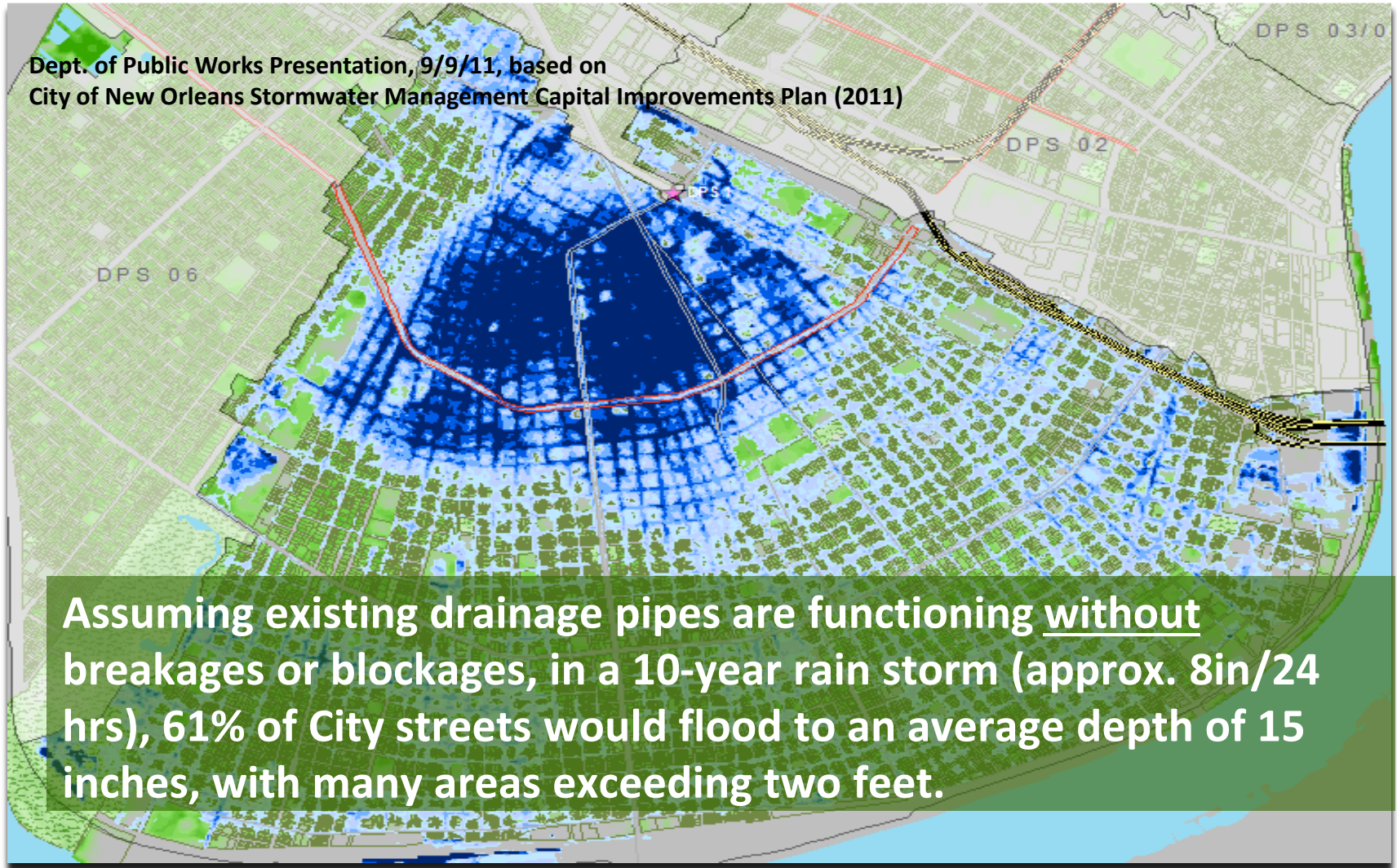




Existing Challenges & Opportunities for Better Neighborhood Flood Protection in New Orleans

New Orleans Citizen Sewer, Water & Drainage System Reform Task Force

The Case for Improving Local Stormwater Protection in Our Subsiding Bowl...



A Third Line of Flood Defense: In the nation's third rainiest city, coastal restoration and levees must be complimented by a system that detains and removes rain water to slow subsidence and ease the burden on fractured drainage pipes.

Inside enhanced city levees, flooding continues..from rain.



Oak Park Subdivision
(August 29, 2012)



Canal St. (May 16, 2010)



Magazine St. & St. Mary St.



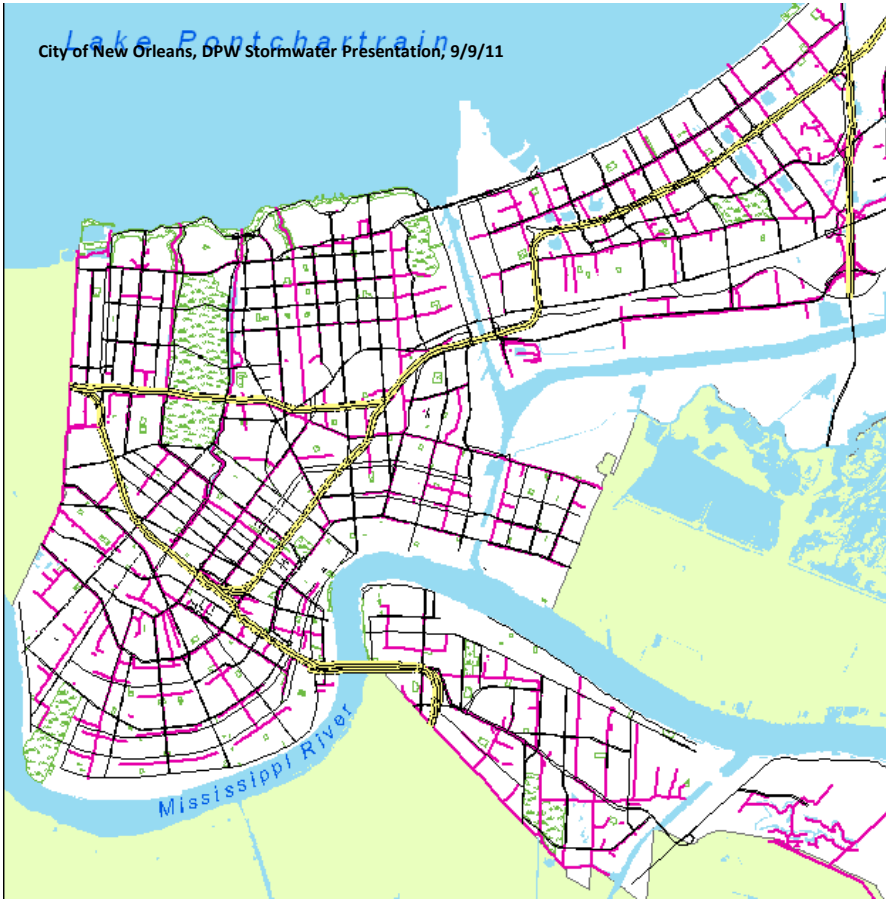
Sycamore St. & Carrollton Ave.
(April 24, 2013)



Oak Park Subdivision, Filmore
Neighborhood (August 29, 2012)

One System with Two Owners: The City's rainwater flood protection infrastructure is managed by two separate government entities using separate funding sources

Lake Pontchartrain
City of New Orleans, DPW Stormwater Presentation, 9/9/11

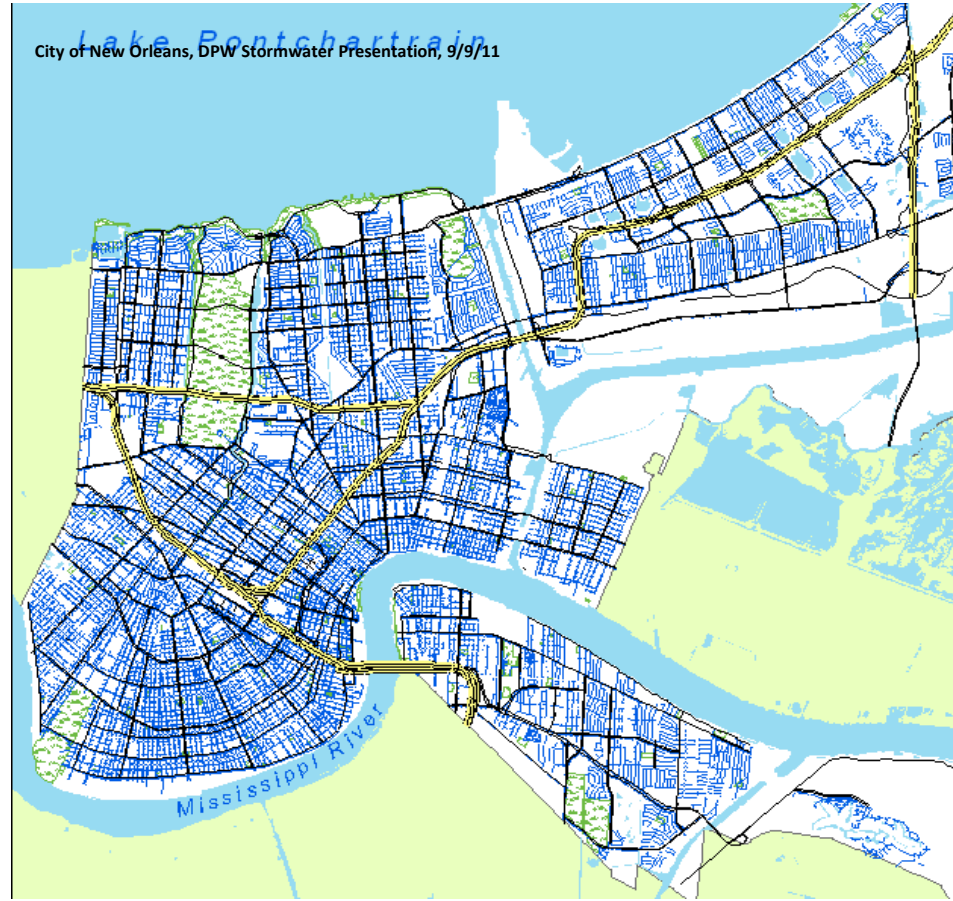


SWBNO: 235 Miles of Pipe, Canals & Culverts; 23 Pump Stations

FY 2013 O&M Budget: \$36,628,814

Pipe-Only Solution Cost for 10-Yr Storm Protection: \$1.6 Billion

Lake Pontchartrain
City of New Orleans, DPW Stormwater Presentation, 9/9/11



City-DPW: 1,288 Miles of Drainage Pipe, 46,350 Manholes, and 19,460 inlets & catch basins

FY 2013 O&M Budget: \$1,855,549

Pipe Only Solution Cost for 10-Yr Storm Protection: \$3.14 Billion

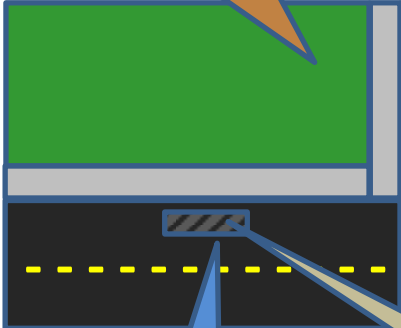
Seven Government Entities Manage NOLA Stormwater Protection...

NORA encourages runoff reduction techniques vacant parcels in its control



City Dept. of Safety & Permits regulates construction impacting stormwater

CPC regulates land uses impacting stormwater



DPW controls over 19,460 catch basins

SWBNO issues stormwater permits

SWBNO controls 235 miles of drainage over 36 inches & drainage culverts and canals



DPW controls 1,288 miles of drainage pipe

SWBNO controls non-outfall pump stations

NOLA Levee District controls canal walls & levees

ACOE constructs outfall pump stations, which are maintained by SWBNO



Citizen Task Force Recommendations for Improving Neighborhood Flood Protection...

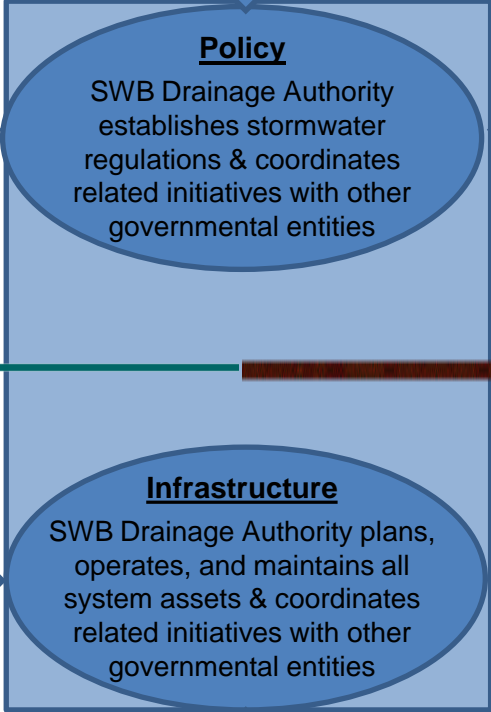
- Consolidate governance of all stormwater assets with Sewerage & Water Board
- Ensure that any drainage fee services all City/SWBNO assets and maintenance for any surface rainwater retention features on public property
- Design new neutral grounds through ongoing SELA projects to retain and absorb more rainwater
- Dedicate an effective portion of the City's \$247 million in federal hazard mitigation funding to construct public stormwater retention features
- By Ordinance and/or Executive Order, develop design standards for public rights-of-way and public spaces that ensure an acceptable minimum % of stormwater retention (e.g. *An even more Complete Street*)
- Strategically connect NORA-held vacant lots to the City's stormwater protection system by designing lots to safely and aesthetically detain stormwater
- Incorporate runoff reduction mandates and incentives into existing zoning codes and economic development, housing, and blight reuse programs



City Dept. of Safety & Permits enforces stormwater rules related to construction

CPC administers stormwater zoning safeguards & incentives

NORA, Housing & Econ. Dev. Depts. administer incentives for stormwater controls on blighted & assisted properties



Consolidate Stormwater Policy & Infrastructure Management within SWBNO

DPW, Capital Projects & Parks coordinate design/maintenance of stormwater controls into public assets w/Drainage Authority

Drainage Authority, Levee District, Jefferson & St. Bernard Parishes coordinate inter-parish drainage investments & policies

Drainage Authority & ACOE coordinate flow rate and maintenance of outfall pump stations

Opportunities to Improve: Capitalize on Existing SELA Projects to Enlist our Neutral Grounds into Flood Protection Efforts...



...into this.

Transform this...

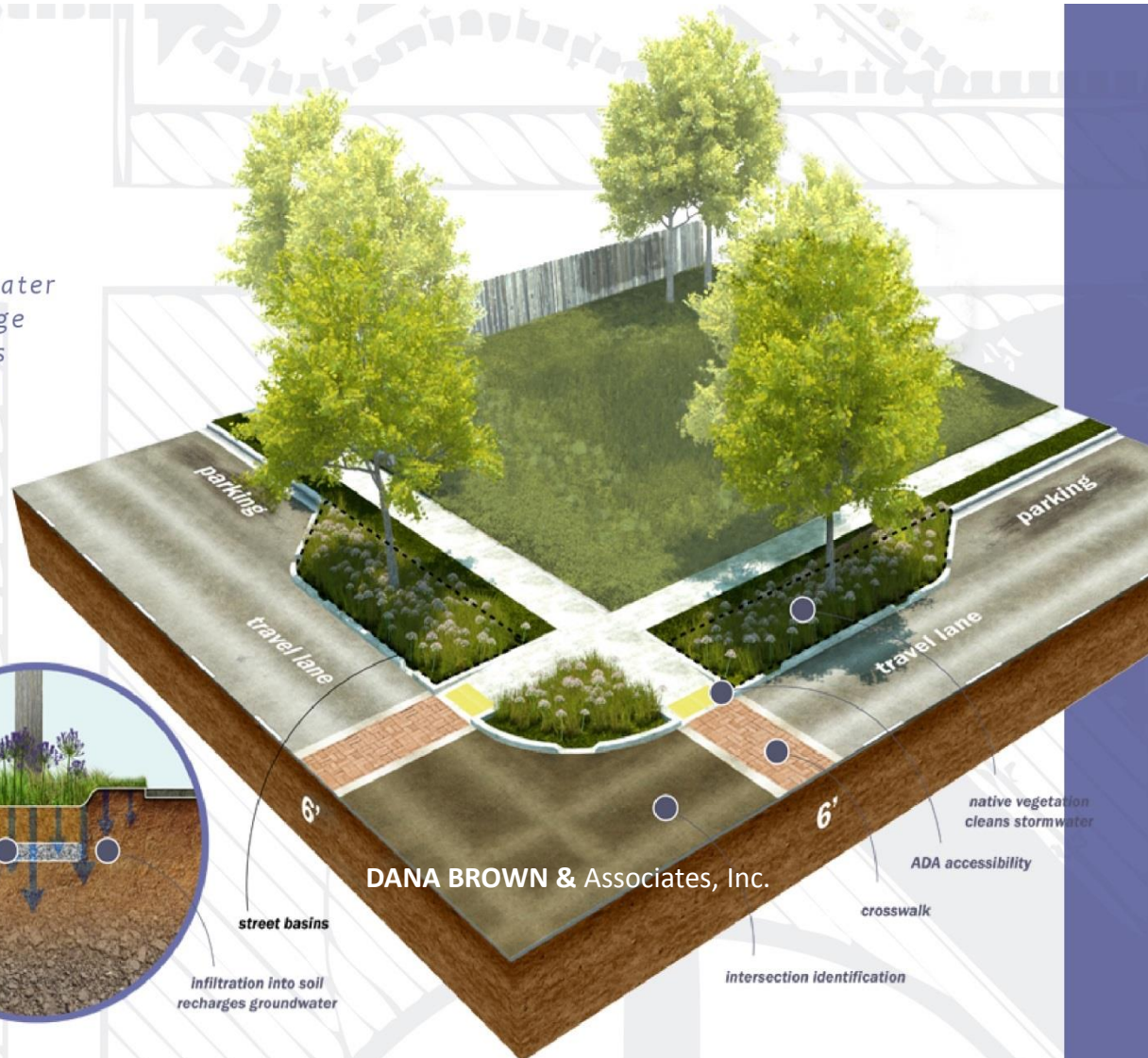


In replacing dug-up neutral ground, don't recreate the dome. Create a basin to safely capture and absorb excess rain water.

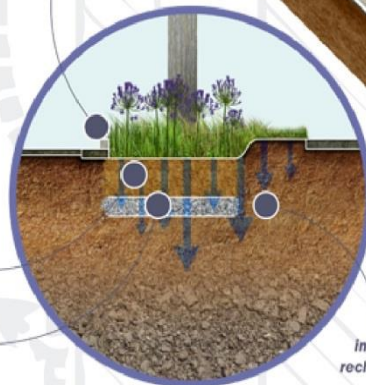
Opportunities to Improve: Capitalize on Planned Roadway Repairs to Create Streets that Absorb More Rain Water...

Transform this...

...into this.



By Ordinance or Executive Order, require that design/engineering for all public projects assess potential stormwater retention opportunities



Opportunities to Improve: Design Planned Park & Vacant Lot Programs to Create Safe Basins for Rainwater to Reduce Flooding of Adjacent Homes & Businesses...

Transform this...



...into this.



Photo By: Mark Venczel

Opportunities to Improve: Harness City Zoning, Economic Develop, Blight & Housing Assistance Programs to Incentive Safe Rainwater Detention/Reuse on Private Properties...

Transform this...



...into this.

Incentivize home and business "Rain Barrels" to Capture & Reuse Rainwater for Yard/Garden Irrigation



Score flood protection designs when awarding financial & other incentives for commercial development



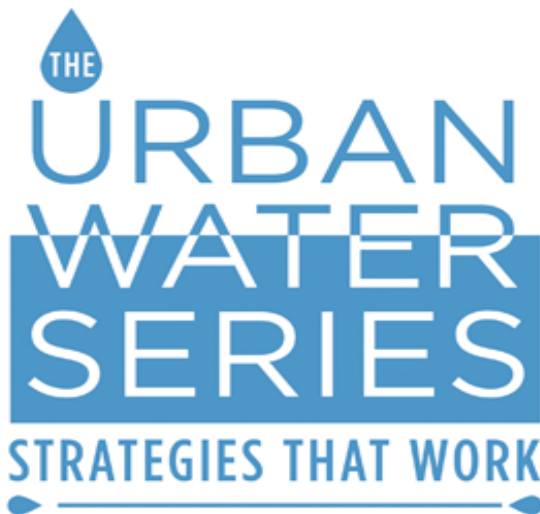
**Costco Parking Lot, Truckee Meadows, NV:
Designed to meet local stormwater retention safeguards**

Learning How Other American Cities are Achieving More Sustainable & Innovative Flood Protection...



GREATER NEW ORLEANS
FOUNDATION

For a vibrant region.



Please attend upcoming dialogues with leaders from other American communities:

June 5: Creating Public-Private Partnerships to Construct & Manage Better Stormwater Protection (**Houston & Philadelphia**)

June 19: Designing Streets, Parks & Other Public Spaces to Reduce Stormwater Flooding and Pollution (**Milwaukee & Portland, Oregon**)

June 26: Innovative Financing Options for Green Stormwater Infrastructure (**District of Columbia, Philadelphia, etc.**)

[To register, please visit: http://www.gnof.org/urbanwaterseries/](http://www.gnof.org/urbanwaterseries/)

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For more information on the recommendations of the *New Orleans
Citizen Sewer, Water & Drainage System Reform Task Force*,
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THOMAS
STRATEGIES 