ISLAIS CREEK BAYVIEW COMMUNITY WATERFRONT RESILIENCE

PUBLIC MEETING 1 | ISLAIS CREEK ADAPTATION STRATEGY | ARMY CORPS FLOOD STUDY

San Francisco Planning | PORT OF SAN FRANCISCO | SFMTA | US Army Corps of Engineers | Caltrans

Thursday March 14, 2019
Bayview Opera House

MEETING AGENDA

1. Opening Remarks and Welcome
2. Climate Hazards & Citywide Resilience
3. Army Corps Flood Study
4. Islais Creek Adaptation Strategy
5. Workshop Exercise
6. Next Steps

TONIGHT'S OBJECTIVES

COMMUNITY MEETING 1

INFORMATION

Learn about the Army Corps Flood Study, Islais Creek Adaptation Strategy, and related resilience projects and efforts

PARTICIPATION

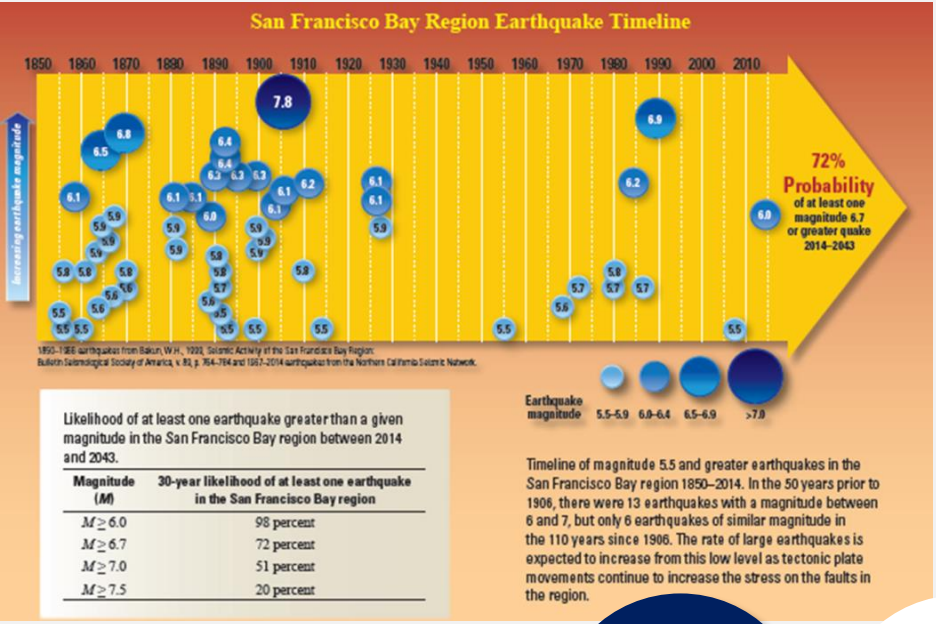
Engagement exercise to better understand what is important to Bayview community

DISCUSSION

Share outcomes of engagement exercise and what it means for equity, environment, economy, community, City and regional issues, priorities, and opportunities

FLOOD HAZARD

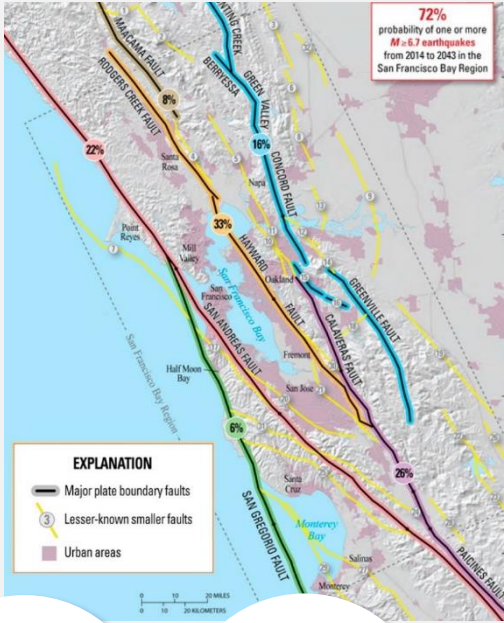
EARTHQUAKE HAZARD



Likelihood of at least one earthquake greater than a given magnitude in the San Francisco Bay region between 2014 and 2043.

Magnitude (*M*)	30-year likelihood of at least one earthquake in the San Francisco Bay region
$M \geq 6.0$	98 percent
$M \geq 6.7$	72 percent
$M \geq 7.0$	51 percent
$M \geq 7.5$	20 percent

Timeline of magnitude 5.5 and greater earthquakes in the San Francisco Bay region 1850–2014. In the 50 years prior to 1906, there were 13 earthquakes with a magnitude between 6 and 7, but only 6 earthquakes of similar magnitude in the 110 years since 1906. The rate of large earthquakes is expected to increase from this low level as tectonic plate movements continue to increase the stress on the faults in the region.



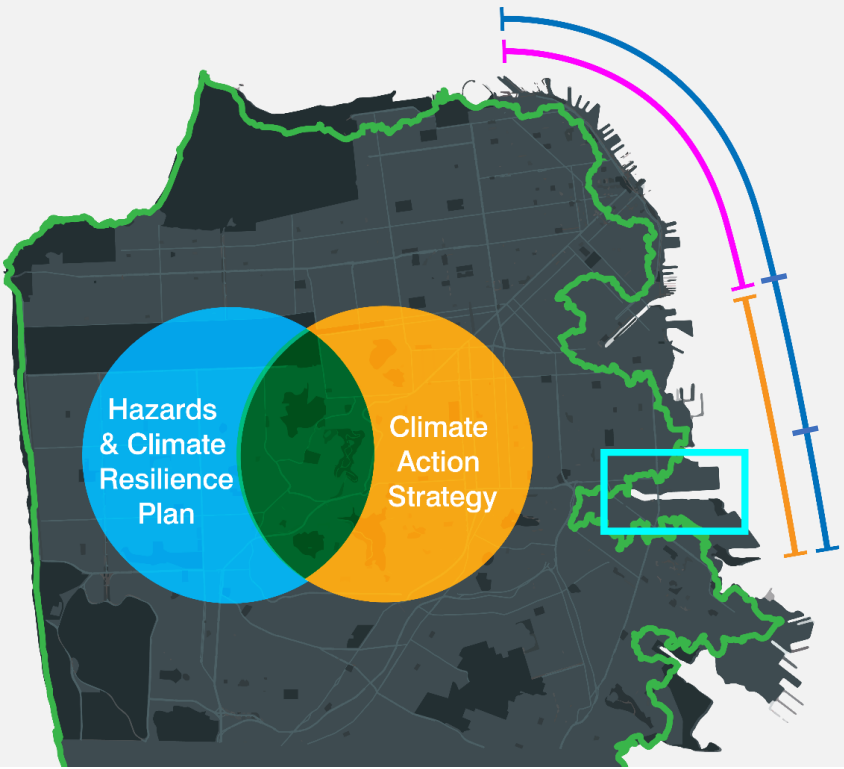
The likelihood of a major earthquake is high and the consequences are significant

72% likelihood of a major earthquake by 2043

Historically quiet period since 1906

San Andreas & Hayward Faults are highest risk

CITYWIDE RESILIENCE EFFORTS



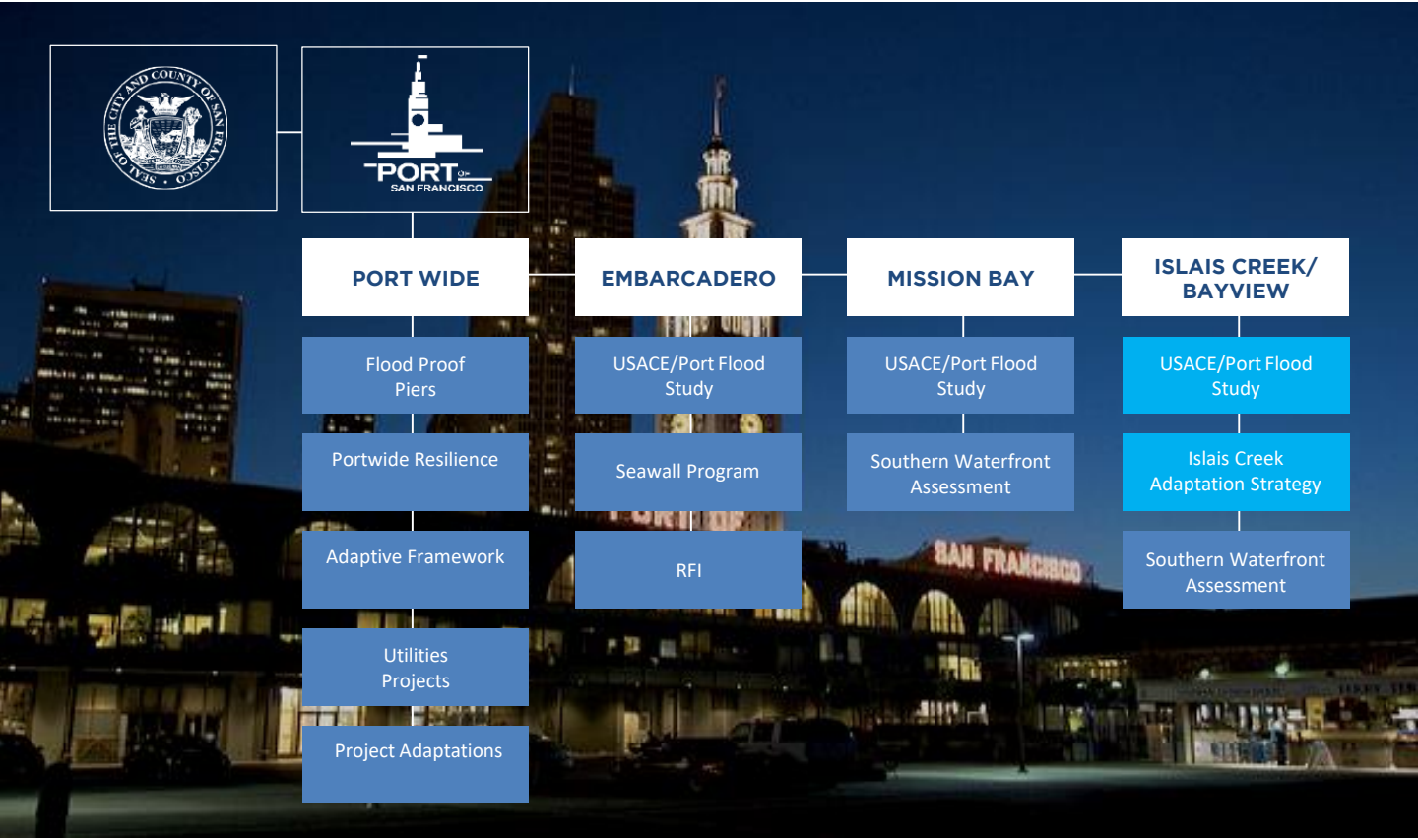
SHORELINE

- Sea Level Rise Action Plan
- Southern Waterfront Assessment
- Seawall Safety Program
- Army Corp of Engineers Flood Study
- Islais/Southeast Mobility Adaptation Strategy

CITYWIDE

- Climate Action Strategy
- Hazards and Climate Resilience Plan

PORT RESILIENCE EFFORTS



PORT RESILIENCE FRAMEWORK

STRENGTHEN ELEMENT

STRENGTEN THE SEAWALL FOR PUBLIC SAFETY

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

Planning and Implementation Horizon:
2018 – 2026

Priorities:
Current Seismic & Flood Risk

Geographic Focus:
Embarcadero Seawall

ADAPT ELEMENT

ADAPT TO MID-CENTURY RISKS

Objective:
Identify policies and projects that will result in a Port that is resilient to seismic and increasing flood risks and that can respond to changing priorities. Projects will be integrated into city, regional, and private actions, resulting in coordinated actions to increase waterfront resilience.

Planning and Implementation Horizon:
2018 – 2050, Plan updated every five years

Priorities:
Seismic Risk and Future Flood Risk

Geographic Focus:
Entire Port Jurisdiction

ENVISION ELEMENT

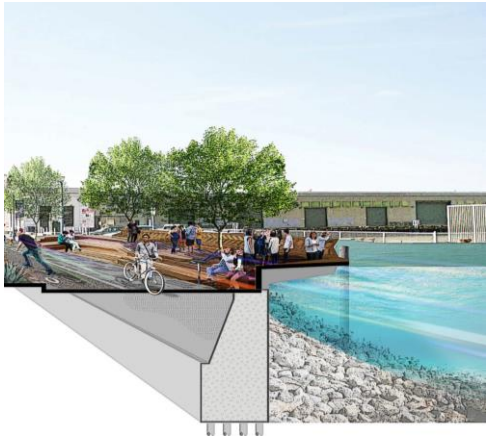
ENVISION THE WATERFRONT IN 2100

Objective:
Develop visions that can respond to remaining seismic risk and increasing flood risks and have an ongoing public conversation about the trade-offs of different options.

Planning and Implementation Horizon:
2018 – 2100, Vision Element updated every 10 years

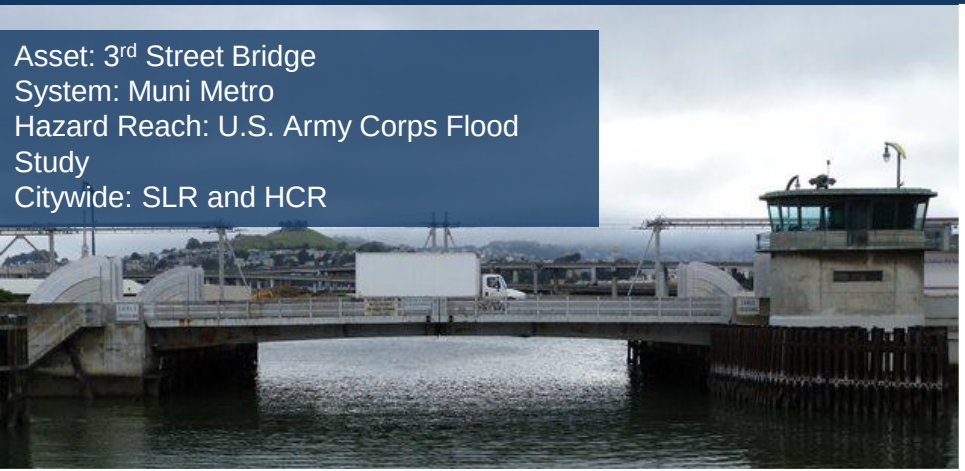
Priorities:
Seismic Risk and Future Flood Risk

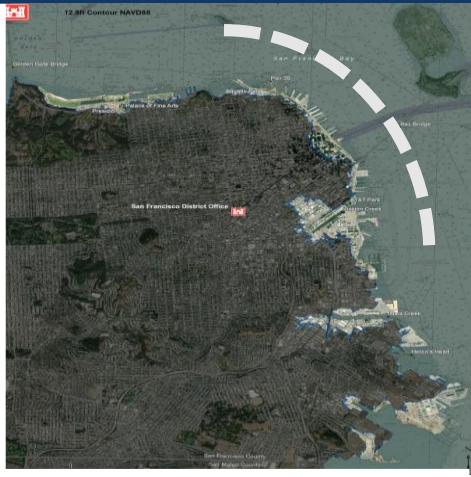
Geographic Focus:
Entire Port Jurisdiction

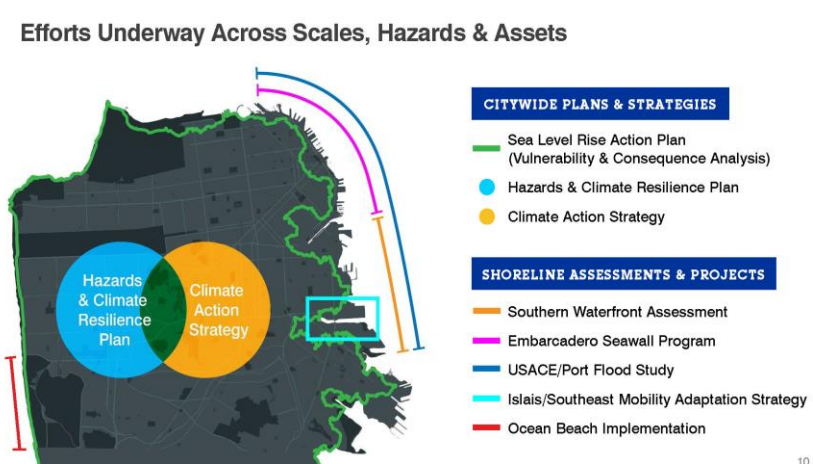


RESILIENCE PROJECTS SCOPE AND SCALE EXAMPLE

Asset: 3rd Street Bridge
System: Muni Metro
Hazard Reach: U.S. Army Corps Flood Study
Citywide: SLR and HCR







PROJECT RESILIENCE

PIER 70

- Mixed use development with 3000 homes, nine acres of parks
- Accommodates up to six feet of sea level rise
- Generates an estimated $88 million to be used for adaptation

Projects are not able to address access, utilities and surrounding access and services

PROJECT RESILIENCE

HERON'S HEAD LIVING SHORELINE

- Stabilize the southern shoreline of the park against ongoing erosion and subsidence
- Enhance biodiversity and ecological function of the site
- Enable the wetlands and park to adapt to a moderate amount of sea level rise through approximately 2050

RESILIENCE EFFORTS AT ISLAIS CREEK

Army Corps Flood Study

Focus: Flood Risk, Protecting assets in the Federal Interest and Identifying local priorities, Potential to qualify for Federal Construction $

Implementation: Short, Medium and Long-Term

Southern Waterfront Assessment

Focus: All hazards, broad resilience (Equity, Environment, Economy)

Implementation: Short, Medium and Long-Term

Islais Creek Adaptation Strategy

Focus: Reliable Transportation Systems, Social Equity

Implementation: Short, Medium and Long-Term

San Francisco Planning

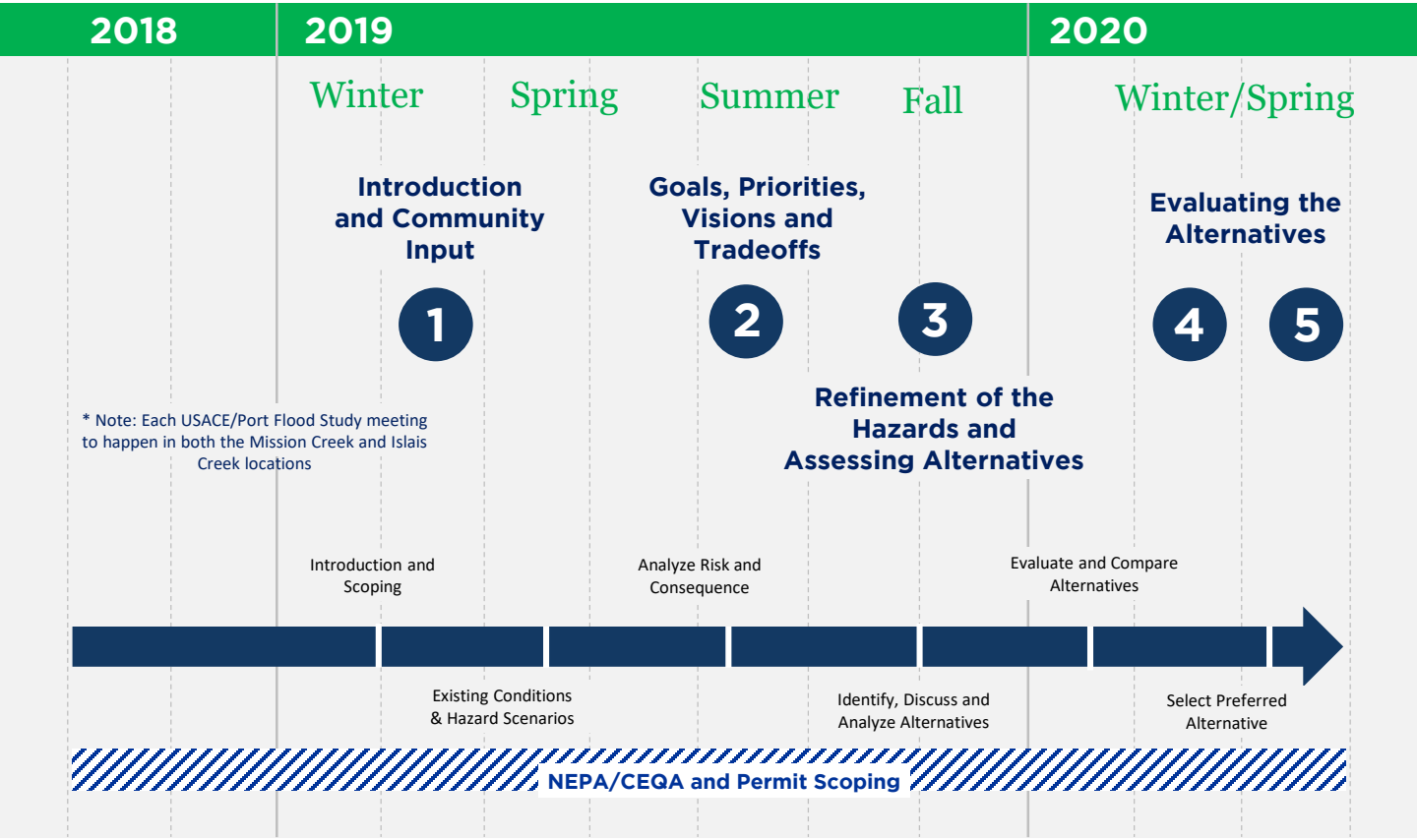
PORT OF SAN FRANCISCO

SFMTA

US Army Corps of Engineers

Caltrans

ISLAIS CREEK ADAPTATION STRATEGY
PLANNING & ENGAGEMENT



FLOOD STUDY
PUBLIC ENGAGMENT

Opportunities for participation will include community meetings held in adjacent neighborhoods, online engagement, and other activities throughout the study period.

Communities, businesses, and interested parties will be asked to help identify top priorities for:

- FLOOD RISK REDUCTION for community assets, resources, and critical infrastructure.
- INVESTMENT in flood risk management and approaches that also achieve benefits for community, environment, and economy.

FLOOD STUDY AREA

Preliminary estimate of value of structures and contents in floodplain: $22B

Approximately 7½ miles of waterfront between Aquatic Park (to the North) and Heron's Head Park (to the South)*

- Area based on preliminary assessment of coastal flood risk
- Significant cultural, historic and maritime assets
- Critical public infrastructure, including local and regional transit (above ground, below ground, and ferries) and wastewater treatment
- Dense residential, commercial, and industrial land use

FLOOD STUDY OVERVIEW

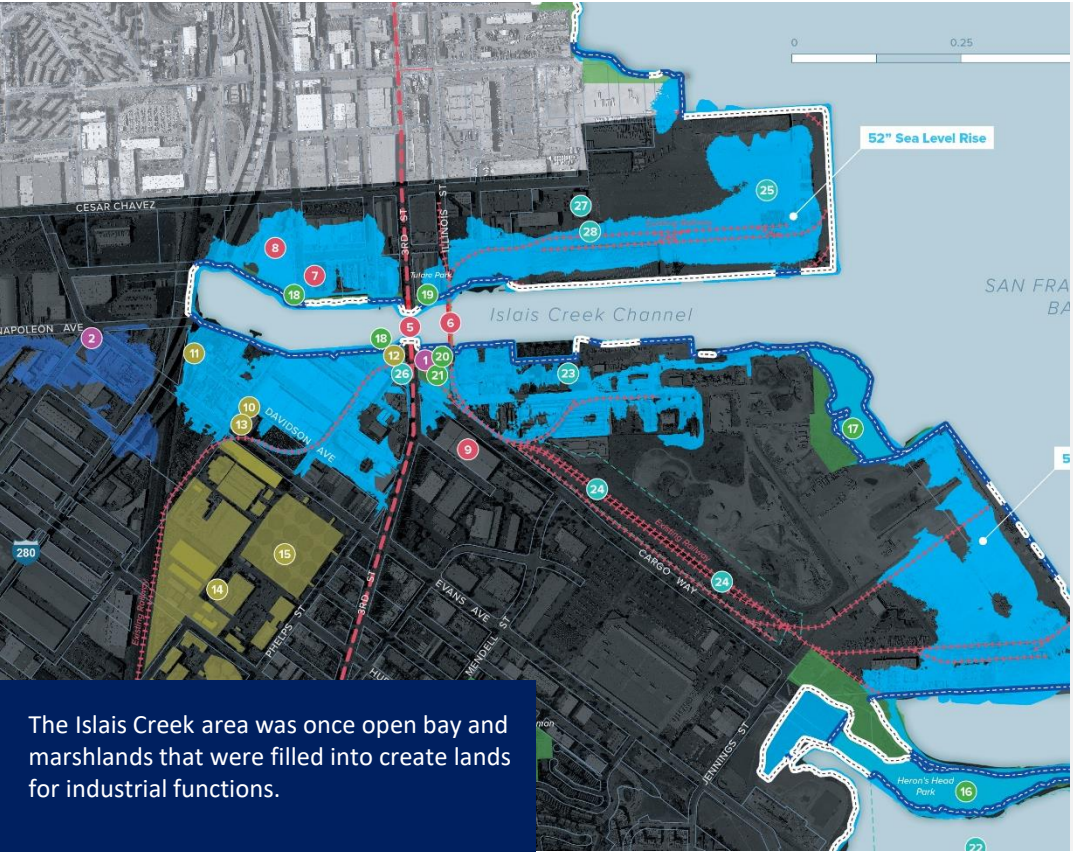
Approximately three to five year study (2018-2022) of flood risk along the San Francisco Bay shoreline which includes

- Army Corps experience and expertise
- Funding for the assessment of flood risk and the identification of a preferred alternative that becomes eligible for Federal funding
- A requirement to identify risks to Federal interest, which drives the project that can be funded

FLOOD STUDY GOALS

- Better understand current and future flood risk along San Francisco's Bayside shoreline
- Identify alternatives to reduce flood risk
- Engage the public and other stakeholders to identify priorities for the Flood Study
- Create opportunities for funding for flood risk reduction projects

UNDERSTANDING THE HAZARDS AT ISLAIS



The Islais Creek area was once open bay and marshlands that were filled into create lands for industrial functions.

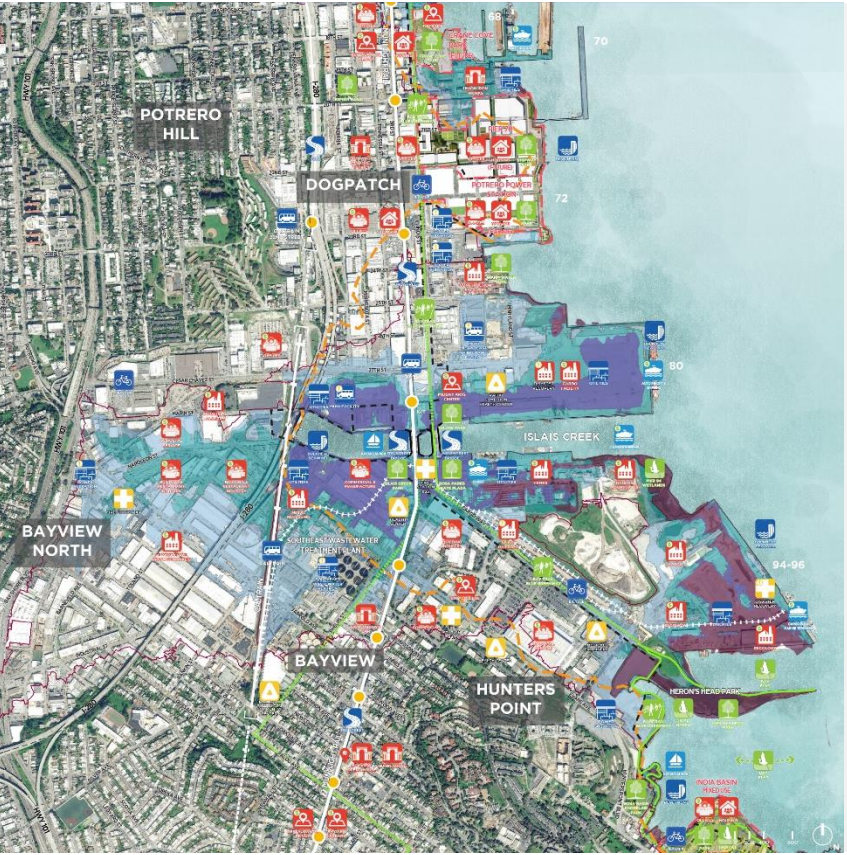
EARTHQUAKE RISK

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.

UNDERSTANDING ASSETS & SERVICES AT ISLAIS



The Port and the Army Corps are collecting information on existing assets with City agencies, partners and community stakeholders

INFRASTRUCTURE

URBAN AND CULTURAL

PARKS AND ECOSYSTEMS

MARITIME

DISASTER RESPONSE

FLOOD STUDY FUNDING

COST OF STUDY

DESIGN/CONSTRUCTION OF FEDERAL PLAN

Locally preferred plan can be selected,

City/Port pays extra cost

Recommendations for funding the selected alternative will be made in the final Army Corps recommendation to Congress in 2022 or later.

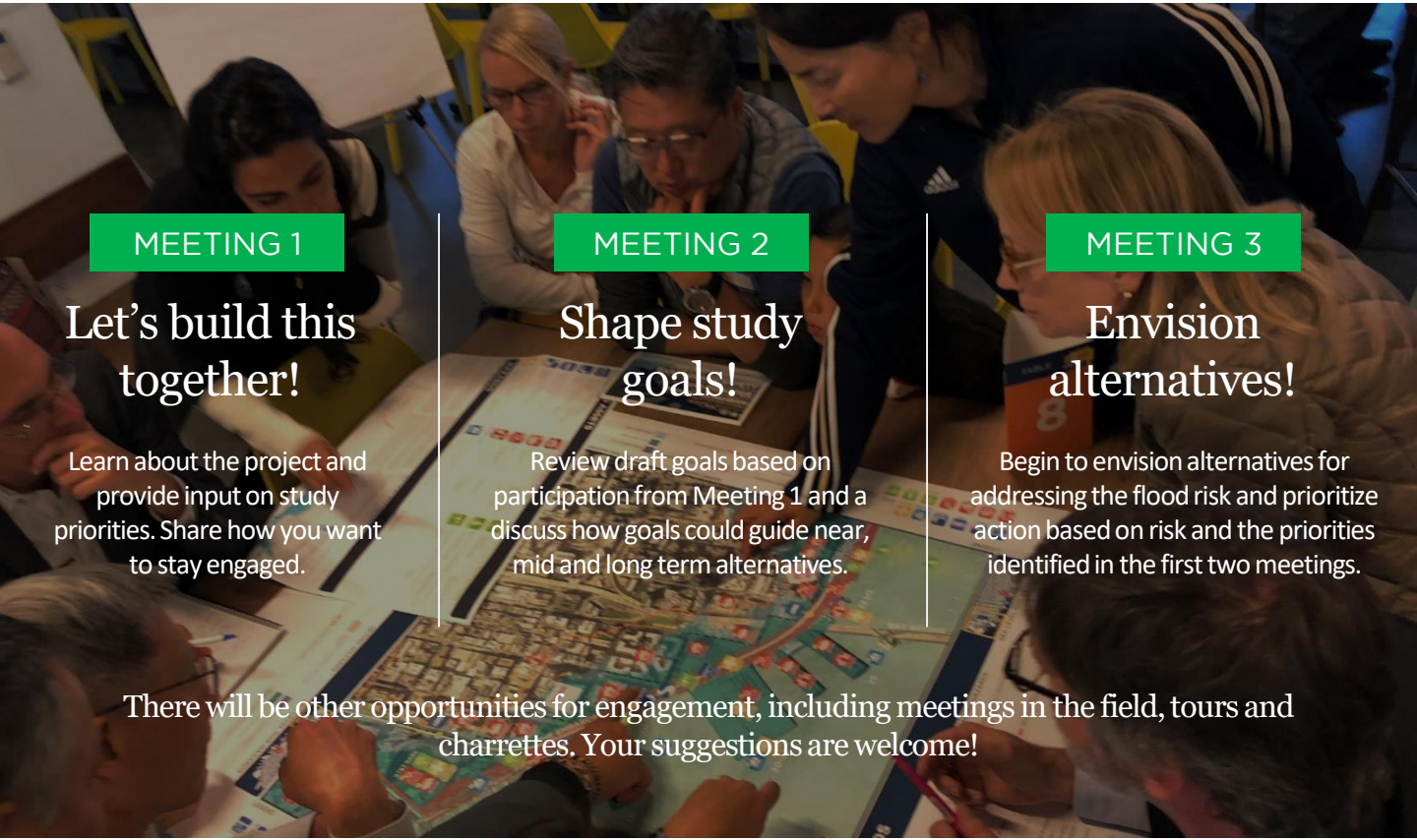
FLOOD STUDY OUTCOMES

San Francisco Planning | PORT OF SAN FRANCISCO | US Army Corps of Engineers

- A refined understanding of the hazards
- A refined understanding of the assets and services at risk and the consequences of disruption and damage
- Engagement with stakeholders to define goals, priorities and issues
- Education and outreach
- Identification of risk reduction alternatives
- Selection of a preferred alternative
- Federal expertise and possible funding for that preferred alternative

FLOOD STUDY
PUBLIC ENGAGMENT

San Francisco Planning | PORT OF SAN FRANCISCO | US Army Corps of Engineers



MEETING 1

Let's build this together!

Learn about the project and provide input on study priorities. Share how you want to stay engaged.

MEETING 2

Shape study goals!

Review draft goals based on participation from Meeting 1 and a discuss how goals could guide near, mid and long term alternatives.

MEETING 3

Envision alternatives!

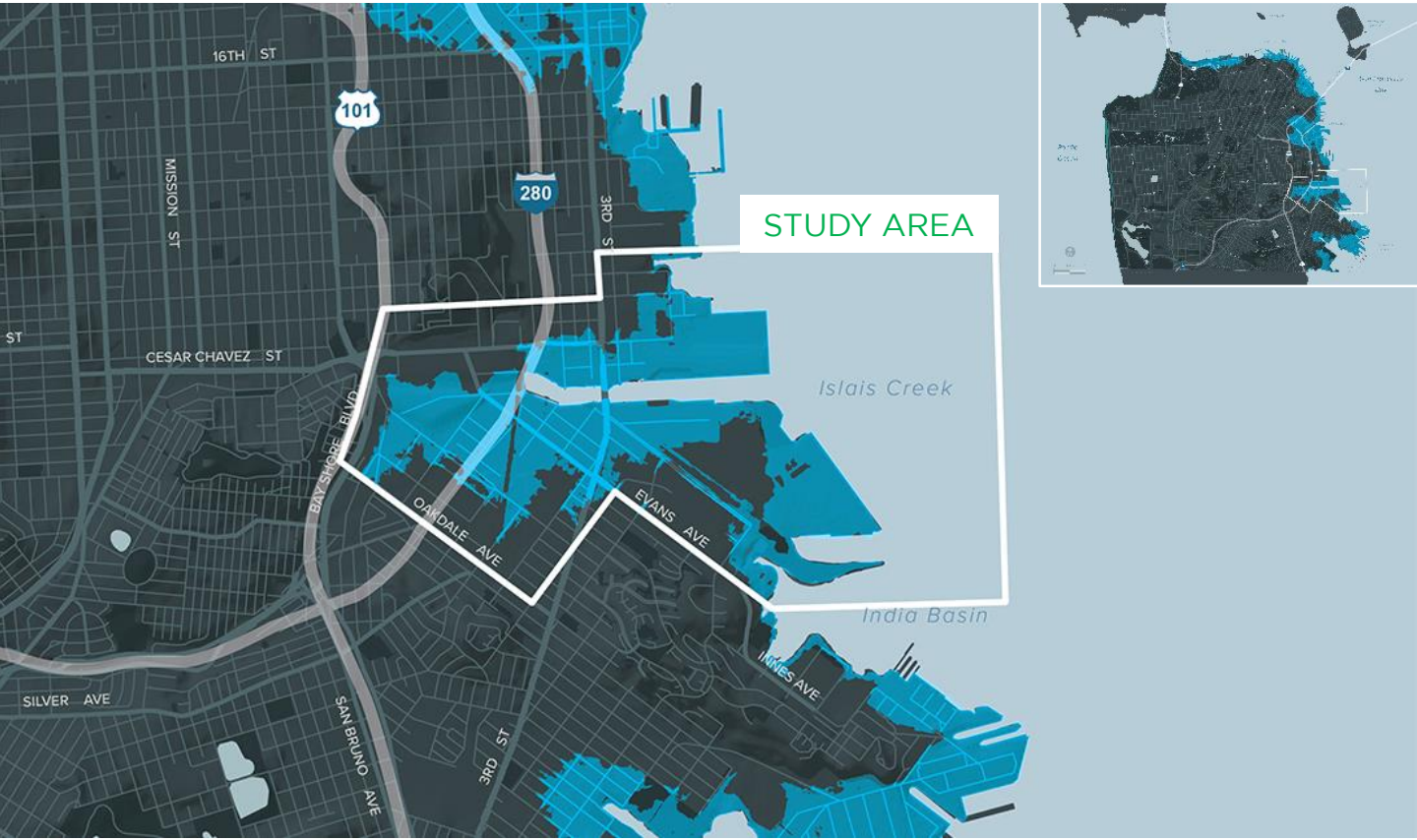
Begin to envision alternatives for addressing the flood risk and prioritize action based on risk and the priorities identified in the first two meetings.

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

OPPORTUNITIES TO ENGAGE IN RESILIENCE EFFORTS

- **MAP THE WATERFRONT ASSETS! sfseawall.com**
- **OUTREACH**
  - Waterfront Resilience Webinar
    Wednesday March 27
    1 - 1:30 PM
- Let us know where we should go-community events, meetings, organizations
- Let us know how you want to engage-field visits, smaller technical or policy briefings, hosting or participating in community led events

RESILIENCE EFFORTS AT ISLAIS CREEK



ISLAIS CREEK ADAPTATION STRATEGY
GOALS

1. Develop strategies for a resilient, safe, and reliable multimodal transportation system that accommodates projected population and job growth
2. Engage community members, especially those who are vulnerable and disadvantaged, in all phases of the project to ensure that local expertise is included
3. Produce both site-specific district-wide strategies
4. Prioritize Actions for near, mid, and long-term implementation
5. Identify other co-benefits such as increased wildlife habitat, ecosystem functions, and expanded open space
6. Identify other co-benefits such as more jobs, and of greater diversity, in the project area

ISLAIS CREEK ADAPTATION STRATEGY

PLANNING & ENAGEMENT

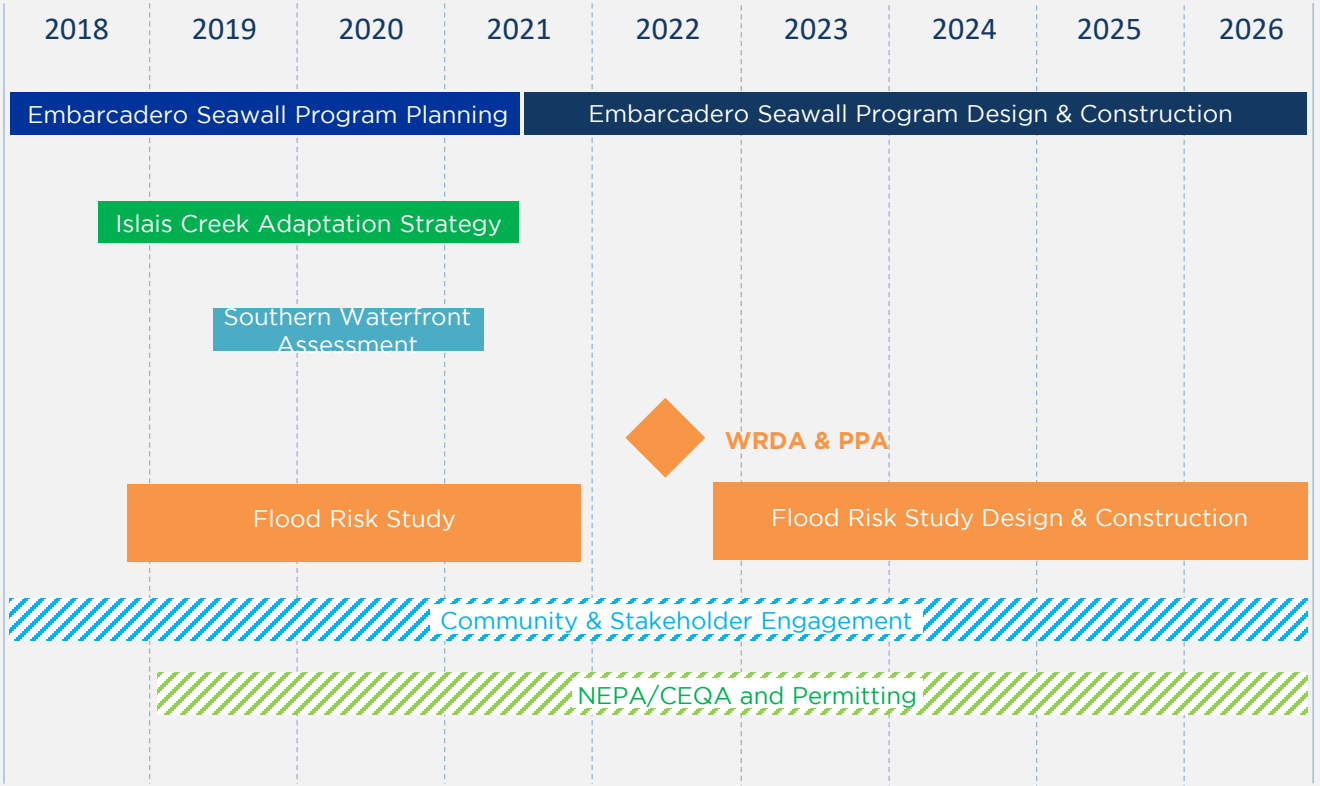
Workshop #1: Mapping Assets: March 2019
Workshop #2: Establish Adaptation Goals, Priorities, and Tradeoffs: Summer 2019
Refinement of the Hazards and Assessing Alternatives: Fall 2019
Workshop #3: Develop District-Scale Design Alternatives: Winter 2020
Workshop #4: Adaptation Designs for Specific Sites: Winter 2021

Youth Engagement: Spring 2019, Fall 2019, Spring 2020

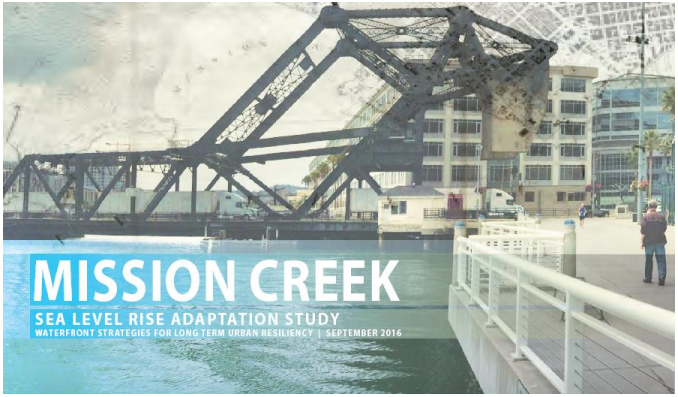
Community Ambassador Working Groups: Summer 2019 – Fall 2020

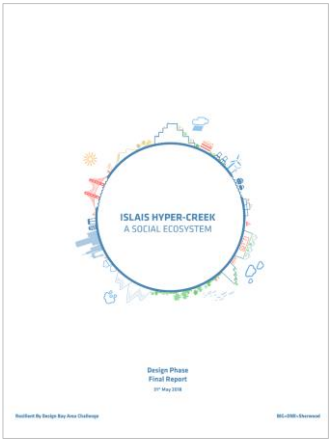
Other engagement opportunities TBD

RESILIENCE EFFORTS: TIMELINE



RELEVANT STUDIES AND PROJECTS





THANK YOU

Robin Abad
Islais Creek Project Manager
San Francisco Planning Dept.

robin.abad@sfgov.org
sfplanning.org/projects/islais

Lindy Lowe
Port Resilience Officer
Port of San Francisco

lindy.lowe@sfport.org
sfport.com

Flood Study Assets
& Community Engagement Exercise

Islais CreekCommunity Meeting

March 13th, 2019

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:

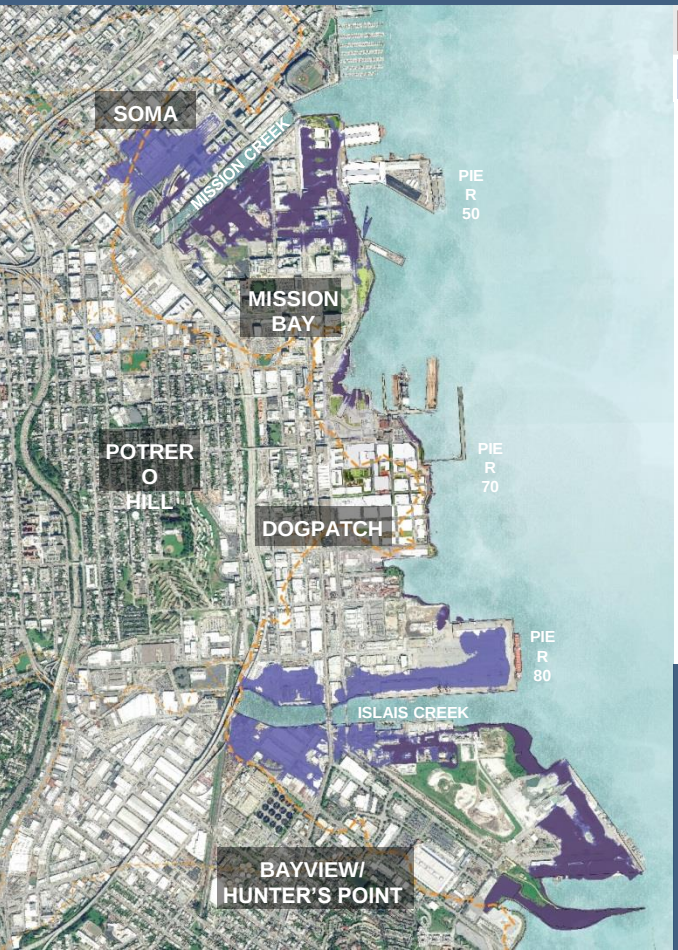
- 1 to 2 feet by 2050 (CCSF 2016)
- 3 to 5.5 feet by 2100 (CCSF 2016)
- New CA guidance up to 10 ft by 2100 (H++)

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

Immediate Flood Hazards:

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

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



CURRENT (2019 - 2030)

NEAR (2030 - 2050)

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)*

CURRENT (2019 - 2030)

NEAR (2030 - 2050)

MID (2050 - 2100)

Mid Term Flood Hazards:

- Mission Bay
- SOMA Neighborhood
- Islais Creek Industrial Area

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

- CURRENT (2019 - 2030)
- NEAR (2030 - 2050)
- MID (2050 - 2100)
- LONG (2100 - 2140)

Long Term Flood Hazards:

- Mission Bay
- SOMA Neighborhood
- Islais Creek Industrial Area

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

CURRENT (2019 - 2030)

NEAR (2030 - 2050)

MID (2050 - 2100)

LONG (2100 - 2140)

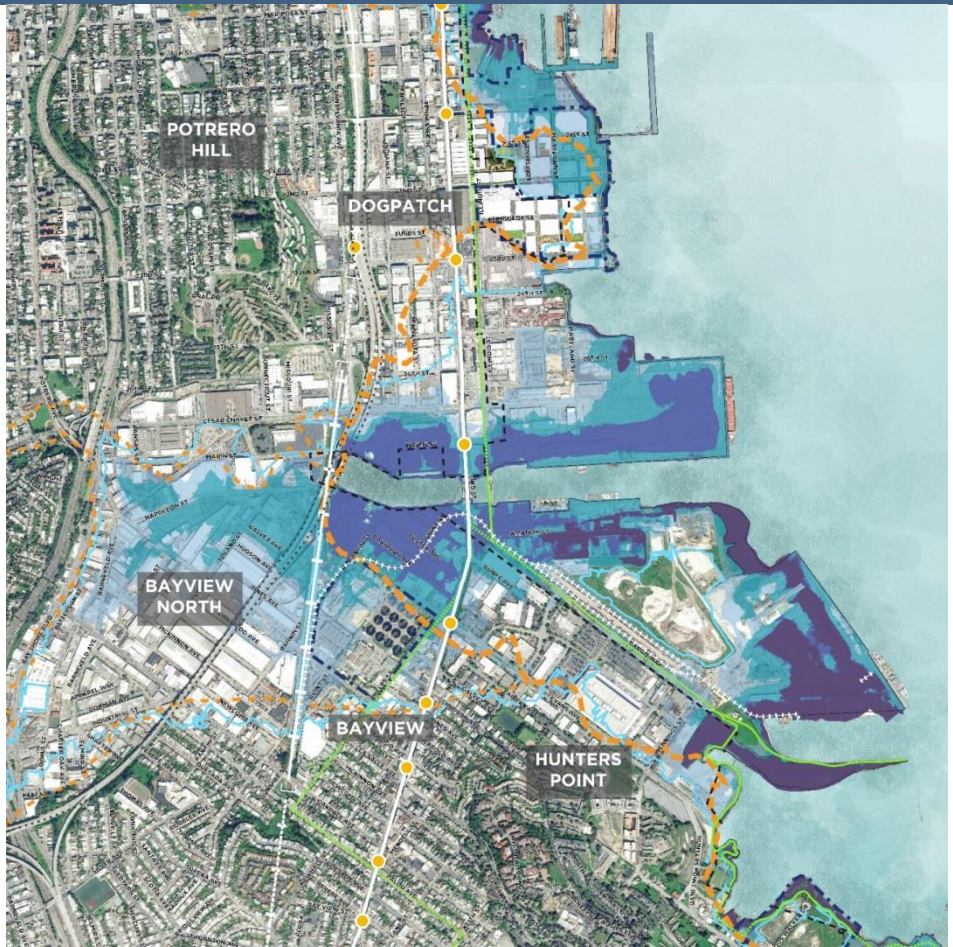
H++ SCENARIO

H++ Flood Hazards:

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

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

SAN FRANCISCO'S SOUTERN WATERFRONT: ISLAIS CREEK



SAN FRANCISCO'S SOUTERN WATERFRONT: ISLAIS CREEK

GAME OF HAZARDS!

SF WATERFRONT GAME OF HAZARDS
ASSET LEGEND
SEA LEVEL RISE HAZARDS
LEGEND
POTRERO HILL
DOGPATCH
POTRERO POWER STATION
PIER 70
ISLAIS CREEK
BAYVIEW NORTH
BAYVIEW
HUNTERS POINT
70
72
80
94-96
SF WATERFRONT GAME OF HAZARDS
ASSET LEGEND
LEGEND
SEA LEVEL RISE HAZARDS
PORT PROPERTY
BAY TRAIL
BART/MUNI/CALTRAIN RAIL AND STOP
100 YR FLOOD EVENT + 0.5 FT. SLR
100 YR FLOOD EVENT + 1 FT. SLR
++ 10.2 FT. SLR + 100 YR FLOOD
100 YR FLOOD EVENT + 3.5 FT. SLR

INFRASTRUCTURE

UTILITIES

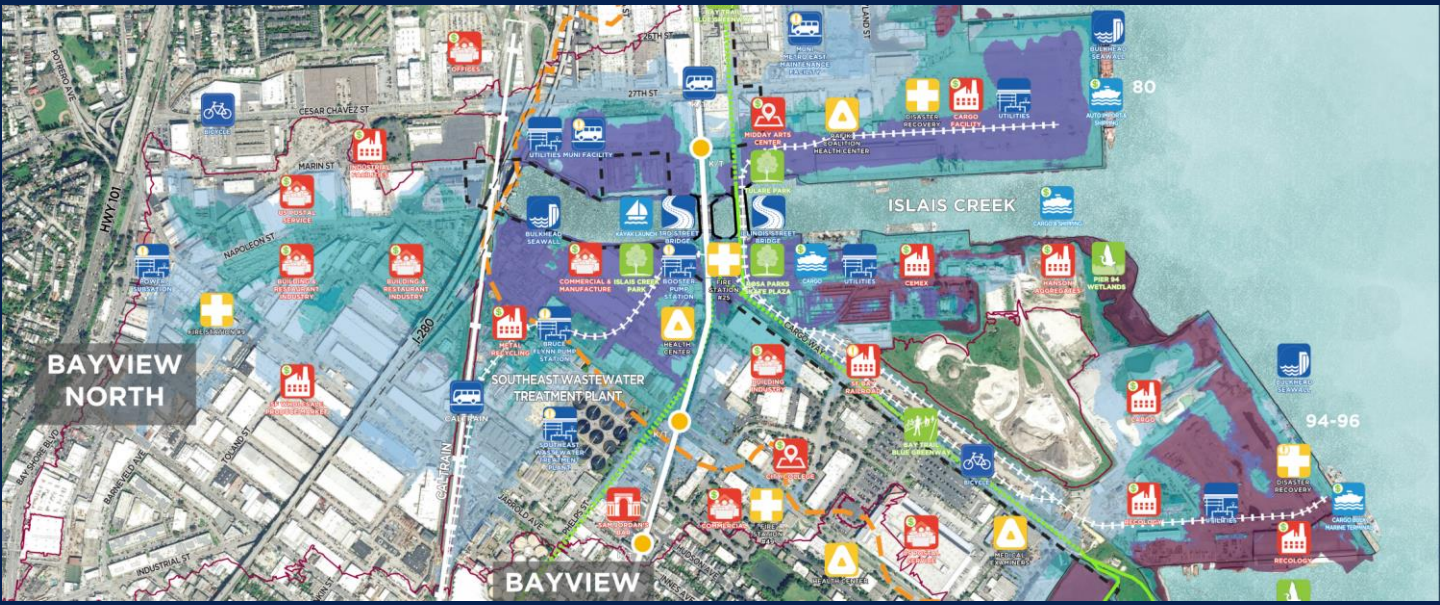
STREETS

TRANSIT

SHORELINE PROTECTION

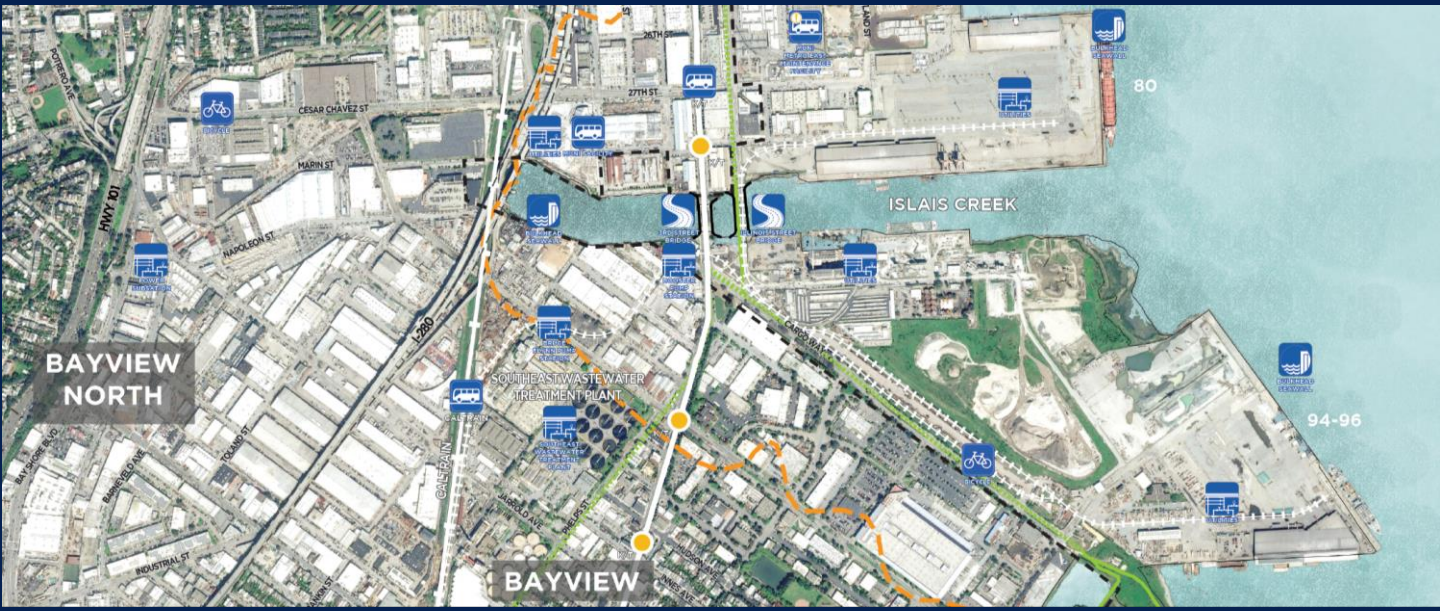
INFRASTRUCTURE

UTILITIES STREETS TRANSIT SEAWALL



INFRASTRUCTURE

UTILITIES STREETS TRANSIT SEAWALL



URBAN AND CULTURAL

URBAN AND CULTURAL

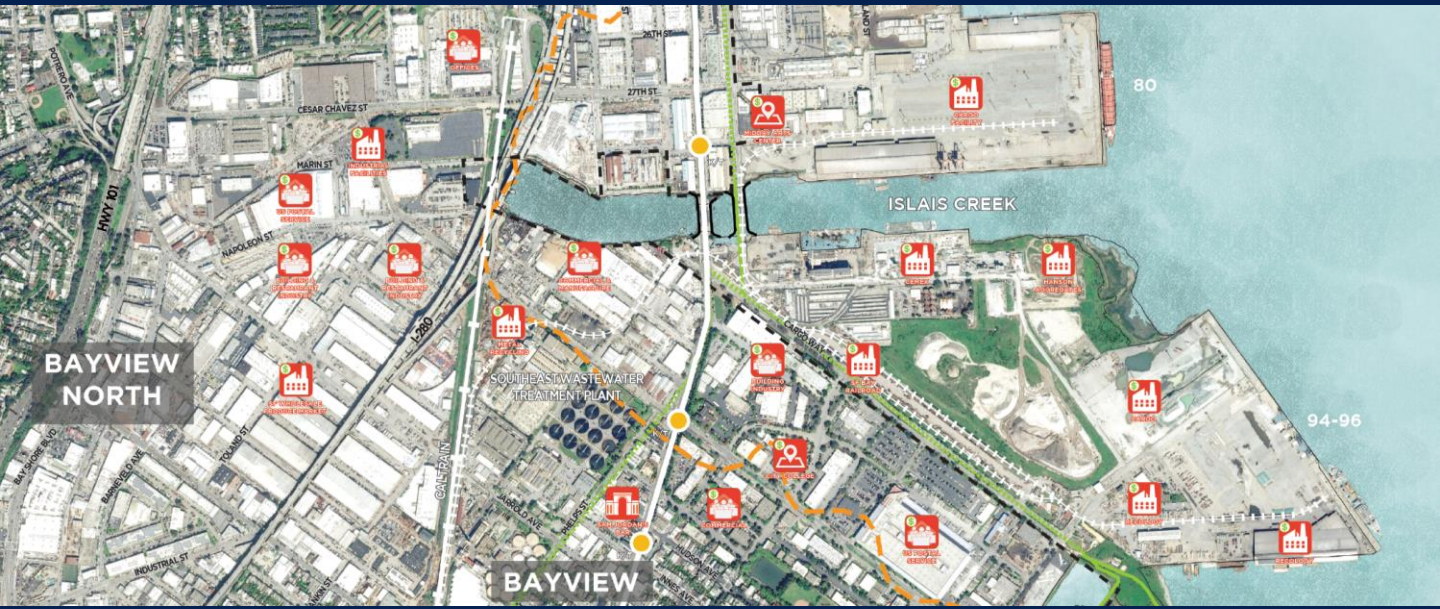
HISTORIC

LIVE

WORK

VISIT

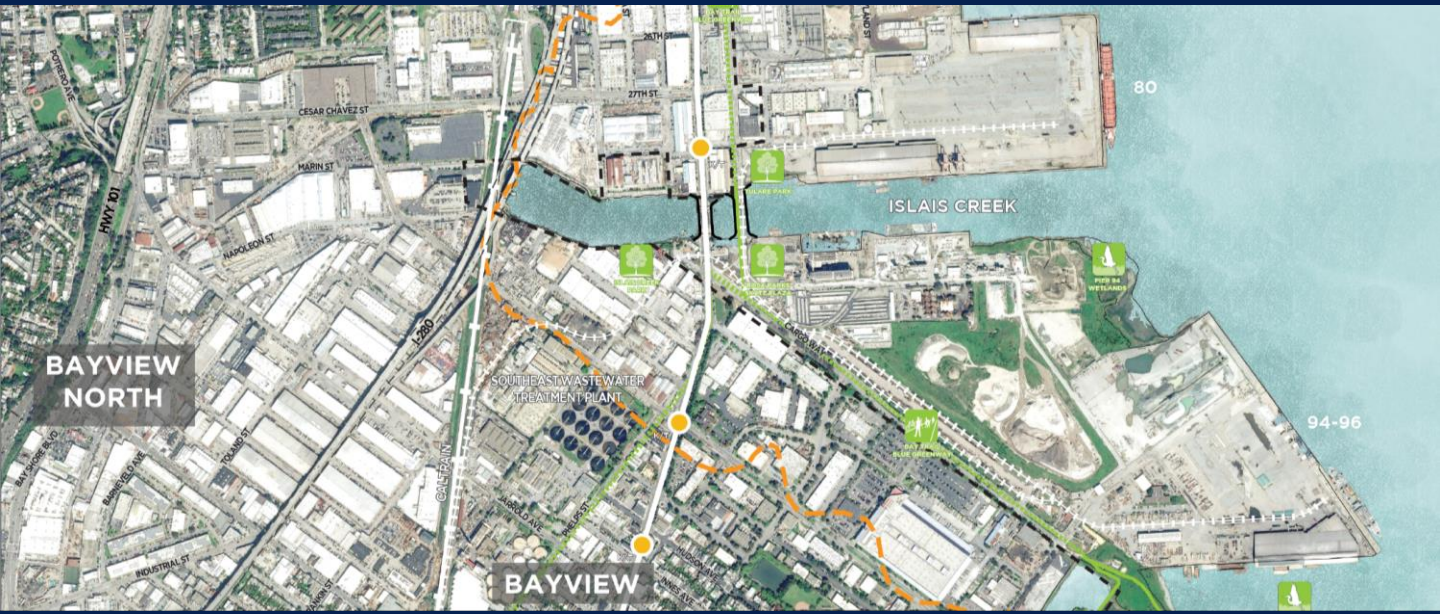
INDUSTRIAL FACILITIES



PARKS AND ECOSYSTEMS

PARKS AND ECOSYSTEMS

BAY TRAIL PARKS HABITAT

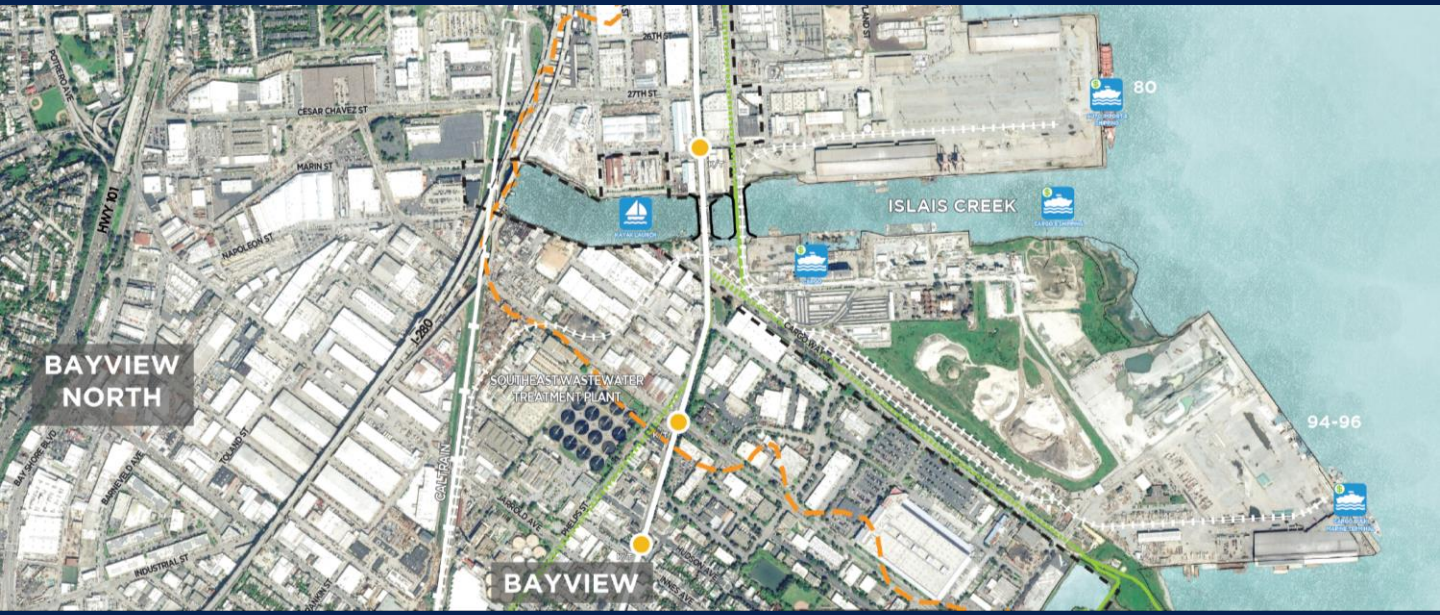


MARITIME ASSETS

MARITIME ASSETS

MARITIME & PUBLIC TRUST

CARGO & INDUSTRY

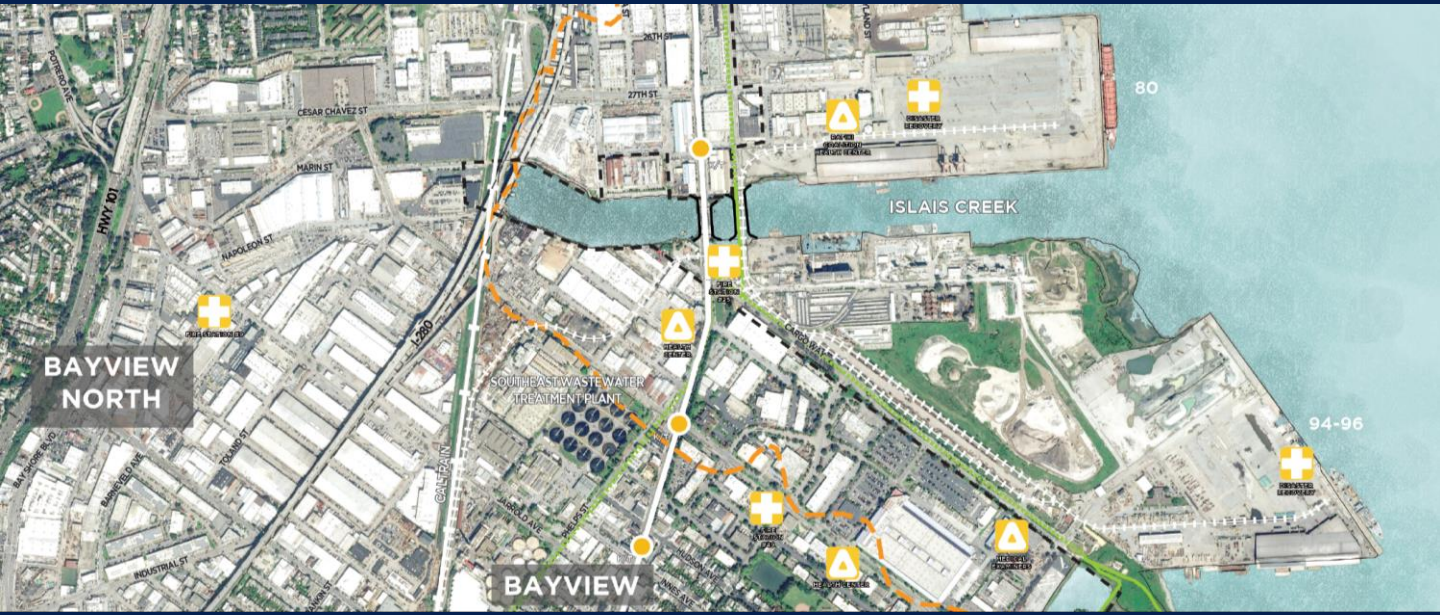


HEALTH & SAFETY

HEALTH & SAFETY

EMERGENCY SERVICES

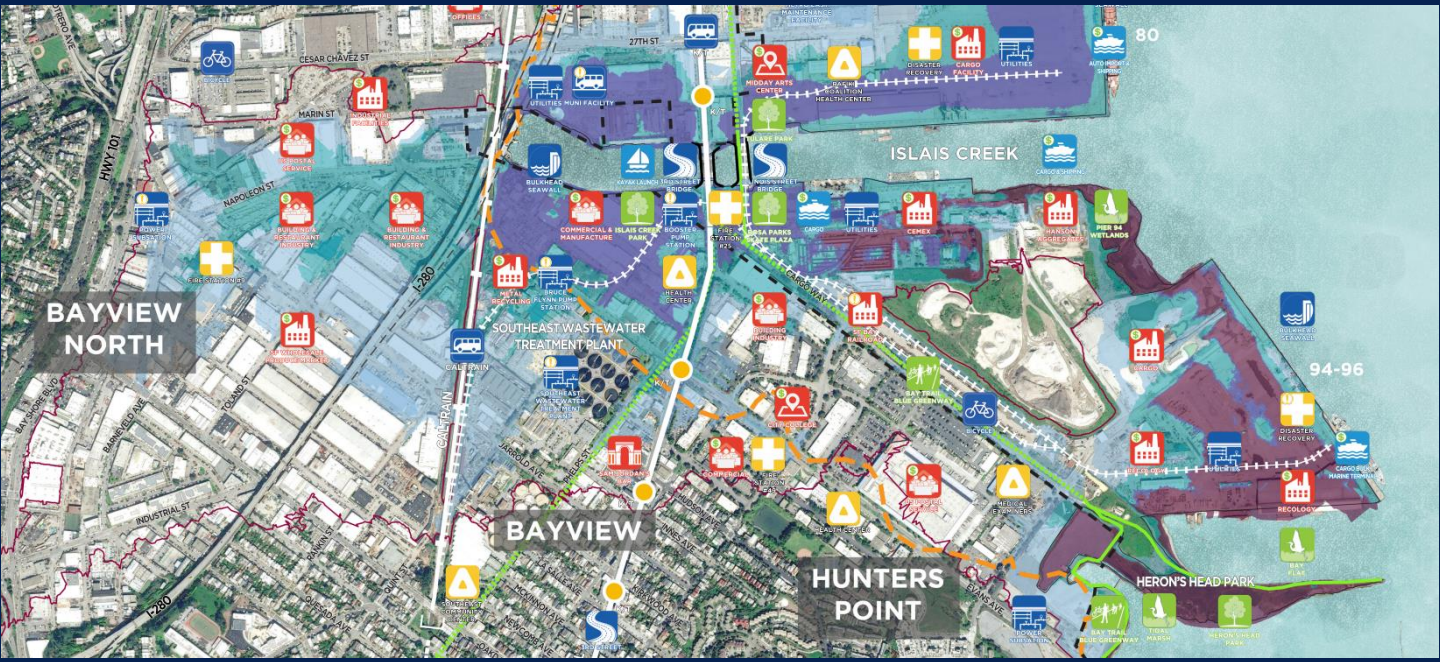
HEALTH & SAFETY



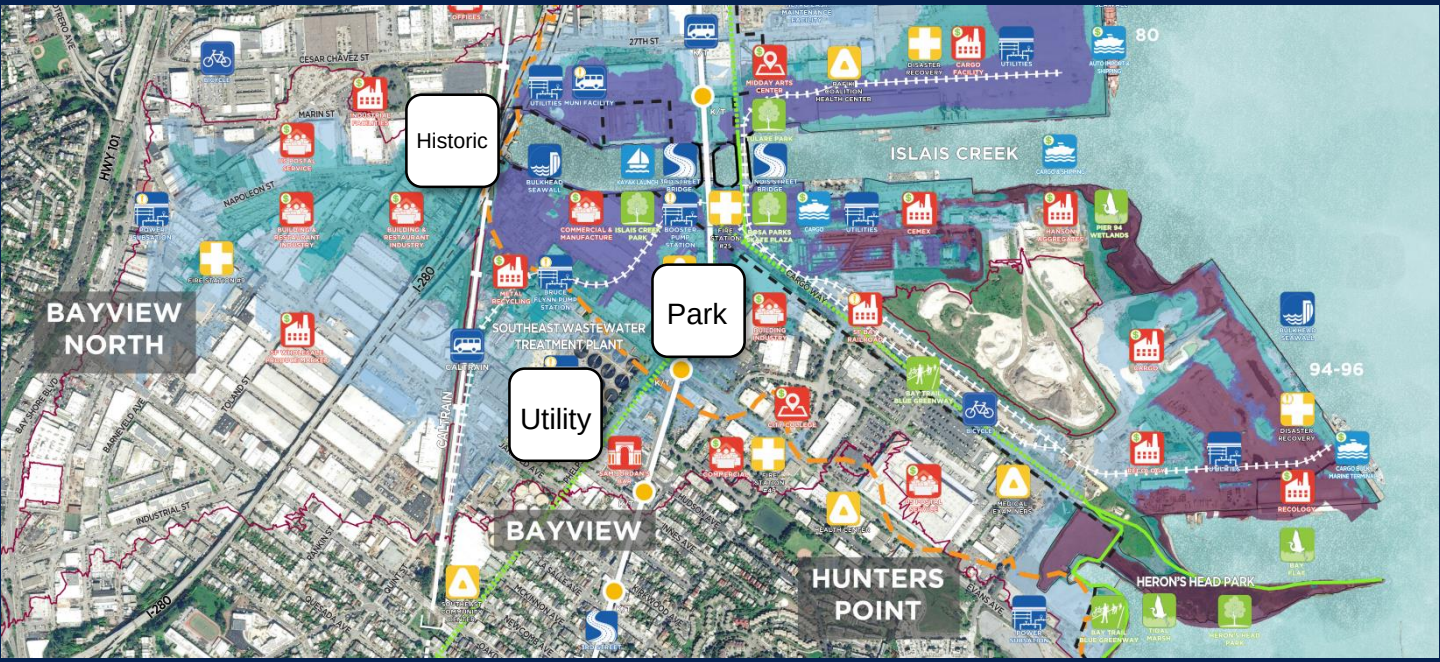
THE GAME


SF WATERFRONT GAME OF HAZARDS
POTRERO HILL
DOGPATCH
BAYVIEW NORTH
BAYVIEW
HUNTERS POINT
ISLAIS CREEK
70
72
80
94-96
LEGEND
SEA LEVEL RISE HAZARDS
ASSET LEGEND

STEP 1: STUDY THE MAP



STEP 1: AND TELL US WHAT WE MISSED



5 min

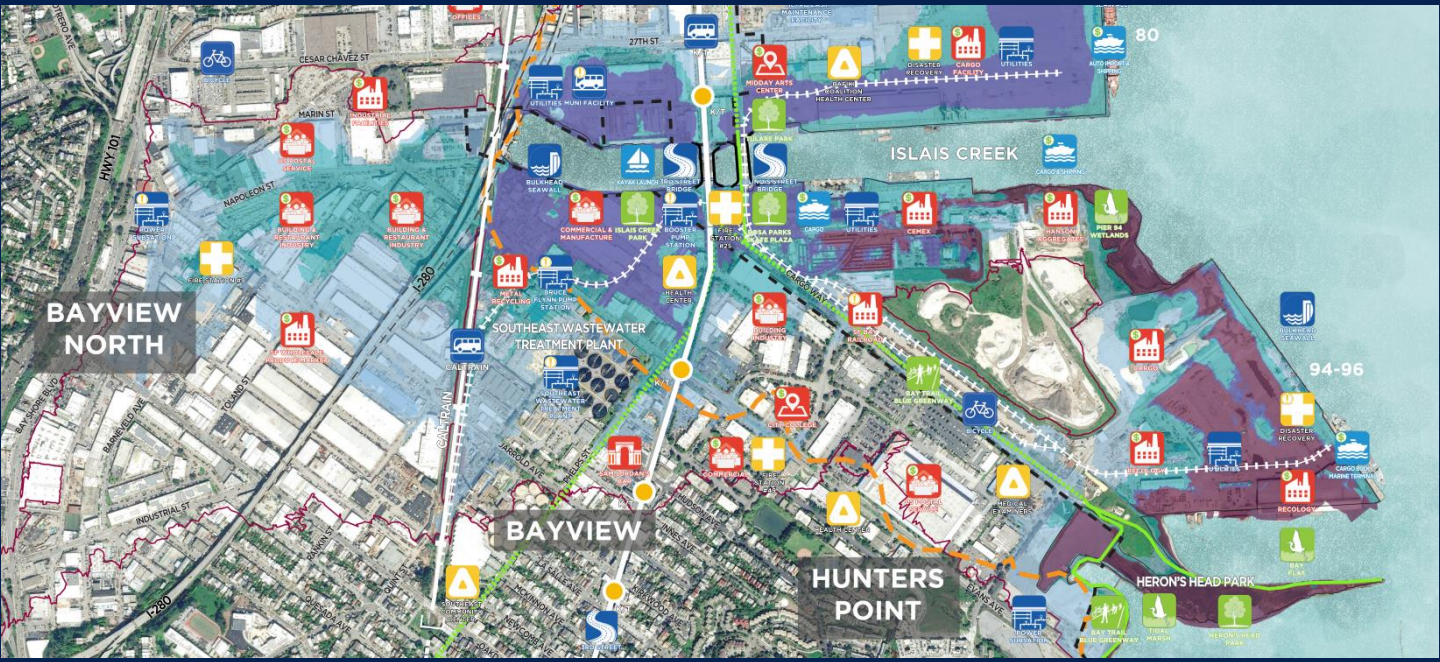
STEP 2: SAY WHAT YOU LOVE ABOUT THE CREEK AND SHORELINE

STEP 2: SAY HOW YOU USE THIS AREA / WHAT BRINGS YOU HERE

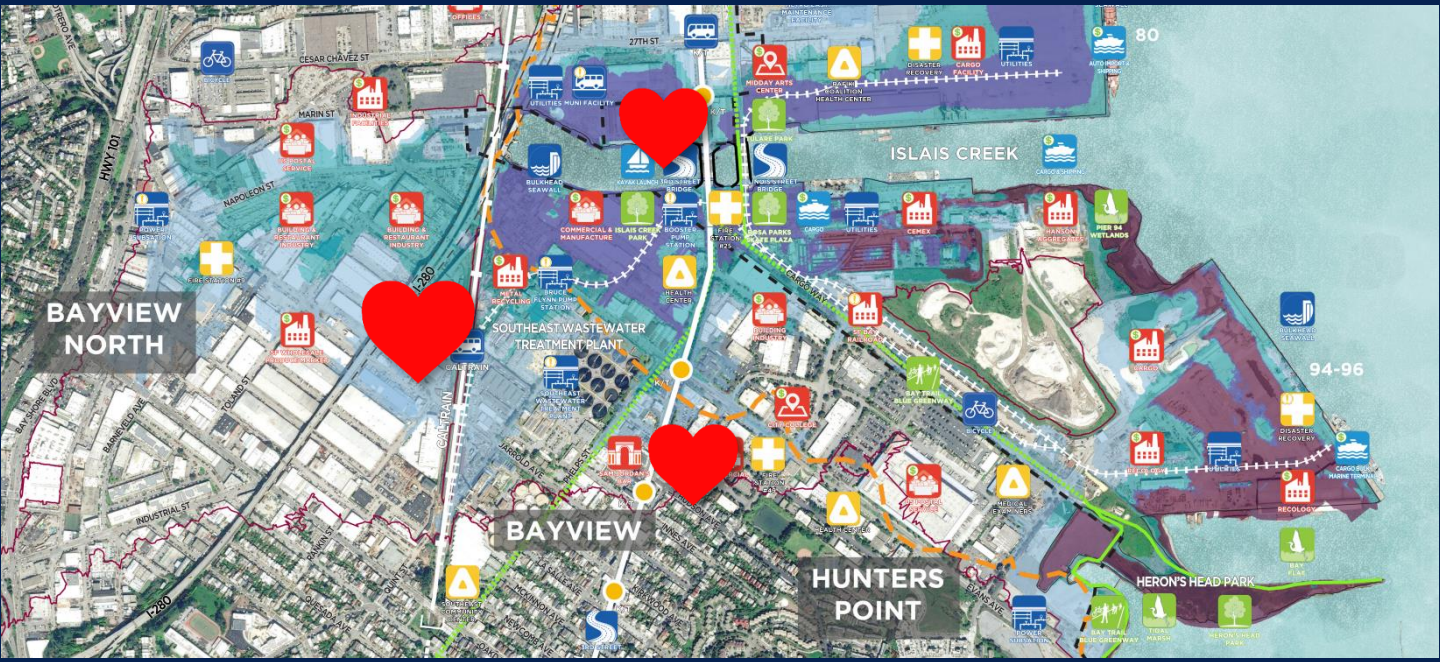
STEP 2: AND WHAT IS MOST IMPORTANT TO THE CITY

10 min

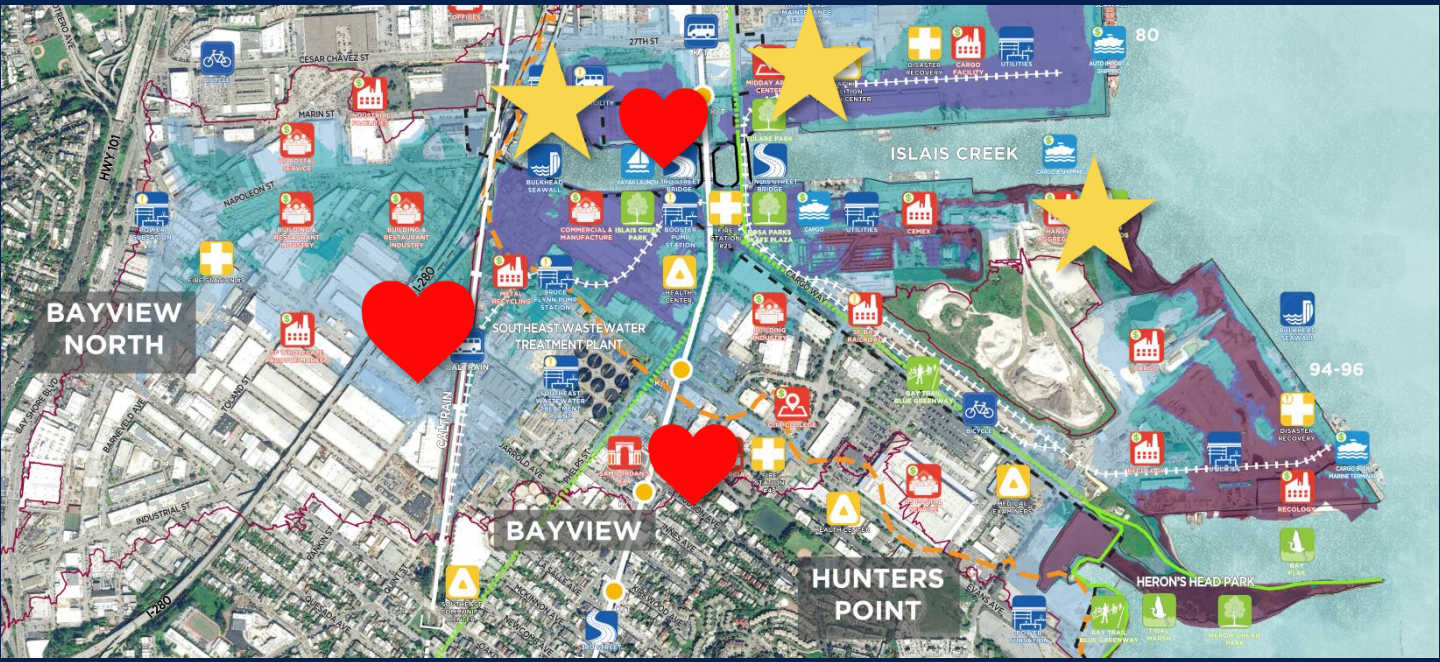
STEP 2: DECIDE WHAT YOU LOVE THE MOST AS A GROUP



STEP 2: DECIDE WHAT YOU LOVE THE MOST AS A GROUP

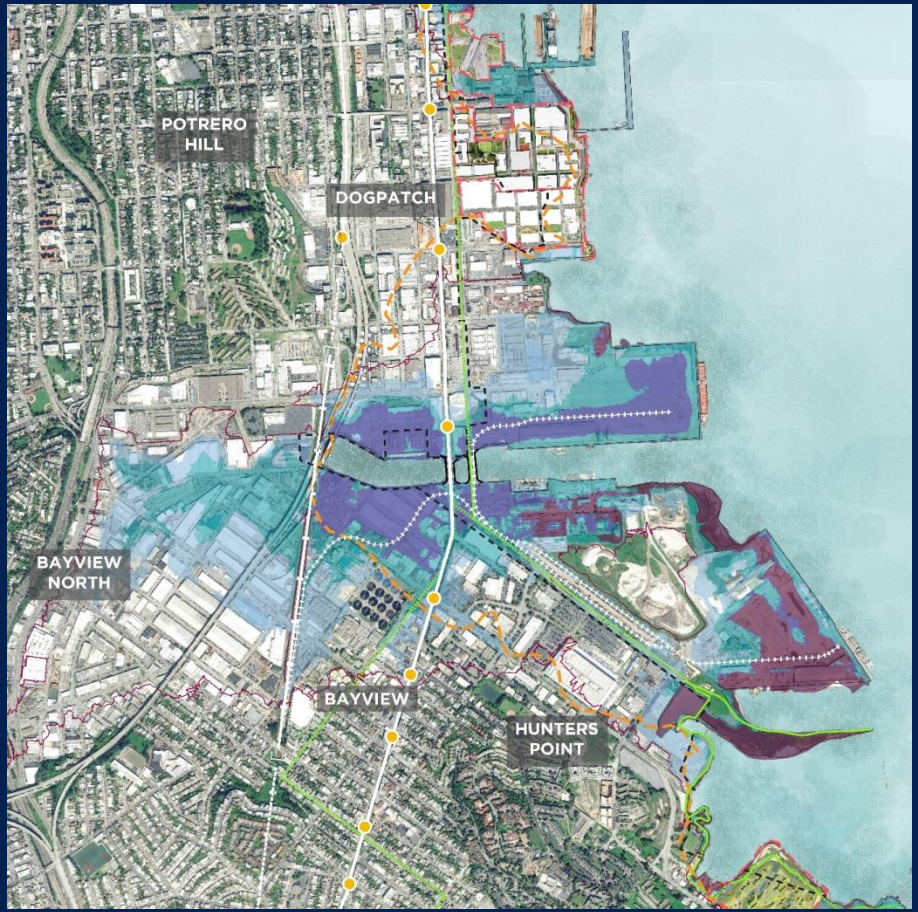


STEP 2: AND WHAT'S MOST IMPORTANT TO THE CITY



3 min

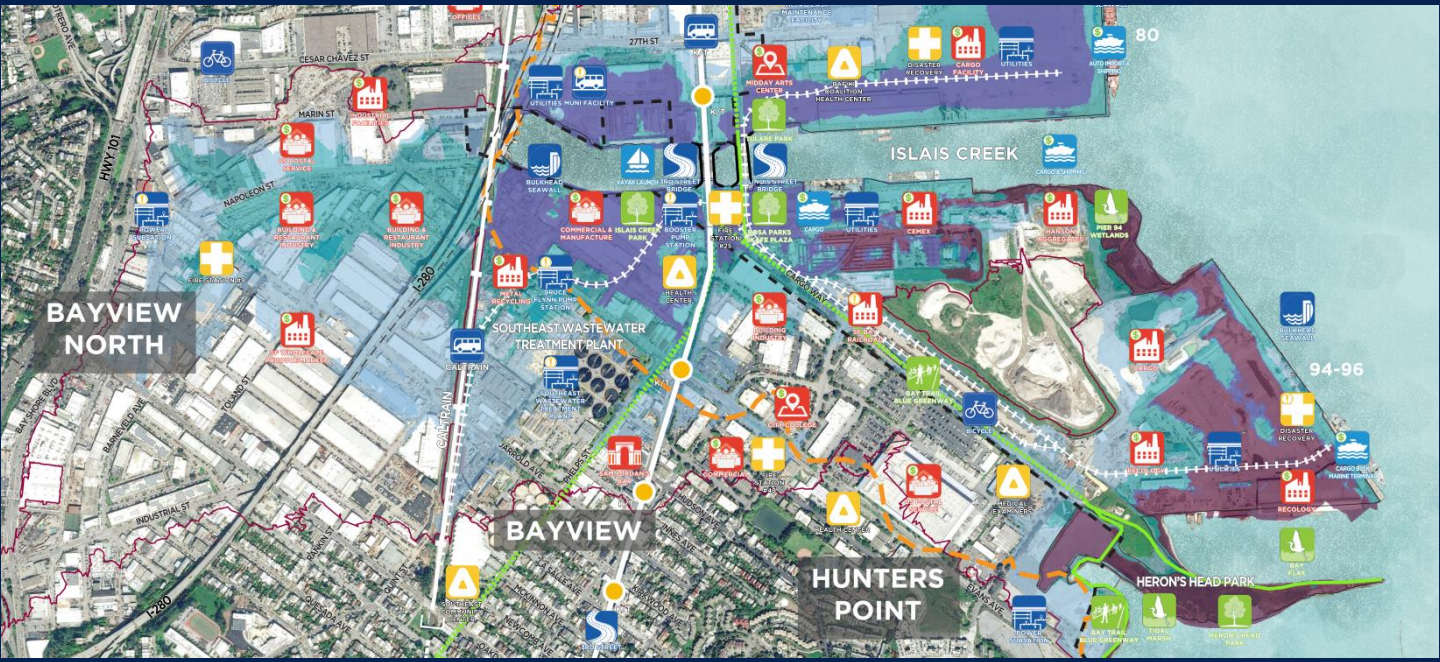
STEP 3: CONSIDER FLOODING



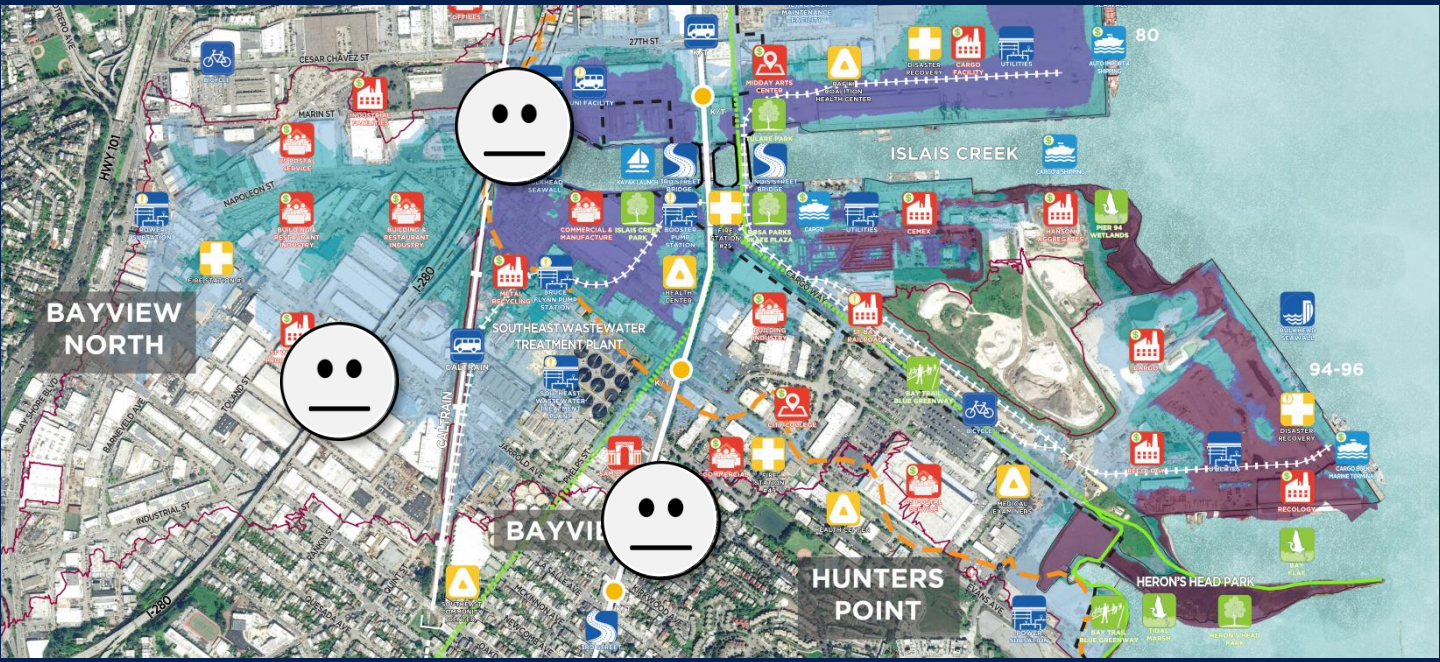
…SHARE WHAT CONCERNS YOU THE MOST

10 min

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



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



3 min

STEP 4: REPORT OUT

6 min

FLOOD STUDY COMMUNITY MEETING AND PROJECT SCHEDULE

PORT OF SAN FRANCISCO

US Army Corps of Engineers

2018 | 2019 | 2020

Winter | Spring | Summer | Fall | Winter/Spring

Introduction and Community Input

Goals, Priorities, Visions and Tradeoffs

Refinement of the Hazards and Assessing Alternatives

Evaluating the Alternatives

1 2 3 4 5

*** Note: Each meeting to happen in both the Mission Creek and Islais Creek locations**

Introduction and Scoping

Existing Conditions & Hazard Scenarios

Analyze Risk and Consequence

Identify, Discuss and Analyze Alternatives

Evaluate and Compare Alternatives

Select Preferred Alternative

NEPA/CEQA and Permit Scoping

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