

CLIMATE CHANGE(D): WEATHERING EXTREMES *TOGETHER*
MODULE 1

ONEWATER ONEBAY



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Preparing for Climate Change: Leveraging Regional Planning Efforts and Exploring One Water



San Francisco
ESTUARY PARTNERSHIP



Partnership in Action

Land Acknowledgement

<https://native-land.ca/>



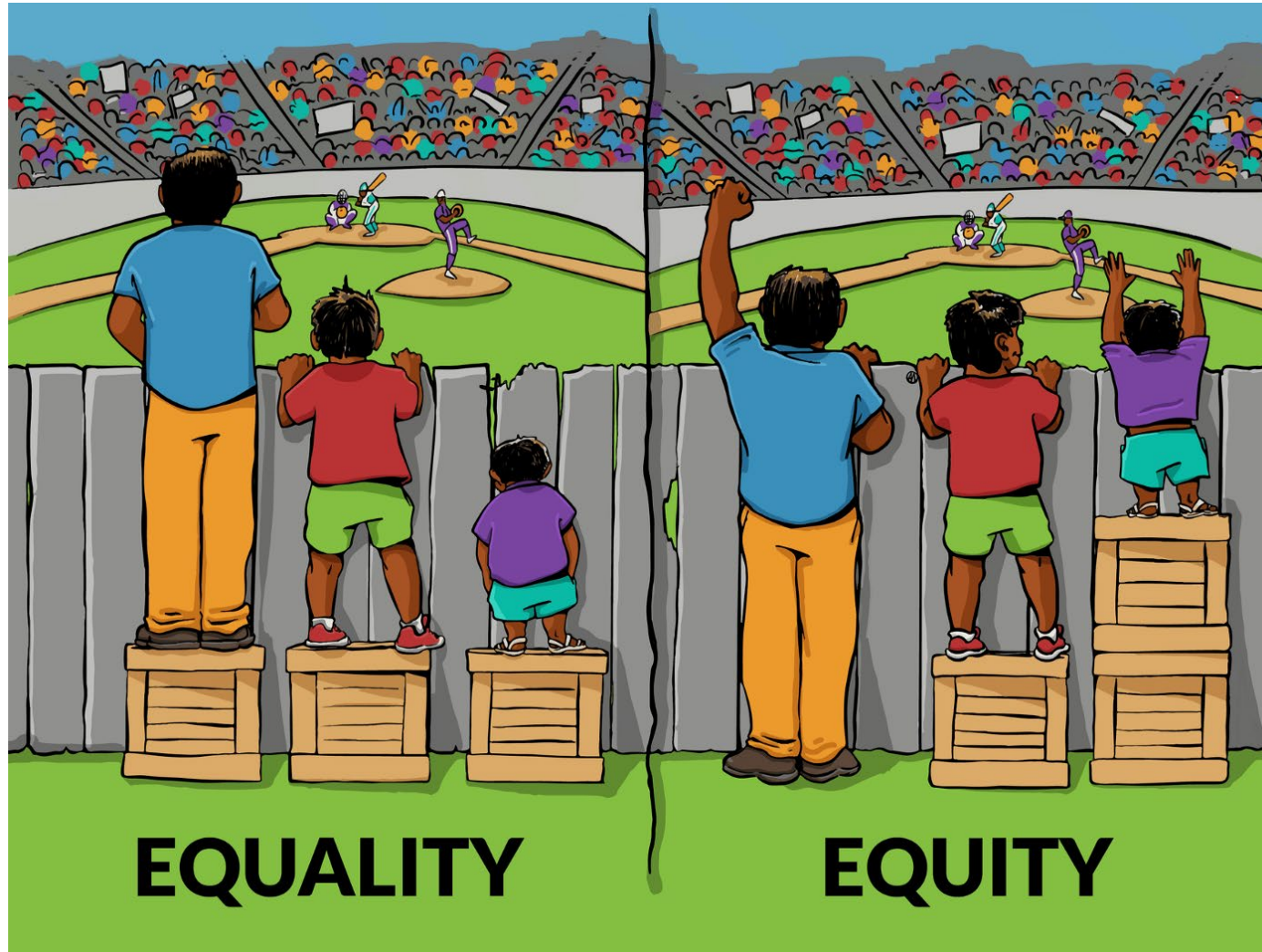
Source: <https://www.ramaytush.org/>

The Ramaytush Ohlone

Original Peoples of the San Francisco Peninsula

The Ramaytush (pronounced *rah-my-toosh*) are the original peoples of the San Francisco Peninsula. Prior to the arrival of the Spanish, the Ramaytush Ohlone numbered approximately 1500 to 2,000 persons, but by the end the Mission Period only a few families had survived. Today, only one lineage is known to have produced living descendants in the present. Today, those descendants comprise the membership of the Ramaytush Ohlone peoples and the staff of the Association of Ramaytush Ohlone.

Equity Acknowledgement



Our Mission:

To protect, enhance, and
restore the San Francisco
Bay Delta Estuary

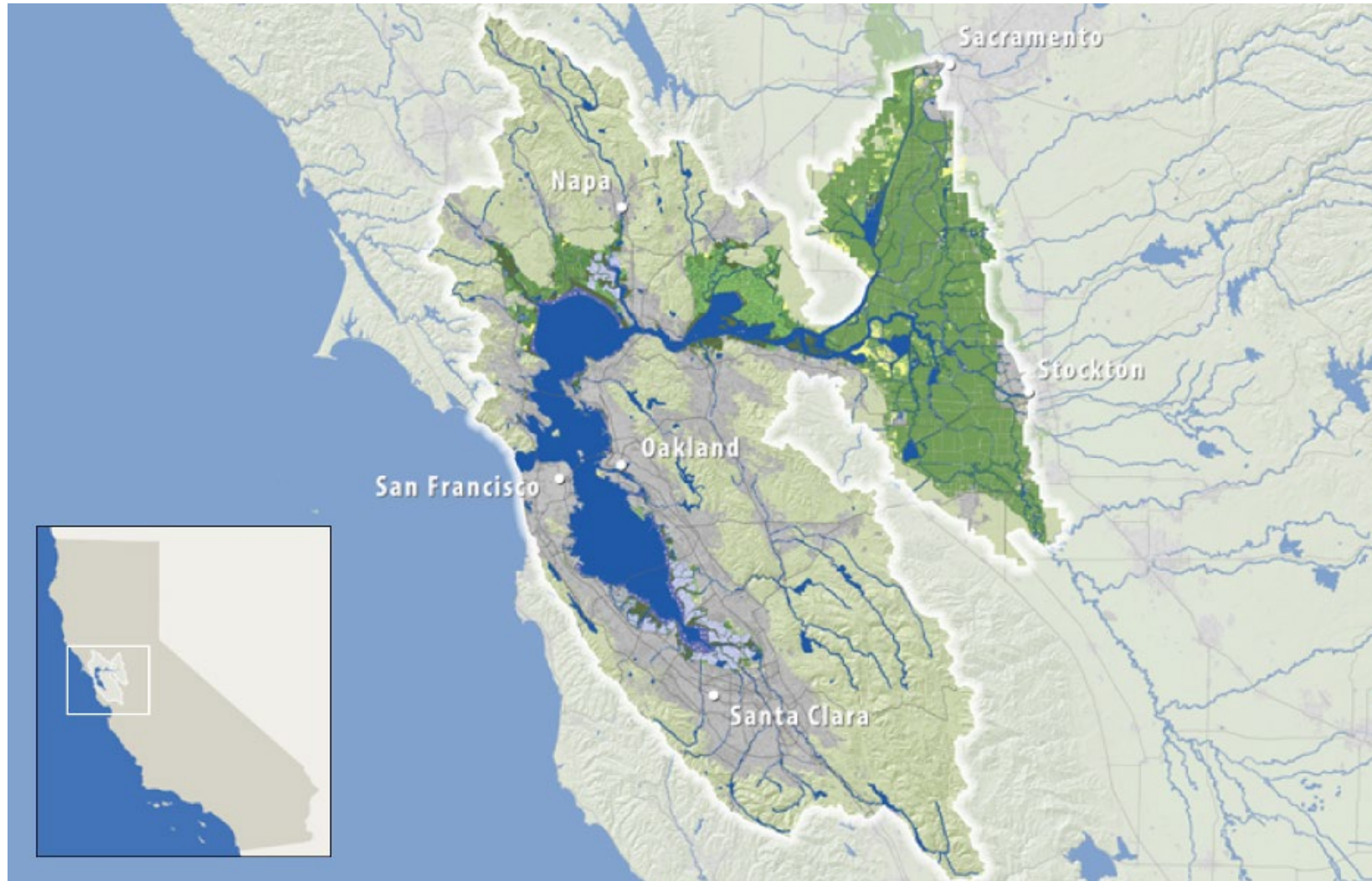


Partnership in Action



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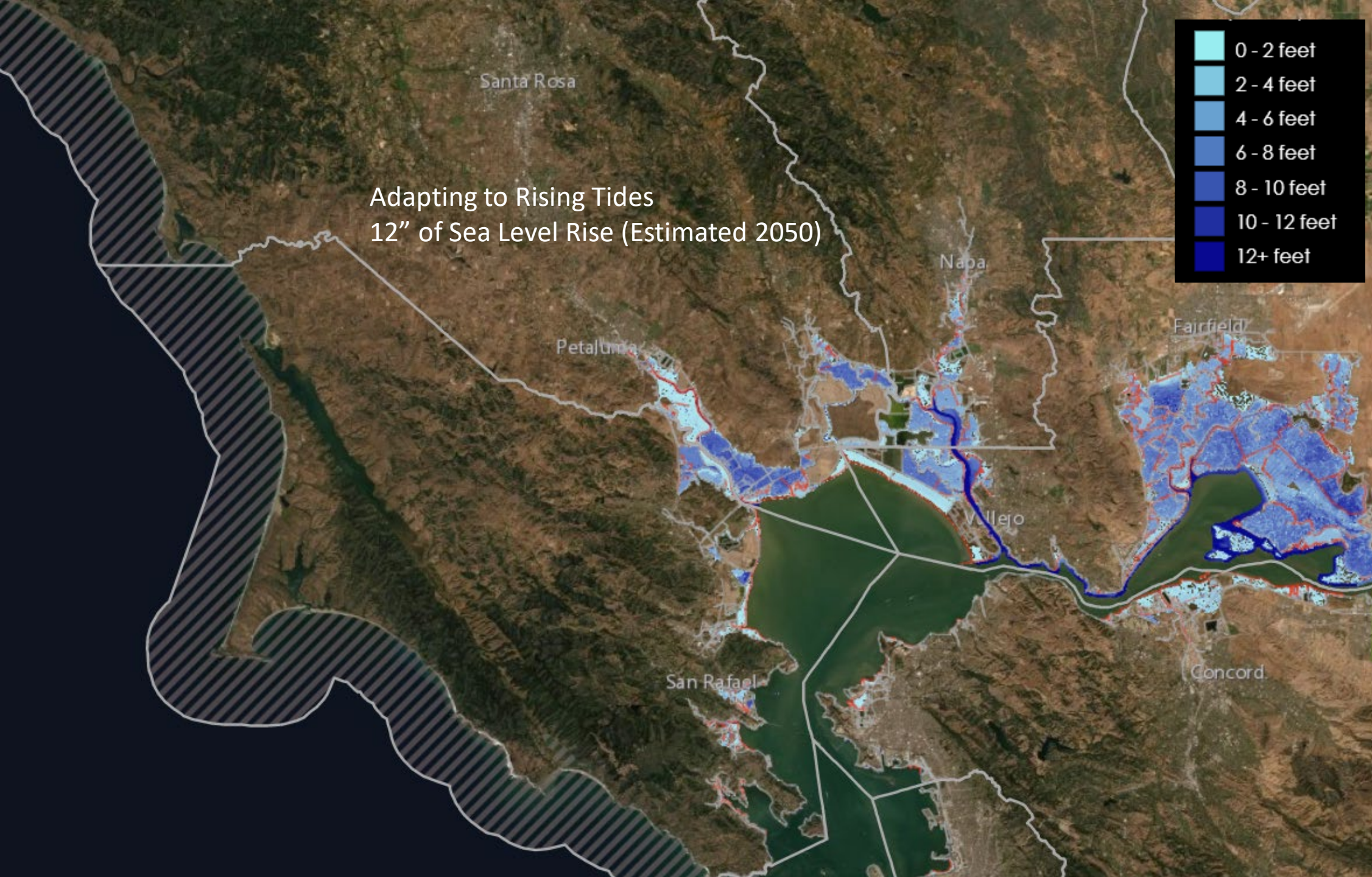
Estuary Partnership Planning Area

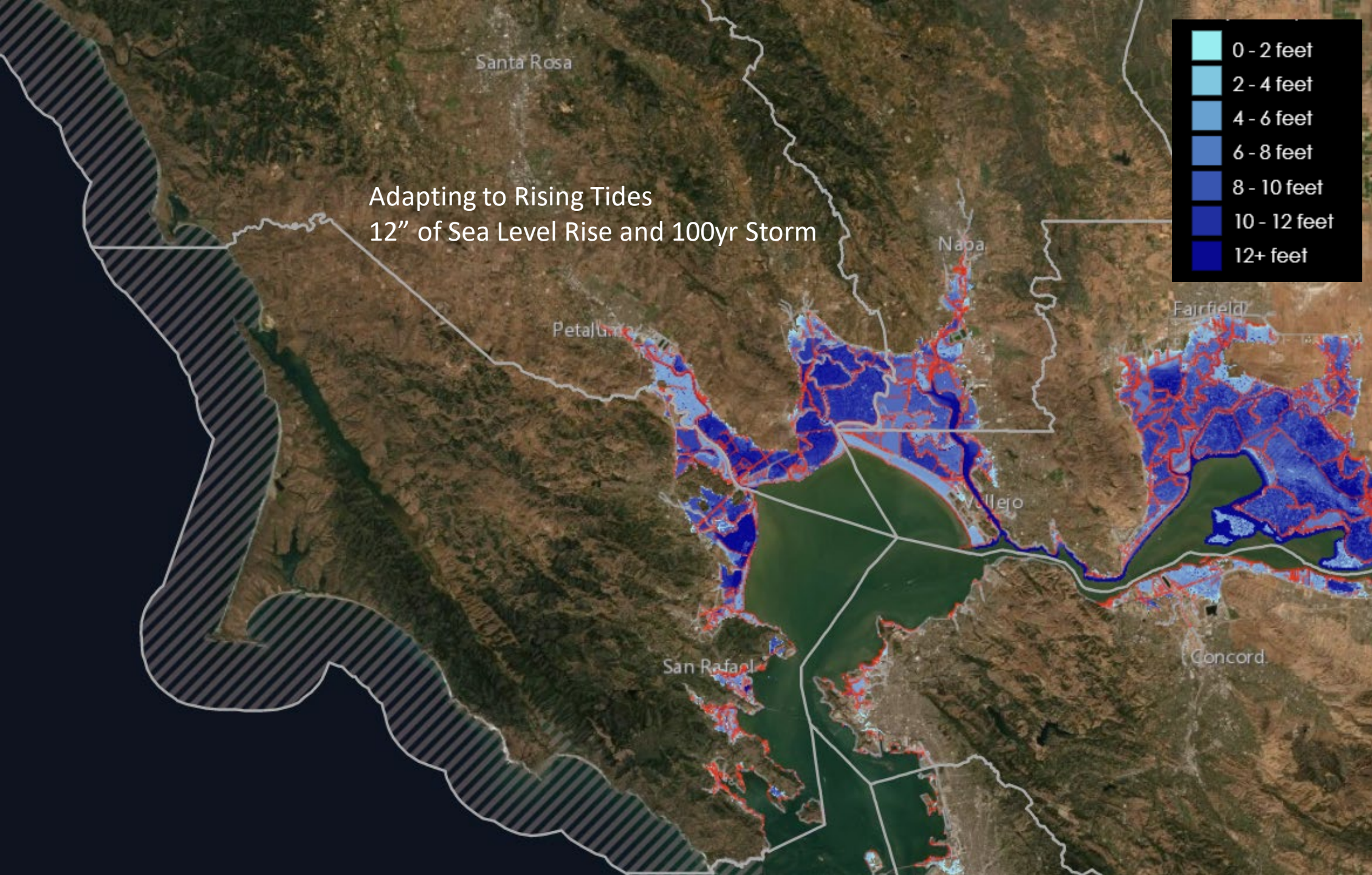


Impacts of Climate Change

- Sea Levels have risen 3 inches in 25 years
- Temps have risen by 1.1°F in the past century
- The last 7 years are the 7 hottest ever recorded
- An atmospheric river in the Antarctic collapsed an ice shelf over three times as large as San Francisco in a period of about three weeks, which was 19x the rate of calving of that ice shelf.
- NASA models project fewer but far more intense (25% wider and longer) atmospheric rivers events
- California has experienced drought conditions in 9 of the last 15 years
- Wildfires crested the Sierra Nevada Mountains twice in two weeks last year







Bay Adapt Facts at a Glance



At risk of flooding in the next 40 years

28,000 socially vulnerable residents

13,000 existing housing units and
another **70,000** new housing units

104,000 existing jobs and another
85,000 new jobs

20,000 acres of wetlands,
lagoon and tidal marsh habitat

5 million daily highway
vehicle trips

60,000 daily rail
commuters

Impacts from flooding that could occur at 48" Total Water Level from the [ART Bay Area Regional Sea Level Rise Vulnerability and Adaptation Study](#). 48" TWL may occur between 2060 and 2100.



“When the well is dry, we know the worth of water.”

– Benjamin Franklin –

“On climate change, we often don't fully appreciate that it is a problem. We think it is a problem waiting to happen.”

– Kofi Annan –

“The less we do to address climate change now, the more regulation we will have in the future.”

– Bill Nye –



An aerial photograph of a coastal estuary, showing a mix of dark water, light-colored sandbars, and some green vegetation. The image is overlaid with a dark, semi-transparent layer to make the text stand out.

Regional Initiatives to Help Guide Our Future

- Bay Adapt (2021)
Bay Conservation & Development
Commission
- Plan Bay Area (2021)
Association of Bay Area Governments AND
Metropolitan Transportation Commission
- Estuary Blueprint (2022)
San Francisco Estuary Partnership
- San Francisco Bay Area Regional Needs
Assessment (2022)
Bay Area Disadvantaged Communities and
Tribes WITH San Francisco Estuary
Partnership



- Regional strategy for a rising Bay
- Includes actions necessary to protect people and natural and built environments from sea level rise
- Goals
 - Reduced flooding
 - Protect natural areas and wildlife
 - Integrate adaption into community-focused local plans
 - Equitable support for low-income communities
 - Accelerated project delivery
 - Technical assistance for local governments
 - More funding for adaptation

The Joint Platform

9 actions, 21 tasks, 1 region *moving forward together*

PEOPLE



- Action 1: Collaborate on a "One Bay" vision to adapt to rising sea levels.**
Task 1.1: Create a long-term regional vision rooted in communities, bay habitats, and the economy.
Task 1.2: Lay the foundation for a proactive regional legislative agenda.
- Action 2: Elevate communities to lead.**
Task 2.1: Improve how communities and public agencies learn from each other and work together.
Task 2.2: Fund the participation and leadership of community-based organizations (CBOs) and frontline communities in adaptation planning.

INFORMATION



- Action 3: Broaden public understanding of climate change science and impacts.**
Task 3.1: Tell local and regional stories about people and places adapting to climate change.
Task 3.2: Weave climate literacy into school programs.
- Action 4: Base plans and projects on the best science, data, and knowledge.**
Task 4.1: Align research and monitoring with information gaps.
Task 4.2: Make scientific data, information, and guidance easier to use.
Task 4.3: Increase access to technical consultants for local adaptation partners.

PLANS



- Action 5: Align local and regional plans into a unified adaptation approach.**
Task 5.1: Provide incentives for robust, coordinated adaptation plans.
Task 5.2: Align state-mandated planning processes around adaptation.
- Action 6: Figure out how to fund adaptation.**
Task 6.1: Expand understanding of the financial costs and revenues associated with regional adaptation.
Task 6.2: Establish a framework for funding plans and projects.
Task 6.3: Help cities and counties expand ways to fund adaptation planning and projects.

PROJECTS



- Action 7: Refine and accelerate regulatory approvals processes.**
Task 7.1: Accelerate permitting for equitable, multi-benefit projects.
Task 7.2: Assess environmental regulations and policies that slow down progress on projects.
- Action 8: Fund and facilitate faster adaptation projects.**
Task 8.1: Incentivize projects that meet regional guidelines.
Task 8.2: Encourage collaboration among people doing projects in the same places.
Task 8.3: Facilitate faster construction of nature-based projects.

PROGRESS



- Action 9: Track and report progress to guide future actions.**
Task 9.1: Measure regional progress using metrics and share results.
Task 9.2: Monitor and learn from pilot projects.



Transportation
Housing
Economy
Environment



160+ public meetings
140+ stakeholder events
60%+ of events/activities targeted Equity Priority Communities
234,000+ public comments

150+ public events

23,000+ participants

Where do we want to be in 2050?

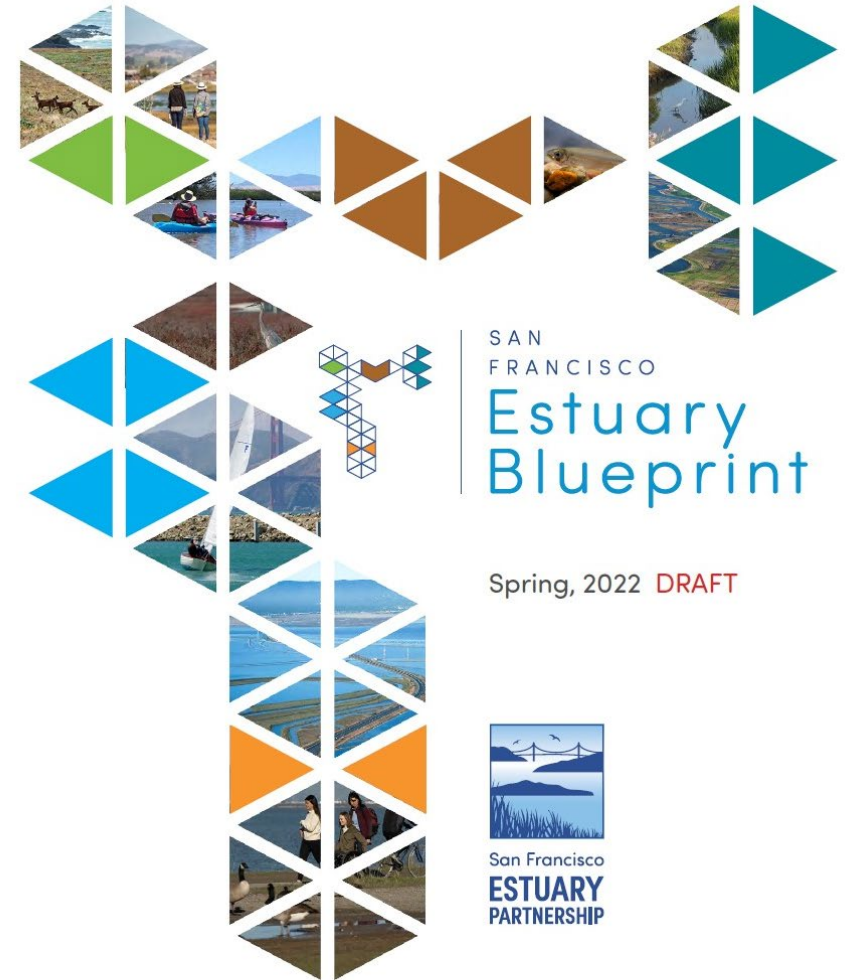
What can we do over the next 5 years to get there?

A collaborative, consensus-driven five-year roadmap for restoring the Estuary's chemical, physical, biological, and social-ecological processes to health



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SPED - BLUEPRINT
DRAFT 03.08.22



2022-2027 Estuary Blueprint



- **4 Goals**
- **25 Actions**
- **5 Years**



Resilience



Living Resources



Water



Stewardship

2022 ESTUARY BLUEPRINT ACTIONS

Climate Resilience

Tidal Marsh

Recycled Water

Equity

Transition Zones

Stormwater

Adaptation Planning

Managed Wetlands

Nutrients

Adaptation Projects

Seasonal Wetlands

Emerging Contaminants

Watershed Connections

Creeks

Health Risks of Contaminants

Sediment

Invasive Species

Trash

Carbon Management

Freshwater Flows

Public Access

Wetland Monitoring

Water Conservation

Champion the Estuary



San Francisco Bay Area Disadvantaged Community and Tribal Water Needs Assessment

Goals

- To work with disadvantaged communities, people experiencing homelessness and Tribes to conduct community level needs assessments related to water
- To roll those assessments up into a regional report with associated lessons learned

North Bay Communities

- Marin City
- Canal District of San Rafael
- Petaluma
- Three Springs
- Vallejo



Water Needs Assessment - Findings

- **Flooding**
- **Aging infrastructure**
- **Trash & Dumping**
- **Homeless Encampments**
- **Access to outdoor spaces**
- **Wastewater management**
- **Habitat protection**
- **Sea level rise**
- **Water shortages**
- **Soil/Land Contamination**
- **Mistrust in drinking Water**

April 12, 2022



Water Needs Assessment – Next Steps

- The final report will be released in May, 2022
- Includes
 - Needs assessments for each community and Tribe and people experiencing homelessness
 - Regional connections
 - Lessons learned for government agency engagement
- Local stakeholders have the opportunity to hear firsthand from their disadvantaged communities and local Tribes what **their** needs are as **they** see them.

One Water: Context for the Water Sector



What is One Water?

“...all water has value. It must be managed in a **sustainable** and **inclusive** manner to build strong **economies**, vibrant **communities**, and healthy **environments**.” – One Water Alliance -

“One Water is an integrated planning and implementation approach to managing **finite water** resources for long-term **resilience** and **reliability**, meeting both **community** and **ecosystem** needs.” – Water Research Foundation –

One Water is a Philosophy and is supported by a robust network of cities, counties, special districts, sanitation districts, water providers, flood/stormwater management agencies, and other stakeholders focused on achieving a future where water is sustainably managed in an equitable manner for people and the environment.



NBWA's Mission

- Facilitate partnerships across political boundaries that promote stewardship of the North Bay Counties watershed resources
 - **Convene** local agencies on issues of common interest
 - Be proactive about watershed-based **regulation**
 - Work cooperatively for watershed-based **funding**
 - Maximize effective **use of resources**
 - Enhance NBWA's influence on local, state, federal **policies and programs**
 - Educate communities about the importance of **watershed stewardship**

NBWA2019 – 2023 Strategic Plan

- Shared Vision to:
 - Manage water holistically and sustainably
 - Fund multibenefit projects
 - Regional leadership
 - Restore people/place for sustainable environment using watershed based planning and habitat recovery
 - Lead North Bay Climate Change resilience and adaptation
 - Apply science and innovation to drive responsible and efficient water use
 - Assist divergent organizations to come together and collaborate

Challenges in the water sector

- Aging infrastructure
- Rate payers are tapped out
- Water is inequitably managed
- Climate change is changing everything
- Environmental impacts and regulations



US Water Alliance is diving deep...Funding

- Making Water a Public Good
 - Strategies to meeting funding and capital improvement needs beyond the ratepayer
 - Economies of scale
 - State level considerations for policies, programs, and funding beyond the beneficiary pays model
 - Local strategies to meet future needs and overcome political, funding, and policy challenges

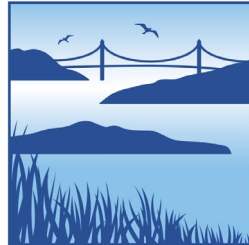
US Water Alliance is diving deep...Equity

- Water Equity Network
- WATER EQUITY TASKFORCE: Insights for the Water Sector
 - Enabling conditions for advancing water equity
 - Demonstrates that the water industry has the capacity and the appetite to build credibility with local partners, solve water equity challenges, and make these approaches standard practice in the sector.

US Water Alliance is diving deep...Climate Change

- Water's Net Zero Plus: A Call to Action for Climate Mitigation
 - Details the impacts water management have on GHG emissions and details a vision for curtailing those impacts

Thank You



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