Waterfront Resilience Program Update

With APRI

December 2, 2020

WELCOME!

Zoom Meeting Tips & Tricks

- Welcome to Islais Creek Community Meeting #3 Digital Series – Hosted tonight by APRI!

- Here are a few tips and tricks for this virtual meeting setting:
  - Keep your device on mute unless you are speaking
  - Try not to talk over others, and give each other time to gathers thoughts and comment before jumping in
  - The chat function is on and we're tracking any comments and feedback, but will be unable to answer all questions
  - IT Tip: Minimize lag by turning off your video during the presentation
  - Fun Tip: Choose a virtual background!

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LET'S TAKE A QUICK POLL

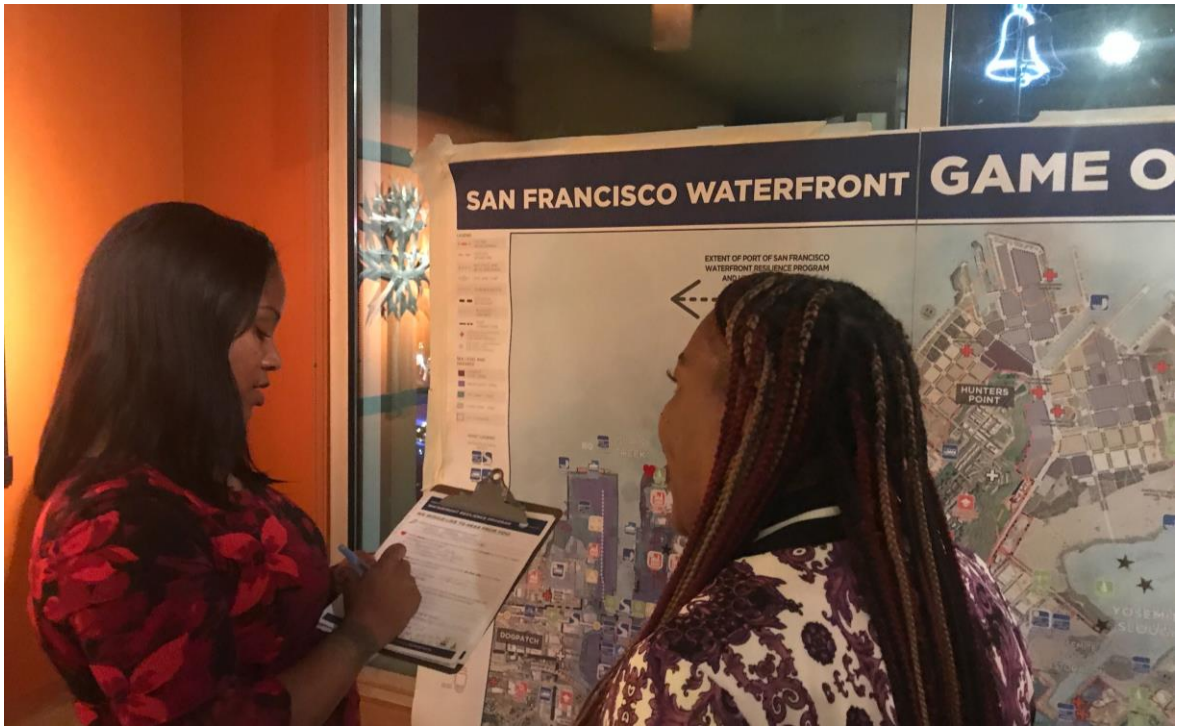
We want to hear from you!

What is the first word that comes to mind for you for "San Francisco Waterfront"?

Enter your answer in the Chat Box

TODAY'S AGENDA

Presentation Overview



- What are the flood risks in Islais Creek?
- USACE Flood Resiliency Study Update
- Islais Creek Adaptation Strategy Update
- Measures and alternatives to reduce the risks
- Key priorities from community and stakeholder engagement
- Next steps
- We'll be asking for your feedback along the way!

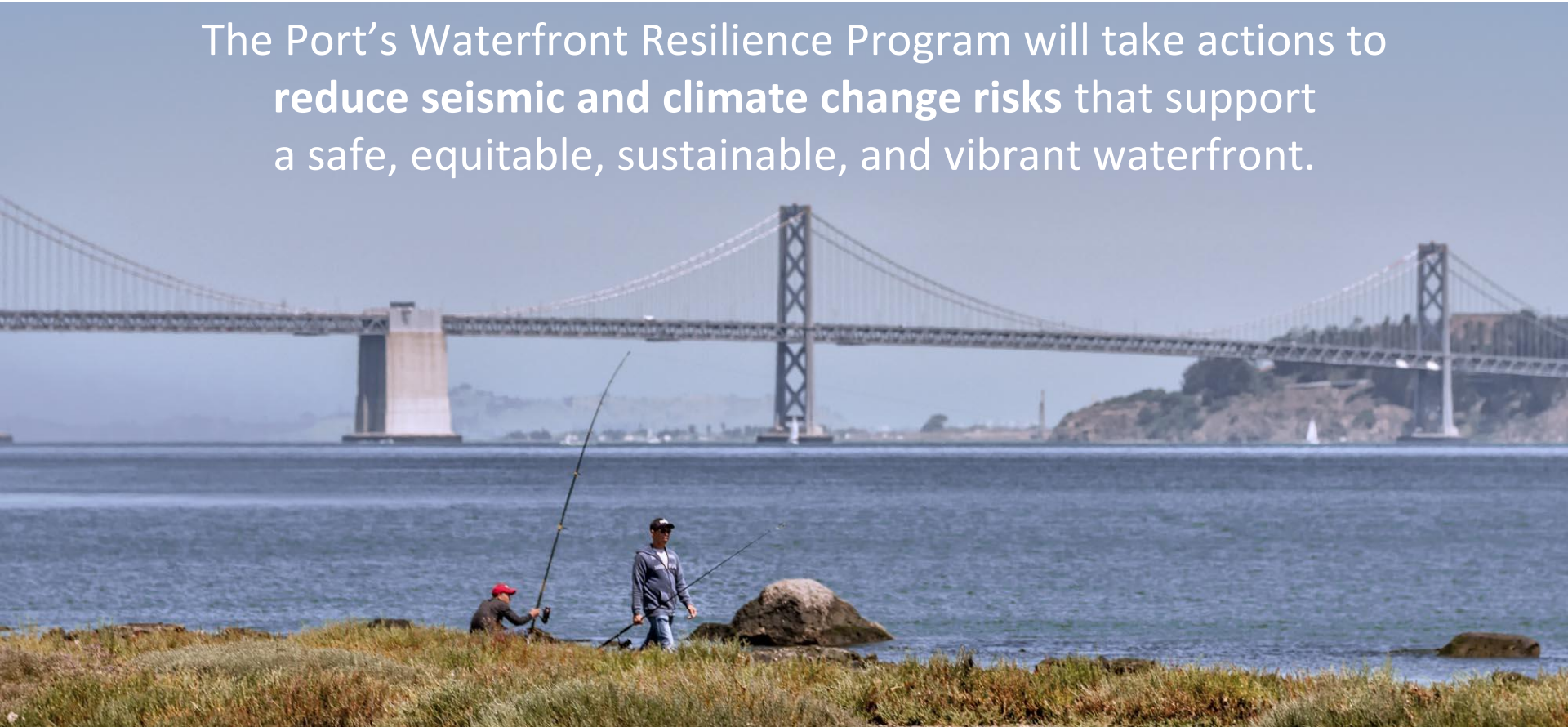
Waterfront Resilience Program

Overview

WATERFRONT RESILIENCE PROGRAM

Goal Statement

The Port's Waterfront Resilience Program will take actions to **reduce seismic and climate change risks** that support a safe, equitable, sustainable, and vibrant waterfront.



WATERFRONT RESILIENCE PROGRAM DRAFT PRINCIPLES

Affirmed through Robust Community Engagement

- **Prioritize** life safety and emergency response
- **Advance** equity throughout the Waterfront Resilience Program, including through community and stakeholder engagement, planning, contracting, jobs and decision-making
- **Enhance** and sustain economic and ecological opportunities
- **Inspire** an adaptable waterfront that:
  - Improves the health of the Bay
  - Ensures public access to the waterfront and historic places and an inviting waterfront for all
  - Protects and preserves historic and maritime resources
  - Provides opportunities for diverse families, businesses, and neighborhoods to thrive
- **Lead** a transparent, innovative, collaborative, and adaptive Resilience Program

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WATERFRONT RESILIENCE PROGRAM EFFORTS

Program and City Resilience Projects and Efforts

LET'S PAUSE FOR Q&A

We want to hear from you!

- How do these efforts to reduce seismic and climate change risks relate to you?
- How do you see this work impacting you?
- How do you see this work impacting your community, today and for future generations?

USACE Flood Resiliency Study

Overview and Update

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Waterfront Resilience Program

USACE FLOOD RESILIENCY STUDY

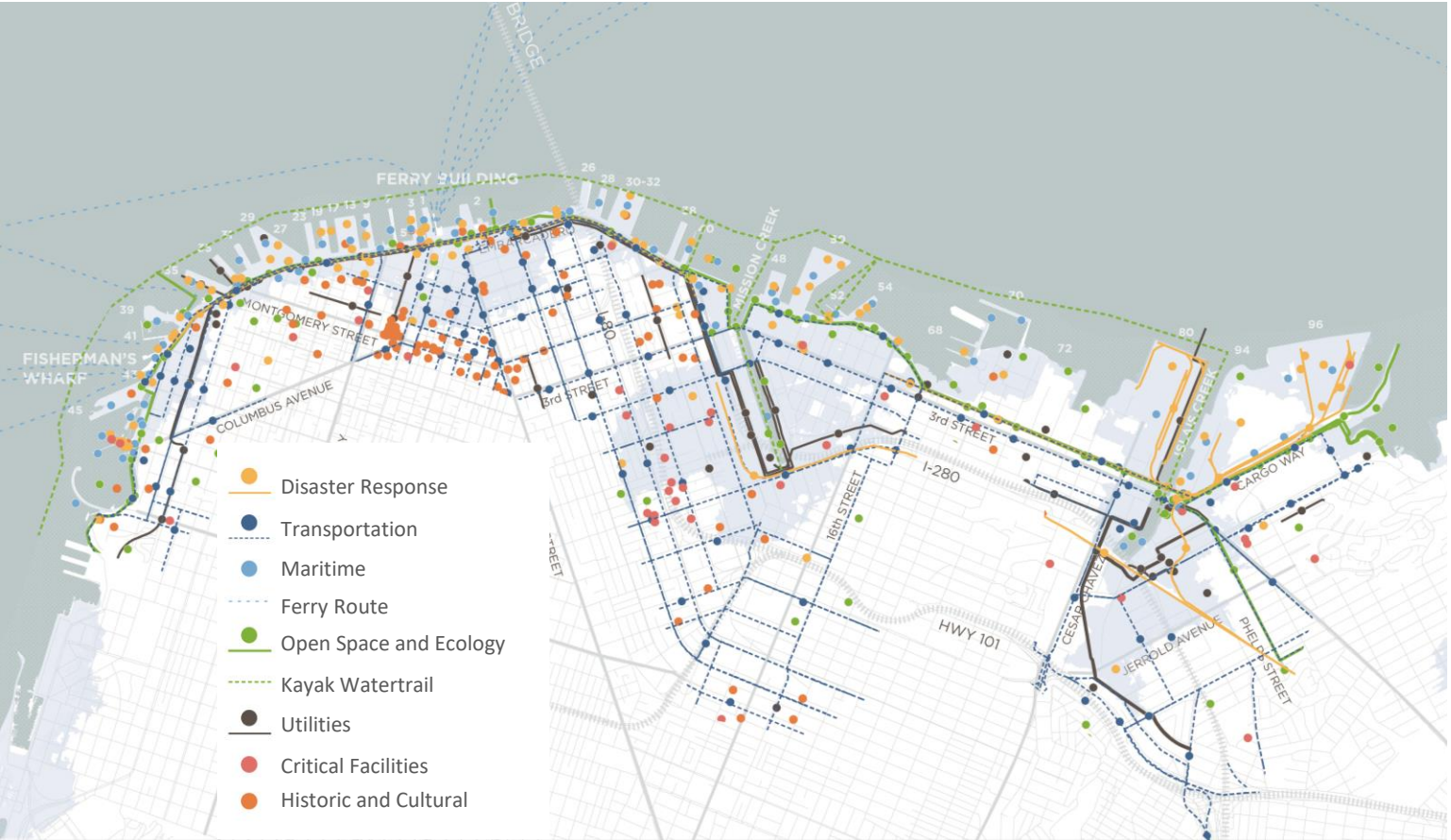
Overview and Key Highlights

- Port is local sponsor
- 5 to 6 year study
- Flood risk assessment
- Robust community and stakeholder input
- If USACE finds a Federal interest and Congress authorizes a Project:

  Design/construction of project cost-shared 65% Federal, 35% Local

USACE FLOOD RESILIENCE STUDY ASSESSMENT

Study Wide



Assets at risk include more than:

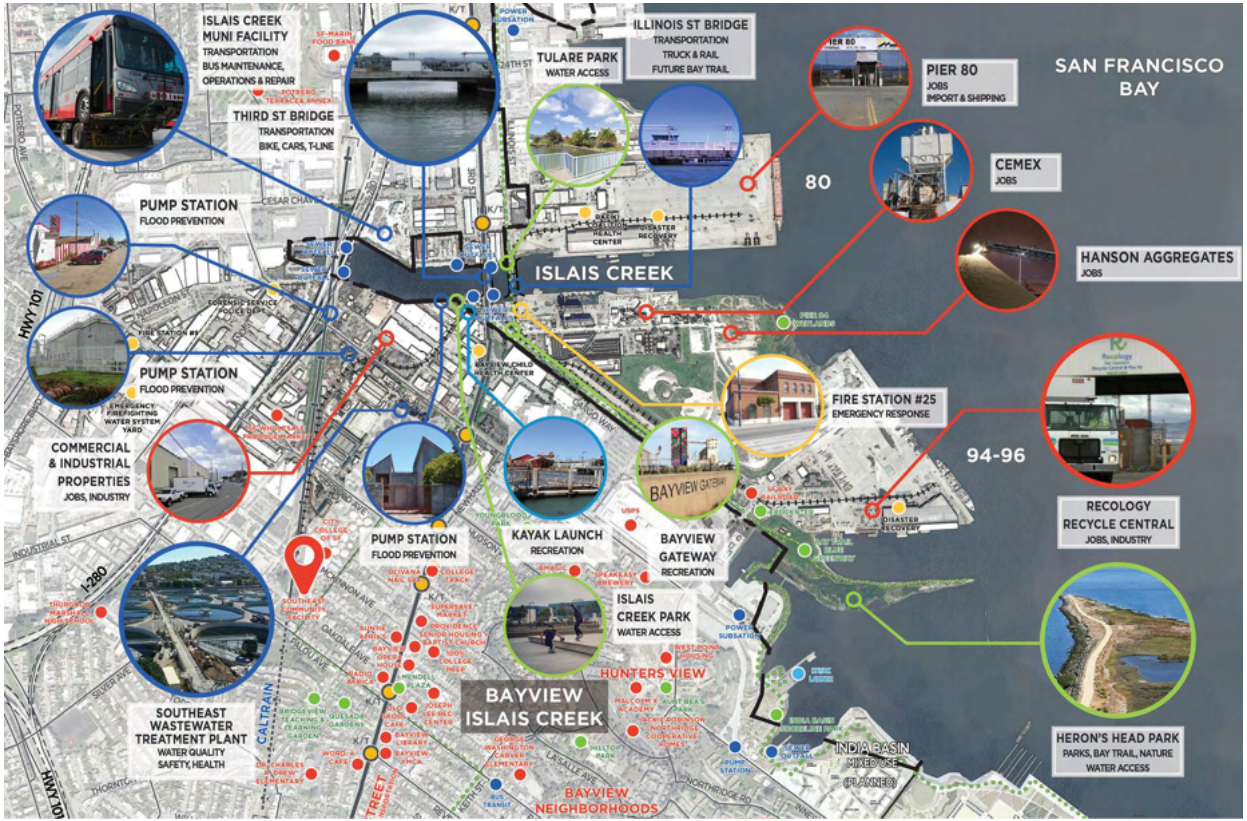
- 40 miles of roadway
- 25 miles of muni & cable car track
- 5 miles of freight railway
- 6 fire stations
- Dozens of other critical facilities 11,000 jobs
- 360,000 regional commuters
- 2,600 residential and commercial buildings
- 13,500 residents, 58% people of color
- Wastewater functions for 580,000 residents

FLOOD RESILIENCE STUDY ASSESSMENT

Islais Creek

Collaborated with City partners, Port tenants and other stakeholders to:

- Assign value to physical infrastructure
- Estimate impact of disruption and downtime for businesses and services
- Evaluate vulnerability of each asset to flood risk based on water depth
- Compile exhaustive database of all assets within the flood plain for use in the planning model



USACE FLOOD RESILIENCE STUDY ASSESSMENT

Near Term/High Likelihood

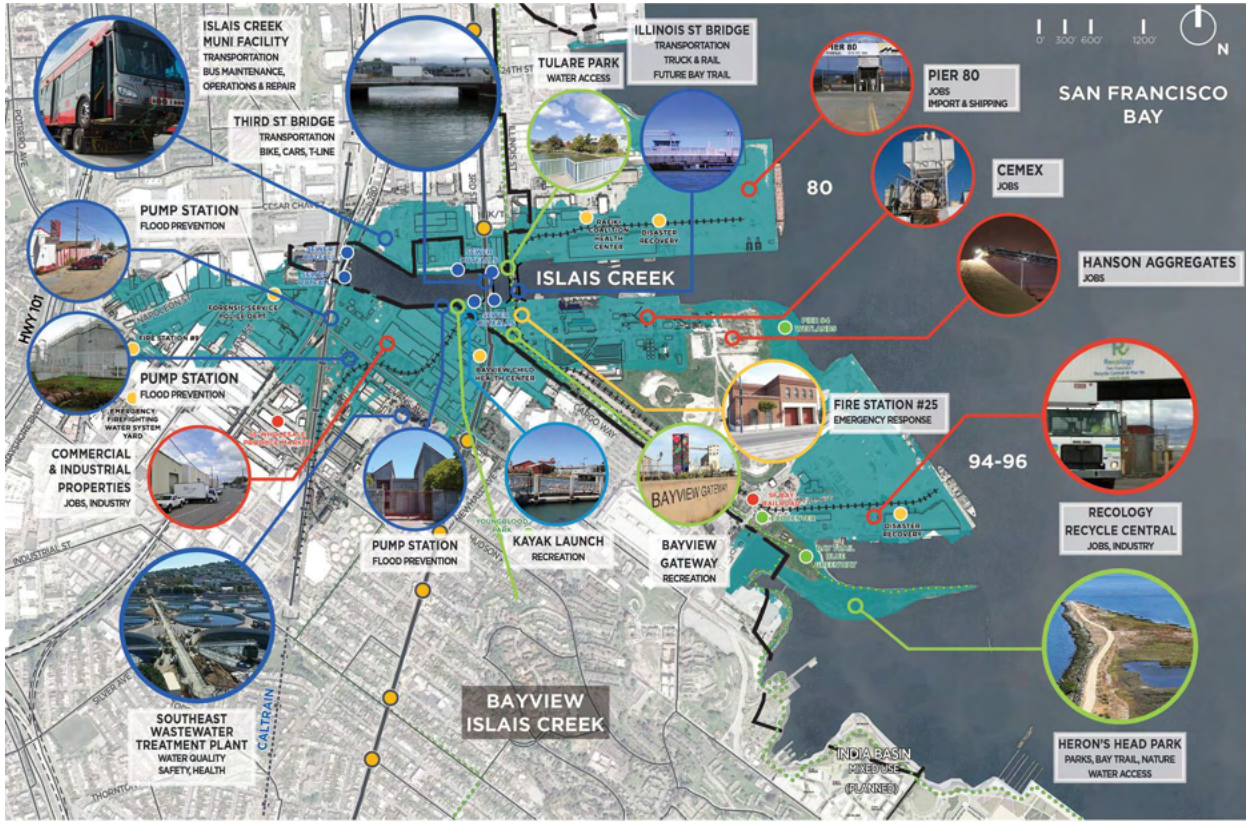
- Areas that will flood earlier in the study period carry more weight in the flood damage assessment because of their high likelihood of flood risk in the near term

100 years flood event

USACE FLOOD RESILIENCE STUDY ASSESSMENT

Long Term/Lower Likelihood

- Areas that will flood later in the study period carry less weight in the flood damage assessment because of their low likelihood of flood risk in the near term
- These assets are still important, but the benefit to cost ratio to protect these structures on an individual basis will be lower



100 years flood event + 3' SLR

LET'S TAKE A QUICK POLL

We want to hear from you!

How concerned are you about sea level rise?

- **Very Concerned**
- **Somewhat Concerned**
- **Not Very Concerned**

Islais Creek Adaptation Strategy

Update

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Waterfront Resilience Program

ISLAIS CREEK VISION & GOALS

Islais Creek adapts to flood risks while ensuring healthy and resilient communities.

1. A socially & environmentally resilient neighborhood
2. Authentic & transparent public engagement during & beyond Planning
3. A transportation system that is resilient & adaptable to flood risk
4. A Healthy environment for residents, workers & ecologies
5. A sustainable economy that benefits local residents, workers & industries

ISLAIS CREEK ADAPTATION STRATEGY: SLR, City Assets, and Project Outcomes

HAZARDS OF FOCUS

Worsening **seasonal floods and permanent inundation** due to rising sea levels, more intense storms, and& overland flows

ASSETS AT RISK

Critical municipal and regional **transportation facilities**

Concentration of unique facility types needed for **PDR businesses**

TARGETED OUTCOMES

Strategies for resilient, safe, and reliable **multimodal transportation** that:

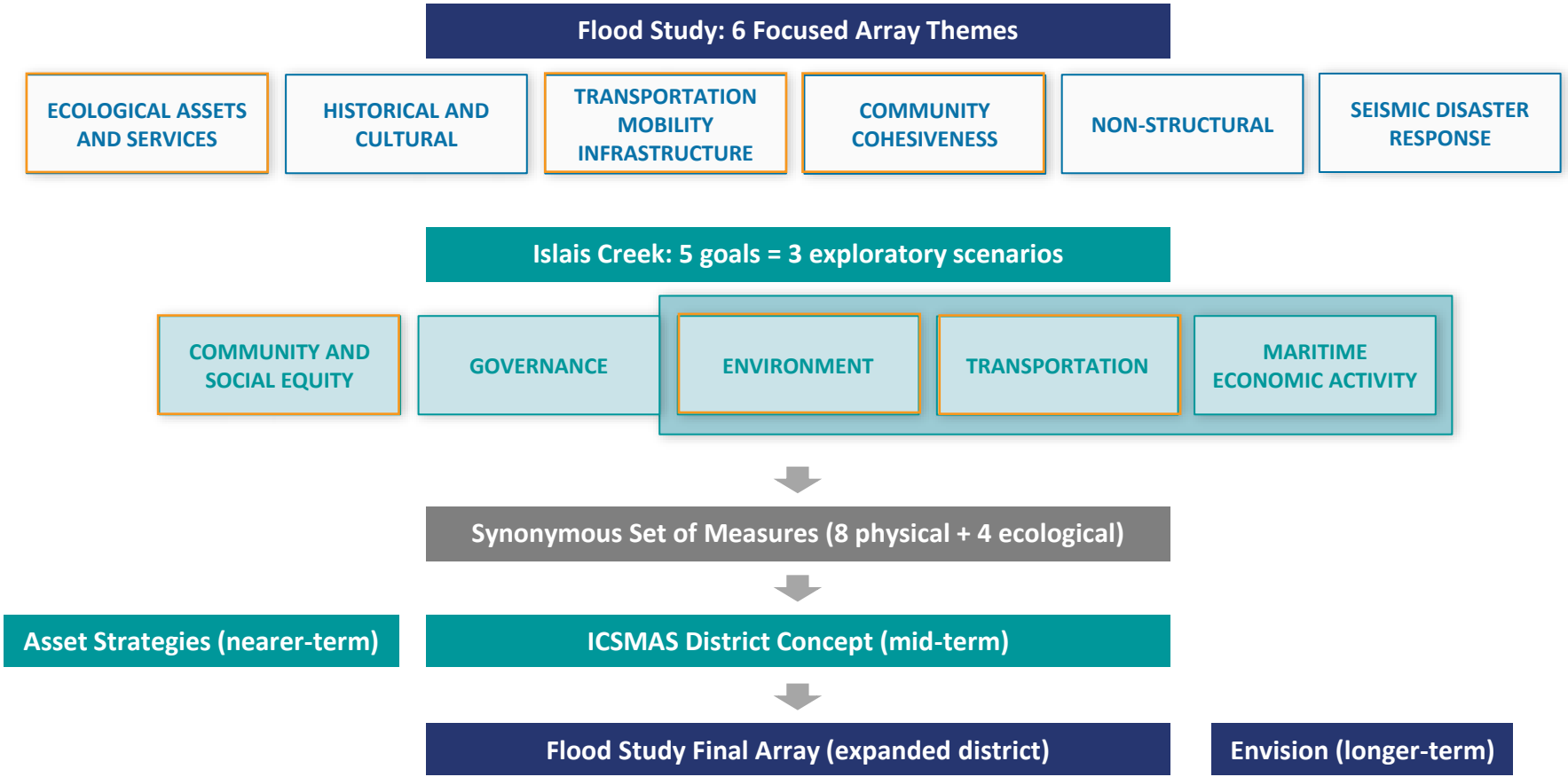
- Address both site-specific and district-wide needs
- Accommodate growth (people, jobs, industry)
- Prioritize walking, biking, and transit to minimize climate impacts

Actions prioritized/phased for **near-, mid-, and long-term implementation**

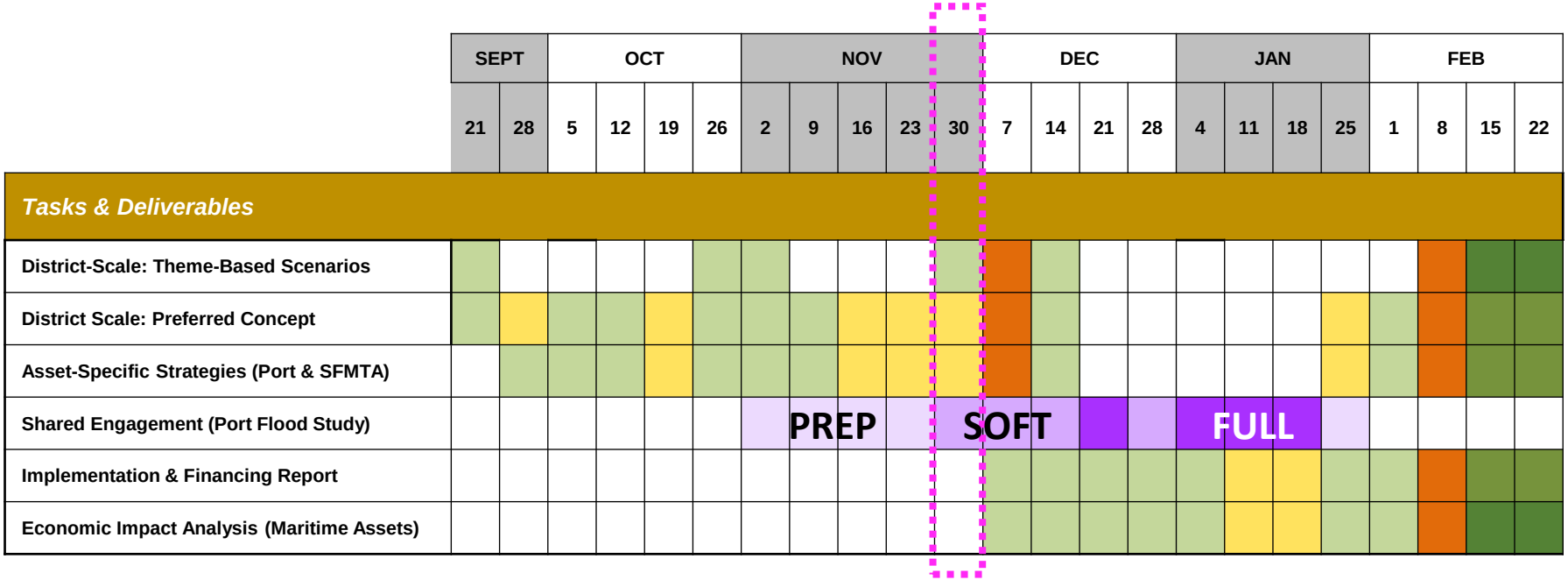
Multi-benefit solutions (e.g., open space, ecosystem function, habitat)

Engaged community members (especially vulnerable and disadvantaged citizens) across all project phases and beyond

Greater **number and diversity of jobs** in the project area


Flood Study: 6 Focused Array Themes
ECOLOGICAL ASSETS AND SERVICES
HISTORICAL AND CULTURAL
TRANSPORTATION MOBILITY INFRASTRUCTURE
COMMUNITY COHESIVENESS
NON-STRUCTURAL
SEISMIC DISASTER RESPONSE
Islais Creek: 5 goals = 3 exploratory scenarios
COMMUNITY AND SOCIAL EQUITY
GOVERNANCE
ENVIRONMENT
TRANSPORTATION
MARITIME ECONOMIC ACTIVITY
Synonymous Set of Measures (8 physical + 4 ecological)
Asset Strategies (nearer-term)
ICSMAS District Concept (mid-term)
Flood Study Final Array (expanded district)
Envision (longer-term)

ISLAIS WORK PROGRAM: Key Dates, Milestones, Coordination



- Materials Development & Refinements
- Staff Review
- Leadership Review
- Community Meeting Presentations
- Completion

Measures and Alternatives Development

Introducing Improvements or “Measures” for Consideration Along the Waterfront

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Waterfront Resilience Program

LET'S TAKE A QUICK POLL

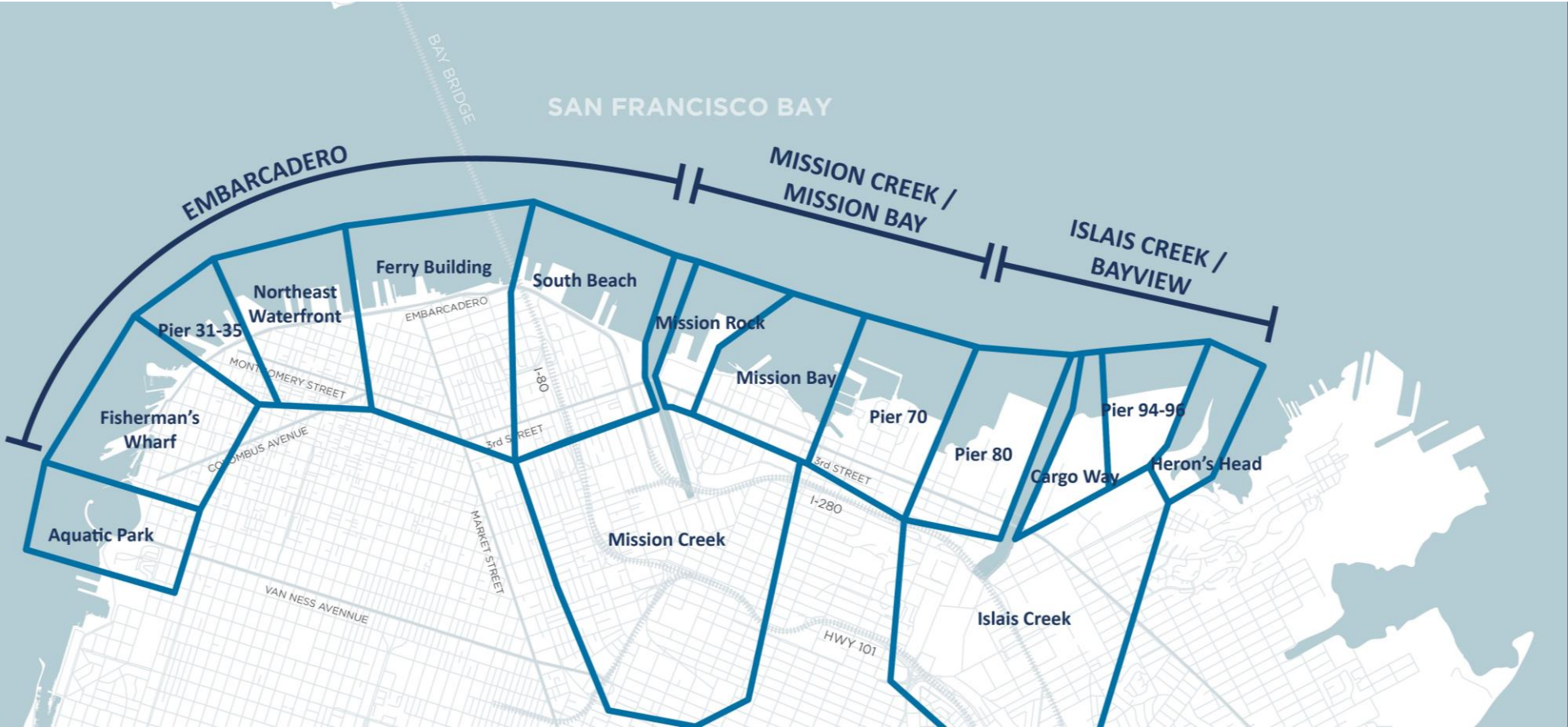
We want to hear from you!

What is a measure?

- **A potential improvement to address seismic or flood risk along the waterfront**
- **To estimate or assess the value or effect of something**
- **The rhythm of a piece of music**

USACE FLOOD RESILIENCY STUDY AREA

Subareas Support Community Prioritization and Evaluation of Conditions / Measures

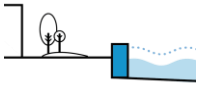


WATERFRONT-WIDE FLOOD MEASURES

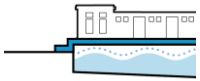
Draft Flood Improvements Under Consideration by the Port

Physical

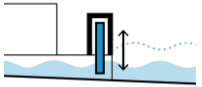
Levees



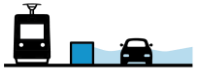
Seawalls



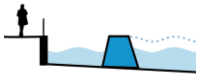
Raised Marine Structures



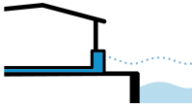
Tide Gates



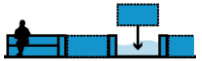
Floodwalls



Breakwaters



Building Adaptations



Deployables

Ecological

Ecological Marine Structures

Ecological Features

Aquatic Habitat

Ecological Shorelines

ALTERNATIVES DEVELOPMENT

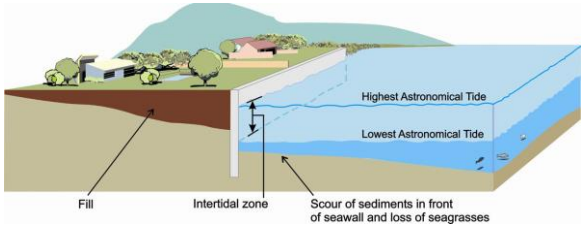
Overview

SUBAREA MATERIAL AND MEASURES

Includes information critical to alternatives development, including Problems and Objectives, Flood and Seismic Hazards, Stakeholder Input, Applicable Measures and Unique Characteristics of a subarea.

FOCUSED ARRAY

Flood and seismic measures used to create thematic alternatives that resulted in a wide range of approaches to reduce risk. Process provided the team with information about applicable approaches and trade-offs along the entire waterfront.



ALTERNATIVES AND ACTIONS

Based on the key findings, four concept alternatives and associated actions were identified for further development, refinement, consideration of phasing, and preliminary evaluation.

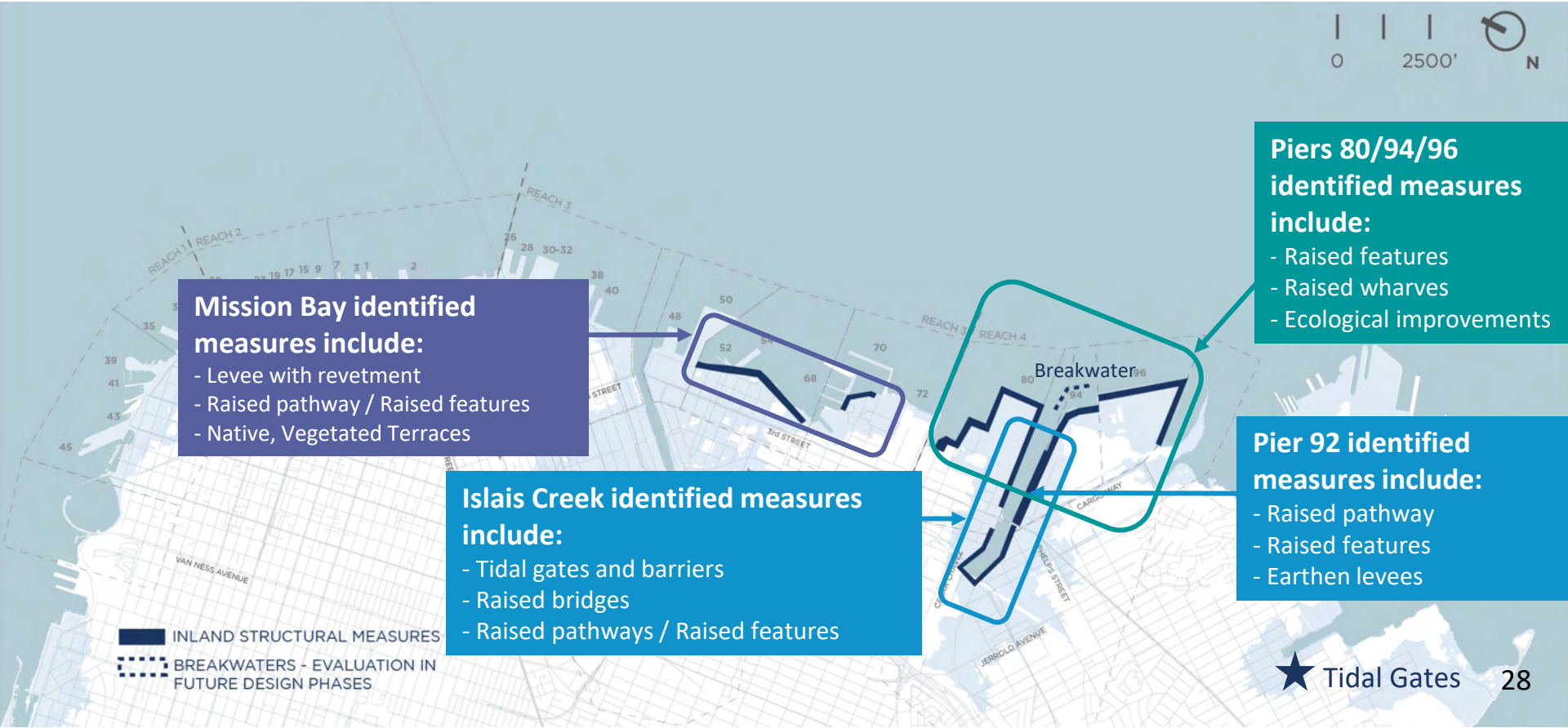
LET'S PAUSE FOR Q&A

Time to hear from you!

- Which measure types are most interesting to you?
- Which measure types would you like to learn more about?
- Which measure types do you find confusing?
- Check out more at the Measures Explorer at sfportresilience.com/measures-explorer

MEASURES KEY FINDINGS

Structural Measures / Southern Waterfront



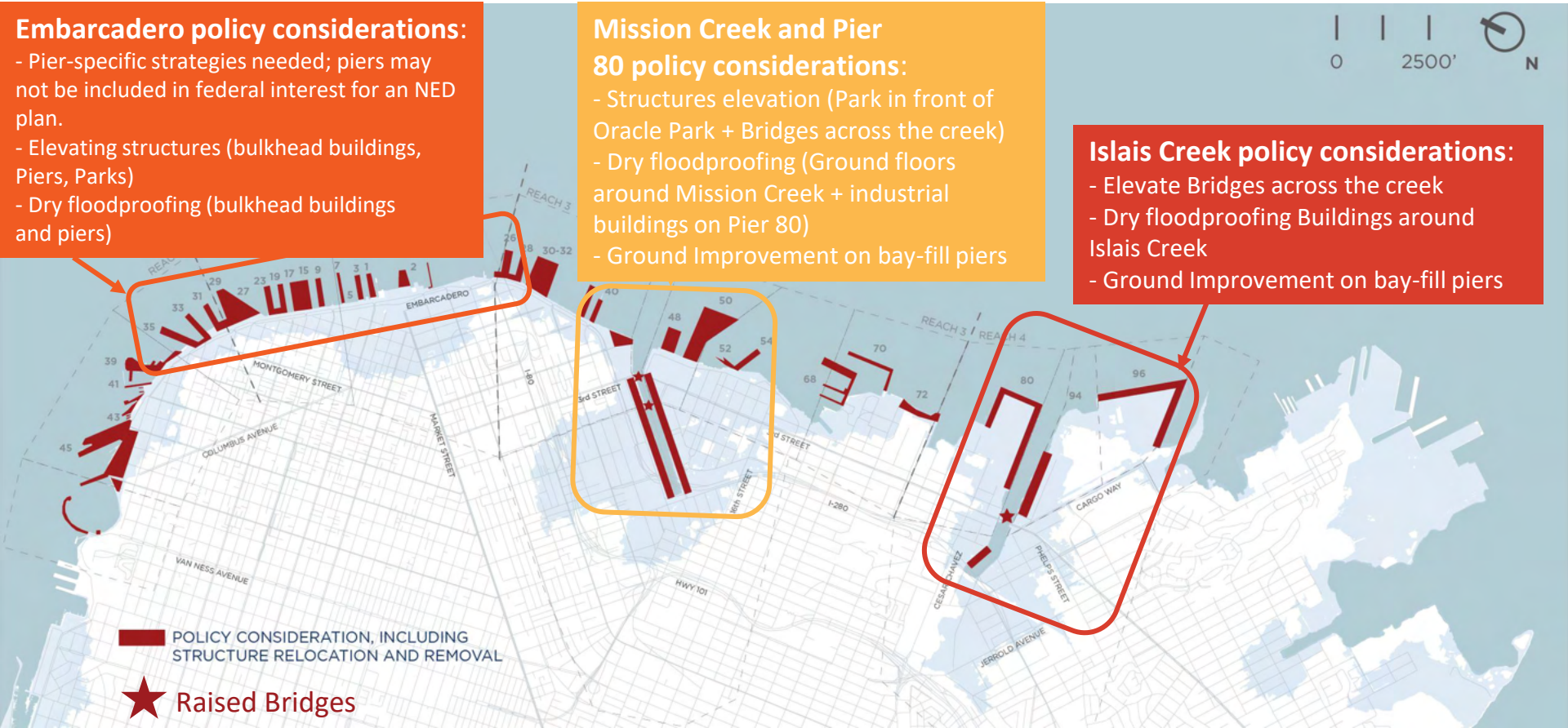
MEASURES KEY FINDINGS

Non-Structural Measures

Embarcadero policy considerations:
- Pier-specific strategies needed; piers may not be included in federal interest for an NED plan.
- Elevating structures (bulkhead buildings, Piers, Parks)
- Dry floodproofing (bulkhead buildings and piers)

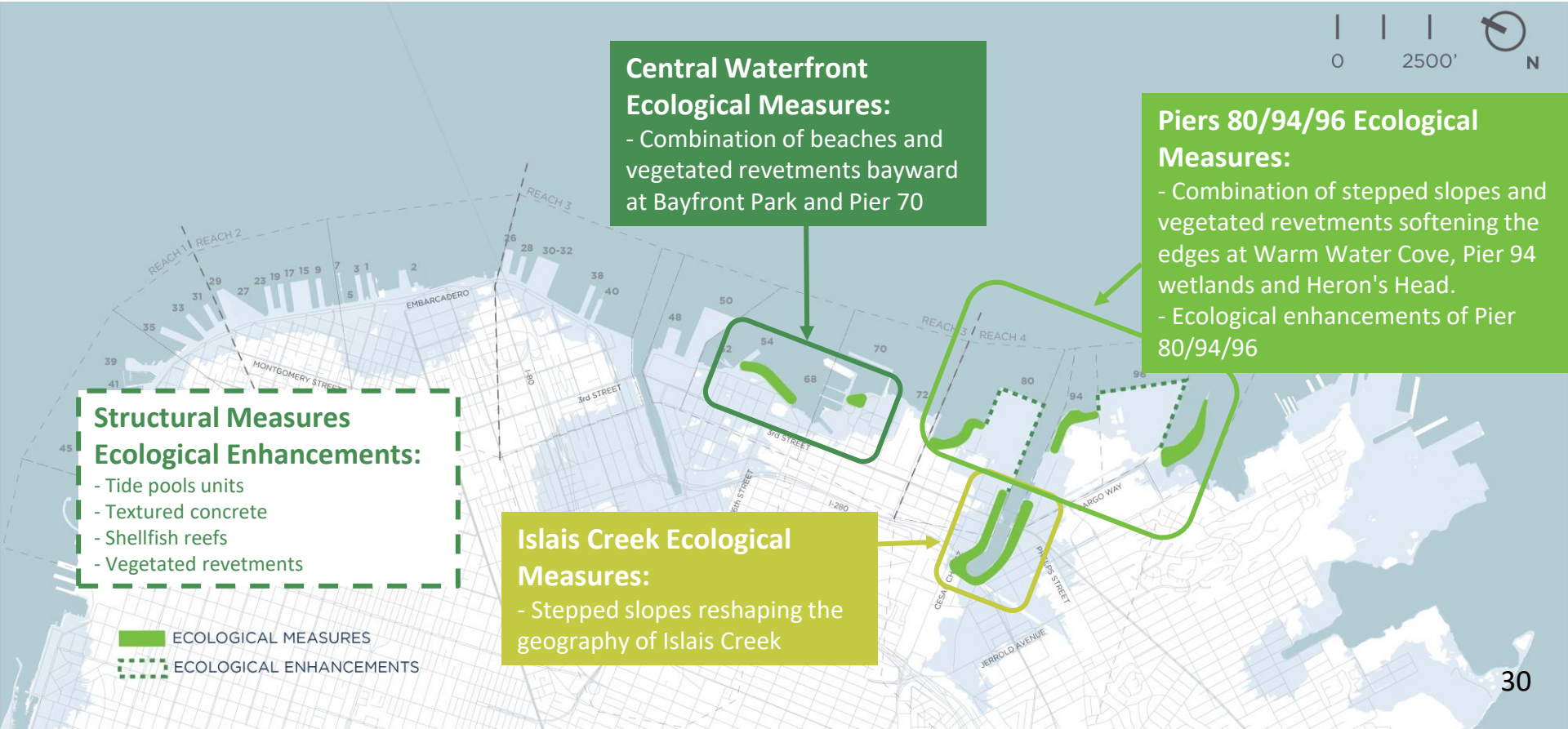
Mission Creek and Pier 80 policy considerations:
- Structures elevation (Park in front of Oracle Park + Bridges across the creek)
- Dry floodproofing (Ground floors around Mission Creek + industrial buildings on Pier 80)
- Ground Improvement on bay-fill piers

Islais Creek policy considerations:
- Elevate Bridges across the creek
- Dry floodproofing Buildings around Islais Creek
- Ground Improvement on bay-fill piers



MEASURES KEY FINDINGS

Ecological Measures / Southern Waterfront



Central Waterfront Ecological Measures:
- Combination of beaches and vegetated revetments bayward at Bayfront Park and Pier 70

Piers 80/94/96 Ecological Measures:
- Combination of stepped slopes and vegetated revetments softening the edges at Warm Water Cove, Pier 94 wetlands and Heron's Head.
- Ecological enhancements of Pier 80/94/96

Structural Measures Ecological Enhancements:
- Tide pools units
- Textured concrete
- Shellfish reefs
- Vegetated revetments

Islais Creek Ecological Measures:
- Stepped slopes reshaping the geography of Islais Creek

LET'S TAKE A QUICK POLL

We want to hear from you!

What would you prioritize?

- **Measures that can be adopted soon to help address near-term risks**
- **Measures that may take longer to adopt but would help address long-term risk**

LET'S TAKE A QUICK POLL

We want to hear from you!

In evaluating measures, which of these considerations would affect your thinking most?

- **Design Life** – estimation of how long a measure will function before requiring replacement
- **Adaptability** – how easily a measure can be adapted to higher water levels
- **Impact on the Waterfront** – effect that a measure will have on the character of the waterfront
- **Cost** – estimated construction cost based on a linear foot basis
- **Compatible Measures** – ability to be combined with other measures

LET'S PAUSE FOR Q&A

We want to hear from you!

- What questions or concerns do you have about measures?
- What additional feedback would you like to share?

Stakeholder Engagement

What We've Heard from Islais Creek / Bayview

FEEDBACK FROM "ASSET MAPPING" EXERCISE

Islais Creek / Bayview Feedback

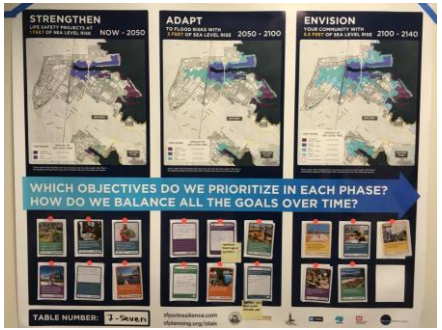
- Bayview Opera House
- Candlestick Point
- Neighborhoods
- Parks and Open Space
- Heron's Head
- Water Access
- Families and Communities
- Schools
- Community Based Organizations

- Housing
- Wastewater/ Sewage
- Third Street Bridge
- Transportation and Utilities
- Critical Facilities
- Jobs and Workforce Development
- Commercial Corridors and Local Industry

- Emergency Response
- Transportation
- Hospital Access
- Neighborhood Function
- Water Quality
- Contaminated lands
- Bayview/Hunters Point

FEEDBACK ON GEOGRAPHIC PROGRAM GOALS

Islais Creek / Bayview Feedback



- Prioritize homes, including low-income housing
- Prioritize environmental concerns and ensure anti-displacement is centered in any work
- Broad support for the Embarcadero Seawall Program as addressing risk is important to the entire City, including the Bayview
- That said, prioritize resilience projects in the southern waterfront
- Continue engagement with the communities in the southeast to ensuring equitable and sustainable outcomes along the Port's entire 7.5 mile jurisdiction

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HOW THIS ENGAGEMENT EFFORT INFORMED THE WRP

Community Input Helped Refine WRP

1

Community feedback affirmed focus on **life safety & emergency response** and offered ideas for evolving how we understand "inspiring an adaptable waterfront":

- Connecting
- Accessible
- Supporting jobs, housing, seniors & youth

2

Community feedback affirmed the Port goals and encouraged:

- Transparency
- Accountability
- Engagement
- **Prioritize assets most loved by the community and most important to the city**
- Select projects that responsibly use tax dollars

3

Community feedback on evaluation criteria affirmed the Port's key focus on life safety and disaster response

- **"Put people first"**
- Assets and services most prioritized: housing, disaster recovery facilities, utilities, and businesses
- Key focus on transportation assets

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Next Steps

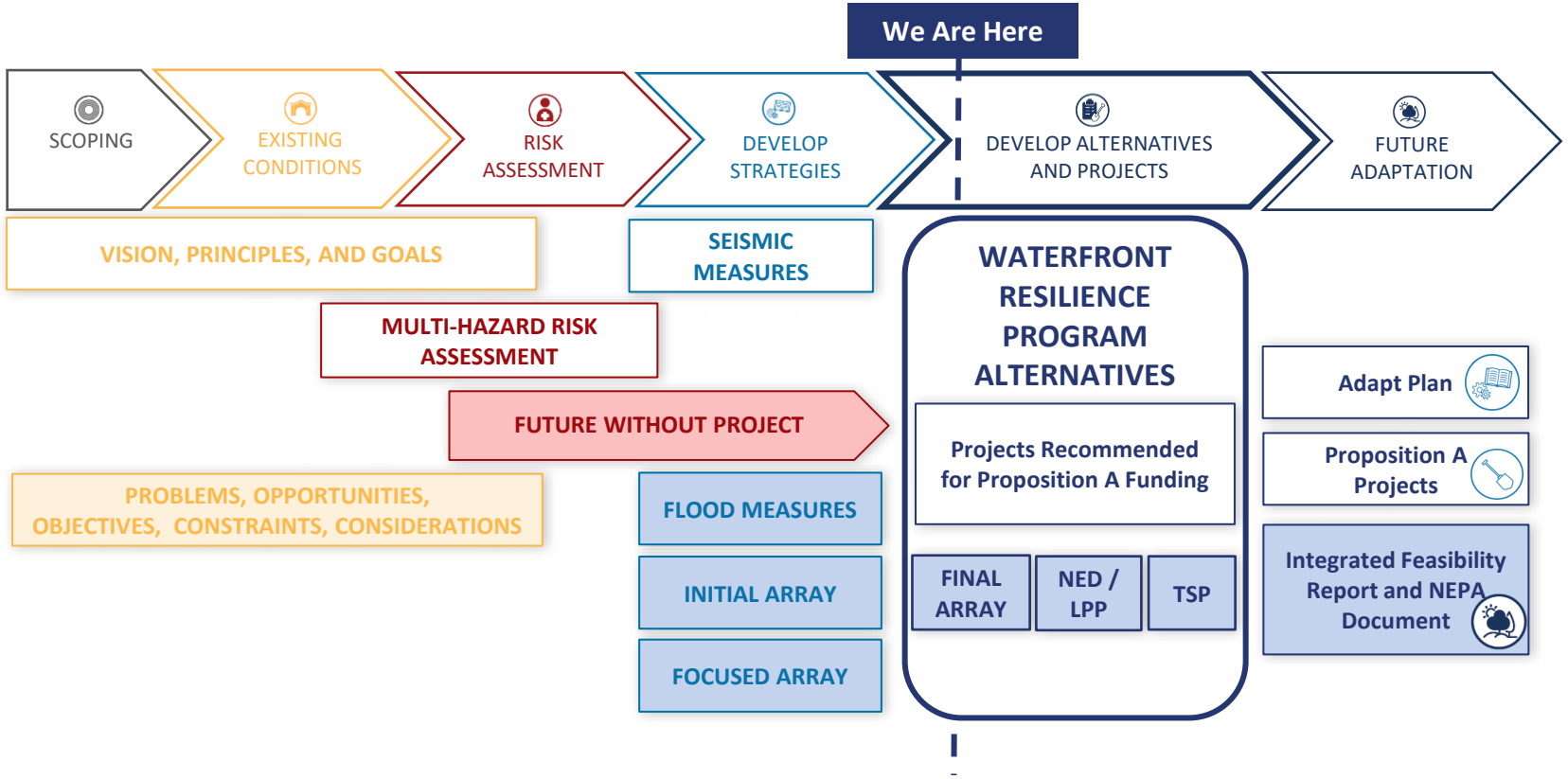
What's Next for the Waterfront Resilience Program?

EMBARCADERO SEAWALL PROGRAM

Program Overview

- **Project Area:** Fisherman's Wharf to Mission Creek
- **Timing:** 2017 to 2021 project planning followed by implementation / construction
- **Focus:** Seismic and flood risk associated with the Embarcadero Seawall
- **Funding:** $425 million General Obligation Bond passed in November 2018

ALTERNATIVES DEVELOPMENT PROCESS



WATERFRONT RESILIENCE OPPORTUNITIES

Upcoming Workforce Development and Contracting Efforts

WORKFORCE DEVELOPMENT

Currently under development: technical training; skill gap analysis for the local workforce; union and employer-led training; and more

LBE HIRING COMMITMENT

The Port's policy is to ensure small businesses, including Local Business Enterprises (LBE), can compete for upcoming contract opportunities

PROMOTING OPPORTUNITIES

Through events like this, the Port is working with LBE stakeholder engagement firms to share upcoming opportunities for employment and contracting

UPCOMING COMMUNITY ENGAGEMENT

Engagement planned before the end of 2020 and early 2021

- Meetings co-hosted with community-based organizations in Islais Creek / Bayview and Mission Creek / Mission Bay
- Ongoing digital engagement, including feedback on waterfront-wide measures and Waterfront Resilience Story Maps
- Ongoing tenant engagement
- Youth engagement with youth-serving organizations that serve citywide youth

Thank You!

Lindy Lowe, Port of San Francisco
lindy.lowe@sfport.com

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Waterfront Resilience Program

Waterfront Resilience Program Update

With Public Housing Tenants Association

December 9, 2020

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Waterfront Resilience Program

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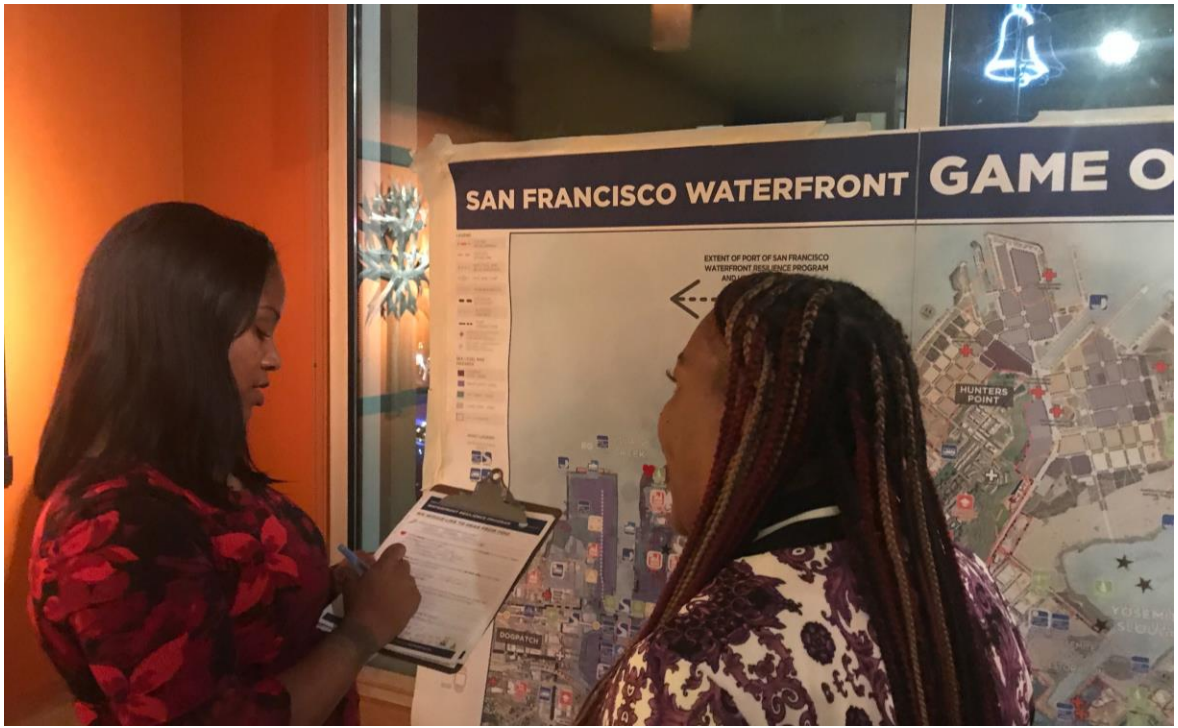

- What are the flood risks in Islais Creek?
- Overview of Flood Risk projects: U.S. Army Corps of Engineers Flood Resiliency Study + Islais Creek Adaptation Strategy
- How can we reduce the risk
- Key priorities from community and stakeholder engagement + next steps
- We'll be asking for your feedback along the way!

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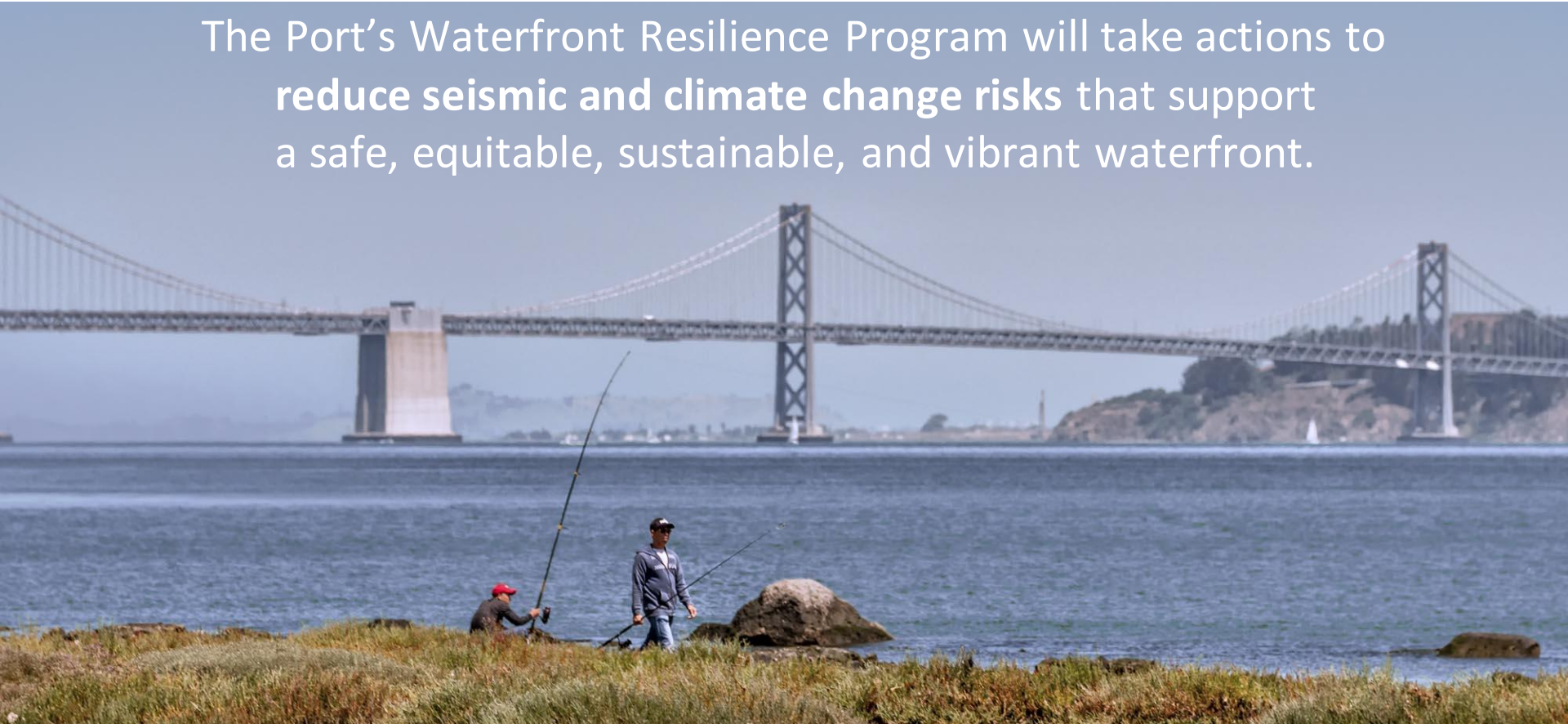

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- **Advance** equity throughout the Waterfront Resilience Program, including through community and stakeholder engagement, planning, contracting, jobs and decision making
- **Enhance** and sustain economic and ecological opportunities

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WATERFRONT RESILIENCE PROGRAM DRAFT PRINCIPLES CONT.

Affirmed through Robust Community Engagement

- **Inspire** an adaptable waterfront that:
  - Improves the health of the Bay
  - Ensures public access to the waterfront and historic places and an inviting waterfront for all
  - Protects and preserves historic and maritime resources
  - Provides opportunities for diverse families, businesses, and neighborhoods to thrive
- **Lead** a transparent, innovative, collaborative, and adaptive Resilience Program

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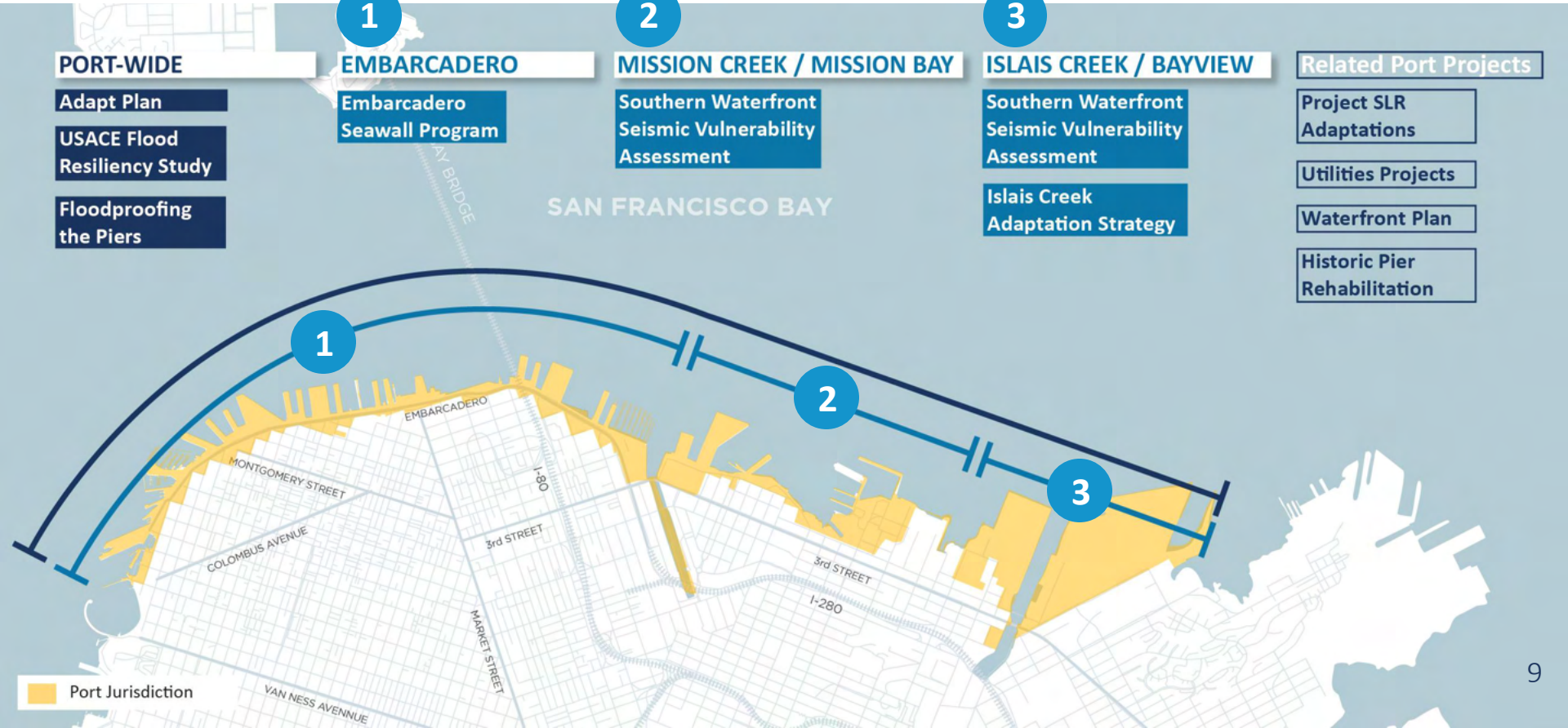
WATERFRONT RESILIENCE PROGRAM EFFORTS

Program and City Resilience Projects and Efforts



INTER-AGENCY CLIMATE RESILIENCE EFFORTS

SLR Vulnerability & Consequences Assessment

Waterfront Resilience Program (Flood Study & Seawall)

Strengthen Adapt Envision

Waterfront Plan Update

Hazard & Climate Resilience Plan

Climate Action Strategy

Islais Creek Adaptation Strategy

CR General Plan Updates

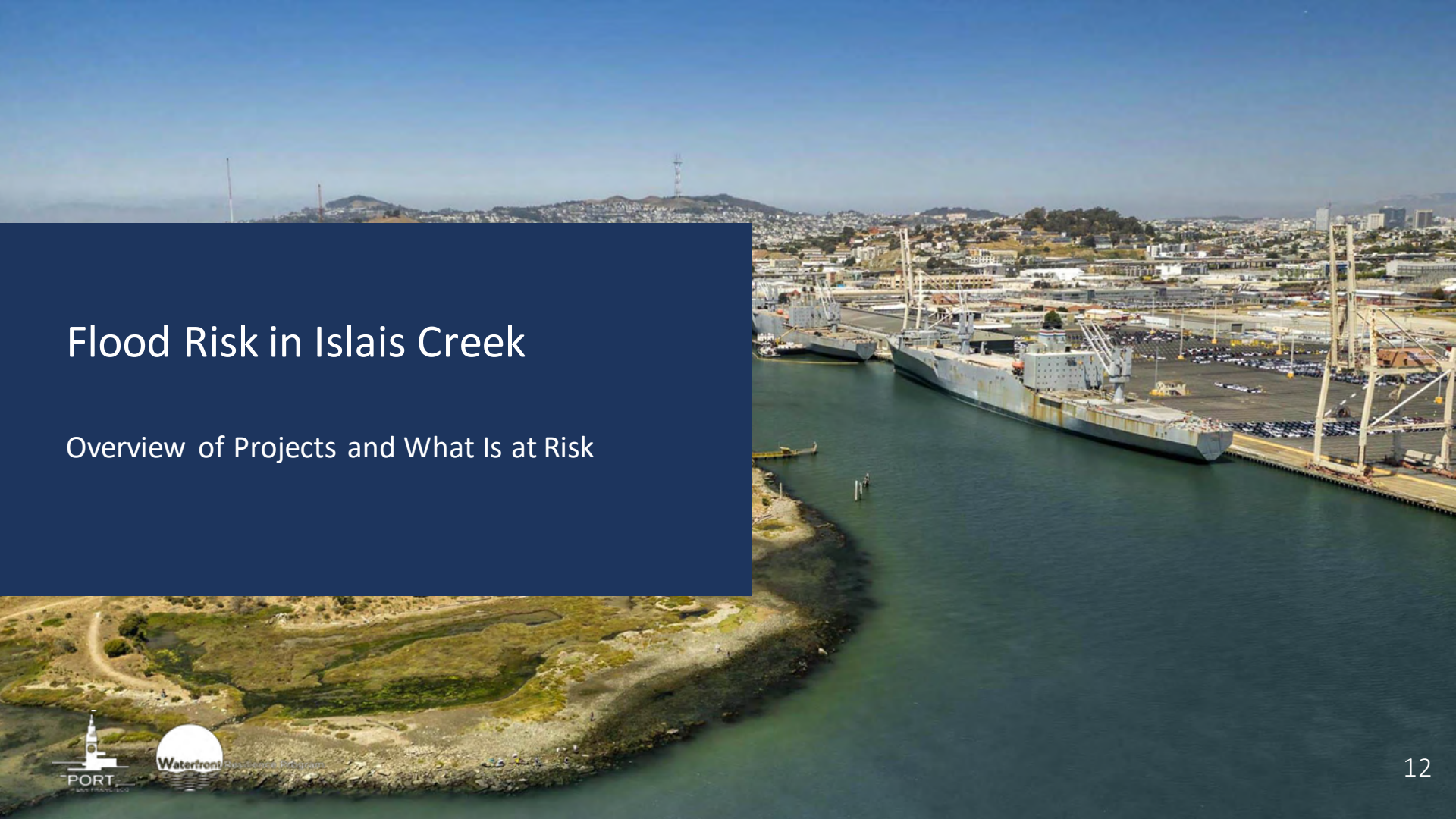
Ocean Beach Adaptation

Bayview Resilience Strategy

LET'S PAUSE FOR Q&A

We Want to Hear from You!

- How do you see this work impacting you and your community now and into the future?



Flood Risk in Islais Creek

Overview of Projects and What Is at Risk

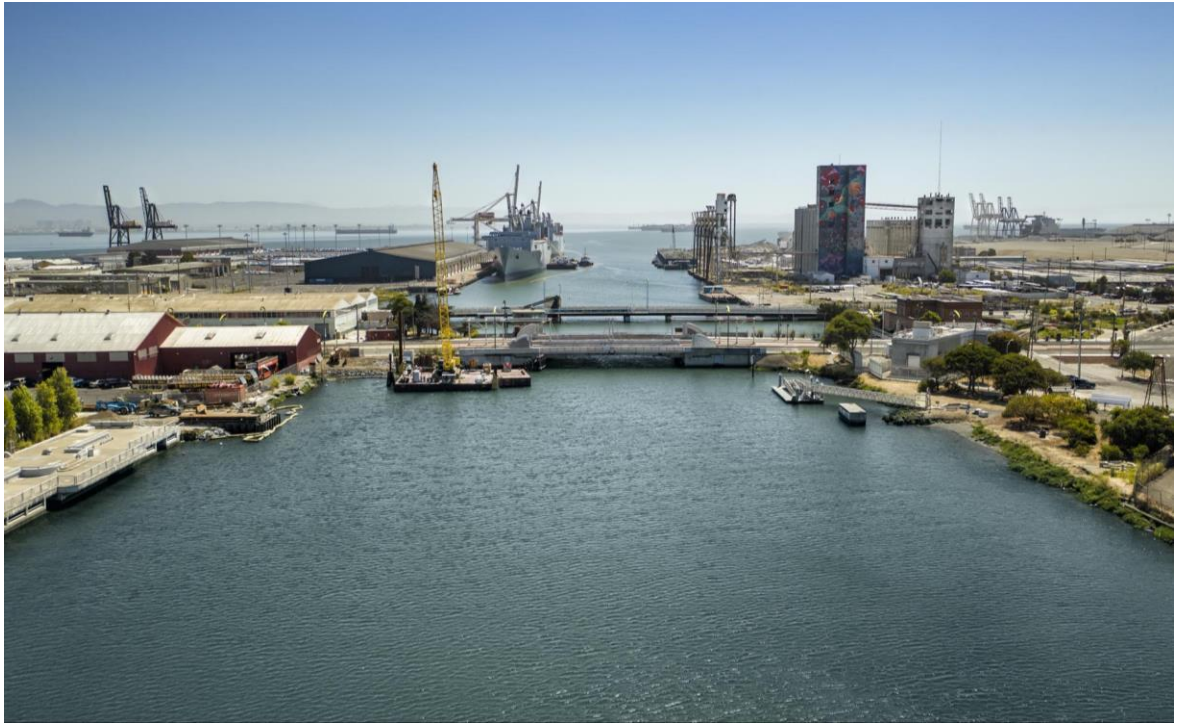
US ARMY CORPS OF ENGINEERS (USACE) FLOOD RESILIENCY STUDY

Overview and Key Highlights

- Port is local sponsor
- 5- to 6-year study
- Flood risk assessment
- Robust community and stakeholder input
- If the Federal government partners with the Port on a project, they will contribute 65% of its cost

ISLAIS CREEK ADAPTATION STRATEGY

Overview and Key Highlights



- Led by SF Planning in partnership with Port, SFMTA, SFPUC
- Two-year community planning process
- Develop a long-range vision for the Islais Creek shoreline and identify near- and mid-term strategies to address sea level rise

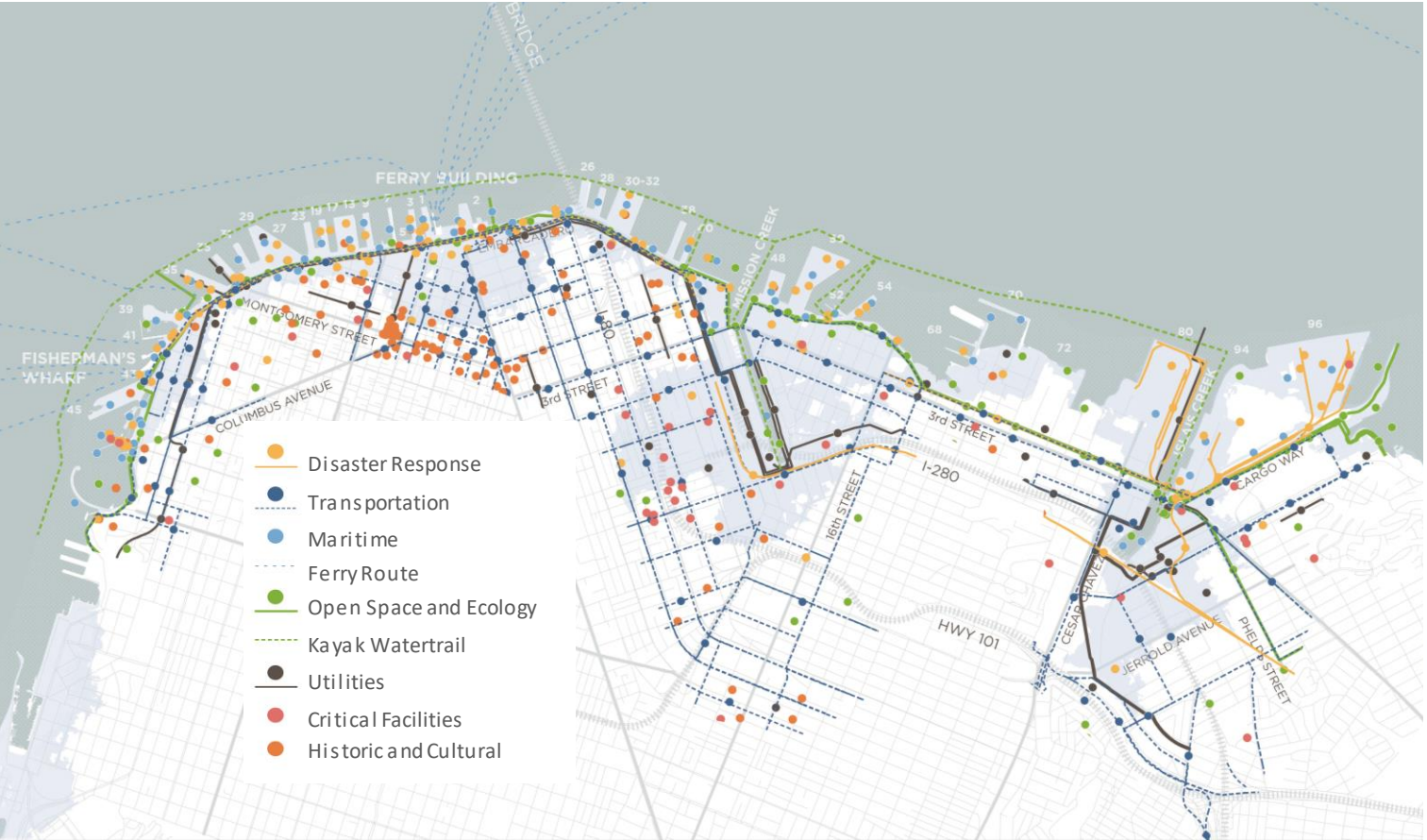
ISLAIS CREEK VISION & GOALS

Islais Creek adapts to flood risks while ensuring healthy and resilient communities.

1. A socially & environmentally resilient neighborhood
2. Authentic & transparent public engagement during & beyond Planning
3. A transportation system that is resilient & adaptable to flood risk
4. A Healthy environment for residents, workers & ecologies
5. A sustainable economy that benefits local residents, workers & industries

Study Wide Assets at Risk

U.S. Army Corps of Engineers Flood Resilience Study



At Risk:

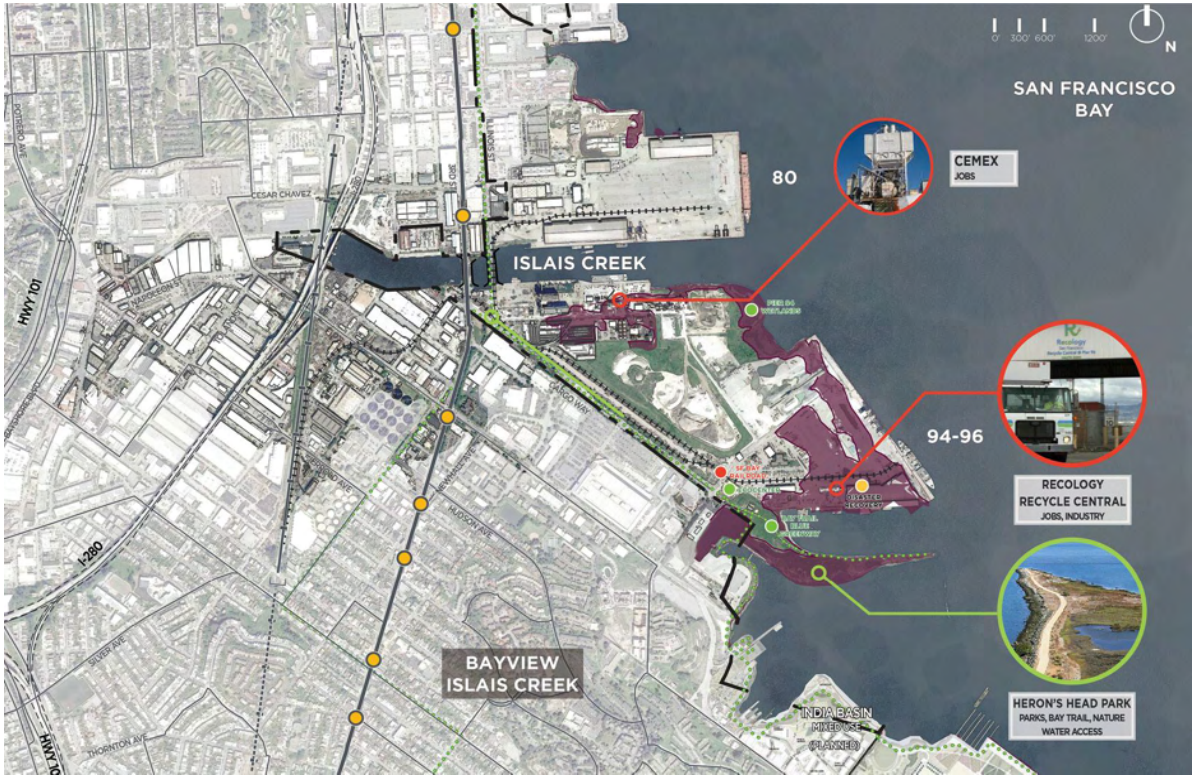
- 40 miles of roadway
- 25 miles of muni & cable car track
- 11,000 jobs
- 13,500 residents, 58% people of color
- Wastewater functions for 580,000 residents

NEAR-TERM FLOOD RISK IN ISLAIS CREEK / BAYVIEW

U.S. Army Corps of Engineers Flood Resiliency Study

Assets with current and near-term flood risk include:

- Heron's Head Park
- Recology
- Industrial and Maritime Uses and Jobs
- Pier 94 wetlands



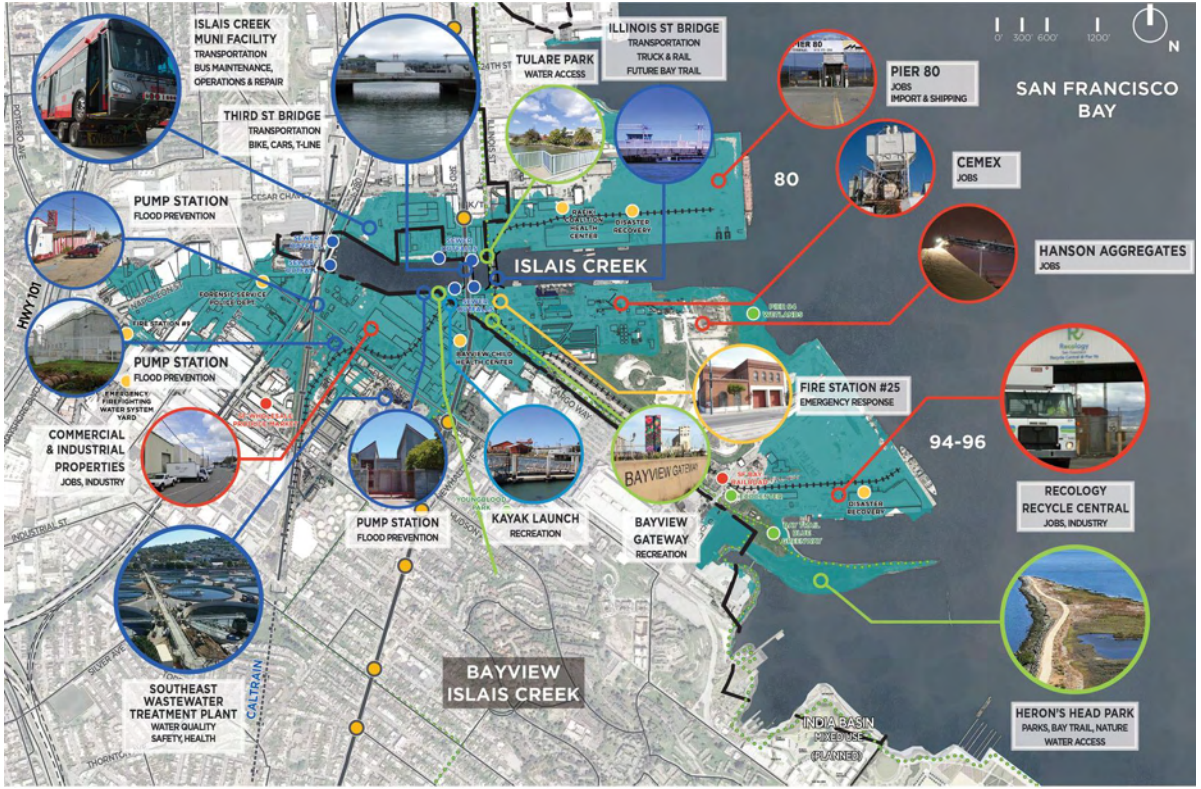
100 years flood event

MID- TO LONG-TERM FLOOD RISK IN ISLAIS CREEK / BAYVIEW

U.S. Army Corps of Engineers Flood Resiliency Study

Mid- to long-term flood risk includes:

- Third Street and Illinois Street Bridges
- MUNI facilities that provide Citywide transit
- Industrial and Maritime uses and jobs
- Parks and open spaces
- Fire Station #25



FEEDBACK FROM "ASSET MAPPING" EXERCISE

Islais Creek / Bayview Feedback

- Bayview Opera House
- Candlestick Point
- Neighborhoods
- Parks and Open Space
- Heron's Head
- Water Access
- Families and Communities
- Schools
- Community Based Organizations

- Housing
- Wastewater/ Sewage
- Third Street Bridge
- Transportation and Utilities
- Critical Facilities
- Jobs and Workforce Development
- Commercial Corridors and Local Industry

- Emergency Response
- Transportation
- Hospital Access
- Neighborhood Function
- Water Quality
- Contaminated lands
- Bayview/Hunters Point

LET'S TAKE A QUICK POLL

We Want to Hear from You!

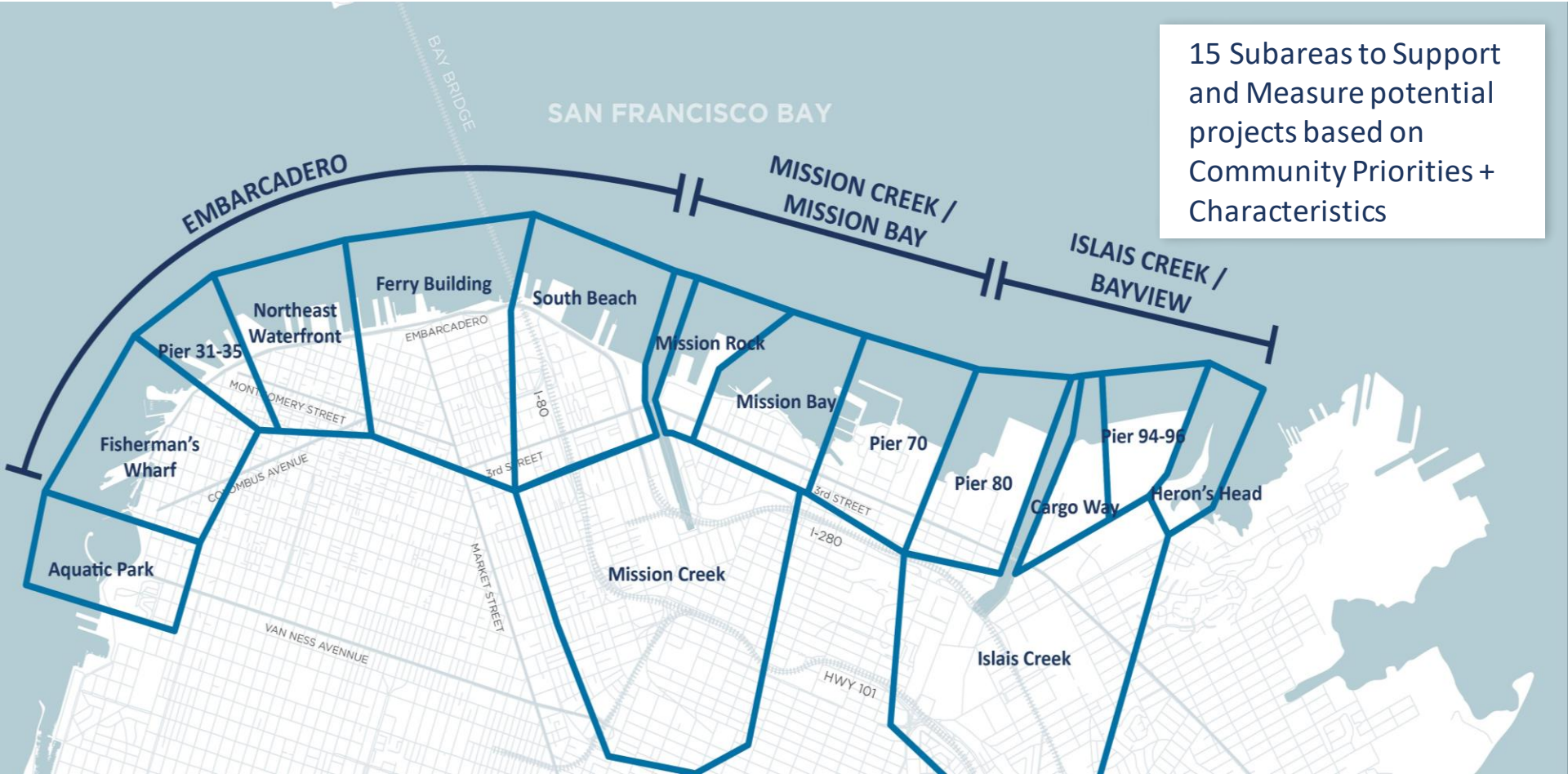
How concerned are you about sea level rise?

- **Very Concerned**
- **Somewhat Concerned**
- **Not Very Concerned**

How Can We Reduce the Risk?

Waterfront "measures" to reduce risk

UNITED STATES ARMY CORPS OF ENGINEERS FLOOD STUDY AREA

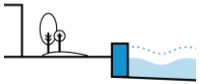


HOW CAN WE REDUCE FLOOD RISK?

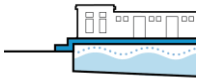
Measures to Reduce Flood

Physical and Policy

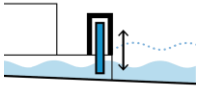
Levees



Seawalls



Raised Marine Structures



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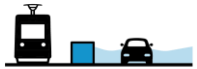

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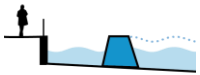
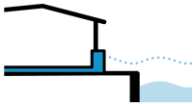
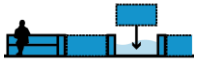


Breakwaters



Building Adaptations



Deployables

Ecological

Ecological Marine Structures

Ecological Features

Aquatic Habitat

Ecological Shorelines

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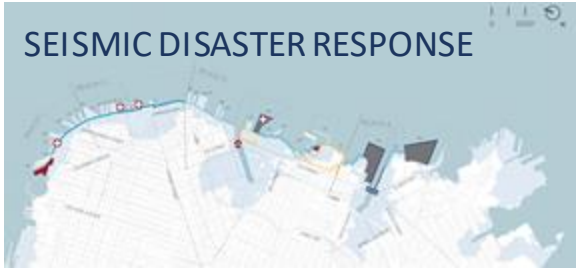
HOW WILL WE DECIDE HOW TO REDUCE THE RISK?

For Each of the 15 Subareas We Have Identified:

- Community, city, and Port priorities and characteristics
- Critical assets and facilities
- Shoreline conditions and character
- Feasible ways to reduce seismic and current and future flood risk

HOW WILL WE DECIDE HOW TO REDUCE THE RISK?

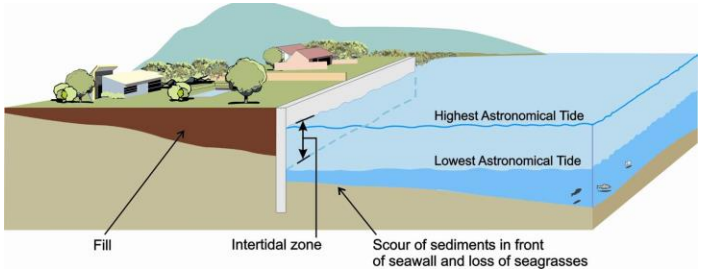
Focused Array Themes



HOW WILL WE REDUCE THE RISK?

Process for Developing Alternatives and Strategies

- Build upon community, City and Port priorities
- Understand existing and future conditions and characteristics
- Use repetition or multiple iterations to test out measures and strategies and obtain input
- Understand the above by ensuring everyone is at the table



FLOOD STUDY FIRST DRAFT OF ALTERNATIVES

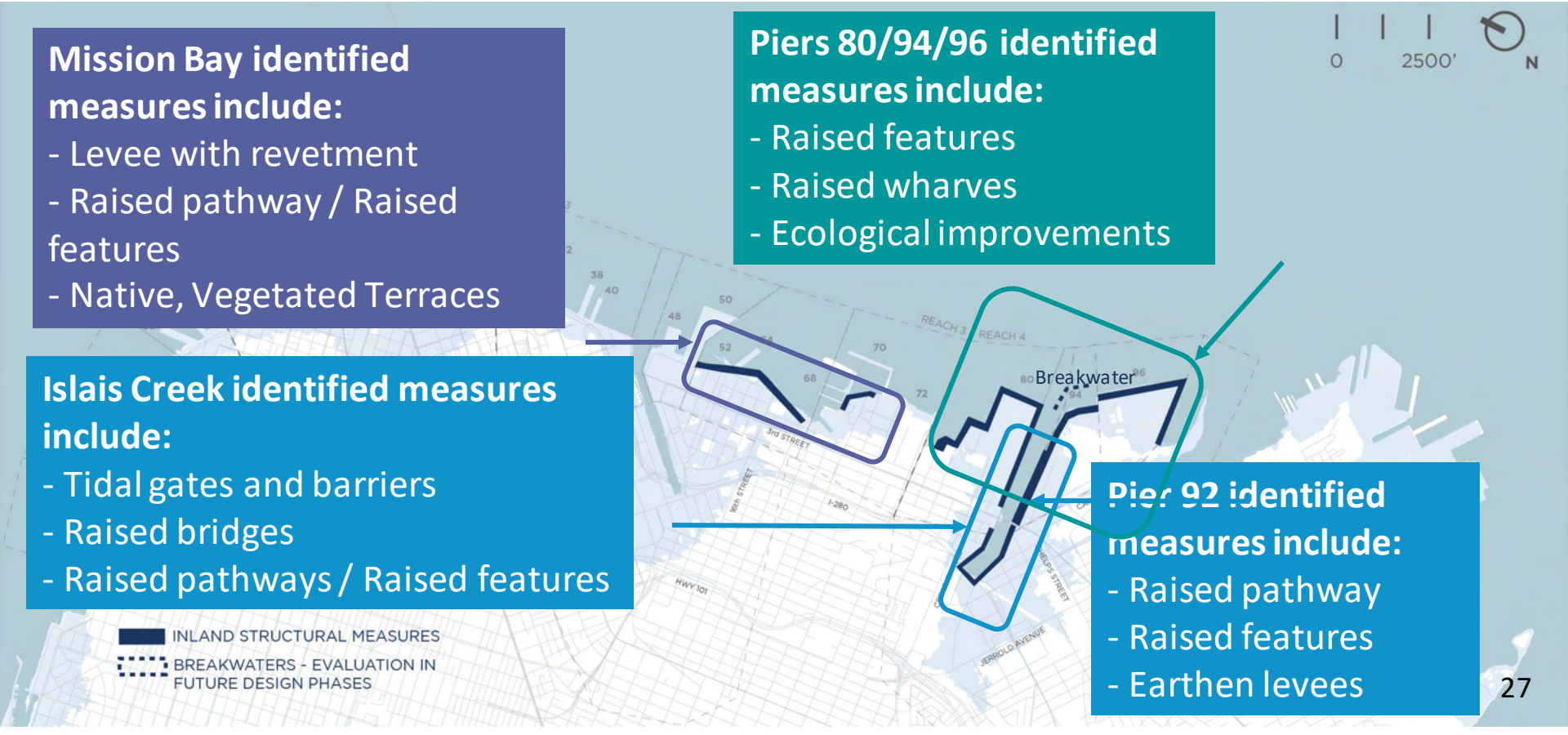
Physical Measures Applied to the Southern Waterfront

Mission Bay identified measures include:
- Levee with revetment
- Raised pathway / Raised features
- Native, Vegetated Terraces

Piers 80/94/96 identified measures include:
- Raised features
- Raised wharves
- Ecological improvements

Islais Creek identified measures include:
- Tidal gates and barriers
- Raised bridges
- Raised pathways / Raised features

Pier 92 identified measures include:
- Raised pathway
- Raised features
- Earthen levees

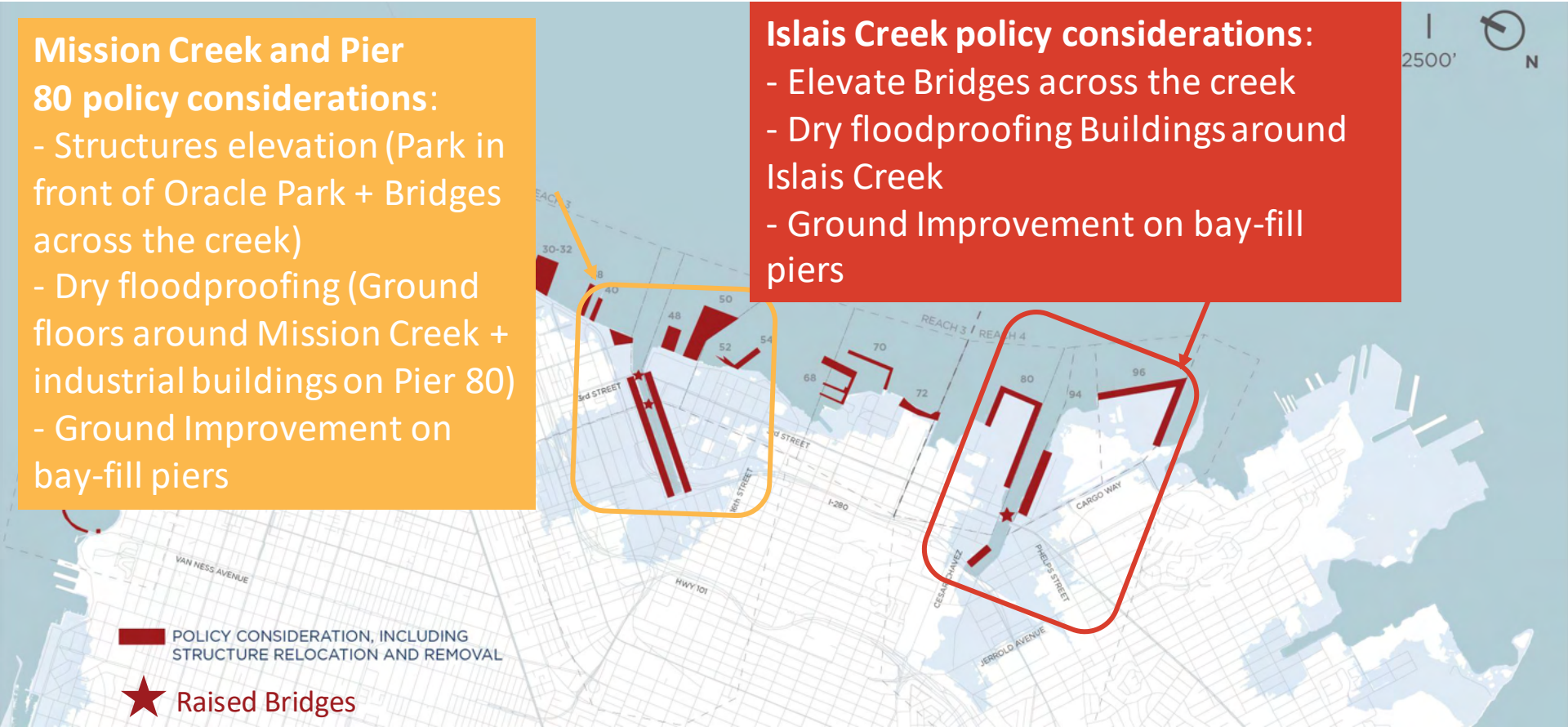


FLOOD STUDY FIRST DRAFT OF ALTERNATIVES

Non-Structural Measures Applied to the Southern Waterfront

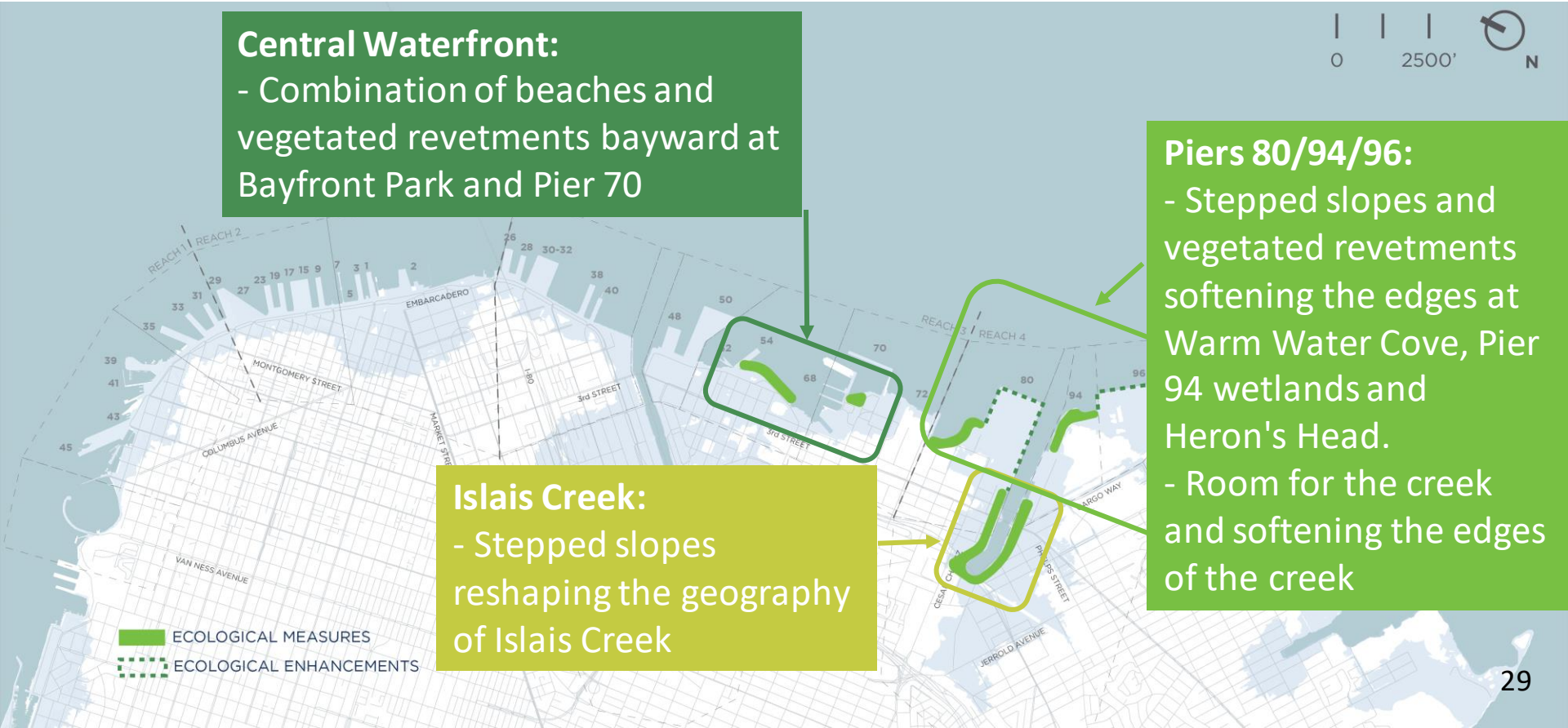
Mission Creek and Pier 80 policy considerations:
- Structures elevation (Park in front of Oracle Park + Bridges across the creek)
- Dry floodproofing (Ground floors around Mission Creek + industrial buildings on Pier 80)
- Ground Improvement on bay-fill piers

Islais Creek policy considerations:
- Elevate Bridges across the creek
- Dry floodproofing Buildings around Islais Creek
- Ground Improvement on bay-fill piers



FLOOD STUDY FIRST DRAFT OF ALTERNATIVES

Nature Based Measures Applied to the Southern Waterfront



Central Waterfront:
- Combination of beaches and vegetated revetments bayward at Bayfront Park and Pier 70

Piers 80/94/96:
- Stepped slopes and vegetated revetments softening the edges at Warm Water Cove, Pier 94 wetlands and Heron's Head.
- Room for the creek and softening the edges of the creek

Islais Creek:
- Stepped slopes reshaping the geography of Islais Creek

LET'S TAKE A QUICK POLL

What Matters Most to You?

- **Design Life and Risk Reduced** – How long a project will provide risk reduction before requiring replacement? How much of the risk is being reduced and for how long?

- **Adaptability** – How easily a project be changed for new conditions such as sea level rise?

- **Impact on the Waterfront** – Will the project have a big impact on the waterfront, shoreline and communities? What kind of impact?

- **Cost** – How much will a project cost? How does this compare with the design life?

- **Multiple functions** – Does the project provide multiple benefits? Public open space and flood risk reduction? Transportation improvements and risk reduction?

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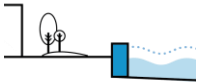
HOW CAN WE REDUCE FLOOD RISK?

Measures to Reduce Flood

Physical and Policy

Levees



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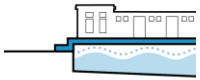

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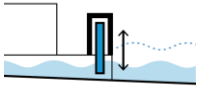

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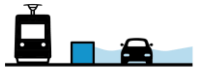

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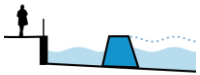

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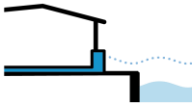

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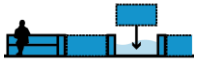

Deployables

Ecological

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Ecological Features

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Ecological Shorelines

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LET'S PAUSE FOR Q&A

We Want to Hear from You!

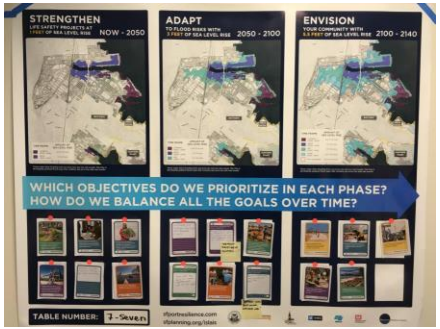
- What other issues would you like to include in projects to reduce flood and earthquake risks? Pedestrian pathways? Habitat improvement? Parks and open space? Transportation? What should we avoid?
- Check out more at the Measures Explorer at sfportresilience.com/measures-explorer

Stakeholder Engagement

What We've Heard from Islais Creek / Bayview

FEEDBACK ON GEOGRAPHIC PROGRAM GOALS

Islais Creek / Bayview Feedback



- Prioritize homes, including low-income housing
- Prioritize environmental concerns
- Ensure anti-displacement is centered in any work
- Broad support for the Embarcadero Seawall Program as addressing risk is important to the entire City, including the Bayview
- That said, prioritize resilience projects in the southern waterfront
- Continue engagement along the Port's entire 7.5 mile jurisdiction

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HOW THIS ENGAGEMENT EFFORT INFORMED THE WRP

Community Input Helped Refine WRP

1

Community feedback affirmed focus on **life safety & emergency response** and offered ideas for evolving how we understand "inspiring an adaptable waterfront":

- Connecting
- Accessible
- Supporting jobs, housing, seniors & youth

2

Community feedback affirmed the Port goals and encouraged:

- Transparency
- Accountability
- Engagement
- **Prioritize assets most loved by the community and most important to the city**
- Select projects that responsibly use tax dollars

3

Community feedback on evaluation criteria affirmed the Port's key focus on life safety and disaster response

- **"Put people first"**
- Assets and services most prioritized: housing, disaster recovery facilities, utilities, and businesses
- Key focus on transportation assets

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Next Steps

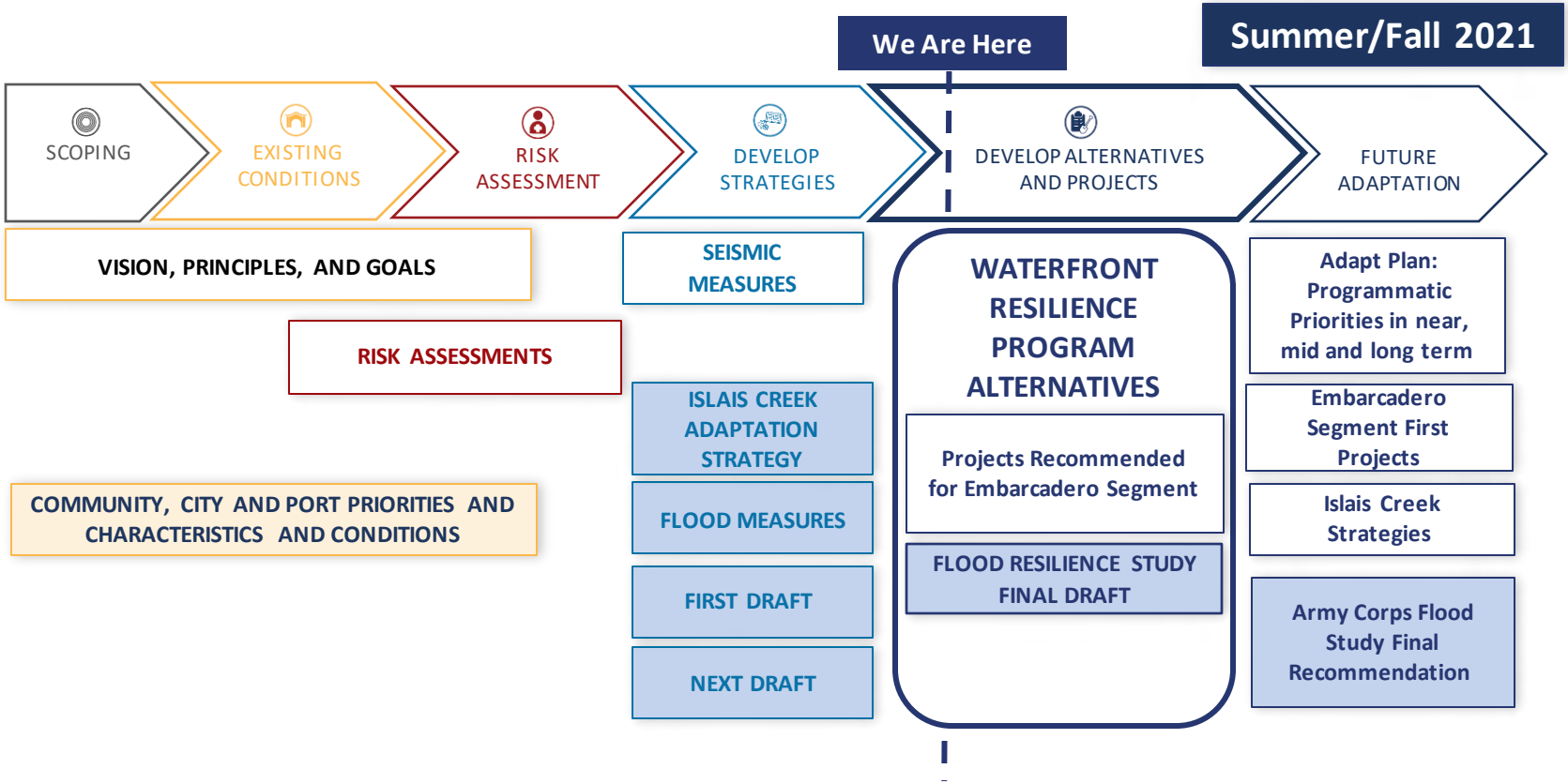
What's Next for the Waterfront Resilience Program?

EMBARCADERO SEAWALL PROGRAM

Program Overview

- **Project Area:** Fisherman's Wharf to Mission Creek
- **Timing:** 2017 to 2021 project planning followed by implementation / construction
- **Focus:** Seismic and flood risk associated with the Embarcadero Seawall
- **Funding:** $425 million General Obligation Bond passed in November 2018

WATERFRONT RESILIENCE PROGRAM STEPS



JOB AND CAREER OPPORTUNITIES

Coming Soon...

Job Opportunities May Include:

- Pile Drivers
- Welders
- Laborers
- Cement Masons
- Operating Engineers
- Carpenters
- Painters
- Office Engineers
- Schedulers and Document Controls
- Construction Administrative

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SMALL & LOCAL BUSINESS CONTRACT OPPORTUNITIES

Coming Soon...

Upcoming Contracts May Include:

Professional Services:

- Engineering
- Design
- Environmental
- Planning

Construction

- Demolition
- Excavation
- Pavement and sidewalk removal
- Electrical

UPCOMING COMMUNITY ENGAGEMENT

Engagement planned before the end of 2020 and early 2021

- Meetings co-hosted with community-based organizations in Islais Creek / Bayview and Mission Creek / Mission Bay
- Ongoing digital engagement, including feedback on waterfront-wide measures and Waterfront Resilience Story Maps
- Ongoing tenant engagement
- Youth engagement with youth-serving organizations that serve citywide youth

Thank You!

Lindy Lowe, Port of San Francisco
lindy.lowe@sfport.com

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Waterfront Resilience Program

Waterfront Resilience Program Update

St. John Missionary Baptist Church

December 10, 2020

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Waterfront Resilience Program

LET'S TAKE A QUICK POLL

We Want to Hear from You!

What is the first word that comes to mind for you for "San Francisco Waterfront"?

Enter your answer in the Chat Box

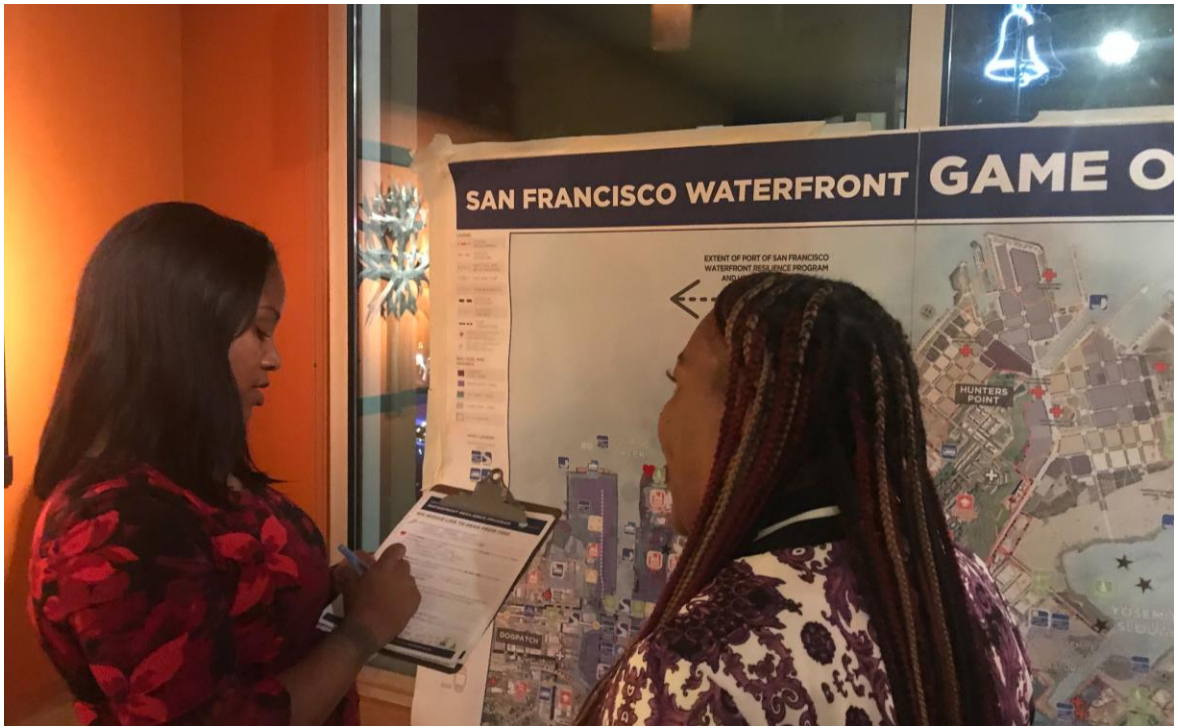
WELCOME!

Zoom Meeting Tips & Tricks

- Welcome to Islais Creek Community Meeting #3 Digital Series – Hosted tonight by St. John Missionary Baptist Church!
- Here are a few tips and tricks for this virtual meeting setting:
  - Keep your device on mute unless you are speaking
  - Try not to talk over others, and give each other time to gathers thoughts and comment before jumping in
  - The chat function is on and we're tracking any comments and feedback, but will be unable to answer all questions
  - IT Tip: Minimize lag by turning off your video during the presentation
  - Fun Tip: Choose a virtual background!

TODAY'S AGENDA

Presentation Overview



- What are the flood risks in Islais Creek?
- Overview of Flood Risk projects: U.S. Army Corps of Engineers Flood Resiliency Study + Islais Creek Adaptation Strategy
- How can we reduce the risk
- Key priorities from community and stakeholder engagement + next steps
- We'll be asking for your feedback along the way!

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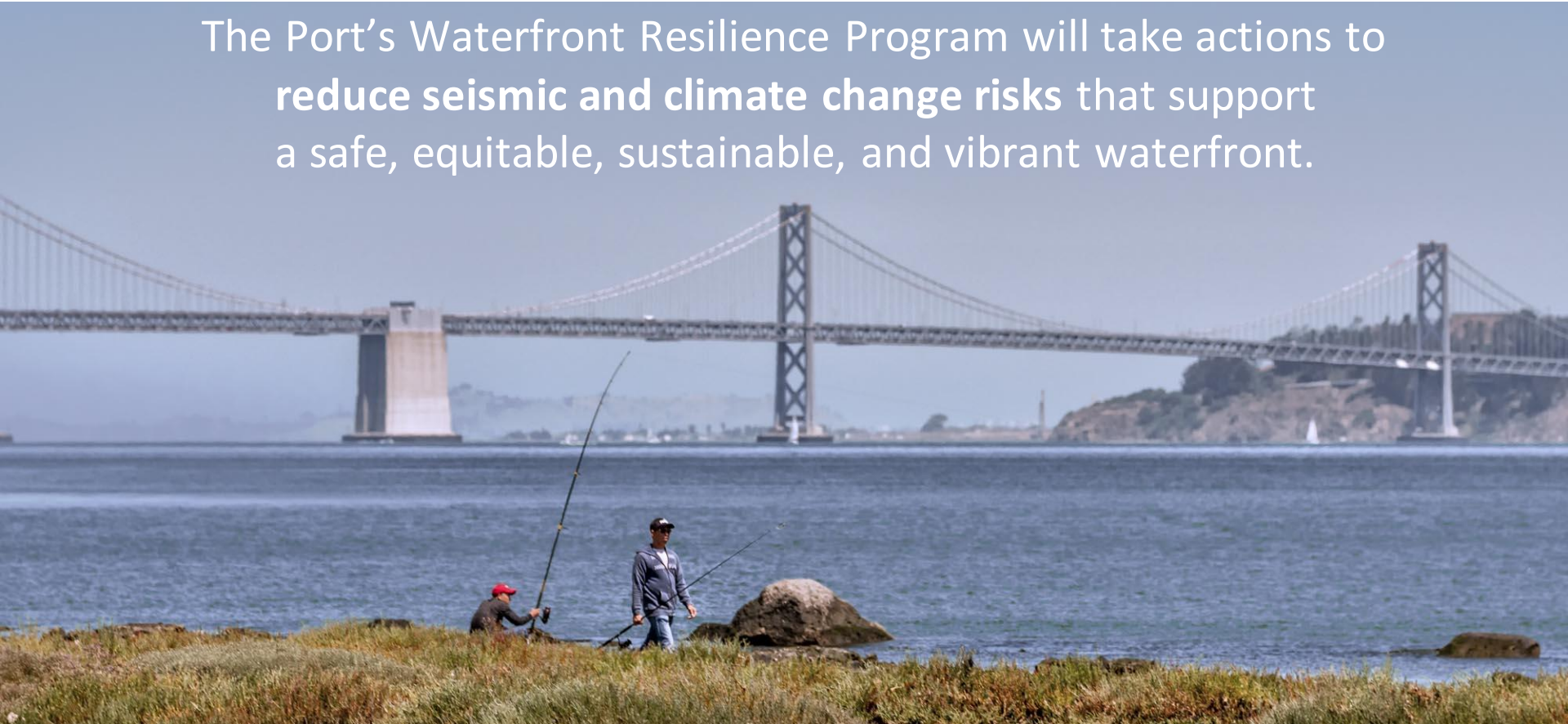
Waterfront Resilience Program

Overview

WATERFRONT RESILIENCE PROGRAM

Goal Statement

The Port's Waterfront Resilience Program will take actions to **reduce seismic and climate change risks** that support a safe, equitable, sustainable, and vibrant waterfront.



WATERFRONT RESILIENCE PROGRAM DRAFT PRINCIPLES

Affirmed through Robust Community Engagement

- **Prioritize** life safety and emergency response
- **Advance** equity throughout the Waterfront Resilience Program, including through community and stakeholder engagement, planning, contracting, jobs and decision making
- **Enhance** and sustain economic and ecological opportunities

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WATERFRONT RESILIENCE PROGRAM DRAFT PRINCIPLES CONT.

Affirmed through Robust Community Engagement

- **Inspire** an adaptable waterfront that:
  - Improves the health of the Bay
  - Ensures public access to the waterfront and historic places and an inviting waterfront for all
  - Protects and preserves historic and maritime resources
  - Provides opportunities for diverse families, businesses, and neighborhoods to thrive
- **Lead** a transparent, innovative, collaborative, and adaptive Resilience Program

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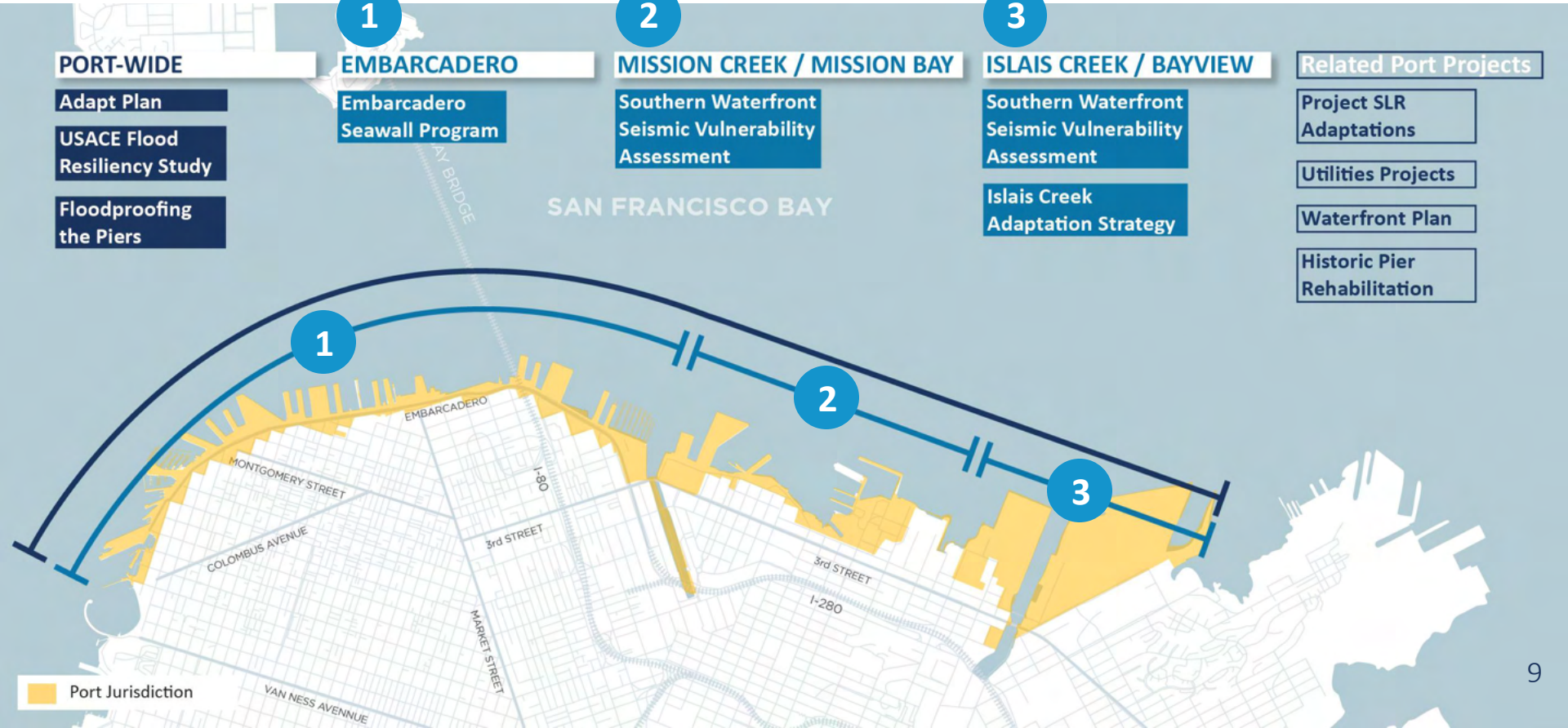
WATERFRONT RESILIENCE PROGRAM EFFORTS

Program and City Resilience Projects and Efforts



INTER-AGENCY CLIMATE RESILIENCE EFFORTS

SLR Vulnerability & Consequences Assessment

Waterfront Resilience Program (Flood Study & Seawall)

Strengthen Adapt Envision

Waterfront Plan Update

Hazard & Climate Resilience Plan

Climate Action Strategy

Islais Creek Adaptation Strategy

CR General Plan Updates

Ocean Beach Adaptation

Bayview Resilience Strategy

LET'S PAUSE FOR Q&A

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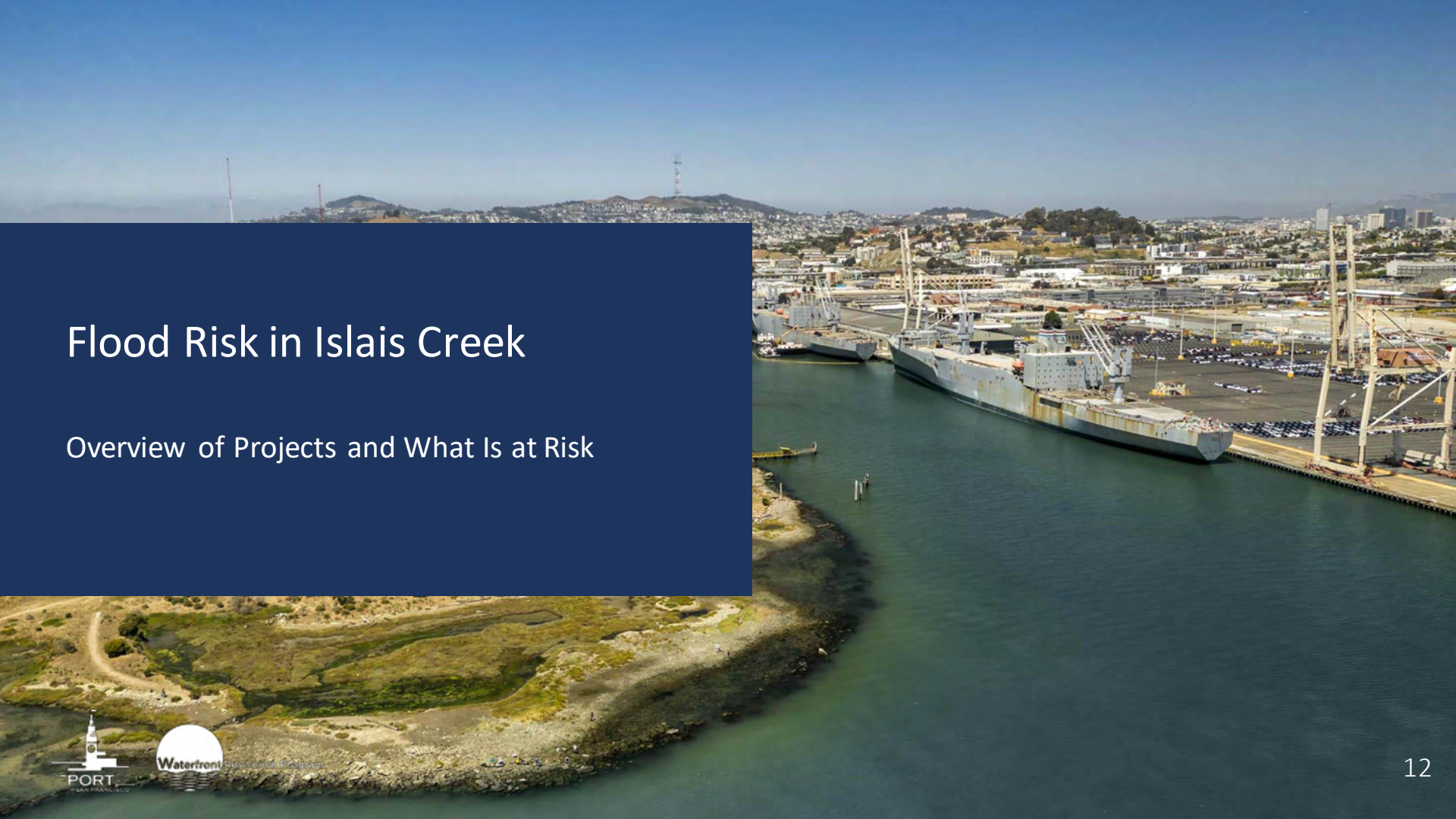
- How do you see this work impacting you and your community now and into the future?



Flood Risk in Islais Creek

Overview of Projects and What Is at Risk

U.S. ARMY CORPS OF ENGINEERS (USACE) FLOOD RESILIENCY STUDY

Overview and Key Highlights

- Port is local sponsor
- 5- to 6-year study
- Flood risk assessment
- Robust community and stakeholder input
- If the Federal government partners with the Port on a project, they will contribute 65% of its cost

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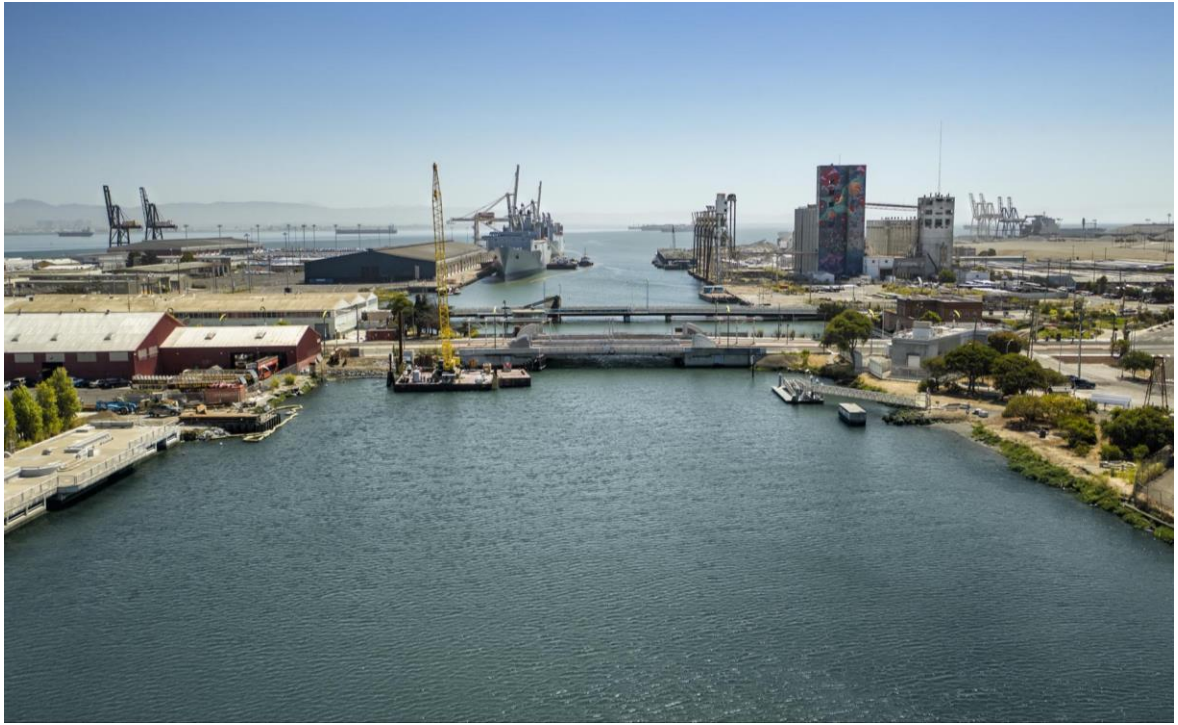

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Study Wide Assets at Risk

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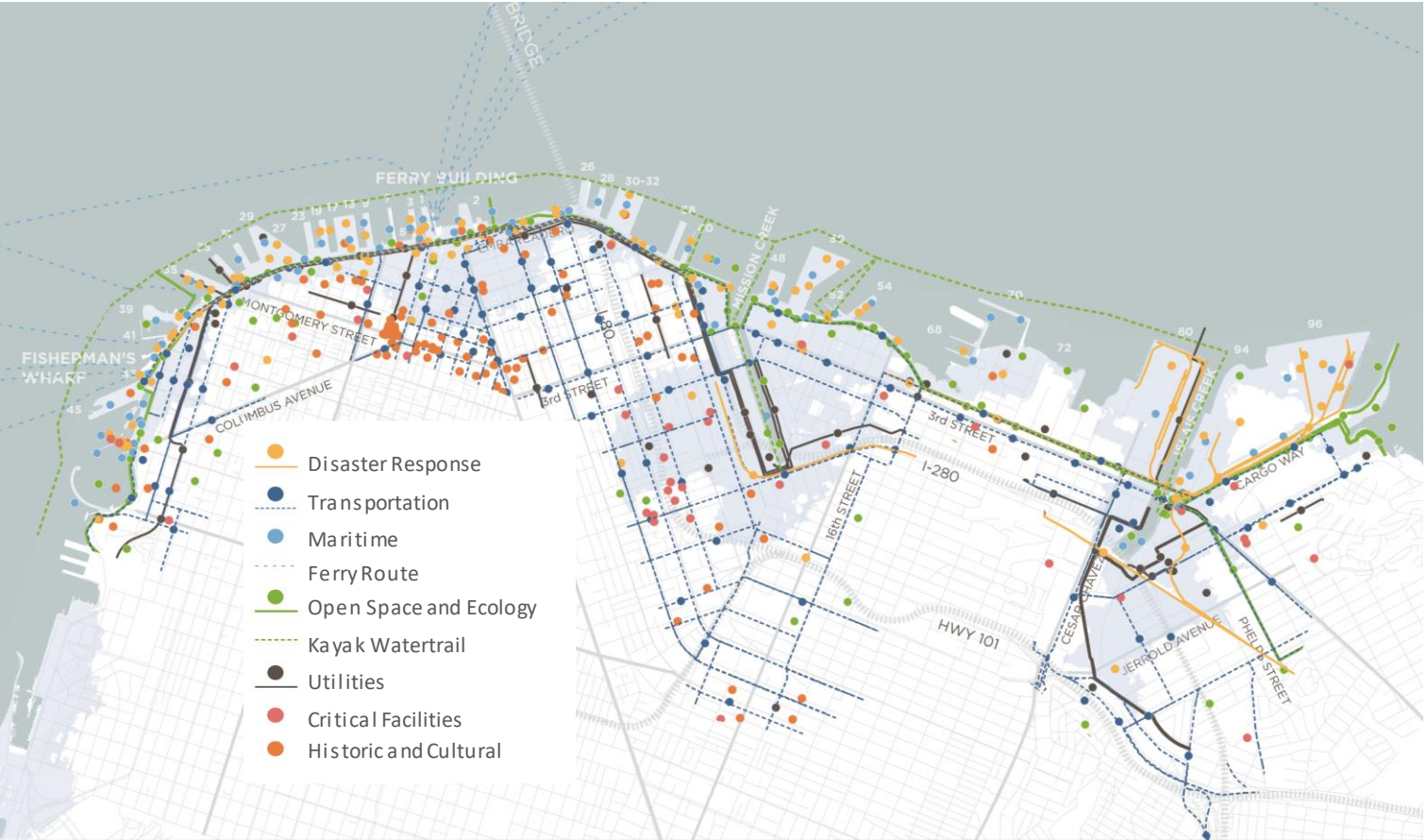

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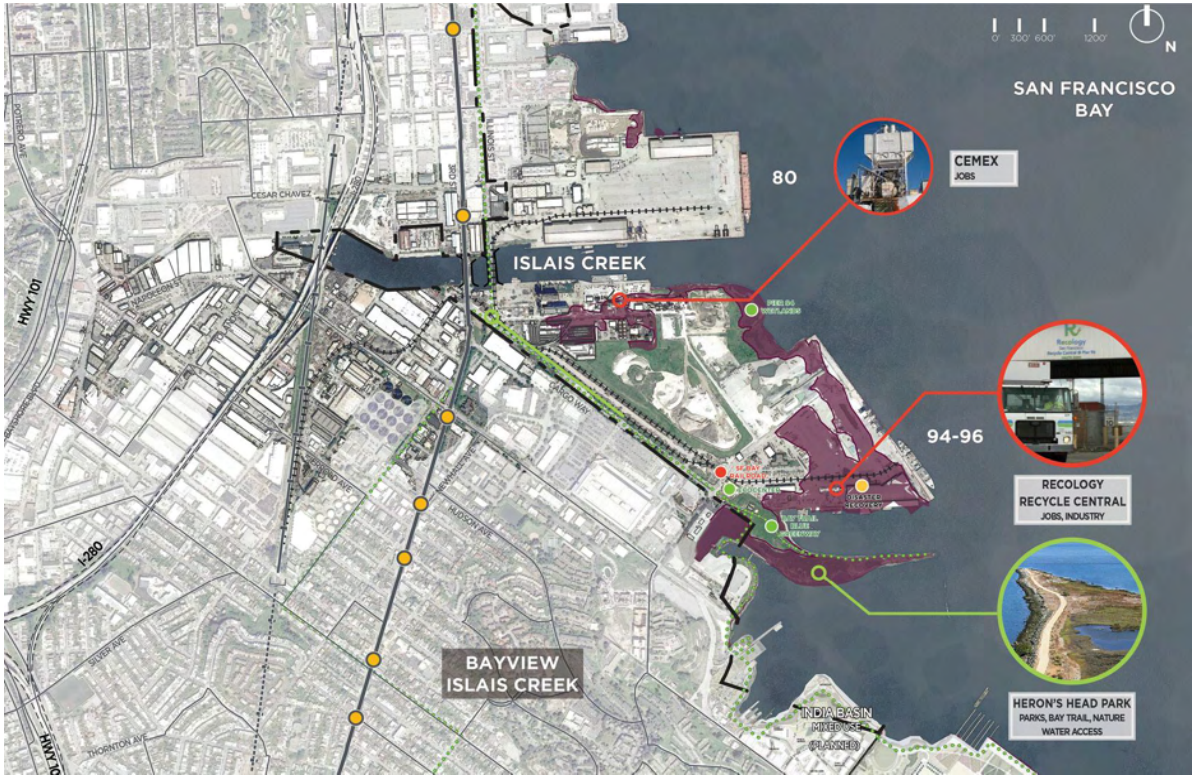

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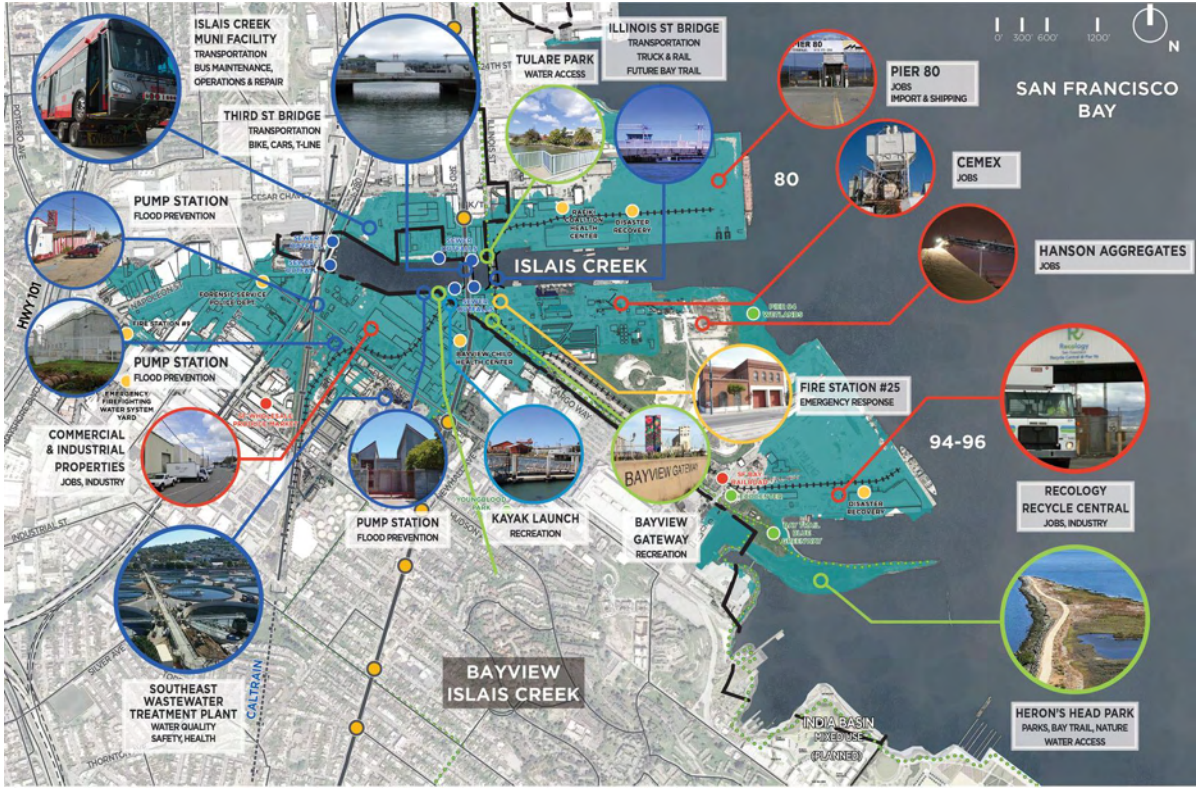
U.S. Army Corps of Engineers Flood Resiliency Study

Mid- to long-term flood risk includes:

- Third Street and Illinois Street Bridges
- MUNI facilities that provide Citywide transit
- Industrial and Maritime uses and jobs
- Parks and open spaces
- Fire Station #25



FEEDBACK FROM "ASSET MAPPING" EXERCISE

Islais Creek / Bayview Feedback

- Bayview Opera House
- Candlestick Point
- Neighborhoods
- Parks and Open Space
- Heron's Head
- Water Access
- Families and Communities
- Schools
- Community Based Organizations

- Housing
- Wastewater/ Sewage
- Third Street Bridge
- Transportation and Utilities
- Critical Facilities
- Jobs and Workforce Development
- Commercial Corridors and Local Industry

- Emergency Response
- Transportation
- Hospital Access
- Neighborhood Function
- Water Quality
- Contaminated lands
- Bayview/Hunters Point

LET'S TAKE A QUICK POLL

We Want to Hear from You!

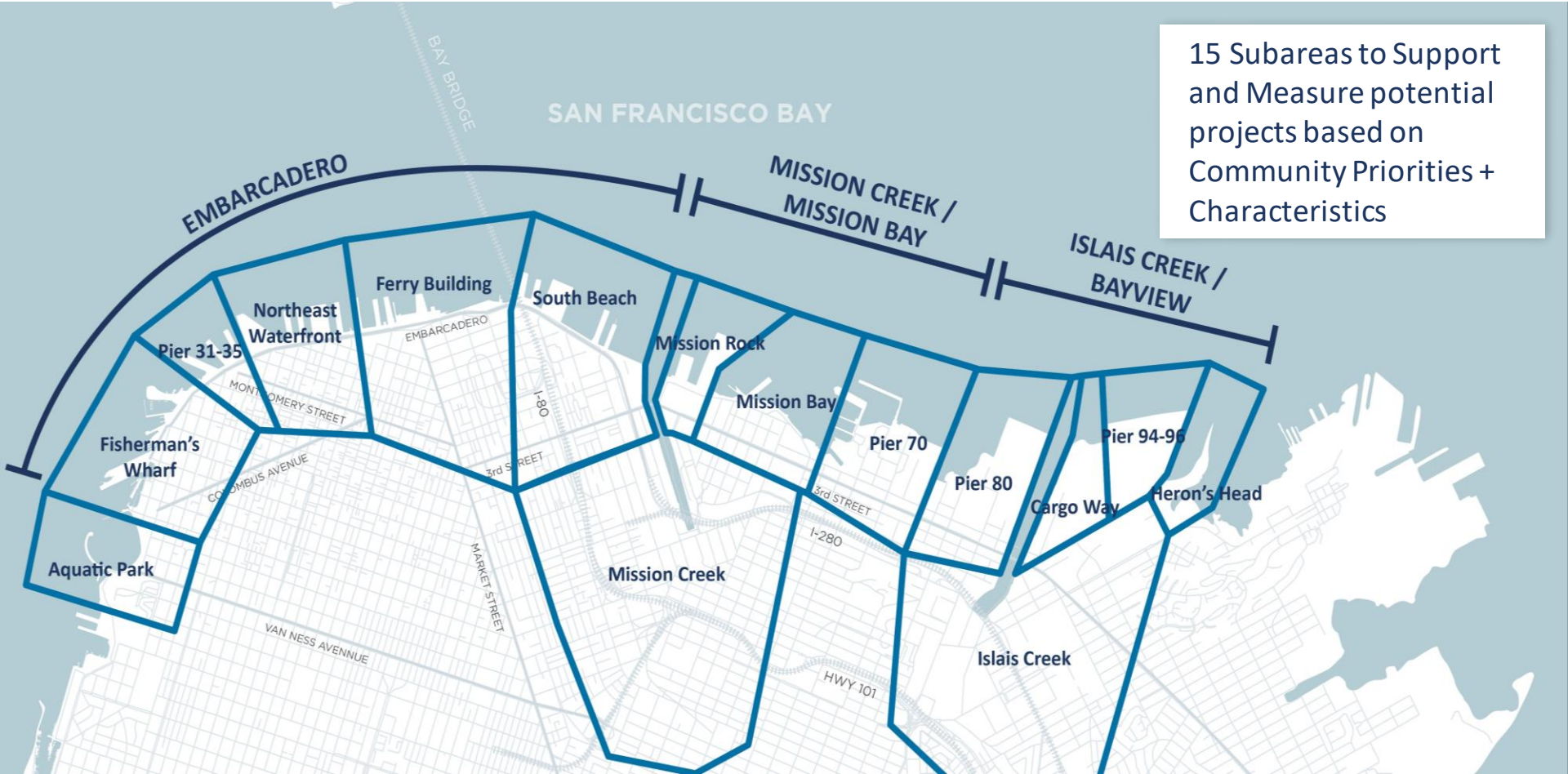
How concerned are you about sea level rise?

- **Very Concerned**
- **Somewhat Concerned**
- **Not Very Concerned**

How Can We Reduce the Risk?

Waterfront "measures" to reduce risk

UNITED STATES ARMY CORPS OF ENGINEERS FLOOD STUDY AREA

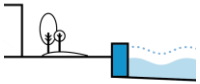


HOW CAN WE REDUCE FLOOD RISK?

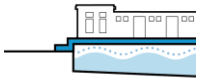
Measures to Reduce Flood

Physical and Policy

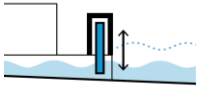
Levees



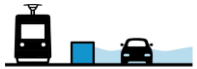
Seawalls



Raised Marine Structures



Tide Gates



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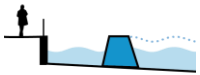
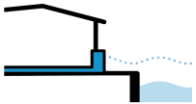
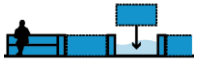


Breakwaters



Building Adaptations



Deployables

Ecological

Ecological Marine Structures

Ecological Features

Aquatic Habitat

Ecological Shorelines

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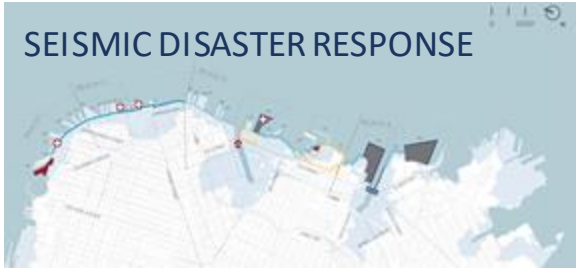
HOW WILL WE DECIDE HOW TO REDUCE THE RISK?

For Each of the 15 Subareas We Have Identified:

- Community, city, and Port priorities and characteristics
- Critical assets and facilities
- Shoreline conditions and character
- Feasible ways to reduce seismic and current and future flood risk

HOW WILL WE DECIDE HOW TO REDUCE THE RISK?

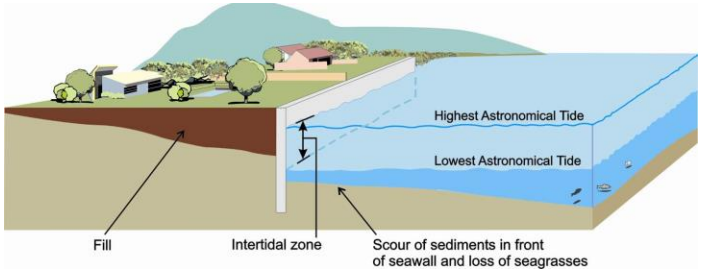
Focused Array Themes



HOW WILL WE REDUCE THE RISK?

Process for Developing Alternatives and Strategies

- Build upon community, City and Port priorities
- Understand existing and future conditions and characteristics
- Use repetition or multiple iterations to test out measures and strategies and obtain input
- Understand the above by ensuring everyone is at the table



FLOOD STUDY FIRST DRAFT OF ALTERNATIVES

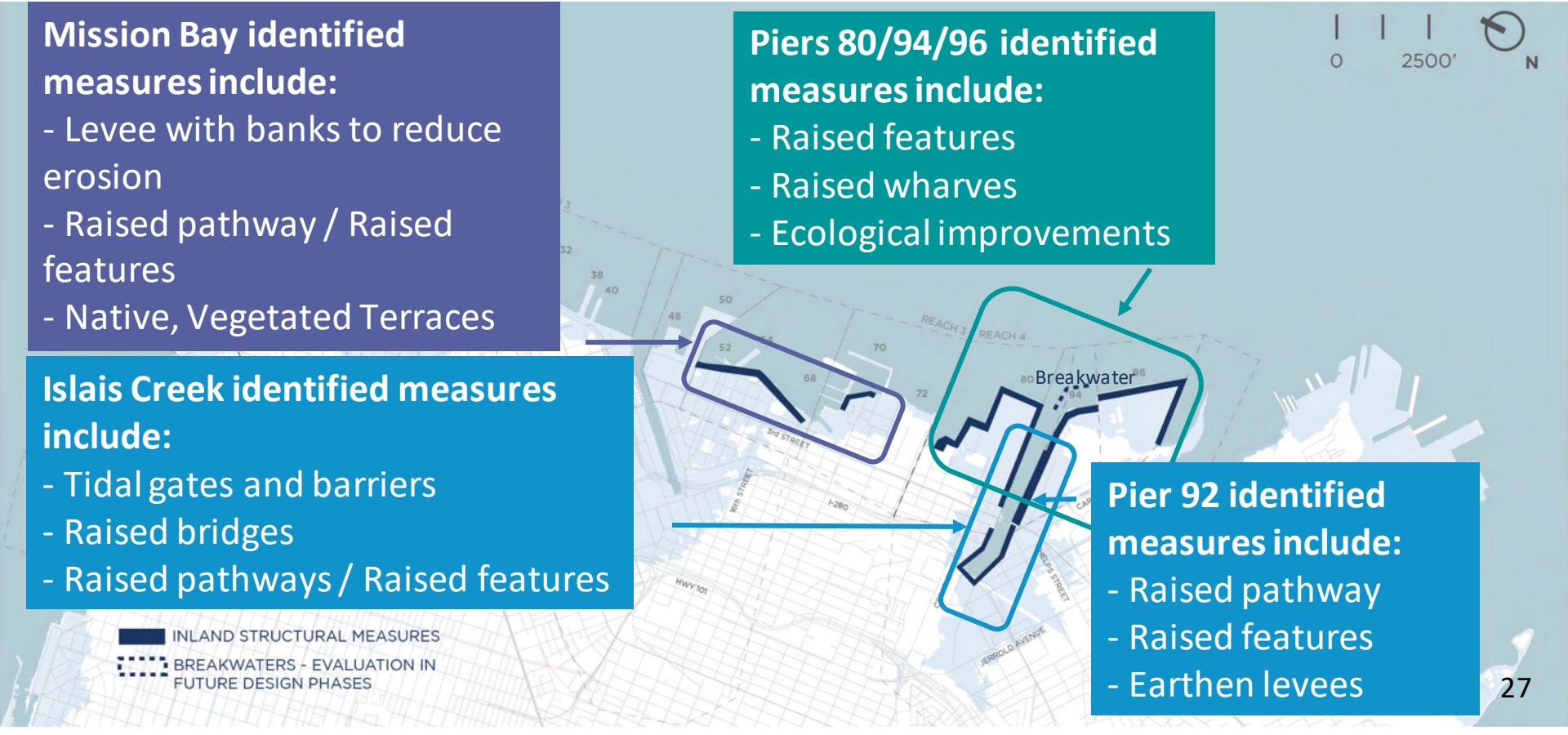
Physical Measures Applied to the Southern Waterfront

Mission Bay identified measures include:
- Levee with banks to reduce erosion
- Raised pathway / Raised features
- Native, Vegetated Terraces

Islais Creek identified measures include:
- Tidal gates and barriers
- Raised bridges
- Raised pathways / Raised features

Piers 80/94/96 identified measures include:
- Raised features
- Raised wharves
- Ecological improvements

Pier 92 identified measures include:
- Raised pathway
- Raised features
- Earthen levees

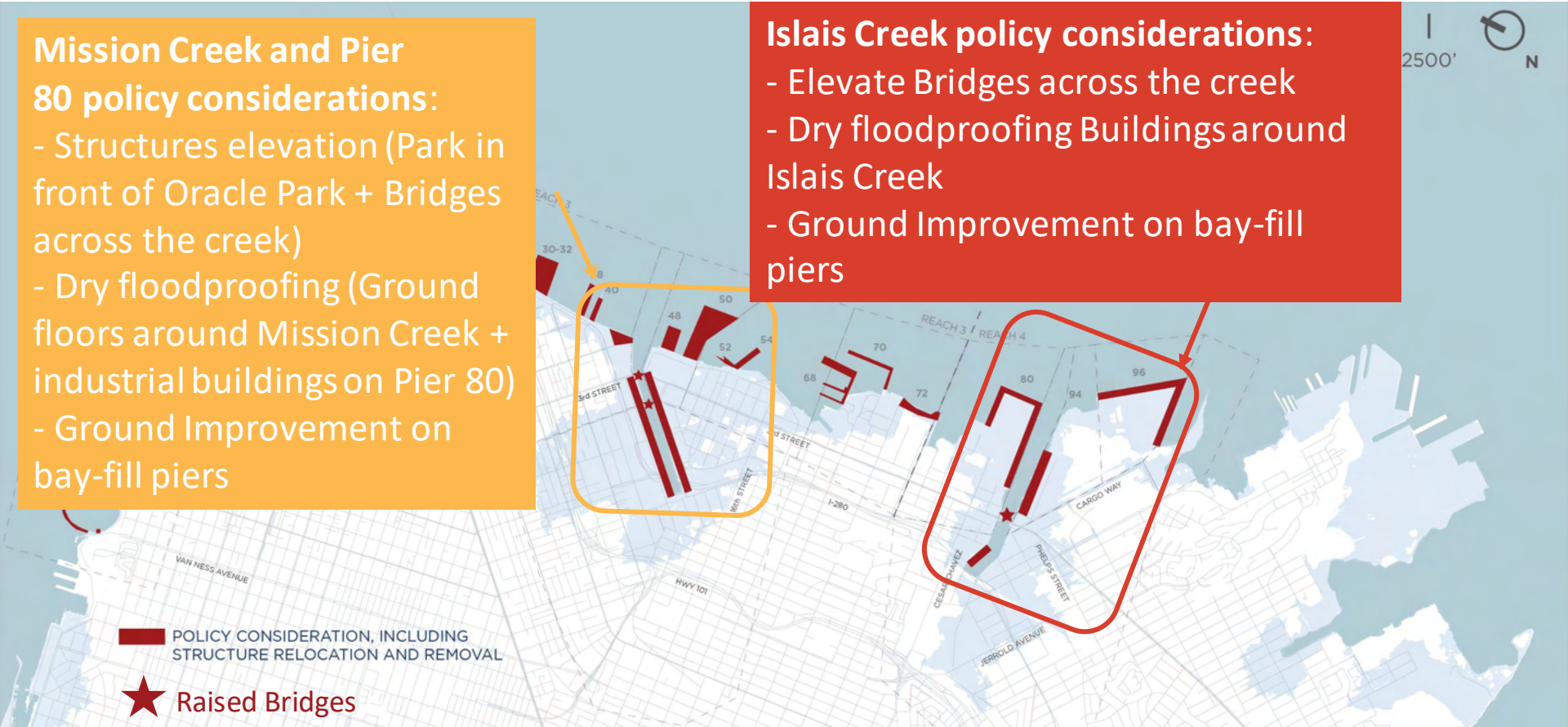


FLOOD STUDY FIRST DRAFT OF ALTERNATIVES

Non-Structural Measures Applied to the Southern Waterfront

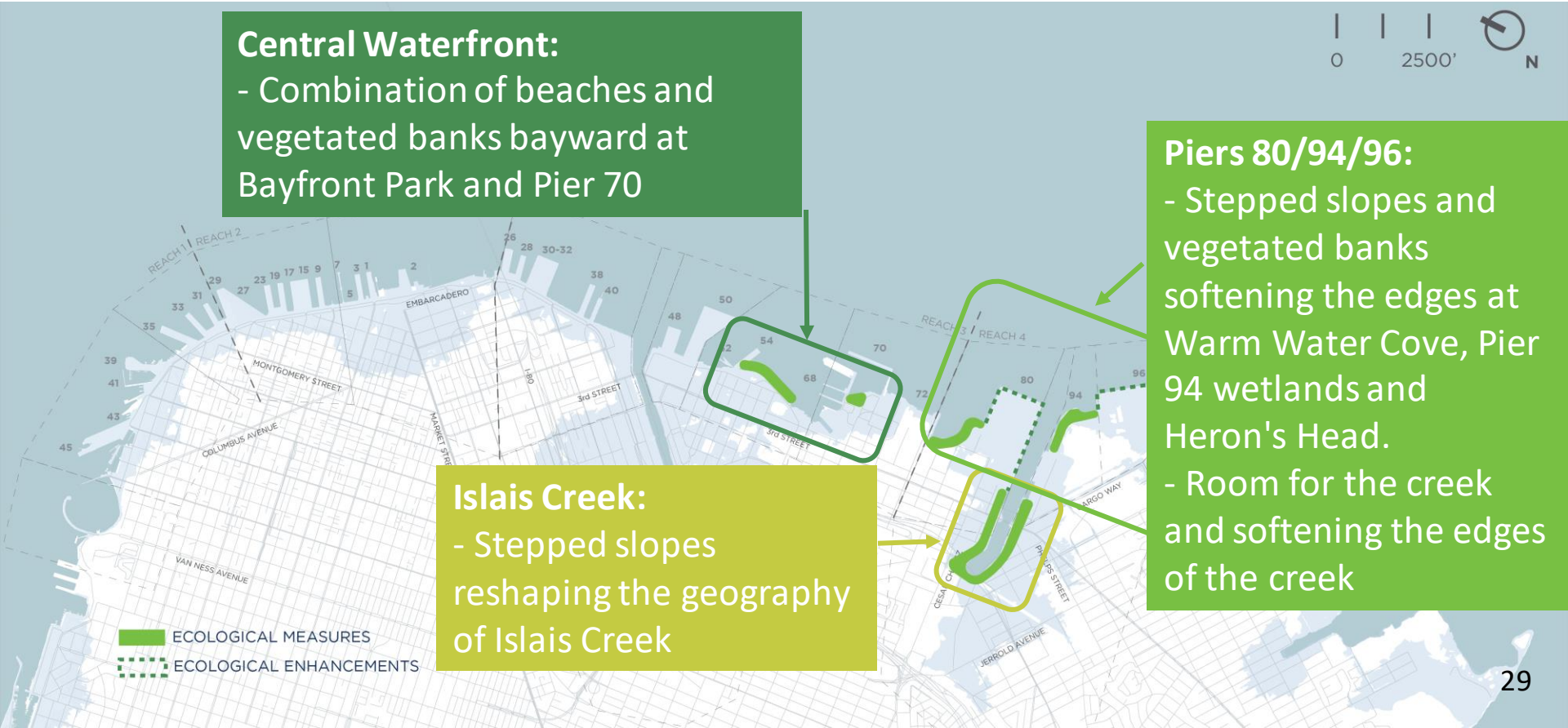
Mission Creek and Pier 80 policy considerations:
- Structures elevation (Park in front of Oracle Park + Bridges across the creek)
- Dry floodproofing (Ground floors around Mission Creek + industrial buildings on Pier 80)
- Ground Improvement on bay-fill piers

Islais Creek policy considerations:
- Elevate Bridges across the creek
- Dry floodproofing Buildings around Islais Creek
- Ground Improvement on bay-fill piers



FLOOD STUDY FIRST DRAFT OF ALTERNATIVES

Nature Based Measures Applied to the Southern Waterfront



LET'S TAKE A QUICK POLL

What Matters Most to You?

- **Design Life and Risk Reduced** – How long a project will provide risk reduction before requiring replacement? How much of the risk is being reduced and for how long?

- **Cost** – How much will a project cost? How does this compare with the design life?

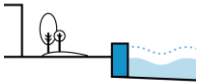
- **Multiple functions** – Does the project provide multiple benefits? Public open space and flood risk reduction? Transportation improvements and risk reduction?

HOW CAN WE REDUCE FLOOD RISK?

Measures to Reduce Flood

Physical and Policy

Levees



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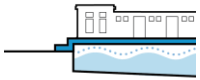

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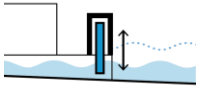

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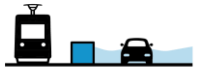

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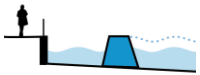

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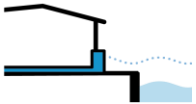

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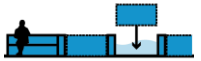

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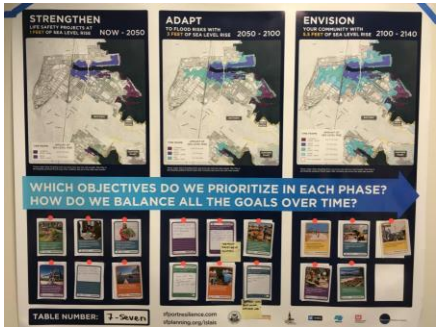
Stakeholder Engagement

What We've Heard from Islais Creek / Bayview

FEEDBACK ON GEOGRAPHIC PROGRAM GOALS

Islais Creek / Bayview Feedback



- Prioritize homes, including low-income housing
- Prioritize environmental concerns
- Ensure anti-displacement is centered in any work
- Broad support for the Embarcadero Seawall Program as addressing risk is important to the entire City, including the Bayview
- That said, prioritize resilience projects in the southern waterfront
- Continue engagement along the Port's entire 7.5 mile jurisdiction

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HOW THIS ENGAGEMENT EFFORT INFORMED THE WRP

Community Input Helped Refine WRP

1

Community feedback affirmed focus on **life safety & emergency response** and offered ideas for evolving how we understand "inspiring an adaptable waterfront":

- Connecting
- Accessible
- Supporting jobs, housing, seniors & youth

2

Community feedback affirmed the Port goals and encouraged:

- Transparency
- Accountability
- Engagement
- **Prioritize assets most loved by the community and most important to the city**
- Select projects that responsibly use tax dollars

3

Community feedback on evaluation criteria affirmed the Port's key focus on life safety and disaster response

- **"Put people first"**
- Assets and services most prioritized: housing, disaster recovery facilities, utilities, and businesses
- Key focus on transportation assets

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Next Steps

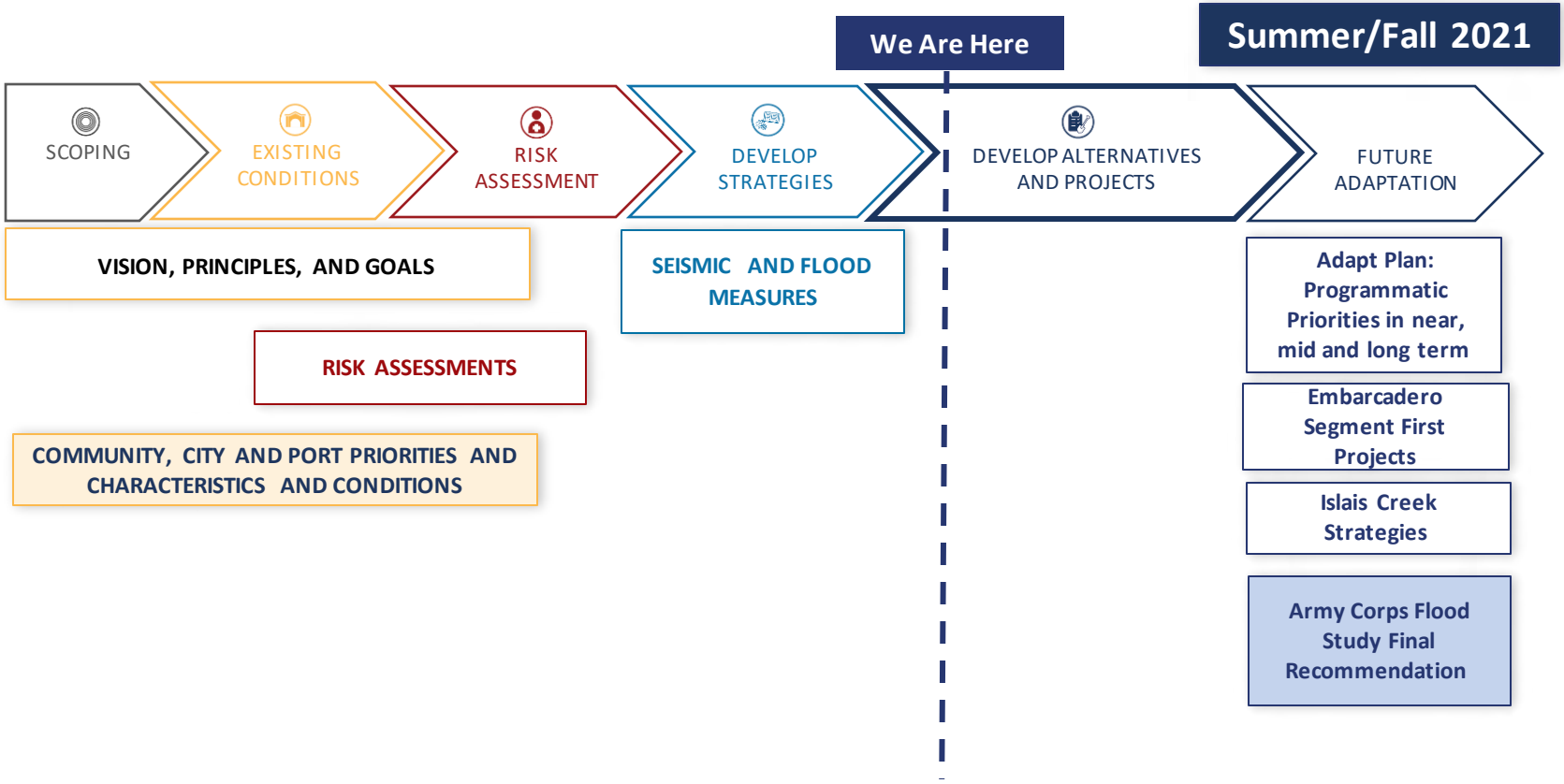
What's Next for the Waterfront Resilience Program?

EMBARCADERO SEAWALL PROGRAM

Program Overview

- **Project Area:** Fisherman's Wharf to Mission Creek
- **Timing:** 2017 to 2021 project planning followed by implementation / construction
- **Focus:** Seismic and flood risk associated with the Embarcadero Seawall
- **Funding:** $425 million General Obligation Bond passed in November 2018

WATERFRONT RESILIENCE PROGRAM STEPS



JOB AND CAREER OPPORTUNITIES

Coming Soon...

Job Opportunities May Include:

- Pile Drivers
- Welders
- Laborers
- Cement Masons
- Operating Engineers
- Carpenters
- Painters
- Office Engineers
- Schedulers and Document Controls
- Construction Administrative

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SMALL & LOCAL BUSINESS CONTRACT OPPORTUNITIES

Coming Soon...

Upcoming Contracts May Include:

Professional Services:

- Engineering
- Design
- Environmental
- Planning

Construction

- Demolition
- Excavation
- Pavement and sidewalk removal
- Electrical

UPCOMING COMMUNITY ENGAGEMENT

Engagement Planned Before the End of 2020 and Early 2021

- Meetings co-hosted with community-based organizations in Islais Creek / Bayview and Mission Creek / Mission Bay
- Ongoing digital engagement, including feedback on waterfront-wide measures and Waterfront Resilience Story Maps
- Ongoing tenant engagement
- Youth engagement with youth-serving organizations that serve citywide youth

Thank You!

Presenter Name and Contact Info

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Waterfront Resilience Program