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TO: California Coastal Commissioners and Interested Public

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SUBJECT: Briefing and possible action on Nature-Based Adaptation Strategies Guidance.

SUMMARY OF STAFF RECOMMENDATION

Staff is recommending adoption of a new sea level rise planning guidance document titled "Nature-Based Adaptation Strategies." The draft Nature-Based Adaptation Strategies Guidance describes how to consider and plan for the implementation of nature-based adaptation strategies through a Coastal Act lens. As interpretive guidelines, and pursuant to Public Resources Code Section 30620(a)(3), the Guidance provides a set of principles that are intended to guide the Commission, local governments, and potential applicants with regard to permitting and planning actions related to nature-based adaptation strategies, but it is not a regulatory document. Rather, the document is intended to provide information and recommendations for how to ensure that projects are designed consistent with the Coastal Act, with an overall goal of encouraging the implementation of these strategies along the California coast.

A public draft of the Guidance document was released on September 29, 2025 for a 30-day public review period. 11 comment letters were received during the review period. Two additional comment letters were received just before the informational briefing on the draft Guidance during the Commission hearing on December 10, 2025. The comments from state agency partners and the public fall into the following categories: 1) harmonizing the guidance with ongoing state efforts, 2) refining the discussion on soft strategies and hybrid armoring, 3) beach nourishment as a nature-based adaptation strategy, 4) clarifying the role of nature-based adaptation strategies in phased adaptation planning, and 5) requiring the implementation of nature-based adaptation strategies. In response to the comments, staff made edits to clarify, correct, add context to, and emphasize certain portions of the document.

A public draft was also shared with California Native American Tribes for tribal consultation on November 25, 2025. One comment letter was received from the Costanoan Rumsen Carmel Tribe and staff held one consultation with the San Luis Rey Band of Mission Indians.

No additional modifications were made to the document in response to either the tribal consultation period or comments received at the December briefing. The proposed final draft of the Nature-Based Adaptation Strategies Guidance is the version that was presented in December. Responses to common questions, concerns, or other recommendations are provided in this staff report. This recommended final draft version of the Nature-Based Adaptation Strategies Guidance is attached as [Exhibit 1](#).

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[Exhibit 1: Final Draft Nature-Based Adaptation Strategies Guidance](#)

I. MOTION AND RESOLUTION

Motion:

I move that the Commission adopt the Nature-Based Adaptation Strategies Guidance pursuant to the staff recommendation.

Staff recommendation of approval:

Staff recommends a **YES** vote. Passage of this motion will result in the Commission's adoption of the Nature-Based Adaptation Strategies Guidance as interpretive guidelines. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution of approval:

The Commission hereby adopts the Nature-Based Adaptation Strategies Guidance as interpretive guidelines pursuant to Public Resources Code section 30620.

II. BACKGROUND

As the climate crisis and sea level rise threaten the future of California's coastal lands, uses, and resources, it is becoming more important to advance sea level rise adaptation planning under the Coastal Act that can protect, conserve, restore, and enhance the state's coastal resources. The Commission's [Sea Level Rise Policy Guidance](#) (2024) details a variety of adaptation options to consider when planning for sea level rise, including nature-based adaptation strategies. These strategies capitalize on the natural ability of coastal ecosystems to protect coastlines from hazards while also providing benefits such as habitat enhancement, recreation and scenic resource preservation, water quality improvements, and carbon sequestration and storage. Nature-based adaptation strategies are increasingly being recognized as resilient practices to address sea level rise impacts that can respond to, adjust to, and withstand changing conditions while minimizing disruptions to communities and natural resources.

The overall project that has resulted in this Guidance, developed using financial assistance provided by the Coastal Zone Management Act, started with the development of an internal Scoping Report that both evaluated and summarized different approaches to regulating and planning nature-based adaptation strategies for sea level rise, and assessed possible future guidance products and/or regulatory changes that could assist the Coastal Commission and its staff in prioritizing and permitting nature-based adaptation strategies. The Scoping Report was informed in part by several internal staff interviews and meetings. Through the Scoping Report, staff determined that interpretive guidance that provides general information on nature-based adaptation strategies and recommendations for how to design such projects in line with

Coastal Act requirements was the highest need that could help with prioritizing permitting of such projects.

The overall project also included development of other resources related to nature-based adaptation strategies including a story map, a memo on LCP policies, a compilation of nature-based projects permitted by the Commission, and a permit filing checklist for nature-based adaptation projects. Taken together, these resources, and the Guidance itself, are intended to provide information on nature-based adaptation strategies – what they are and why the Coastal Commission supports their use – and recommendations for how to design nature-based adaptation projects consistent with the Coastal Act. In turn, this information is meant to promote and expand the use of these strategies consistent with statewide goals.

III. SUMMARY OF NATURE-BASED ADAPTATION STRATEGIES GUIDANCE

The Nature-Based Adaptation Strategies Guidance ([Exhibit 1](#)) describes how to consider and plan for the implementation of nature-based adaptation strategies through a Coastal Act lens. The Guidance provides a set of principles that aims to guide the Commission, local governments, and potential applicants with regard to permitting and planning actions related to nature-based adaptation strategies. Taken together, these principles are intended to signal the Commission’s support for nature-based adaptation strategies as critical opportunities for increasing coastal communities’ resilience to coastal hazards and sea level rise. The Guiding Principles include:

- 1) The Coastal Commission recognizes that nature-based adaptation strategies can be more resilient to coastal hazards than traditional armoring.
- 2) The Coastal Commission is supportive of the implementation of nature-based adaptation strategies in line with state actions.
- 3) Nature-based adaptation strategies can support Coastal Act goals to protect coastal resources.
- 4) The Coastal Commission is committed to meaningful coordination and consultation with state agency partners, local governments, tribal communities, and members of the public to advance permitting of nature-based adaptation strategies.
- 5) The Coastal Commission encourages planning for and implementing nature-based adaptation strategies as part of a holistic, proactive adaptation approach.

Additionally, the Guidance discusses various federal and statewide efforts to advance implementation of nature-based adaptation strategies. This section highlights a selection of funding opportunities, permitting review processes, laws and policies, and implementation guidelines carried out by several federal and state agencies, as well as

how the Coastal Commission has aligned and will continue to align its work on nature-based adaptation strategies with state and federal efforts.

The Guidance also includes a robust discussion on how to consider nature-based adaptation strategies in a Coastal Act context. This includes an explanation of Coastal Act permitting pathways such as de minimis waivers, administrative Coastal Development Permits (CDPs), and regular CDPs, and how nature-based projects could be permitted through these pathways depending on specific project details such as project cost or potential for adverse impacts to coastal resources. This section also examines relevant Coastal Act policies that may be triggered when reviewing a permit application for nature-based adaptation strategies. Lastly, the Guidance includes additional key considerations and topics that should be addressed when designing and implementing such projects, such as public trust concerns, monitoring and maintenance requirements, community impacts, and phased adaptation planning efforts. The intent of this information is to aid in the development of well-designed nature-based adaptation projects that are consistent with the Coastal Act.

IV. RESPONSE TO COMMENTS

Commission staff coordinated with state agency partners including during a recurring Sea Level Rise Collaborative Working Group meeting on July 31, 2025 to review a draft of the Guidance. On September 29, 2025, a draft was released for a 30-day public review. During the public review period, staff received 11 comment letters. Staff received two more comment letters prior to the informational briefing on the draft Guidance during the December 2025 Coastal Commission hearing.

All comment letters are included as [Correspondence](#) for this item. Comments generally fell into the categories summarized below (note that this summary remains the same as the summary provided in the [staff report](#) for the December 10, 2025 Commission informational briefing). Changes that were made to the September draft of the Guidance related to these topics are discussed in the relevant sections, along with broader responses to the questions, concerns, or other recommendations raised in the comment letters. Although various edits were made to clarify, correct, add context, and emphasize certain portions of the document, the proposed final draft of the Nature-Based Adaptation Strategies Guidance does not fundamentally alter the content or recommendations of the prior draft that was released in September 2025.

In addition to the general public comment period, Commission staff shared the draft Guidance for tribal consultation on November 25, 2025. Staff received one comment letter from the Costanoan Rumsen Carmel Tribe (also included in the Correspondence) and one request for consultation from the San Luis Rey Band of Mission Indians. Staff held a virtual consultation with the San Luis Rey Band of Mission Indians on February 17, 2026. The comments from both tribes indicated appreciation and support for the draft Guidance, noting that nature-based adaptation strategies closely align with and mirror indigenous practices that have sustained coastal landscapes for millennia through balance, reciprocity, and respect for natural processes. Further, both tribes

encouraged the Commission to continue outreach with Tribes to ensure that nature-based adaptation strategies do not inadvertently result in impacts to Tribal cultural resources or restrict access to traditional use areas. Based on the comment letter from the Costanoan Rumsen Carmel Tribe and virtual consultation with the San Luis Rey Band of Mission Indians, no additional changes were made to the draft Guidance.

Overall, neither the tribal consultation, the testimony received at the December 2025 informational briefing, nor any general ongoing coordination on this topic have resulted in changes to the December draft version of the Guidance.

Harmonize Guidance with State Efforts

Commission staff received a number of comments requesting that the Guidance include more information to harmonize it with other state efforts. These comments requested that the Guidance include additional information on the state's 30x30 and Cutting Green Tape initiatives, discussion of how nature-based adaptation strategies can contribute to carbon sequestration efforts, and alignment of the Commission's definition of nature-based adaptation strategies with the definitions of other agencies. The Guidance was revised to include more information on the various executive orders and legislative bills that support the expanded use of nature-based adaptation strategies as a carbon storage and sequestration method. Revisions also added more references to statewide efforts and guidance materials, such as the San Francisco Bay Adaptation Atlas that can be used as a reference document to identify appropriate nature-based approaches depending on shoreline typologies. Lastly, staff reviewed suggestions to revise the definition of nature-based adaptation strategies to ensure it aligns with other definitions. Staff made minor tweaks to the definition but determined that overall, the language in the Guidance does not conflict with other definitions while also capturing the goals of the Coastal Act.

Refine Discussion on Soft Strategies and Hybrid Armoring

Several comments requested that the Guidance more clearly define the subcategories of nature-based adaptation strategies, including more clearly separating soft solutions from hybrid armoring, clarifying how permitting review of soft solutions may or may not differ from hybrid armoring under the Coastal Act, and including language that indicates that the Commission should be supportive of one subcategory over the other subcategory. Commission staff revised Figure 1 in the Guidance to emphasize the difference between soft solutions and hybrid armoring approaches as well as adding a caveat that the graphic represents a subset of common nature-based adaptation strategies. As for the comments requesting information on permitting differences between soft solutions and hybrid armoring as well as the Commission's support for each subcategory, staff revised the Guidance to emphasize that generally, hybrid armoring strategies may be more complex and involve greater impacts and tradeoffs between coastal resources as compared to soft solutions. However, there is no set criteria for determining the extent to which a project qualifies as a nature-based adaptation strategy. A project's classification as a nature-based adaptation strategy (including as a soft strategy or as hybrid armoring) does not change the standard of review, and the Commission should look beyond the label assigned by an applicant to

ensure that, to the extent feasible consistent with project objectives, nature-based adaptation projects genuinely integrate natural features, contribute to measurable habitat enhancement or restoration, and align with community priorities. Thus, the Commission is equally supportive of soft solutions and hybrid armoring so long as the project is designed to avoid, minimize, or mitigate adverse impacts to coastal resources and is the alternative with the fewest coastal resource impacts.

Beach Nourishment as a Nature-Based Adaptation Strategy

The Commission received comments relating to the topic of beach nourishment and requesting information on how beach nourishment fits under the umbrella of nature-based adaptation strategies. The comments ranged in their perspective, with some indicating that beach nourishment is not considered a nature-based strategy, others stating that beach nourishment is not a standalone nature-based strategy, and still others commenting that beach nourishment should always be considered a nature-based strategy. These differing comments speak to the variable and potentially complicated nature of nature-based adaptation strategies as a whole, and to the fact that different entities may have competing priorities and/or restraints to implementing such strategies. Commission staff included revisions that suggest that beach nourishment projects could be considered as a component in a sediment management program that addresses regional-scale sediment supply imbalances and promotes the potential beneficial reuse of clean sediment in certain nature-based adaptation projects.

Clarify Role of Nature-Based Adaptation Strategies in Phased Adaptation Planning

Various comments recommended that the Guidance clarify how nature-based adaptation strategies fit into a phased adaptation planning approach. Staff revised the Guidance by adding more information on the use of nature-based adaptation strategies as a potential short- to mid-term adaptation option. Staff also revised the Guidance to offer more considerations when discussing nature-based strategies in the context of phased adaptation planning including spatial constraints that limit certain strategies that require a larger area to be effective and the need to involve more asset managers and owners when certain strategies span multiple jurisdictions. With respect to the latter point, the Commission has been facilitating ongoing conversations among various stakeholders and local governments to improve communication and coordination.

Require the implementation of Nature-Based Adaptation Strategies

Commission staff received comments requesting that the Guidance be revised to require the implementation of nature-based adaptation strategies whenever feasible. Staff concur that local jurisdictions and project applicants should consider and should generally implement nature-based adaptation strategies over traditional hard armoring when feasible. The intent of the Guidance is to provide more information on the Commission permitting process, Coastal Act policies, and other key issues that should be considered in order to clarify and ease the permitting and development of such projects for both applicants and Commission staff. The Guidance also includes guiding principles emphasizing the Commission's commitment to supporting and prioritizing nature-based adaptation strategies. However, the Commission currently cannot

expressly require the implementation of such strategies, and the Commission does not have the authority to penalize project applicants who do not implement such strategies. Rather, proposed projects simply need to be consistent with relevant Coastal Act or LCP policies and should be the least environmentally damaging feasible alternative. The Commission has advised and will continue to advise local jurisdictions to explore the feasibility of implementing nature-based adaptation strategies. Further, several jurisdictions have already or are in the process of developing nature-based adaptation strategies for their coastlines, including the City of Manhattan Beach and the City of Santa Barbara.

V. NEXT STEPS

Staff is recommending **adoption** of the proposed Nature-Based Adaptation Strategies Guidance. The Draft is available for review as [Exhibit 1](#). Following the March hearing, if the Draft is adopted, Commission staff will release a final adopted draft of the Guidance. This version will reflect that it is the final adopted version.

Coastal Commission staff will also continue to work with state agencies, local governments, tribal communities, and project applicants to support the development and implementation of nature-based adaptation strategies in line with Commission and statewide goals.