Preparing for the New Normal and Challenging the Process for Integrated and Large Scale Solutions for Mitigation

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Agenda

CNO project History – Timeline of progression of Green/Grey Infrastructure Projects

Overview of New Landscape of funding with DRRA/BRIC

Challenges and Solutions

Policy and Program Recommendations
Background

Multiple Disasters – Significant HMGP funding >$200 Million – 2005
Statewide Buyout Programs
First Green Infrastructure Project (Pontilly) – 2008 (submission to FEMA)
100 Resilient Cities – Resilience Plan – 2015
NDRC – Gentilly Resilience District $141 Million (2016)
Current Green/Grey Infrastructure Projects

Hazard Mitigation

- Mirabeau Water Garden
- Oak Park
- Pontilly Stormwater Network
- Hagan-Lafitte Drainage Upgrades
- Lakeview Drainage Upgrades
- DPS01 WATERSHED: Central City, Lower Garden District, Broadmoor
- St. Roch Drainage Improvements
Goals of Resilience Projects

- Reduced risk of flooding and subsidence
- Neighborhood beautification & economic development
- Recreation & health
- Environmental awareness
CNO project History

Timeline of progression of Green/Grey Infrastructure Projects
Pontilly Green/Grey Infrastructure Project

Pontilly is composed of two moderate income, minority neighborhoods, Pontchartrain Park and Gentilly Woods (almost 900 acres in size), which have for decades experienced repetitive losses due to flooding. Both neighborhoods were severely damaged by Hurricane Katrina, with hundreds of homes destroyed or severely damaged.
Pontilly – Project Timeline

2008
HMGP Application Submitted to FEMA for Review

2009
FEMA approves Phase 1 funding for Design and detailed BCA

2013
FEMA initially approves Phase 2 funding – but put on hold for further review (EHP)

2019
The $15M Pontilly Neighborhood Storm water Network project broke ground on Monday, March 18, 2019.
Challenges

- Communications
- Silos
- Ownership/Responsibility
- Ordinance/Laws/Regulations/City Charter – Conflicts with State and Local
- Change Acceptance
- Time
- Noise (too many players – non-profit overdose)
- BCA/EHP Review process
- Personnel Changes
Mirabeau Gardens
MIRABEAU IMPACT AREA
Drainage Analysis

- **25 acres** Retention and Storage: 75% of adjacent vacant properties developed into stormwater storage.
- **1.40 acres** Captured Runoff: This area drains through two main pines into Mirabeau and Queen Brooks, which can be diverted into the canal.
- **7.46 acres** Improved Flow: Retention upstream allows drainage at this area to flow more efficiently to Pump Station #4.
- **2.800 acres** Increased Pump Capacity: Reduced overflow at Pump Station #4 benefits the entire flooding area.

3,810 acres

DRAINAGE FLOWS

DRAINAGE IMPACT
Approximately 550 structures included in BCA
# Example Data: Impacts of Project

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BCA Data, a sample

- Total size of building (sf)
- Value of Building (est)
- Value of building (BRV) ($/sf) (National Building Cost Guidance)
- Building Value
- Contents Value
- Number of Stories
- Number of Units
- First Floor Elevation
- Is the building residential?
- Depth Damage Function Return Interval 1
- Elevation Before Mitigation Return Interval 1
- Damage % for Building
- Building Damages
- Damage % for Contents
Broadmoor

Estimated Cost: $50M

Project Area

- Project Boundaries
  - Toledano/Louisiana, Broad, Melpomene/MLK, Tchoupitoulas

- Encompasses all or part of 8 Uptown neighborhoods

- Nearly 1,800 acres

- Phase I
  - Stormwater Lots
  - Stormwater Parks
  - Corner Street Basins (Associated with Burke Stormwater Park)
  - Pipe Installations and Upgrades (Associated with Stormwater Parks)
Benefit Cost Analysis Approach – Lessons Learned

There is no “one size fits all” approach.

Analyses performed prior to design often fall short of addressing the realities of the project.

Funding opportunities for Phase I – Design seldom provide the necessary resources for a full and complete BCA.

When flawed assumptions are used to approve design for large-scale projects (+ $10 million), the pressure for a BCA to demonstrate the cost-effectiveness of the construction of the project is increased.

BCA teams of individuals from each level – Federal, State, and Local – must work together to address concerns and inadequacies.
Overview of New Landscape of funding with DRRA – but also leveraging large scale disaster funding

Disaster Recovery Reform Act of 2018

On Oct. 5, 2018, President Trump signed the Disaster Recovery Reform Act of 2018 into law as part of the Federal Aviation Administration Reauthorization Act of 2018. These reforms acknowledge the shared responsibility of disaster response and recovery, aim to reduce the complexity of FEMA and build the nation’s capacity for the next catastrophic event.

- Federally Authorized Water Resources Development Project (1210b): This section authorizes FEMA to provide assistance to States under its Hazard Mitigation Grant Program for water resource development projects that also fall within the authority of the United States Army Corps of Engineers (USACE).

- Management Costs - Hazard Mitigation Grant Program (Section 1215): Expands the definition of management costs to include both direct and indirect administrative expenses by the state, local, tribal or territorial government. It also establishes the following rates for the Hazard Mitigation Grant Program:
  - Up to 15 percent of the total award amount, with up to 10 percent for the recipient, and up to 5 percent for the subrecipient.
Overview of New Landscape of funding with DRRA – but also leveraging large scale disaster funding

Disaster Recovery Reform Act of 2018

- Unified Federal Environmental and Historic Preservation Review (Section 1220): This section requires FEMA to study the inter-agency expedited environmental and historical review process and provide a report to Congress.

- Study to Streamline and Consolidate Information Collection (Section 1223): This section requires an inter-agency study to streamline information collection from disaster assistance applicants and grantees, and the establishment of a public website to present the data.

- National Public Infrastructure Pre-Disaster Hazard Mitigation (Section 1234): Authorizes the National Public Infrastructure Pre-Disaster Mitigation fund which will be funded as a 6 percent set aside from disaster expenses, to allow for a greater investment in mitigation before a disaster.

- Hazard Mitigation Grant Program for Resilience (Section 1235a): Ensures Hazard Mitigation Grant Program funding increases resilience to future damage, hardship, loss or suffering.
Engineering/Design/BCA Costs

$50,000,000 Project Cost

$3.3 Million for Engineering/Design/BCA
Challenges and Solutions

- Project development, project evaluation, modeling, design and cost benefit analysis of these projects.
- Need to use diverse data sets to identify areas in need of mitigation
- Triage projects to different programs, and have a shared vision for community outcome
- Leverage HMA funding as a part of a broader stacked funding strategy
- Engage in long term data collection to measure impacts and improve modeling
Recommendations for Policy or Program Changes

- Need for resource investment in project design (higher advance assistance thresholds, inclusion of BCA support on outset, etc)
- Key teams for support to expedite review and coordination for larger scale projects
- Build Capacity and Capability: Provide funding for GIS related data collection and tools (HMA)
- Support for Long Term and Integrated Planning through new BRIC program
- Consistency in Program Delivery – Develop Standards for Large Scale project Development and Review
- Prioritize resilient infrastructure projects
Questions:
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