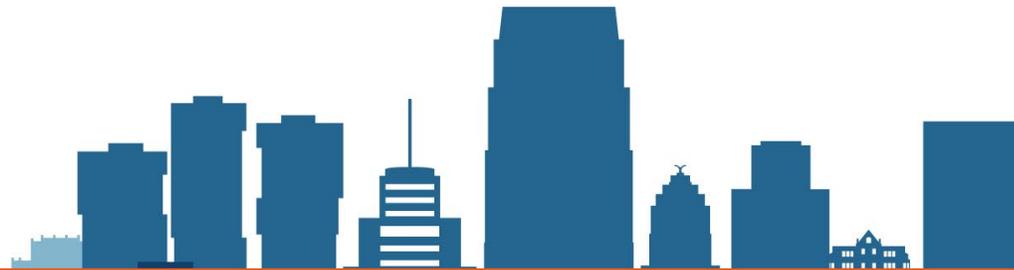


RESILIENT NORTHEASTERN NJ

SCENARIO DEVELOPMENT JERSEY CITY – HACKENSACK / WEST JC

WAVE 3 MEETING IN A BOX
SPRING 2022



PLEASE NOTE:

All content is working DRAFT for planning and discussion purposes only
This document can be used either for individual review or to help guide a meeting

NOTES TO THE FACILITATOR

HIDE THIS SLIDE WHEN PRESENTING BY RIGHT CLICKING ON THE SLIDE IN THE PANEL AND SELECTING “HIDE SLIDE” (or delete it)

- First, thank you so much for helping to ensure there is widespread public involvement in this important project!
- We recommend that one person presents this slide deck, while another takes notes either directly in the form accessible through the QR code to the right or separately such that it can be later logged as feedback via the QR code to the right.
- This deck is intended to help support and guide conversations to obtain the input needed at this phase of the project, but it is not intended to be prescriptive. All content is working DRAFT for planning and discussion purposes only.
- It can be helpful at the beginning of meetings with people new to you to set ground rules to help guide the meeting. Example possible ground rules include: Participate fully, give everyone the chance to speak, seek first to understand then be understood, respect the group’s time.
- Please share your thoughts about what worked and didn’t work about the information provided herein, and how our next rounds of materials can be even better in the feedback form.



**PLEASE
LOG
FEEDBACK
FROM THE
MEETING
HERE**

Community Meeting Guidelines

TO ENSURE THAT WE ARE ABLE TO MAXIMIZE OUR TIME TOGETHER AS A GROUP

- **Please remain on mute unless speaking**
- **During the main presentation:**
 - Please submit questions in the chat
 - Please turn off video to allow for ASL accessibility
- **During the breakouts:**
 - If you are able and willing to, please consider turning on your camera
 - Use one mic and stack
 - Acknowledge everyone's voice and time. If you find yourself speaking frequently, consider opening the floor to your group members. We look forward to hearing what everyone has to say!
 - Please speak from your own experience
 - If there are several group members with things to share, please use the 'raise hand' function, the chat, or gesticulating in Zoom and a facilitator will call on you
- **Please save discussion for the breakouts and report out**



Join the conversation!

Please use the chat function to ask questions as we go!

If the meeting abruptly ends, please be patient and re-join using the same Zoom link. You will also receive an email with the meeting link.

TOPICS

- What's important and at risk in this neighborhood?
- For each solution scenario:
 - Possible actions
 - How the area might change
 - Key considerations
 - What do you think?
- Discussion
 - Of everything we discuss, what is most important to advance?
 - What do you want to not happen?



“We have tools and ideas, like a carpenter, but this is your house”

For this regional level plan, we have broken the community down into geographic areas. This means that there is nuance and community boundaries that might not always be honored. Let us know when we don't get it right.

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HACKENSACK / WEST BREAKOUT

AREA CONTEXT

- Access to the waterfront
- Access to regional transportation
- Pedestrian and biker experience
- Importance of neighborhood parks and Lincoln Park
- Desire to see more green space, trees, and green infrastructure

Land Use

Residential

- High Density
- Medium to Low Density (Single Unit)

Commercial & Industry

- Commercial/Services
- Cultural Attractions
- Industrial & Commercial Complexes
- Industrial
- Transportation, Services & Utilities
- Other Urban/Built-Up Land

Natural & Open Space

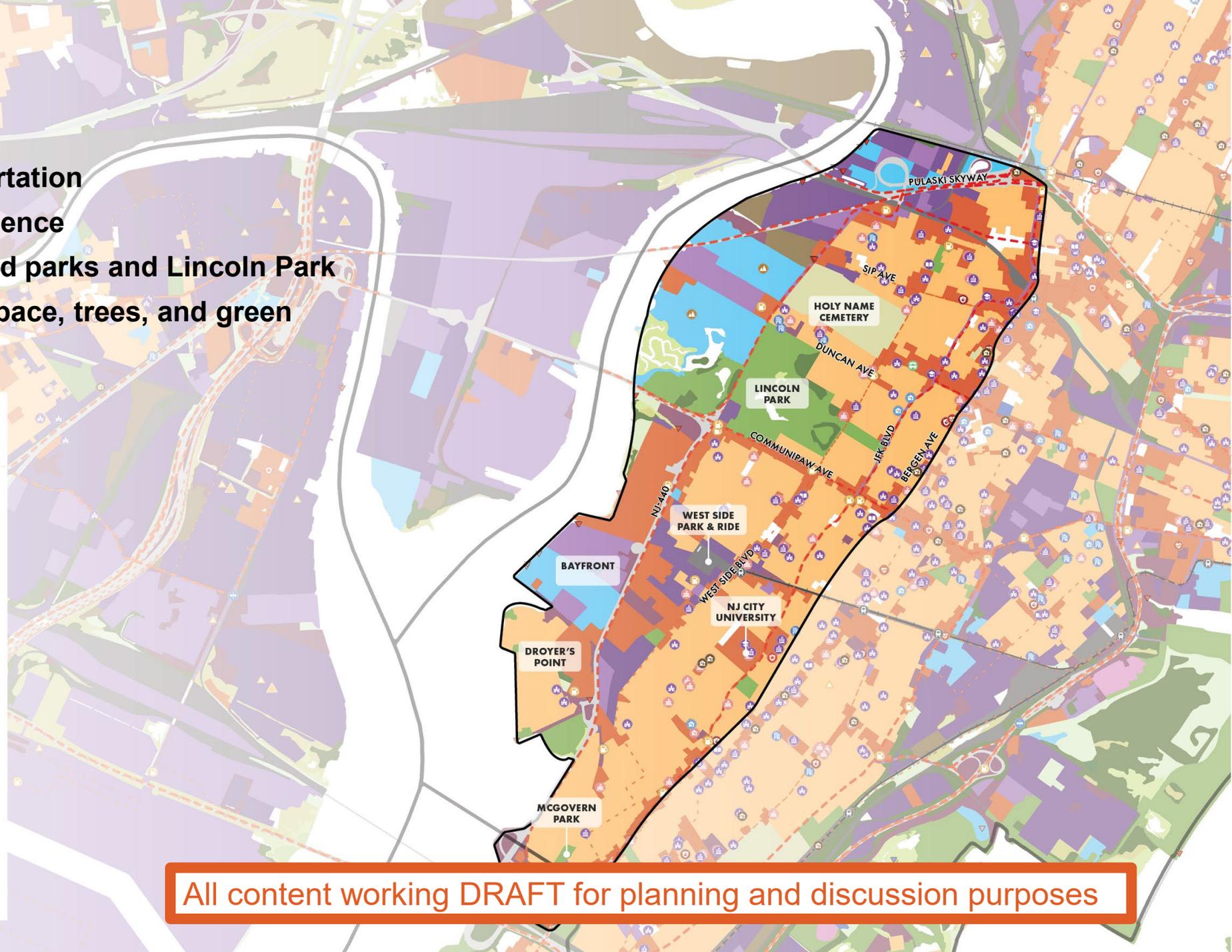
- Mixed Forests
- Coniferous Forests
- Deciduous Forests
- Wetlands/Marshes
- Agriculture
- Recreational Land
- Open Field (< 25% Covered)
- Cemetery
- Phragmites Dominate Areas
- Beaches

Other

- Barren Lands
- Altered Lands
- Military Installations
- Transitional Areas

Asset_Type

- Hurricane Evacuation Route
- Bus Routes
- Light Rail/Commuter Rail
- Child Care Centers
- Colleges
- Combined Sewer Outfall
- EMS
- Ferry Terminal
- Fire Stations
- Gas Stations
- Hospitals/Medical Centers
- Landfill
- Library
- Major Sports Venue
- Municipal Building
- Nursing Homes
- Other Surface Discharge
- Places of Worship
- Police Stations
- Power Generation
- Public Housing
- Rail Stations
- Schools
- Senior Housing
- Shelters
- Stormwater Discharge
- Substations
- Wastewater Treatment



All content working DRAFT for planning and discussion purposes

AREA CONTEXT

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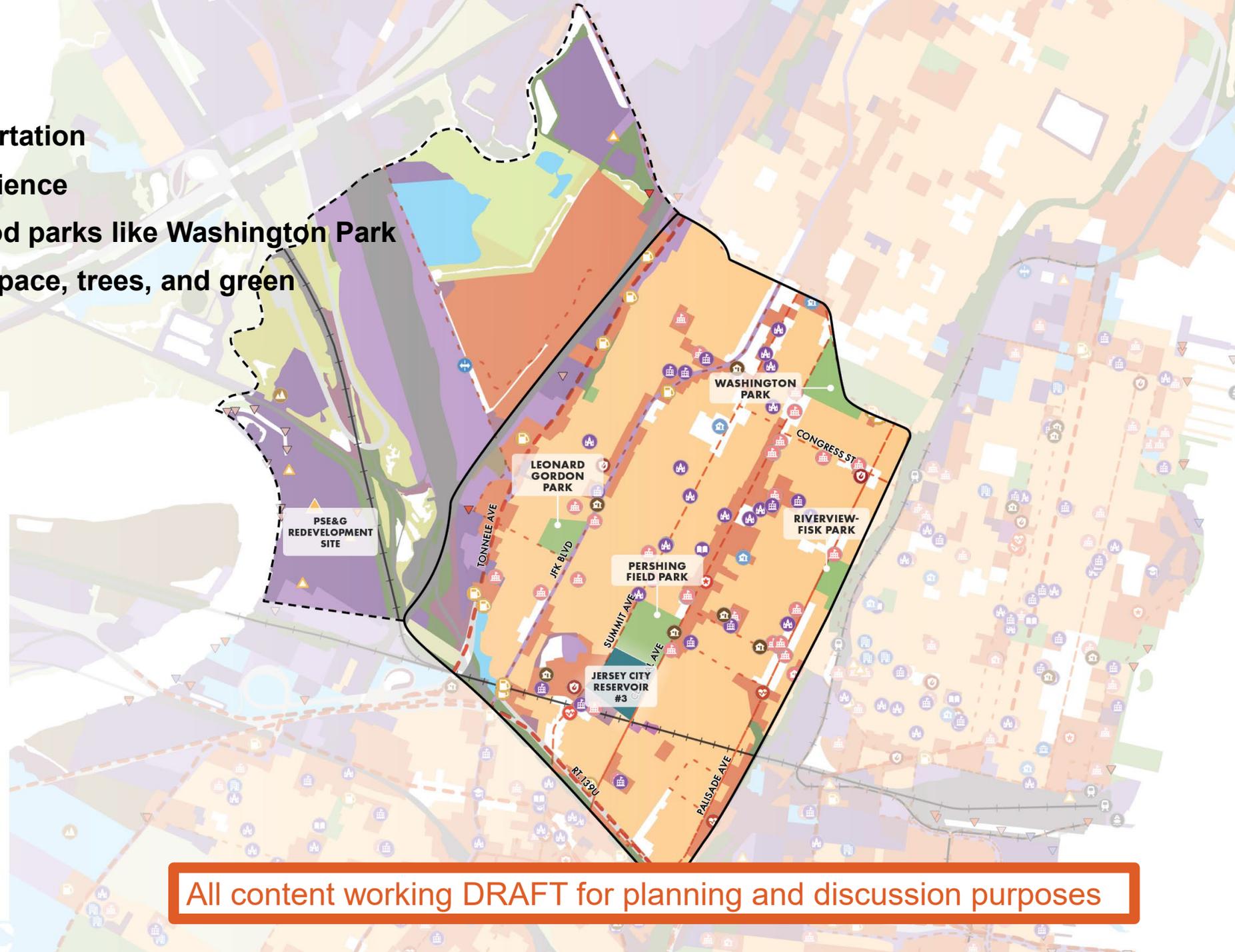
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- Wastewater Treatment



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RISK CONTEXT

Both rainfall flooding and coastal flooding can impact large swaths of this area. Residential neighborhoods like Country Village and Society Hill, parks, transportation infrastructure, and community buildings are especially at risk.

24 HOUR, 100 YEAR STORM

2070 MODEL (HIGH TIDE + SLR + 10% RAINFALL INCREASE)

STORM SURGE

2070 EXTENT (HURRICANE SANDY + SEA LEVEL RISE)

AREAS OF OVERLAP

SEA LEVEL RISE

..... 2070 MHHW + 2.4' SLR

— 2070 MHHW + 5.0' SLR

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RISK CONTEXT

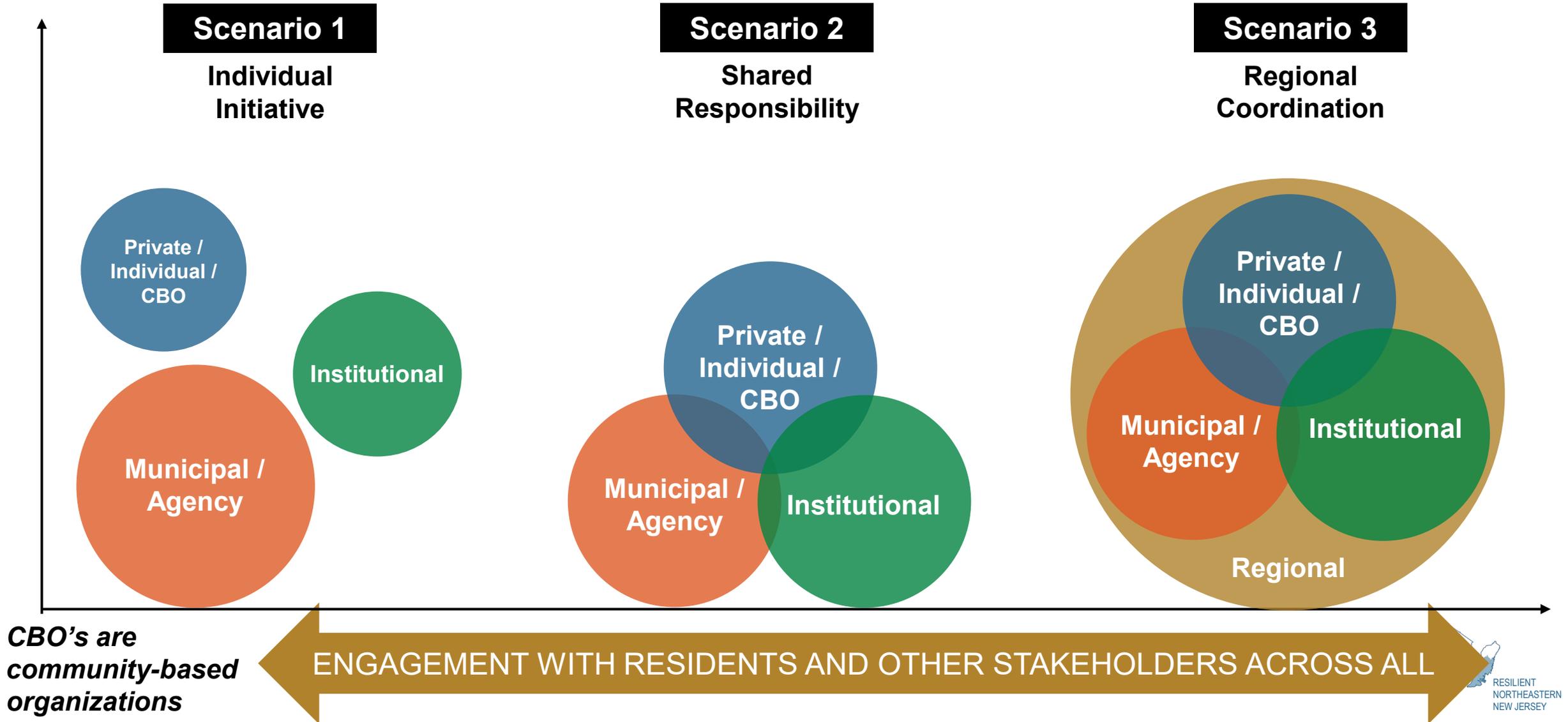
Rainfall flooding is reportedly getting worse in this area, and causes damage to basements and first floor commercial shops.

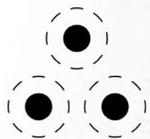
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- 2070 MHHW + 2.4' SLR
- 2070 MHHW + 5.0' SLR

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SCENARIO FRAMEWORK

*The scenarios are not alternatives.
The action plan could be a combination
of actions from the different scenarios.*





SCENARIO 1 INDIVIDUAL INITIATIVE

EXISTING CONDITIONS

- PROJECTS ALREADY PLANNED OR IN PROGRESS
- EXISTING OUTFALLS
- LTCP STORAGE TANKS
- PROPOSED GREENWAY CORRIDORS (BY OTHERS)

RESILIENT NJ MEASURES

- COASTAL PROTECTION ALIGNMENTS
- POTENTIAL ALTERNATE COASTAL ALIGNMENTS
- GREEN INFRASTRUCTURE CORRIDORS
- SUGGESTED FLOW PATHS
- SUGGESTED RETENTION AREAS
- PUMP STATIONS
- NEW STORMWATER OUTFALLS
- PROPOSED GREENWAY CORRIDORS
- AREAS OUTSIDE PROTECTIONS
- REDEVELOPMENT AREAS
- SITES TO ADAPT
- POSSIBLE RESILIENCE HUB LOCATION

NON-PHYSICAL SOLUTIONS

- 1 ADOPT ORDINANCES TO STATE MODELS & GUIDANCE
- 2 GI PROGRAM FOR CITY PROPERTIES
- 3 GUIDELINES FOR GI ON OPEN SPACE
- 4 TREE CANOPY PROGRAMS
- 5 RESILIENCE HUBS AT CITY PROPERTIES
- 6 MUNICIPAL TRASH CLEANUP & CATCH BASIN PROGRAMS
- 7 PROMOTE & INCORPORATE RESIDENT FLOOD REPORTING
- 8 INTER-DEPARTMENT & MUNICIPAL COORDINATION



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SCENARIO 1

INDIVIDUAL INITIATIVE

EXISTING CONDITIONS

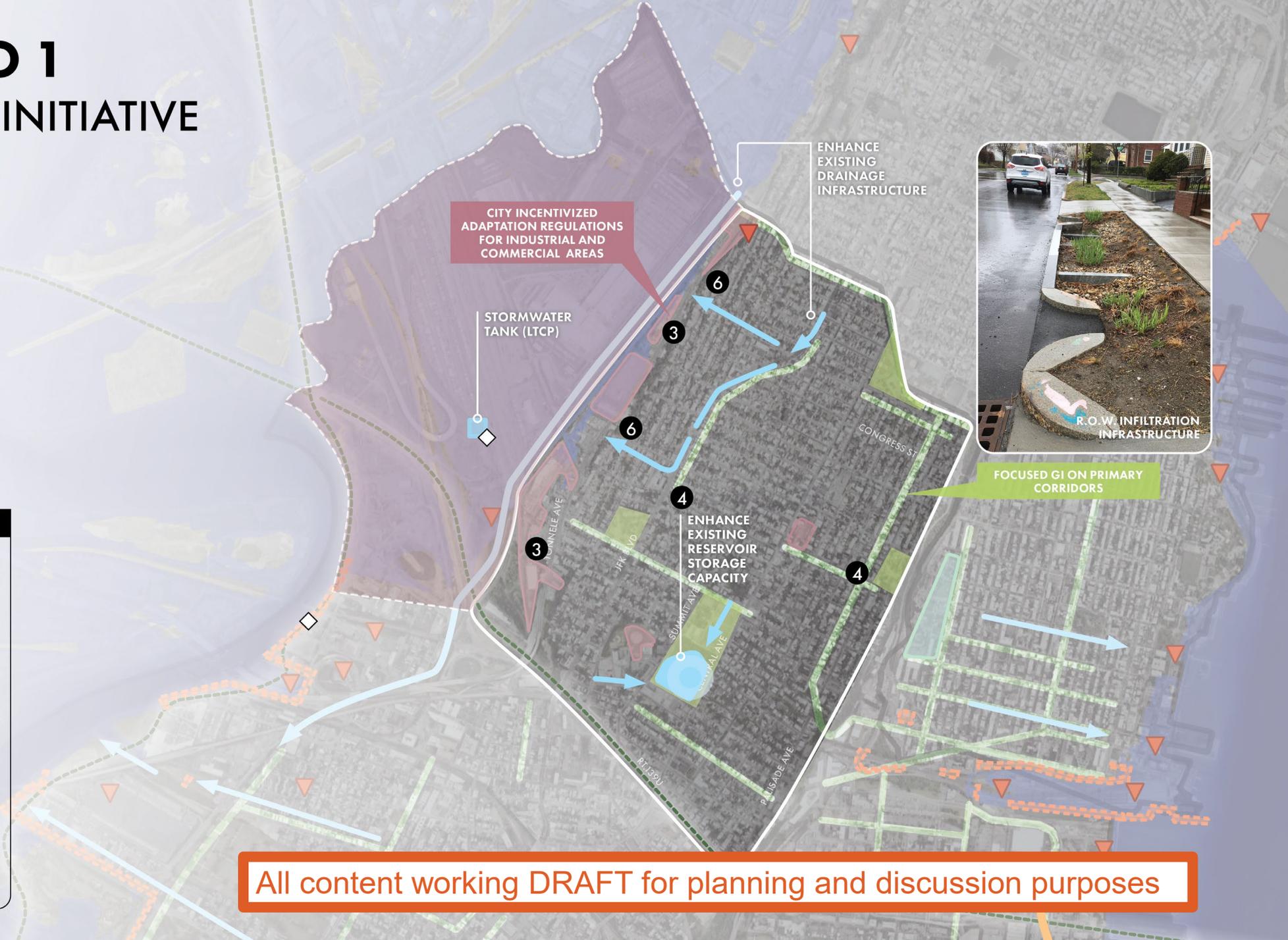
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RESILIENT NJ MEASURES

- GREEN INFRASTRUCTURE CORRIDORS
- POTENTIAL INFILTRATION AREAS
- SUGGESTED FLOW PATHS
- SUGGESTED RETENTION AREAS
- AREAS OUTSIDE PROTECTIONS

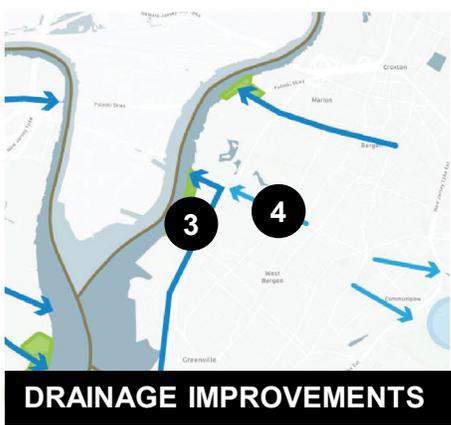
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- 2 GI PROGRAM FOR CITY PROPERTIES
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- 6 EXPAND MUNICIPAL TRASH CLEANUP & CATCH BASIN PROGRAMS
- 7 PROMOTE & INCORPORATE RESIDENT FLOOD REPORTING
- 8 INTER-DEPARTMENTAL COORDINATION FOR ADVANCEMENT OF PROJECTS



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KEY CHANGES, SCENARIO 1





COASTAL PROTECTIONS



DRAINAGE IMPROVEMENTS



GREEN INFRASTRUCTURE

OBJECTIVES, SCENARIO 1

Close gaps in infrastructure and topography using strategies such as inland road raising with adaptation measures applied to areas left outside protections.

Improve drainage & pumping along existing pathways, taking advantage of areas that can be easily separated from the combined sewer system.

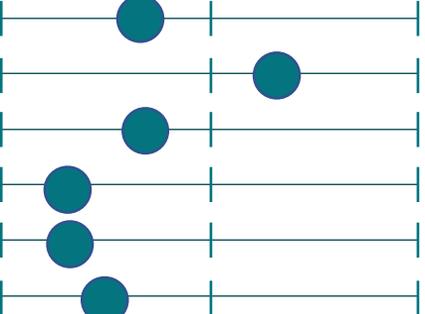
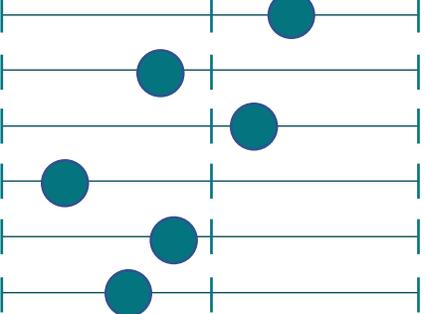
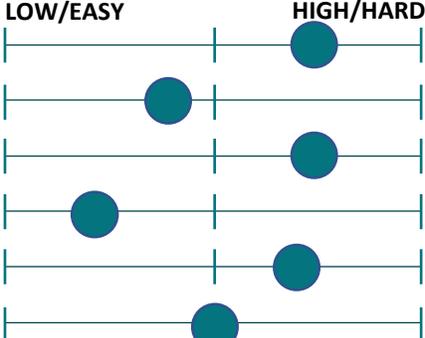
Expand green infrastructure installations on public property targeting key primary corridors and lots with significant impervious area.

KEY CONSIDERATIONS, SCENARIO 1

- CONSTRUCTION TIME
- IMPACT TO PUBLIC ACCESS & USE
- COSTS
- PERMITTING
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- LEVEL OF PROTECTION

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ISSUES TO CONSIDER

Alignments along public right of ways can be implemented by the city **BUT** parts of the community would be left out of the alignment and could be cut off from critical services during storm events.

Upgrades to the current system can be phased to facilitate construction and provide immediate benefit **BUT** upgrades to the existing system will not greatly expand the existing sewer capacity and could exceed treatment plant capacity.

Green infrastructure projects can treat stormwater at the source and add other benefits to the city **BUT** will compete with other needs in the public right of way and is limited in treating large storm events.

NON-PHYSICAL SOLUTIONS, SCENARIO 1



COASTAL PROTECTIONS

Policy based coastal measures are needed for areas outside of protections & for areas integrated with inland alignments.



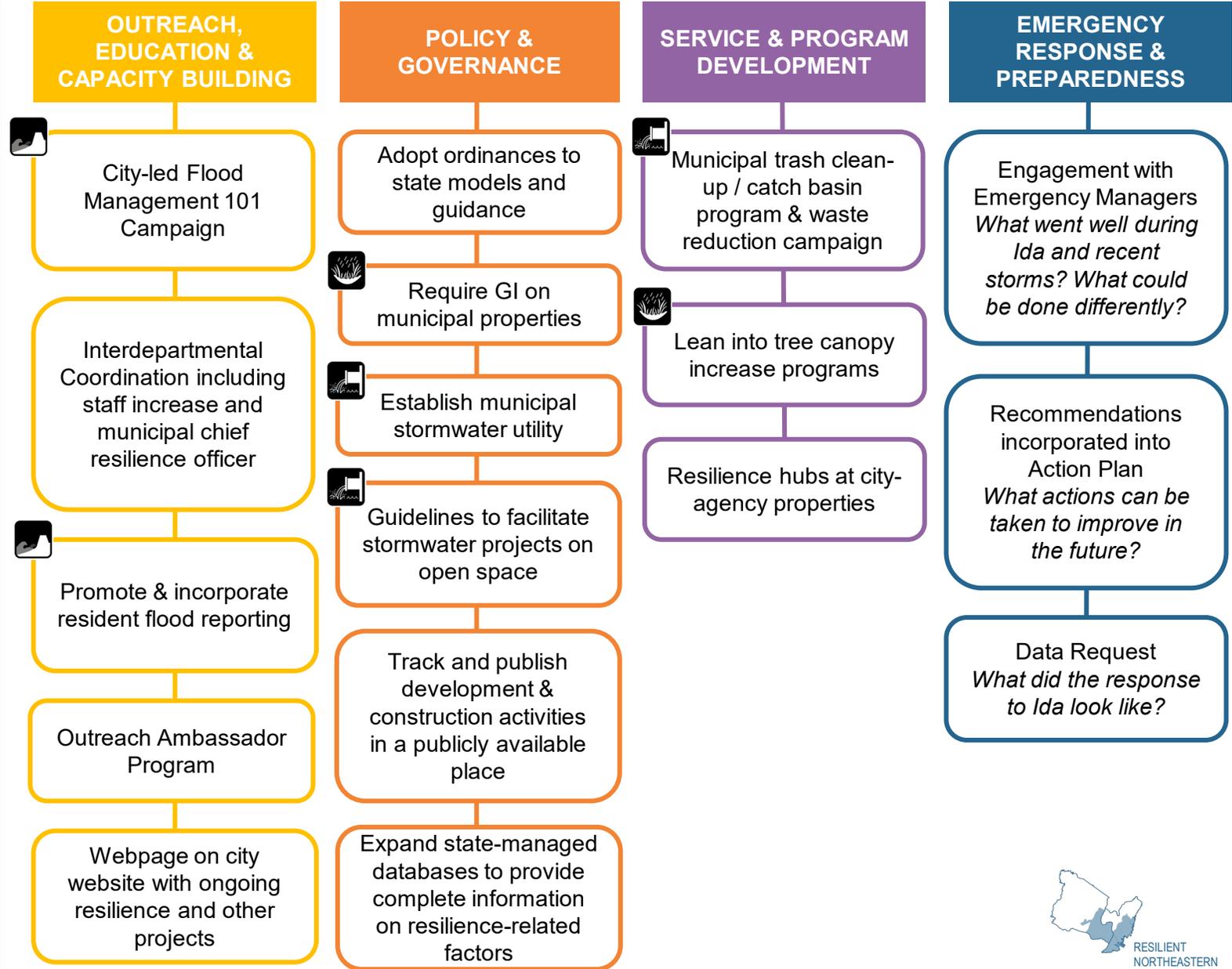
DRAINAGE IMPROVEMENTS

Policy based measures are like trash clean-up & catch basin programs help with drainage efficiency while larger measures like a Municipal Stormwater utility increase resilience equity.



GREEN INFRASTRUCTURE

Measures like tree programs and Green Infrastructure requirements on public open-space are essential to meeting resilience goals in Scenario 1.





COASTAL PROTECTIONS



DRAINAGE IMPROVEMENTS



GREEN INFRASTRUCTURE

QUESTIONS TO CONSIDER

- Which streets or city properties do you want to see transformed?
- What greening projects would appeal to you most?
- Where would you like to see Resilience Hubs?

WHAT DO YOU LIKE ABOUT SCENARIO 1?

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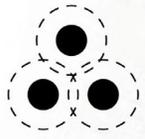
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WHAT DO YOU DISLIKE ABOUT SCENARIO 1?

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SCENARIO 2 SHARED RESPONSIBILITY

EXISTING CONDITIONS

- PROJECTS ALREADY PLANNED OR IN PROGRESS
- EXISTING OUTFALLS
- LTCP STORAGE TANKS
- PROPOSED GREENWAY CORRIDORS (BY OTHERS)

RESILIENT NJ MEASURES

- COASTAL PROTECTION ALIGNMENTS
- POTENTIAL ALTERNATE COASTAL ALIGNMENTS
- GREEN INFRASTRUCTURE CORRIDORS
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- POSSIBLE RESILIENCE HUB LOCATION

NON-PHYSICAL SOLUTIONS

- 1 INCORPORATE RESILIENCE INTO REDEVELOPMENT PLANS
- 2 INCENTIVIZE GI ON PRIVATE PROPERTIES
- 3 RESILIENCE LEADER OUTREACH AND TRAINING PROGRAM
- 4 TRASH CLEAN-UP DAYS AND COMMUNITY GARDENS THROUGH PARTNERSHIPS
- 5 RAIN BARREL DISTRIBUTION & GUIDE FOR INSTALLATION



TIDAL WETLAND RESTORATION



GREEN ROOF



R.O.W GREEN INFRASTRUCTURE



RESTORE WETLANDS FOR RETENTION AND FILTRATION

IMPERVIOUS SPACE CONVERSION VIA PUBLIC PARTNERSHIP

WORK WITH RESILIENCE MEASURES OF PLANNED BAYFRONT I REDEVELOPMENT

CITY ENFORCED ADAPTATION REGULATIONS FOR INDUSTRIAL AND COMMERCIAL AREAS

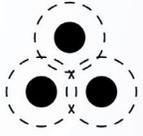
JC ADAPTATION PLAN : RAISED WALKWAY

RT 440 STREET LEVEE COORDINATED WITH NJDOT

SEPARATE SEWERS ALONG SIP, DUNCAN AND CLENDENNY AVES TO PARKS, NEW STORMWATER OUTFALLS & WETLANDS

DIRECT STORMWATER TO NEW RETENTION AREAS AT BAYFRONT I, WEST SIDE CAR PARK & LINCOLN PARK

All content working DRAFT for planning and discussion purposes



SCENARIO 2

SHARED RESPONSIBILITY

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ENHANCE EXISTING DRAINAGE INFRASTRUCTURE



DIRECT STORMWATER TO NEW RETENTION AREAS AT RIVERVIEW-FISK, PERSHING FIELD, LEONARD GORDON AND WASHINGTON PARKS



EXPAND GI NETWORK THROUGH PUBLIC PARTNERSHIPS

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KEY CHANGES, SCENARIO 2



COASTAL PROTECTIONS



1. ELEVATED RIVERWALK INTEGRATED WITH NATURE BASED COASTAL PROTECTIONS

Hunter's Point
Brooklyn, New York City



2. RAISED AND REINFORCED ROADWAY

Mount Cotton Road
Queensland, Australia



DRAINAGE IMPROVEMENTS



3. URBAN STORMWATER RETENTION PARK

Qunli Stormwater Wetland Park
Haerbin, China



4. STORMWATER MEDIAN

Via Verde
Mexico City



GREEN INFRASTRUCTURE



5. GREEN INFRASTRUCTURE ON PRIVATELY OWNED SPACES

First Avenue Water Plaza
Manhattan, New York City



6. BLUE & GREEN ROOFS

Osbourne Association
South Bronx, New York City



COASTAL PROTECTIONS



DRAINAGE IMPROVEMENTS



GREEN INFRASTRUCTURE

OBJECTIVES, SCENARIO 2

Raise highways and roadways and integrate with new flood barriers and raised walkways as part of planned redevelopment projects to provide protection.

Consolidate drainage infrastructure to create new and expanded conveyance pathways and expand retention areas in conjunction with partners.

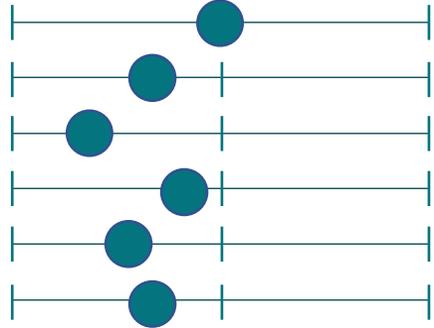
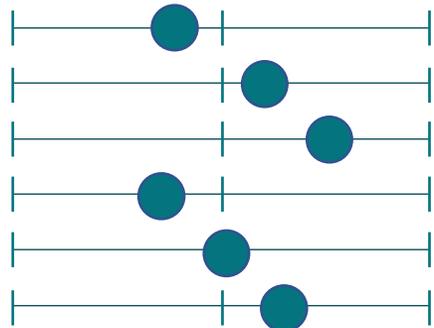
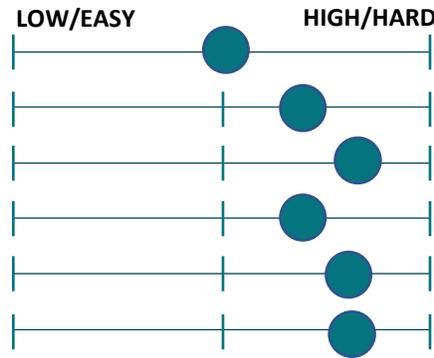
Expand green infrastructure to secondary corridors and beyond public sites to incentivize additional GI on private properties. Target large parcels to implement regional GI practices.

KEY CONSIDERATIONS, SCENARIO 2

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ISSUES TO CONSIDER

Expanding protection using existing corridors results in more comprehensive and cohesive protection **BUT** extending protection will require additional coordination with agencies and other property owners.

Separating stormwater and directing to new outfalls gets water out of the sewer system and improves water quality **BUT** requires significant investment and coordination before benefits can be realized.

Expanding GI to private properties provides broader watershed management **BUT** results in a greater number of assets that need to be inspected and maintained to provide protection.



COASTAL PROTECTIONS



DRAINAGE IMPROVEMENTS



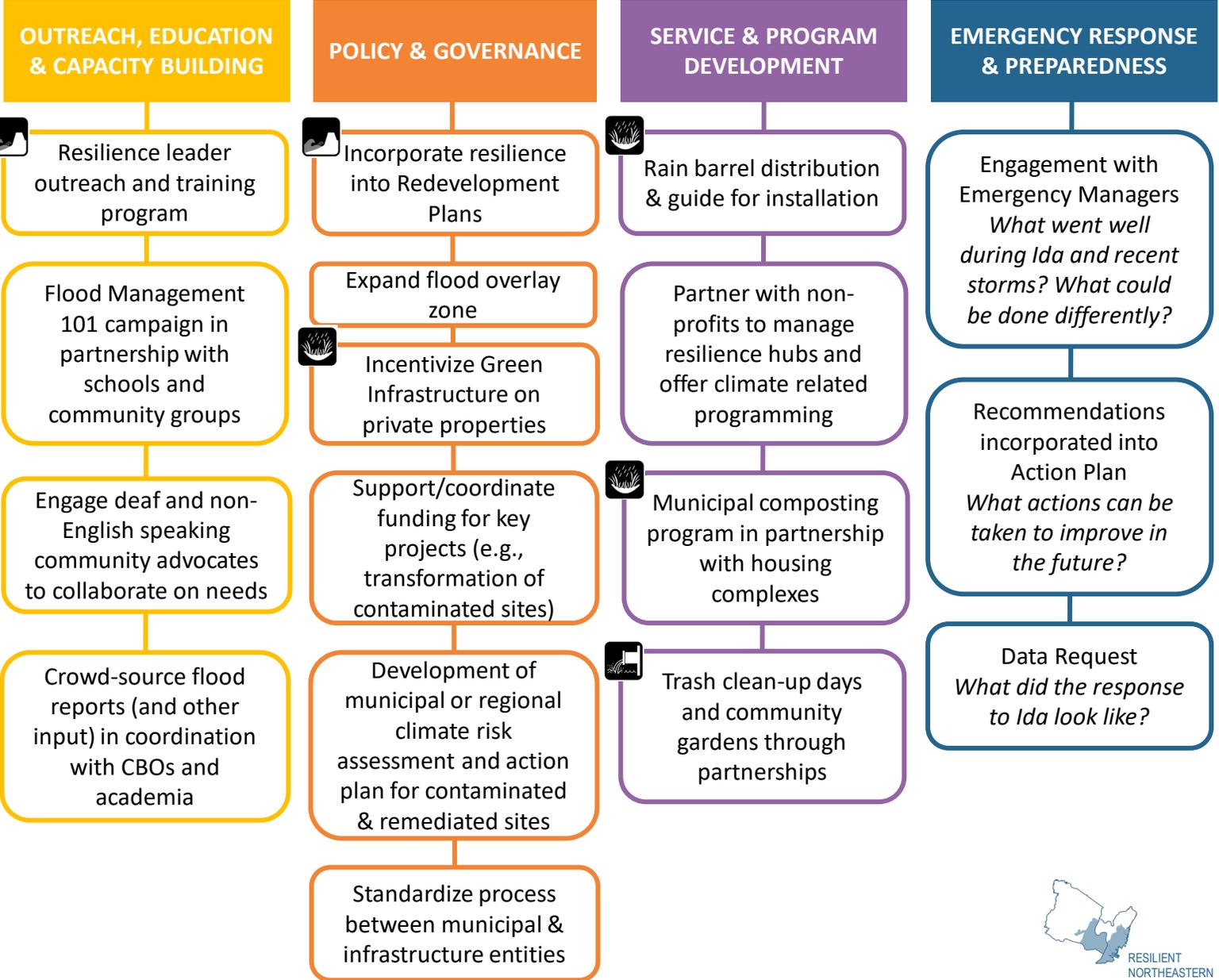
GREEN INFRASTRUCTURE

NON-PHYSICAL SOLUTIONS, SCENARIO 2

Resilience advancements deepened through collaboration with community members, schools, and community-based organizations

Partnerships in composting and trash clean-up help reduce drainage system clogging

Public private partnerships expand green infrastructure benefits





COASTAL PROTECTIONS



DRAINAGE IMPROVEMENTS



GREEN INFRASTRUCTURE

QUESTIONS TO CONSIDER

- Which streets or city properties do you want to see transformed?
- What greening projects would appeal to you most?
- Where would you like to see Resilience Hubs?

WHAT DO YOU LIKE ABOUT SCENARIO 2?

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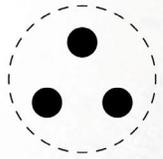
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WHAT DO YOU DISLIKE ABOUT SCENARIO 2?

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SCENARIO 3 REGIONAL COORDINATION

EXISTING CONDITIONS

- PROJECTS ALREADY PLANNED OR IN PROGRESS
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- PROPOSED GREENWAY CORRIDORS (BY OTHERS)

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- POSSIBLE RESILIENCE HUB LOCATION

NON-PHYSICAL SOLUTIONS

- 1** CREATE A "SINGLE SOURCE OF TRUTH" FOR RESILIENCE-RELATED INFORMATION AND RESOURCES
- 2** REGIONAL GI CHAMPIONS TRAINING PROGRAM
- 3** DEVELOP PIPELINE OF SITES FOR STORMWATER MANAGEMENT / RESILIENT TRANSFORMATION OF BROWNFIELDS & CONTAMINATED SITES
- 4** REGIONAL TREE PLANTING PROGRAM
- 5** REGIONAL NETWORK OF RESILIENCE HUBS
- 6** REGIONAL PROGRAM DEVELOPMENT AND SUPPORT FOR COMPOSTING AND WASTE REDUCTION CAMPAIGNING



REGIONAL NATURE BASED STORMWATER MANAGEMENT

REGIONALLY COORDINATED NEWARK BAY LIVING SHORELINE: LIVING WITH WATER INITIATIVE WETLANDS FOR RETENTION AND ECOSYSTEM SERVICES

INTEGRATE COASTAL BARRIERS WITH GREENWAY CORRIDORS FOR MULTI-PURPOSE INFRASTRUCTURE

REVIEW & STRENGTHEN RESILIENCE MEASURES OF PLANNED BAYFRONT I REDEVELOPMENT

CITY ENFORCED ADAPTATION REGULATIONS FOR INDUSTRIAL AND COMMERCIAL AREAS

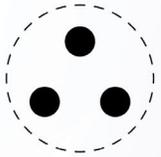
JC ADAPTATION PLAN : RAISED WALKWAY

CONCENTRATE NEW DRAINAGE IMPROVEMENTS ALONG GREENWAY CORRIDORS FOR "DIG ONCE" BENEFITS

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DIRECT STORMWATER TO NEW RETENTION AREAS AT BAYFRONT I, WEST SIDE CAR PARK & LINCOLN PARK

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SCENARIO 3

REGIONAL COORDINATION

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INTEGRATE COASTAL BARRIERS WITH GREENWAY CORRIDORS FOR MULTI-PURPOSE INFRASTRUCTURE

CONCENTRATE NEW DRAINAGE IMPROVEMENTS ALONG GREENWAY CORRIDORS FOR "DIG ONCE" BENEFITS



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KEY CHANGES, SCENARIO 3



1. FLOOD PROTECTIONS INTEGRATED WITH PUBLIC INFRASTRUCTURE

Chicago Riverwalk



2. FLOODABLE PUBLIC INFRASTRUCTURE

Domino Park
Brooklyn, New York City



3. STORMWATER RETENTION AT COASTAL WETLAND

Hunter's Point
Brooklyn, New York City



4. IMPROVED STORMWATER SURFACE CONVEYANCE

Lick Run Greenway
South Fairmont, Cincinnati



5. REGIONAL URBAN GREENWAY

The BeltLine
Atlanta, Georgia



6. R.O.W GREEN INFRASTRUCTURE FOR STORMWATER MANAGEMENT

Swale on Yale
Seattle, Washington



COASTAL PROTECTIONS



DRAINAGE IMPROVEMENTS



GREEN INFRASTRUCTURE

OBJECTIVES, SCENARIO 3

Strengthen protection at planned redevelopment sites to align with comprehensive protection systems, adding natural coastal infrastructure to work in tandem with barriers.

Drainage is integrated with greenway corridors and re-directed to larger retention facilities built into redevelopment areas.

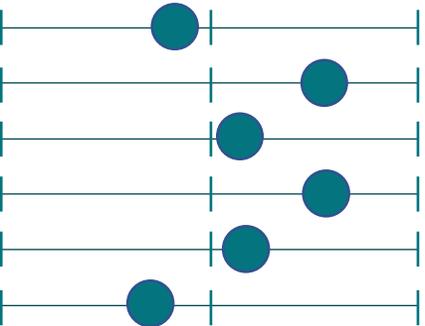
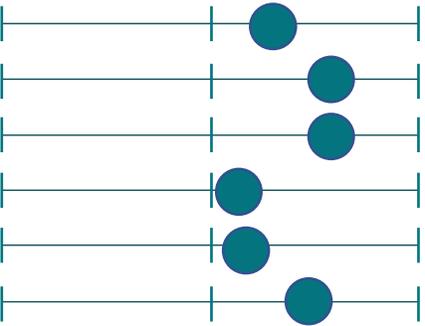
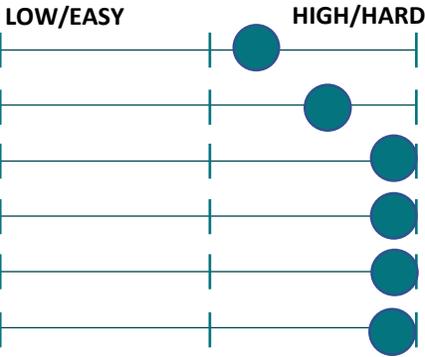
Build additional green infrastructure improvements into drainage corridors and other projects to promote a “dig once” approach.

KEY CONSIDERATIONS, SCENARIO 3

- CONSTRUCTION TIME
- IMPACT TO PUBLIC ACCESS & USE
- COSTS
- PERMITTING
- CONSTRUCTABILITY
- LEVEL OF PROTECTION

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ISSUES TO CONSIDER

Expanding private resiliency measures provides a more cohesive system **BUT** would require extensive coordination and commitments to ensure comprehensive protection.

Interior drainage corridors align with natural topography **BUT** require land use changes for surface conveyance or extensive partnering with the private sector to manage in redevelopment sites.

Incorporating additional GI into drainage corridors and other projects improves cost-effectiveness **BUT** requires conversion of existing uses to natural stormwater management.



COASTAL PROTECTIONS



DRAINAGE IMPROVEMENTS



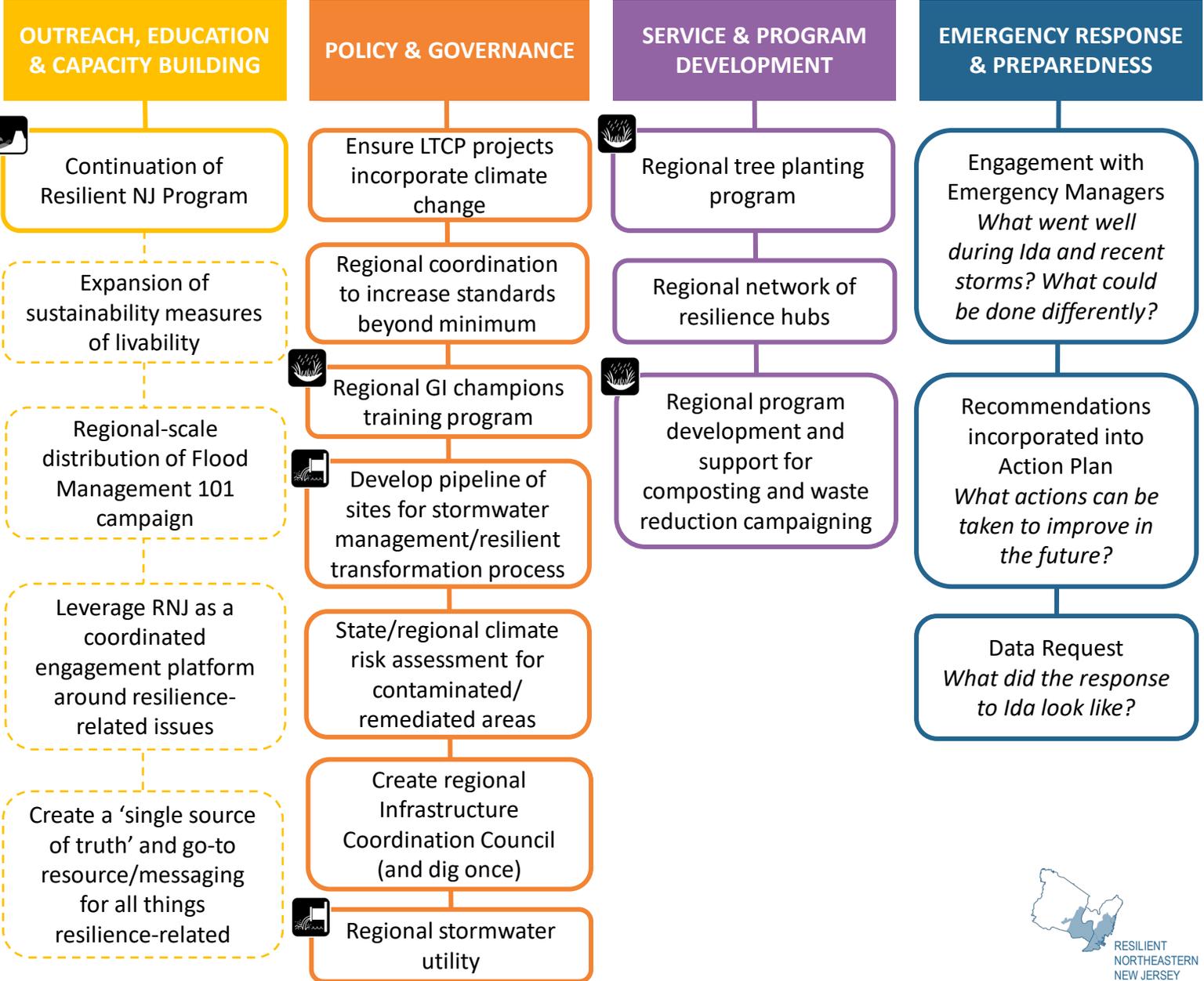
GREEN INFRASTRUCTURE

NON-PHYSICAL SOLUTIONS, SCENARIO 3

Continuing and expanding the Resilient NENJ program could allow the region to learn from, build on, and advance work completed to date

A regional infrastructure coordination council help maximize resilience in planned infrastructure improvements and limit disruption to communities

A regional network of resilience hubs could help CBOs and municipalities coordinate and share resources and information in times of disaster





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GREEN INFRASTRUCTURE

QUESTIONS TO CONSIDER

- Which streets or city properties do you want to see transformed?
- What greening projects would appeal to you most?
- Where would you like to see Resilience Hubs?

WHAT DO YOU LIKE ABOUT SCENARIO 3?

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WHAT DO YOU DISLIKE ABOUT SCENARIO 3?

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DISCUSSION & QUESTIONS

Of everything we've discussed, what is the most important thing to advance in this area?

What do you want to make sure does not happen?

