



BCDC's Climate Policies and the Adapting to Rising Tides Project



San Francisco Bay Conservation
and Development Commission

San Francisco Bay Plan

San Francisco Bay Conservation
and
Development Commission







Adapting to Rising Tides

The goal of the ART project is to increase the preparedness and resilience of Bay Area communities to sea level rise and other climate change impacts while protecting ecosystem and community services.



Photo: Ingrid Taylor



San Francisco Bay Conservation and Development Commission

Adapting to Rising Tides

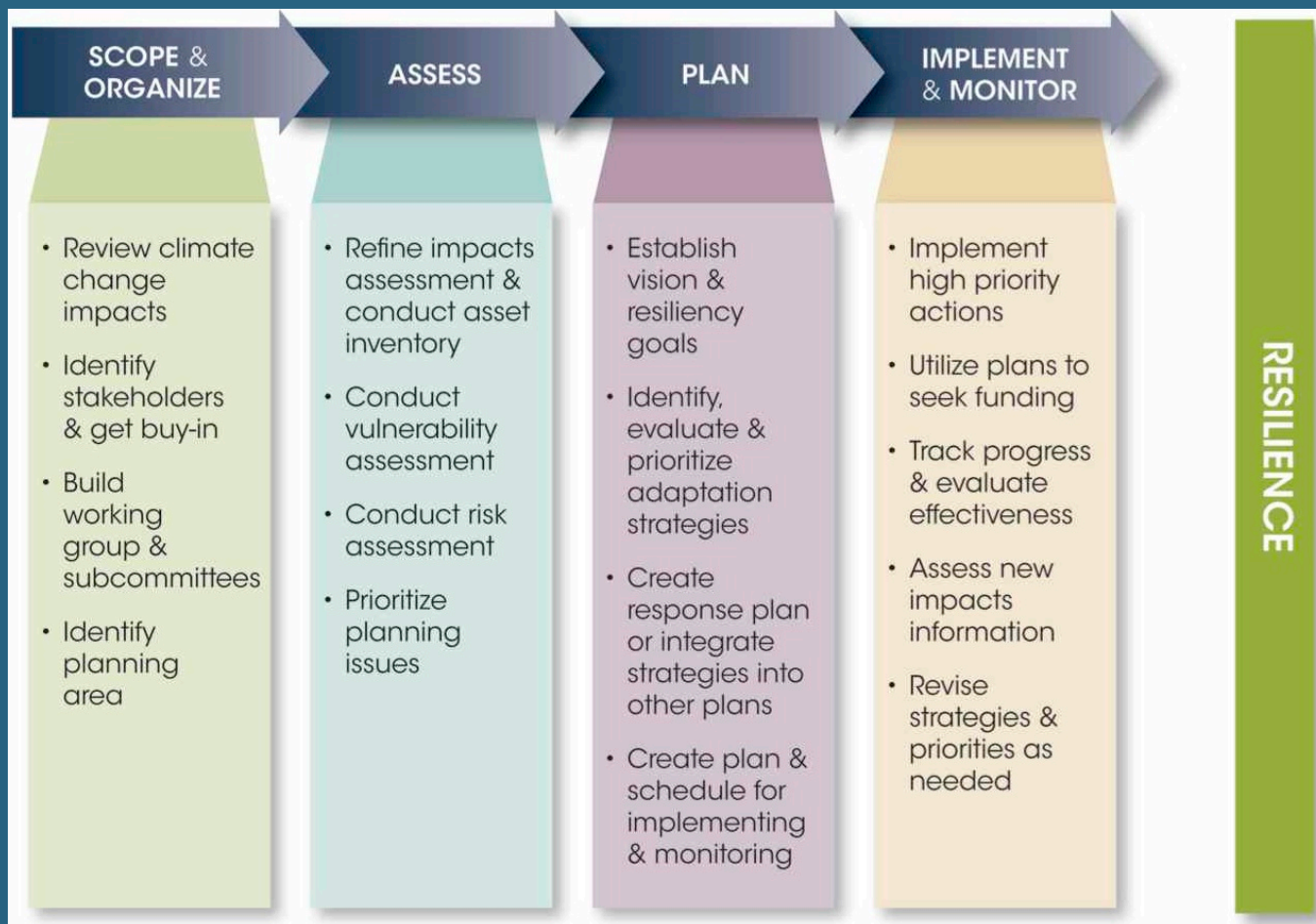
ART is a collaborative project to evaluate:



- How will sea level rise and storm events affect the future of Bay Area communities, infrastructure, ecosystems and economy?
- What approaches can we pursue, both locally and regionally, to assess these challenges, and reduce or manage these risks?

Adapting to Rising Tides

ART Adaptation Planning Process



Scope & Organize

ART Project Area

- Wide, regional interest \approx 40 submittals from seven of the nine Bay Area counties
- Three main selection criteria:
 - ✓ Capacity and interest
 - ✓ A diversity of shoreline types
 - ✓ Regionally significant transportation infrastructure
- Project area includes the shoreline of Alameda County, from Emeryville to Union City



Scope & Organize

ART Collaborative Project Management

- San Francisco Bay Conservation and Development Commission
- NOAA Coastal Services Center
- U.S. Department of Transportation Federal Highway Administration
- Metropolitan Transportation Commission
- California Department of Transportation
- ICLEI Local Governments for Sustainability



Scope & Organize

ART Subregional Working Group

ABAG

Alameda County (AC) Public Works

AC Community Development

AC Public Health Department

AC Transportation Commission

Alameda CTC

BART

Bay Institute

Bay Trail

CA Coastal Conservancy

Capitol Corridor JPA

City of Alameda

City of Emeryville

City of Hayward

City of Oakland

City of San Leandro

City of Union City

East Bay Dischargers Authority

East Bay Municipal Utility District

East Bay Regional Park District

H.A.R.D.

Oro Loma Sanitary District

Pacific Institute

PG&E

Port of Oakland

San Francisco Estuary Institute



Assess

ART Asset Categories:

- Airport
- Community land use, facilities and services
- Contaminated lands
- Energy, pipelines and telecom
- Hazardous material sites
- Ground transportation
- Parks and recreation
- Natural shorelines
- Seaport
- Stormwater
- Structural shorelines
- Wastewater

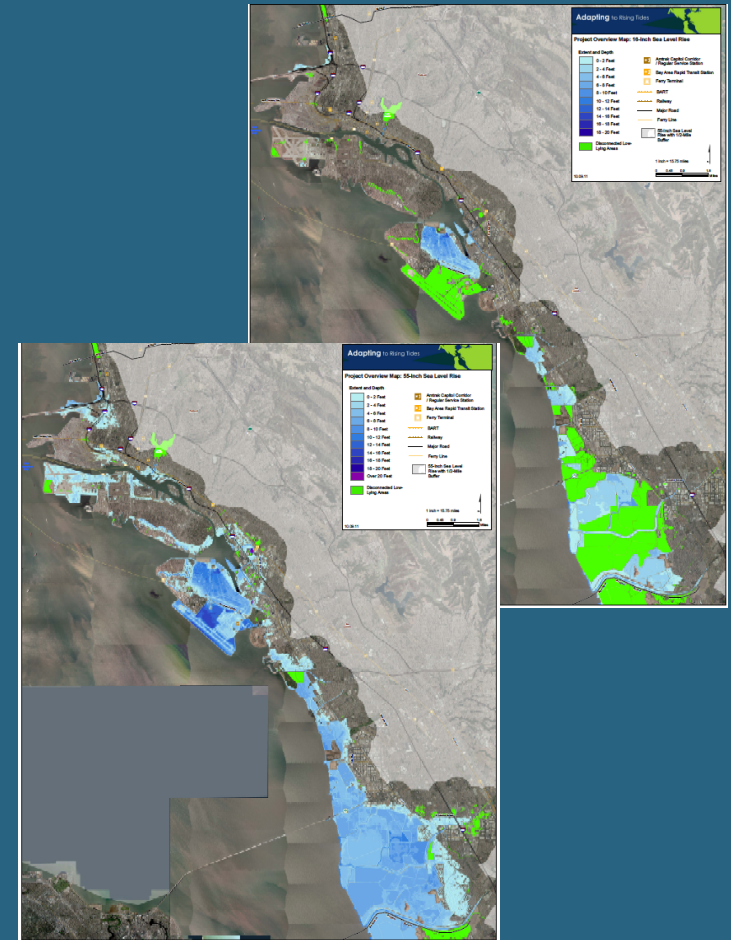


Assess

New, Refined Sea Level Rise and Storm Event Maps

Areas potentially exposed to:

- frequent or permanent inundation
- more frequent floods or floods that last longer
- overtopping of shoreline protection
- elevated groundwater and salinity intrusion



Assess

Impacts Assessment

- Local Climate Projections and Impact Statements
- Asset Inventory
- Asset-Specific Metrics
- Existing Conditions and Stressors Report

Climate Impacts

The Adapting to Rising Tides Subregional Working Group and Project Management Team are developing a vulnerability and risk assessment of how climate change may affect the communities, infrastructure, economy and ecosystems along the Alameda County shoreline from Emeryville to Union City.

This project addresses five climate impacts related to changes in storm events and sea level rise.

ART Climate Impacts Statement (PDF)



Frequent Flooding

Longer Floods

Inundation

Waves & Erosion

Elevated Groundwater

All Impacts



More frequent flood events

Extreme high Bay water levels will occur more often due to changes in storm events and sea level rise. This will lead to more frequent flooding events in flood-prone areas.



Adapting to Rising Tides

Impacts Assessment

The Adapting to Rising Tides project is assessing how sea level rise and storm events will affect shoreline and community assets. This analysis began with an Impacts Assessment (see figure). The impacts assessment includes two components, local climate projections and an asset inventory. Together, these components directly inform the next phase of the Assess step, determining vulnerability and risk.

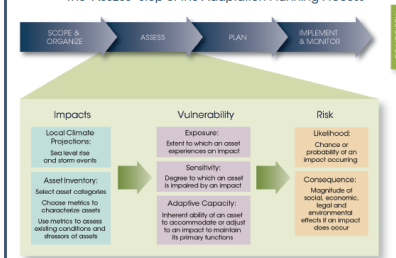
Local Climate Projections: Sea Level Rise and Storm Events

First, project staff selected local climate projections for sea level rise and storm events to use in the assessment. Then, with the help of the Adapting to Rising Tides Communications Subcommittee, staff prepared climate impact statements that broadly describe the potential effects associated with these projections. Together, the projections and the impact statements help to define the scope of the vulnerability and risk assessment.

Asset Inventory

The Adapting to Rising Tides Subregional Working Group and project staff identified twelve categories of community assets, such as infrastructure, land uses and resources to be assessed in the project area. The existing conditions and stressors of each asset category were evaluated and summarized in a project report.

The "ASSESS" Step of the Adaptation Planning Process



<http://risingtides.cac.noaa.gov/>

Adapting to Rising Tides

DRAFT

EXISTING CONDITIONS AND STRESSORS REPORT

PREPARED BY:

SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION

JANUARY 2012



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Adapting to Rising Tides



ART Project Next Steps

- Work with project partners to complete vulnerability and risk assessment (Spring 2012)
- Research adaptation strategies and options, and develop evaluation framework (Summer 2012)
- Engage local and regional entities in identifying a broad suite of adaptation strategies and options (Fall 2013)

For More Information

[Home](#) [About ART](#) [Events](#) [Resources](#) [Contacts](#)

About ART

Building on its regional assessment of Bay Area impacts from mid- and end-of-century sea level rise, [Living With a Rising Bay](#), the San Francisco Bay Conservation and Development Commission (BCDC) has partnered with the National Oceanic and Atmospheric Administration Coastal Services Center (NOAA CSC) to work with Bay Area communities in planning for sea level rise. The Adapting to Rising Tides (ART) project will be a collaborative effort involving community officials and stakeholders to address two specific questions:

How will sea level rise and other climate change impacts affect the future of Bay Area communities, ecosystems, infrastructure, and economy?

What strategies should we pursue, both locally and regionally, to address these challenges and reduce and manage these risks?

Please click on components of the image to learn more about specific aspects of the ART Project

Project Components

[Climate Impacts](#)

Fact sheets

[ART fact sheet](#)

[About ART](#)

[Tomorrow's High Tide](#)

[Vulnerability & Risk](#)

[Mitigation & Adaptation](#)

[Adaptation Efforts](#)

NOAA Coastal Services Center
LINKING PEOPLE, INFORMATION, AND TECHNOLOGY

San Francisco Bay
Conservation and Development Commission

Visit the ART project
website at:

www.risingtides.csc.noaa.gov

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