

SF Bay Plan Climate Change Policies Review



Commission Policy
Review Workshop
January 21, 2016

Agenda

- 1:30 Welcome
- 1:45 Presentation: 2011 Climate Policies Refresher
- 2:05 Introduction to the table top discussions
- 2:15 Table top discussion #1 – built projects
- 3:00 Table top discussion #2 – natural area projects
- 3:30 Group discussion
- 4:00 Wrap up and next steps

Today's Workshop Objectives

- A five-year review of BCDC's Climate Policies with the Commission, staff and public
- Discuss the strengths and shortcomings of BCDC's jurisdiction and policies related to Climate Change
- Launch a year-long workshop series on sea level rise adaptation and resilience
- A forum to discuss how BCDC's ongoing programs and projects are helping us move towards a resilient region (Policies for a Rising Bay, Adapting to Rising Tides Program, Flood Control 2.0, Climate Policies)

2011 Bay Plan Amendments

- 3 years
- 36 public hearings



Climate Change Policy 1

- Policies apply only in BCDC's jurisdiction, i.e., bay, managed wetlands, certain waterways, salt ponds, 100-foot shoreline band:
 - Bay: includes marshes and subtidal areas
 - Shoreline Band: 100 feet from mean high tide
 - Commission may only deny a project that does not provide maximum feasible public access
- Do not apply to federal projects subject to consistency review under CZMA outside of BCDC jurisdiction
- Policies are not applied in complying with CEQA

Climate Change Policy 2

- Larger Shoreline Projects need a risk assessment conducted by a qualified engineer
 - Climate Change policies apply only if a “larger shoreline project”
- Risk Assessments should:
 - Use current 100-year base flood elevation that includes a “best estimate of future sea level rise”
 - Use “best scientific data” for mid-century and end of century sea level rise projections.
 - Include current and planned flood protection
 - Depict all types of flooding, degrees of uncertainty, consequences of defense failure, and risks to habitat from proposed flood protection devices

Best Available Science on Sea Level Rise

- According to State of California and BCDC

Sea Level Rise (inches) Projected for the San Francisco Bay Area				
	Projection		Range	
Year	Mean \pm standard deviation	Simplified Translation	Low	High
2030	6 \pm 2	By 2030, SLR will very likely be 6 inches	2	12
2050	11 \pm 4	By 2050, SLR will most likely be 12 inches	5	24
2100	36 \pm 10	By 2100, SLR will most likely be 36 inches	17	66

National Research Council (NRC), June 2012.

Climate Change Policy 3

- If a risk assessment determines an area is vulnerable to flooding all projects should be designed to be:
 - “Resilient” to mid-century
 - **Resilient:** System is built to “absorb and rebound from the impacts of weather extremes or climate change and continue functioning without substantial outside assistance”
 - “Adaptively managed” to end-of-century
 - **Adaptation:** “Project can adjust to climate change impacts by taking actions to reduce the potential damages, taking advantage of new opportunities arising from climate change, and accommodating the impacts”

Climate Change Policy 4

- Encourage preservation and enhancement of habitat that is vulnerable to flooding or suitable for restoration

Climate Change Policy 5

- Innovative sea level rise adaptation approaches should be encouraged

Related Policies interpreted through Climate Change Policies:

Public Access Policy 5 & 6

- Public access must be located, designed and managed to avoid flood impacts
- Any public access provided as a condition of development within the shoreline band should:
 - Either remain viable in the event of future sea level rise or flooding
 - Or equivalent access consistent with the project should be provided nearby

Related Policies interpreted through Climate Change Policies:

Tidal Marsh Policy 6

- Tidal marsh restorations should be *resilient* and *adaptable* to sea level rise and incorporate a buffer that will allow for marsh migration

Safety of Fills Policy 4

- New projects on fill or near the shoreline should be set back or built so the bottom floor is above the 100-year flood elevation that takes future sea level rise into account

Shoreline Protection Policy 1

- Shoreline protection should be integrated with current or planned adjacent shoreline protection

Climate Change Policy 6

- Discusses the formulation of a Regional Sea Level Rise Adaptation Strategy in collaboration with local, regional, state, federal, and public stakeholders

Example Built Project: Blu Harbor, Redwood City

Project includes public access, shoreline protection, and housing

Key issues

- Shoreline protection is needed but is placed above mean high tide so no bay fill
- The Commission's authority limited to ensuring and protecting the public access; *access to project site outside of the Commission's jurisdiction will flood before development floods*



EXHIBIT A - PROPOSED PUBLIC ACCESS AREA
BLU HARBOR RESIDENTIAL COMMUNITY
Redwood City, California
N.T.S. revised November 12, 2014

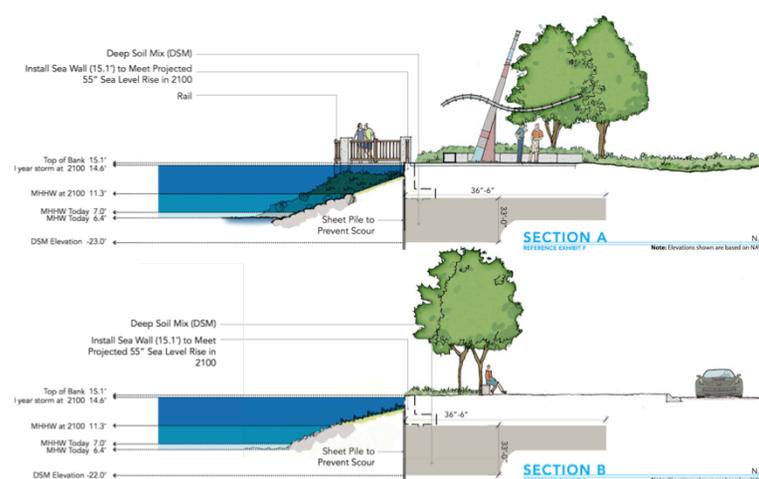


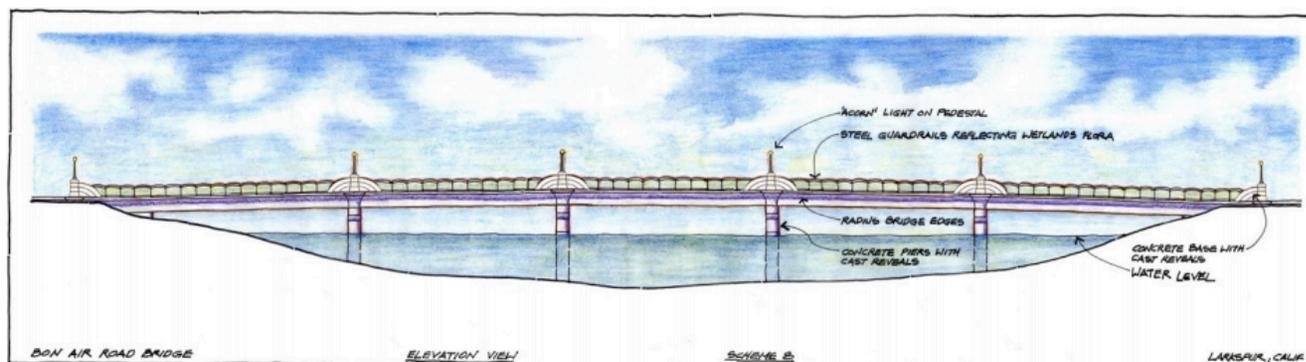
EXHIBIT K - SEA LEVEL RISE END OF CENTURY
PETE'S HARBOR RESIDENTIAL COMMUNITY
Redwood City, California
N.T.S. revised October 2014

Example Built Project: Bon Air Bridge, Corte Madera Creek

Bridge over Corte Madera Creek within the Commission's certain waterway jurisdiction

Key issues

- The bridge is designed to be resilient through end of century even though some parts will get wet during storm events
- Approaches to the bridge, outside the Commission's jurisdiction, will flood. The bridge itself is resilient, but access to it will be limited



Tabletop discussion #1 - Built Projects



Objective:

Discuss the strengths and shortcomings of the Climate Change Policies in improving the resilience of built projects

Policy questions:

- Should there be thresholds for adaptive action, e.g., how long can public access be closed?
- Does the Commission have the policy basis to adequately review the potential impact of fill and/or shoreline protection projects on adjacent properties?
- To encourage effective and innovative approaches, should fill, public access, and mitigation requirements be interpreted in different ways?
- Can the Commission consider whether a project can be both resilient to sea level rise and still continue to function with the surrounding landscape?

Table Top Discussion

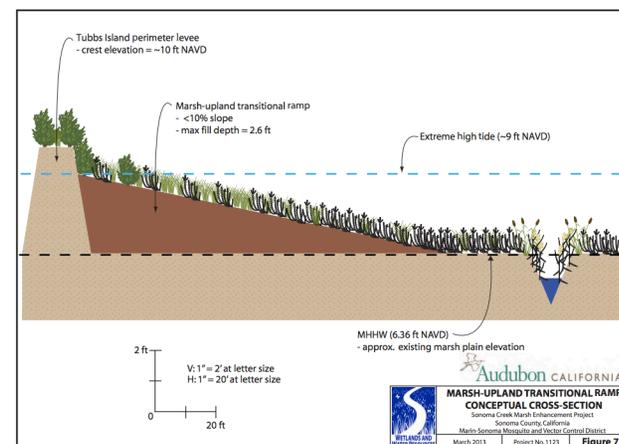
- The goal of the table tops is for participants to gain a better understanding of the Climate Policies
- We do not expect you to be experts on the policies!
- Staff facilitators will help guide your table in an active discussion, and note takers will capture your thoughts, ideas and questions
- There will be roaming staff available to answer your specific questions, and there are “question cards” available where you can note any unanswered questions
- There is no wrong way to participate! Speak up, ask hard questions, and give us a lot to think about
- This is the beginning of the workshop series and we hope it is a great start to this important conversation

Example Built Project: Sonoma Creek, San Pablo Bay National Wildlife Refuge

Project includes tidal marsh enhancement, improved water circulation, upland refugia and transitional habitat

Key issues

- Original design included 5 acres of marsh mound, 3 acres of dredge material placement, 10 acres of transitional habitat
- Authorized amount of fill was *reduced* to meet the requirement that the fill be the minimum necessary under the McAteer-Petris Act
- The project trades off a net loss of 3 acres of existing tidal marsh to establish the improved health and function of 305 acres of marsh

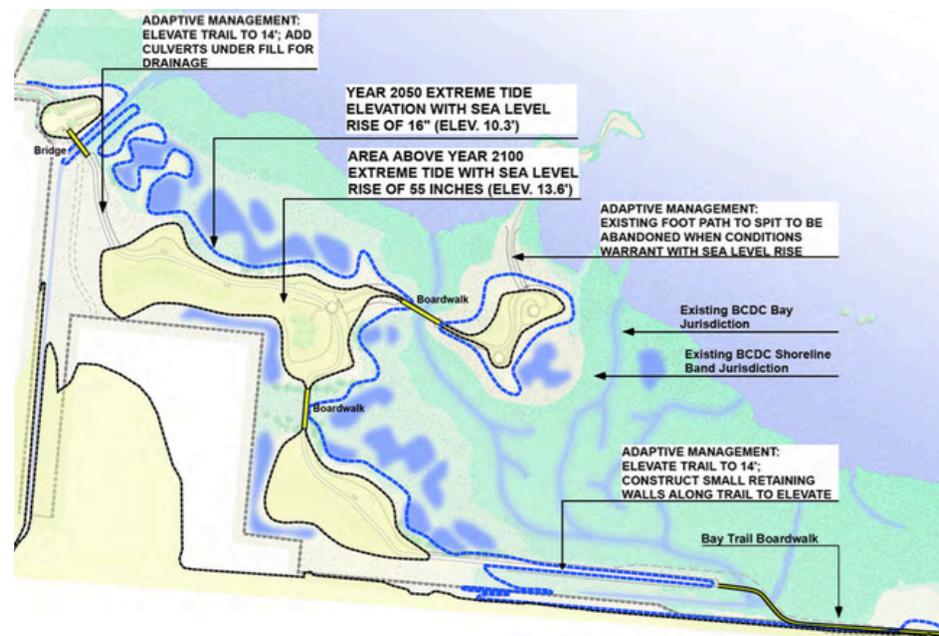


Example Built Project: Breuner Marsh Restoration, Richmond

Project includes excavation in uplands for tidal marsh enhancement, seasonal wetlands, and public access trails

Key issues

- Restoration design allows the marsh to retreat inland with low-lying areas reverting to mudflat and high marsh becoming low marsh
- Main Bay Trail segment will be relocated inland and replaced as the Bay rises
- A 0.25 mile spur to the Bay will be lost, possibly before mid-century



Tabletop discussion #2 - Natural Project Example



Objective:

Discuss the strengths and shortcomings of the Climate Change Policies in encouraging innovative sea level rise approaches

Policy questions:

- What level of risk from innovative strategies is acceptable?
- To encourage effective and innovative approaches, should fill, public access, and mitigation requirements be interpreted in different ways?
- To achieve natural ecosystem preservation and enhancement, should fill, public access, and mitigation requirements be interpreted in different ways?

Table Top Discussion

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Group discussion to share and exchange ideas among the tables

- Top three issues, challenges, “ah-ha” moments and findings from your table



Photo: SFGate

Wrap Up and Next Steps

Workshop 2

The Regional Landscape

March 3rd

Workshop 3

Recap and Review

April 7th

Workshop 4

Commissioner Conversation

May 5th