

ISLAIS CREEK

BAYVIEW

COMMUNITY

WATERFRONT RESILIENCE

Thursday September 19, 2019



San Francisco
Planning



US Army Corps
of Engineers.



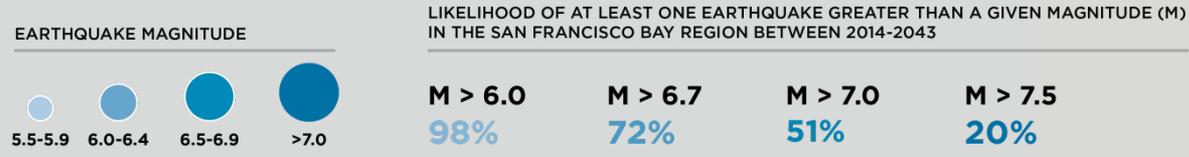
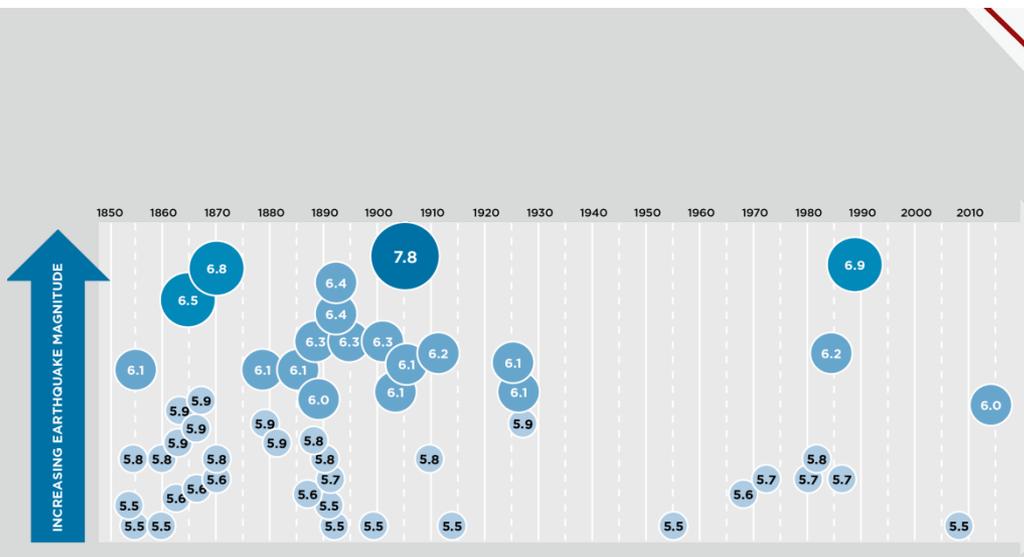
WELCOME

WE WILL COVER

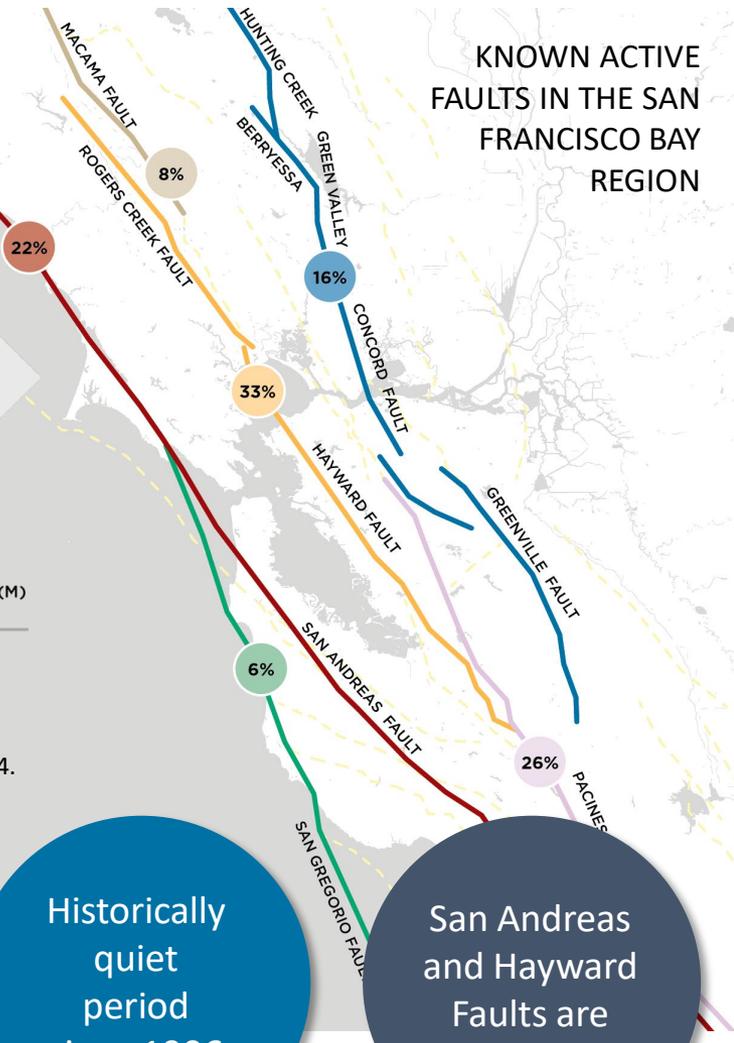
- San Francisco's flood and earthquake risks
- City/Port of San Francisco Resilience efforts
- Port Waterfront Resilience Program
- Islais Creek Resilience
- Present tonight's activity on asset mapping
- Engage in small group activity and report back



EARTHQUAKE RISK IN SAN FRANCISCO



TIMELINE OF MAGNITUDE 5.5 AND GREATER EARTHQUAKES IN THE SAN FRANCISCO BAY REGION 1850–2014.



KNOWN ACTIVE FAULTS IN THE SAN FRANCISCO BAY REGION

72% likelihood of a major earthquake by 2043

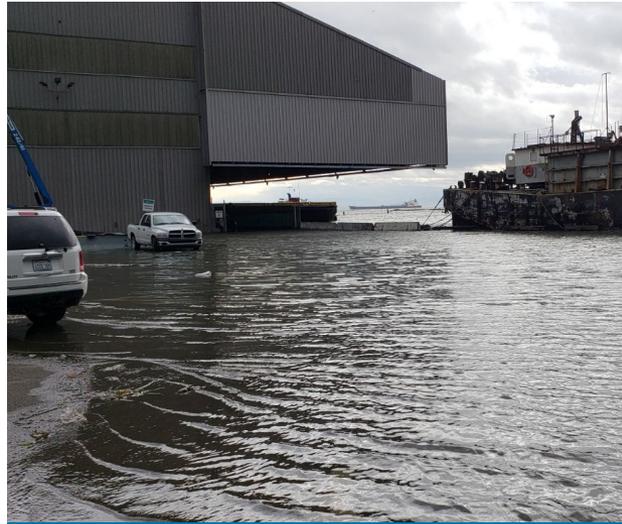
Historically quiet period since 1906

San Andreas and Hayward Faults are highest risks

SAN FRANCISCO'S FLOOD RISK



INTERMITTENT AND LOCALIZED
FLOODING TODAY



INTERMITTENT AND LOCALIZED
FLOODING TODAY

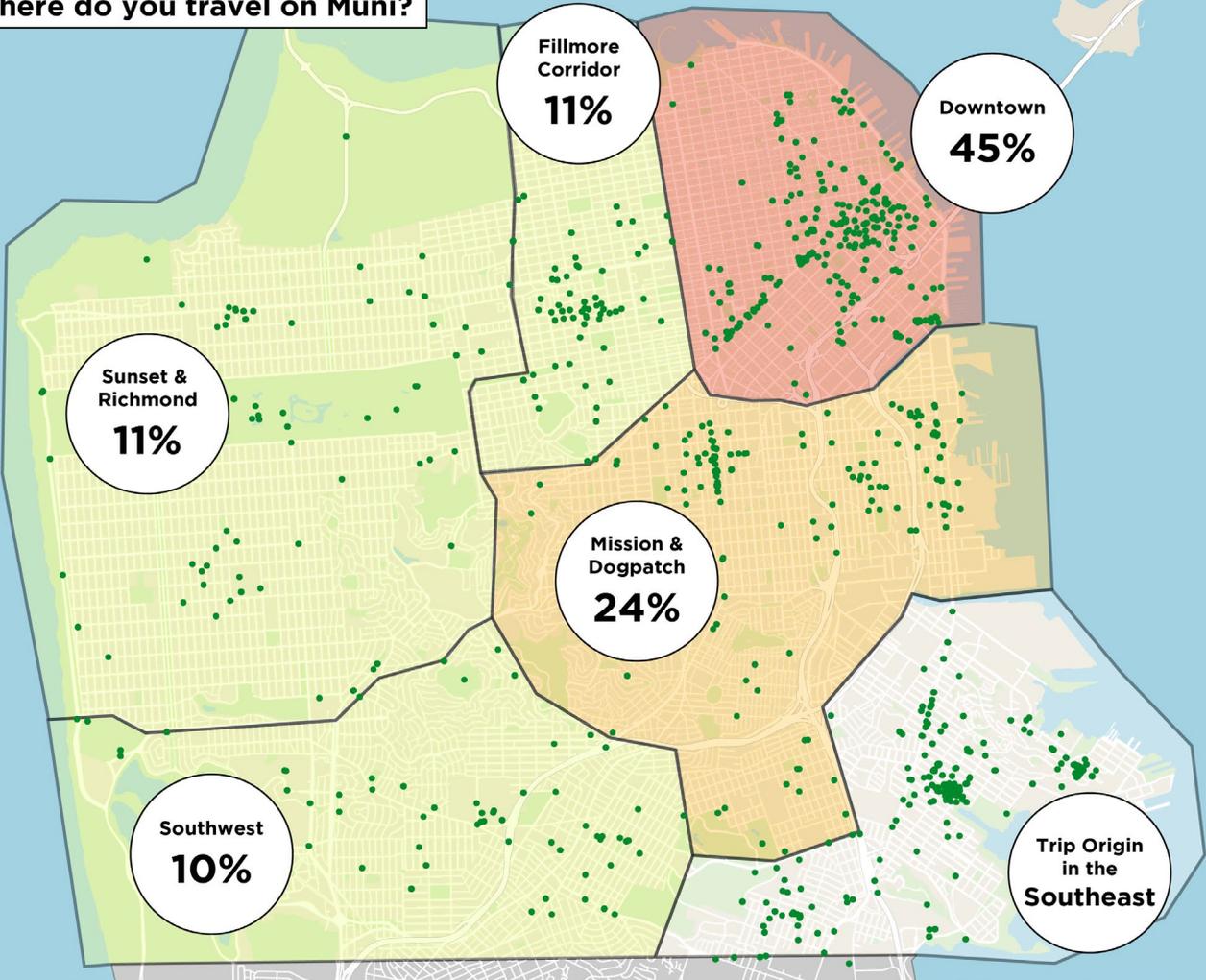


FUTURE SLR RISK

- San Francisco faces increasing flood risk
- Some shoreline areas already experience flooding
- 100 year flood event would create significant disruption to critical assets and services
- San Francisco's shoreline will flood more frequently and new areas will begin to experience flooding in the coming decades

FOCUS ON ISLAIS: FLOOD RISK AND MOBILITY

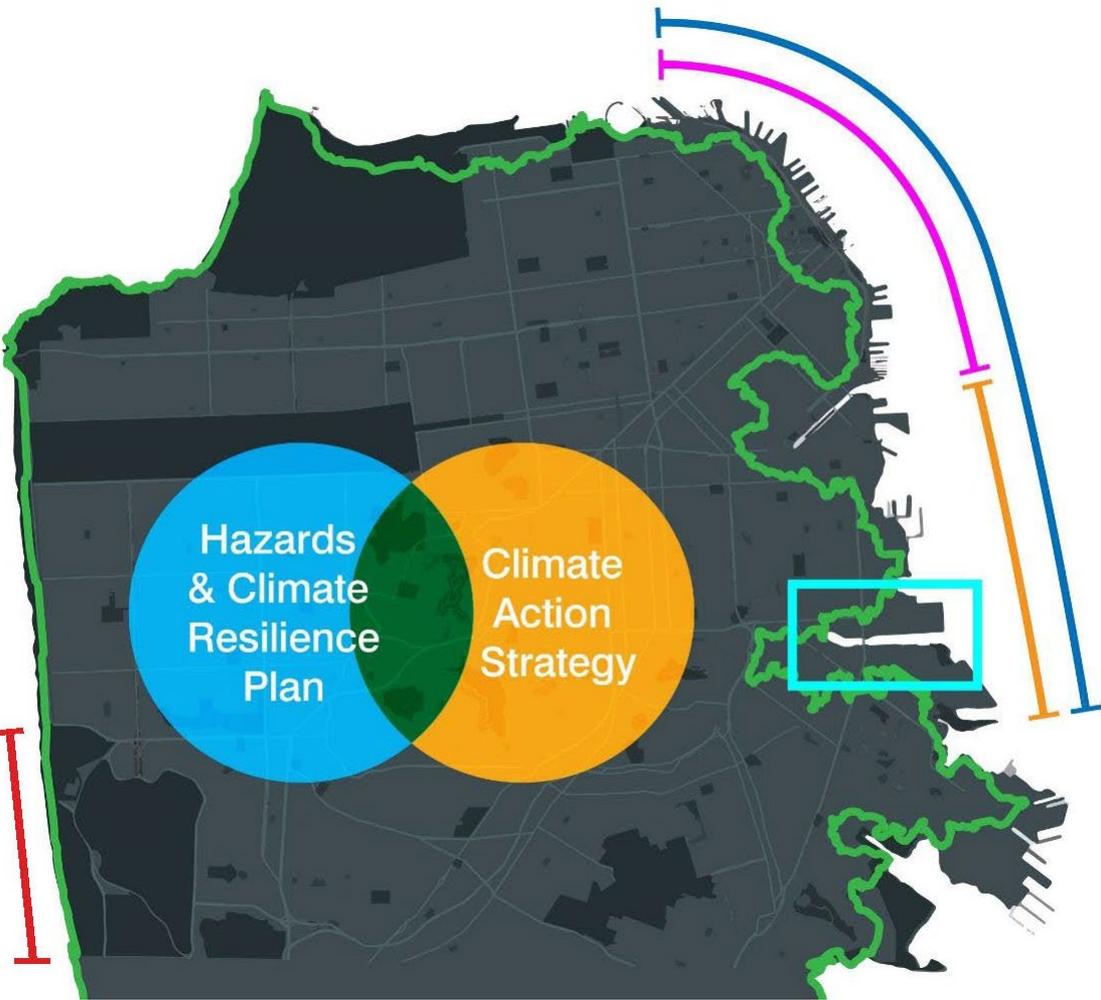
Where do you travel on Muni?



Trips out of the southeast will double by **2040**

more than **45%** of commuters cross Islais

CITYWIDE RESILIENCE EFFORTS



CITYWIDE PLANS AND STRATEGIES

- Sea Level Rise Action Plan
- Hazards & Climate Resilience Plan
- Climate Action Strategy

SHORELINE ASSESSMENTS AND PROJECTS

- Southern Waterfront Seismic Vulnerability Assessment
- Embarcadero Seawall Program
- USACE/Port Flood Study
- Islais/Southeast Mobility Adaptation Strategy
- Ocean Beach Implementation

PORT OF SAN FRANCISCO'S WATERFRONT RESILIENCE PROGRAM



The Port of San Francisco's Waterfront Resilience Program will create a safe, equitable, sustainable, and inspiring waterfront.

WATERFRONT RESILIENCE PROGRAM DRAFT PRINCIPLES

1. **Prioritize** life safety and emergency response
2. **Advance** equity in inclusive engagement, planning, and decision-making
3. **Enhance** and sustain economic and ecological opportunities
4. **Inspire** an adaptable waterfront that:
 - Improves the health of the Bay
 - Ensures access to the waterfront and historic places
 - Protects and preserves historic resources
 - Provides opportunities for families, businesses, and neighborhoods to thrive
5. **Lead** a transparent, innovative, collaborative, and adaptive resilience program



WATERFRONT RESILIENCE PROGRAM ADAPTATION FRAMEWORK



STRENGTHEN ELEMENT

Objective: Immediately implement highest priority disaster response and life safety projects along the Embarcadero Seawall.



ADAPT ELEMENT

Objective: Adapt the existing waterfront to address remaining seismic and increasing flood risks while generally retaining current form and function.



ENVISION ELEMENT

Objective: While implementing projects and adaptations to reduce seismic and flood risk, develop visions for a waterfront that is resilient to 2100 and beyond.

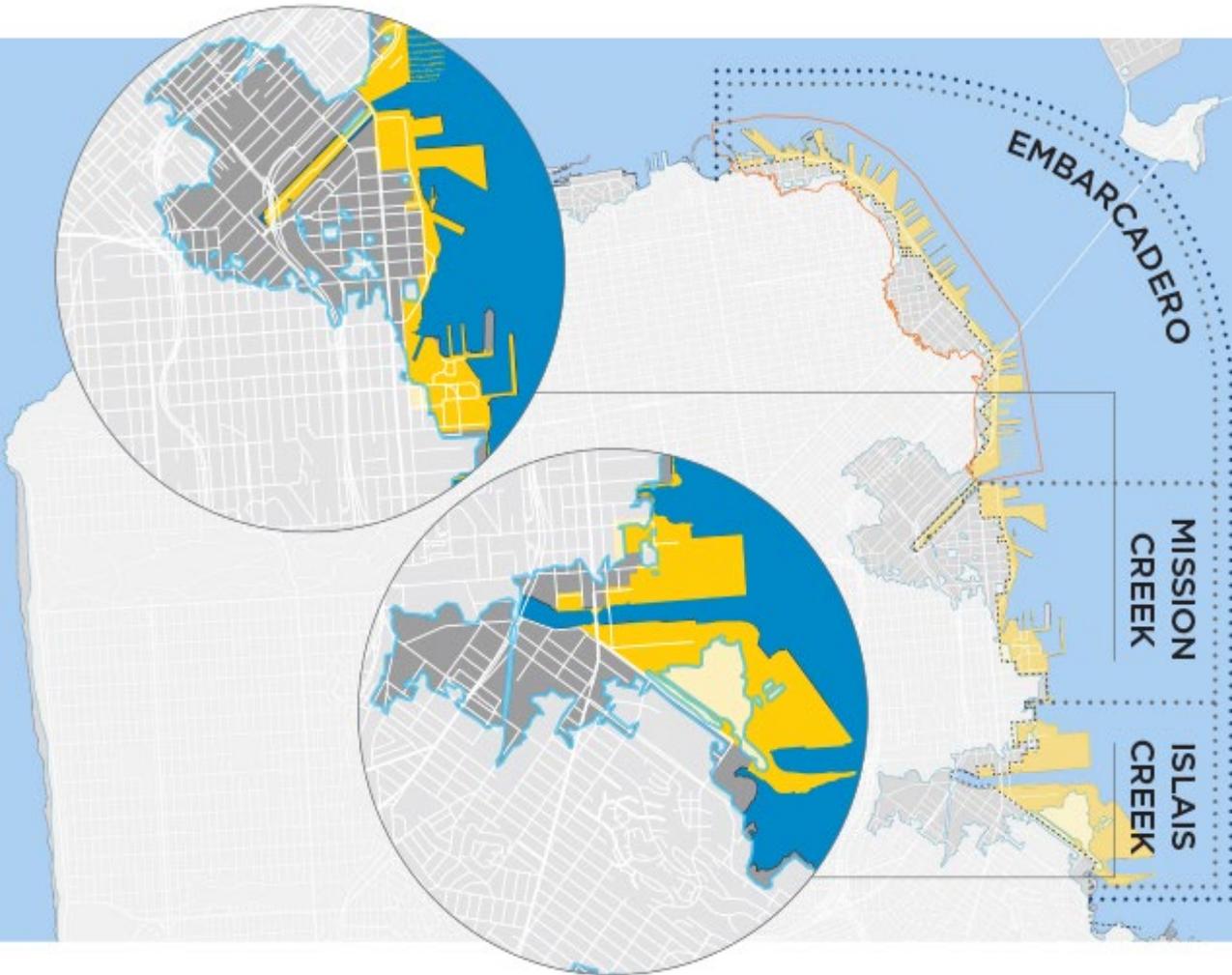
WATERFRONT RESILIENCE PROGRAM: EMBARCADERO SEAWALL



SEAWALL PROGRAM OVERVIEW

- First priority is to protect **life safety** and **emergency response** from seismic events
- Funding and financing from **City, state, federal and private**
- Will address as much flood risk as possible and **create a foundation** for addressing flood risk
- Focus on **Citywide impacts** of seismic and flood risk – **life safety, emergency response, mobility, utilities, jobs**

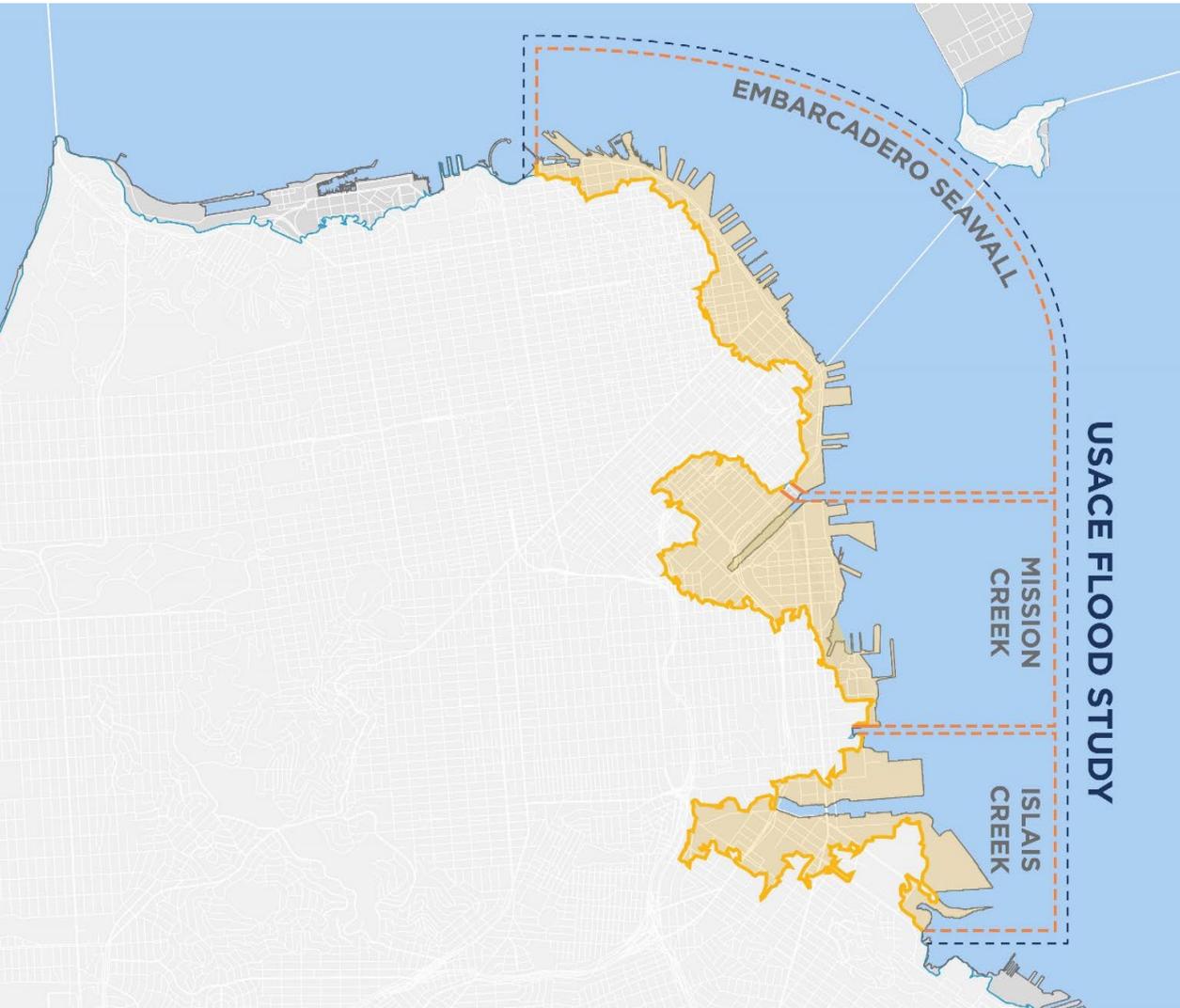
WATERFRONT RESILIENCE PROGRAM: U.S. ARMY CORPS / PORT FLOOD RESILIENCE STUDY AREAS



THREE STUDY AREAS

- Areas based on preliminary assessment of coastal flood risk
- Significant cultural, historic, and maritime assets
- Critical public infrastructure, including local and regional transit and wastewater treatment
- Dense residential, commercial, and industrial land use
- Does not include redevelopment sites such as Bayview/Hunter's Point and Mission Rock
- Other areas outside of study area should be a focus of future studies

WATERFRONT RESILIENCE PROGRAM: U.S. ARMY CORPS / PORT FLOOD RESILIENCE STUDY OVERVIEW



HIGHLIGHTS

- Federal expertise
- Port as local sponsor
- Entire Port jurisdiction + Aquatic Park
- ~3-5 years, 50/50 cost share

STUDY OVERVIEW

- Currently in the scoping phase to determine federal interest and size of potential project
- Process includes many opportunities for community input
- If successful, leads to a project that is recommended to Congress
- Design/construction of project cost shared 65% federal/35% local

POTENTIAL FLOOD STUDY BENEFITS TO THE BAYVIEW



Identification of
resilience
alternatives for
Islais Creek

Federal, state,
and local
investment in
flood protection

Future
projects with
job creation
opportunities

WATERFRONT RESILIENCE PROGRAM PUBLIC ENGAGEMENT



JOIN US!

Public engagement and participation is how we get to a plan and a project.

- **Meeting 1:** Let's build this together- learning about the project and sharing priorities
- **Meeting 2:** Shape the study goals
- **Meeting 3:** Envision alternatives
- **Meeting 4:** Evaluate alternatives
- **Meeting 5:** Identify actions and alternatives

There will be other opportunities for engagement, including meetings in the field, tours, and charrettes. Your suggestions are welcome!

FOCUS ON ISLAIS

BAYVIEW ISLAIS CREEK RESILIENCE

Neighborhoods along the San Francisco shoreline are at risk of flooding from climate hazards like sea level rise and more intense storms. These hazards already impact residents and businesses in those neighborhoods, and will occur with more severity and frequency in the future.

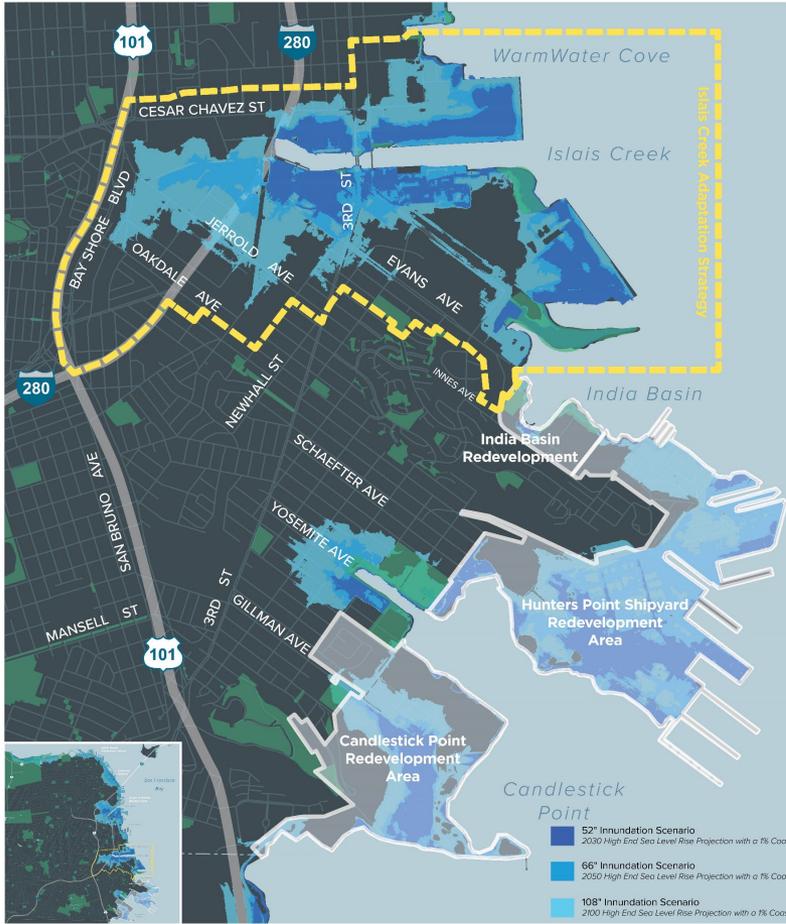
Bayview is special for its unique history and heritage. It is also important because facilities here serve citywide and regional systems upon which hundreds of thousands of people rely.

The Islais Creek Adaptation Strategy focuses on securing our current transportation facilities from flood risks, while envisioning a resilient system for the future. Benefits to Bayview include frequent and reliable transit service, diverse options for getting around, and better physical connectivity to other parts of the City.

The Islais Creek Adaptation Strategy is an opportunity to identify co-benefits to implement along with a resilient transportation system.

Which of these co-benefits would you prioritize?

NEIGHBORHOOD CHARACTER & QUALITIES							
	NEED INCOME & AFFORDABLE HOUSING		CULTURAL LEGACY & HERITAGE		DEMOGRAPHIC DIVERSITY & FAMILIES		OTHER IDEAS?
	ARTIST COMMUNITY & CREATIVE INDUSTRIES		BUSINESS & WORKFORCE OPPORTUNITIES/JOB		NATURE IN THE CITY		OTHER IDEAS?
DISTRICT AMENITIES & COMMUNITY SERVICES							
	PUBLIC ART		COMMUNITY CENTERS & CIVIC INSTITUTIONS		VIEWS TO THE BAY, CITY, & HILLS		OTHER IDEAS?
	GREATER PHYSICAL CONNECTIVITY TO THE REST OF THE CITY		COMMUNITY SERVICES (HEALTHCARE, FOOD, EDUCATION)		RECREATION FACILITIES & PROGRAMMING		OTHER IDEAS?
CITYWIDE & REGIONAL FUNCTIONS							
	HABITAT / ECOSYSTEM FUNCTION		EMERGENCY RESPONSE FACILITIES		MARITIME FUNCTIONS		OTHER IDEAS?
	INDUSTRIAL, MANUFACTURING & FABRICATION JOBS		INDUSTRIAL & MANUFACTURING FACILITIES		CITYWIDE INFRASTRUCTURE & UTILITIES		OTHER IDEAS?



WELCOME!

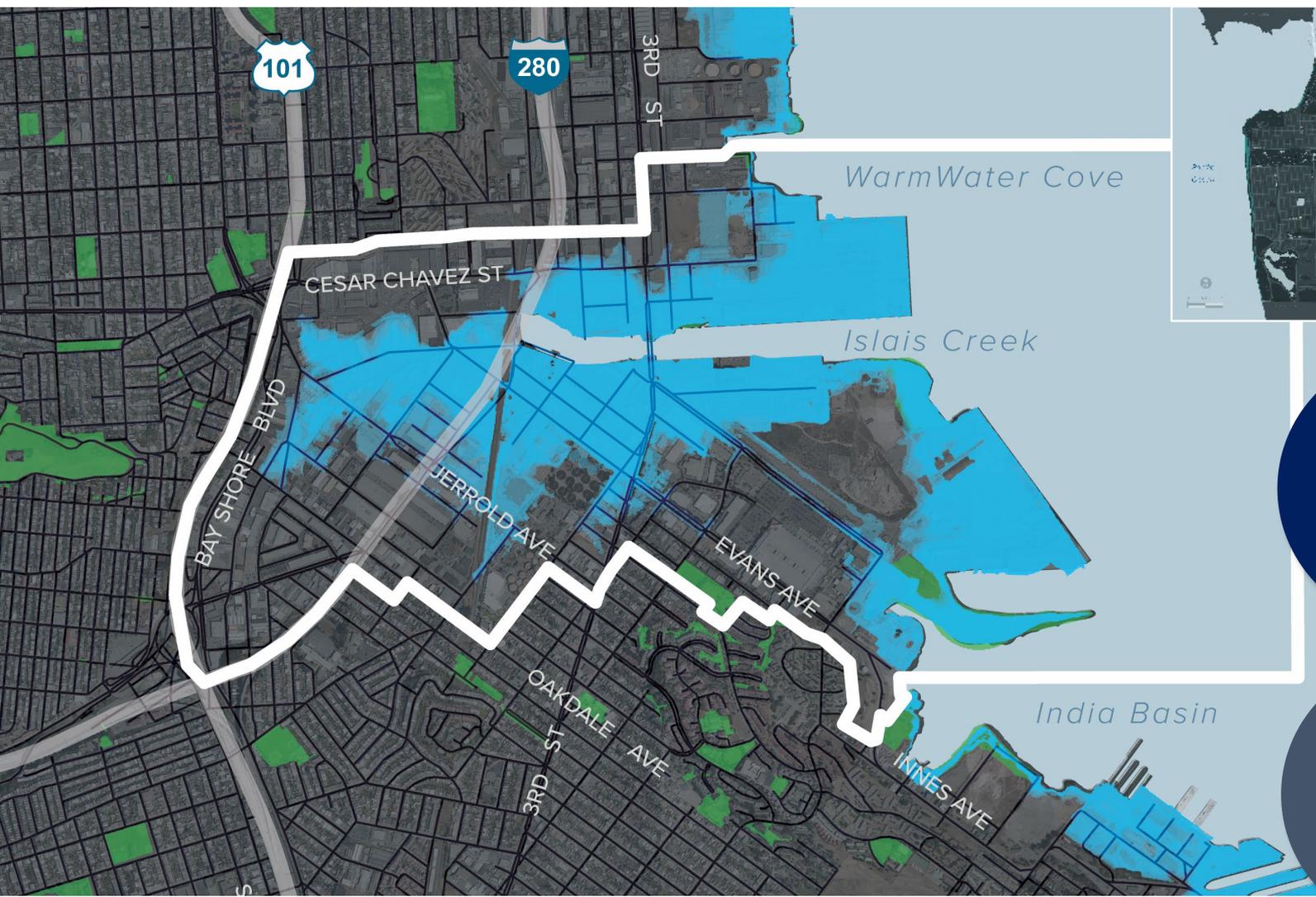
What are your hopes for the long-term future of the Islais Creek area?

PLEASE LEAVE ADDITIONAL COMMENTS HERE. DON'T BE SHY!

sfplanning.org/islais

ISLAIS CREEK ADAPTATION STRATEGY

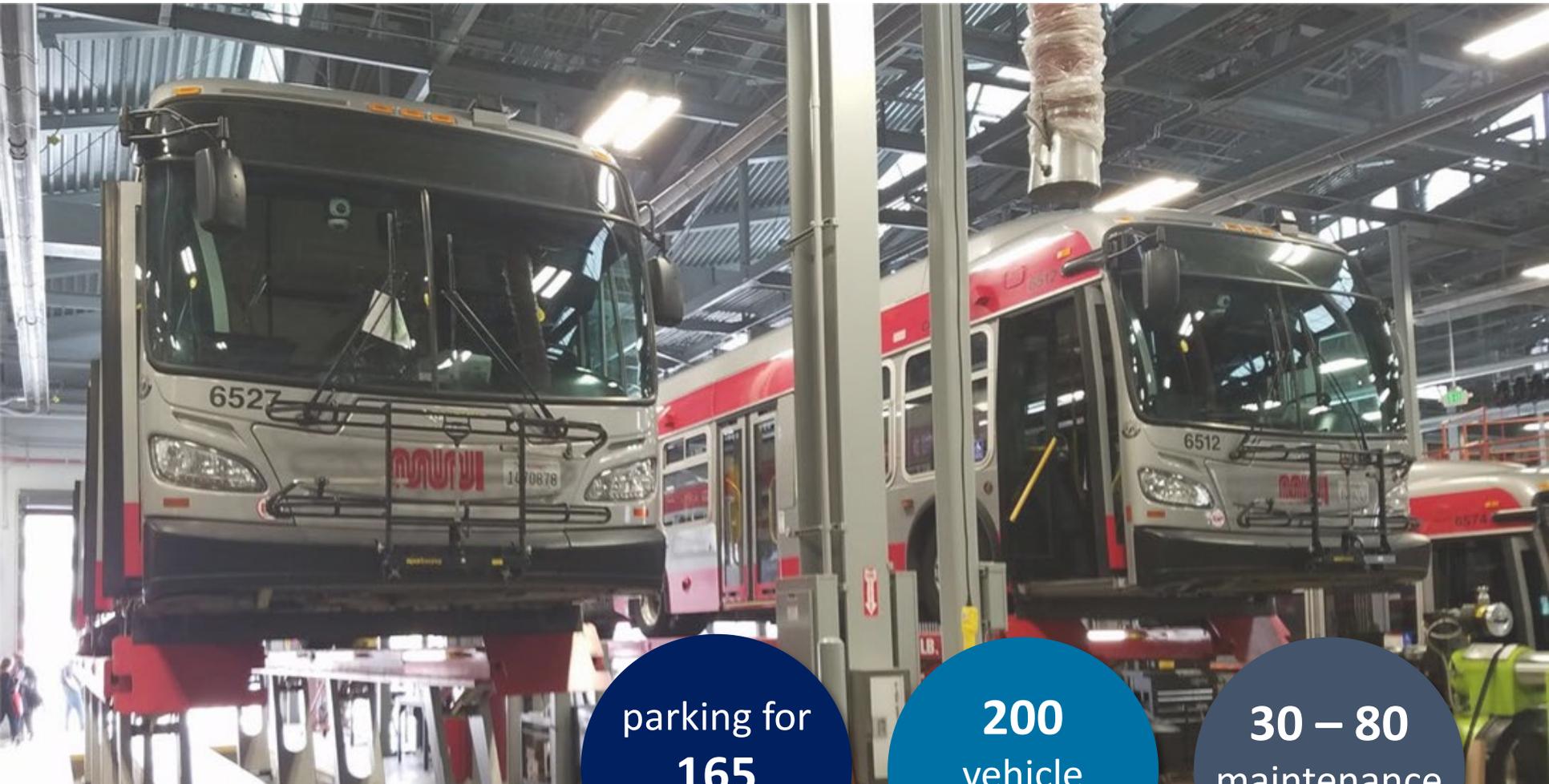
FOCUS ON ISLAIS: FLOOD RISK AND JOBS



683
industrial
jobs in
BV-HP

over
2,900
jobs in
BV-HP

FOCUS ON ISLAIS: MUNI FACILITIES AT RISK



parking for
165
buses

200
vehicle
operators

30 – 80
maintenance
workers

FOCUS ON ISLAIS: RECOLOGY AT RISK



750
tons sorted
per day

over
200
trips into
facility per
day

Over **35**
shipments
of product
out per day

FOCUS ON ISLAIS: CARGO SERVICES

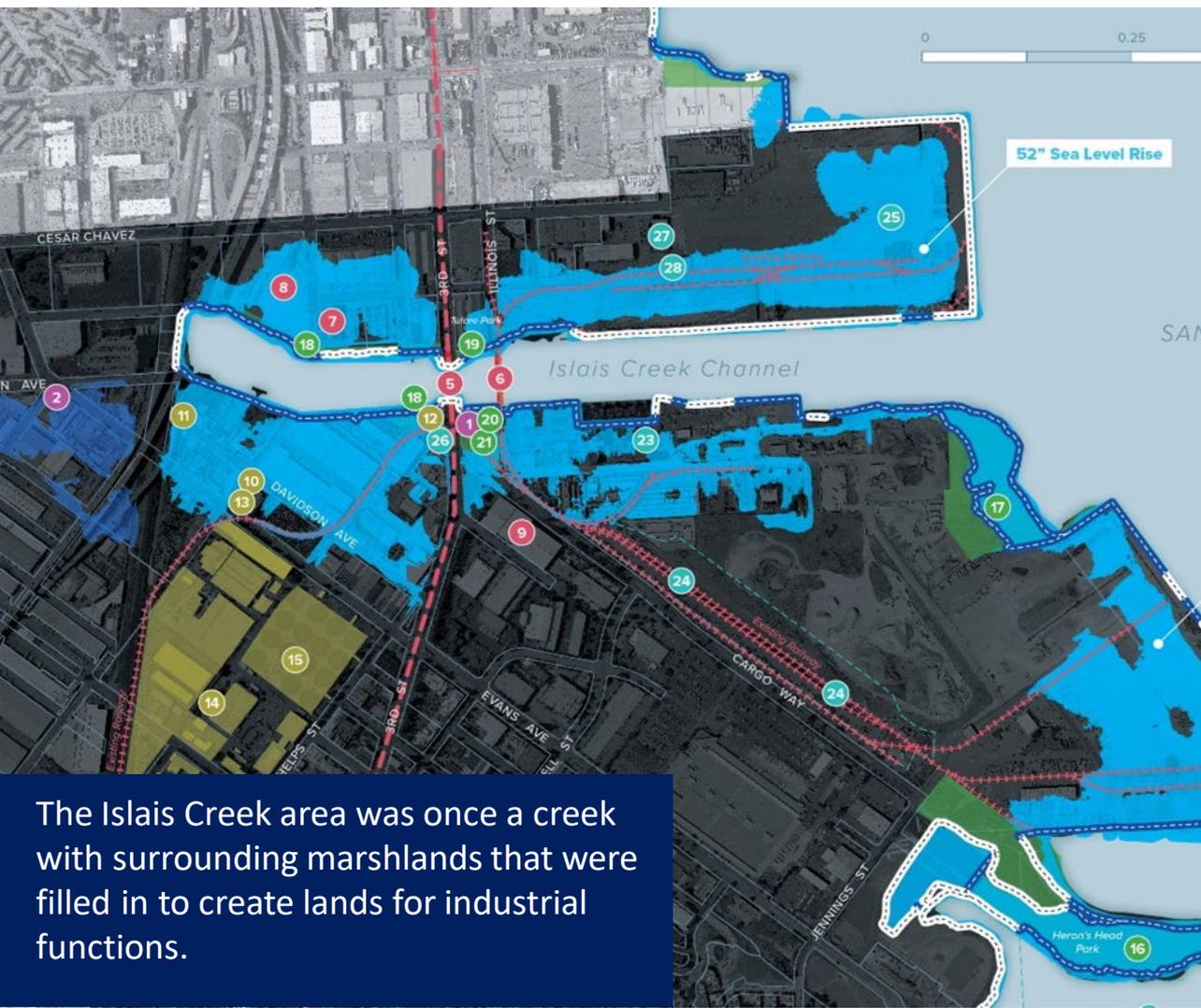


Pier 92 and
Pier 94

Sand and
aggregates
make
concrete

Supports
construction
projects
across SF

UNDERSTANDING THE HAZARDS AT ISLAIS



The Islais Creek area was once a creek with surrounding marshlands that were filled in to create lands for industrial functions.

ISLAIS CREEK HAZARDS

EARTHQUAKE RISK

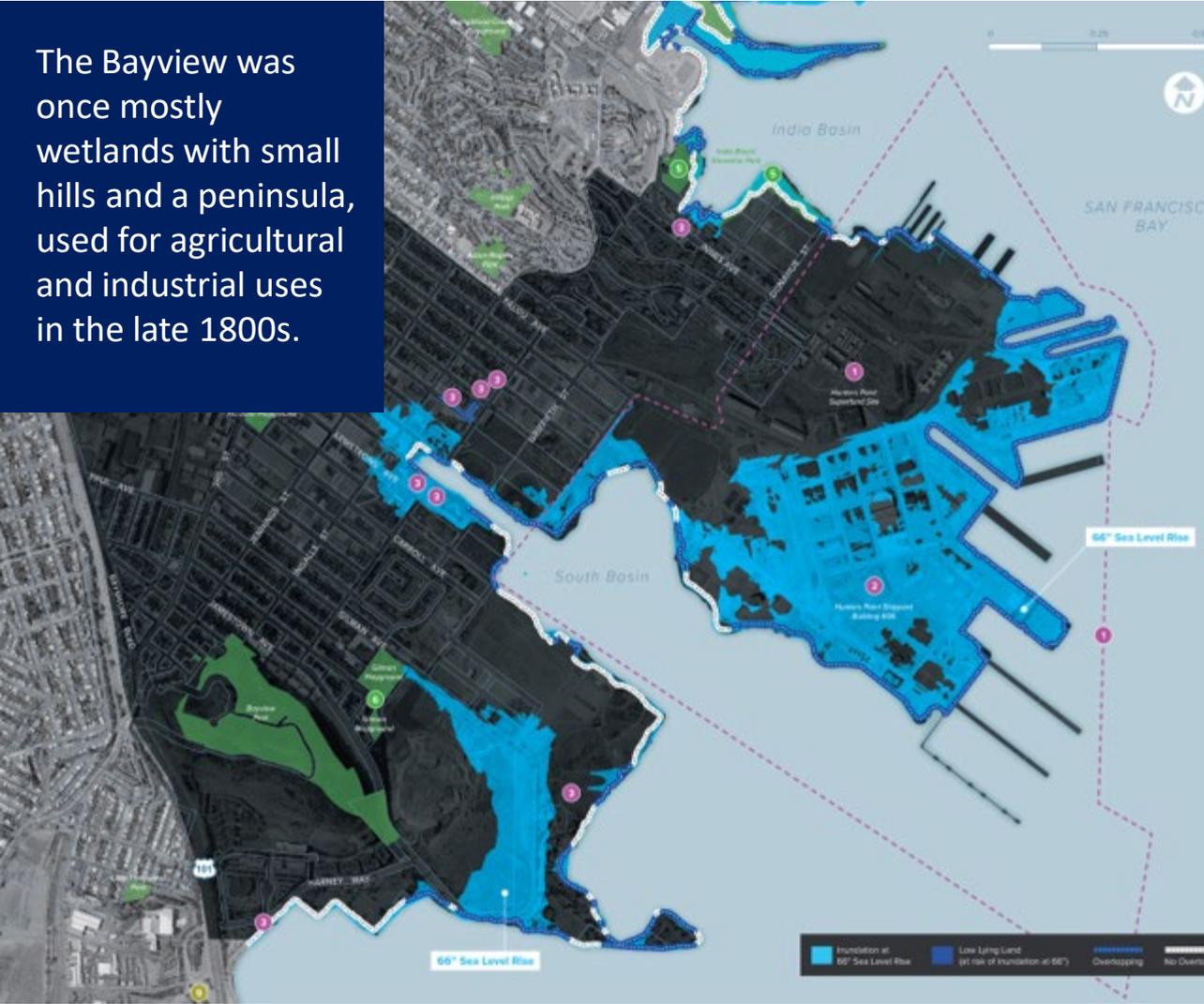
Evaluate existing information to develop an understanding of the seismic risk, including ground shaking and liquefaction in the project area.

FLOOD RISK

Evaluate extent of coastal flood hazard to estimate damage to exposed assets.

FLOODING AT ISLAIS CREEK & BAYVIEW

The Bayview was once mostly wetlands with small hills and a peninsula, used for agricultural and industrial uses in the late 1800s.



ISLAIS CREEK & BAYVIEW FLOODING

EARTHQUAKE RISK

Filled areas of the community are subject to liquefaction.

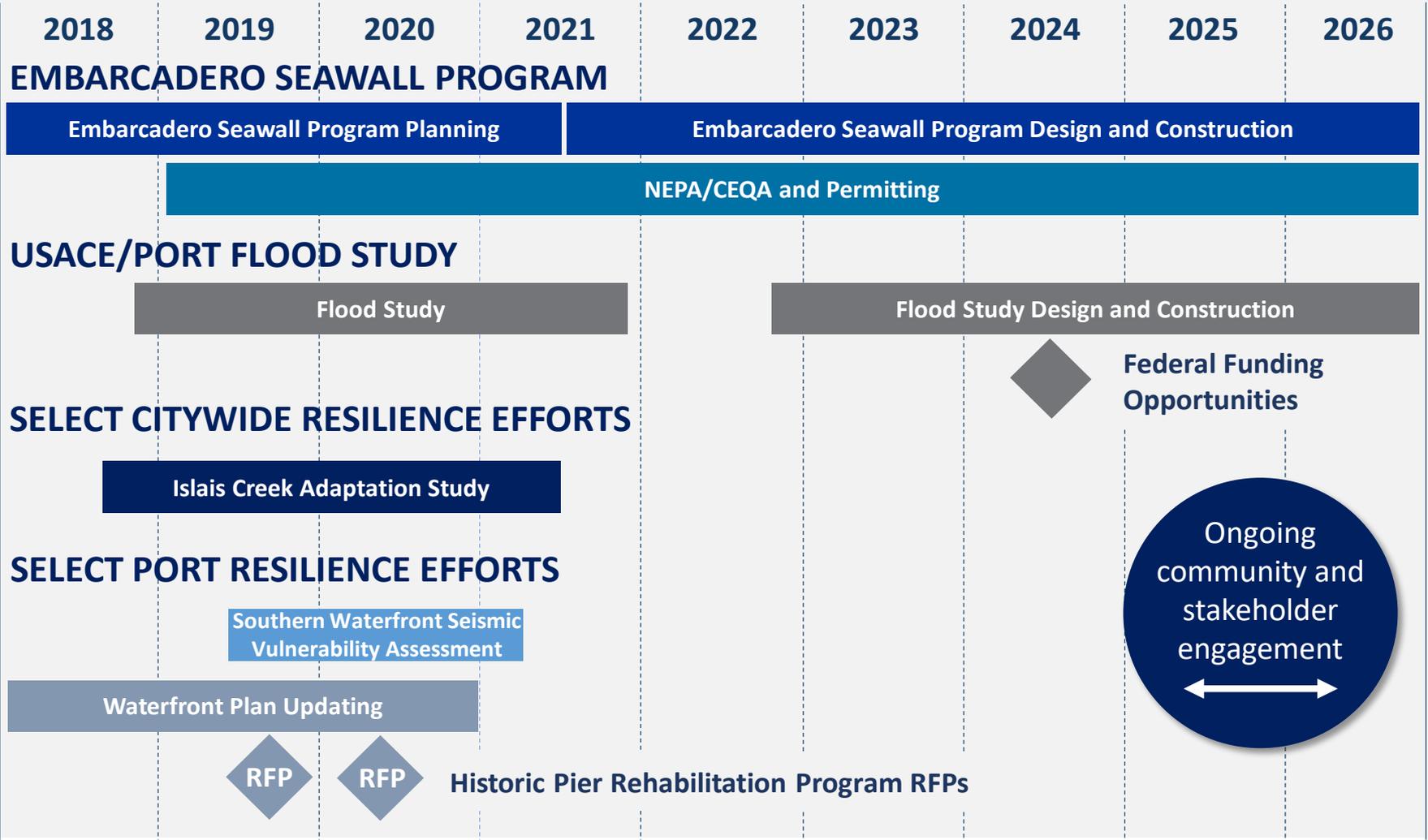
FLOOD RISK

Sea level rise will expose much of the shoreline of the community, including contaminated lands.

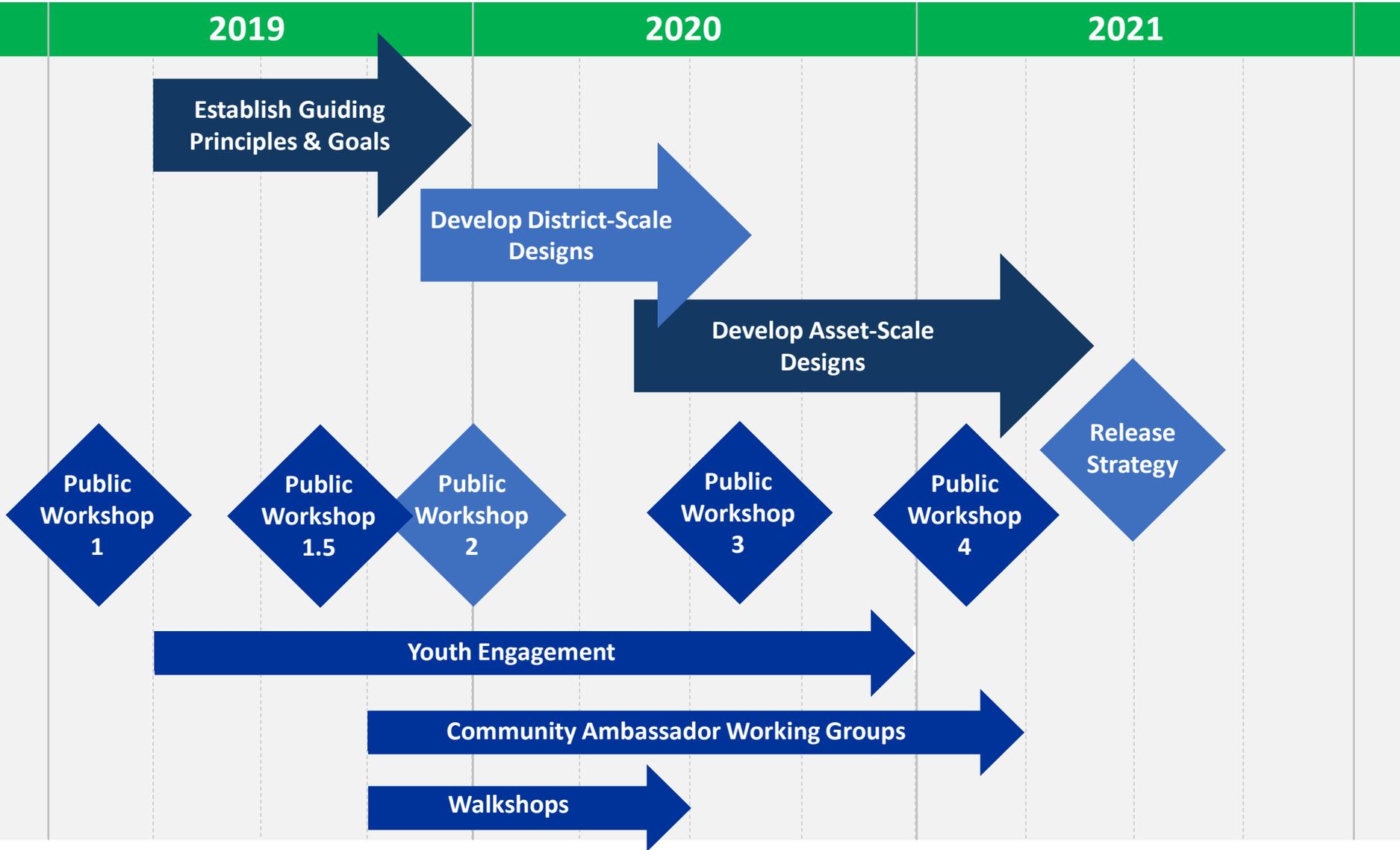
REDEVELOPMENT

Redevelopment of the area considers these issues.

WATERFRONT RESILIENCE PROGRAM TIMELINE



ISLAIS CREEK ADAPTATION STRATEGY PHASES



THANK YOU!



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San Francisco Planning Dept.



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WATERFRONT
GAME OF HAZARDS
part I

FLOOD HAZARD: SEA LEVEL RISE

Sea Level is on the rise & we're running out of time!

History:

- 8 inches from 1900 to 2000

Future:

- 1 to 2 feet by 2050 (CCSF 2016)
- 3 to 5.5 feet by 2100 (CCSF 2016)
- New CA guidance up to 10 ft by 2100 (H++)

FLOOD HAZARD ZONES: *Current (6 inches of SLR)*



CURRENT (2019 - 2030)

Immediate Flood Hazards:

- Parts of Mission Bay
- Pier 96
- Heron's Head Park

FLOOD HAZARD ZONES: *Near Term (Up to 1 foot of SLR)*



Near Term Flood Hazards:

- Caltrain King Street Station Yard
- Pier 80
- Islais Creek Industries

FLOOD HAZARD ZONES: *Mid Term (Up to 3 feet of SLR)*



Mid Term Flood Hazards:

- Mission Bay
- SoMa Neighborhood
- Yosemite Slough Area Industries

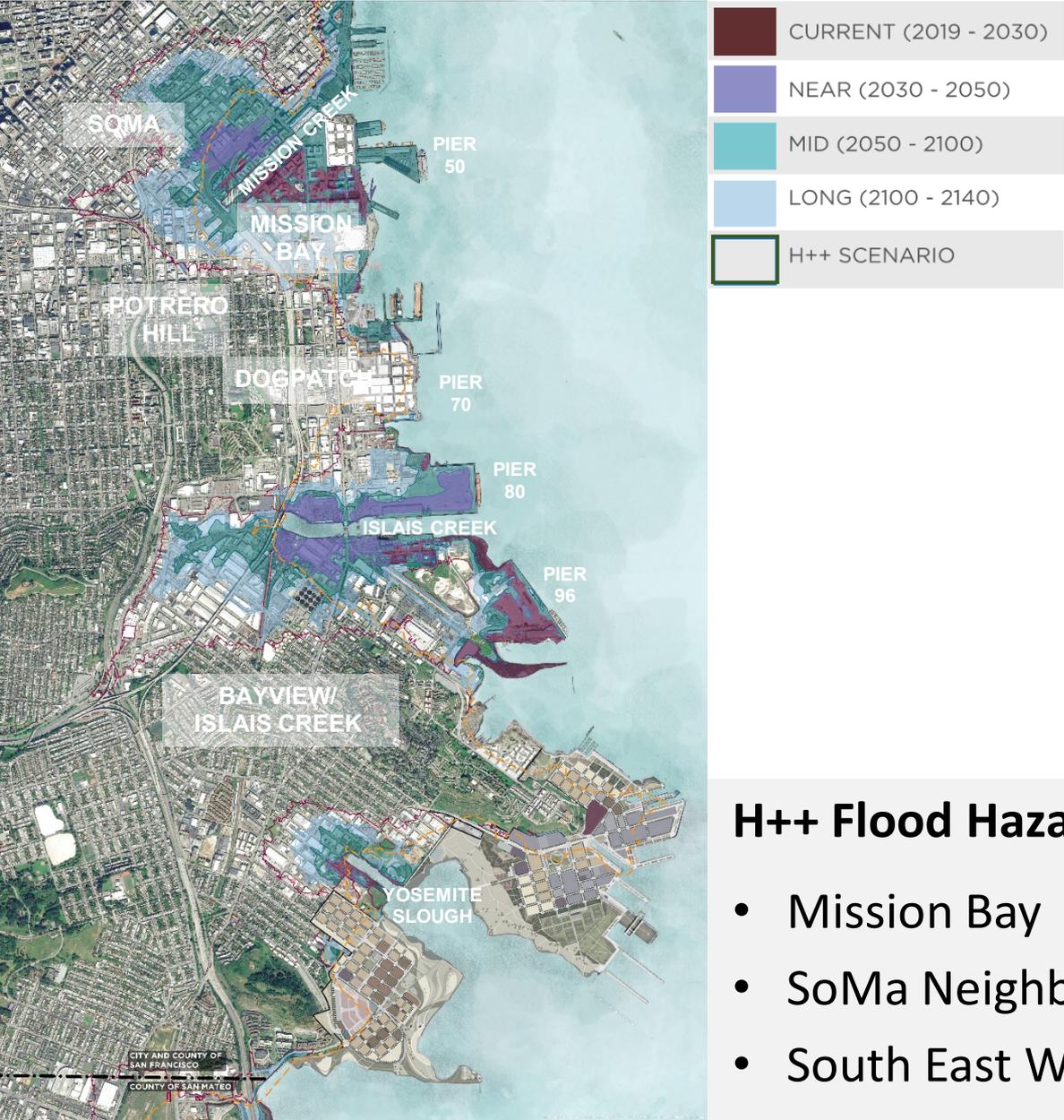
FLOOD HAZARD ZONES: *Long Term (Up to 5.5 feet of SLR)*



Long Term Flood Hazards:

- Mission Bay
- SoMa Neighborhood
- Islais Creek Industrial Area

FLOOD HAZARD ZONES: *H++ Scenario (Up to 10 feet of SLR)*



H++ Flood Hazards:

- Mission Bay
- SoMa Neighborhood
- South East Wastewater Treatment Plant

WHAT'S OUT THERE AND WHAT'S AT STAKE?

SAN FRANCISCO'S SOUTHERN WATERFRONT: ISLAIS CREEK



SAN FRANCISCO'S SOUTHERN WATERFRONT: ISLAIS CREEK



GAME OF HAZARDS!



SF WATERFRONT GAME OF HAZARDS

LEGEND	LEGEND	LEGEND
<ul style="list-style-type: none"> INFRASTRUCTURAL ASSETS MARITIME ASSETS HEALTH & CARE ASSETS URBAN & CULTURAL ASSETS PARKS & ECOSYSTEM FUNCTIONS PROGRAM BOUNDARY 	<ul style="list-style-type: none"> FUTURE DEVELOPMENT HISTORIC SHOBELE BAY TRAIL AND BLUE GREENWAY RAIL AND STOP ELEVATED HIGHWAY PORT JURISDICTION CONTAMINATION HAZARDS SEA LEVEL RISE HAZARDS 	<ul style="list-style-type: none"> CONTAMINATION HAZARDS SEA LEVEL RISE HAZARDS LEGEND

INFRASTRUCTURE



UTILITIES



STREETS

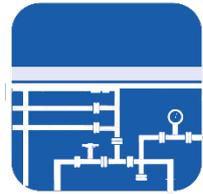


TRANSIT



SHORELINE
PROTECTION

INFRASTRUCTURE



UTILITIES



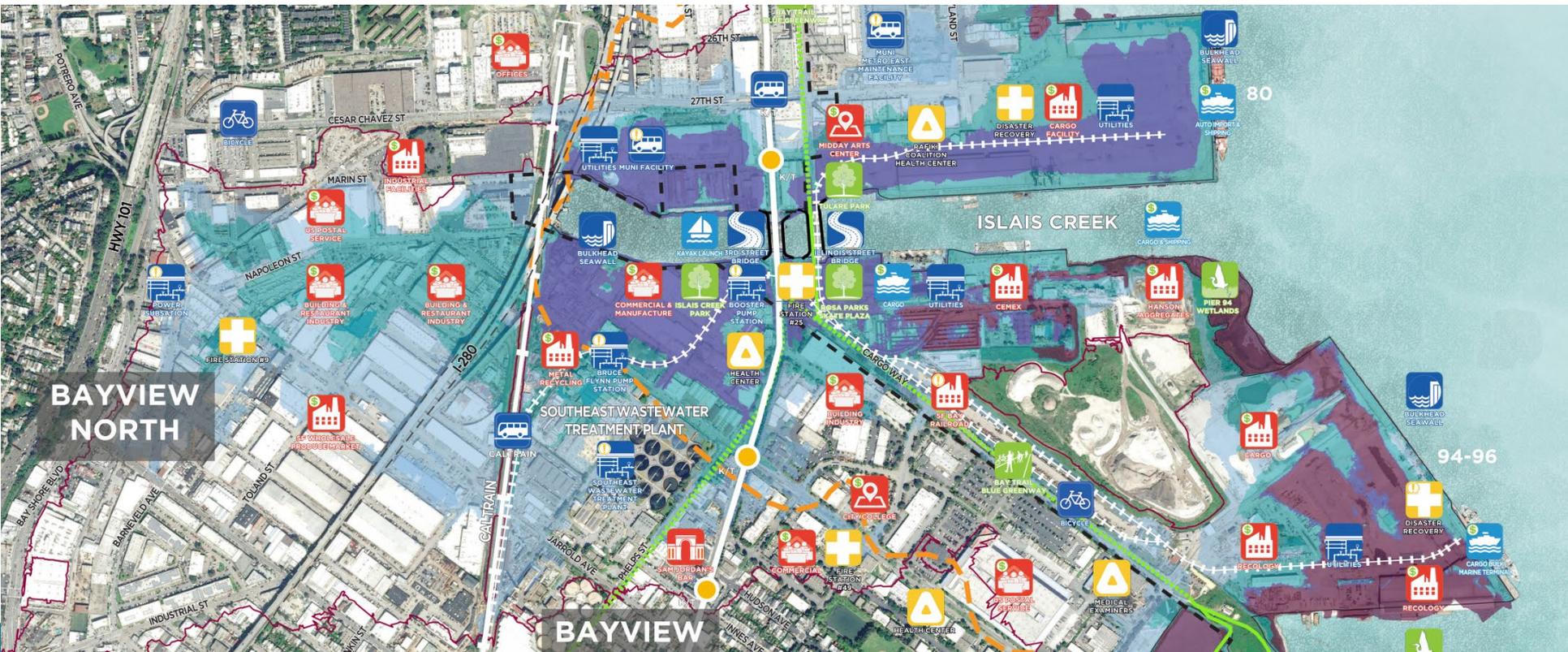
STREETS



TRANSIT



SEAWALL



INFRASTRUCTURE



UTILITIES



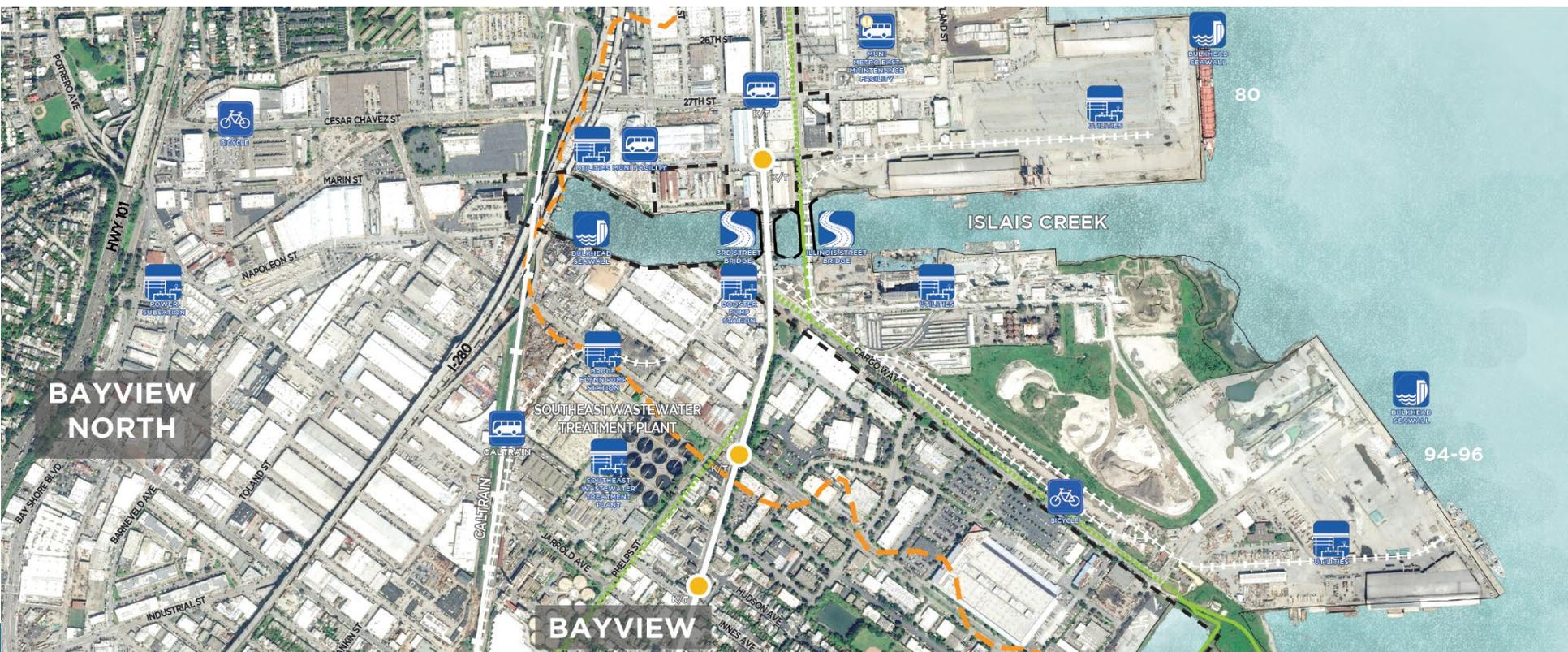
STREETS



TRANSIT



SEAWALL



URBAN AND CULTURAL



HISTORIC



LIVE



WORK



VISIT



INDUSTRIAL
FACILITIES



URBAN AND CULTURAL



HISTORIC



LIVE



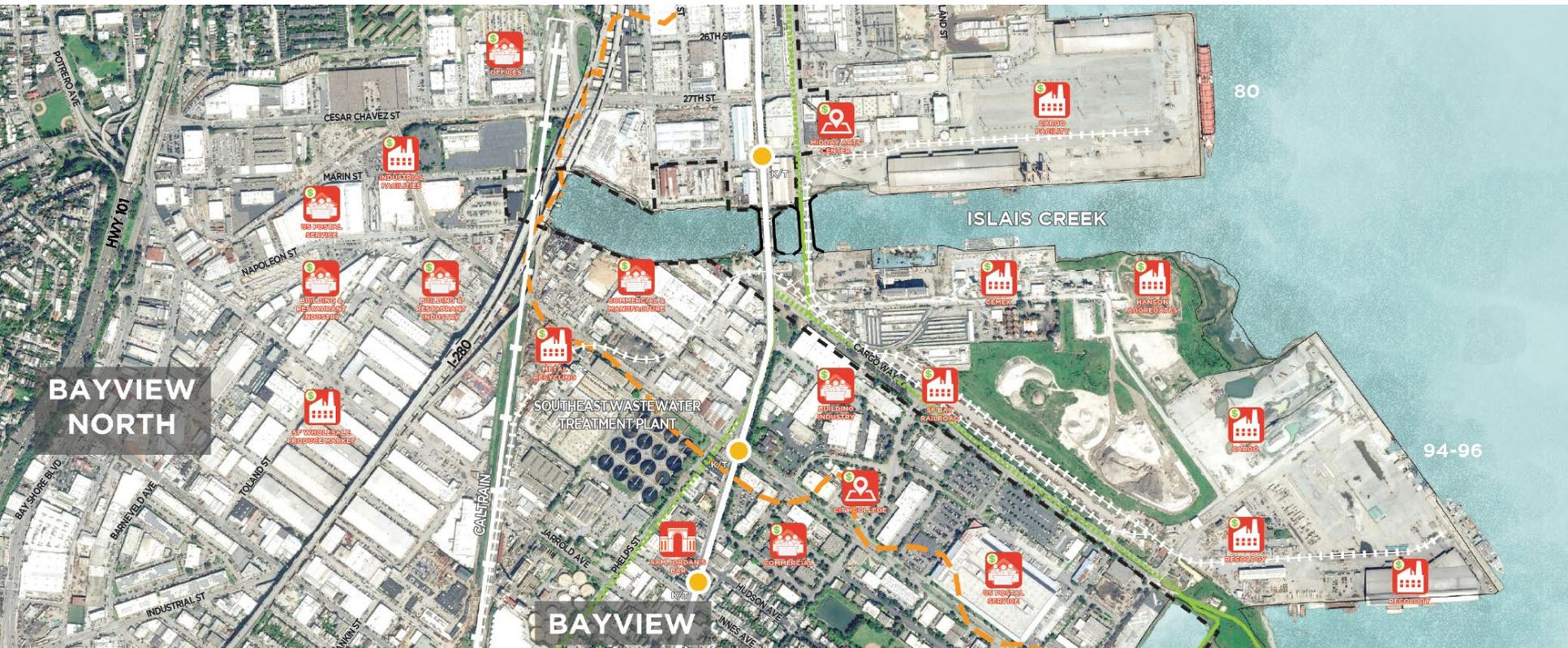
WORK



VISIT



**INDUSTRIAL
FACILITIES**



PARKS AND ECOSYSTEMS



BAY TRAIL



PARKS



HABITAT

PARKS AND ECOSYSTEMS



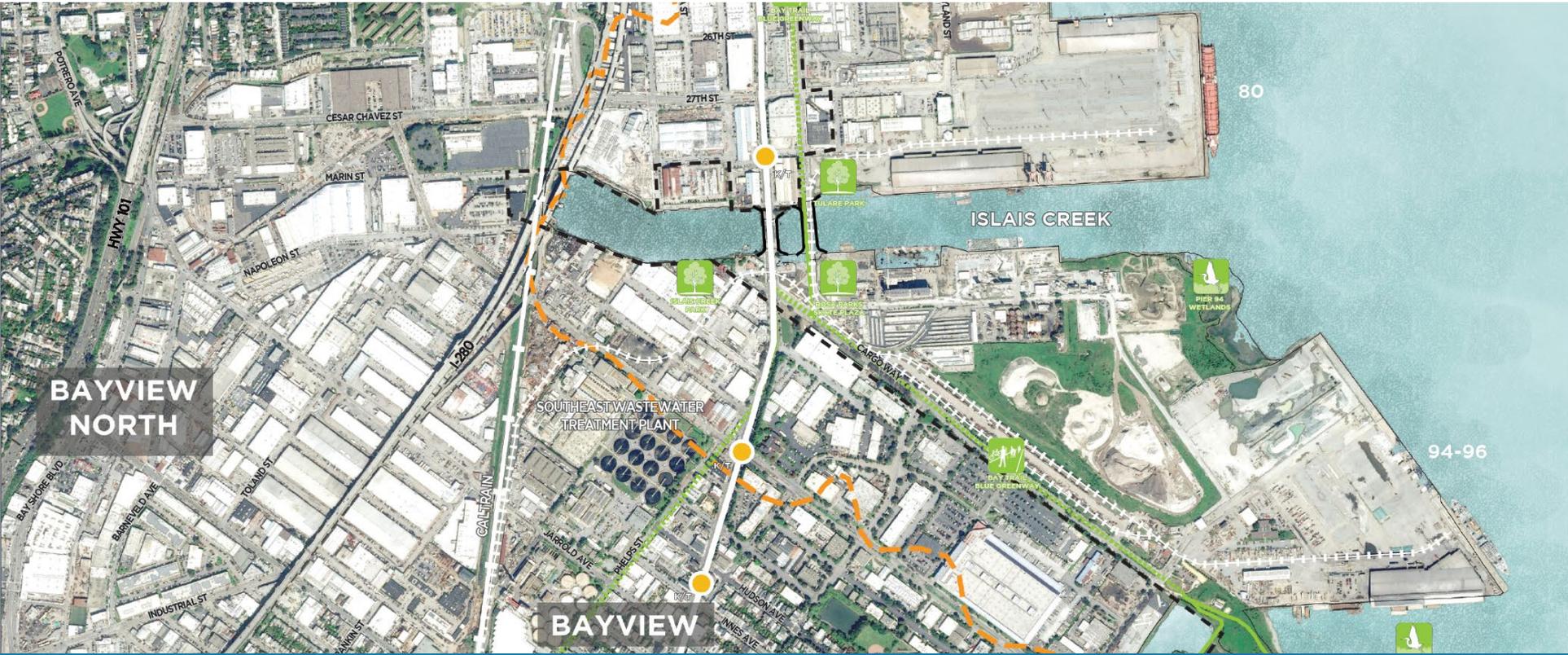
BAY TRAIL



PARKS



HABITAT



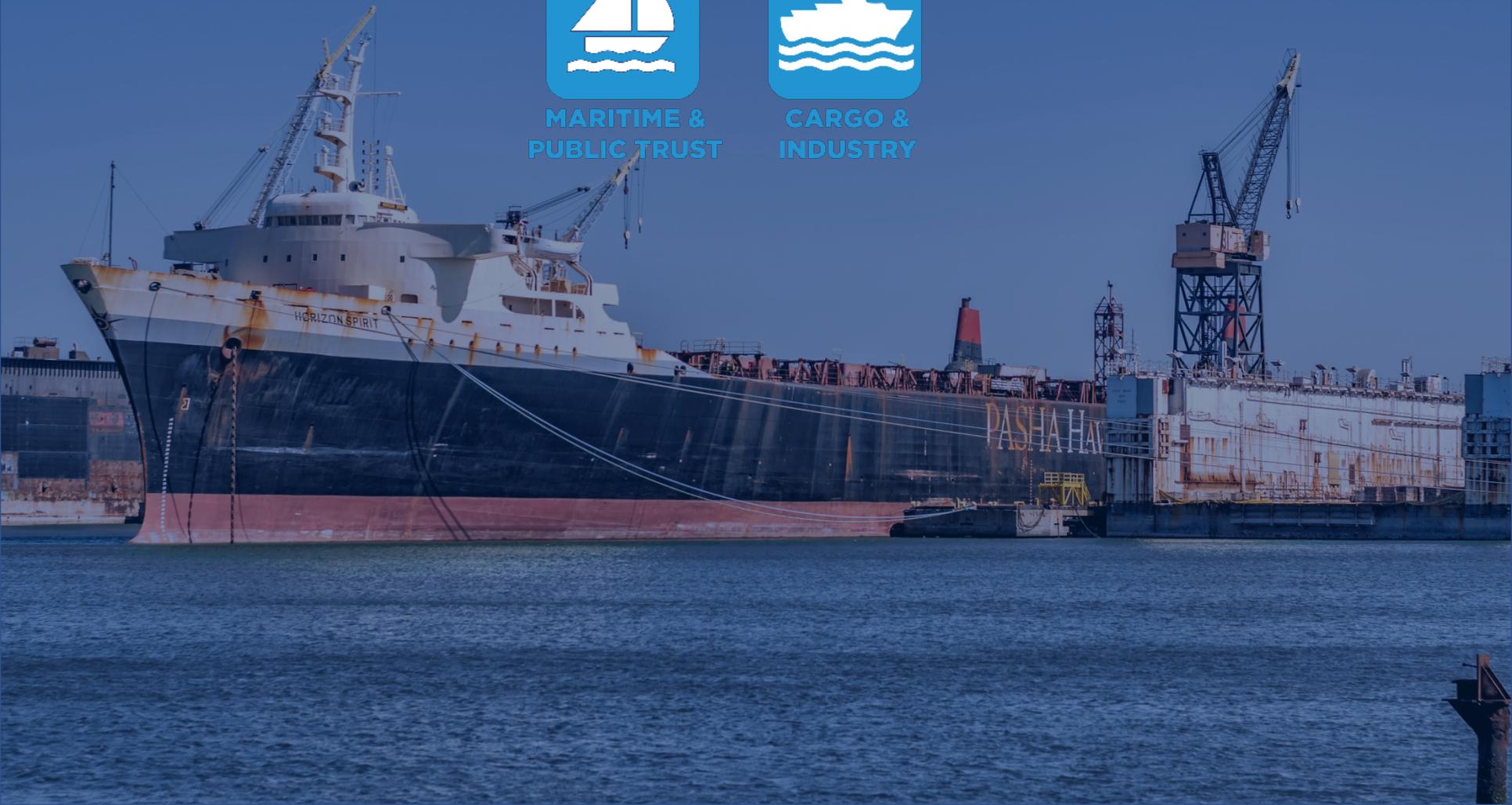
MARITIME ASSETS



MARITIME &
PUBLIC TRUST



CARGO &
INDUSTRY



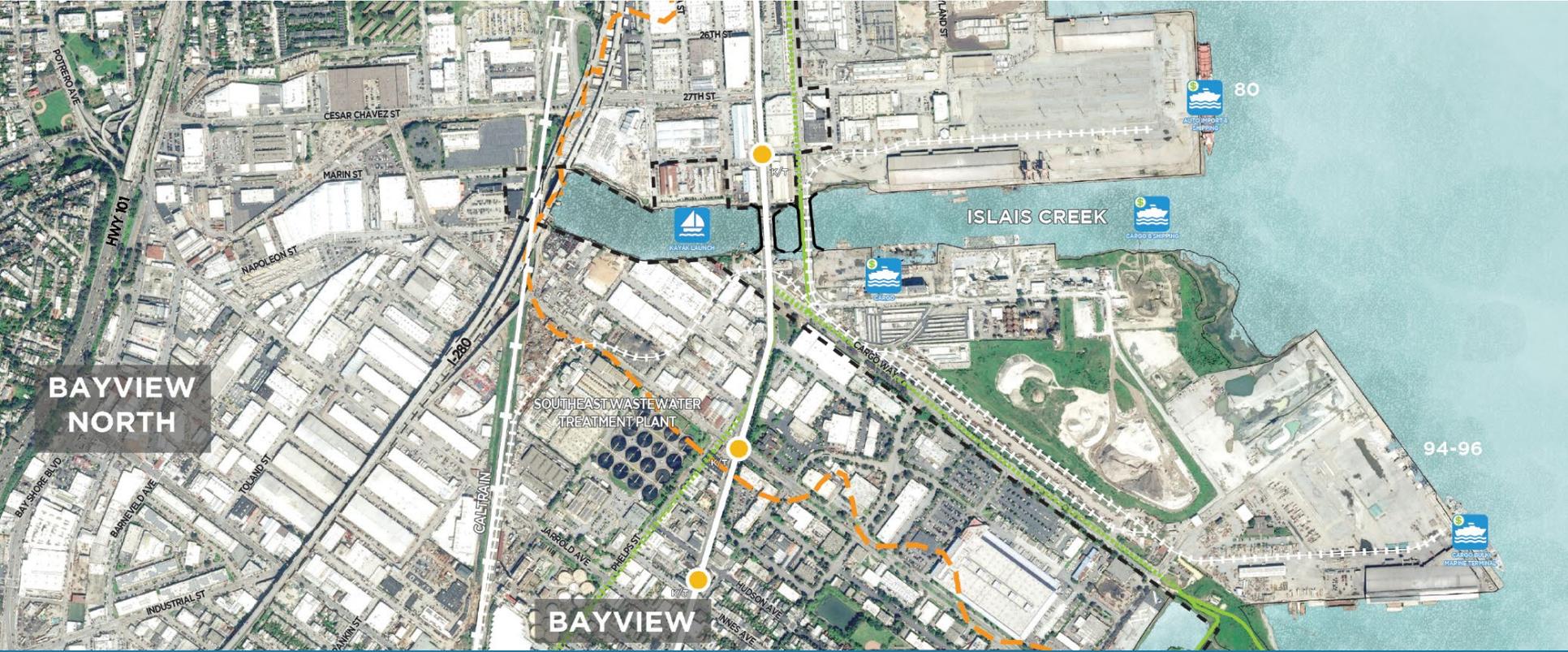
MARITIME ASSETS



**MARITIME &
PUBLIC TRUST**



**CARGO &
INDUSTRY**



HEALTH & SAFETY



EMERGENCY
SERVICES



HEALTH &
SAFETY



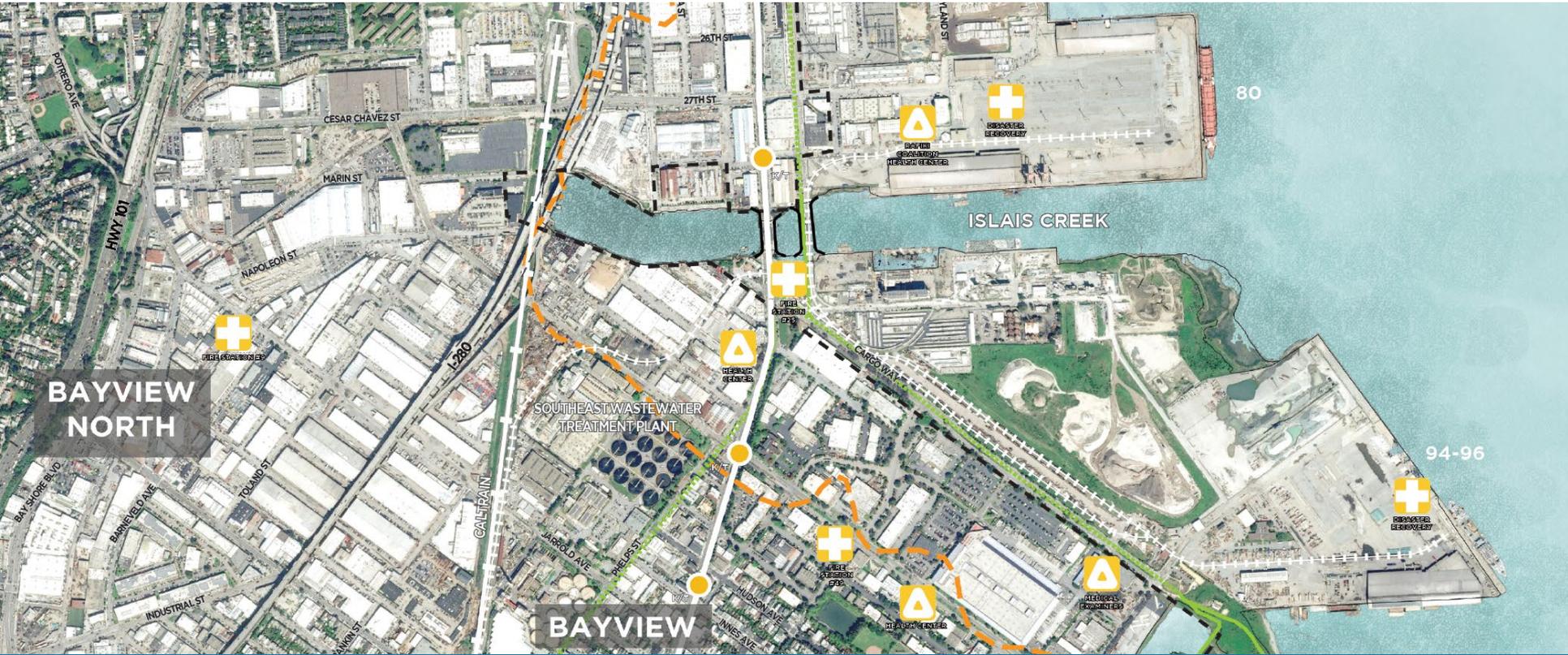
HEALTH & SAFETY



EMERGENCY SERVICES



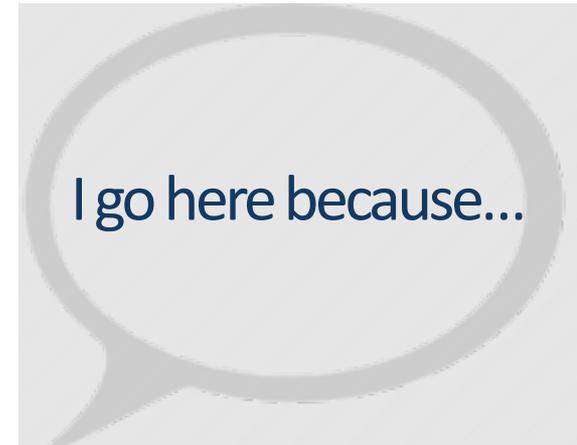
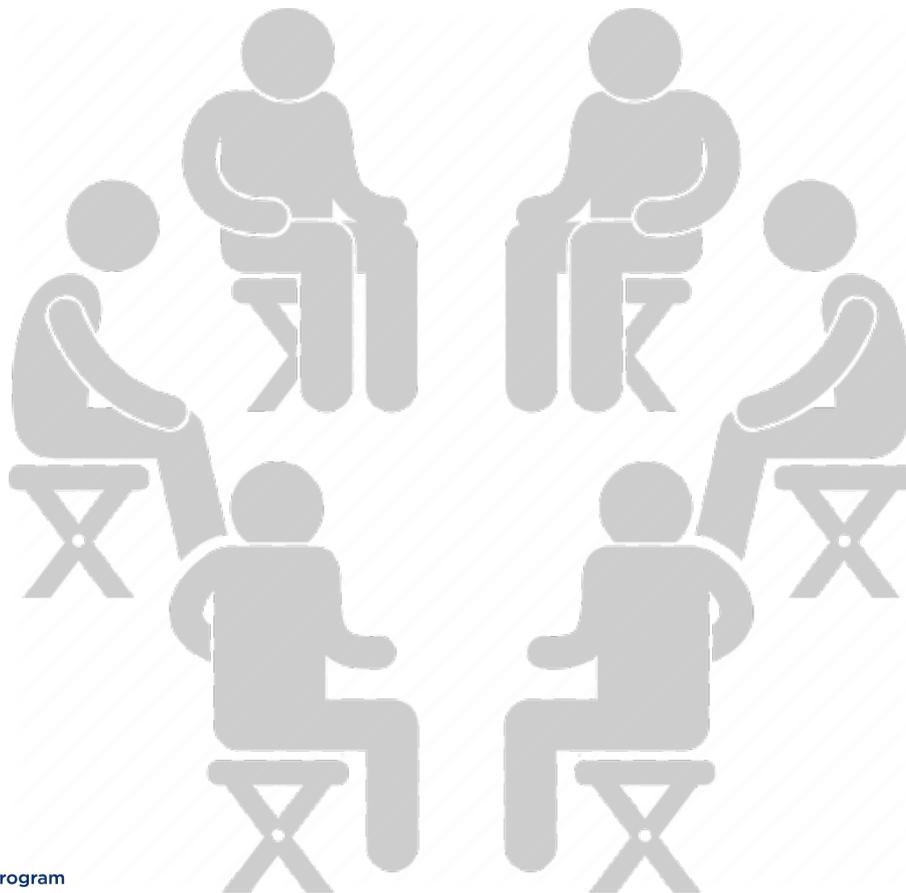
HEALTH & SAFETY



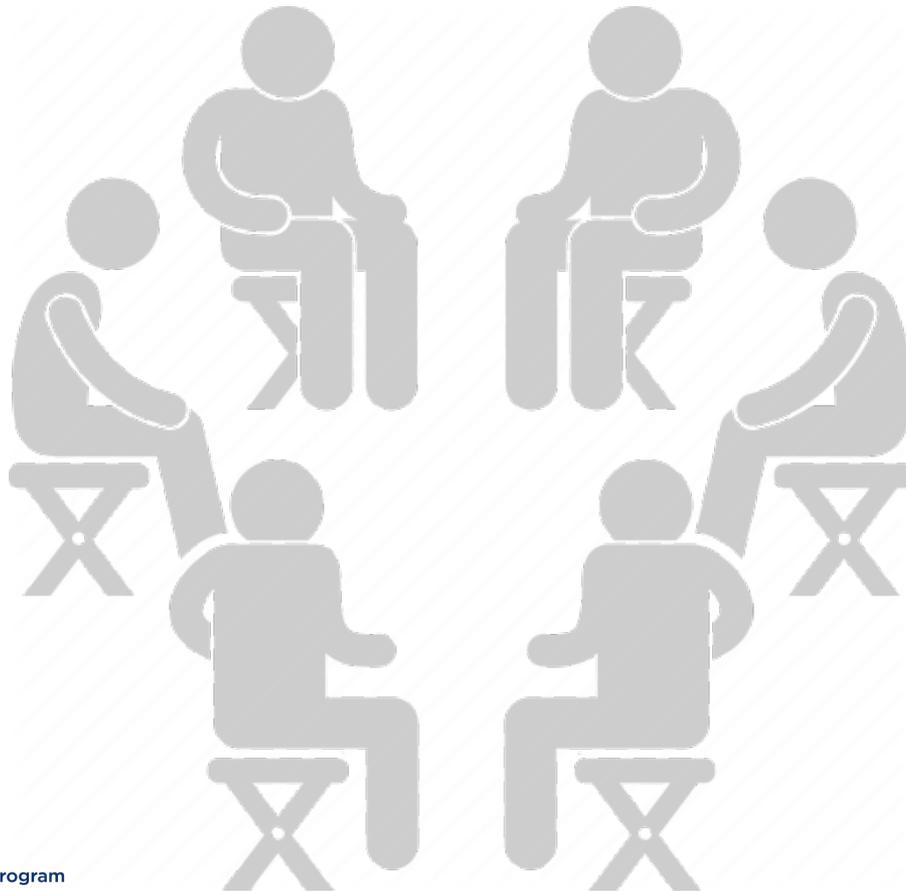
STEP 2: SHARE WHAT IS MOST IMPORTANT TO YOU ABOUT THIS AREA



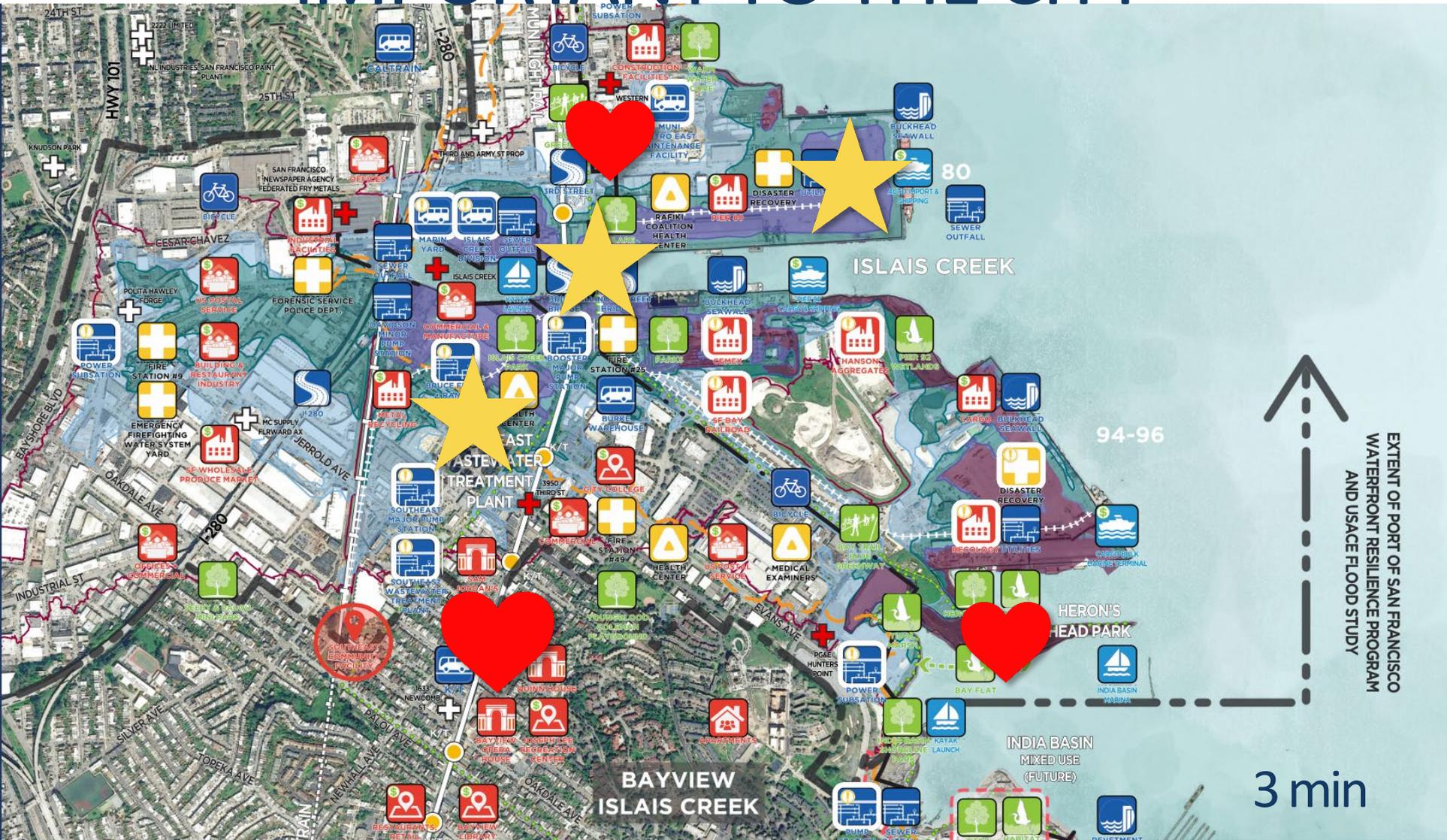
STEP 2: SHARE HOW YOU USE THIS AREA OR WHAT BRINGS YOU HERE



STEP 2: AND WHAT YOU THINK IS MOST IMPORTANT TO THE CITY



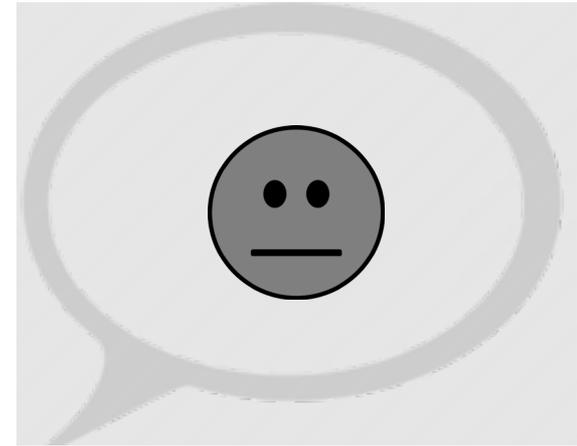
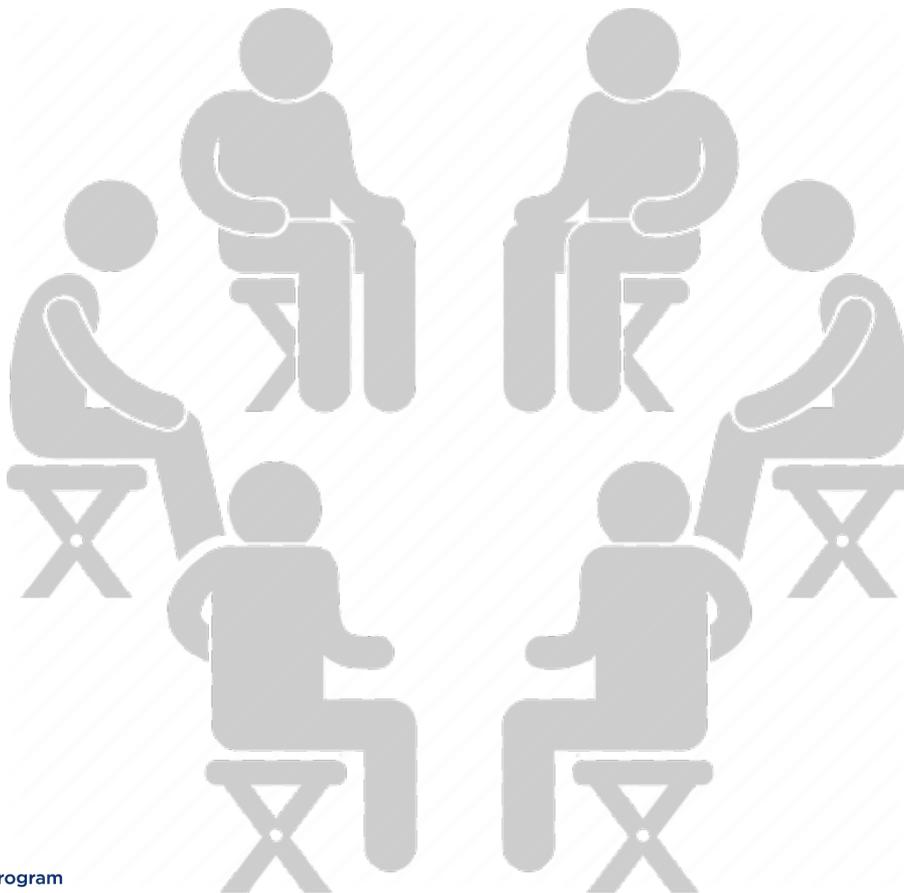
STEP 2: AND WHAT'S MOST IMPORTANT TO THE CITY



STEP 3: CONSIDER FLOODING



...SHARE WHAT CONCERNS YOU THE MOST

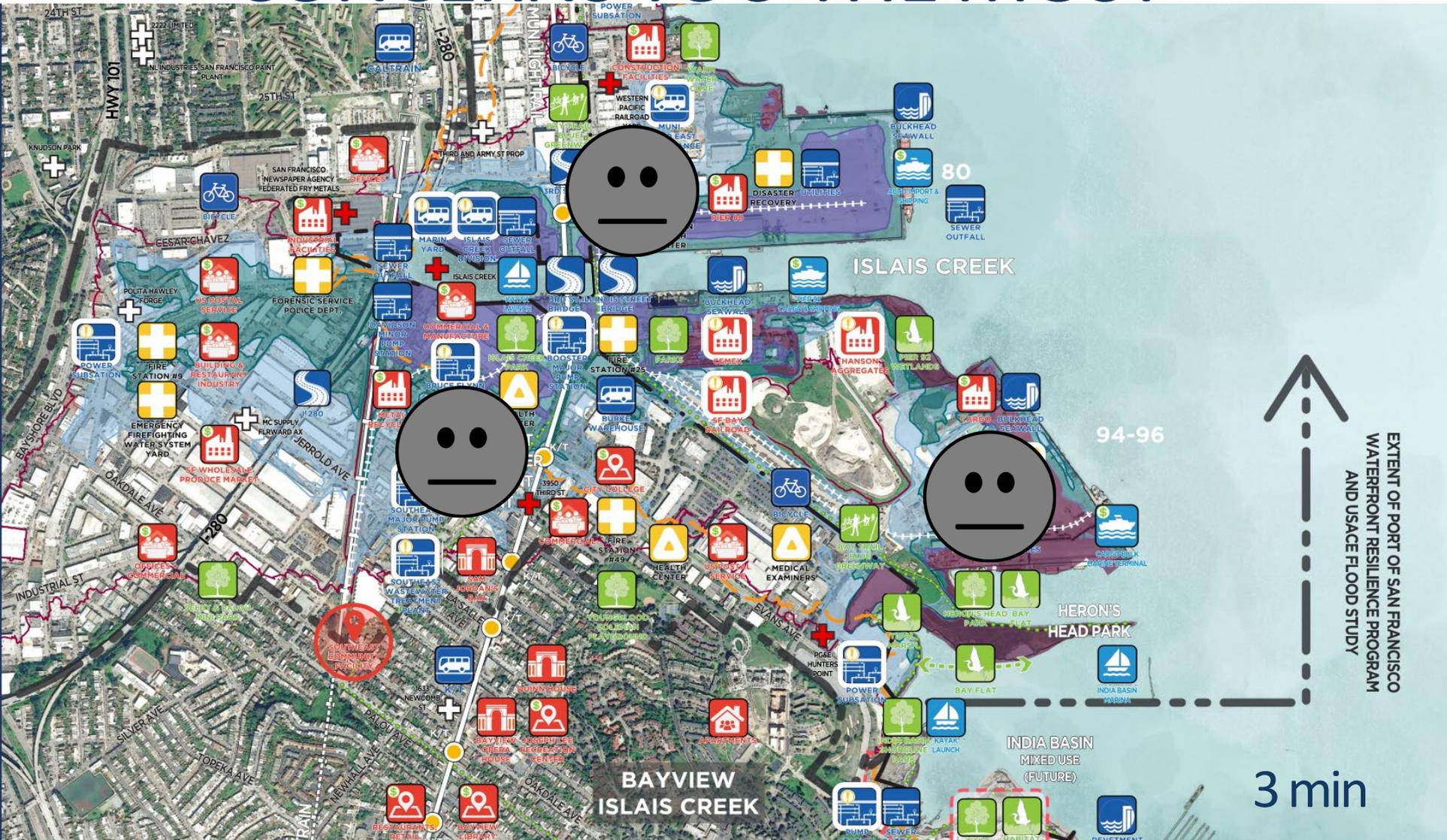


STEP 3: DECIDE AS A GROUP WHAT CONCERNS YOU THE MOST



EXTENT OF PORT OF SAN FRANCISCO
WATERFRONT RESILIENCE PROGRAM
AND USAGE FLOOD STUDY

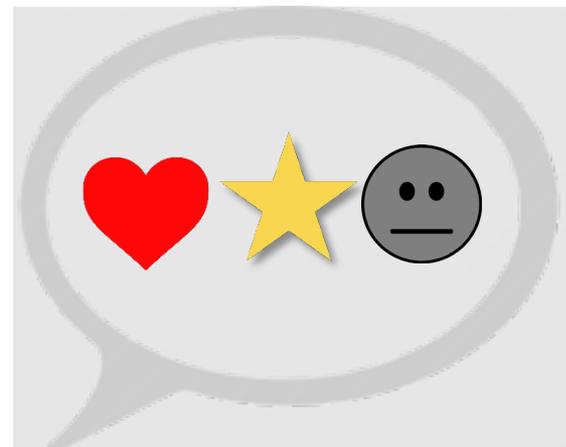
STEP 3: DECIDE AS A GROUP WHAT CONCERNS YOU THE MOST



EXTENT OF PORT OF SAN FRANCISCO
WATERFRONT RESILIENCE PROGRAM
AND USAGE FLOOD STUDY

3 min

STEP 4: REPORT OUT



RULES OF THE GAME

- Be a polite fellow citizen and listener
- Recognize that this is a game
- Follow the instructions and guidance of your facilitator
- Next meeting focus on detailed strategies – this is high level
- Have fun!

TIME TO FORM GROUPS

