RESILIENT NORTHEASTERN NJ

SCENARIO DEVELOPMENT NEWARK - IRONBOUND

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

RESILIENT NORTHEASTERN NEW JERSEY

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.

RESILIENT NORTHEASTERN NEW JERSEY

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?

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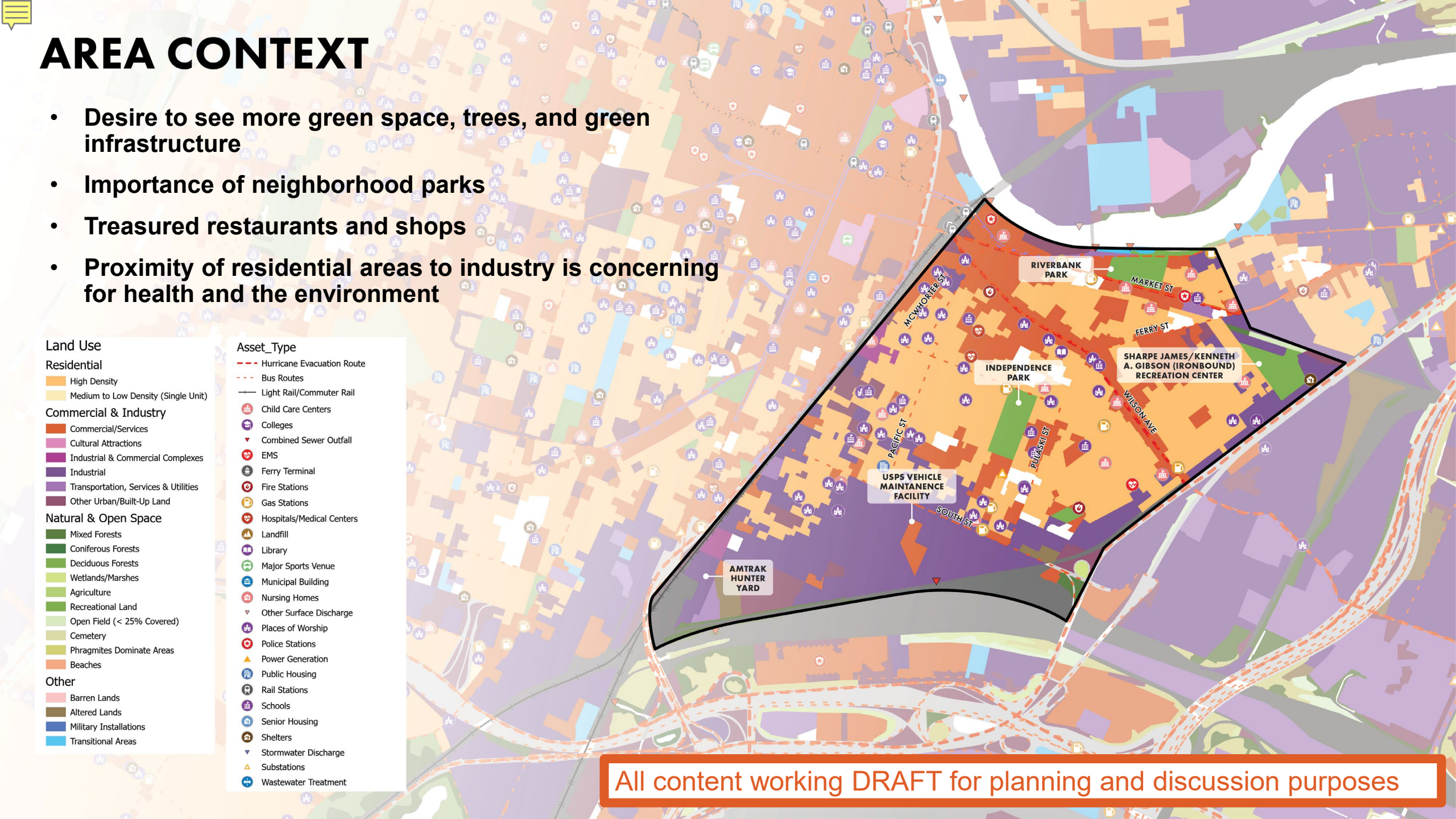
"We have tools and ideas, like a carpenter, but this is your house"

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.

Responders to Tropical Storm Henri on 8/22 on Vesey Street by Kenny Lin

AREA CONTEXT

- Desire to see more green space, trees, and green infrastructure
- Importance of neighborhood parks
- Treasured restaurants and shops
- Proximity of residential areas to industry is concerning for health and the environment



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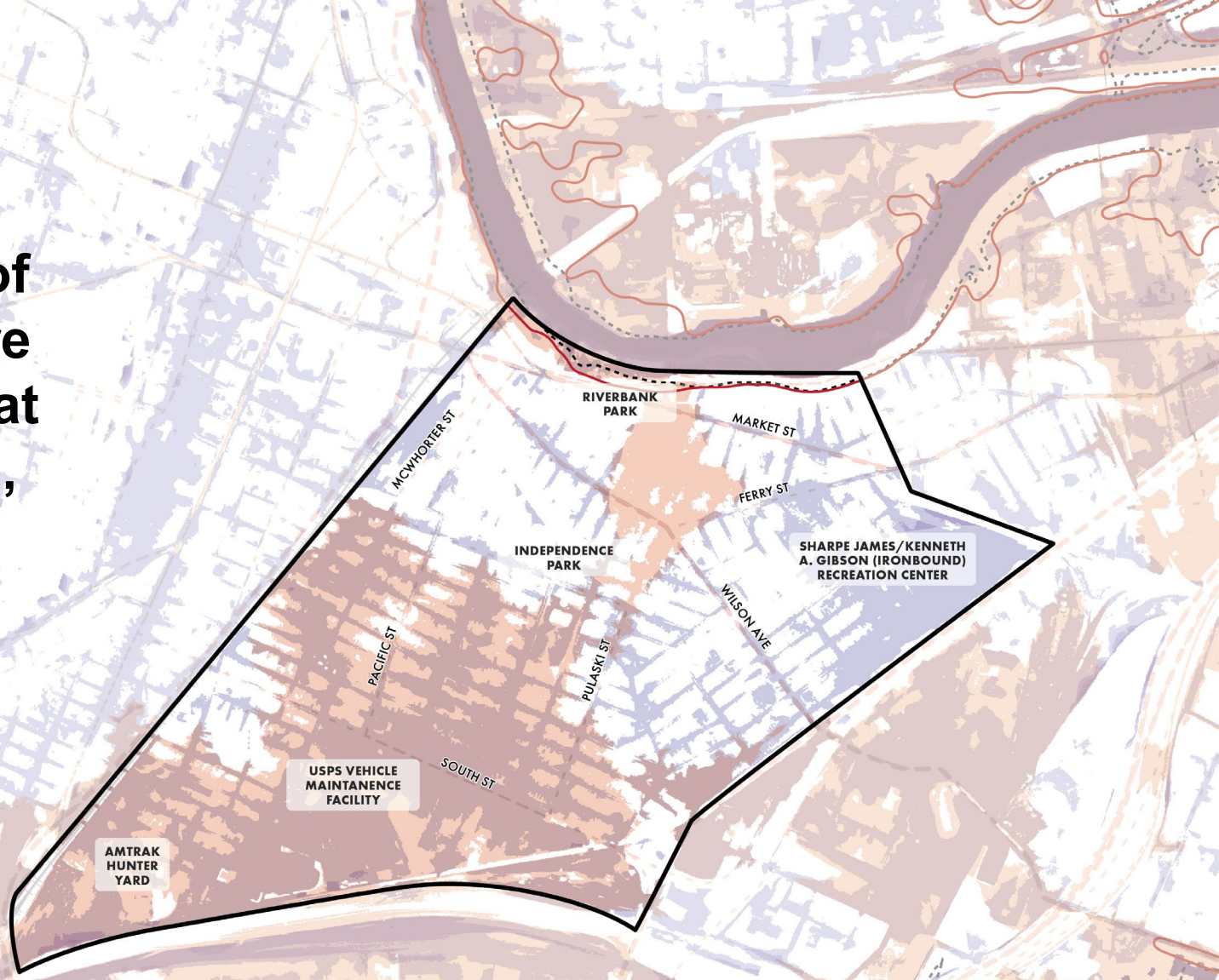
RISK CONTEXT

Both rainfall flooding and coastal flooding can impact large swaths of this area. Tidal flooding shown here impacts fewer areas but would be at a nearly constant frequency. Parks, transportation infrastructure, homes, streets, and community buildings are all 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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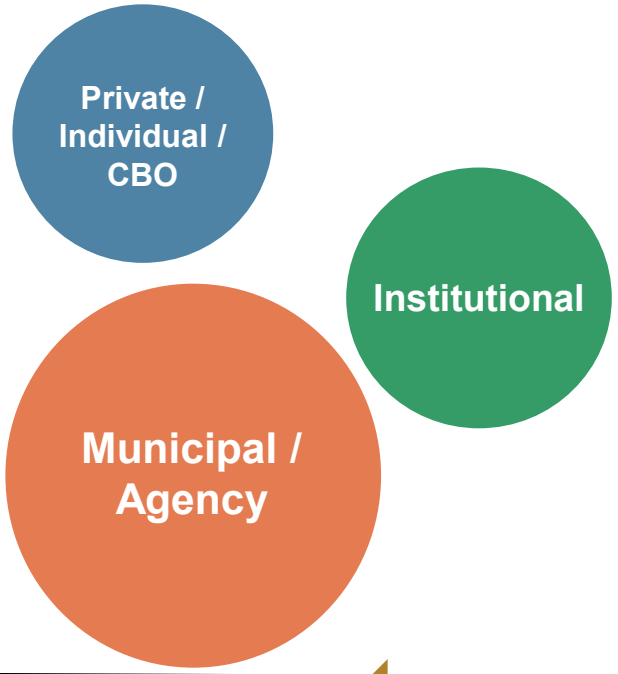
SCENARIOS

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

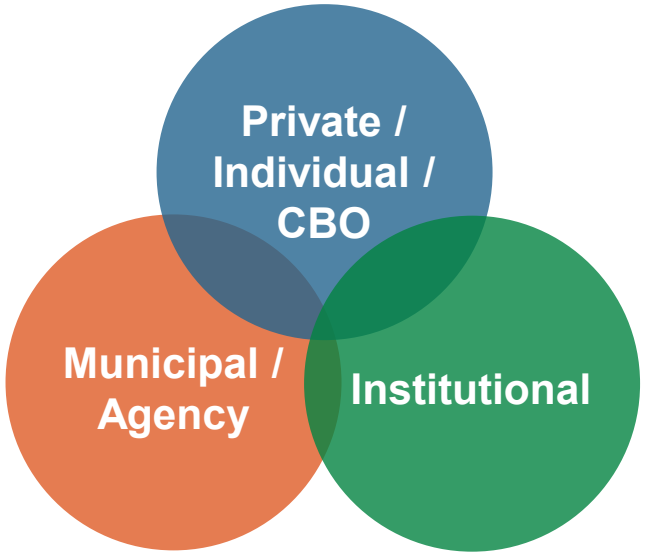
Scenario 1

Individual Initiative



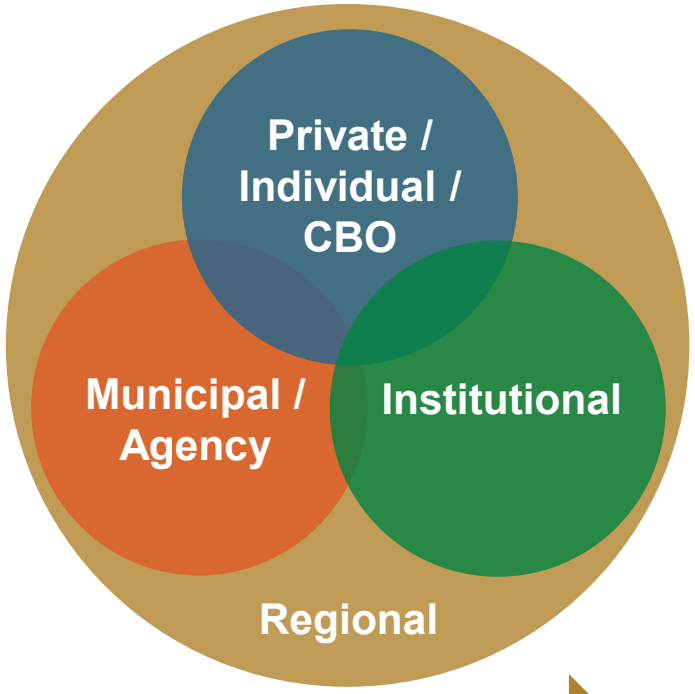
Scenario 2

Shared Responsibility



Scenario 3

Regional Coordination



CBO's are community-based organizations

ENGAGEMENT WITH RESIDENTS AND OTHER STAKEHOLDERS ACROSS ALL

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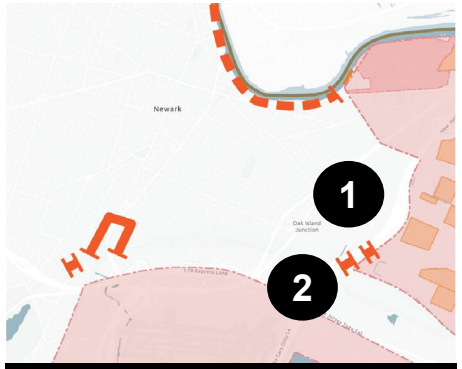
KEY CHANGES, SCENARIO 1 – INDIVIDUAL INITIATIVE



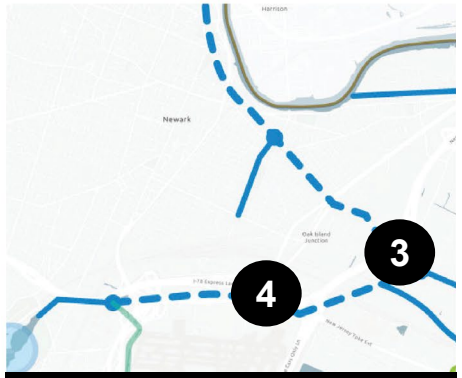
COASTAL PROTECTIONS

1. INDIVIDUAL BUILDING PROTECTIONS

Reading, United Kingdom

2. INLAND ROAD ELEVATION

Miami Beach, Florida



DRAINAGE IMPROVEMENTS

3. IMPROVED STORMWATER SURFACE CONVEYANCE

Waterplein Benthemplein
Rotterdam, Netherlands

4. URBAN STORMWATER RETENTION PARKS

Venice Island
Philadelphia

GREEN INFRASTRUCTURE

5. PERMEABLE PARKING SURFACES

TU Delft
Netherlands

6. R.O.W GREEN INFRASTRUCTURE

Queens, New York City

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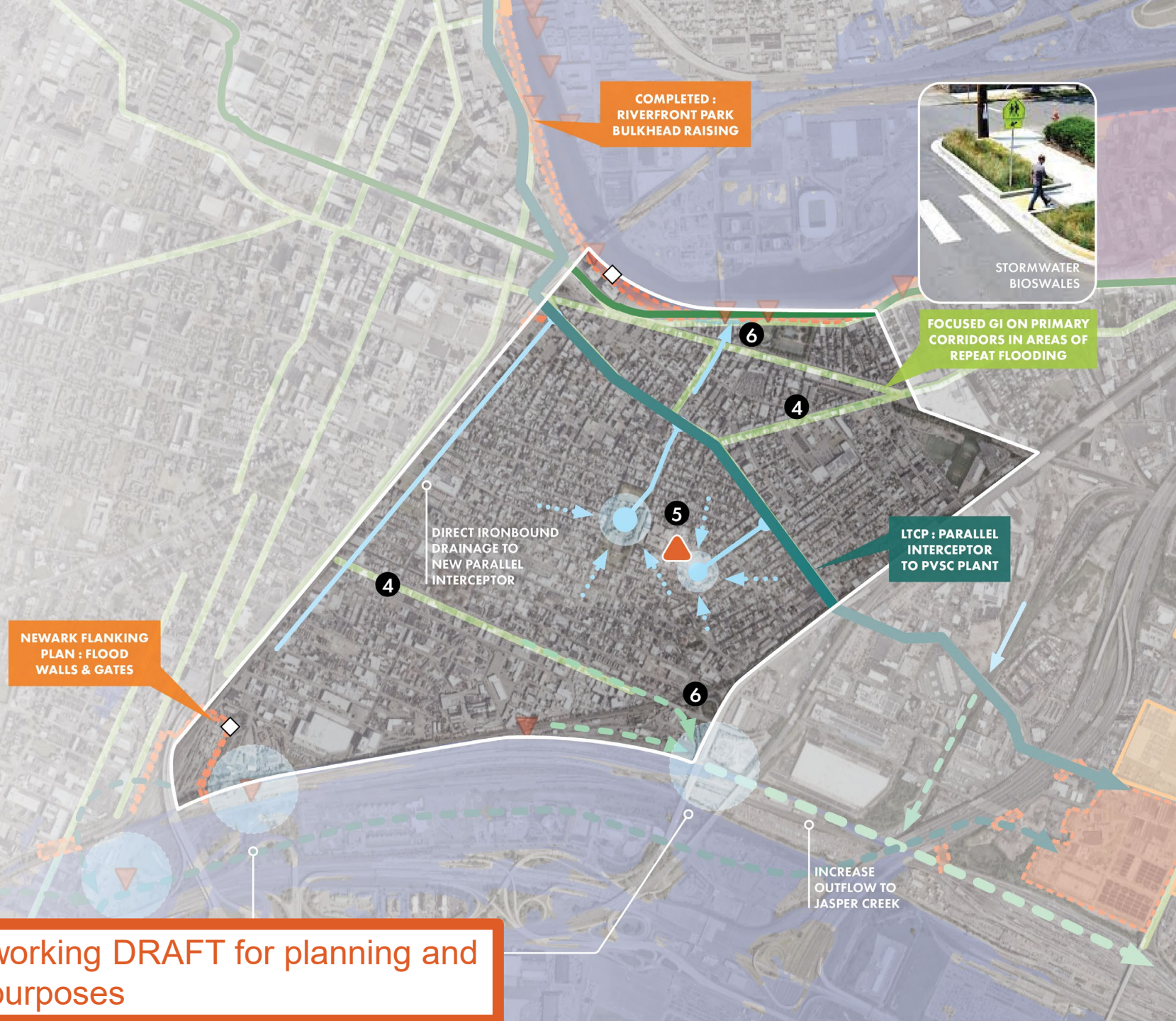
SCENARIO 1

- PROJECTS ALREADY PLANNED OR IN PROGRESS
- COASTAL PROTECTIONS
- GREEN INFRASTRUCTURE
- SUGGESTED PIPED FLOW PATHS
- SUGGESTED PIPED FLOW PATHS TO LTCP INTERCEPTOR
- SUGGESTED PIPED FLOW PATHS TO RETENTION SITES
- SUGGESTED DITCH DRAINAGE FLOW PATHS
- RESILIENCE HUB
- AREAS OUTSIDE PROTECTIONS
- REDEVELOPMENT AREAS
- EXISTING OUTFALLS

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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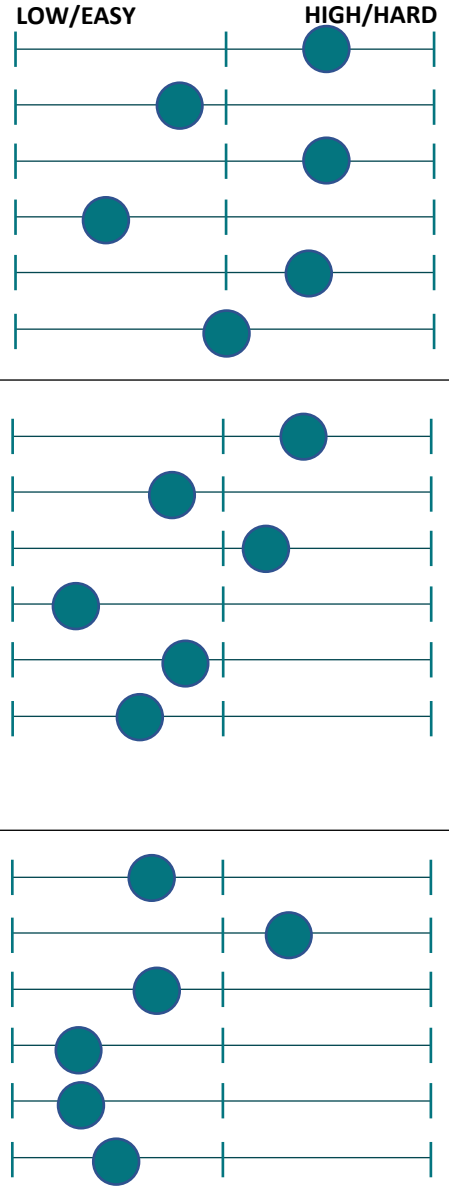
	OBJECTIVES, SCENARIO 1	KEY CONSIDERATIONS, SCENARIO 1	ISSUES TO CONSIDER
 COASTAL PROTECTIONS	Close infrastructure and topography gaps by advancing coastal protection plans such as the USACE Newark Flanking Plan and incorporating improvements to Riverfront Park.	CONSTRUCTION TIME IMPACT TO PUBLIC ACCESS & USE COSTS PERMITTING CONSTRUCTABILITY LEVEL OF PROTECTION	Closing key flood pathways can be an extremely efficient method of providing protection from coastal surge **BUT** piecemeal protection can result in other areas becoming potential flood pathways.
 DRAINAGE IMPROVEMENTS	Improve drainage along existing pathways, directing additional stormwater to the expanded interceptors as part of the LTCP.	CONSTRUCTION TIME IMPACT TO PUBLIC ACCESS & USE COSTS PERMITTING CONSTRUCTABILITY LEVEL OF PROTECTION	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	Expand green infrastructure installations on public property targeting key primary corridors and lots with significant impervious area.	CONSTRUCTION TIME IMPACT TO PUBLIC ACCESS & USE COSTS PERMITTING CONSTRUCTABILITY LEVEL OF PROTECTION	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.



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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 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.

OUTREACH, EDUCATION & CAPACITY BUILDING

- City-led Flood Management 101 Campaign
- Interdepartmental Coordination including Staff increase and municipal chief resilience officer
- Promote & incorporate resident flood reporting
- Outreach Ambassador Program
- Webpage on city website with ongoing resilience and other projects

POLICY & GOVERNANCE

- Adopt ordinances to state models and guidance
- Require GI on municipal properties
- Establish municipal stormwater utility
- Guidelines to facilitate stormwater projects on open space
- Track and publish development & construction activities in a publicly available place
- Expand state-managed databases to provide complete information on resilience-related factors

SERVICE & PROGRAM DEVELOPMENT

- Municipal trash clean-up / catch basin program & waste reduction campaign
- Lean into tree canopy increase programs
- Resilience hubs at city-agency properties

EMERGENCY RESPONSE & PREPAREDNESS

- Engagement with Emergency Managers
  What went well during Ida and recent storms? What could be done differently?
- Recommendations incorporated into Action Plan
  What actions can be taken to improve in the future?
- Data Request
  What did the response to Ida look like?

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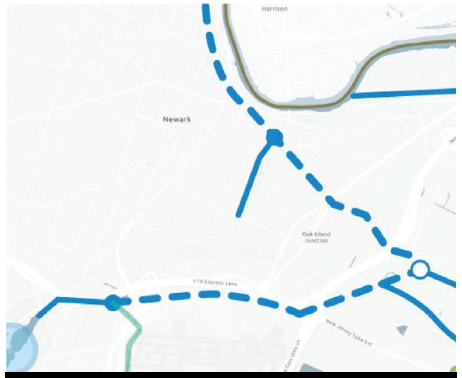
COASTAL PROTECTIONS



DRAINAGE IMPROVEMENTS

GREEN INFRASTRUCTURE

QUESTIONS TO CONSIDER

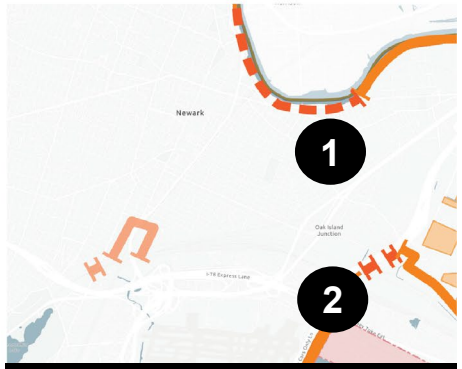
- Which streets or city properties do you want to see transformed?
- What Greening projects would appeal to you most?
- Where would you like to see Resilience Hubs?

PLEASE LOG FEEDBACK FROM THE MEETING HERE

WHAT DO YOU **LIKE** ABOUT SCENARIO 1?

WHAT DO YOU **DISLIKE** ABOUT SCENARIO 1?

KEY CHANGES, SCENARIO 2 – SHARED RESPONSIBILITY



COASTAL PROTECTIONS

1. FLOODWALL ALONG ROADWAY

Fargo, North Dakota

2. RAISED AND REINFORCED ROADWAY

Mount Cotton Road
Queensland, Australia

DRAINAGE IMPROVEMENTS

3. URBAN STORMWATER RETENTION PARK

Qunli Stormwater Wetland Park
Haerbin, China

4. BLUE & GREEN INFRASTRUCTURE INTEGRATED WITH ELEVATED HIGHWAY

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

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SCENARIO 2
SHARED RESPONSIBILITY

- PROJECTS ALREADY PLANNED OR IN PROGRESS
- COASTAL PROTECTIONS
- GREEN INFRASTRUCTURE
- SUGGESTED PIPED FLOW PATHS
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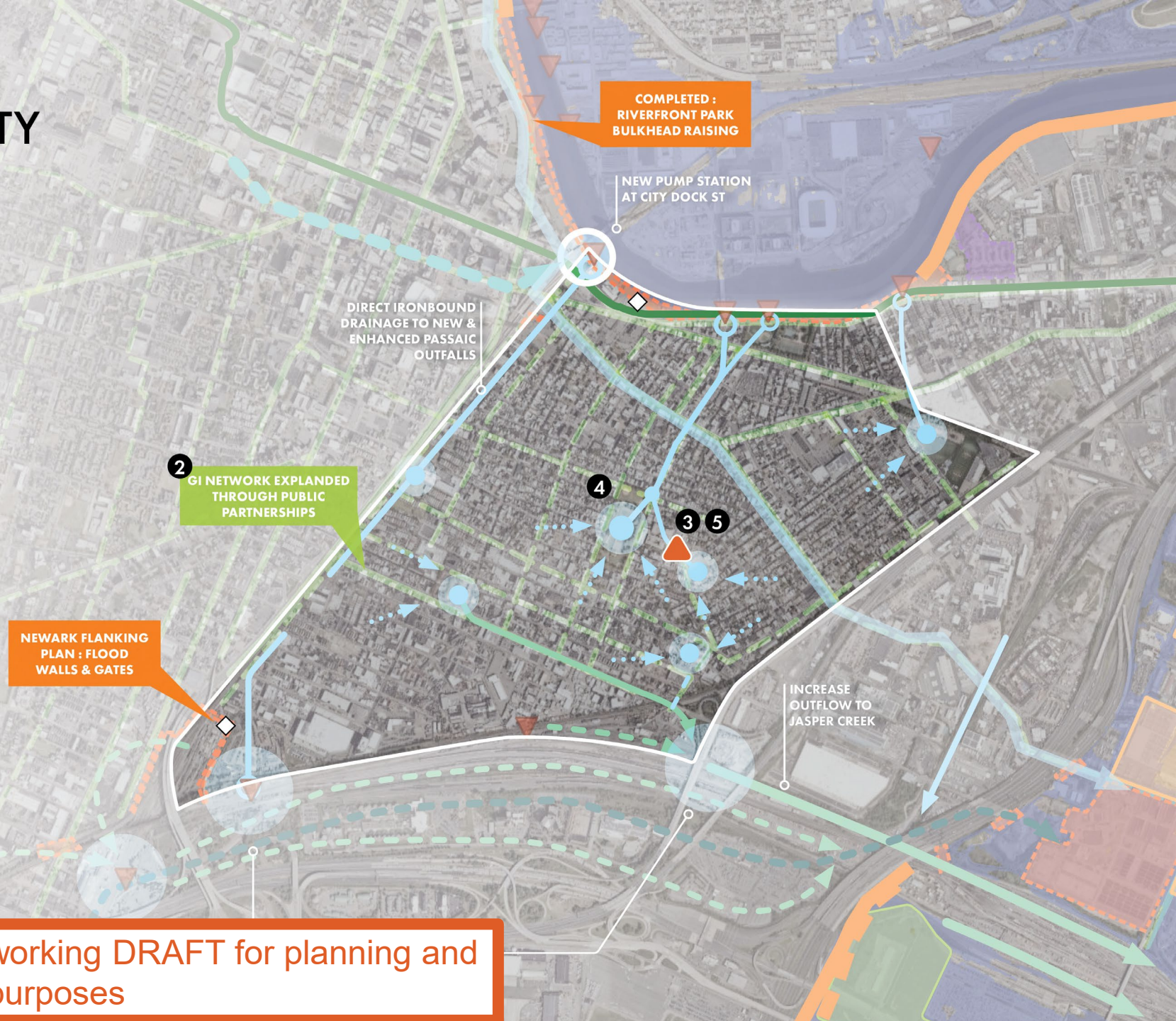
- RESILIENCE HUB
- AREAS OUTSIDE PROTECTIONS
- REDEVELOPMENT AREAS
- EXISTING OUTFALLS

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



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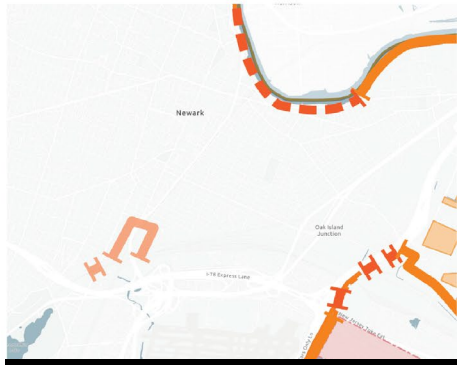
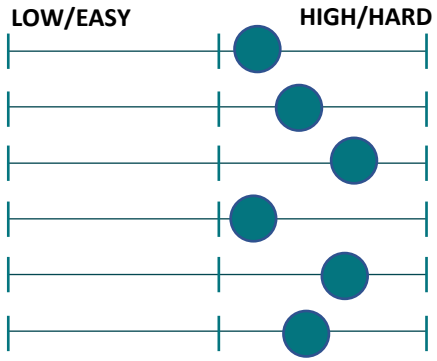
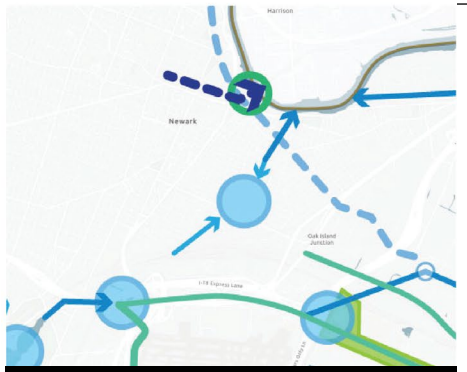
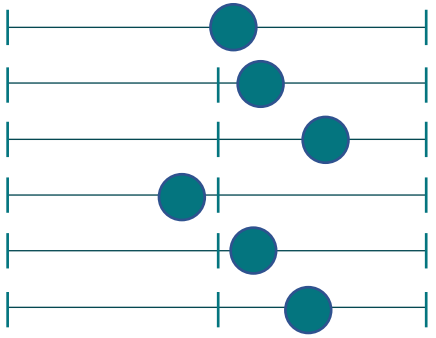
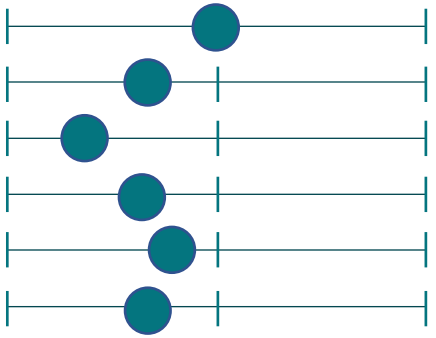
	OBJECTIVES, SCENARIO 2	KEY CONSIDERATIONS, SCENARIO 2	ISSUES TO CONSIDER
 **COASTAL PROTECTIONS**	Tie in expanded barriers to the Newark Flanking Plan and Riverfront Park protection elements, extending across private property and property managed by other agencies.		Expanding protection using existing corridors results in more comprehensive and cohesive protection **BUT** extending protection will require additional coordination with agencies and other property owners.
 **DRAINAGE IMPROVEMENTS**	Consolidate drainage infrastructure to create new and expanded conveyance pathways, taking advantage of centralized retention areas and pump stations in conjunction with partners.		Consolidating stormwater allows for more cost-effective storage and pumping solutions **BUT** requires significant investment and coordination before benefits can be realized.
 **GREEN INFRASTRUCTURE**	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.		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.

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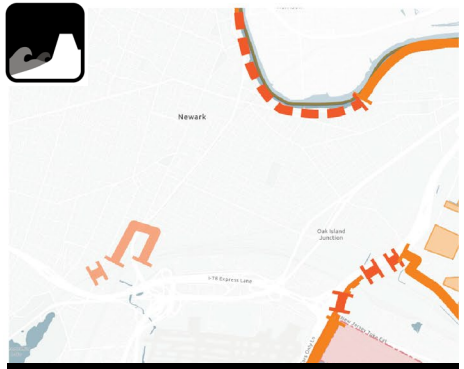
NON-PHYSICAL SOLUTIONS, SCENARIO 2



COASTAL PROTECTIONS

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

DRAINAGE IMPROVEMENTS

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

GREEN INFRASTRUCTURE

Public private partnerships expand green infrastructure benefits

OUTREACH, EDUCATION & CAPACITY BUILDING

- Resilience leader outreach and training program
- Flood Management 101 campaign in partnership with schools and community groups
- Engage deaf and non-English speaking community advocates to collaborate on needs
- Crowd-source flood reports (and other input) in coordination with CBOs and academia

POLICY & GOVERNANCE

- Incorporate resilience into Redevelopment Plans
- Flood overlay zone
- Incentivize Green Infrastructure on private properties
- Support/coordinate funding for key projects (e.g., transformation of contaminated sites)
- Development of municipal or regional climate risk assessment and action plan for contaminated & remediated sites
- Standardize process between municipal & infrastructure entities

SERVICE & PROGRAM DEVELOPMENT

- Rain barrel distribution & guide for installation
- Partner with non-profits to manage resilience hubs and offer climate related programming
- Municipal composting program in partnership with housing complexes
- Trash clean-up days and community gardens through partnerships

EMERGENCY RESPONSE & PREPAREDNESS

- Engagement with Emergency Managers *What went well during Ida and recent storms? What could be done differently?*
- Recommendations incorporated into Action Plan *What actions can be taken to improve in the future?*
- Data Request *What did the response to Ida look like?*

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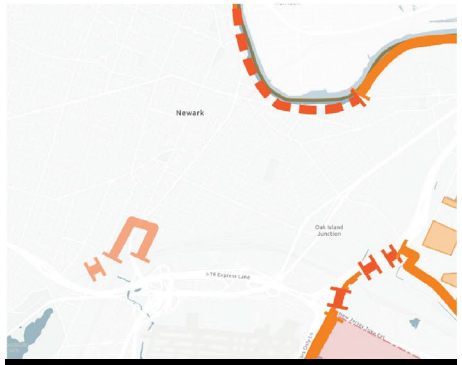
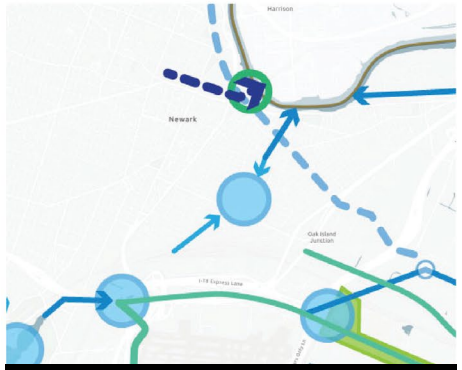


COASTAL PROTECTIONS



DRAINAGE IMPROVEMENTS

GREEN INFRASTRUCTURE

QUESTIONS TO CONSIDER

- Which streets or city properties do you want to see transformed?
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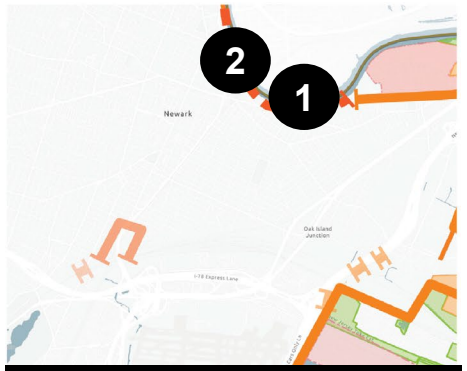
PLEASE LOG FEEDBACK FROM THE MEETING HERE

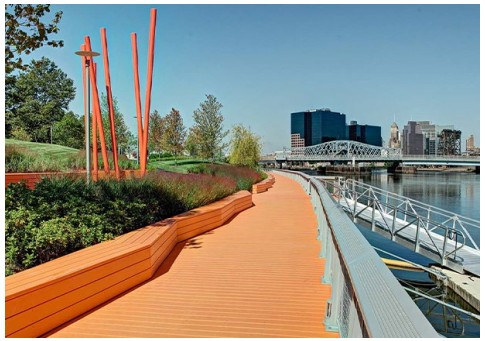
WHAT DO YOU **LIKE** ABOUT SCENARIO 2?

WHAT DO YOU **DISLIKE** ABOUT SCENARIO 2?

KEY CHANGES, SCENARIO 3 – REGIONAL COORDINATION



COASTAL PROTECTIONS



1. RIVERWALK WITH COASTAL PROTECTIONS

Newark Riverfront Park

2. FLOODABLE PUBLIC INFRASTRUCTURE

Domino Park
Brooklyn, New York City

DRAINAGE IMPROVEMENTS

3. DEEP TUNNEL STORMWATER CONVEYANCE & STORAGE

DigIndy
Indianapolis, Indiana

2. STORMWATER RETENTION AT COASTAL WETLAND

Hunter's Point
Brooklyn, New York City

GREEN INFRASTRUCTURE

5. REGIONAL URBAN GREENWAY

The BeltLine
Atlanta, Gerogia

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

Swale on Yale
Seattle, Washington

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SCENARIO 3
REGIONAL COORDINATION

- PROJECTS ALREADY PLANNED OR IN PROGRESS
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- RESILIENCE HUB
- AREAS OUTSIDE PROTECTIONS
- REDEVELOPMENT AREAS
- EXISTING OUTFALLS

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

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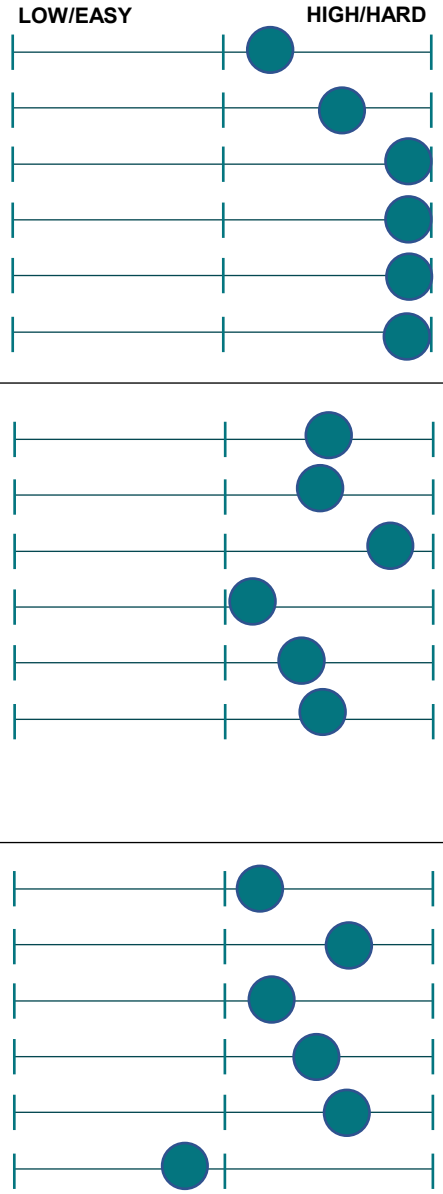
	OBJECTIVES, SCENARIO 3	KEY CONSIDERATIONS, SCENARIO 3	ISSUES TO CONSIDER
 COASTAL PROTECTIONS	Utilize existing highway infrastructure and public ROW to place a continuous barrier closer to the coast.		A continuous barrier can provide more reliable protection and protect more areas **BUT** would greatly impact the connectivity within those areas and would require significant coordination.
 DRAINAGE IMPROVEMENTS	Drainage is integrated with greenway corridors & additional local detention and deep tunnel storage is incorporated in conjunction with consolidated conveyance and pumping.		Integrating additional storage further leverages the benefits of consolidating drainage infrastructure **BUT** will be considerably costly with limited co-benefits.
 GREEN INFRASTRUCTURE	Build additional green infrastructure improvements into drainage corridors and other projects to promote a “dig once” approach.		Incorporating additional GI into drainage corridors and other projects improves cost-effectiveness **BUT** requires conversion of existing uses to natural stormwater management.



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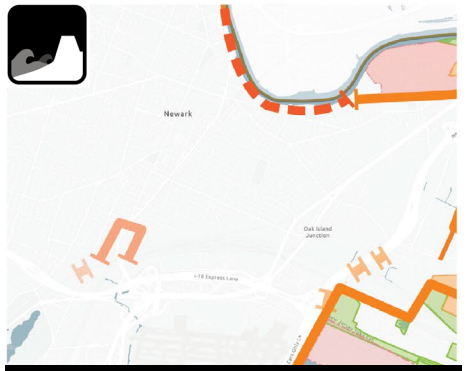
NON-PHYSICAL SOLUTIONS, SCENARIO 3



COASTAL PROTECTIONS

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

DRAINAGE IMPROVEMENTS

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

GREEN INFRASTRUCTURE

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

OUTREACH, EDUCATION & CAPACITY BUILDING

- Continuation of Resilient NJ Program
- Expansion to include sustainability and other livability measures
- Regional-scale distribution of Flood Management 101 campaign
- Leverage RNJ as a coordinated engagement platform around resilience-related issues
- Create a 'single source of truth' and go-to resource/messaging for all things resilience-related

POLICY & GOVERNANCE

- Ensure LTCP projects incorporate climate change
- Regional coordination to increase standards beyond minimum
- Regional GI champions training program
- Develop pipeline of sites for stormwater management/resilient transformation process
- State/regional climate risk assessment for contaminated/ remediated areas
- Create regional Infrastructure Coordination Council (and dig once)
- Regional stormwater utility

SERVICE & PROGRAM DEVELOPMENT

- Regional tree planting program
- Regional network of resilience hubs
- Regional program development and support for composting and waste reduction campaigning

EMERGENCY RESPONSE & PREPAREDNESS

- Engagement with Emergency Managers
  What went well during Ida and recent storms? What could be done differently?
- Recommendations incorporated into Action Plan
  What actions can be taken to improve in the future?
- Data Request
  What did the response to Ida look like?

RESILIENT NORTHEASTERN NEW JERSEY

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?

PLEASE LOG FEEDBACK FROM THE MEETING HERE

WHAT DO YOU **LIKE** ABOUT SCENARIO 3?	WHAT DO YOU **DISLIKE** ABOUT SCENARIO 3?

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?