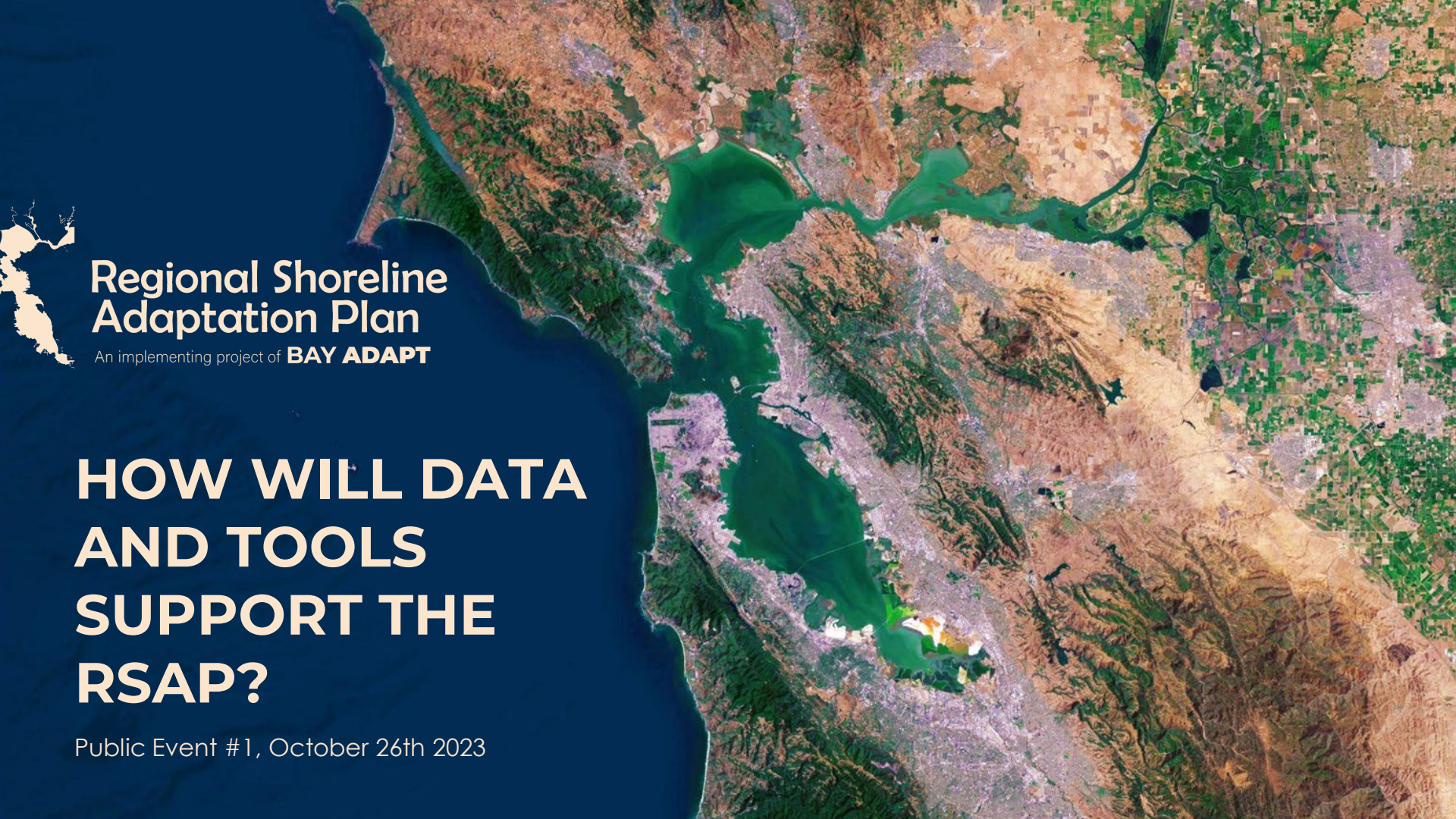

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HOW WILL DATA AND TOOLS SUPPORT THE RSAP?

Public Event #1, October 26th 2023

How do **Data and Tools** inform the RSAP?

- What are we considering as coastal hazards in the RSAP?
- What topic area assets are at risk from those hazards?
- What are the RSAP guidelines and WHERE do they apply?
- What data or tools are necessary for the creation of Subregional Adaptation Plans?
- What data should be used to measure & track progress?

REGIONAL SHORELINE ADAPTATION PLAN
COMPONENTS

What is the **Online Mapping Platform?**

Regional Shoreline Adaptation Plan
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- Provide access to and visualization of data necessary to develop Subregional Adaptation Plans
- Support submission and evaluation of Subregional Adaptation Plans
- Communicate regional progress towards adaptation goals

Who are the **audiences** for the Online Mapping Platform?

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- Planning Practitioners
- Community Based Organizations
- Regional Agency Staff
- General Public

What can the Online Mapping Platform **build from**?

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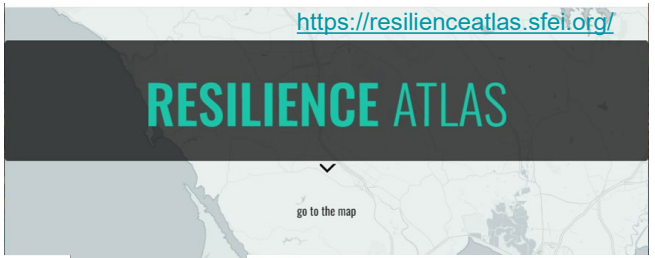
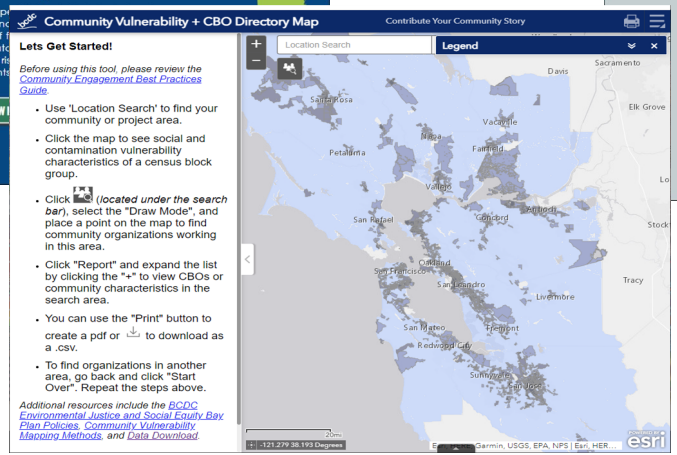
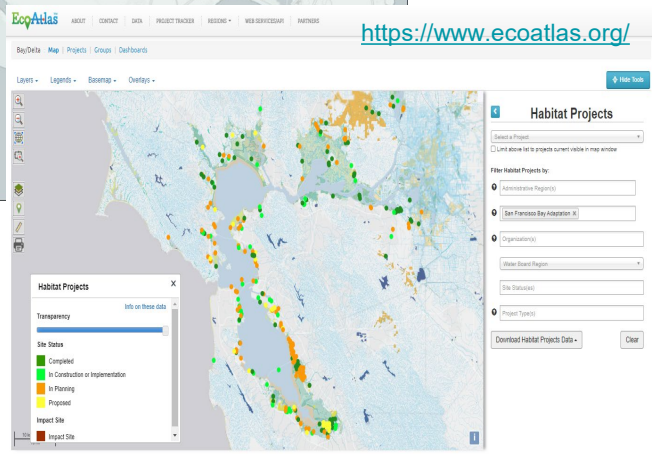
https://explorer.adaptingtorisingtides.org/home

https://resilienceatlas.sfei.org/





https://www.ecoatlas.org/



Discussion and Questions 2

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- What type of technical assistance would be most useful to you in developing effective shoreline adaptation plans?
- What are the key functionalities of a mapping platform that will be of greatest use to you?
- What types of data would you like to see in the online mapping platform?

- https://forms.gle/9axcx9XvsMoWVmPt9

PROJECT TIMELINE

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Regional Shoreline Adaptation Plan

How will **flood hazards** be used?

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Flooding hazards and their impacts are the main driver of *why we need a regional shoreline adaptation plan* - it sets the **basis and context for the problem**.

What Do we Mean by "Flood Hazards":

- **Hazard Type** (e.g., SLR, Extreme Tides, Storms, Shallow Groundwater, etc.)
- **Flood model/Data Layer** (e.g., ART, OCOF, etc.)
- **Future Projections (Time Horizons and Water Levels)** (e.g., OPC)
- **Analysis of Hazard Impacts on Assets** (e.g., ART Bay Area, etc.)

Decisions we make on flood hazard assumptions can help us:

a) **Summarize Existing Data.** Organize existing data and/or analysis in ways that can be summarized and shared

b) **Conduct New Analysis.** Fill in knowledge gaps about topic area vulnerability or create data consistency, where needed

c) **Determine if/where Guidelines Apply.** Support where guidelines may apply based on spatial extent of hazard(s)

d) **Evaluate Compliance with Guidelines**. Require certain hazard layers be used in subregional plans (if necessary) and/or how subregional plans reduce flood risk

e) **Tracking Metrics of Success.** Support how we track and share progress towards a regional vision of success

Flood hazards the RSAP will address

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	SLR + Extreme Tides	Ground-water Rise	Sub-sidence	Shoreline/ Marsh Erosion	Com-pound Flooding (Fluvial/ Tidal)	Wave Runup	Tsunami	Liquefac tion/ Lateral Spread	Precipit ation/Fl uvial Flooding	Levee Failure	FEMA base flood elevatio n	Air Quality
Regional Vulnerability Assessment, RSAP Spatial Guidelines, Online Mapping Platform, Tracking Metrics	x	x										
Subregional Vulnerability Assessment, Subregional Adaptation Plans, Subregional Plan Evaluation	x	x	x	o	o	o						
Other Plans (e.g. Hazard Mitigation Plans)							x	x	o	o	x	
Future Research	x	x	x	o	o	o						
Other Hazards of Concern												x

x = regional data available; o = local data/no data

Sources of flood hazard data

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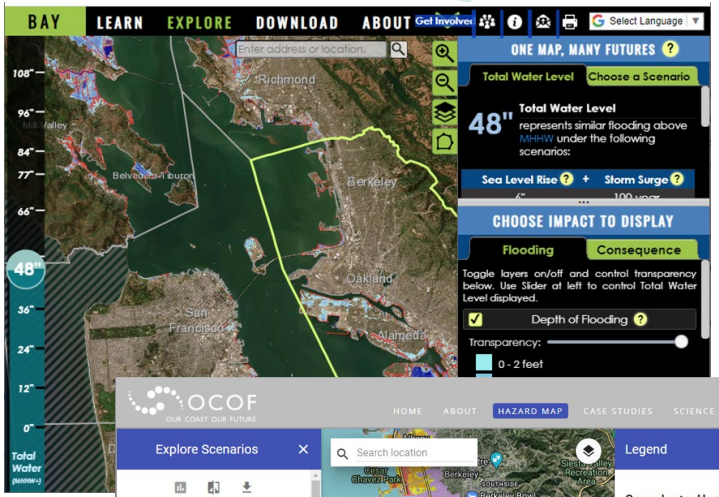
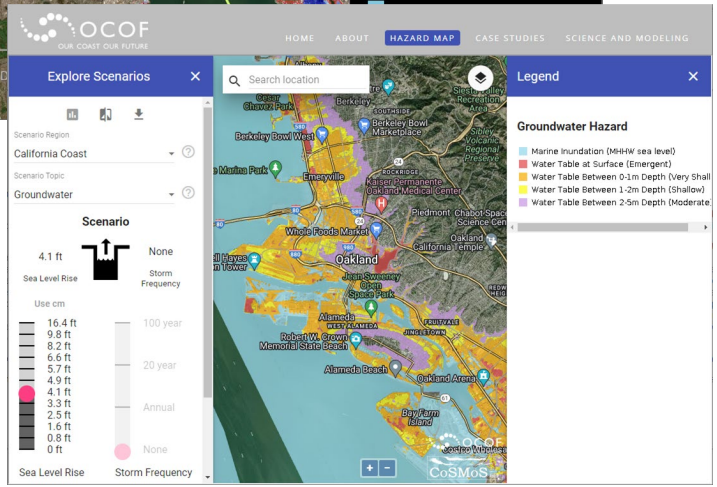
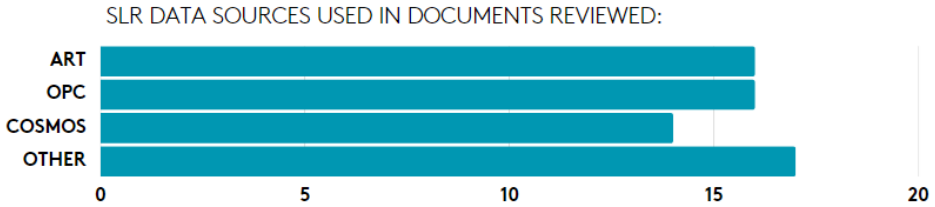
- **Adapting to Rising Tides**
  - SLR/Extreme Tide flood maps
  - https://explorer.adaptingtorisingtides.org/home

- **USGS COSMOS**
  - Shallow Groundwater Rise depth to water maps
  - https://ourcoastourfuture.org/hazard-map/







Planning Horizons relevant to RSAP

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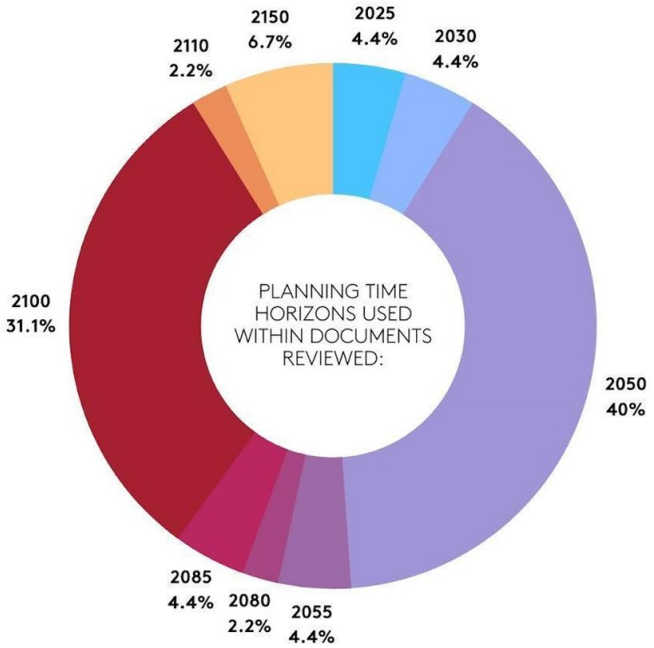
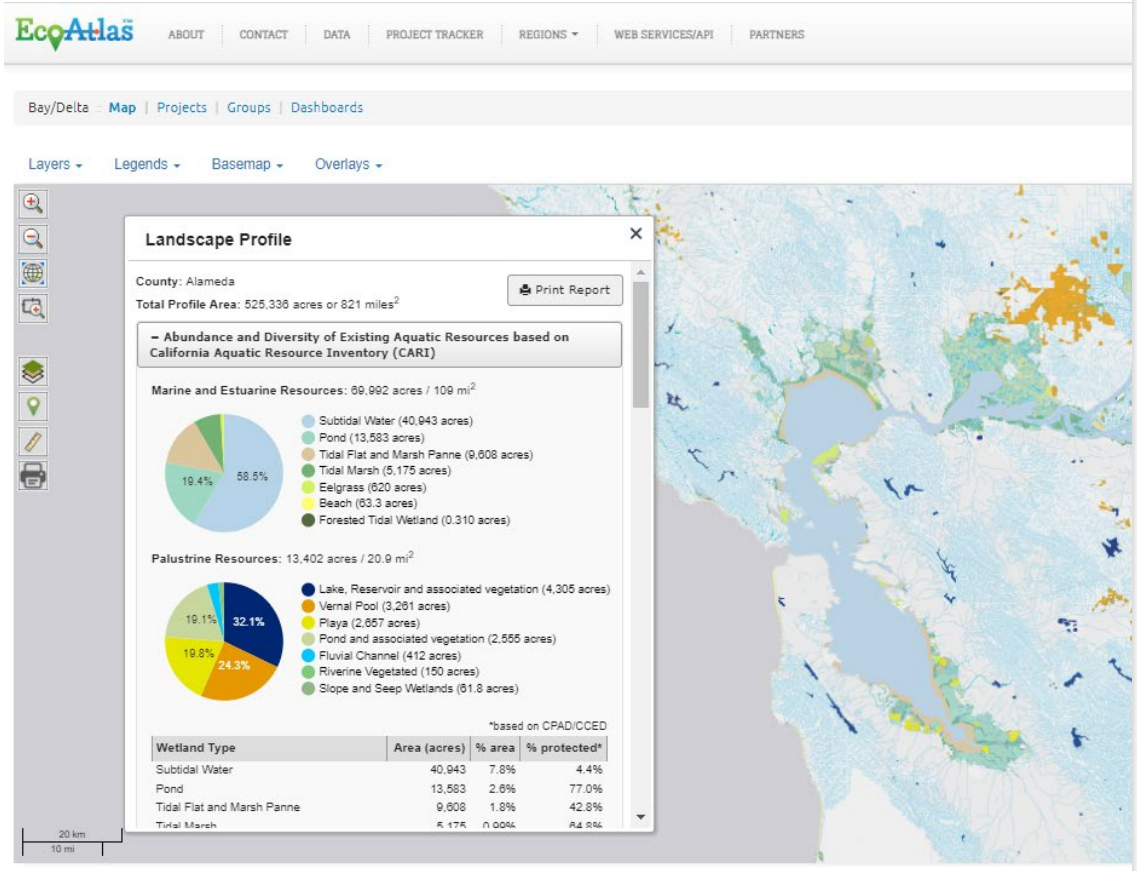
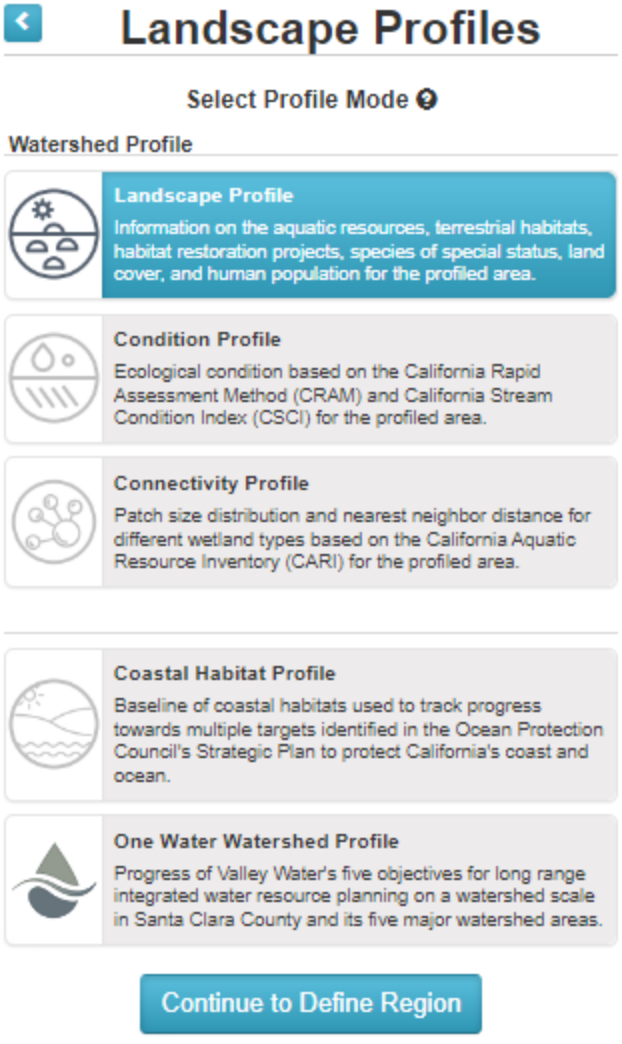
Short term: Now to 2050
Medium term: 2050 - 2100
Long term: 2100 - 2150



EcoAtlas Landscape Profile Tool





EcoAtlas Shoreline Adaptation Project Map (SAPMap)

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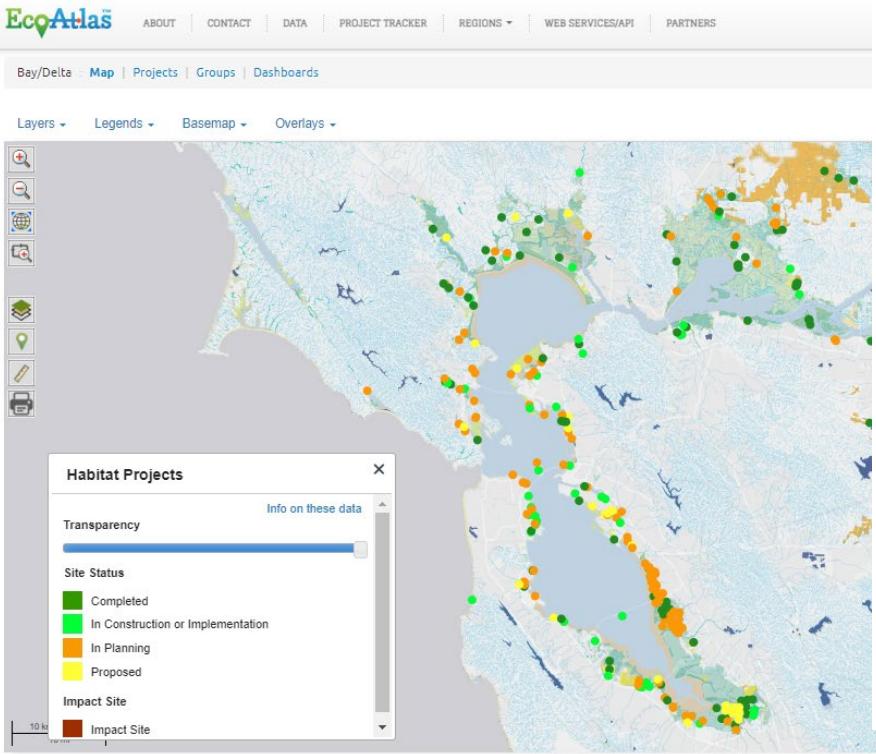

San Francisco Bay Adaptation

Description	Projects containing sea level rise adaptation features that contribute to the resilience of the San Francisco Bay region. Adaptation refers to specific interventions or ways to manage the shoreline, flooding, and sea level rise. These may include grey infrastrucutre, grey-green hybrid projects, and green/restoration projects that include sea level rise adaptation design elements.		
Organization	Metropolitan Transportation Commission, San Francisco Bay Conservation and Development Commission	**Number of Projects**	221
Mapped Projects	https://ecoatlas.org/regions/group/303		

Habitat Projects

Habitat Project Name	Status	County	Total Acres
Liberty Island Tidal Habitat Restoration Map	In-progress	Solano, Yolo	9,500
Novato Baylands Map	Planning	Marin	8,908
Skaggs Island and Haire Ranch Restoration Map	Completed	Sonoma	4,968
Briones Valley (Cowell Ranch) Map	Completed	Contra Costa	3,650
South San Francisco Bay Shoreline Project Map	In-progress	Santa Clara	3,017
Bel Marin Keys V Wetlands Restoration Map	Proposed	Marin	2,426
Dutch Slough Tidal Marsh Restoration Project Map	Completed	Contra Costa	2,365
Lower Elkhorn Basin Levee Setback Project Map	Completed	Contra Costa	2,207
Liberty Farms Wetland Restoration Map	Completed	Solano	2,197
Cosumnes Floodplain Acquisition and Restoration	Completed	Sacramento	2,195
South Bay Salt Ponds: Alviso - Ponds A9, A10, A11, A12, A13, A14, A15 Map	Proposed	Santa Clara	2,093
Grizzly Island Wildlife Area Wetland Enhancement	Completed	Solano	1,740