



AGENDA

CONTRA COSTA COUNTY

Contra Costa Resilient Shoreline Ad Hoc Committee

Thursday, October 12, 2023

10:00 AM

11780 San Pablo Avenue, Suite D
El Cerrito, CA 94530

3361 Walnut Boulevard, Suite 140
Brentwood, CA 94513

<https://cccouny-us.zoom.us/j/884036917>
91

Dial: 888 278 0254 Code: 198675

Agenda Items: Items may be taken out of order based on the business of the day and preference of the Committee

- 1 Introduction
- 2 Public comment on any item under the jurisdiction of the Committee and not on this agenda (speakers may be limited to three minutes).
- 3 RECEIVE a Presentation from the Bay Conservation and Development Commission, Dana Brechwald, Assistant Planning Director for Climate Adaptation

Presentation on "Bay Adapt" Planning for Sea Level Rise in San Francisco Bay [23-563](#)
Attachments: [2023_Oct_12 BCDC Bay Adapt Presentation.pdf](#)
- 4 RECEIVE a Presentation from the Department of Conservation and Development, Ryan Hernandez, Principal Planner

Presentation on Developing the Contra Costa Resilient Shoreline [23-564](#)
Attachments: [2023_10_12 CCC Work on SLR.pdf](#)
- 5 Adjourn

The Committee will provide reasonable accommodations for persons with disabilities planning to attend the Committee meetings. Contact the staff person listed below at least 72 hours before the meeting. Any disclosable public records related to an open session item on a regular meeting agenda and distributed by the County to a majority of members of the Committee less than 96 hours prior to that meeting are available for public inspection at _____, during normal business hours. Staff reports related to items on the agenda are also accessible on line at www.co.contra-costa.ca.us. Public comment may be submitted via electronic mail on agenda items at least one full work day prior to the published meeting time.

For Additional Information Contact:



CONTRA COSTA COUNTY

1025 ESCOBAR STREET
MARTINEZ, CA 94553

Staff Report

File #: 23-563

Agenda Date: 10/12/2023

Agenda #:

Choose an item.: Contra Costa Resilient Shoreline Ad Hoc Committee

Meeting Date: October 12, 2023

Subject: Bay Conservation and Development Commission Presentation on Sea Level Rise

Submitted For: John Kopchik

Department: Conservation and Development

Presenter: Dana Brechwald, Assistant Planning Director for Climate Adaptation

Contact: Dana.Brechwald@bcdcc.ca.gov <<mailto:Dana.Brechwald@bcdcc.ca.gov>>

See attached presentation: "Bay Adapt"

BAY ADAPT

**CONTRA COSTA COUNTY
AD HOC COMMITTEE FOR SEA LEVEL RISE
10/12/2023**



Dana Brechwald, Assistant Planning Director for
Climate Adaptation

ABOUT BCDC



The San Francisco Bay Conservation and Development Commission protects and enhances San Francisco Bay and advances the Bay's responsible, productive, and equitable use for this and future generations as we face a changing climate and rising sea levels.

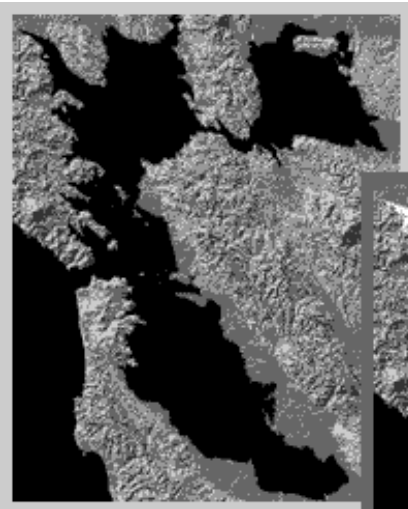
Who We Are

- 27 member Commission
- ~50 person Staff
- Advisory Boards, Working Groups, EJ Advisors, Task Forces

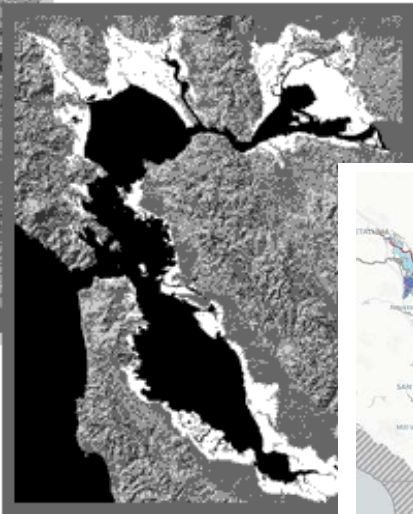
What We Do

- Maintain the San Francisco Bay Plan
- Issue Permits
- Enforce
- Adapt to Sea Level Rise

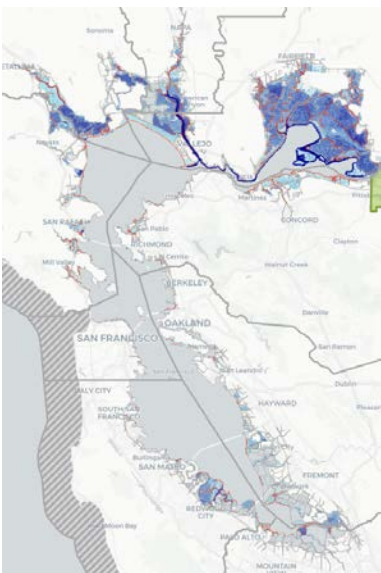
BCDC'S PAST AND FUTURE



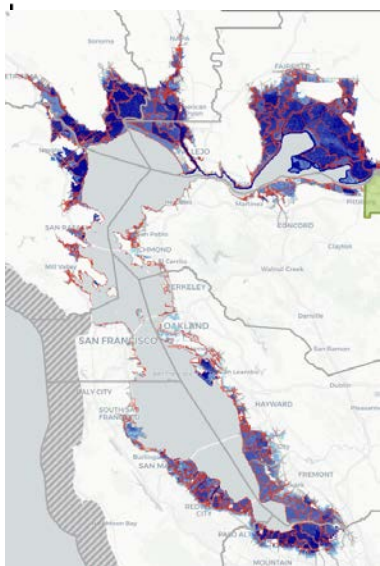
The Bay in 1849



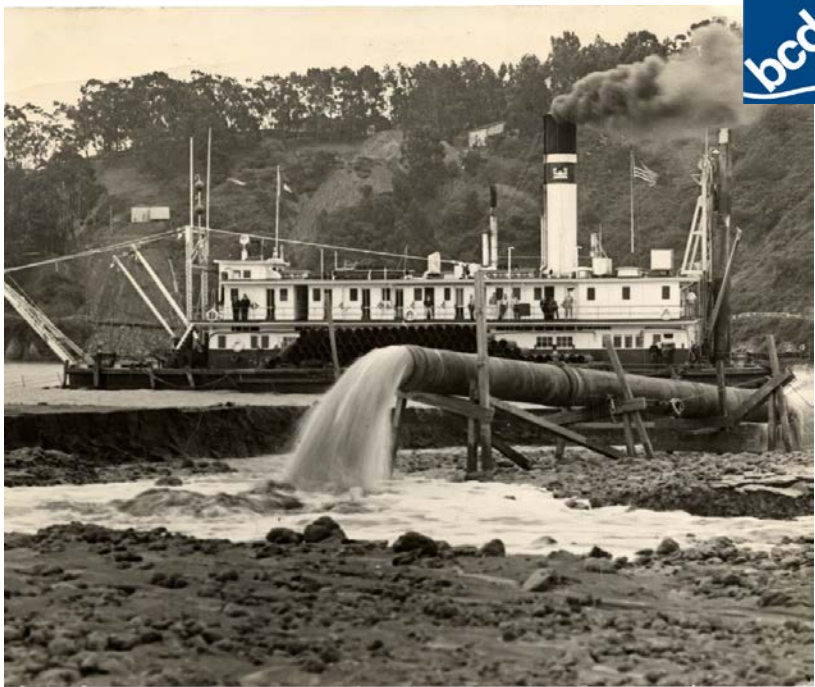
Bay fill in 1965



Sea level rise
1 foot by 2050



Sea level rise
6 feet by...



2/3 of California's sea level rise impacts will be felt in the Bay Area

- Temporary Flooding
- Permanent Inundation
- Shoreline Erosion
- Groundwater Rise

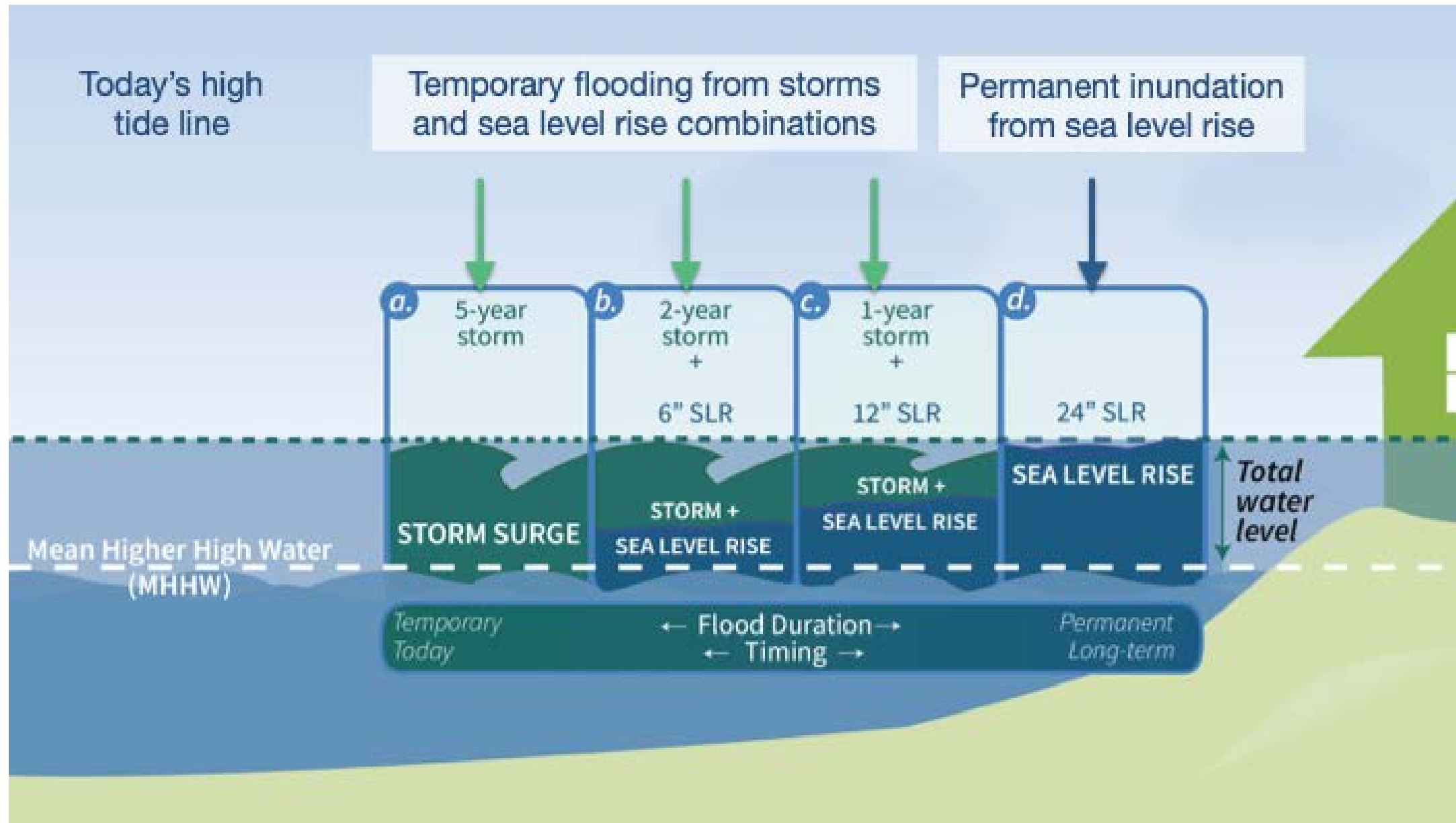
Photo: Levee Breach near Highway 37 (February 26, 2019)
Photo courtesy of Ghilotti Construction Company



ALREADY SEEN: + 8 inches SLR

PROJECTED BY 2050: + 12 to 32 inches

END OF CENTURY: 10+ feet?



Temporary flooding today shows us what permanent flooding could look like in the future.

No matter where you live, shoreline flooding will impact everyone in the Bay Area

What's at risk?
(40-100 years)



5 million
daily highway
vehicle trips

60,000 daily
rail commuters



13,000 existing
housing units

104,000
existing jobs

70,000 new,
planned housing
units

85,000 new,
planned jobs

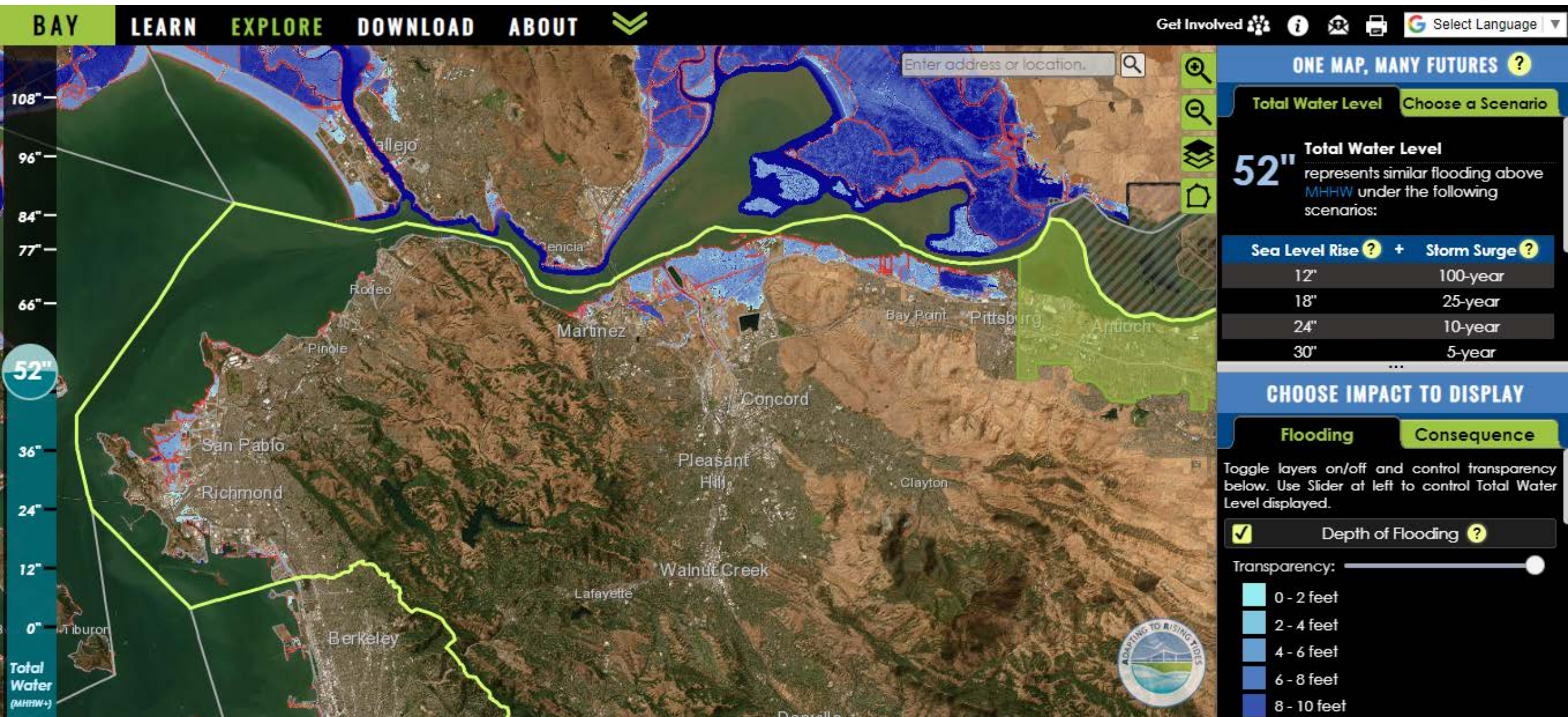


28,000 socially
vulnerable
residents



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







HOW MUCH WILL IT COST?

Adaptation Needs

\$110 billion¹

Estimated cost of sea level rise adaptation through 2050 (in Year of Expenditure dollars)

- **\$52 billion:** Estimated cost for known or planned projects
- **\$54 billion:** Estimated placeholder cost for areas with adaptation needs
- **\$3 billion:** Estimated additional sediment management needs³

Cost of Inaction

\$230+ billion²

Estimated value of a subset of assets at risk through 2050

**The cost of inaction is far higher than the cost of adaptation.
We stand to lose much more if we do not act**

¹ In year of expenditure (YOE) dollars. ² In 2022 dollars. ³ Estimate developed by BCDC and SFEI analysis.

SEA LEVEL RISE FUNDING AND INVESTMENT FRAMEWORK

Local Adaptation Projects and Study Areas¹

- Local Adaptation Projects
- Local Study Areas

192 projects in original inventory

132 projects updated with stakeholder input

Includes 47 new projects added

Potential Protective Infrastructure Needs²

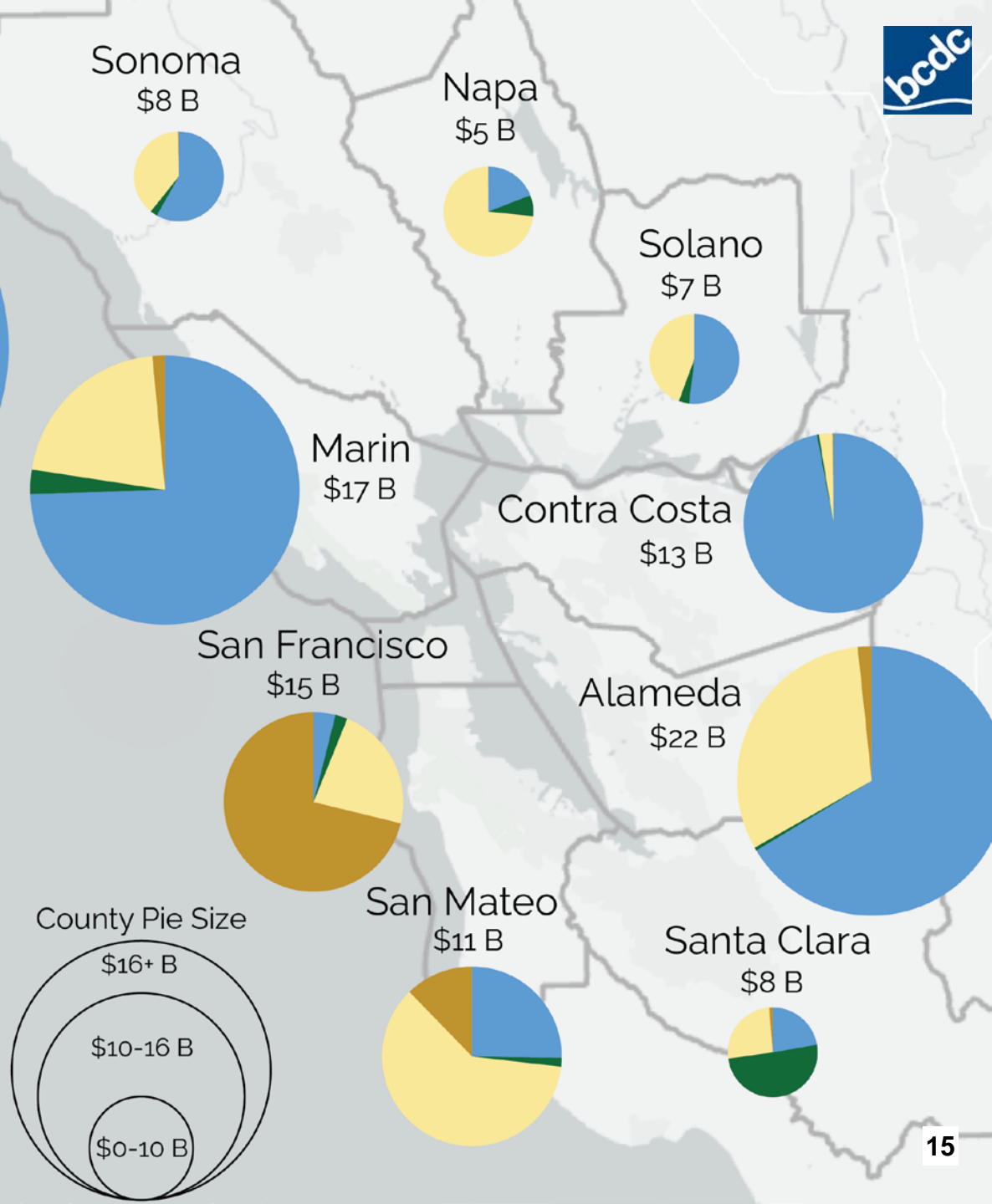
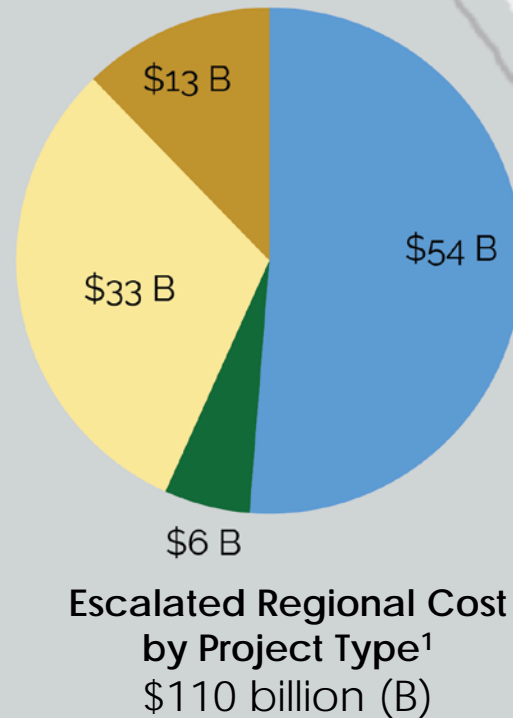
- Placeholder Adaptation Needs

¹ Includes projects identified in BCDC's Shoreline Adaptation Project Map, a regional project inventory hosted through EcoAtlas:

<https://www.ecoatlas.org/groups/303>

ADAPTATION NEEDS

- Most planned projects are hybrid, representing a focus on multiple benefits.
- Alameda and Marin are estimated to have the highest adaptation costs.
- Significant implementation gaps are present across the region; the largest gaps are in Alameda, Contra Costa, and Marin².



Project Type

- Grey
- Hybrid
- Green
- Placeholders

¹Values represented in Year of Expenditure dollars; Regional cost includes \$3B in additional sediment need.
²Locally identified projects do not account for studies or plans without defined interventions.

CONTRA COSTA COUNTY HIGHLIGHTS

Project Type

- Grey
- Hybrid
- Green
- Placeholders



Contra Costa
\$13b

North Richmond Shoreline Living Levee



Estimated median cost: \$15.6 million

Project type: Hybrid

Project status:
Planning/Scoping

Contra Costa Projects (by estimated cost)

Our Home – Resilient by Design

Dutch Slough Tidal Marsh Restoration Project

Dotson Family Marsh Restoration & Public Access Project

Wildcat Creek Restoration and Greenway Trail Project

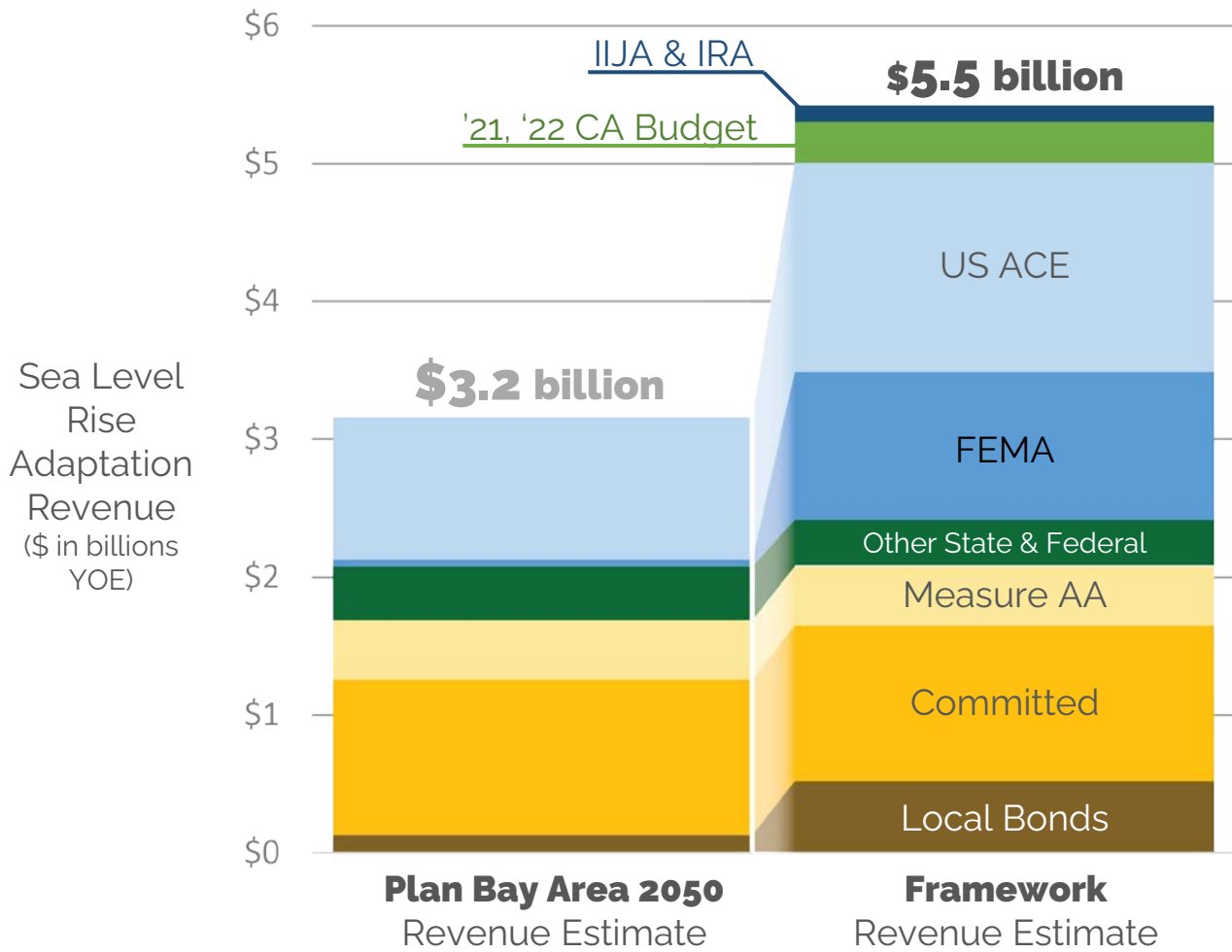
Knightsen Wetland Restoration Project

North Richmond Shoreline Living Levee

Terminal One Development & Waterfront Park

FORECASTING EXISTING PUBLIC REVENUES

REVENUE FORECAST (2022-2050)



CASE STUDIES

Parcel Tax

Ad Valorem Property Tax/GO Bond

County & Regional

Assessment District

District-based (sub-local)

Regional and/or local measures will not be capable of closing the funding gap. Additional funding from federal and/or state sources will also be necessary.

A RISING BAY

A regional problem requires regional solutions

Why?

- Flooding knows no boundaries
- Frontline communities: Most impacted and fewest resources
- Near-term loss of wetlands
- Patchwork of protective actions
- Inconsistent application of science
- Competition not collaboration for limited funding
- No way to measure collective progress

WHAT IS BAY ADAPT?



A regional, consensus-driven strategy that lays out the actions necessary to adapt the Bay Area to rising sea level to protect people and the natural and built environment



Guiding Principles

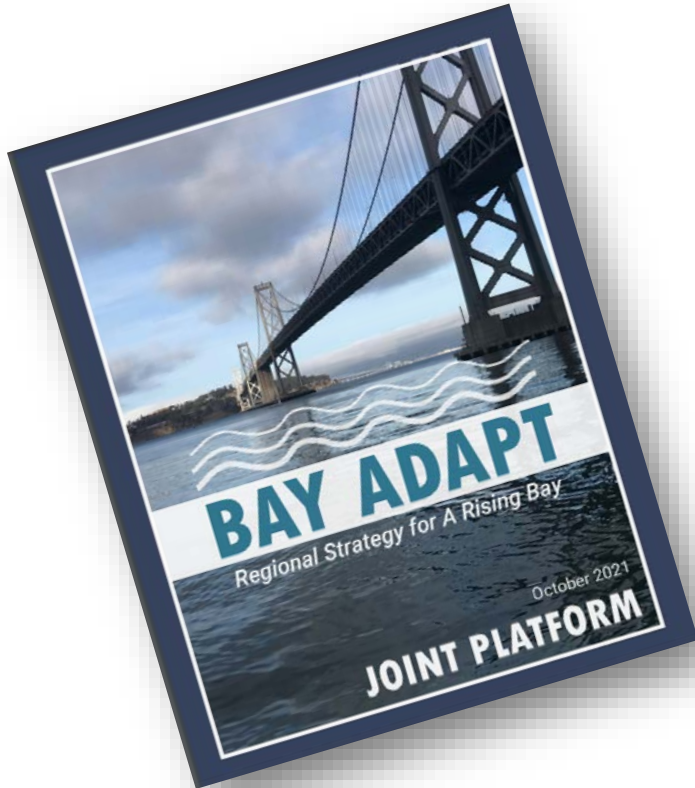
- ▶ Support socially vulnerable communities
- ▶ Put nature first whenever possible
- ▶ Solve interconnected problems at the same time
- ▶ Practice inclusive, community-led governance and decision-making
- ▶ Support existing efforts but plan for the long term
- ▶ Pick the right strategy for the right place at the right time



BAY ADAPT

REGIONAL STRATEGY FOR A RISING BAY

JOINT PLATFORM

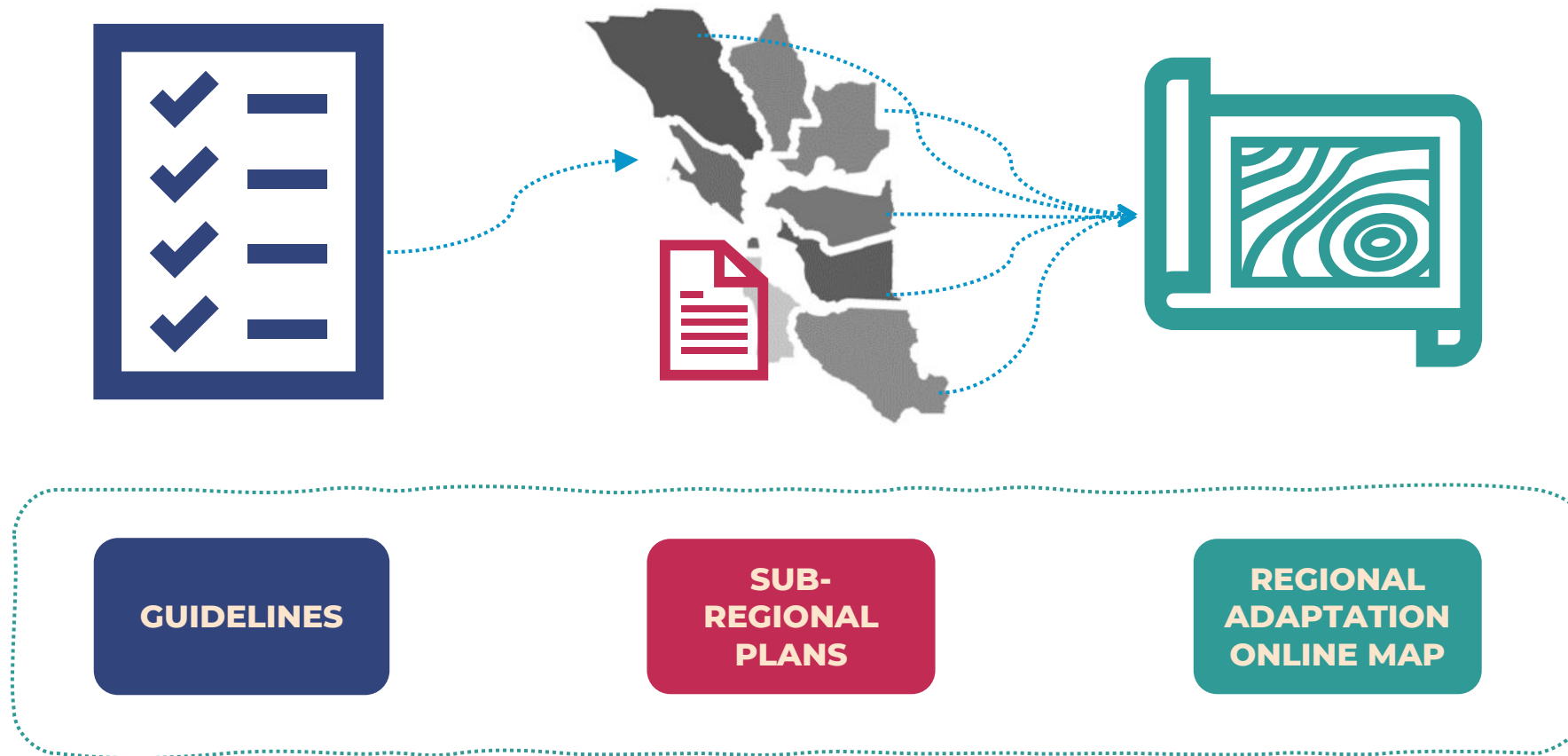


- Engaged over **360+** participants in two public workshops
- Had **81** working group members
- Held **10** focus group meetings
- Gave over **50** presentations around the region
- Identified **9 actions** and **21 tasks**
- Adopted by BCDC October 2021
- Has **over 55 endorsements** from cities, counties, and organizations

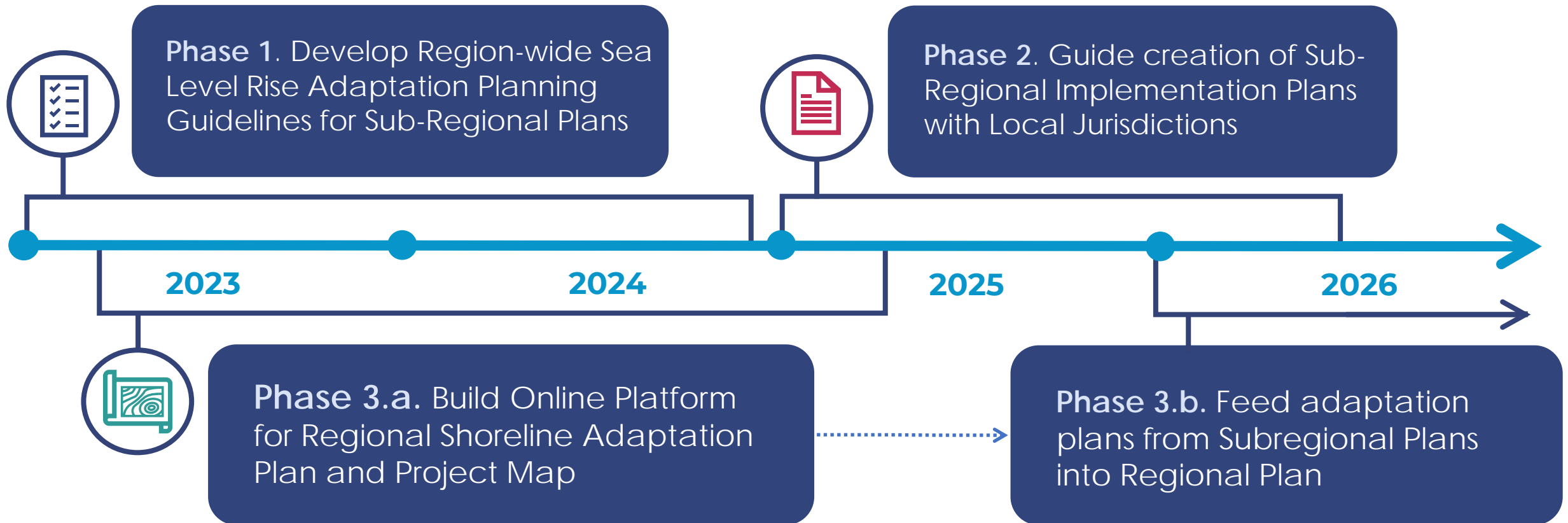
WHAT IS THE REGIONAL SHORELINE ADAPTATION PLAN?

A region-wide plan for the bay shoreline that guides the creation of coordinated, locally-planned sea level rise adaptation actions that work together to meet regional goals.

REGIONAL SHORELINE ADAPTATION PLAN COMPONENTS



REGIONAL SHORELINE ADAPTATION PLAN TIMELINE



GUIDELINE EXPECTATIONS

What the Guidelines Are Envisioned to Be

- A guide for *plans*
- Best practices for vulnerability assessments, identifying and evaluating shoreline adaptation options, and developing adaptation pathways that consider issues the region thinks are important
- Voluntary, non-enforceable, and incentive driven
- Aligned with existing planning processes
- Applicable only where relevant

What the Guidelines Are NOT Envisioned to Be

- Project design guidelines
- Mandatory or enforceable by BCDC permitting or other legal authority
- An additional burden on top of existing planning processes
- Blanket rules that don't consider local conditions, needs, or values

PROJECT TIMELINE



THANK YOU!

Dana Brechwald

Assistant Planning Director for Climate
Adaptation

San Francisco Bay Conservation and
Development Commission

Dana.Brechwald@bcdlc.ca.gov

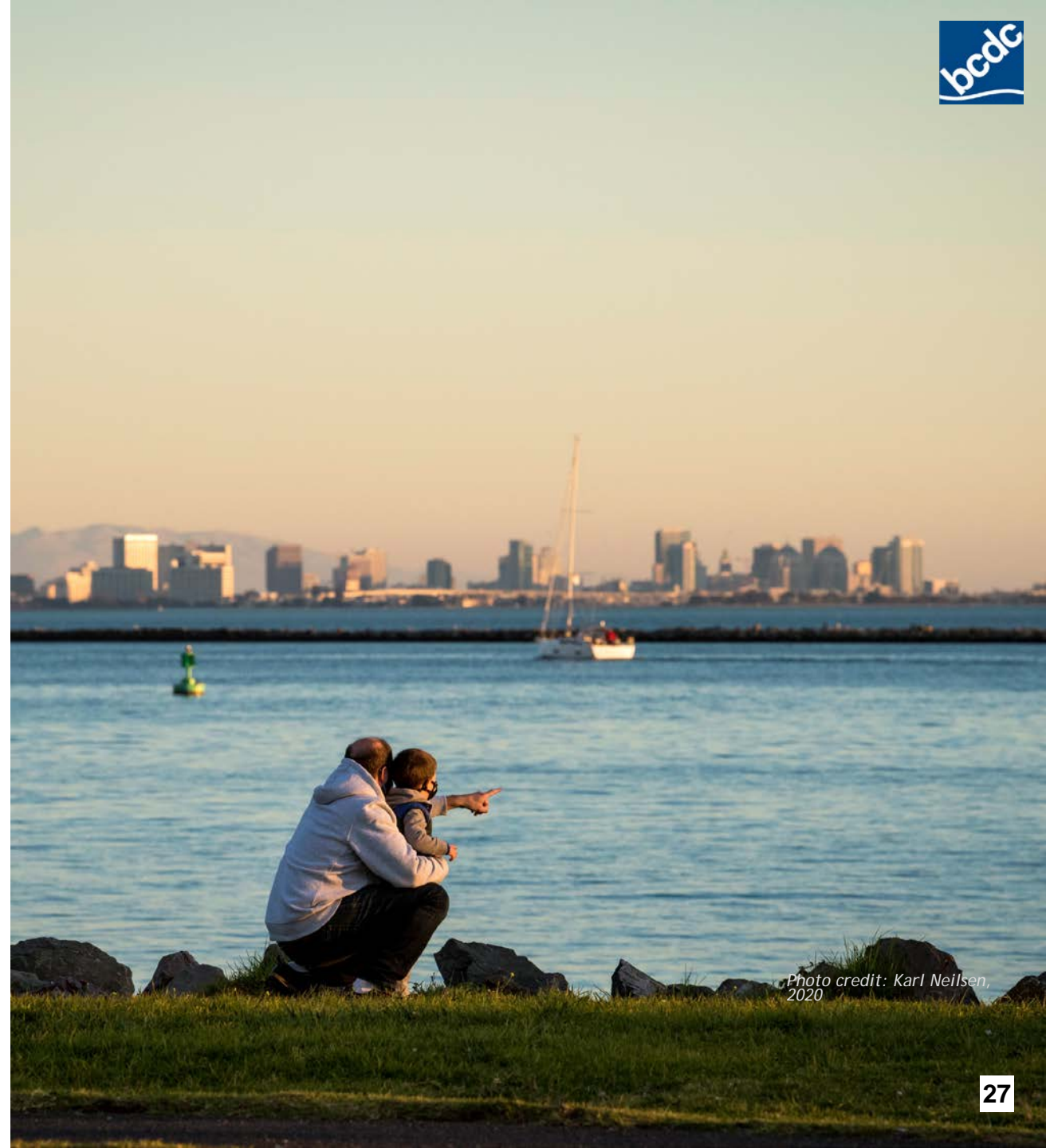


Photo credit: Karl Neilsen,
2020

THE BAY IS RISING.
THE TIME TO COME
TOGETHER TO ACT IS NOW

www.bayadapt.org



What is Bay Adapt?



A Rising Bay



News & Events



CONTRA COSTA COUNTY

1025 ESCOBAR STREET
MARTINEZ, CA 94553

Staff Report

File #: 23-564

Agenda Date: 10/12/2023

Agenda #:

Choose an item.: Contra Costa Resilient Shoreline

Meeting Date: October 12, 2023

Subject: Developing the Contra Costa Resilient Shoreline

Submitted For: John Kopchik

Department: Conservation and Development

Presenter: Ryan Hernandez

Contact: 925-655-2919; ryan.hernandez@dcd.cccounty.us <<mailto:ryan.hernandez@dcd.cccounty.us>>

Referral History and Update:

This is the inaugural meeting for the Contra Costa County Resilient Shoreline ad hoc Committee on sea level rise. The Contra Costa County Board of Supervisors established this new committee on May 16, 2023, to address sea level adaptation and resilience along the 90 miles of shoreline within the County. This Committee is staffed and supported by the Department of Conservation and Development.

The ad hoc committee will develop recommendations to the Board on work the County can do to plan for sea level rise and improve shoreline resiliency. A centerpiece of action could be a sea level rise resiliency and adaptation plan (Plan) for the County shoreline that could build on updated technical information and identify specific and comprehensive actions to address threats within the County and its shoreline cities and communities. The Plan would assess the effectiveness of potential approaches and recommend adaptation strategies at a more granular level than what has been developed through regional planning. Staff have commenced work to seek outside funding for a Plan, and congressional appropriation requests have been submitted.

Recommendation(s)/Next Step(s):

Accept the presentation on sea level rise planning and provide direction to staff as appropriate.

Fiscal Impact (if any):

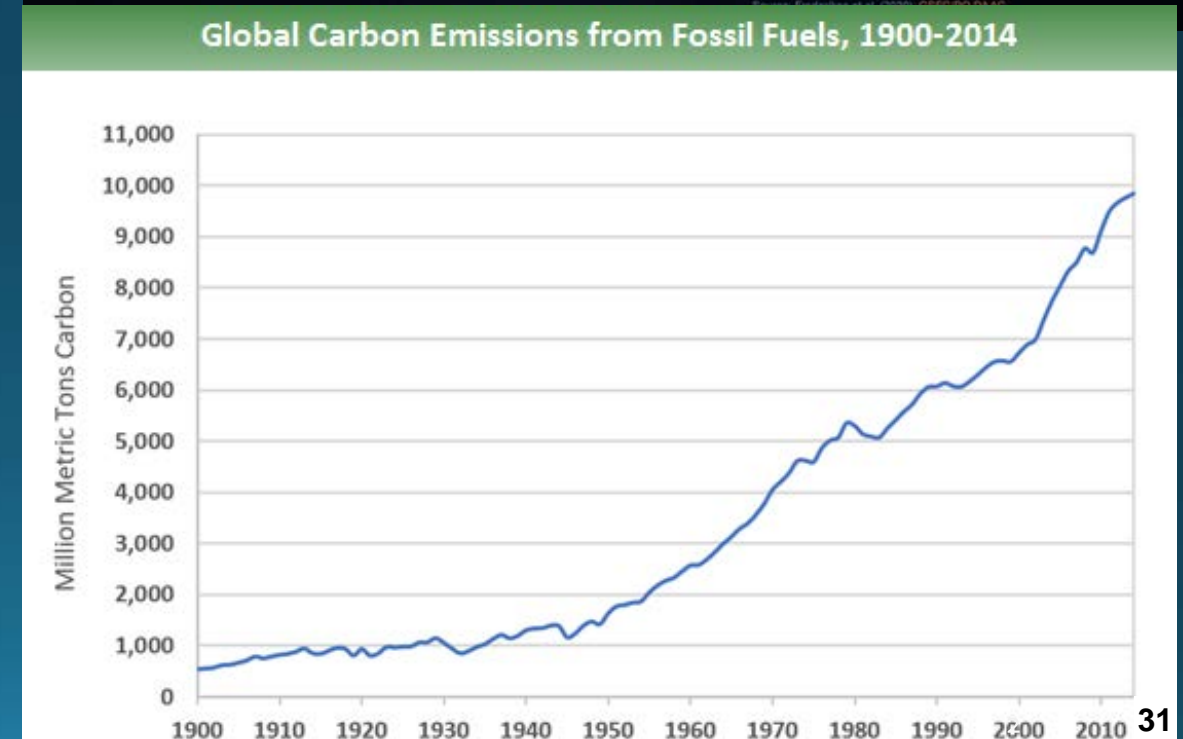
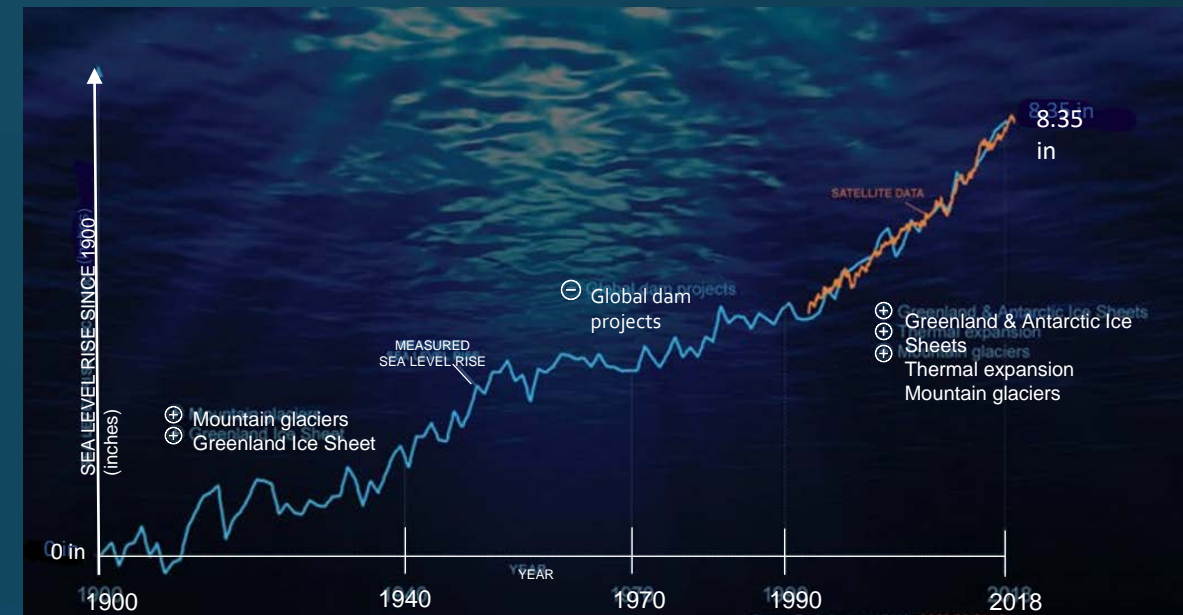
The costs in staff time and materials for the Department of Conservation and Development's work activities associated with the Contra Costa Resilient Shoreline Ad Hoc Committee will be funded by the Measure X - Climate Equity and Resilience Investment allocation administered by the department. Additional funding will be necessary to develop a robust sea level rise adaptation plan. The Department is pursuing opportunities for grants and other funding mechanisms to support this effort.

Contra Costa County's Work on Sea Level Rise to Date

October 12, 2023

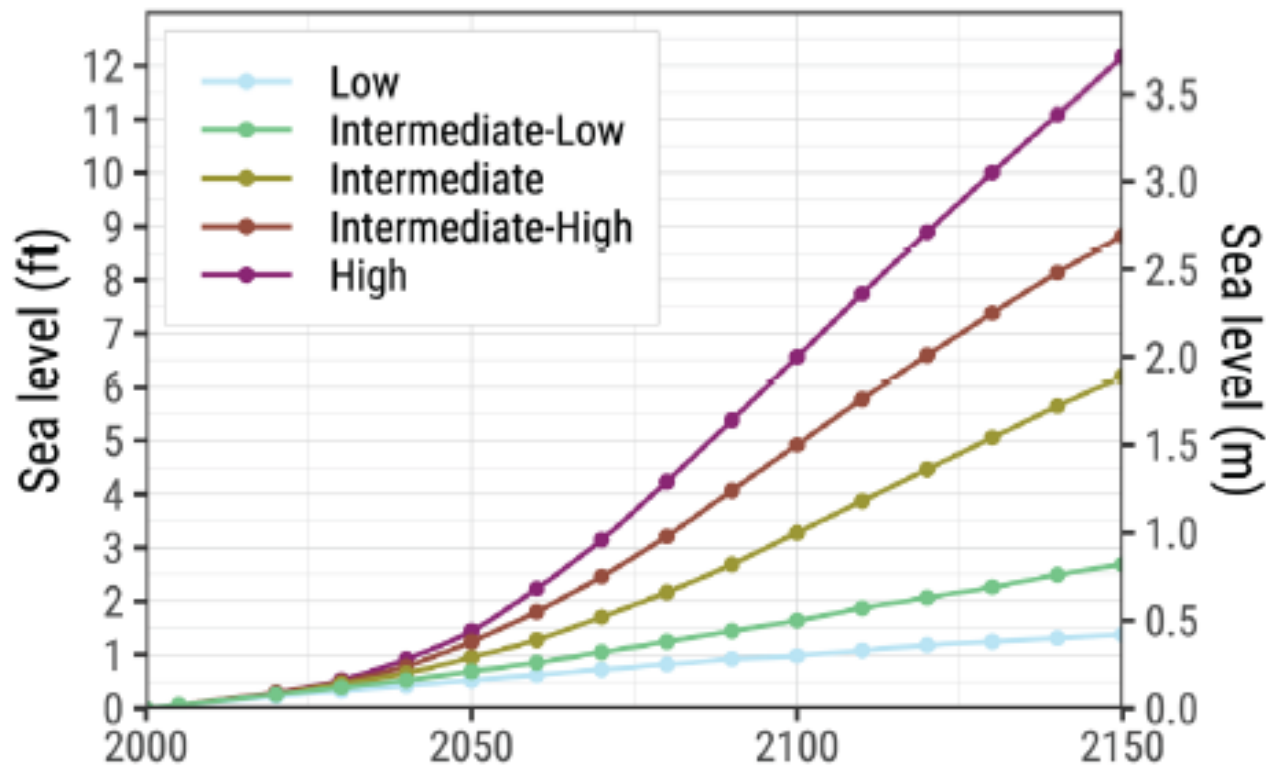
Sea levels have risen historically...

- Global sea levels are rising at an accelerating rate due to climate change
- Sea level rise is caused by two main factors:
 - **Melting Ice:** As global temperatures rise, glaciers and ice sheets melt adding freshwater to our oceans which lead to rising sea levels
 - **Thermal Expansion:** As global temperatures rise, water temperatures also rise. When water is heated, its volume expands, contributing to rising sea levels
- The County has initiatives to reduce the County's greenhouse gas emissions and slow the rise of global temperature. However, even if the inputs to climate change are drastically curbed, sea levels will continue to rise



Source: National Aeronautics and Space Administration (NASA) 2020/USEPA 2022

... and are projected to accelerate.



Scenario	Year		
	2050	2100	2150
Low	0.5	1.0	1.4
Intermediate-Low	0.7	1.6	2.7
Intermediate	1.0	3.3	6.2
Intermediate-High	1.2	4.9	8.8
High	1.4	6.6	12.2

Units in feet relative to year 2000

Source: NOAA 2022

2022 Sea Level Rise Technical Report found that there is greater certainty in the amount of sea level rise to expect through 2050 which should give coastal decision makers and professionals greater confidence for making decisions/investments to address sea level rise that will occur in the next 30 years.

What flooding caused by sea level rise could look like in Contra Costa County without action

West County



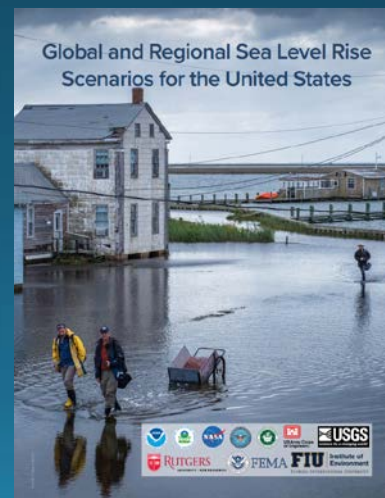
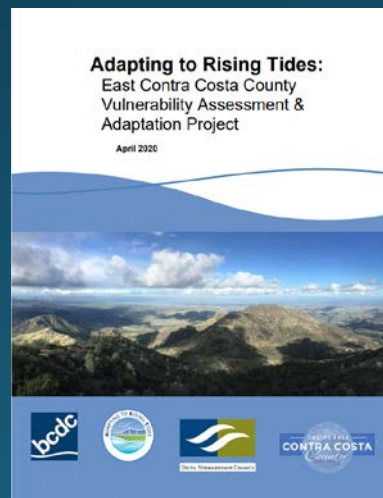
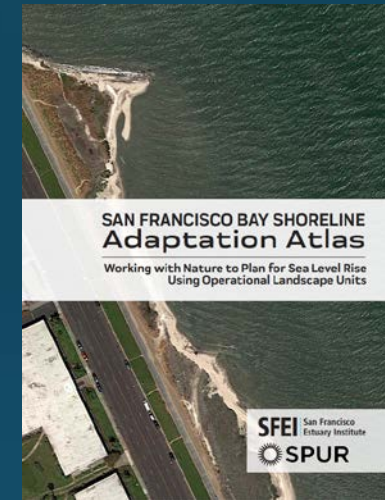
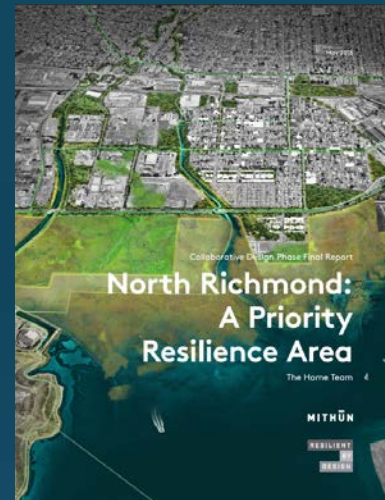
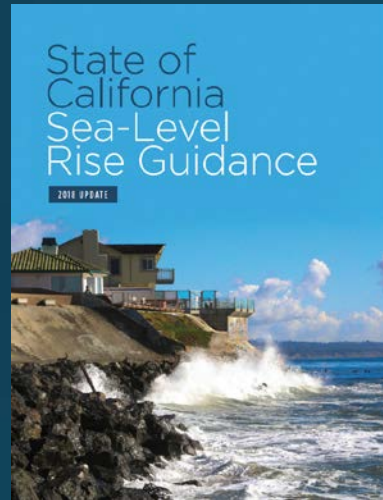
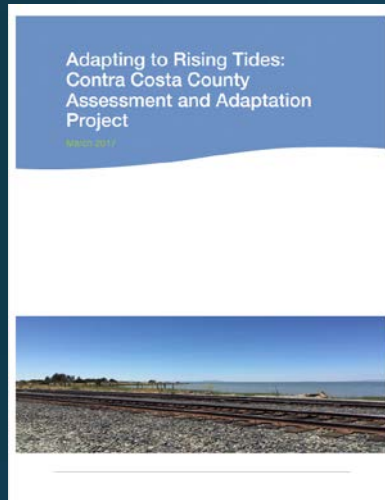
East County



Central County

Source: Dockwa 2022; California King Tides Project Contra Costa County Photo Gallery 2022; The Press 2017

Building Upon Past Work



OPC Updated
SLR Guidance
Expected Later
in 2023

County's Work on Sea Level Rise Adaptation So Far

September 13, 2011

CCFCD helps establish Bay Area Flood Protection Agencies Association

2015-2016

DCD, PWD, CCHS & OES participate in BCDC ART planning process

July 11, 2017

3 communities recommended for Resilient by Design Challenge

May 22, 2018

CCHS applies for funding for Hazardous Materials Emergency Planning Program to identify SLR risks

December 15, 2015

2015 CAP evaluates co-benefits of climate actions including SLR adaptation

May 23, 2017

BOS accepts BCDC Contra Costa ART study & invites BCDC to extend ART study to East County

May 2018

County staff & Supervisor Gioia's office participate in North Richmond Resilient by Design project

County's Work on Sea Level Rise Adaptation So Far

November 2018

DCD works with UC Berkeley Goldman School student team to examine ART studies & recommend action items

2019-2020

County staff participates in DSC Delta Adapts Stakeholder Workgroup Meetings

September 13, 2021

TWIC receives letter from HazMat Commission to address SLR

February 8, 2022

BOS adopts Resolution No. 2022/52 in support of Bay Adapt

May 16, 2023

BOS established Contra Costa Resilient Shoreline Ad Hoc Committee

September 10, 2019

BOS accepts UC Berkeley Goldman School report

March 9, 2021

BOS amends adopted 2021-22 State & Federal Legislative Platforms to include SLR adaptation

November 16, 2021

BOS approves Measure X long-term funding including SLR adaptation planning

March 29, 2022

BOS accepts Sustainability Commission recommendation of SLR working group formation

How could Contra Costa County's efforts to address sea level rise fit into the regional picture?

Regional Shoreline Adaptation Plan (BCDC)

- Develop Regional SLR Adaptation Planning Guidelines
- Guide creation of Sub-Regional Implementation Plans with local jurisdictions
- Expand online platform for Regional Shoreline Adaptation Plan and Project Map



County Sea Level Rise Resilience and Adaptation Plan (County + BCDC + other local partners)

- In the development of County's Plan, County staff will be involved with BCDC's Regional Shoreline Adaptation Plan work
- Integrate Regional Shoreline Adaptation Plan work into County's Plan where applicable
- Integrate County's Plan into other Countywide Plans where applicable
- Using County's Plan development process lessons learned to help inform Regional Shoreline Adaptation Plan & Sub-Regional Implementation Plans

Vision for Contra Costa County's Sea Level Rise Response

One Plan for Contra Costa County's entire shoreline spanning the San Francisco Bay into the Sacramento-San Joaquin Delta to create a resilient shoreline, uplift and protect our most vulnerable communities, and ground these efforts in the values of local shoreline communities.

Contra Costa County Sea Level Rise Resilience and Adaptation Plan Development Process



Phase 1: Community Education and Engagement

Series of education and visioning workshops to increase community members' understanding of sea level rise and general shoreline adaptation and resilience strategies.



Phase 2: Selecting Adaptation Responses

Community members identify adaptation measures and outcomes that align with their vision for the future shoreline of Contra Costa County.



Phase 3: Write the Contra Costa County Sea Level Rise Resilience and Adaptation Plan

Encompass priority implementation actions, funding mechanisms, partnerships, lead agencies, and metrics to implement the project.

Seeking grants to fund Plan development

Climate Resilience Regional Challenge

Administered by the National Oceanic and Atmospheric Administration

One-time grant funding through the Inflation Reduction Act to build the resilience of coastal communities to extreme weather and climate change through risk reduction, regional collaboration, equity, and building enduring capacity for adaptation

Status: Letter of Intent submitted on August 28, 2023. Waiting to hear from agency about whether we've been invited to submit a full grant application.



Regional Resilience Grant Program

Administered by the California Office of Planning and Research Integrated Climate Adaptation and Resiliency Program Regional Resilience Planning and Implementation Grant Program

Planning grant to strengthen climate change resilience at a regional scale

Status: Submitted application on August 29, 2023.



California Resilience Challenge

Administered by the Bay Area Council and funded by businesses and utilities

Grants for diverse, replicable, and innovative climate change adaptation planning projects across California

Status: Submitted application on September 29, 2023.



We can't do this work alone and welcome additional partners!



Stay connected with our work

- Subscribe on Contra Costa County's Legistar landing page (<https://contra-costa.legistar.com/Calendar.aspx>) to receive notifications about agendas and upcoming meetings

Email Updates

To sign up for email updates or to access your subscriber preferences, please enter your contact information below.

*Email Address

- Contra Costa Resilient Shoreline Ad Hoc Committee webpage coming soon



Lower Walnut Creek Restoration Project on May 5, 2022

Thank You!

If you have any questions, please email Ryan Hernandez at Ryan.Hernandez@dcd.cccounty.us