Changing the Paradigm:
Stormwater Management for the Greater New Orleans, Louisiana Area

Jessica L. Watts. P.E., D.WRE, ENV SP, CFM
Dana Brown, ASLA, AICP, LEED AP

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Water Management Eras

1850: FIRST DRAINAGE IMPROVEMENTS
   - 1895 New Orleans Drainage Master Plan

1900: DRAINAGE & URBAN EXPANSION

1950: FLOOD PROTECTION & URBAN EXPANSION
   - 1965 Betsy Flood Control Act

2000

2050: SUSTAINABILITY & URBAN QUALITY
   - 2005 Katrina 2012 HSDRRS Completion
New Orleans Drainage Master Plan

Objective: Develop City-wide pipe plan to Reduce Peak Stage to Meet a 10-Year LOS of 6-inches of Flooding in Roads

Scope: All pipe less than 36 inches in diameter (1,288 miles of pipe)
Results

Model Results: 2-Year

Flooding Sunday, May 16, 2010
Last century’s infrastructure enabled widespread urbanization in a wet delta environment, but the principles underlying that infrastructure are no longer adequate to sustain the region.

=59,218 cubic feet per second
Approximate regional maximum pumping capacity, almost a third of the average flow of the Ohio River
Greater New Orleans Urban Water Plan

www.livingwithwater.com

- **Retain**
  Hold the drop of rain as close to where it falls as possible
- **Detain**
  Store runoff temporarily in planned locations
- **Drain**
  Increase the ability of infrastructure to flow
Greater New Orleans Urban Water Plan

- Retention on 20% of Vacant Lots
- 1,815 Acre- Ft. of Street BMPs
- 100% of Parcels store 1.25"

- All 5,622 Acres of Storage

- $2.2 Billion in Drainage System Upgrades

Legend
- Existing pump station
- Modified/new pump station
- Modified/new surface canal
- Modified/new subsurface canal
- Remove concrete floodwalls
- Surface canal
- Subsurface canal
- Catchment area
- Ridge

Stormwater Volume

STORE FLOOD PUMP

SLOW, STORE & USE

Duration

Duration
Pontilly Stormwater HMGP Project
Green Infrastructure Tools

Solutions address more than one issue
- Drainage
- Water Quality
- Traffic Calming
- Walkable
- Aesthetics

Stormwater Lots
Street Basins

Bio-swales
Pervious Pavement
Combined Stormwater Management Strategies
Existing Peak Flood, 1-Yr Design Storm
Proposed Peak Flood, 1-Yr Design Storm
Existing Flooding
Benefit Area
Communicating Understanding

Urban Water Plan

Planning, Implementation, and Communication on Multiple Fronts:
- Dutch Dialogs
- Inclusion in Comprehensive Zoning Ordinance
- Water Collaborative (www.nolawater.org)
- Conferences
- YouTube
- GI Toolkit

Green Infrastructure in New Orleans
“Water, like religion and ideology, has the power to move millions of people... People write, sing and dance about it. People fight over it. And all people, everywhere and every day, need it.”

Mikhail Gorbachev
President of Green Cross International, from Water: The Drop of Life
Questions

Jessica L. Watts. P.E., D.WRE, ENV SP, CFM
Water Resources Engineer
CDM Smith
wattsjl@cdmsmith.com