

San Francisco Bay Conservation and Development Commission

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TO: Design Review Board Members

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SUBJECT: Regional Shoreline Adaptation Plan – Public Draft
(For Design Review Board consideration October 7, 2024)

Project Summary

Project Representatives

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Project Background

Coastal adaptation to rising sea level is a state priority to avoid devastating impacts to people, the economy, and natural habitats. Despite having only one-third of the state's coastline, two-thirds of California's economic losses due to rising sea level are forecast to occur in the nine-county Bay Area, absent adaptation actions. The San Francisco Bay is a state-protected resource that is the largest estuary on the West Coast of the Americas, a key part of the Pacific Flyway for migrating waterfowl, and a critical economic driver of the State's economy.

With the assistance and leadership of BCDC, significant progress has been made in the Bay Area by cities and counties to plan for a changing shoreline and establish shoreline ecosystem restoration and other flood protection projects. Yet many of the adaptation plans and projects already occurring within the Bay Area are disconnected and disjointed. Absent regional collaboration and a shared vision, we risk: disproportionate impacts to less affluent, disadvantaged communities; a patchwork of protective actions with varying levels of protection; inconsistent interpretation and application of the best statewide science; competition, not collaboration, for limited funding; near-term loss of wetlands; and, no way to measure collective progress.

BCDC created and continues to lead Bay Adapt — a collaborative regional planning program to develop a consensus-driven strategy to protect people and the built and natural environments from a rising Bay. The Bay Adapt Joint Platform lays out guiding principles, priority actions, and tasks whose implementation will enable the region to adapt faster, better, and more equitably to a rising Bay.

The Regional Shoreline Plan (RSAP) is one of the initiatives coming out of Bay Adapt with the aim of implementing multiple tasks in the Joint Platform. The RSAP consists of a) a One Bay Vision for what successful shoreline adaptation will include to ensure long-term equity, protection, and prosperity, informing specific priorities, guidelines, and standards, b) Strategic Regional Priorities that identify key adaptation opportunity areas and projects throughout the Bay Area using the One Bay Vision to guide



priority criteria and direct jurisdictions to consider regional priorities within their Subregional Shoreline Resiliency Plans, c) guidelines that lay out consistent regional standards and practices for Subregional Shoreline Resiliency Plans and projects (guidelines), and d) an Online Mapping Platform that will provide data, guidance, and region-wide analysis to help support local jurisdictions in creating Subregional Resiliency Plans (Mapping Platform).

The RSAP describes the vision, goals and local guidelines for how the 46 cities and nine counties surrounding San Francisco Bay can collectively plan for this unprecedented challenge. The guidelines will be used by local jurisdictions for developing Subregional Implementation Plans that effectively address local and regional climate risks.

Senate Bill (SB) 272: Sea level Rise Planning and Adaptation

Senate Bill (SB) 272 (Laird 2023): Sea level Rise Planning and Adaptation now requires all local governments in the State's coastal zone to address sea level rise (SLR) through Local Coastal Programs or San Francisco Bay Shoreline Resiliency Plans by January 1, 2034. Jurisdictions that complete this requirement will be prioritized for state funding. Vulnerability assessments and adaptation plans will be based on best available science, cover specified priorities, and will get updated on a timeline agreed upon by the local governments and the Coastal Commission or BCDC. The measure also requires the Commission and BCDC to collaborate with the Ocean Protection Council (OPC) and the Sea Level Rise State and Regional Support Collaborative on the establishment of guidelines to assist local governments in this work by December 31, 2024.

Implementing SB 272 in the San Francisco Bay will require a new era of regional and local collaboration to protect and enhance San Francisco Bay for this and future generations from rising sea level. To ensure that people, infrastructure, and habitat are protected, Bay-wide and local plans must work in coordination with one another to provide large-scale regional protection and avoid conflict among jurisdictions. Local plans must embed social equity and environmental justice, prioritize and protect the natural environment, be developed with both local and regional priorities, be action-oriented and implementable, and meet State policy and standards.

The RSAP is BCDC's answer to fulfill SB 272. Staff is on track to complete guidelines and seek Commission approval by the end of 2024. Since the Subregional Shoreline Resiliency Plans are new and have never been developed by local governments, BCDC staff anticipates that staff will need to work closely with local governments to ensure that guidelines are applied consistently and that local governments have the capacity, data, and resources they need to interpret the guidelines. Staff also anticipate learning from local governments how effective the guidelines are, which can inform how guidelines are updated in the future.

Review by the Board

In June, the Design Review Board received a draft of the Regional Shoreline Adaptation Plan Outline and the Adaptation Strategy and Pathway Standards section of the plan. Board members observed that the strategies made sense and were not too burdensome, it would be helpful to include a spatial vision, guidance on balancing priorities, and discussion on incentives.

In August 2023, the Design Review Board received a briefing on Bay Adapt, the Joint Platform, and an early discussion of the RSAP. The Boards were generally supportive of reimagining the role of BCDC in the region; commending the ambition in stepping up and taking a leadership role. The Boards

expressed favor for continuing to engage in regular meetings to provide input and guidance. Board members stated they appreciate staying informed so to better fulfill their roles as technical advisors. The Boards also expressed that direction on societal values is necessary, design and engineering are simple but society needs to provide guidance on values and priorities.

Regional Shoreline Adaptation Plan

Building from the *Joint Platform*, and in response to SB 272, BCDC staff have been working with a broad array of interested parties, including the Commission, a Rising Sea Level Commissioner Working Group, a Local Electeds Regional Task Force, a large advisory group of external stakeholders, and through partnerships with community-based organizations, to develop the draft *Regional Shoreline Adaptation Plan* (RSAP) (Appendix A). The RSAP is a region-wide plan for the Bay shoreline that guides the creation of coordinated, locally planned adaptation strategies based on a regional vision (called the One Bay Vision), Strategic Regional Priorities, and Guidelines for Subregional Shoreline Adaptation Plans. Furthermore, the RSAP is the regional strategy called for in [Bay Plan Climate Change Policy 6](#).

The overarching goals identified through the public process that informed development of the of the RSAP include:

- Coordinated adaptation
- Priority resources to frontline communities
- Long-term health of wetlands
- Strategic implementation
- Common standards and methods
- Pipeline of funding
- Track and measure progress

The initial RSAP consists of 1) a One Bay Vision, 2) a set of Strategic Regional Priorities, and 3) guidelines for local governments to follow as they create, submit, and seek approval for Subregional Shoreline Adaptation Plans, along with associated resources, best practices, and data and maps to support implementation. Together, these components establish common standards and values for adaptation planning along the San Francisco Bay shoreline and guide local jurisdictions in making adaptation decisions that contribute to not only local benefits but also to regional adaptation goals.

The RSAP provides requirements for achieving coordinated, collaborative sea level rise adaptation in the San Francisco Bay and directs local governments in their preparation of Subregional Shoreline Adaptation Plans as required by SB 272. It guides these plans by explicitly outlining:

The Context for Planning: Section I of the RSAP, Introduction, provides the laws, policies, and concepts that the approach to subregional shoreline planning is based on.

The One Bay Vision and Strategic Regional Priorities: Section II, the One Bay Vision, outlines the shared goals that successful adaptation planning in the region should help achieve. It also identifies key issues that drive region-wide patterns, where these issues occur spatially around the region, and the required policy responses to successfully address these issues locally. The One Bay Vision and Strategic Regional Priorities address goals in the following categories:

- *Community Health and Well-being:* This section addresses safeguarding communities from the public health consequences of flooding, meaningfully engaging and empowering communities in adaptation decision-making processes, addressing risks to essential community assets, and prioritizing economic opportunities from adaptation in

disadvantaged communities. The Strategic Regional Priority requires that plans include actions to mitigate involuntary displacement risk due to sea level rise. This section primarily responds to existing Climate Change Policy 6(g), “address environmental justice and social equity issues,” although other sections do as well.

- *Ecosystem Health and Resilience*: This section addresses the need to protect, restore, and enhance Baylands ecosystems, prioritize nature-based solutions where possible, and identify and facilitate opportunities for ecosystems to migrate landward. The Strategic Regional Priority requires that where ecosystems cross jurisdictional boundaries, habitat connectivity is maintained or enhanced. This section responds to existing Climate Change Policy 6(b): “enhance the Bay ecosystem by identifying areas where tidal wetlands and tidal flats can migrate landward; assuring adequate volumes of sediment for marsh accretion; identifying conservation areas that should be considered for acquisition, preservation or enhancement; developing and planning for flood protection; and maintaining sufficient transitional habitat and upland buffer areas around tidal wetlands”; and 6(c): “integrate the protection of existing and future shoreline development with the enhancement of the Bay ecosystem, such as by using feasible shoreline protection measures that incorporate natural Bay habitat for flood control and erosion prevention.”
- *Development, Housing, and Land Use*: This section addresses the need to adapt existing development and plan for safe new and re-development, align land use planning with risk mitigation while balancing economic vitality, and supporting the creation of needed housing while managing risk and preserving public trust uses of the Bay. The Strategic Regional Priority requires strategies for safe, sustainable, and strategic growth and density in MTC/ABAG’s growth geographies contained within Plan Bay Area. This section responds to existing Climate Change Policy 6 to address “where and how existing development should be protected, and infill development encouraged, where new development should be permitted, and where existing development should eventually be removed to allow the Bay to migrate inland.”
- *Critical Infrastructure and Services*: This section references continued or improved continuity of critical services, consideration of emergency management services, and prioritizing services expansion in underserved communities. The Strategic Regional Priority requires that plans ensure the maintenance and reliability of critical and emergency services. This section responds to existing Climate Change Policy 6a: “advancing regional public safety and economic prosperity by protecting: (i) existing development that provides regionally significant benefits; (ii) new shoreline development that is consistent with other Bay Plan policies; and (iii) infrastructure that is crucial to public health or the region’s economy, such as airports, ports, regional transportation, wastewater treatment facilities, major parks, recreational areas and trails”, and 6 h: “integrate hazard mitigation and emergency preparedness planning with adaptation planning by developing techniques for reducing contamination releases, structural damage and toxic mold growth associated with flooding of buildings, and establishing emergency assistance centers in neighborhoods at risk from flooding.”
- *Public Access and Recreation*: This section references expanded and improved public access to the shoreline, connecting disadvantaged communities to the Bay, and balancing pleasure, sustenance, and cultural connections to the Bay. The Strategic Regional Priority requires that strategies preserve or improve public access networks along the shoreline and connect these networks with their neighbors. This section responds to Climate Change

Policy 6(a): “advancing regional public safety and economic prosperity by protecting:...(iii) infrastructure that is crucial to public health or the region’s economy, such as...major parks, recreational areas, and trails.”

- *Transportation and Transit*: This section refers to ensuring that transportation systems remain safe and reliable, especially in transit-dependent communities, integrating multi-benefit opportunities into transportation projects, and promoting low-emissions mobility. The Strategic Regional Priority requires the maintained function of regionally significant transportation infrastructure. This section responds to existing Climate Change Policy 6(a): “advancing regional public safety and economic prosperity by protecting:... (iii) infrastructure that is crucial to public health or the region’s economy, such as airports, ports, regional transportation...”.
- *Shoreline Contamination*: This section refers to the need to identify, mitigate, adapt, and remediate shoreline contaminated sites, with prioritization of Environmental Justice communities, and incorporate the latest science on shallow groundwater rise and how it interacts with contaminated sites. The Strategic Regional Priority requires that contamination remediation be prioritized in Environmental Justice communities. This section responds to existing Climate Change Policy 6(j): “encourage the remediation of shoreline areas with existing environmental degradation and contamination in order to reduce risks to the Bay’s water quality in the event of flooding.”
- *Collaborative Governance, Flood Management, and Funding*: This section refers to the need for collaboration between neighboring and regional governments, as well as across hydrologically and environmentally connected landscapes (such as “Operational Landscape Units”), to address shared risk and identify multi-benefit adaptation opportunities, engage with Indigenous partners, promote formal and informal collaboration structures, and improve funding and regulatory processes for projects. The Strategic Regional Priority requires identification of cross-jurisdictional flood risk and identification of multi-jurisdictional flood management strategies. This section responds to existing CC Policy 6: “particular attention be given to identifying and encouraging the development of long-term regional flood protection strategies that may be beyond the fiscal resources of individual local agencies” and 6(e): “identify a framework for integrating the adaptation responses of multiple government agencies.”

Subregional Shoreline Adaptation Plan Guidelines (“Guidelines”): Section III includes all the required components for local governments to prepare a Regional Shoreline Adaptation Plan. This section includes the Subregional Plan Elements, Minimum Standards, Complete Plan Submittal Checklist, Plan Development, Submission, and Approval, and Tools to Support Plan Development. This section includes requirements to incorporate the One Bay Vision and Strategic Regional Priorities into Subregional Plans.

Subregional Plan Elements (3.1) describes the required elements that a completed Subregional Shoreline Adaptation Plan must contain. It also sets the requirements for the content of the plan elements by outlining what should be included in each element, and how they should be considered and developed. This section also contains required submittals. This section includes guidelines for the following plan elements:

- *Element A: Planning Process*
- *Element B: Existing Conditions*
- *Element C: Vulnerability Assessment* – this element addresses SB 272’s requirement that subregional plans include a vulnerability assessment that incorporates efforts to ensure equity for at-risk communities.
- *Element D: Adaptation Strategies and Pathways* – this element addresses SB 272’s requirement that subregional plans include sea level rise adaptation strategies. It also responds to existing Climate Change Policy 6 to incorporate an adaptive management approach.
- *Element E: Land Use and Policy Plan.* This element addresses existing Climate Change Policy 6 regarding land use and long-term adaptation policy by ensuring consistency with Plan Bay Area (SB 375) and aiding local governments to “determine where and how existing development should be protected and infill development encouraged, where new development should be permitted, and where existing development should eventually be removed to allow the Bay to migrate inland.”
- *Element F: Project Implementation Plan and Funding Strategy* – this element addresses SB 272’s requirement that subregional plans must include the identification of lead planning and implementation agencies, and an economic impact analysis of, at a minimum, costs to critical public infrastructure and recommended approaches for implementing sea level rise adaptation strategies. It also responds to existing Climate Change Policy 6(e): “identify a framework for integrating the adaptation responses of multiple government agencies,” and Policy 6(m): “identify mechanisms to provide information, tools, and financial resources so local governments can integrate regional climate change adaptation planning into local community design processes.”
- *Element G: Project List:* This element addresses SB 272’s requirement that subregional plans include recommended projects. This project list will also support the State in prioritizing funding to projects and strategies contained within BCDC approved subregional plans, per SB 272.

Minimum Standards (3.2): Certain Plan Requirements require compliance with common Standards. The Standards outline the minimums that must be met to comply with the Plan Requirements. Not all Plan Requirements reference Standards, but if they do, plan elements will be reviewed based on how closely they align with the intent of the standards. Standards include:

Coastal Flood Hazards and Sea Level Rise Scenarios Standards: The flood hazards and future sea level rise scenarios that all plans must use for vulnerability assessments and to develop responsive strategies. These standards fulfill SB 272’s mandate for “the use of best available science” and respond to existing Climate Change Policy 6.

Minimum Categories and Assets Standards: The minimum assets that plans must consider when evaluating vulnerability and adaptation for flood risk reduction.

Equity Assessment Standards: A set of questions for each element that allows the user to evaluate how effectively equity principles have been incorporated into the plan process and outcomes. This section responds to existing Climate Change Policy 6(g): address environmental justice and social equity issues.

Adaptation Strategy Standards: The adaptation standards set the outcomes of adaptation that must be met when developing adaptation strategies. Strategies must demonstrate how they have met the standards which are intended to achieve both local and regional benefit. This section includes the required standards to advance the Strategic Regional Priorities. Adaptation Strategy Standards fit within the following categories: (1) Maximize benefits of water-dependent shoreline uses and Baylands habitats; (2) Improve community health, economic development, infrastructure and housing needs; (3) Create pathways to respond to changing flood risks over time. These Standards address specific recommendations in existing Climate Change Policy 6 (see Table in Appendix B for more details).

Complete Plan Submittal Checklists (3.3): This section provides an easy-to-follow checklist of the required components of a complete plan.

Plan Development, Submission, and Approval Process (3.4): This section outlines who is responsible for developing a Subregional Shoreline Adaptation Plan and encourages partnering of cities and counties to develop multi-jurisdiction plans. It also addresses plan submittal deadline and requirements, evaluation of alternative data sources, and the process for initiating a plan, engaging in consultations with BCDC while developing a plan, obtaining local approval for completed plans, and submitting completed plans and obtaining approval from BCDC. It describes a requirement for a 5-year limited update process and a 10-year comprehensive update. This section addresses SB 272's requirement for the inclusion of a timeline for updates and existing Climate Change Policy 6, recommending regular updates to the strategy.

Tools to Support Plan Development (3.5). This section describes how local governments can get support. Developing a Subregional Shoreline Adaptation Plan is a significant undertaking, but there are many resources available to help leverage existing material, get access to ready-made data, and utilize examples, support, and guidance. This section discusses how to leverage and utilize existing adaptation work already developed locally, and accessing best available data available regionally or locally.

Adoption of the RSAP in 2024 will begin implementing the requirements of SB 272 and position the region for strategic planning and funding to advance adaptation.

Bay Plan Policies

Climate Change Policy 6:

The Commission, in collaboration with the Joint Policy Committee, other regional, state and federal agencies, local governments, and the general public, should formulate a regional sea level rise adaptation strategy for protecting critical developed shoreline areas and natural ecosystems, enhancing the resilience of Bay and shoreline systems and increasing their adaptive capacity.

The Commission recommends that: (1) the strategy incorporate an adaptive management approach; (2) the strategy be consistent with the goals of SB 375 and the principles of the California Climate Adaptation Strategy; (3) the strategy be updated regularly to reflect changing conditions and scientific information and include maps of shoreline areas that are vulnerable to flooding based on projections of future sea level rise and shoreline flooding; (4) the maps be prepared under the direction of a qualified engineer and regularly updated in consultation with government agencies with authority over flood protection; and (5) particular attention be given to identifying and encouraging the development of long-term regional flood protection strategies that may be beyond the fiscal resources of individual local agencies.

Ideally, the regional strategy will determine where and how existing development should be protected and infill development encouraged, where new development should be permitted, and where existing development should eventually be removed to allow the Bay to migrate inland.

The entities that formulate the regional strategy are encouraged to consider the following strategies and goals:

- a) advance regional public safety and economic prosperity by protecting: (i) existing development that provides regionally significant benefits; (ii) new shoreline development that is consistent with other Bay Plan policies; and (iii) infrastructure that is crucial to public health or the region's economy, such as airports, ports, regional transportation, wastewater treatment facilities, major parks, recreational areas and trails;
- b) enhance the Bay ecosystem by identifying areas where tidal wetlands and tidal flats can migrate landward; assuring adequate volumes of sediment for marsh accretion; identifying conservation areas that should be considered for acquisition, preservation or enhancement; developing and planning for flood protection; and maintaining sufficient transitional habitat and upland buffer areas around tidal wetlands;
- c) integrate the protection of existing and future shoreline development with the enhancement of the Bay ecosystem, such as by using feasible shoreline protection measures that incorporate natural Bay habitat for flood control and erosion prevention;
- d) encourage innovative approaches to sea level rise adaptation;
- e) identify a framework for integrating the adaptation responses of multiple government agencies;
- f) integrate regional mitigation measures designed to reduce greenhouse gas emissions with regional adaptation measures designed to address the unavoidable impacts of climate change;
- g) address environmental justice and social equity issues;
- h) integrate hazard mitigation and emergency preparedness planning with adaptation planning by developing techniques for reducing contamination releases, structural damage and toxic mold growth associated with flooding of buildings, and establishing emergency assistance centers in neighborhoods at risk from flooding;
- i) advance regional sustainability, encourage infill development and job creation, provide diverse housing served by transit, and protect historical and cultural resources;
- j) encourage the remediation of shoreline areas with existing environmental degradation and contamination in order to reduce risks to the Bay's water quality in the event of flooding;
- k) support research that provides information useful for planning and policy development on the impacts of climate change on the Bay, particularly those related to shoreline flooding;
- l) identify actions to prepare and implement the strategy, including any needed changes in law; and
- m) identify mechanisms to provide information, tools, and financial resources so local governments can integrate regional climate change adaptation planning into local community design processes.

Board Questions

Staff request the Board to give particular attention to the Adaptation Strategy Standards. Additionally, staff have the following specific questions for the Board's consideration:

1. Do you feel like you can support the guidelines as-is? If not, what would you change?
2. What do you think are going to be the biggest challenges cities and counties will have as they develop these plans? What sort of tools might be helpful for plan development?
3. What else do you need to know to fully understand how these plans will work?