



CITY OF SANTA BARBARA
PARKS AND RECREATION COMMISSION REPORT

AGENDA DATE: September 23, 2020
TO: Parks and Recreation Commission
FROM: Planning Division, Community Development Department
SUBJECT: Draft Sea-Level Rise Adaptation Plan

RECOMMENDATION:

That the Commission receive a presentation and provide comments on the Draft Sea-Level Rise Adaptation Plan. Given the size of the plan, staff recommends that comments focus on the recommended near-term actions outlined on pages ES-23 through ES-26 of the Executive Summary.

BACKGROUND:

The rate of sea-level rise in the region is projected to increase significantly in upcoming years, eventually resulting in increased flooding and erosion hazards along the City's shoreline. Preparation of a sea-level rise adaptation plan is identified as a priority in the Coastal Land Use Plan, Safety Element, and Hazard Mitigation Plan. Additionally, the State requires the City, as a trustee of state tidelands, to proactively plan for sea-level rise at the Harbor and Stearns Wharf. The 2019 Coastal Land Use Plan includes interim policies that begin to incorporate the effects of sea-level rise into coastal development permitting, but a more comprehensive plan for addressing sea-level rise is needed. The California Coastal Commission, therefore, partially funded preparation of a sea-level rise adaptation plan as part of the City's efforts to update its Local Coastal Program.

The first step in planning to adapt to sea-level rise is understanding the City's vulnerabilities at different stages of sea-level rise. In November 2018, the City's consultant, Environmental Science Associates (ESA), prepared a Draft Sea-Level Rise Vulnerability Assessment (Draft Vulnerability Assessment) that analyzed the City's vulnerabilities to increased levels of coastal flooding and erosion as a result of sea-level rise through the year 2100. The Draft Vulnerability Assessment was presented at several stakeholder meetings and workshops in 2018 and 2019, and to City Council on January 14, 2020.

Conclusions from the Draft Vulnerability Assessment were used to develop recommended actions to mitigate sea-level rise impacts, resulting in the Draft Sea-Level

Rise Adaptation Plan (Draft Adaptation Plan). Development of the Draft Adaptation Plan has involved input from the following:

- Public outreach through a project website (www.SantaBarbaraCA.gov/SLR), public workshops, and stakeholder meetings for various steps in the plan development;
- Technical report and document preparation by a team of consultants led by Environmental Science Associates (ESA);
- Input and review by a City staff Sea-Level Rise Interdepartmental Team;
- Guidance from a Sea-Level Rise Adaptation Plan Subcommittee comprised of members of City Council and the Harbor, Parks and Recreation, Planning, and Water Commissions; and
- Regular consultations with staff from the California Coastal Commission, Santa Barbara County, and other agencies.

DISCUSSION:

Draft Adaptation Plan Overview

On August 11, 2020, the City released a Draft Adaptation Plan that identifies actions the City can take to mitigate sea-level rise impacts. An Executive Summary is included as attachment to this report and the full plan with appendices is available at www.SantaBarbaraCA.gov/SLR.

The Draft Adaptation Plan recommends a phased approach to planning for sea-level rise based on monitoring of changing conditions and actions to reduce vulnerabilities once defined thresholds are reached. It provides detailed recommendations for necessary actions in the near-term (next ten years approximately) and a structure for future decision-making in the mid- and long-term (beyond ten years). A wide range of adaptation options is provided, allowing flexibility to consider different strategies over time.

The Adaptation Plan considers actions to address potential impacts to public and private assets (e.g., buildings, roads, utilities, parks) due to: coastal erosion of beaches and bluffs, inundation by regular high tides, and impacts from waves and flooding during a 100-year coastal storm. The study area for the Draft Adaptation Plan does not include the Santa Barbara Airport and Goleta Slough, as those areas have been studied separately as part of a master planning process for the Goleta Slough area.

The Draft Adaptation Plan includes assumptions and probabilities of sea-level rise projections for the Santa Barbara area and maps depicting the potential hazards expected to result from three sea-level rise stages:

- Near-term: 0–0.8 feet of sea-level rise (approximately 2020–2030);

- Mid-term: 0.8–2.5 feet of sea-level rise (approximately 2030–2060); and
- Long-term: 2.5–6.6 feet of sea-level rise (approximately 2060–2100)

The 2018 State of California Sea-Level Rise Guidance recommends using these conservative, risk-averse projections when planning for structures, infrastructure, and other development that is not easily moved. Due to the uncertainty about when particular amounts of sea-level rise will occur, the Draft Adaptation Plan provides a framework for planning based on amounts of sea-level rise, rather than the year when those amounts of sea-level rise might occur.

The Draft Adaptation Plan includes guiding principles developed in 2018 by the Sea-Level Rise Adaptation Plan Subcommittee to prioritize and select adaptation strategies (page ES-13 of Exhibit A). The highest priorities identified in the guiding principles are: protection of human life, health, and safety; and adaptation of critical facilities, public transportation systems, and public services needed for basic city functions. All of the near-term adaptation actions recommended in the Draft Adaptation Plan have been evaluated for consistency with the guiding principles.

Recommended Actions and Considerations

The Draft Adaptation Plan recommends developing a Five-Year Implementation Plan that identifies the potential costs, funding options, timelines, required resources, and staff responsible for each potential near-term action. It also recommends developing a Shoreline Monitoring Program in coordination with regional, state, and federal agencies. The Five-Year Implementation Plan would be updated based on the results of the Shoreline Monitoring Program and as adaptation projects are scoped and undertaken. Re-evaluation of the overall Adaptation Plan is recommended to occur at least every ten years.

The Draft Adaptation Plan recommends many potential near-term actions to undertake in the next ten years to begin to address the hazards associated with sea-level rise. (See the attachment for a more detailed discussion of each action.) Some of the near-term actions include:

- Raise or modify the Harbor breakwater, rock groin, sand spit, and sidewalk surrounding the Harbor. Renovate Harbor marinas and piers in phases to raise marina piles.
- Study and implement additional sand bypassing, beach nourishment, seasonal sand protective berms, and/or the formation of dunes at East Beach, Leadbetter Beach, and Arroyo Burro Beach.
- Relocate or flood-proof major wastewater, water, and utility lines and infrastructure south of Cabrillo Boulevard.
- Redesign and reconstruct the Laguna Creek tide gate and pump system.

- Initiate additional studies of adaptation options for the City's stormwater, wastewater, and water systems, including possible redesign of portions of the systems, service point improvements, and long-term options for El Estero Water Resource Center.
- Consider potential changes to the City's floodplain ordinance to require additional flood proofing of new development and substantial redevelopment in the areas south of Highway 101 that could experience increased tidal inundation and storm flood depths as a result of sea-level rise.

The Draft Adaptation Plan also recommends continuing several current near-term practices by the City, including:

- Existing requirements for bluff setbacks that account for increased bluff erosion rates from sea-level rise.
- Existing siting and design requirements that account for increased erosion and flooding from sea-level rise for projects located south of Cabrillo Boulevard, Cliff Drive, and Shoreline Drive.
- Existing limitations on use of rock revetments and seawalls along the City's shoreline unless used to protect major public roads, essential public services, public beach access stairways, and the Harbor.
- Existing dredging at the harbor and beach nourishment on Waterfront beaches.

In the mid- and long-term, there are several decisions that will need to be made and additional adaptation options to consider. Some key decisions that should occur at around 1.0 to 1.5 feet of sea-level rise to prepare for long-term impacts include:

- Whether to allow rock revetments and slope stabilization along the bluffs on a larger scale to protect Shoreline Drive or plan for rerouting this road and associated infrastructure.
- Whether to pursue large-scale flood protection measures for the low-lying areas of the City such as: shoreline protection devices or levees along the city's Waterfront; levees or floodwalls along lower portions of major creeks; groundwater dewatering wells; stormwater pumps; and relocation and flood-proofing of critical facilities.
- Whether to raise the grades around the Harbor to retain the Harbor Commercial Area or begin to relocate certain Harbor facilities.
- Whether to reconstruct, redesign, or remove Stearns Wharf.

Additional information and studies will be needed in order to make these decisions. The Draft Adaptation Plan recommends several studies to be conducted in the near- and mid-term to assist with decision-making.

NEXT STEPS:

Staff is conducting a public outreach and comment period on the Draft Adaptation Plan that commenced August 11, 2020 and will end September 30, 2020. During this comment period, staff is meeting with various City Commissions and stakeholder groups, a public question-and-answer webinar will be held, and comments on the document can be submitted to SLRPlan@SantaBarbaraCA.gov. Interactive hazard maps and information on the Draft Adaptation Plan, webinar, meetings, and how to sign up for project notifications can be found at www.SantaBarbaraCA.gov/SLR.

Following the public outreach period, ESA and City staff will make any necessary revisions to the plan based on public comment. The Sea-Level Rise Adaptation Plan Subcommittee will then provide comments and make a recommendation to Council on the revised plan. In late 2020, Council will hold a public hearing to consider adoption of a final Adaptation Plan.

The Draft Adaptation Plan is a first order plan meant to identify studies and potential actions the City may want to consider and the points at which decisions should be made. During implementation of the plan, specific near-term actions recommended in the plan would be further scoped and developed, project specific environmental review conducted, and the normal City approval process associated with each particular action undertaken.

The following table summarizes the schedule for public outreach and consideration of the Adaptation Plan:

Task	Timeframe
Council informational hearing on Draft Adaptation Plan	August 11, 2020
Public outreach and comment period on Draft Adaptation Plan	August 11–September 30, 2020
- Planning Commission	September 10, 2020
- Neighborhood Advisory Council	September 14, 2020
- Creeks Advisory Committee	September 16, 2020
- Water Commission	September 17, 2020
- Harbor Commission	September 17, 2020
- BEACON	September 18, 2020
- Parks and Recreation Commission	September 23, 2020
Public question-and-answer webinar	September 24, 2020
Revisions to Draft Adaptation Plan	October 2020
SLR Subcommittee review of Revised Draft Adaptation Plan and recommendation to Council	October/November 2020
Council consideration of Final Adaptation Plan	November/December 2020
Implementation of actions including LCP Amendment	2021 onward

**All dates subject to change. For an up-to-date schedule, see www.santabarbaraca.gov/slr.*

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ATTACHMENT: Executive Summary: Draft Sea-Level Rise Adaptation Plan

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