater New Orleans Urban Water Plan

source: Bosch Slabbers

Lafitte Blueway: Drainage Impact

Lafitte Blueway: Drainage Impact

Lafitte Blueway: Urban Identities

Greater New Orleans Urban Water Plan

ZONE 3 Claiborne to Broad \$17 to 20 Million

ZONE 2 Claiborne to Broad \$23 to 28 Million

ZONE 1 Basin to Claiborne \$10 to15 Million

Program Diagram natural, cultural sports, playground Den GP community gardens, leisure, sports square, museum, market, appartments

Design Option 1 (of 2)

ZONE 1 \$10-15M

ZONE 2 \$23-28M

ZONE 2 \$17-20M

Lafitte Blueway: Scale Comparisons

Lafitte Blueway: Scale Comparisons

Lafitte Blueway: Scale Comparisons

The costs come before the benefits. Inscription at the Amsterdam Stock Exchange

10 Year Storm: Existing Flooding

10 Year Storm: Full Implementation

Regional Costs vs. Benefits

Greater New Orleans Urban Water Plan

\$6.2 Billion

Implementation Costs

- detention/retention features
- storage basins
- drainage improvements

\$20.6 Billion

Economic Benefits

- direct and indirect job growth
- reduced flooding-induced damages
- reduced subsidence-induced damages
- improved insurability
- improved property values

Planning + Implementation Eras

Greater New Orleans Urban Water Plan

2050

SUSTAINABILITY & URBAN QUALITY

2012 HSDRRS Completion

WATER COLLABORATIVE

ADVOCACY · COMMUNITY EDUCATION · K-12 EDUCATION BUILDERS & DESIGNERS · RESEARCH & POLICY

APA Louisiana · Bayou Land RC&D · Blue Crab Labs · CDM Smith · City of New Orleans DPW · City Park · City Porch Realty Committee for a Better New Orleans · Common Ground Relief · Concordia · Cry You One · CSED · Dana Brown and Associates DisasterMap.net · EcoUrban · Energy Wise Alliance · Evans + Lighter · Feldmeier Galyean · Friends of Lafitte Corridor · Future Proof · Global Green USA · GNO Inc. · Greater New Orleans Foundation · Green Light New Orleans · Groundwork New Orleans Gulf Restoration Network · Hike for Katreena · Hollygrove Greenline · Historic Treme Faubourg Treme · Horizon Initiative · Imago Collective · KIPP Central City School · KSI Environmental Consultants · Lake Pontchartrain Basin Foundation · Land Trust for Louisiana · LEAAF · Levees.org · Life City · Longue Vue House and Gardens · Louisiana Economic Development · LSU Coastal Sustainability Studio · National Wildlife Foundation · Neighborhood Partnership Network · NEWCITY · New Orleans Food & Farm Network · Nola Bamboo · NOMAR Green Comittee · Nunez Community College · WWNO NPR · Parkway Bakery & Tavern Parkway Partners · RIDE New Orleans · Regional Planning Commision · Sankofa · Sewerage & Water Board · Sierra Club Spackman Mossop Michaels · Thomas Strategies LLC · Tulane City Center · Tulane Institute on Water Resources Law and Policy UNO Pontchartrain Institute of Environmental Sciences · UNO Transportation Institute · Urban Conservancy · Urban Institute US Green Building Council Louisiana · Waggonner & Ball · Waldemar S. Nelson · Water Works · Villavaso & Associates

At the core of our project is a three-part and water experts.

- design and implementation.
- Design professionals and educators and experiential learning.
- international and local water issues.

collaboration between teachers, design experts

- <u>Teachers</u> contribute knowledge of curriculum

contribute knowledge of visual, hands-on,

- <u>Water experts</u> contribute content expertise in

Changing Places Changing Lives

