Urban Land Institute

Center for Sustainability and Economic Performance

Reinventing Stormwater Retention Areas as Green, Equitable Community Assets

TAMPA, FLORIDA

A TECHNICAL ASSISTANCE PROJECT FROM THE ULI RESILIENT LAND USE COHORT

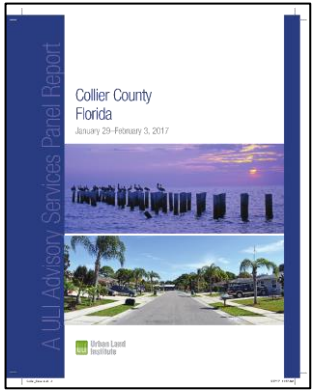
APRIL 29, 2021

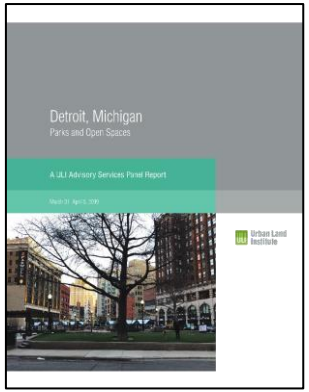
About the Urban Land Institute

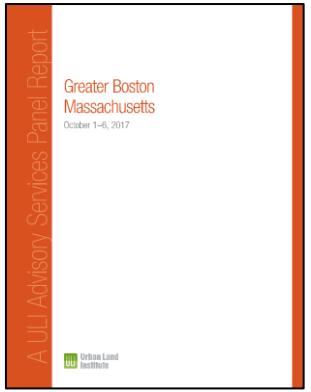
ULI Mission: Shape the future of the built environment for transformative impact in communities worldwide

- A multi-disciplinary membership organization with more than 45,000 members in private enterprise and public service

- What the Urban Land Institute does:
  - Conducts Research
  - Provides a forum for sharing of best practices
  - Writes, edits, and publishes books and magazines
  - Organizes and conducts meetings
  - Directs outreach programs
  - Conducts Advisory Service Panels







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Urban Resilience at ULI

- The Urban Resilience program brings ULI's expertise in land use, real estate, and climate resilience to communities nationwide.
- Resilience panels:
  - Provide land use and development strategies for vulnerable sites
  - Assess policy opportunities to enhance community resilience
  - Craft strategies for implementation and funding





Urban Land Institute
Advisory Services Program

ULI Resilient Land Use Cohort (RLUC)

Program Overview

- RLUC is platform for technical assistance and knowledge sharing between 8 cities and their ULI District Councils.
- RLUC leverages ULI member expertise to identify strategies for cities to be more resilient in the face of climate change and other vulnerabilities, as well as the related social, environmental, and economic impacts.
- The project is generously supported by JPMorgan Chase through a grant to the ULI Foundation.

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Advisory Services Program

Thank you to our sponsors!

JPMorgan Chase & Co.

City of Tampa Florida

Scope for the Panel

This Panel will outline best practices and recommendations for the following topics related to City of Tampa-owned green spaces:

- Creative design and equity centered solutions for addressing stormwater management and retention while also adding value and appeal through more functional and multi-purposed uses.

- Successful frameworks for governance, finance operations and management of City owned open/green spaces that are centered on equitable outcomes.

ULI Panelists

Jason Hellendrung
Vice President, Planning + Design
Tetra Tech

Happy Haynes
Executive Director
Denver Parks + Recreation

Josiah Cain
Director of Innovation
Sherwood Engineers

Pegeen Hanrahan
Southern Conservation Finance Director
Trust for Public Land

Taylor Ralph
President + Founder
REAL Building Consultants
ULI TAP Chair

Chris Ahern
GHD Maritime + Coastal
Co-Chair, ULI Tampa Bay Resiliency

Urban Land Institute

ULI Staff

Erin Fowler
Urban Resilience Team

Jenna Wylie
Manager
ULI Tampa Bay

Siobhan O'Kane
Director
ULI Tampa Bay

Leah Sheppard
Manager, Urban Resilience
ULI

What We Heard

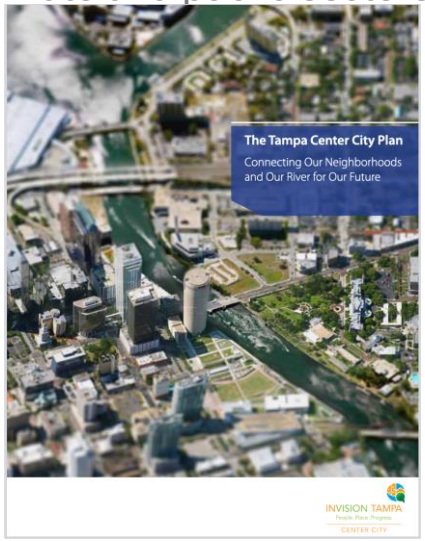
Small group meetings with City team + Community Leaders

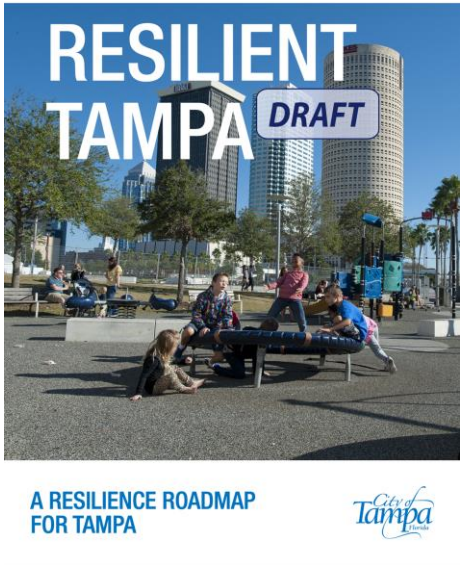
- **Great examples of stormwater pond conversions**
- Opportunity for stormwater areas to serve multiple functions
- Challenging balancing act with multiple needs/demands
- **Budgets are constrained**
- Maintenance considerations /costs are important to factor in during design phase
- Need for quick wins
- Disconnect between neighborhood associations and residents and future of some areas
- **Improving community engagement is a current City focus**
- Comprehensive planning for parks and recreation underway now
- Safety and security is important

- **Cross departmental projects are one-off rather than the norm**
- Opportunity to shift from business as usual
- Affordable housing is the priority in East Tampa / significant economic + development pressure
- **Many stormwater ponds are located in East Tampa / historic underinvestment in infrastructure in this area**
- Emerging technologies and innovative approaches should be spread around the City equitably
- **New ways of doing things (ie. Green infrastructure approaches) requires training and resourcing**
- Focus needed on equitable, diverse, inclusive infrastructure in communities of color
- Create a green workforce program
- Incentivize low impact development

Building On Your Good Work

The future trajectory of City of Tampa has been forever changed by some great planning efforts & execution...projects and efforts by city leadership, staff, partners, community advocates, private and public sectors working! Let's build on that.





Collaboration + Integration of Effort

Sustainability, Resiliency & Equity recognize the interconnectedness of community, built environment and nature. Weaving these priorities into every decision helps the city develop a livable city and a supports a high-quality of life.

Co ace

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Some great collaborative examples exist but creating smart systems of prioritization and collaboration will unlock the ability to do these projects at scale

Lead with a shared [BIG] vision

Josiah Cain
Director of Innovation
Sherwood Engineers

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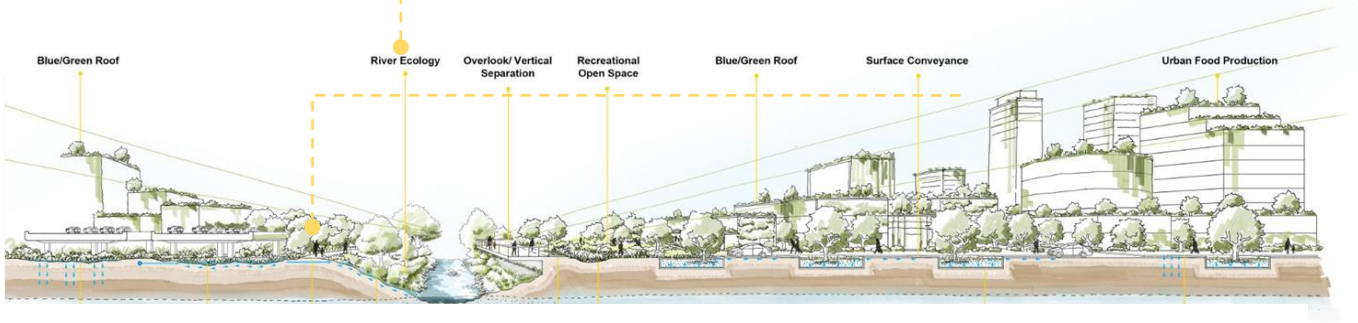
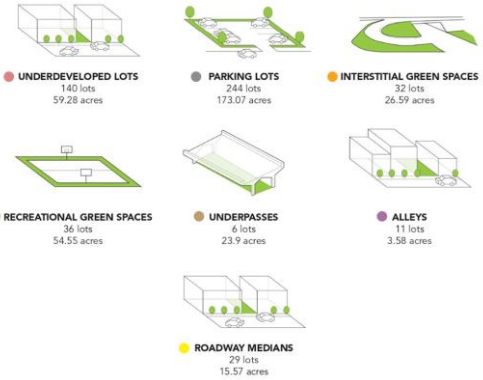
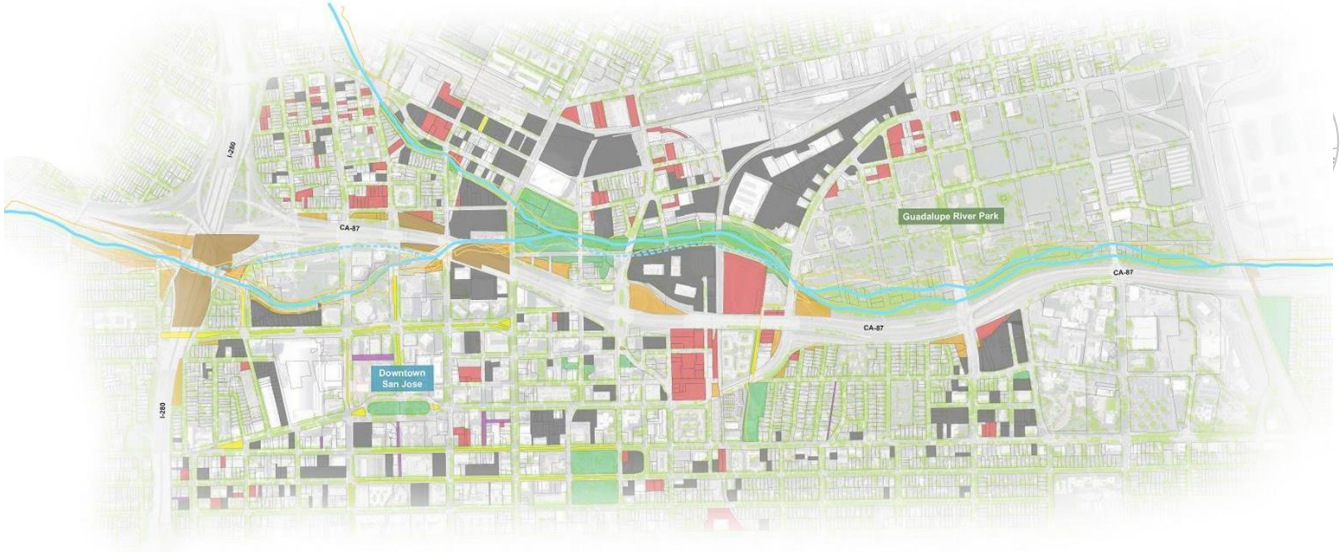
A MULTI-BENEFIT APPROACH

Multi-Scalar / Multi-Agency







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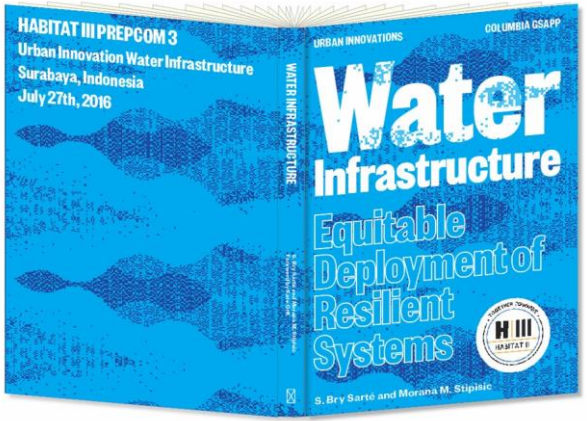

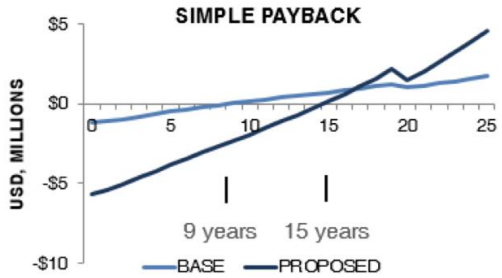

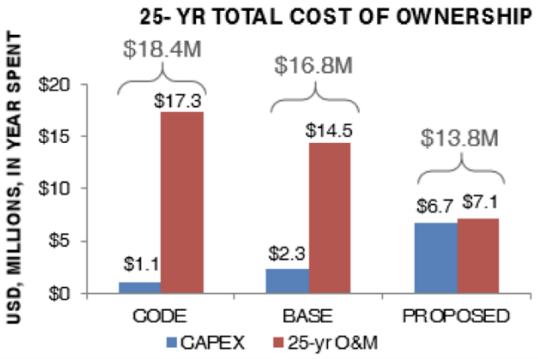

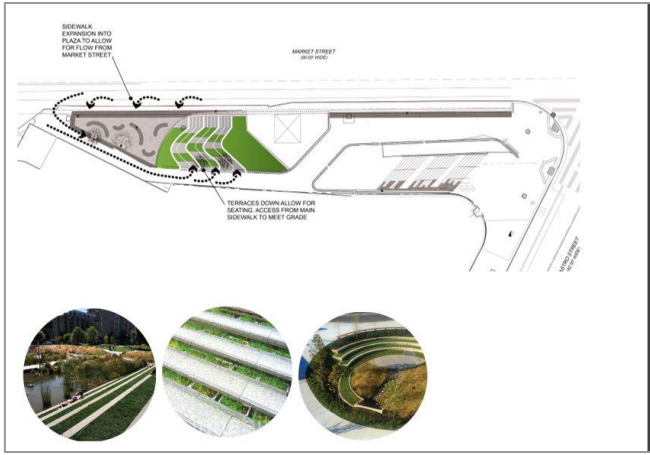

Terracing Concept

- Pull existing grades from south sidewalk into planted area, creating pockets of hardscape and planters.

- Market Street sidewalk extends into Plaza zone

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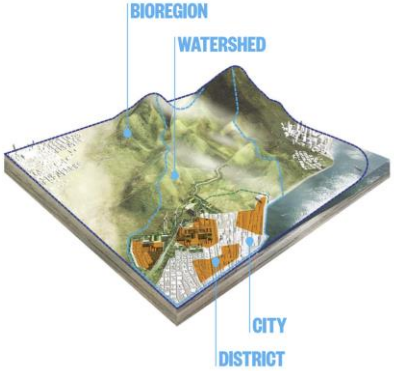
MULTI-SCALAR & JURISDICTIONAL FRAMEWORKS FOR COLLABORATION & BIOREGIONAL RESILIENCY



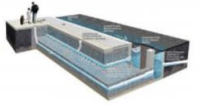
NEW VALUE-CREATION MODELS: ADDRESSING URBAN / ECOLOGICAL RISK

Stormwater Basins

Rain Gardens

Stormwater Tree Trenches

Infiltration Trenches



Stormwater Bumpouts

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Brooklyn Bridge Park is designed to be floodable during storms by implementing soft edges and protection berms embedded in the formed edges as an alternative to a floodwall. The variety of spaces makes for interesting experiences in the park during the absence of heavy storms.

LaFon Park, New Orleans

Floodable Public Space

HISTORY
CULTURE
ECOLOGY
IMAGINATION
EDUCATION
REMEMBRANCE

The primary path – The Hydrology Hike – presents prototypes for alternative stormwater management strategies, reflecting a city-wide approach to the creation of a resilient city and a strong community.

Project Credit: Nelson Byrd Woltz with Sherwood Design Engineers

Use Data + Metrics to Prioritize

Jason Hellendrung
Vice President, Planning + Design
Tetra Tech

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Vision to Implementation: Project Prioritization and Using Data for Decision-making

Transforming Tampa's Tomorrow (T3) Priorities and Strategies: moving from strategy to project implementation

Opportunity for All Tampanians

focuses on actions that ensure all Tampanians, at all stages of their lives, benefit from our continued economic growth.

Thriving Neighborhoods

lays out initiatives that build off the diversity and strength of our vibrant communities to tackle resilience challenges, from affordability to climate to connectivity.

Climate-Ready Infrastructure

outlines actions that will reduce our exposure to climate risk, while strengthening our city's existing and future infrastructure to bounce back from whatever climate-driven challenges come our way.

Growing and Connected City

emphasizes initiatives that harness Tampa's growth to ensure that our City government can work fairly and efficiently by embedding resilient systems and addressing historic racial disparities.

BUILDING ON T3

T3	RESILIENT TAMPA: Opportunity for All Tampanians	Thriving Neighborhoods	Climate-Ready Infrastructure	Growing and Connected City
Transportation		✓		✓
Development Services			✓	✓
Workforce Development	✓			✓
Housing Affordability		✓		

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Living With The Bay

Nassau County, Long Island, NY

Vision from HUD/Rockefeller Rebuild by Design Competition to create science-based innovations to resilience post-Superstorm Sandy

Awarded $125m from HUD for implementation

Challenge: move from Vision to Implementation

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Vision included 36 projects that totaled $892 million

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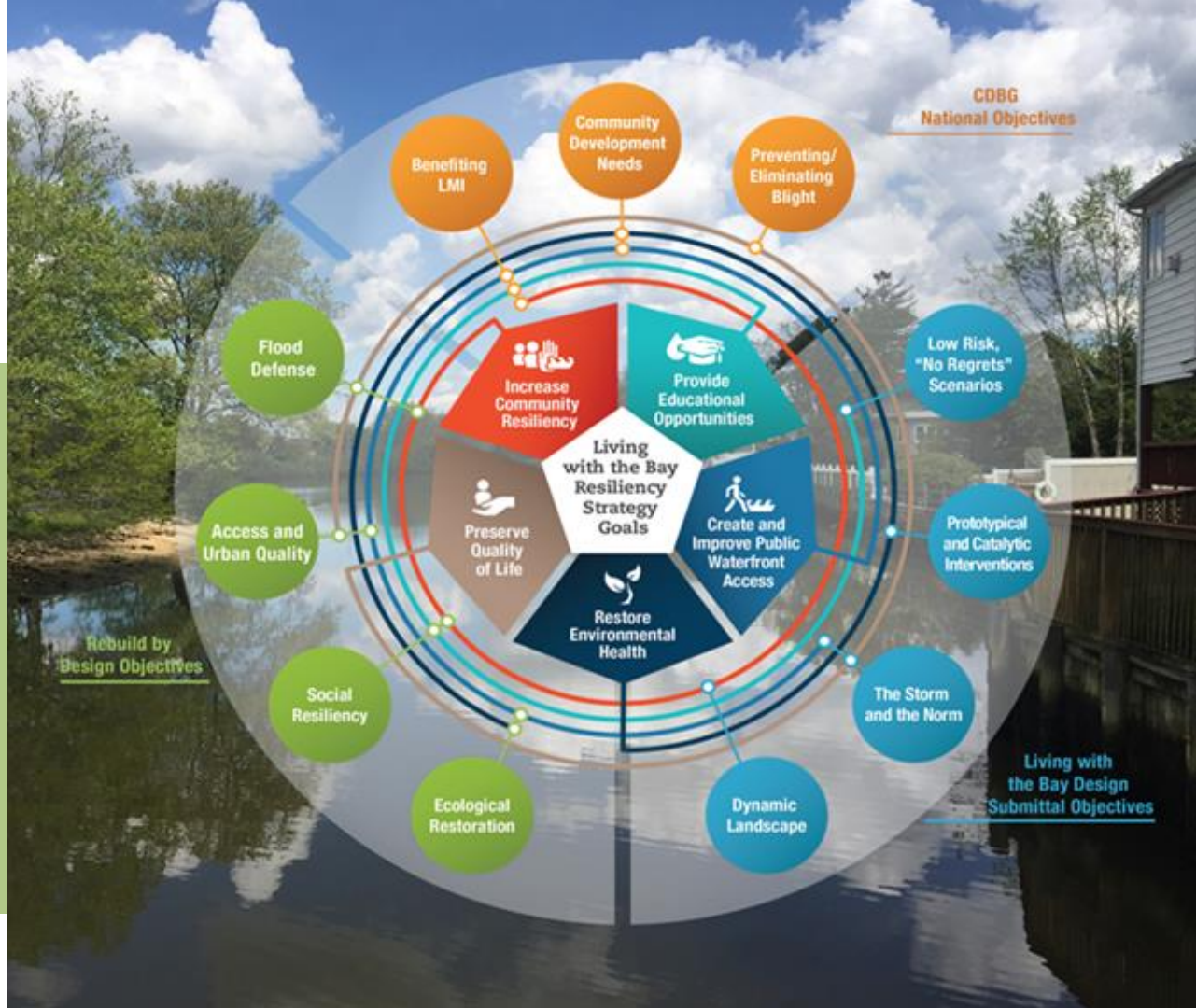
Utilizing Project Vision and Goals to establish Evaluation Criteria for Project Prioritization



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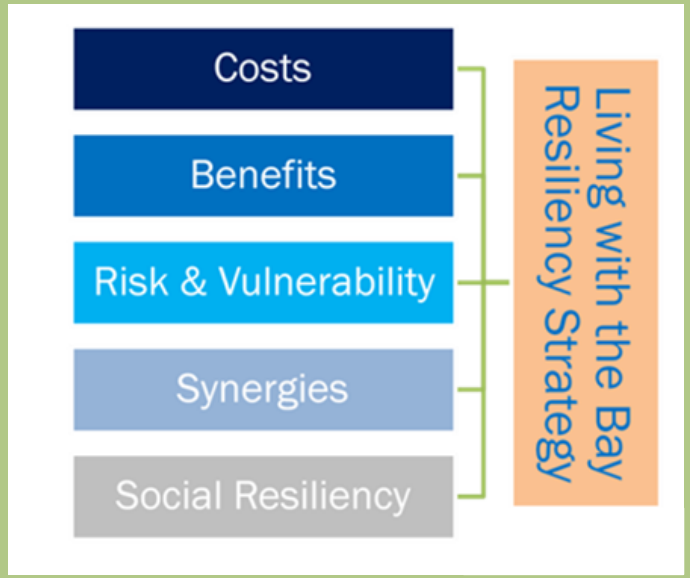
Living With The Bay

- Prioritization Methodology
- Weighting & Calibrating Quantifiable Data to make decisions



Category	Metric	Category Weight	Maximum Score
Costs	Total Costs	100%	25
Total Costs		100%	25
Benefits	Flood Reduction	45%	15.75
	Water Quality	30%	10.5
	Ecosystem/Habitat	25%	8.75
Total Benefits		100%	35
Risk and Vulnerability	Health and Safety	40%	6
	Reduced Flooding Risk	40%	6
	Future Adaptability	20%	3
Total Risk and Vulnerability		100%	15
Synergies	Program Synergies	30%	3
	Municipal Dependencies	30%	3
	Critical Infrastructure	20%	2
	Leveraged Funds	20%	2
Total Synergies		100%	10
Social Resiliency	Improved Quality of Life	33%	5
	Cultural Heritage Preservation	33%	5
	Educational Opportunities	33%	5
Total Social Resiliency		100%	15
MAXIMUM PRIORITIZATION SCORE			100

Living With The Bay

- Project Prioritization & Ranking
- Work with Technical Advisory Committee and Community Advisory Committee

PRIORITIZATION RANKING BREAKDOWN

ID	PROJECT NAME	Costs	Benefits	Risk & Vulnerability	Synergies	Social Resilient	Total Project Rating
V	Coastal Marsh Restoration	0.0	32.4	8.2	3.3	6.6	50.5
B	Horsebrook Drain West Branch Recharge Basin	7.0	25.3	11.4	1.9	0.8	46.4
DD	Hempstead High School Creek Restoration	23.9	7.4	2.2	5.7	5.8	45.0
II	Cooper Square	19.8	14.7	2.3	6.1	0.0	42.9
M	East Rockaway High School/Lister Park	10.3	13.8	6.0	4.9	7.8	42.8
H	Malverne High School	18.0	11.3	2.1	4.8	6.2	42.4
F	Malverne Green Streets	12.1	19.6	3.8	5.3	0.4	41.2
A	Hempstead Lake State Park	0.0	13.6	11.3	5.3	10.7	40.9
L	Smith Pond	12.8	9.1	4.7	5.7	7.4	39.7
C	Hempstead Housing Authority	20.0	8.2	7.2	3.6	0.2	39.2
N	Forest Avenue	22.5	4.9	4.8	6.1	0.4	38.7
P	East Boulevard and West Boulevard	18.8	6.2	6.3	5.4	2.0	38.7
E	Southwest Village of Hempstead Suspended Pavement Green Streets	5.0	22.1	6.1	5.3	0.0	38.5
X	S Centre Avenue Bioretention Green Street	24.5	1.6	2.7	6.1	3.5	38.4
EE	Covert Street	24.5	0.6	5.7	6.8	0.0	37.6
KK	Southern State Parkway Ramp	23.8	3.9	3.4	6.1	0.0	37.2
HH	Nichols Court	24.0	1.3	2.5	6.1	0.0	37.2
J	Lynbrook Recharge Basin	24.7	4.2	3.9	3.6	0.0	37.2
D	Northeast Village of Hempstead	4.1	21.9	6.8	2.5	0.0	35.3

PRIORITIZATION RANKING BREAKDOWN (CONTINUED)

ID	PROJECT NAME	Costs	Benefits	Risk & Vulnerability	Synergies	Social Resilient	Total Project Rating
GG	Hendrickson Avenue	24.0	1.9	3.0	4.8	0.0	33.9
I	Lakeview Avenue	24.0	0.0	2.4	4.9	0.0	32.9
OO	Waldo Avenue	24.8	1.2	3.9	3.0	0.0	32.9
AA	Beverly Road	24.5	1.6	2.9	3.6	0.0	32.6
K	Peninsula Boulevard Greenway	24.3	0.0	2.4	4.3	0.0	32.6
Y	Maple Avenue and Long Beach Road Intersection	24.3	0.1	2.7	5.2	0.0	32.3
LL	Halls Pond Study	24.5	0.0	2.5	4.9	0.0	31.9
Q	Williamson Street	22.5	3.4	4.4	1.3	0.0	31.6
T	Lawson Boulevard	11.8	9.5	7.1	2.4	0.0	30.8
S	East Rockaway Long Island Railroad Station	23.5	1.2	1.7	3.6	0.0	30.4
R	Bay County Park	23.6	1.1	2.5	1.4	0.0	29.6
FF	Mill River Storm Surge Barrier	0.0	15.8	10.2	3.5	0.0	29.5
MM	Greenway	10.2	0.0	2.0	4.3	0.0	27.2
W	East Rockaway Downtown Study	24.5	0.0	0.0	0.0	0.0	24.5
Z	Lakeview Avenue and Hempstead Avenue Intersection	15.0	0.8	2.6	5.4	0.0	23.8
CC	Marina Pointe Marsh Restoration	11.4	4.6	2.1	2.5	0.0	22.4

The prioritization framework is intended to identify a collection of transformative projects that increase the resiliency of the Mill River corridor. Numerical scores for each metric category were developed (a detailed discussion on category weighting is included in Objective #6 document under separate cover) rather than tangible values such as dollars. Each of the categories was formed so that a higher score indicates a positive, preferred element of the project. No negative scores are included in the prioritization framework.

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Living With The Bay

- Project Prioritization:

- Work with Technical Advisory Committee to leverage other community investments and prioritize social vulnerability

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Detroit: Implementation Success

- Align with Vision
- Broad-based resilience
- Multi-benefit solutions
- Partnerships & Collaboration (Interdepartmental coordination, public-private)
- Community partnership

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Break Down Barriers to Collaboration + Engaging the Community

Happy Haynes
Executive Director
Denver Parks + Recreation

ULI Tampa Bay

COMMUNITY ENGAGEMENT PLAN

STEP 1: Conduct Outreach to the Community

STEP 2: Get Initial Input From the Community

STEP 3: Take and Synthesize Community Input Into a Draft Proposal

STEP 4: Obtain Feedback From the Community on the Draft Proposal

STEP 5: Incorporate the Feedback, as Appropriate

STEP 6: Finalize the Proposal and Distribute It to the Community

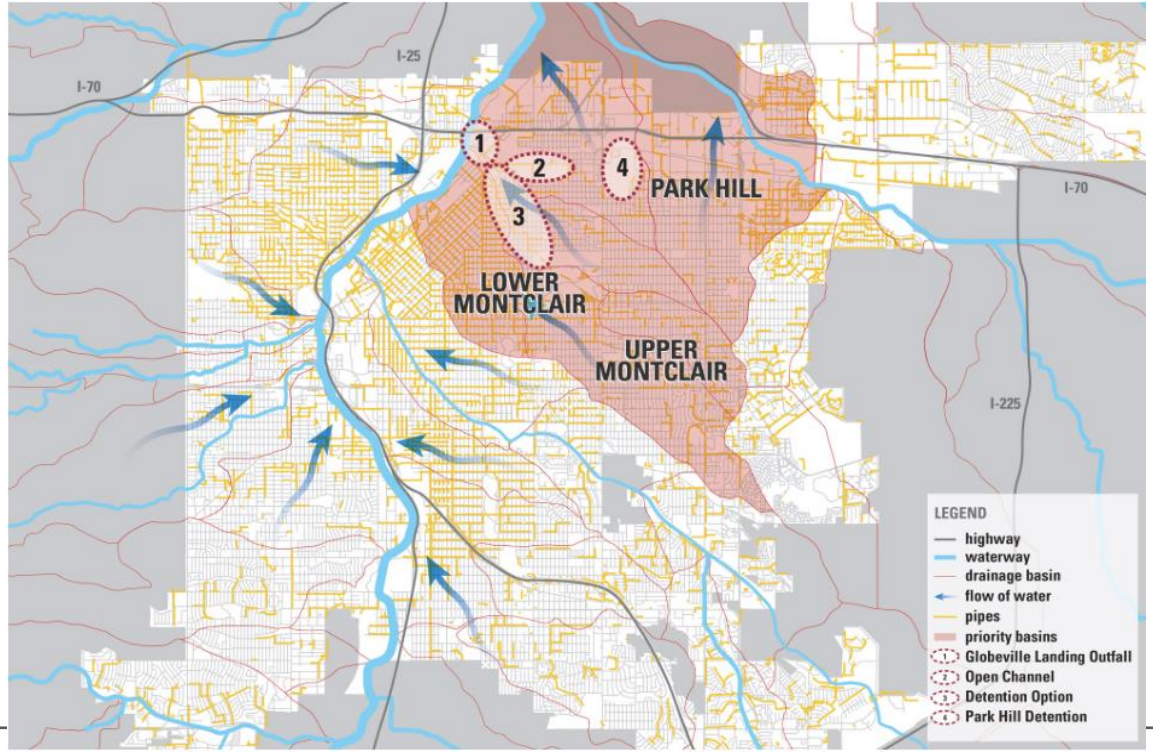
STEP 7: Involve the Community in Implementation and Monitoring

STEP 8: Provide Updates to the Community

CELEBRATE!

Step-by-Step Guide to Integrating Community Input into Green Infrastructure Projects. © 2018 Environmental Law Institute®, Washington, D.C., and Amigos Bravos, Taos, N.M.

WATERSHED/FLOOD MANAGEMENT – PLATTE TO PARK HILL



- Protect vulnerable neighborhoods from floods
- Restore waterway ecosystems
- Improve water quality
- Create/enhance park space

DENVER
THE MILE HIGH CITY

P2P PROGRAM GOALS

ENVIRONMENTAL

REDUCED FLOODING TO DIVERSE NEIGHBORHOODS

INTEGRATED INFRASTRUCTURE AND WATER QUALITY

SOCIAL

IMPROVED NEIGHBORHOOD CONNECTIVITY

ENHANCED EXISTING CITY-WIDE RECREATIONAL ASSETS

PROVIDED NEW NEIGHBORHOOD PARK AMENITIES

AN ENGAGED CITY

THE CLIENT
City & County of Denver

- Mayor's Office
- Parks and Recreation
- Public Works
- Community Planning and Development

EXPERTISE

- Landscape Architects
- Civil Engineers
- Urban Designers
- Geotech Engineers
- Planners
- Public Outreach
- Drainage Engineers

KEY PARTNERS

- Colorado Department of Transportation
- Urban Drainage & Flood Control District
- Regional Transportation District
- US Army Corps of Engineers

To date, there have been

250+ Public and stakeholder meetings

PROBLEM DEFINITION
Summer 2015
1 Public & Community Meetings
2 Design Workgroups
15 Small Groups & 1-on-1 Meetings

IDENTIFICATION OF ALTERNATIVES
Fall 2015
2 Public & Community Meetings
1 Design Workgroups
21 Small Groups & 1-on-1 Meetings

ANALYSIS & FEASIBILITY
Winter 2015
2 Public & Community Meetings
2 Design Workgroups
25 Small Groups & 1-on-1 Meetings

PREFERRED ALTERNATIVES
Spring 2016
1 Public & Community Meetings
2 Design Workgroups
19 Small Groups & 1-on-1 Meetings

PRELIMINARY DESIGN
Summer 2016
4 Public & Community Meetings
6 Design Workgroups
32 Small Groups & 1-on-1 Meetings

FINAL DESIGN & CONSTURCTION
Start Fall 2016
8 Public & Community Meetings
8 Design Workgroups
47 Small Groups & 1-on-1 Meetings

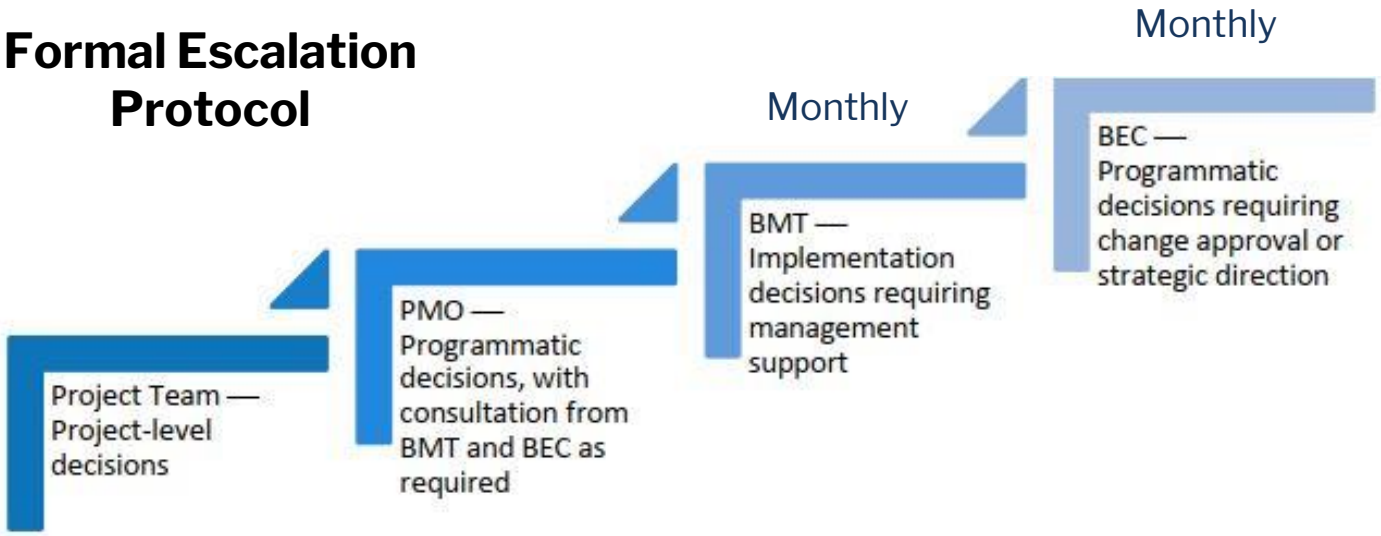
STRATEGIES FOR PUBLIC ENGAGEMENT





Elevate Denver Program Responsibilities

Governance



Phase 1: Public open houses

Phase 2: Neighborhood meetings and workshops

Trained city employees facilitate conversations

Citizen-advisory committees

Partnerships & Community Resilience

Chris Ahern
GHD Maritime + Coastal
Co-Chair, ULI Tampa Bay Resiliency

ULI Tampa Bay

Private Sector Partnerships: Stormwater Management

Tampa-ready opportunity for both contiguous and isolated stormwater assets

- Cities are prioritizing green infrastructure due to flood absorption and co-benefits for the community.
- City policies are increasingly expecting the private sector to play a role in stormwater management.
- Real estate developers are choosing to incorporate green infrastructure in their projects and the public realm due to cost savings, reduced operating costs, added amenities, and other value generation opportunities.
- Invite the private sector (Property Owners, Developers, and Stakeholders) to partner on stormwater pond improvements.

Canal Park
Washington, DC

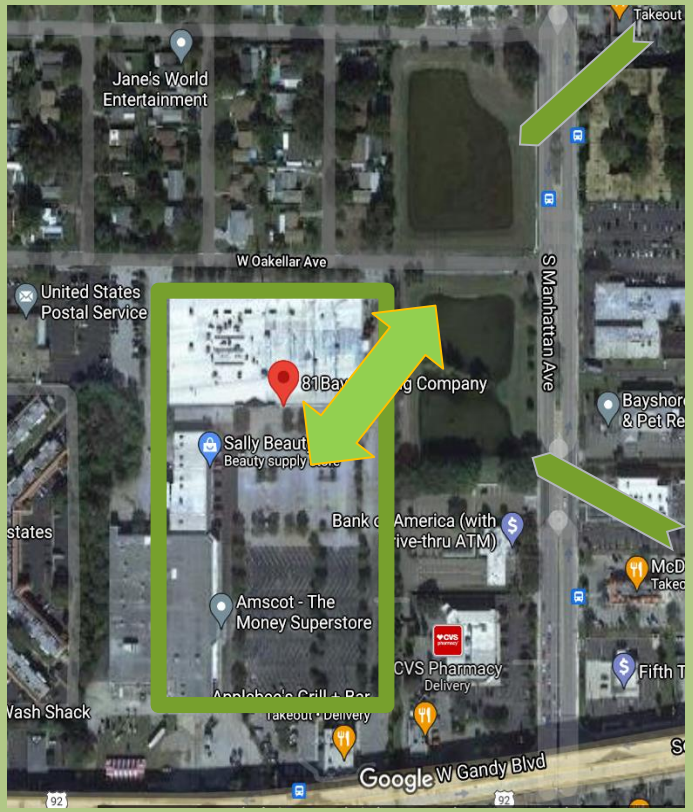
Cira Green
Philadelphia, PA

Stonebrook Estates
(Harris County, TX)

Urban Land Institute

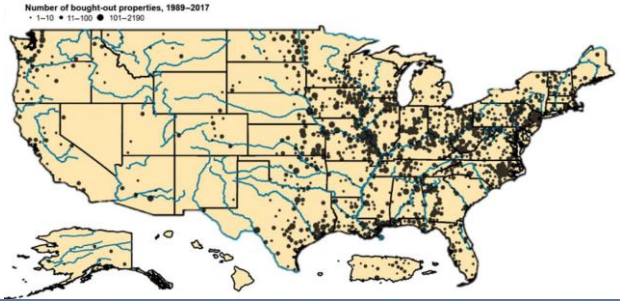
Tampa Specific Opportunity:

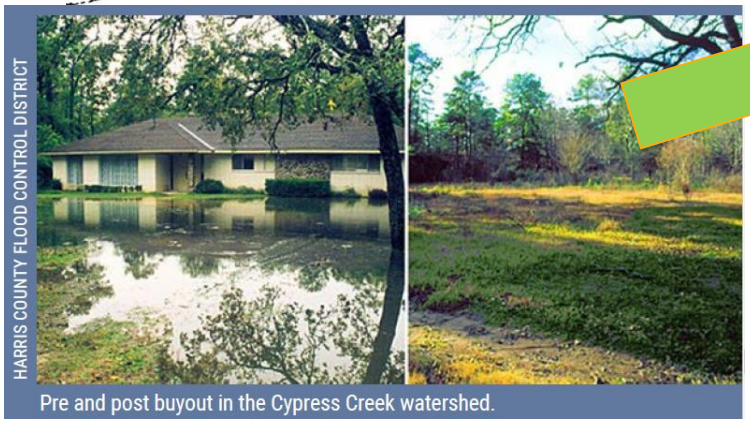
81 Bay Brewery/Multifamily Site Connection to South Manhattan Ponds



Buyouts → An Opportunity to Promote Community Resilience

There is an opportunity to leverage bought-out land for community assets and open space

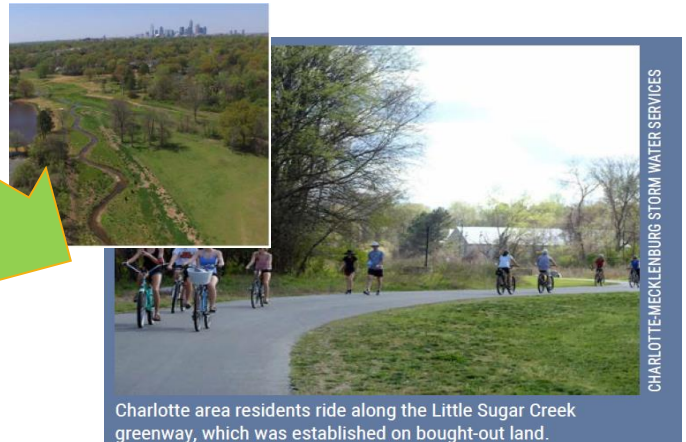




Pre and post buyout in the Cypress Creek watershed.

Invest in tactical nature-based infrastructure

Riverfront Park in downtown Nashville, Tennessee.



Charlotte area residents ride along the Little Sugar Creek greenway, which was established on bought-out land.

Tampa-Specific Example: S. Concordia Ave.

Urban Land Institute

Partnerships & Community Resilience

Pegeen Hanrahan
Southern Conservation Finance Director
Trust for Public Land

ULI Tampa Bay

Engagement Strategy + Partnerships

Visual Preference Theory, pioneered by Tony Nelessen, provides a image-based framework for allowing neighbors to choose between different investments. Using this or a similar tool along with a stylebook of city-approved elements (trail types, vegetation options, fencing options, play equipment, seating, etc.) may streamline and accelerate “going to scale” on a lot of improvements at many sites in a short period of time.

Consider the impact of looking at these as MORE than just stormwater facilities. *Are they supporting redevelopment? Are they building neighborhood pride and cohesion? Facilitating better health? Allowing access to good food via community gardens?*


Multi-Benefits = Multi-Funding Sources
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Leveraging Multiple Benefits and Funding Options

Even Small Pocket Parks Deliver Economic, Social, Health and Climate Benefits

Capital project plans for city investments should seek opportunities to deliver multiple benefits.

Stormwater, transportation, parks, water/wastewater even schools and investments by other jurisdictions should have prioritization systems that look at how investments can be completed in sync with one another based on condition of the facilities, community needs, equity, and other objective data.

Florida statute allows cities and counties to fund all capital needs at the ballot box, in some cases with operating funds as well. The Trust for Public Land has worked on nearly 600 successful city or county ballot initiatives for parks, trails, natural land, climate investments and green schoolyards, sometimes in combination with transportation, stormwater or other local needs.

Closing Thoughts

- **Create a big, shared vision** across all departments and throughout the community to develop a strategic, phased plan
- **Utilize data/metrics & holistic ranking system of city-wide resilience:** economic, social, environmental, health & governance: not just infrastructure
- **Design for multi-benefit solutions:** flood protection, economic development, public gathering spaces, green infrastructure, restored ecological functions, trail connections
- **Pursue partnerships:** interdepartmental coordination with city staff; city, county, state, fed and private/non-profit partnerships, neighborhoods, universities
- **Create and encourage interdisciplinary teams** to break down silos: Planning, Engineering, Landscape Architecture, Parks and Rec, Transportation, Stormwater
- **Community engagement is the foundation** - build and institutionalize a plan that fosters community ownership and can lead to effective implementation
- **Integrate resiliency** in response to climate change