

Waterfront Resilience Program Update

With APRI

December 2, 2020



Waterfront Resilience Program

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 gather 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!

LET'S TAKE A QUICK POLL

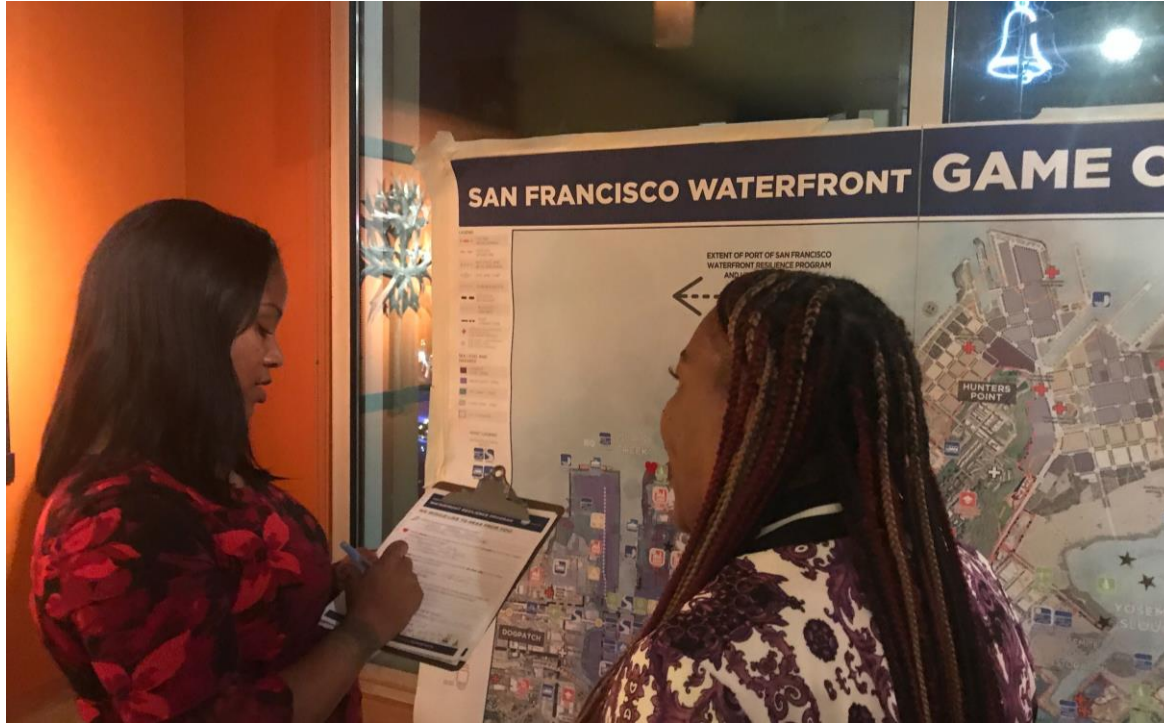
We want to hear from you!

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

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



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



USACE FLOOD RESILIENCY STUDY

Overview and Key Highlights

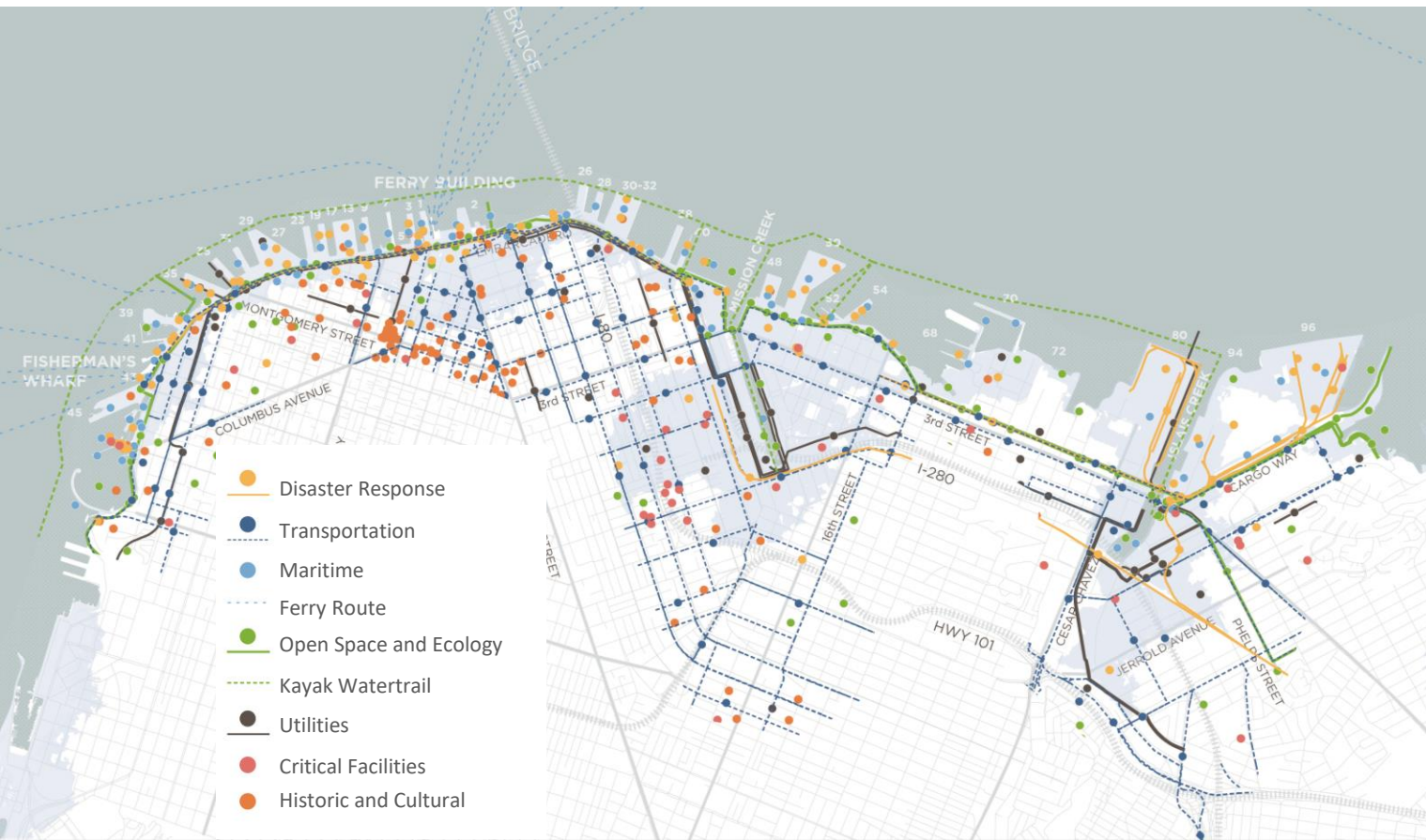


- Port is local sponsor
- 5 to 6 year study
- Flood risk assessment
- Robust community and stakeholder input
- If USACE finds a Federal interest and Congress authorizes a Project:

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

USACE FLOOD RESILIENCE STUDY ASSESSMENT

Study Wide



Assets at risk include more than:

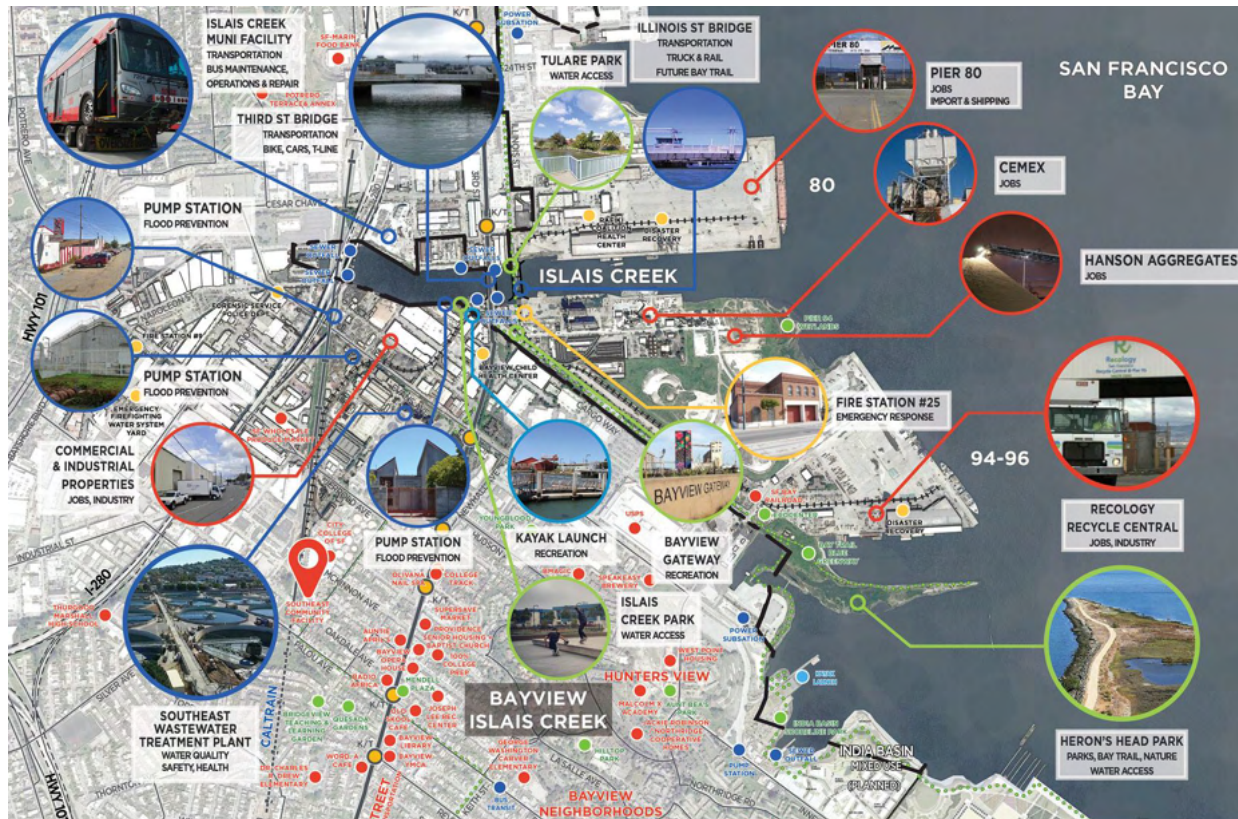
- 40 miles of roadway
- 25 miles of muni & cable car track
- 5 miles of freight railway
- 6 fire stations
- Dozens of other critical facilities
- 11,000 jobs
- 360,000 regional commuters
- 2,600 residential and commercial buildings
- 13,500 residents, 58% people of color
- Wastewater functions for 580,000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

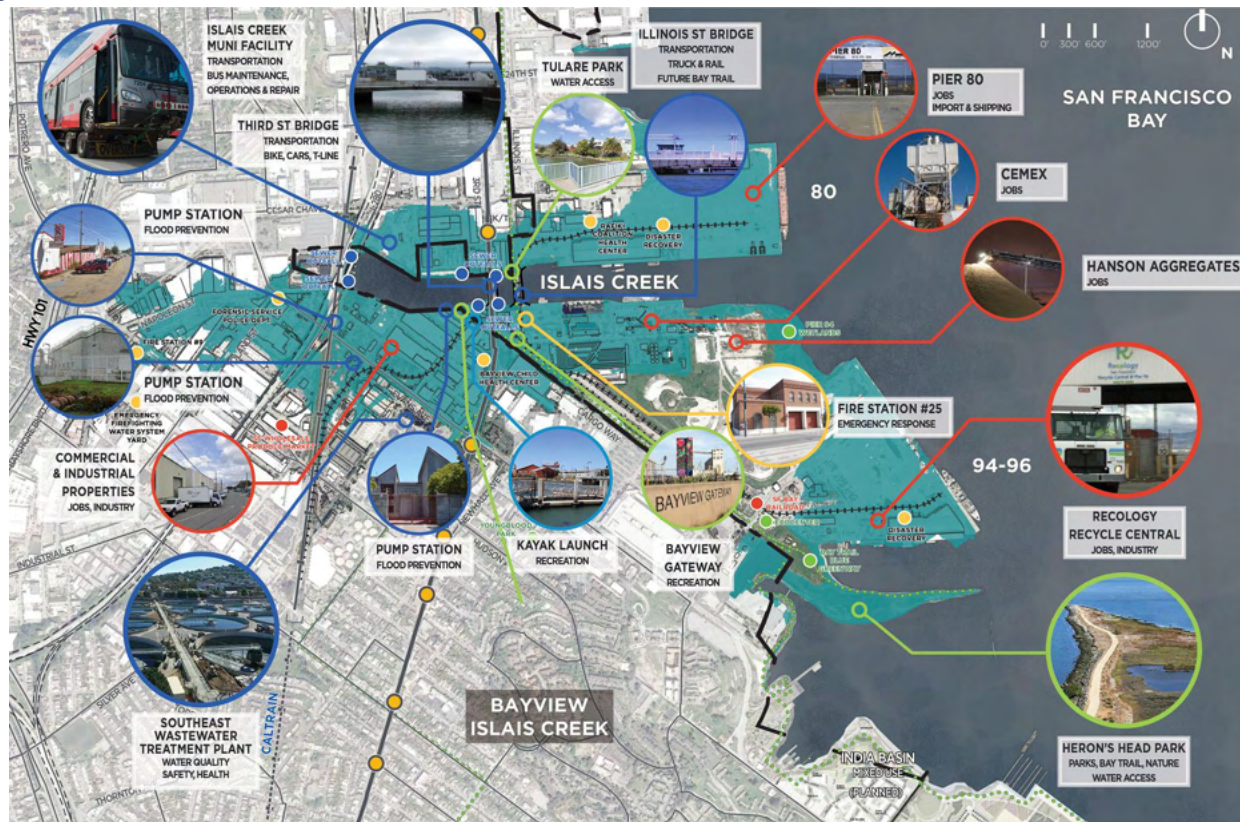


100 years flood event

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?

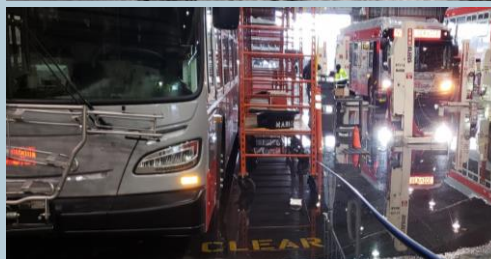
- **Very Concerned**
- **Somewhat Concerned**
- **Not Very Concerned**

Islais Creek Adaptation Strategy

Update



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

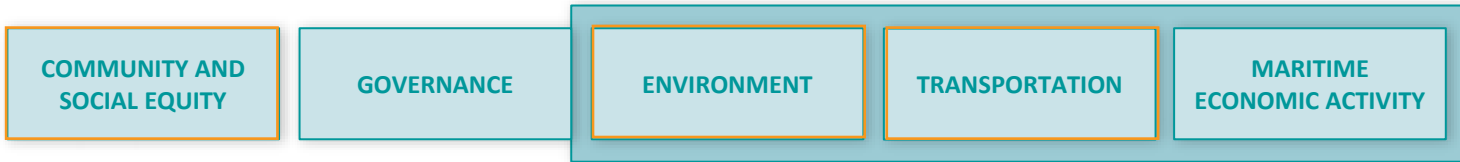


Greater **number and diversity of jobs** in the project area

Flood Study: 6 Focused Array Themes



Islais Creek: 5 goals = 3 exploratory scenarios



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

SEPT		OCT				NOV					DEC				JAN				FEB			
21	28	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	1	8	15	22

<i>Tasks & Deliverables</i>																							
District-Scale: Theme-Based Scenarios																							
District Scale: Preferred Concept																							
Asset-Specific Strategies (Port & SFMTA)																							
Shared Engagement (Port Flood Study)																							
Implementation & Financing Report																							
Economic Impact Analysis (Maritime Assets)																							



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

Measures and Alternatives Development

Introducing Improvements or “Measures” for Consideration Along the Waterfront



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



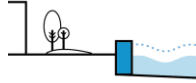
WATERFRONT-WIDE FLOOD MEASURES

Draft Flood Improvements Under Consideration by the Port

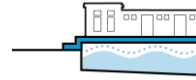
Physical



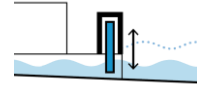
Levees



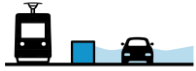
Seawalls



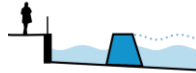
Raised Marine Structures



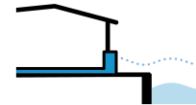
Tide Gates



Floodwalls



Breakwaters



Building Adaptations



Deployables

Ecological



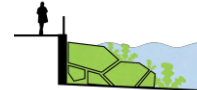
Ecological Marine Structures



Ecological Features



Aquatic Habitat



Ecological Shorelines

ALTERNATIVES DEVELOPMENT

Overview



SUBAREA MATERIAL AND MEASURES

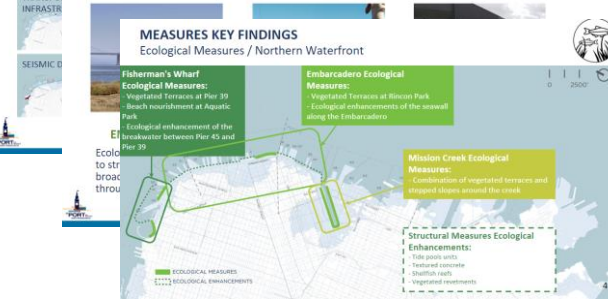
Includes information critical to alternatives development, including Problems and Objectives, Flood and Seismic Hazards, Stakeholder Input, Applicable Measures and Unique Characteristics of a subarea.

FOCUSED ARRAY THEMES

Introduction and Overview by Measure Classes

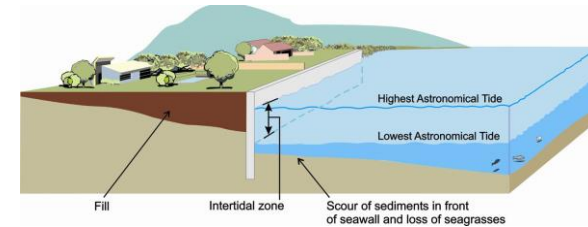
ECOLOGICAL ASSETS AND SERVICES HISTORICAL AND CULTURAL • A theme is a planning tool to

OVERALL KEY FINDINGS FROM FOCUSED ARRAY DEVELOPMENT



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



Mission Bay identified measures include:

- Levee with revetment
- 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

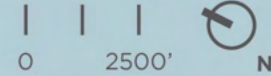
Pier 92 identified measures include:

- Raised pathway
- Raised features
- Earthen levees

 INLAND STRUCTURAL MEASURES
 BREAKWATERS - EVALUATION IN FUTURE DESIGN PHASES

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)

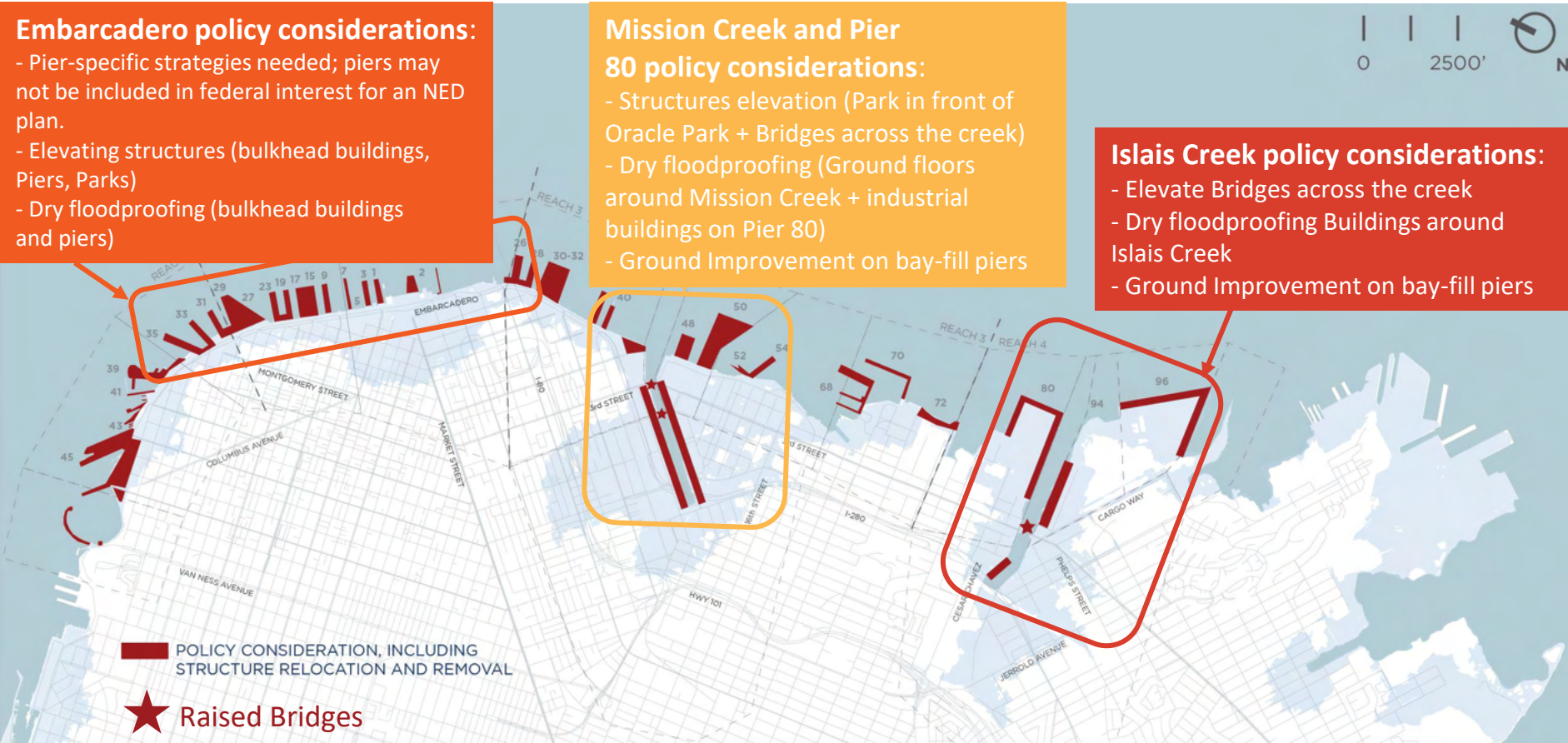
Mission Creek and Pier

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



 POLICY CONSIDERATION, INCLUDING STRUCTURE RELOCATION AND REMOVAL

 Raised Bridges

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

PARTICIPANT'S HANDOUT
TABLE NUMBER: _____

SOUTHERN WATERFRONT
DRAFT GOALS

WELCOME!
Islais Creek Adaptation Strategy
Waterfront Resilience Program,
Southern Waterfront
Workshop #2, Thursday January 30th
10 Community Health

OVERALL PROJECT GOAL:
A VISION FOR ISLAIS CREEK THAT ADAPTS TO FLOOD RISKS WHILE ENSURING HEALTHY AND RESILIENT COMMUNITIES.

A SOCIALLY AND ENVIRONMENTALLY RESILIENT NEIGHBORHOOD

- Encourage neighborhood vitality, character, and diversity with more mixed-income housing
- Adapt buildings, open spaces and services that ensure the safety and preparedness of the district and city in the case of a flood emergency
- Develop equitable solutions with and for a wide variety of community members, including youth, seniors, families and people of color

AUTHENTIC AND TRANSPARENT PUBLIC ENGAGEMENT DURING AND BEYOND THE PLANNING PHASE

- Build a long-lasting basis of support with a transparent, authentic engagement process
- Engage with youth to build long-term understanding, capacity, and ownership
- Acknowledge the significance of the newly designated African American Cultural District at Bayview Marina Park, and other cultural groups, as central to developing future vision
- Engage with youth to build long-term understanding, capacity, and ownership

A TRANSPORTATION SYSTEM THAT IS RESILIENT AND ADAPTABLE TO FLOOD RISK

- Adapt key transportation facilities to flooding to maintain operations, service and connectivity
- Improve connectivity between Bayview and other neighborhoods
- Improve pedestrian and bike connections to provide resilience during near term periods, flood events
- Create accessible transportation between the waterfront, the City and the region

A HEALTHY ENVIRONMENT FOR RESIDENTS, WORKERS, AND ECOLOGIES

- Identify solutions and strategies that benefit the entire Islais Creek watershed
- Prioritize nature-based solutions and green infrastructure to mitigate floods, improve stormwater management and support local ecology
- Improve access to and create new resilient open spaces along the creek and lay claim to it to provide much needed recreational space for the surrounding neighborhoods

A SUSTAINABLE ECONOMY THAT BENEFITS LOCAL RESIDENTS, WORKERS, AND INDUSTRIES

- Adapt flood-prone areas that currently support existing jobs, small businesses and local artists
- Support local, blue collar industrial jobs
- Use the planning process of this project as an opportunity to train and mentor individuals in the fields of design, planning and engineering
- Retain and increase women- and minority-owned businesses, community benefit organizations, worship centers, and arts and culture organizations

portofsanfrisco.com | waterfront.org/islais



STRENGTHEN
10% OF SEA LEVEL RISE NOW - 2050

ADAPT
15% OF SEA LEVEL RISE 2050 - 2100

ENVISION
20% OF SEA LEVEL RISE 2100 - 2140

**WHICH OBJECTIVES DO WE PRIORITIZE IN EACH PHASE?
HOW DO WE BALANCE ALL THE GOALS OVER TIME?**

TABLE NUMBER: 3 - Seven

portofsanfrisco.com | waterfront.org/islais

- 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

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

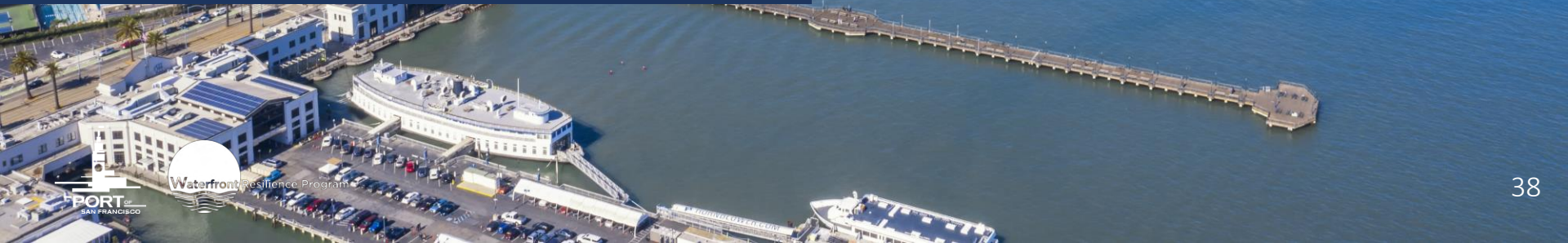
Community feedback on evaluation criteria affirmed the Port’s key focus on life safety and disaster response

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



Next Steps

What's Next for the Waterfront Resilience Program?



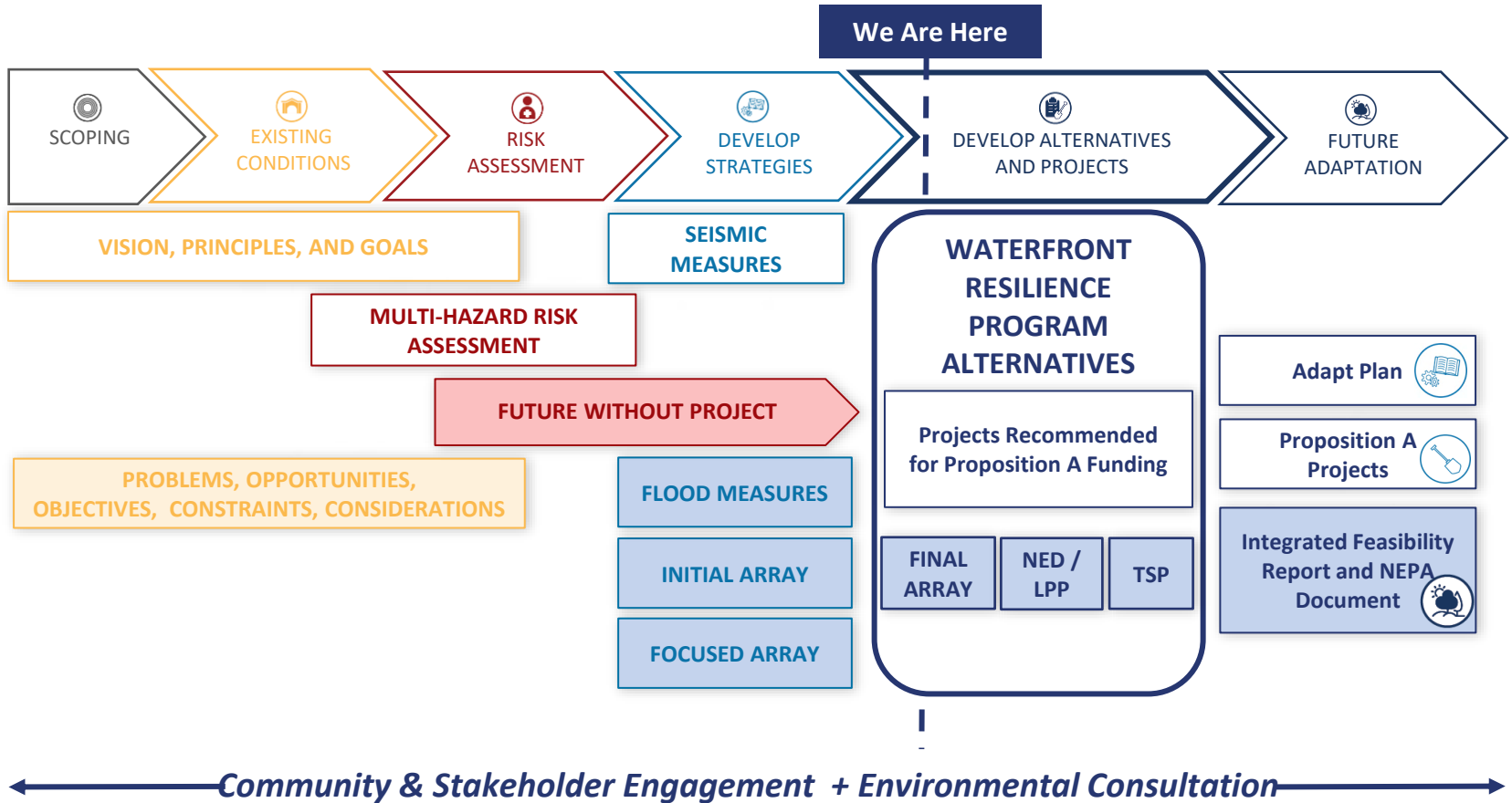
EMBARCADERO SEAWALL PROGRAM

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

A photograph of two children riding bicycles on a dirt path. The child in the foreground is wearing a red and white shirt, white shorts, and a yellow helmet. The child in the background is wearing a dark jersey with the number 30 and a dark helmet. They are riding away from the camera towards the ocean under a clear blue sky. A large, dark blue semi-transparent box is overlaid on the left side of the image, containing text.

Thank You!

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



Waterfront Resilience Program Update

With Public Housing Tenants Association

December 9, 2020



Waterfront Resilience Program

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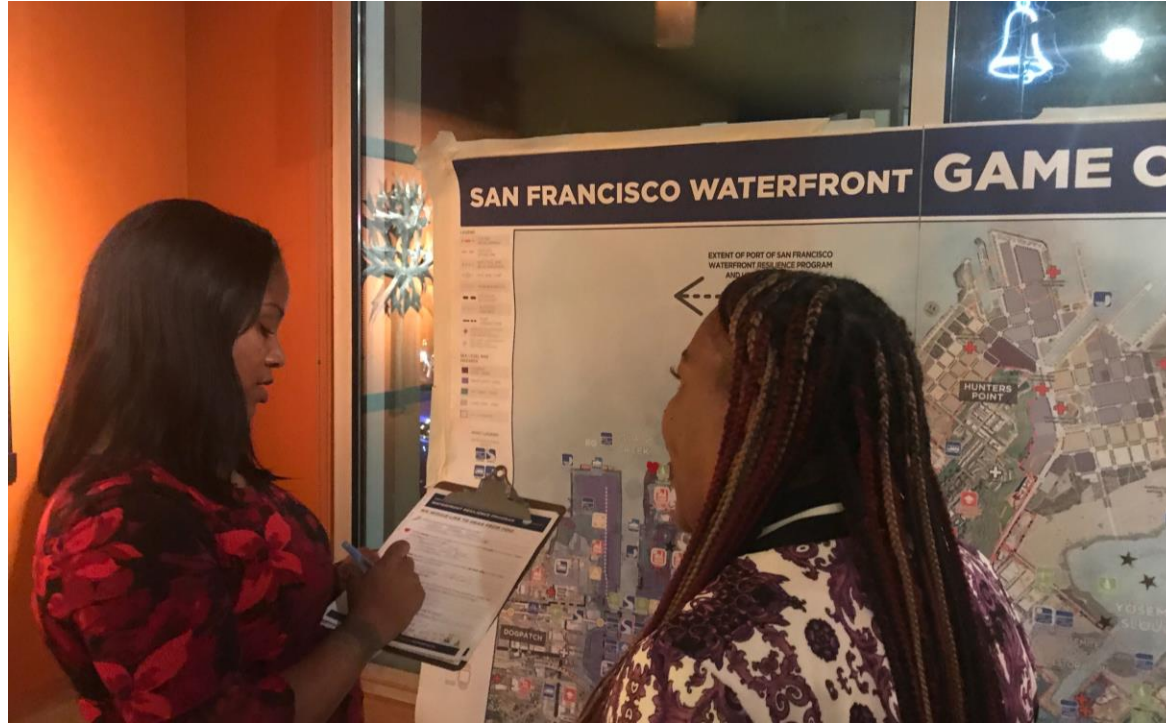
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Presentation Overview



- 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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- **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



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



WATERFRONT RESILIENCE PROGRAM EFFORTS

Program and City Resilience Projects and Efforts



INTER-AGENCY CLIMATE RESILIENCE EFFORTS



**SLR
Vulnerability &
Consequences
Assessment**



**Ocean Beach
Adaptation**



**Hazard &
Climate
Resilience
Plan**



**Climate
Action
Strategy**



**Waterfront
Resilience
Program (Flood
Study
& Seawall)**



**Strengthen
Adapt
Envision**



**Waterfront
Plan
Update**



**Islais Creek
Adaptation
Strategy**



**CR
General Plan
Updates**



**Bayview
Resilience
Strategy**



LET'S PAUSE FOR Q&A

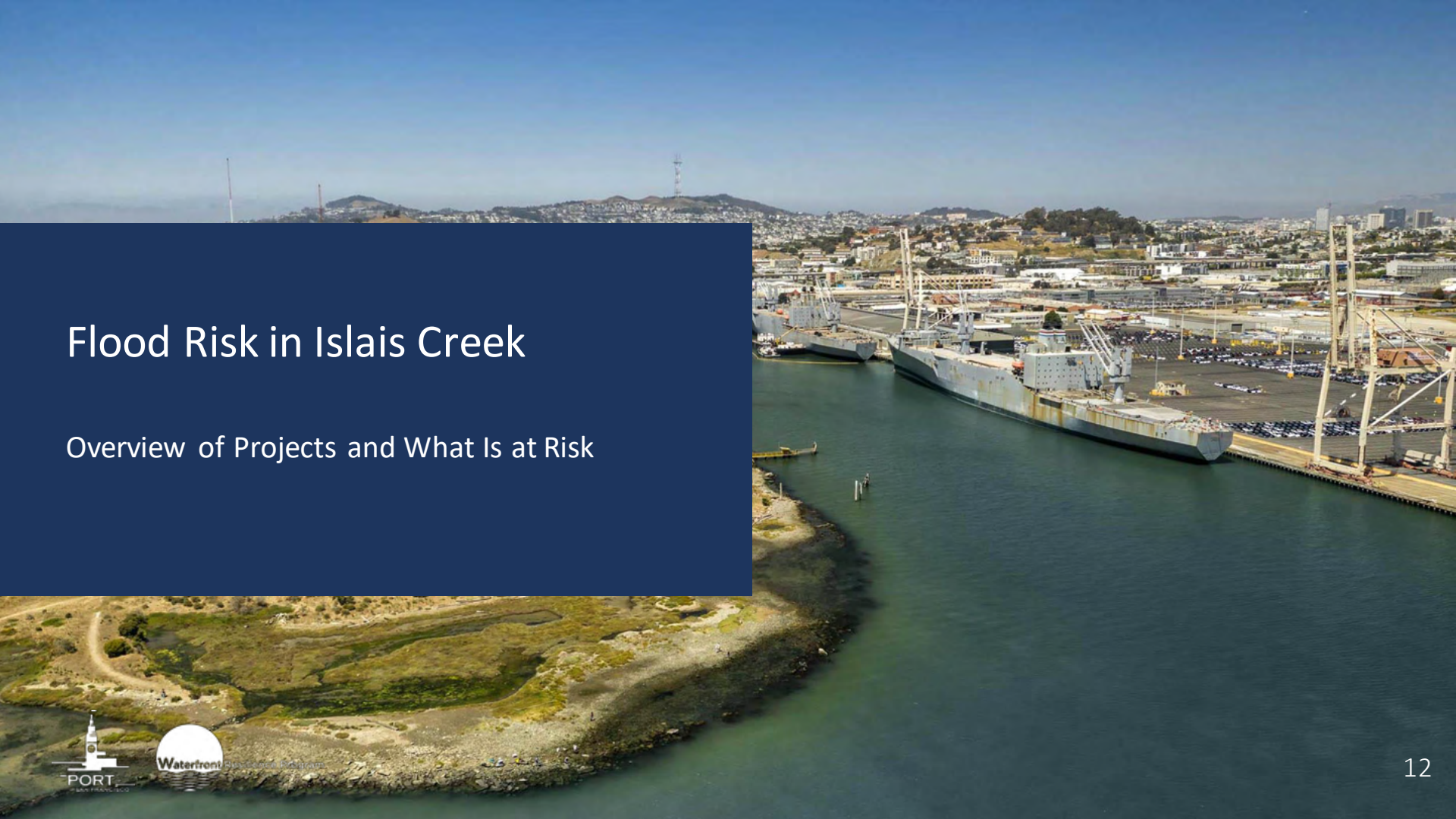
We Want to Hear from You!



- 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

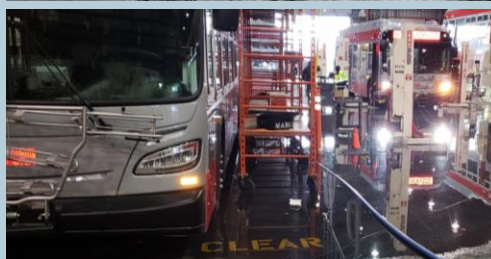
ISLAIS CREEK ADAPTATION STRATEGY

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

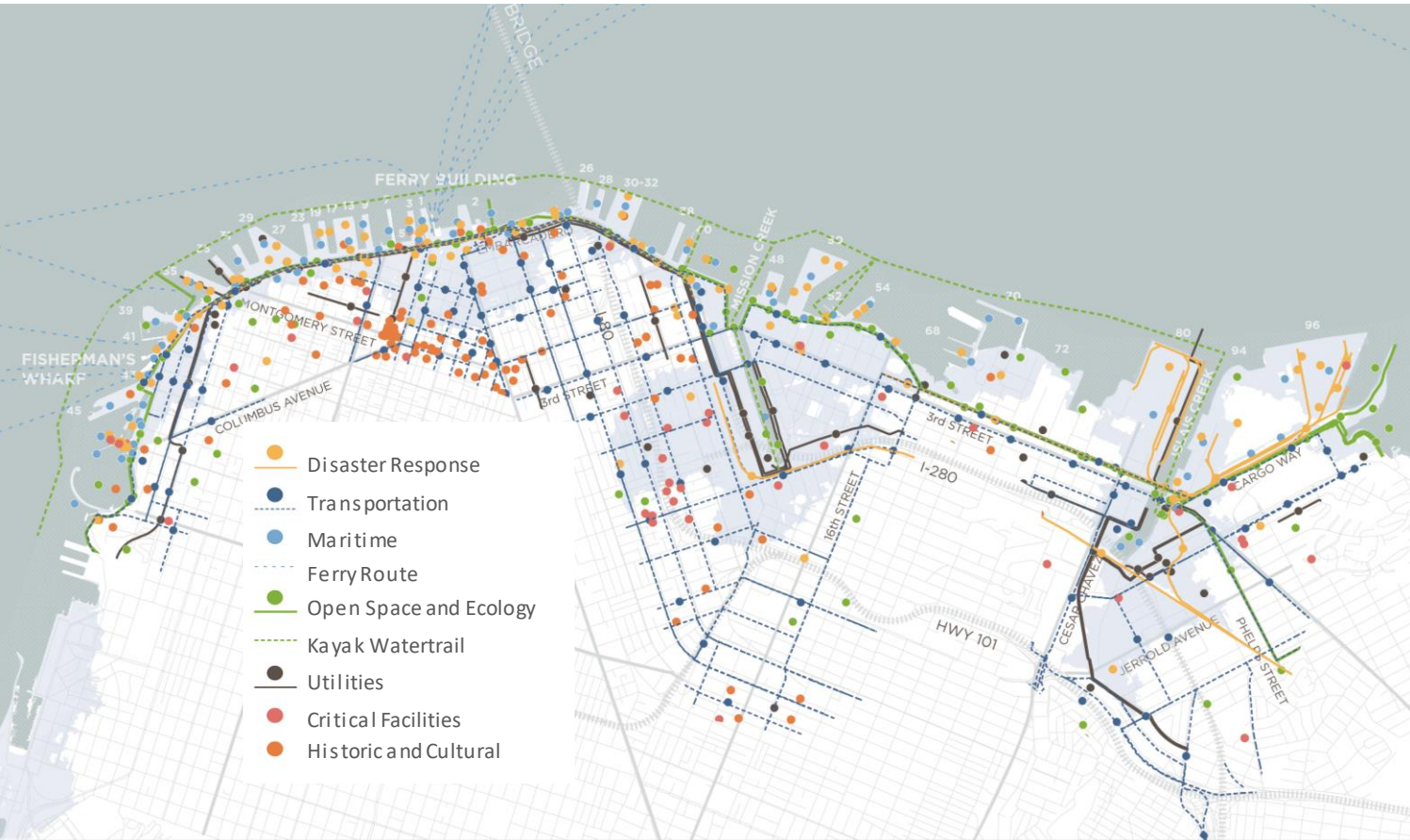


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1. A socially & environmentally resilient neighborhood
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3. A transportation system that is resilient & adaptable to flood risk
4. A Healthy environment for residents, workers & ecologies
5. A sustainable economy that benefits local residents, workers & industries

Study Wide Assets at Risk

U.S. Army Corps of Engineers Flood Resilience Study



At Risk:

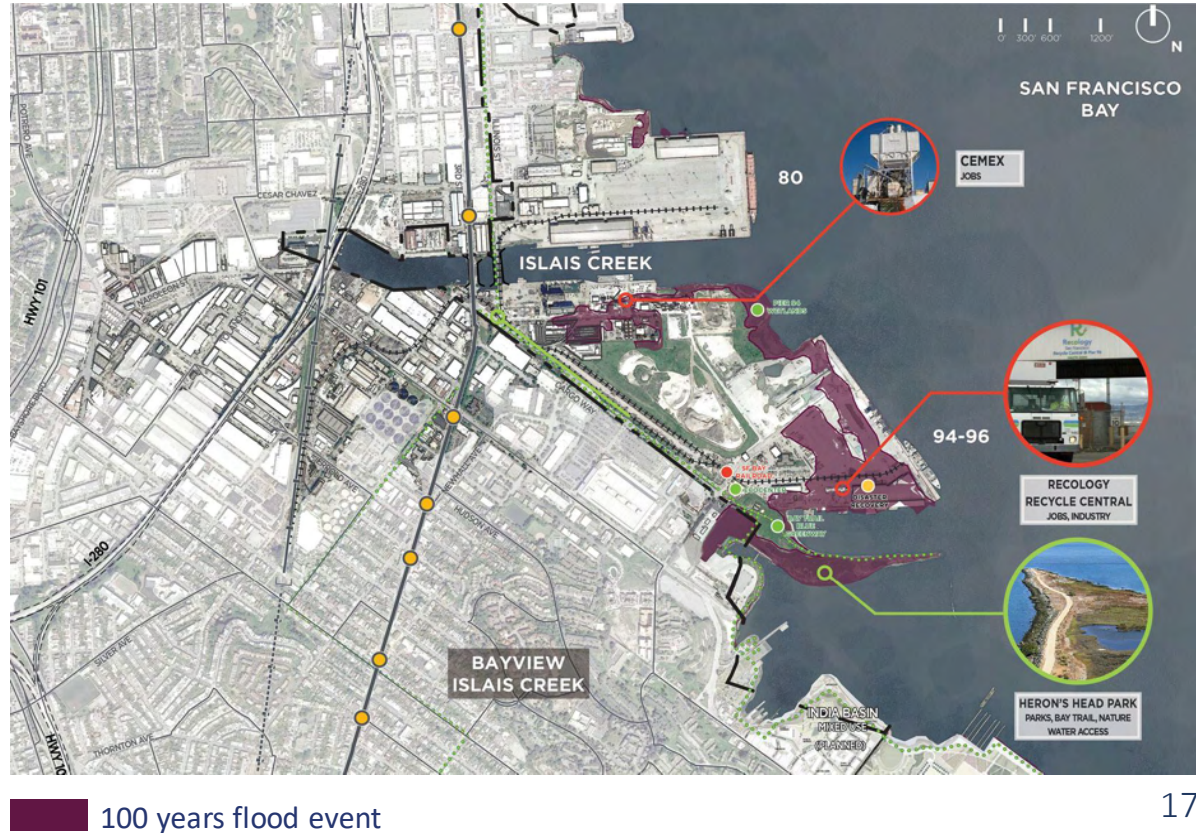
- 40 miles of roadway
- 25 miles of muni & cable car track
- 11,000 jobs
- 13,500 residents, 58% people of color
- Wastewater functions for 580,000 residents

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

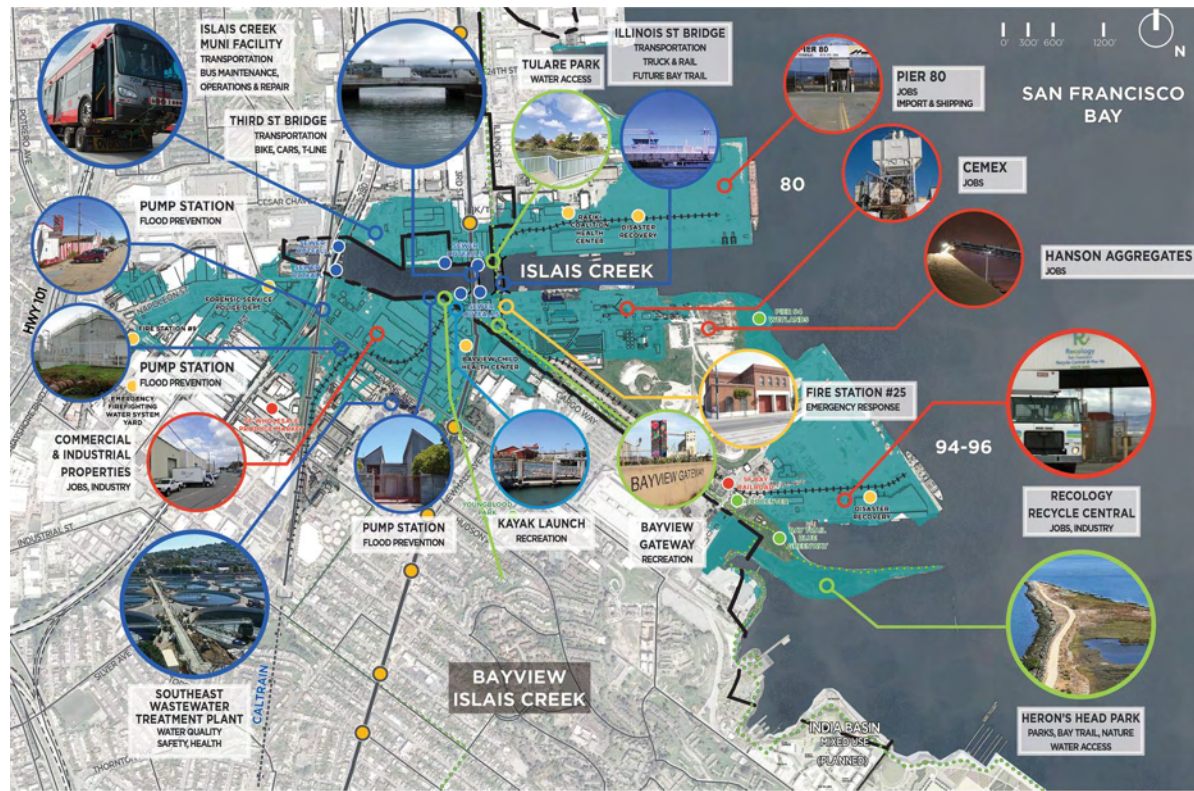


MID- TO LONG-TERM FLOOD RISK IN ISLAIS CREEK / BAYVIEW

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



100 years flood event + 3' SLR

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?

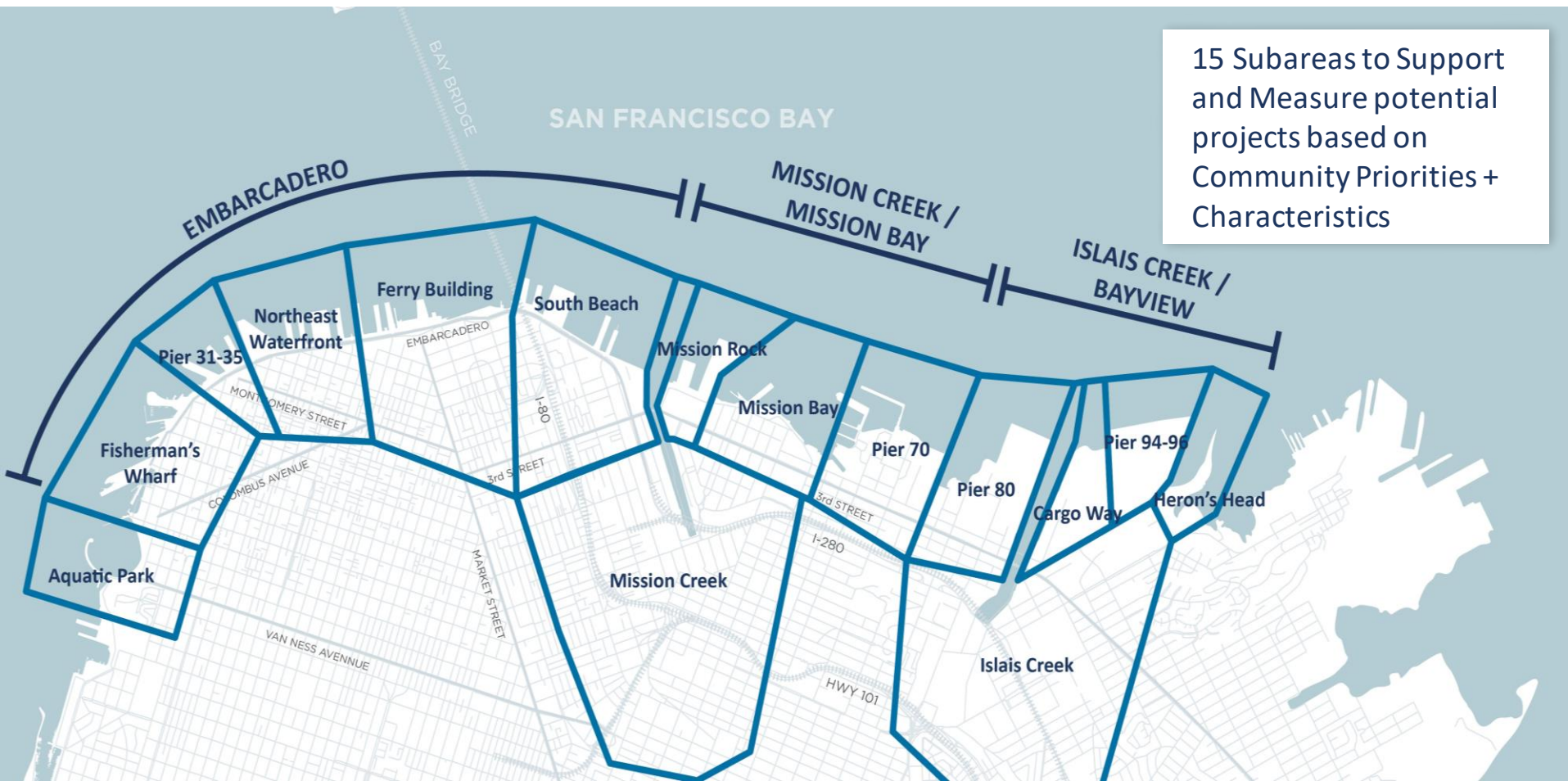
- **Very Concerned**
- **Somewhat Concerned**
- **Not Very Concerned**

How Can We Reduce the Risk?

Waterfront "measures" to reduce risk

UNITED STATES ARMY CORPS OF ENGINEERS FLOOD STUDY AREA

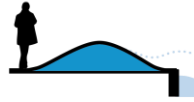
15 Subareas to Support and Measure potential projects based on Community Priorities + Characteristics



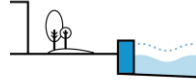
HOW CAN WE REDUCE FLOOD RISK?

Measures to Reduce Flood

Physical
and Policy



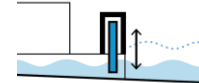
Levees



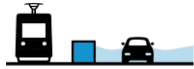
Seawalls



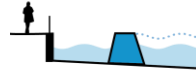
Raised Marine
Structures



Tide Gates



Floodwalls



Breakwaters



Building
Adaptations



Deployables

Ecological



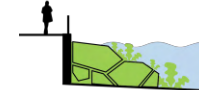
Ecological Marine
Structures



Ecological
Features



Aquatic
Habitat



Ecological
Shorelines

HOW WILL WE DECIDE HOW TO REDUCE THE RISK?

For Each of the 15 Subareas We Have Identified:

Measure Profile
Vegetated Revetment
Flood Adaptation Measure



ECOLOGICAL INFRASTRUCTURE



WATER LEVEL RANGE:
meets to surpasses

SHORELINE LOCATION:



DESIGN LIFE | **ADAPTABILITY** | **IMPACT**

Decades | Medium | Low

COASTAL FLOOD HAZARDS MITIGATED:
Enhancements can provide flood protection when:
Sea Level Rise | Storm Surge



MEASURES COMPATIBILITY:

Flood	Seismic	ECOS
Nearshore	Buttress, Lintside	
Seawall, Levee	Buttress, Liquefaction Mitigation	Ats

DESCRIPTION:
Plantings can be added to the voids between a new or existing concrete blocks (ACB), marine mattress barge piles in low wave and/or weak flow location.

CONSIDERATIONS:

- Design should anticipate migration pathways or repositioning as sea levels rise.

ADVANTAGES:

- Ech
- Can
- hab




Measure Profile
Super Bulkhead Wharf
Seismic Adaptation Measure



SHORELINE STABILIZATION



TYPE: Structural

SHORELINE LOCATION:



DESIGN LIFE | **ADAPTABILITY** | **IMPACT ON THE WATERFRONT** | **CONSTRUCTION COST**

75+ years | Medium | Moderate Waterside Intervention | High

SEISMIC HAZARDS MITIGATED:
Lateral Spreading | Liquefaction

SEISMIC PERFORMANCE IMPROVED:
Structures | Utilities and Transportation

MEASURES COMPATIBILITY:

Flood	Seismic
Raised Marine Structures	Liquefaction Mitigation Utility Retrofit

DESCRIPTION:
New robust wharf structure that would replace the existing bulkhead wall & wharf and be strong and stiff enough to stabilize the rock pile. This will reduce lateral spreading ground displacements to The Embarcadero, but will not stop liquefaction of the Embarcadero fill.

CONSIDERATIONS:

- The quantity and diameter of the piles would be defined by the depth of the Young Bay Mud and bedrock which varies along the waterfront.
- Measure is less effective in areas of medium to deep Young Bay Mud.

ADVANTAGES:

- Less construction impact to the Embarcadero and Promenade compared to landslide shoreline stabilization measures.
- Replace deteriorated wharf structures. Can elevate wharf for future sea level rise protection.

DISADVANTAGES:

- Construction would require closure of waterfront buildings and relocation of barges when the work occurs at an occupied pier.
- Construction duration likely longer than other shoreline stabilization measures.
- Does not mitigate liquefaction-induced settlements.




Waterfront Resilience Program | Measure Profile | Page 1

- 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

ECOLOGICAL ASSETS AND SERVICES



HISTORICAL AND CULTURAL



SEISMIC DISASTER RESPONSE



TRANSPORTATION MOBILITY
INFRASTRUCTURE



COMMUNITY COHESIVENESS



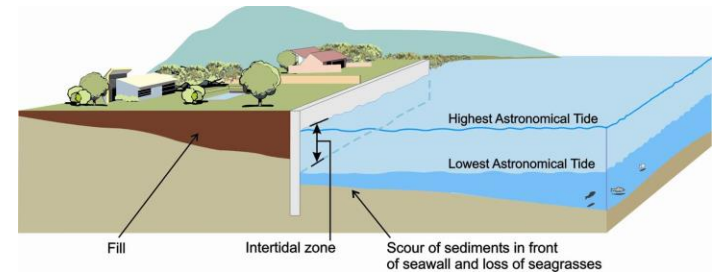
NON STRUCTURAL



HOW WILL WE REDUCE THE RISK?

Process for Developing Alternatives and Strategies

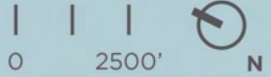
- Build upon community, City and Port priorities
- Understand existing and future conditions and characteristics
- Use repetition or multiple iterations to test out measures and strategies and obtain input
- Understand the above by ensuring everyone is at the table





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:

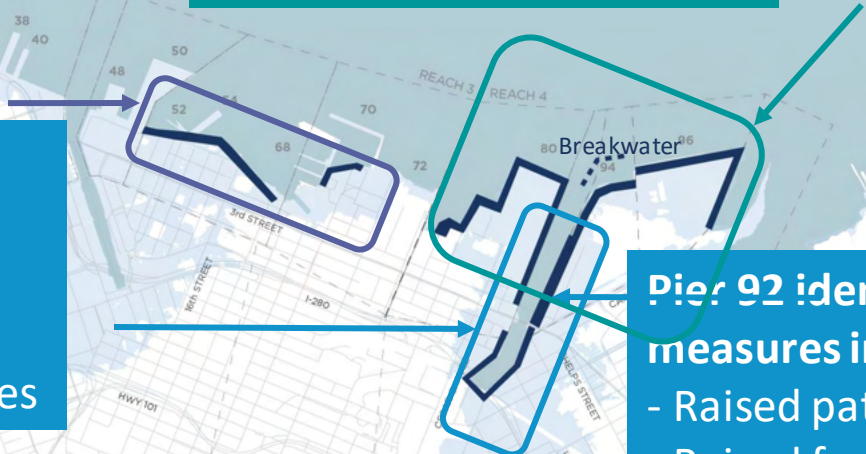
- Raised features
- Raised wharves
- Ecological improvements


Islais Creek identified measures include:

- Tidal gates and barriers
- Raised bridges
- Raised pathways / Raised features

Pier 92 identified measures include:

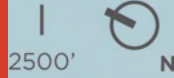
- Raised pathway
- Raised features
- Earthen levees



 INLAND STRUCTURAL MEASURES
 BREAKWATERS - EVALUATION IN FUTURE DESIGN PHASES

FLOOD STUDY FIRST DRAFT OF ALTERNATIVES

Non-Structural Measures Applied to the Southern Waterfront

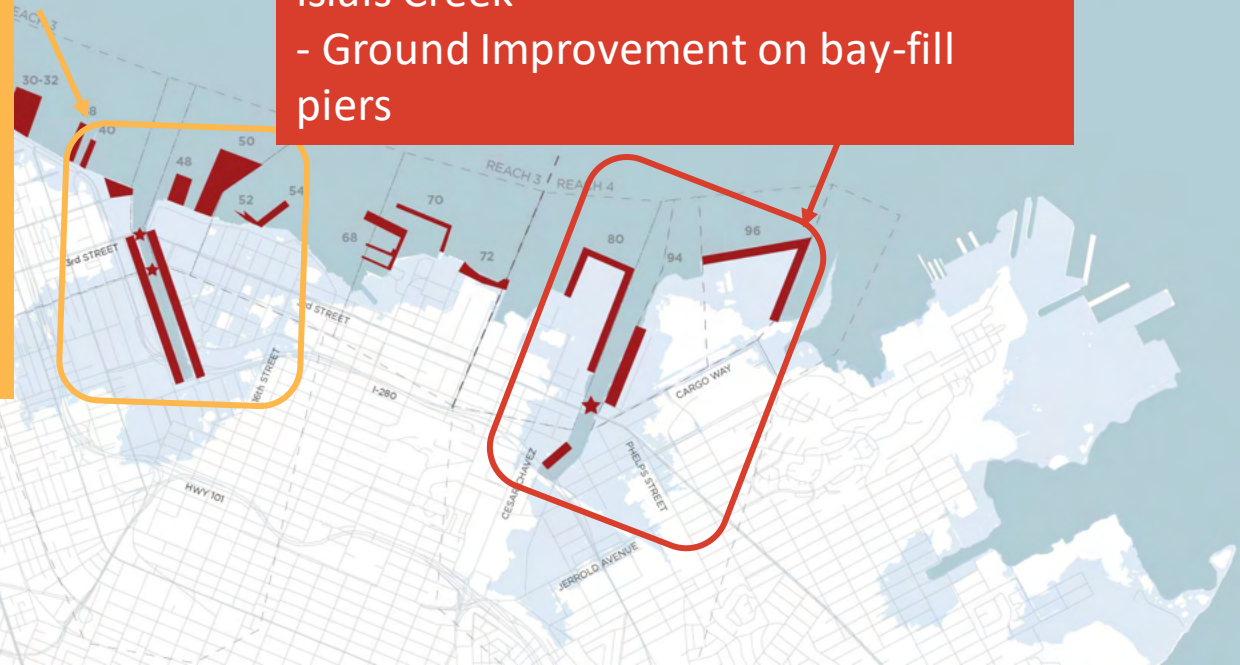


Mission Creek and Pier 80 policy considerations:

- 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



 POLICY CONSIDERATION, INCLUDING STRUCTURE RELOCATION AND REMOVAL

 Raised Bridges

FLOOD STUDY FIRST DRAFT OF ALTERNATIVES

Nature Based Measures Applied to the Southern Waterfront



Central Waterfront:

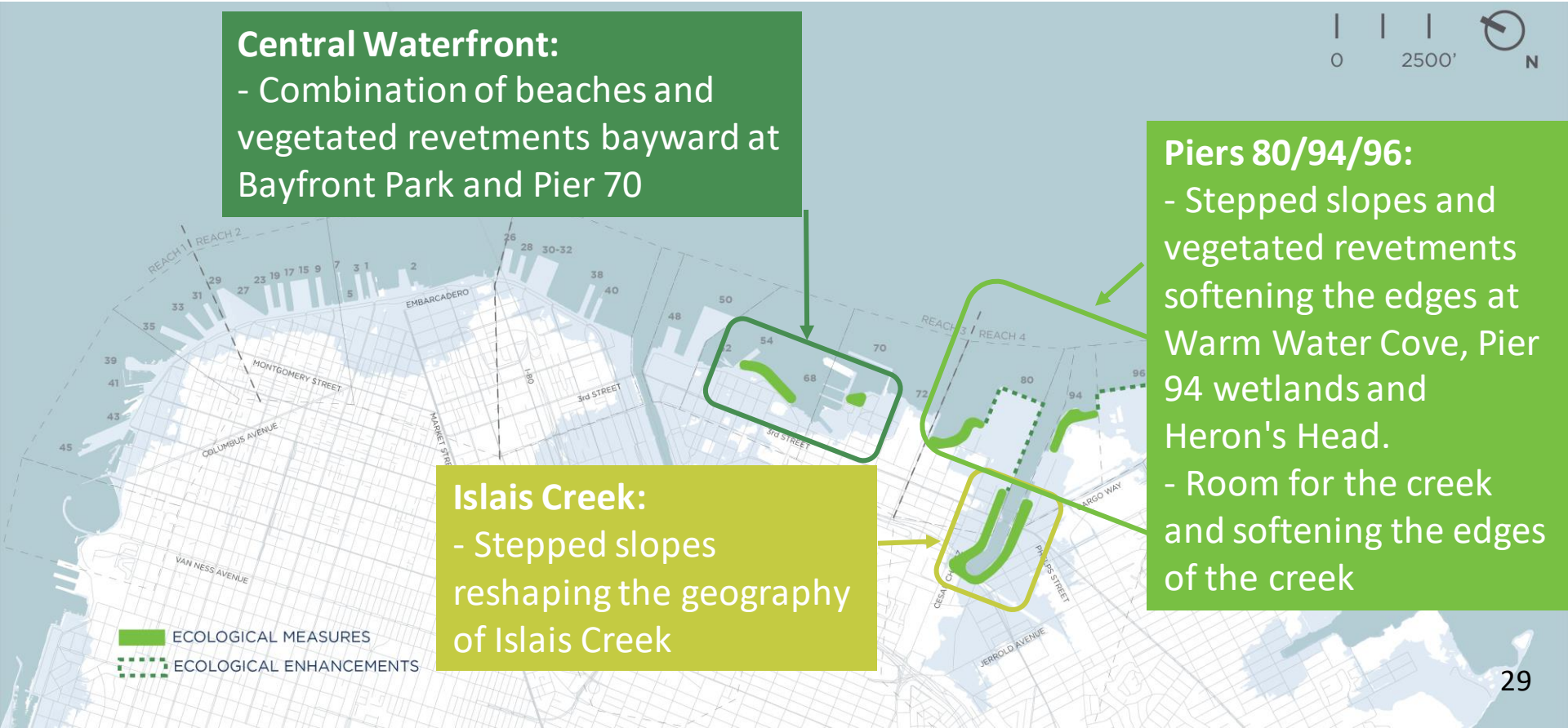
- Combination of beaches and vegetated revetments bayward at Bayfront Park and Pier 70

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

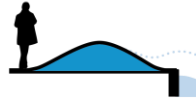
What Matters Most to You?

- **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?

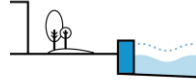
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Measures to Reduce Flood

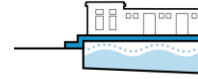
Physical
and Policy



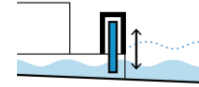
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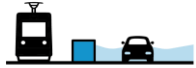
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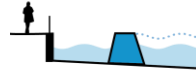
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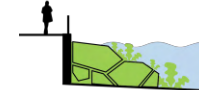
Ecological Marine
Structures



Ecological
Features



Aquatic
Habitat



Ecological
Shorelines

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

PARTICIPANT'S HANDOUT
TABLE NUMBER:

SOUTHERN WATERFRONT DRAFT GOALS

WELCOME!
Islais Creek Adaptation Strategy
Waterfront Resilience Program,
Southern Waterfront
Workshop #2, Tuesday January 30th
8:00 Community Hall

OVERALL PROJECT GOAL:
A VISION FOR ISLAIS CREEK THAT ADAPTS TO FLOOD RISKS WHILE ENSURING HEALTHY AND RESILIENT COMMUNITIES

COMMUNITY & SOCIAL RESILIENCE

- Encourage neighborhood vitality, character, and diversity with more mixed-income housing
- Adapt buildings, open spaces and services that ensure the safety and preparedness of the district and city in the case of a flood emergency
- Develop equitable solutions with and for a wide variety of community members, including youth, seniors, families and people of color

EXPERIENCE

AUTHENTIC AND TRANSPARENT PUBLIC ENGAGEMENT DURING AND BEYOND THE PLANNING PHASE

- Build a long-lasting basis of support with a transparent, authentic engagement process
- Engage with youth to build long-term understanding, capacity, and stewardship
- Acknowledge the significance of the nearby designated African American Cultural District of Bayview Hunters Point, and other cultural groups, as central to developing future visions
- Engage with youth to build long-term understanding, capacity, and stewardship

TRANSPORTATION

A TRANSPORTATION SYSTEM THAT IS RESILIENT AND ADAPTABLE TO FLOOD RISK

- Adapt key transportation facilities to flooding to maintain operations, service and connectivity
- Improve connectivity between Bayview and other neighborhoods
- Improve pedestrian and bike connections to provide resilience during near term periods, flood events
- Create accessible transportation between the waterfront, the City and the region

ENVIRONMENT

A HEALTHY ENVIRONMENT FOR RESIDENTS, WORKERS, AND ECOLOGIES

- Identify solutions and strategies that benefit the entire Islais Creek watershed
- Prioritize nature-based solutions and green infrastructure to mitigate floods, improve stormwater management and support local ecology
- Improve access to and create new resilient open spaces along the creek and bay shorelines to provide much needed recreational space for the surrounding neighborhoods

ECONOMY

A SUSTAINABLE ECONOMY THAT BENEFITS LOCAL RESIDENTS, WORKERS, AND INDUSTRIES

- Adapt flood-prone areas that currently support existing jobs, small businesses and local artists
- Support local, blue collar industrial jobs
- Use the planning process of this project as an opportunity to train and mentor individuals in the fields of design, planning and engineering
- Maintain and increase of women- and minority-owned businesses, community benefit organizations, worship centers, and arts and culture organizations



STRENGTHEN
1 FT OF SEA LEVEL RISE NOW - 2050

ADAPT
2 FT OF SEA LEVEL RISE 2050 - 2100

ENVISION
3 FT OF SEA LEVEL RISE 2100 - 2140

**WHICH OBJECTIVES DO WE PRIORITIZE IN EACH PHASE?
HOW DO WE BALANCE ALL THE GOALS OVER TIME?**

TABLE NUMBER:

- 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

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

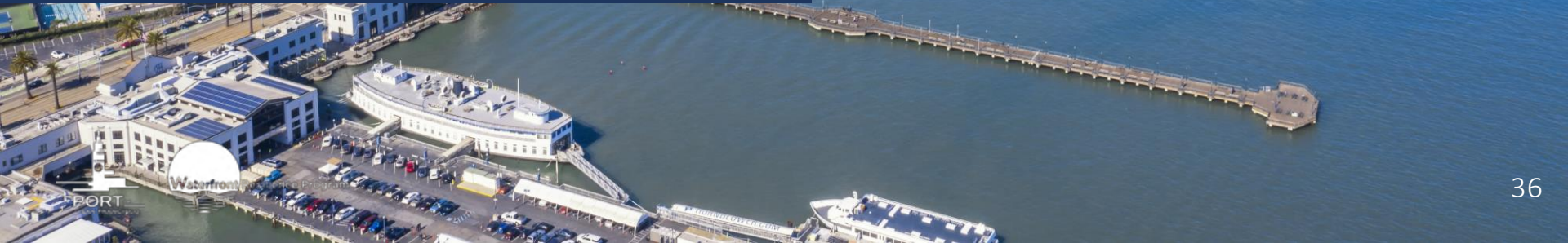
Community feedback on evaluation criteria affirmed the Port’s key focus on life safety and disaster response

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



Next Steps

What's Next for the Waterfront Resilience Program?



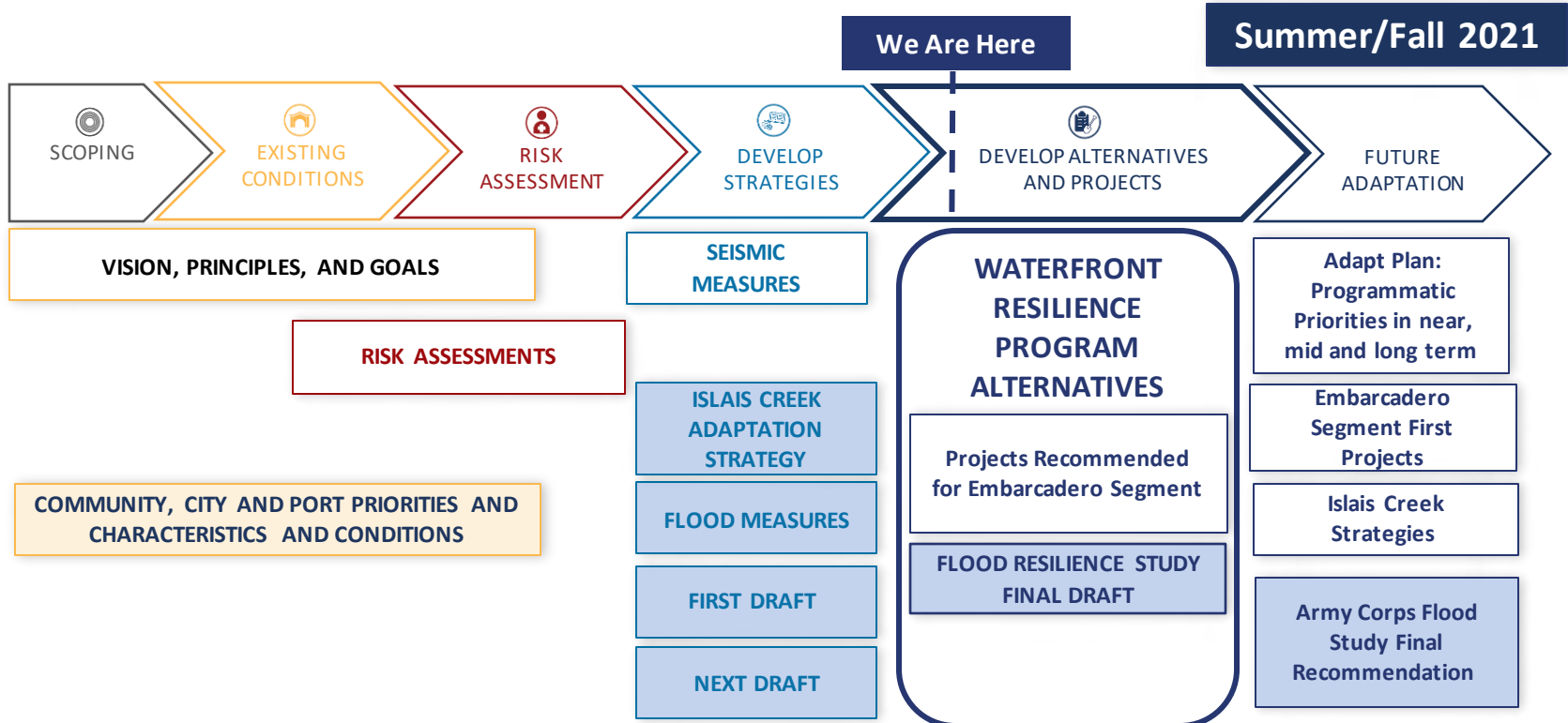
EMBARCADERO SEAWALL PROGRAM

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



← **Community & Stakeholder Engagement + Environmental Consultation** →

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

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

A photograph of two children riding bicycles on a dirt path. The child in the foreground is wearing a red and white jersey and a yellow helmet. The child in the background is wearing a dark jersey with the number 30 and a dark helmet. In the background, a large ship is docked at a port, and there are some trees and a clear blue sky.

Thank You!

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



Waterfront Resilience Program Update

St. John Missionary Baptist Church

December 10, 2020



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

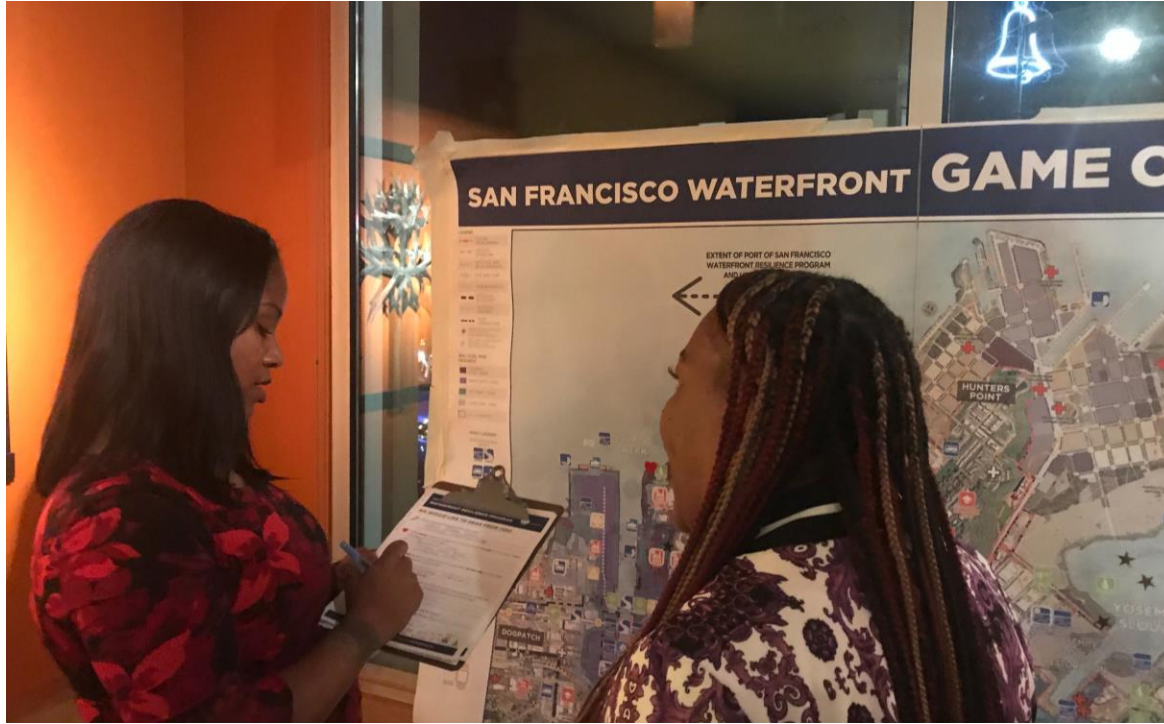
WELCOME!

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 gather 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!



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



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



WATERFRONT RESILIENCE PROGRAM EFFORTS

Program and City Resilience Projects and Efforts



INTER-AGENCY CLIMATE RESILIENCE EFFORTS



**SLR
Vulnerability &
Consequences
Assessment**



**Ocean Beach
Adaptation**



**Hazard &
Climate
Resilience
Plan**



**Climate
Action
Strategy**



**Waterfront
Resilience
Program (Flood
Study
& Seawall)**



**Strengthen
Adapt
Envision**



**Waterfront
Plan
Update**



**Islais Creek
Adaptation
Strategy**



**CR
General Plan
Updates**



**Bayview
Resilience
Strategy**



LET'S PAUSE FOR Q&A

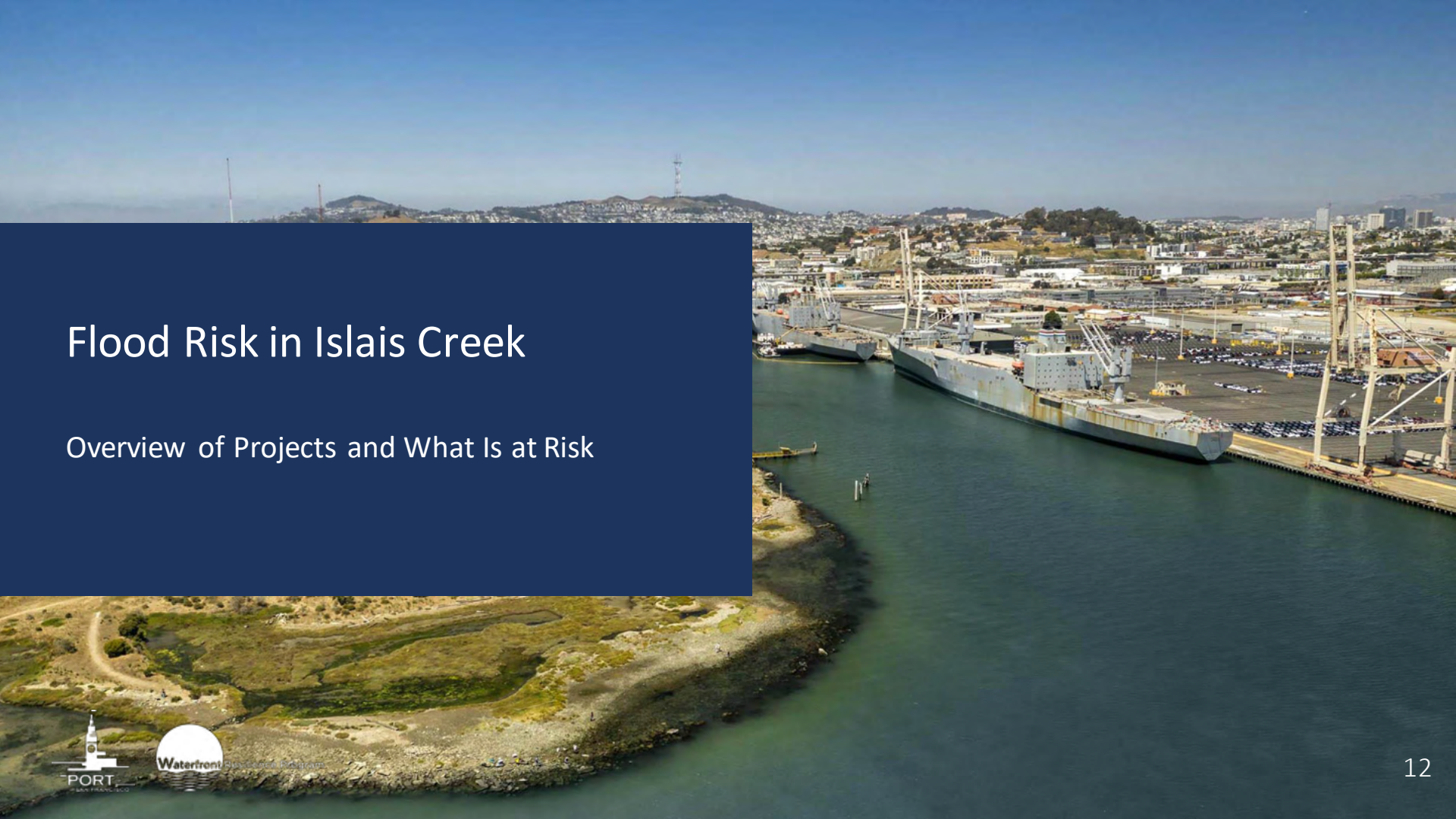
We Want to Hear from You!



- 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



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

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

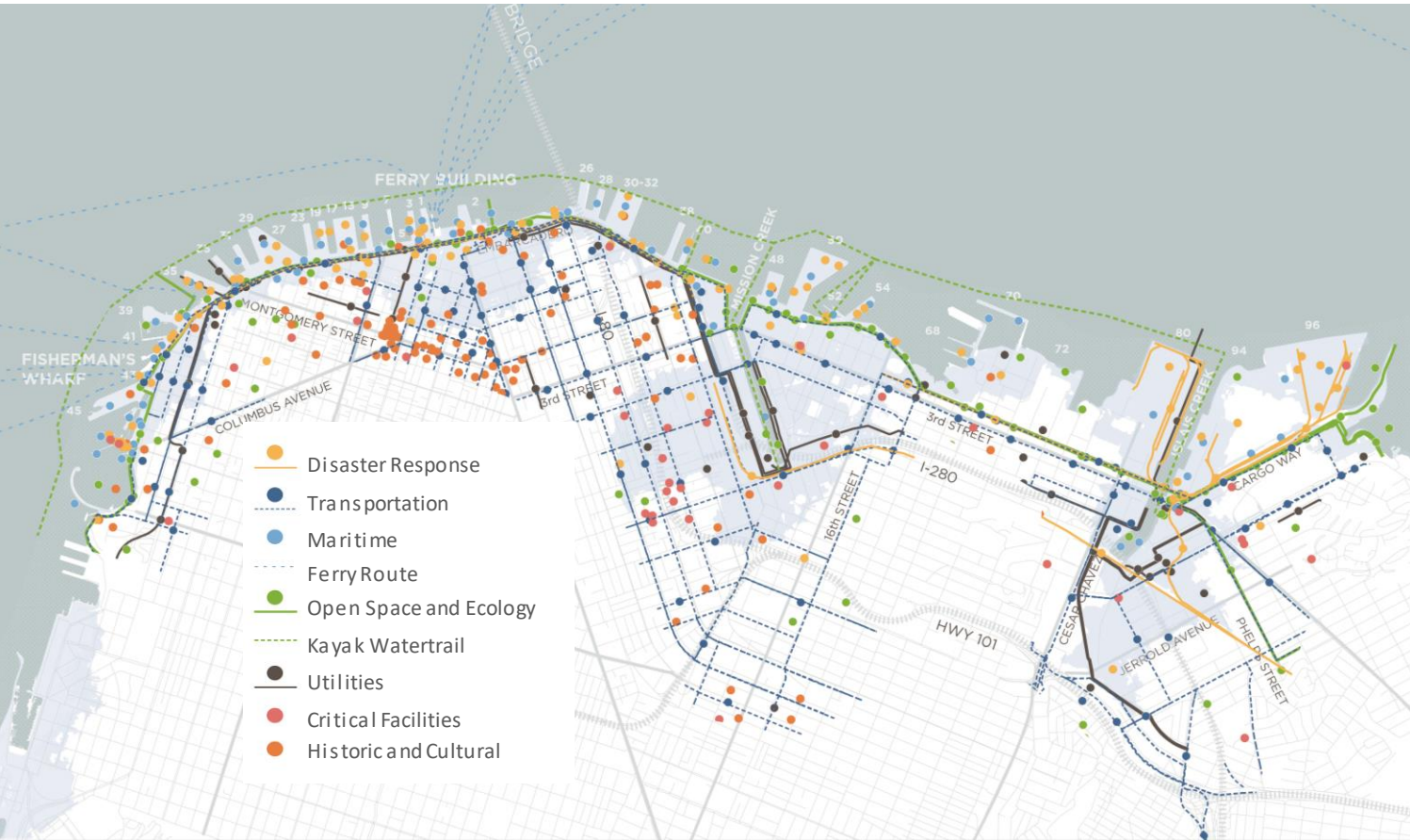


Islais Creek adapts to flood risks while ensuring healthy and resilient communities.

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
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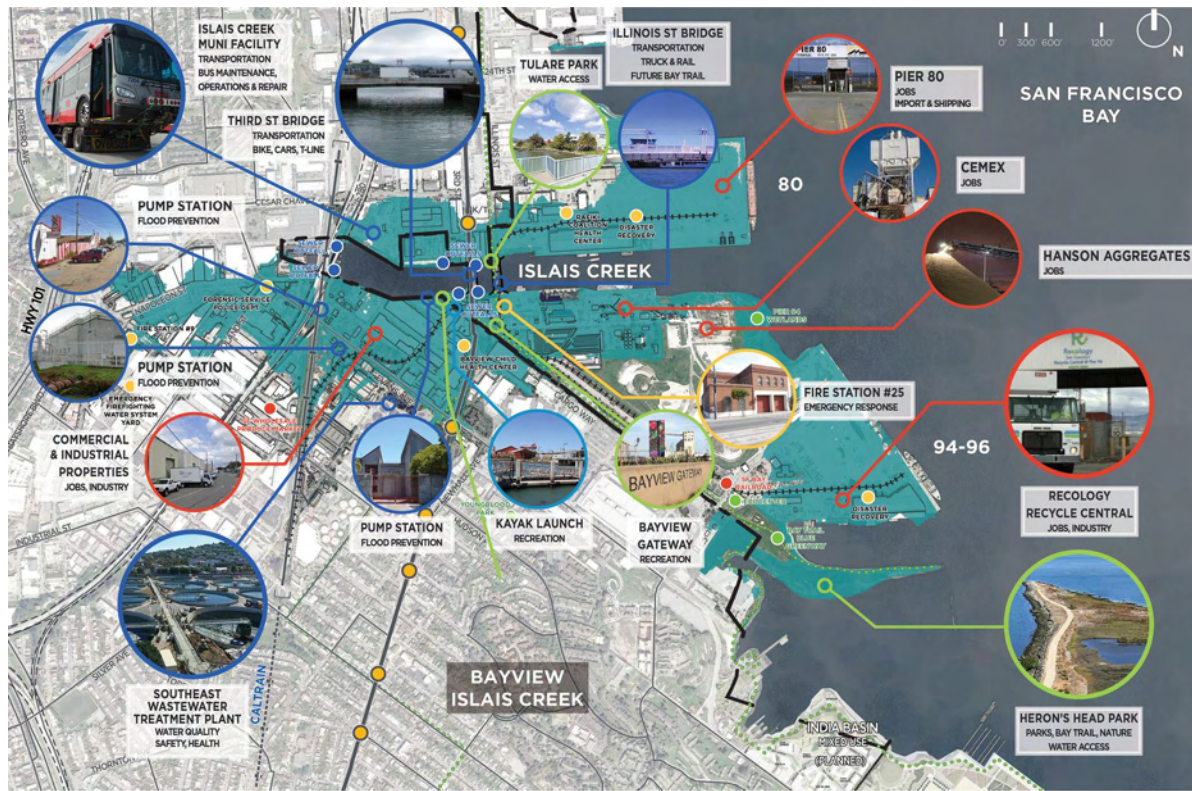


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- Neighborhoods
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- Schools
- Community Based Organizations



- Housing
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- Transportation and Utilities
- Critical Facilities
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- Emergency Response
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How concerned are you about sea level rise?

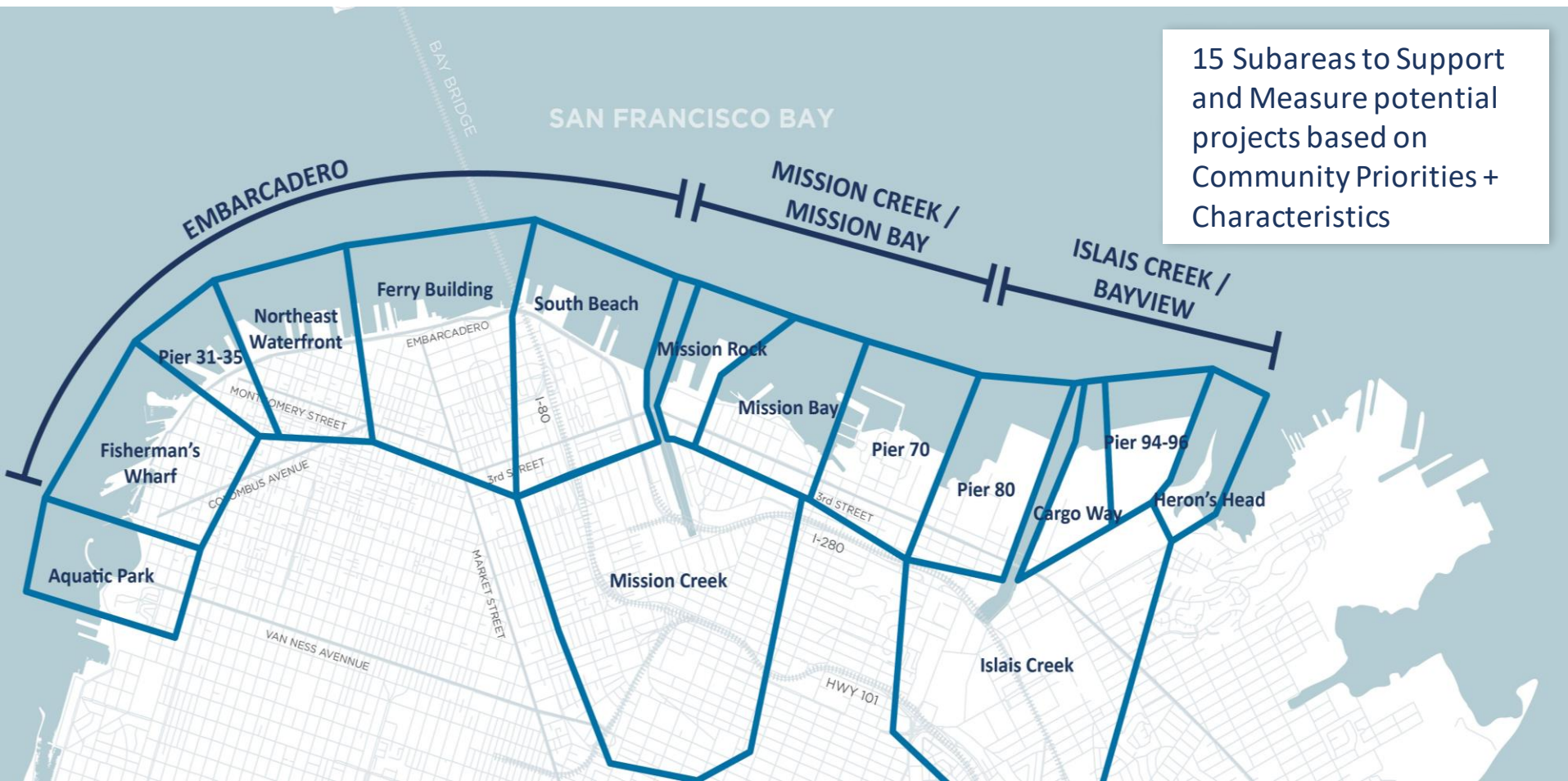
- **Very Concerned**
- **Somewhat Concerned**
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Waterfront "measures" to reduce risk

UNITED STATES ARMY CORPS OF ENGINEERS FLOOD STUDY AREA

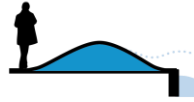
15 Subareas to Support and Measure potential projects based on Community Priorities + Characteristics



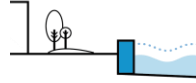
HOW CAN WE REDUCE FLOOD RISK?

Measures to Reduce Flood

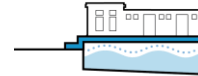
Physical
and Policy



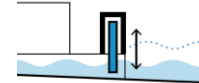
Levees



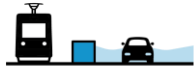
Seawalls



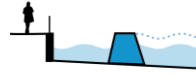
Raised Marine
Structures



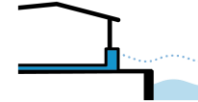
Tide Gates



Floodwalls



Breakwaters



Building
Adaptations



Deployables

Ecological



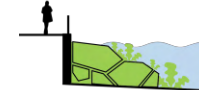
Ecological Marine
Structures



Ecological
Features



Aquatic
Habitat



Ecological
Shorelines

HOW WILL WE DECIDE HOW TO REDUCE THE RISK?

For Each of the 15 Subareas We Have Identified:

Measure Profile
Vegetated Revetment
Flood Adaptation Measure



ECOLOGICAL INFRASTRUCTURE



WATER LEVEL RANGE:
meets to surpasses

SHORELINE LOCATION:



DESIGN LIFE | **ADAPTABILITY** | **IMPACT**

Decades | Medium | Low

COASTAL FLOOD HAZARDS MITIGATED:
Enhancements can provide flood protection when:
Sea Level Rise | Storm Surge



MEASURES COMPATIBILITY:

Flood	Seismic	ECOS
Nearshore	Buttress, Lintside	
Seawall, Levee	Buttress, Liquefaction Mitigation	

DESCRIPTION:
Plantings can be added to the voids between a new or existing concrete blocks (ACB), marine mattress barge piles in low wave and/or weak flow location.

CONSIDERATIONS:

- Design should anticipate migration pathways or repositioning as sea levels rise.

ADVANTAGES:

- Ech
- Can
- hab




Measure Profile
Super Bulkhead Wharf
Seismic Adaptation Measure



SHORELINE STABILIZATION



TYPE: Structural

SHORELINE LOCATION:



DESIGN LIFE | **ADAPTABILITY** | **IMPACT ON THE WATERFRONT** | **CONSTRUCTION COST**

75+ years | Medium | Moderate Waterside Intervention | High

SEISMIC HAZARDS MITIGATED:
Lateral Spreading | Liquefaction

SEISMIC PERFORMANCE IMPROVED:
Structures | Utilities and Transportation

MEASURES COMPATIBILITY:

Flood	Seismic
Raised Marine Structures	Liquefaction Mitigation Utility Retrofit

DESCRIPTION:
New robust wharf structure that would replace the existing bulkhead wall & wharf and be strong and stiff enough to stabilize the rock pile. This will reduce lateral spreading ground displacements to The Embarcadero, but will not stop liquefaction of the Embarcadero fill.

CONSIDERATIONS:

- The quantity and diameter of the piles would be defined by the depth of the Young Bay Mud and bedrock which varies along the waterfront.
- Measure is less effective in areas of medium to deep Young Bay Mud.

ADVANTAGES:

- Less construction impact to the Embarcadero and Promenade compared to landslide shoreline stabilization measures.
- Replace deteriorated wharf structures. Can elevate wharf for future sea level rise protection.

DISADVANTAGES:

- Construction would require closure of waterfront buildings and relocation of barges when the work occurs at an occupied pier.
- Construction duration likely longer than other shoreline stabilization measures.
- Does not mitigate liquefaction-induced settlements.




Waterfront Resilience Program | Measure Profile | Page 1

- 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

ECOLOGICAL ASSETS AND SERVICES



HISTORICAL AND CULTURAL



SEISMIC DISASTER RESPONSE



TRANSPORTATION MOBILITY
INFRASTRUCTURE



COMMUNITY COHESIVENESS



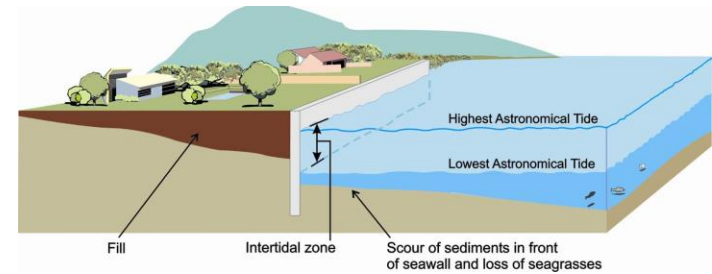
NON STRUCTURAL



HOW WILL WE REDUCE THE RISK?

Process for Developing Alternatives and Strategies

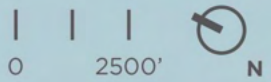
- Build upon community, City and Port priorities
- Understand existing and future conditions and characteristics
- Use repetition or multiple iterations to test out measures and strategies and obtain input
- Understand the above by ensuring everyone is at the table





FLOOD STUDY FIRST DRAFT OF ALTERNATIVES

Physical Measures Applied to the Southern Waterfront



Mission Bay identified measures include:

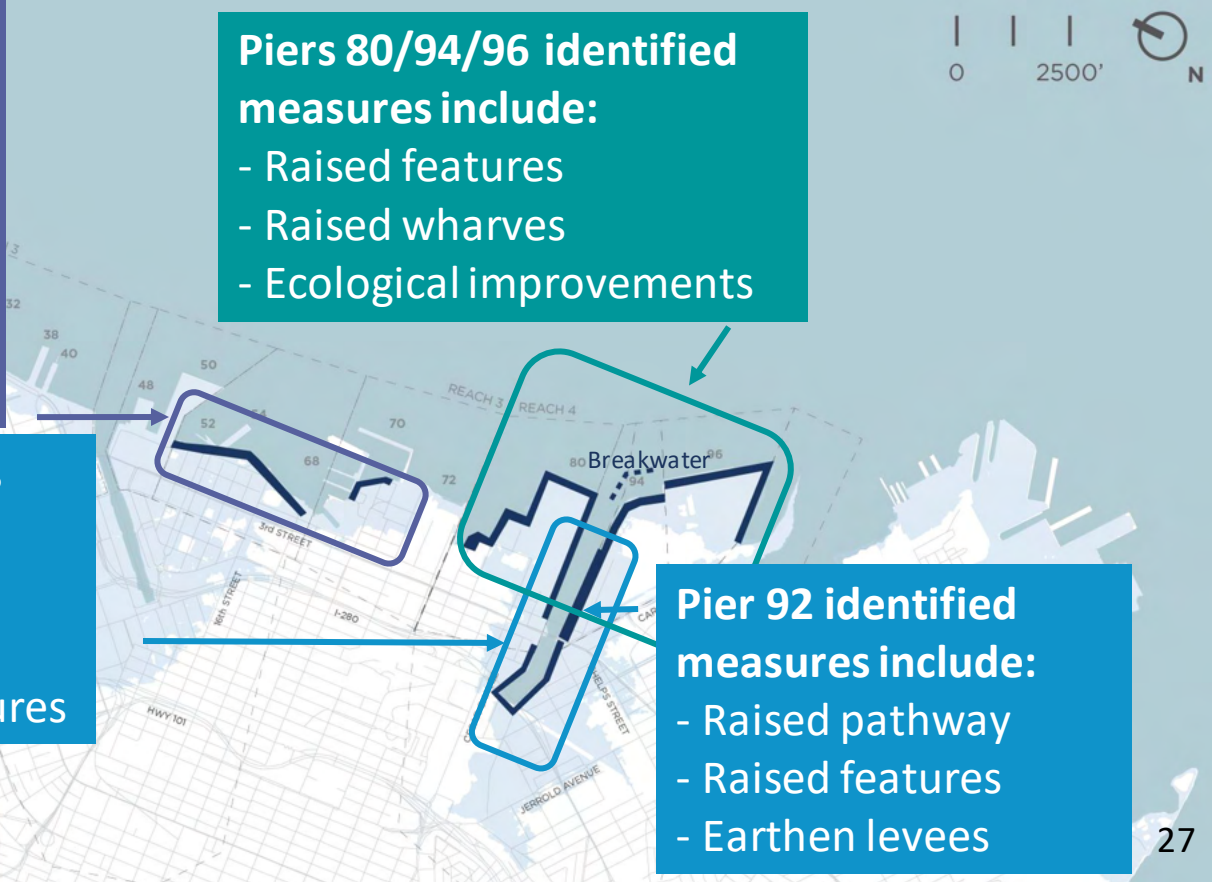
- Levee with banks to reduce erosion
- Raised pathway / Raised features
- Native, Vegetated Terraces

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



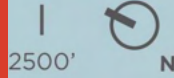
Pier 92 identified measures include:

- Raised pathway
- Raised features
- Earthen levees

INLAND STRUCTURAL MEASURES
BREAKWATERS - EVALUATION IN FUTURE DESIGN PHASES

FLOOD STUDY FIRST DRAFT OF ALTERNATIVES

Non-Structural Measures Applied to the Southern Waterfront

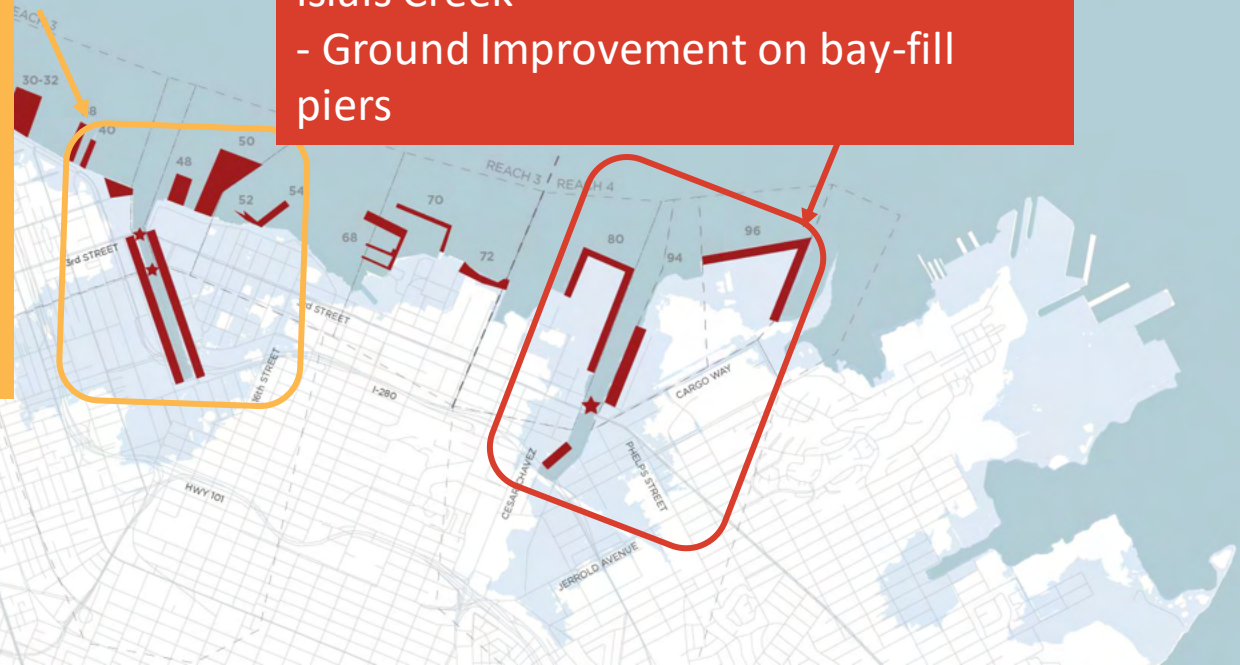


Mission Creek and Pier 80 policy considerations:

- 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



 POLICY CONSIDERATION, INCLUDING STRUCTURE RELOCATION AND REMOVAL

 Raised Bridges

FLOOD STUDY FIRST DRAFT OF ALTERNATIVES

Nature Based Measures Applied to the Southern Waterfront



Central Waterfront:

- Combination of beaches and vegetated banks bayward at Bayfront Park and Pier 70

Piers 80/94/96:

- Stepped slopes and vegetated banks 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

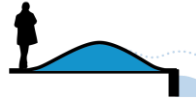
What Matters Most to You?

- **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?
- **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?

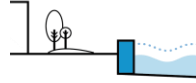
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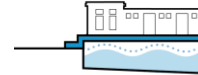
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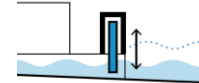
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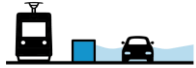
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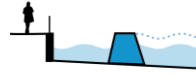
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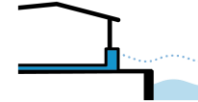
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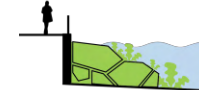
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Habitat



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Shorelines



Stakeholder Engagement

What We've Heard from Islais Creek / Bayview



FEEDBACK ON GEOGRAPHIC PROGRAM GOALS

Islais Creek / Bayview Feedback

PARTICIPANT'S HANDOUT
TABLE NUMBER:

SOUTHERN WATERFRONT DRAFT GOALS

WELCOME!
Islais Creek Adaptation Strategy
Waterfront Resilience Program,
Southern Waterfront
Workshop #2, Tuesday January 30th
8:00 Community Facility

OVERALL PROJECT GOAL:
A VISION FOR ISLAIS CREEK THAT ADAPTS TO FLOOD RISKS WHILE ENSURING HEALTHY AND RESILIENT COMMUNITIES

COMMUNITY & SOCIAL RESILIENCE

- Encourage neighborhood vitality, character, and diversity with more mixed-income housing
- Adapt buildings, open spaces and services that ensure the safety and preparedness of the district and city in the case of a flood emergency
- Develop equitable solutions with and for a wide variety of community members, including youth, seniors, families and people of color

TRANSPORTATION

- Build a long-lasting basis of support with a transparent, authentic engagement process
- Engage with youth to build long-term understanding, capacity, and stewardship
- Acknowledge the significance of the nearby designated African American Cultural District of Bayview Hunters Point, and other cultural groups, as central to developing future visions
- Engage with youth to build long-term understanding, capacity, and stewardship

TRANSPORTATION

- Adapt key transportation facilities to flooding to maintain operations, service and connectivity
- Improve connectivity between Bayview and other neighborhoods
- Improve pedestrian and bike connections to provide resilience during near term periods, flood events
- Create accessible transportation between the waterfront, the City and the region

ENVIRONMENT

- Identify solutions and strategies that benefit the entire Islais Creek watershed
- Prioritize nature-based solutions and green infrastructure to mitigate floods, improve stormwater management and support local ecology
- Improve access to and create new resilient open spaces along the creek and bay shorelines to provide much needed recreational space for the surrounding neighborhoods

ECONOMY

- Adapt flood-prone areas that currently support existing jobs, small businesses and local artists
- Support local, blue collar industrial jobs
- Use the planning process of this project as an opportunity to train and mentor individuals in the fields of design, planning and engineering
- Maintain and increase of women- and minority-owned businesses, community benefit organizations, worship centers, and arts and culture organizations



STRENGTHEN
1 FT OF SEA LEVEL RISE NOW - 2050

ADAPT
2 FT OF SEA LEVEL RISE 2050 - 2100

ENVISION
3 FT OF SEA LEVEL RISE 2100 - 2140

WHICH OBJECTIVES DO WE PRIORITIZE IN EACH PHASE?
HOW DO WE BALANCE ALL THE GOALS OVER TIME?

TABLE NUMBER:

- 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

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

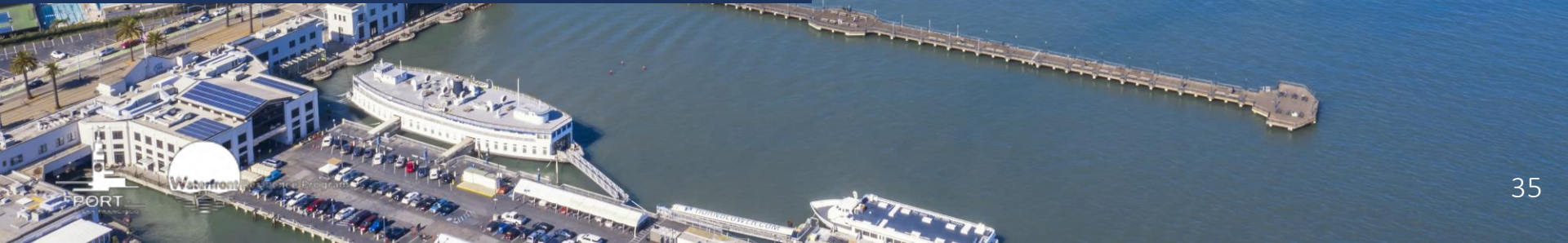
Community feedback on evaluation criteria affirmed the Port’s key focus on life safety and disaster response

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



Next Steps

What's Next for the Waterfront Resilience Program?



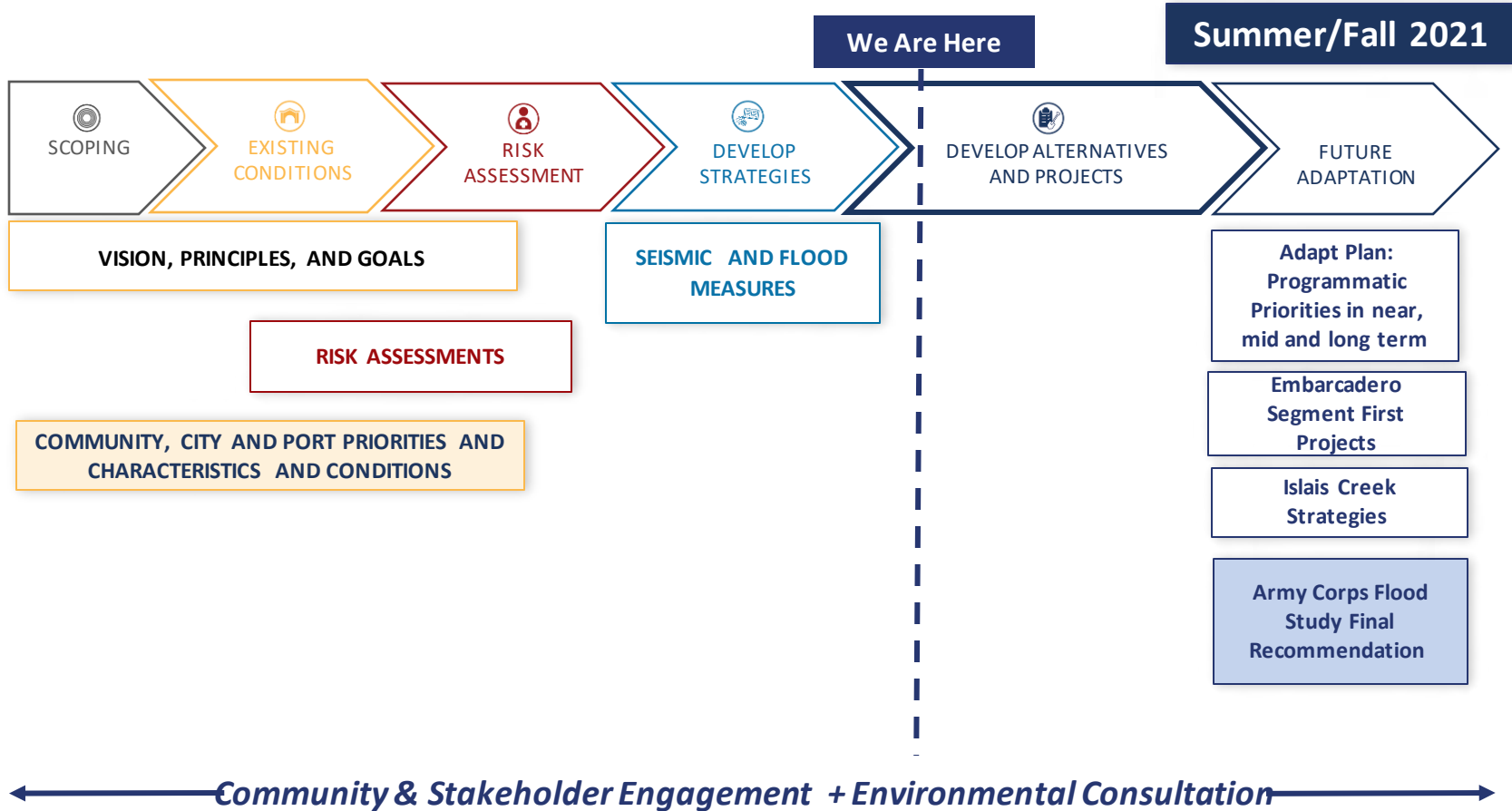
EMBARCADERO SEAWALL PROGRAM

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

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

A photograph of two children riding bicycles on a dirt path. The child in the foreground is wearing a red and white jersey and a yellow helmet. The child in the background is wearing a dark jersey with 'CROLEY 30' on the back and a dark helmet. In the background, a large ship is docked at a pier, and there are some trees and a clear blue sky.

Thank You!

Presenter Name and Contact Info

