**CALIFORNIA COASTAL COMMISSION**
455 MARKET STREET, SUITE 300
SAN FRANCISCO, CA 94105-2421
VOICE (415) 904-5200
WEB: WWW.COASTAL.CA.GOV

# W6d

**Final Draft Nature-Based Adaptation Strategies Guidance**

**March 10, 2026**

**CORRESPONDENCE**

Additional correspondence received in the time the staff report was distributed on February 24, 2026.

Outlook

## FW: Nature-Based Adaptation Strategies: Guidance on Nature-Based Adaptation Strategies Through a Coastal Act Lens. Public Comment

**From** ExecutiveStaff@Coastal <ExecutiveStaff@coastal.ca.gov>
**Date** Wed 3/4/2026 10:31 AM
**To** Vu, Karen@Coastal <karen.vu@coastal.ca.gov>; Ducklow, Kelsey@Coastal <Kelsey.Ducklow@coastal.ca.gov>; Prahler, Erin@Coastal <Erin.Prahler@coastal.ca.gov>

**From:** MELINDA MacNaughton <nutrimel@comcast.net>
**Sent:** Saturday, February 21, 2026 10:55 AM
**To:** ExecutiveStaff@Coastal <ExecutiveStaff@coastal.ca.gov>
**Cc:** Jane Praysilver <praysilver7@gmail.com>; sebastians.petersen@gmail.com; natbat@gmail.com; Jacqueline Nauman <jsnauman@me.com>; Mary-Anne Comcast <m.giglio@comcast.net>; Laurel Frishman <opielee1@icloud.com>
**Subject:** Nature-Based Adaptation Strategies: Guidance on Nature-Based Adaptation Strategies Through a Coastal Act Lens. Public Comment

You don't often get email from nutrimel@comcast.net. Learn why this is important

Dear Coastal Commission:

A true **Nature-Based Solution is NOT** cutting down 100-year-old trees (including Eucalyptus trees) and calling it restoration. Protected Tree Ordinances and Land Use rules need to be more strict. This should be a subject of restriction when using Nature Based Solutions.

Along the San Mateo Coast, our Protected Tree Ordinances are weak. In many cases, certain listed species can be removed without permits. That means a 100-year-old tree can be taken down without replacement requirements, without review, and without safeguards to protect nesting birds, bat maternity colonies, or overwintering monarchs.

There are currently **no clear rules requiring removal outside of bird nesting season or bat maternity season.** Many birds and bats are threatened worldwide. There is **no requirement to check for monarch overwintering site**s before cutting/removal. That is a serious gap. Monarchs are on the verge of extinction and that makes **every one of their overwintering sites are critical.**

Raptors and herons depend on 40- to 100-foot mature trees to nest, scope prey, and ride thermals. These birds control rats and gophers naturally. When we remove older trees, we eliminate habitat for the very species that help maintain ecological balance.

Western Monarchs are on the verge of collapse. The Xerces Society warns they are likely to shift further north along the coast as the climate warms. If we continue removing mature coastal trees without review, we risk eliminating future overwintering habitat before it is even documented.

Taking away habitat is the primary driver of species extinction. Incremental tree loss may seem small at the parcel level, but cumulatively it dismantles ecosystems.

There is a **dangerous narrative that because trees may not have existed in certain coastal areas 150–200 years ago, it is acceptable to remove them today.** That is not sound ecological reasoning. We have trees now. They provide critical habitat now. Wildlife depends on them now.

As the climate heats, we need more mature canopy — not fewer trees — to prevent drying landscapes, wind-barren zones, and collapsing habitat networks.

**The Coastal Commission should require stronger tree protections through Local Coastal Programs and Protected Tree Ordinances. Nature-Based Solutions must enhance ecological resilience — not weaken it.**

If we fail to strengthen oversight on when and how trees are removed, we will slowly erase the remaining wildlife systems along our coast.

Thank you for considering,,

Melinda MacNaughton

Outlook

## FW: Public Comment on March 2026 Agenda Item Wednesday 6d - Nature-Based Adaptation Strategies Guidance.

**From** ExecutiveStaff@Coastal <ExecutiveStaff@coastal.ca.gov>
**Date** Mon 3/9/2026 3:24 PM
**To** Vu, Karen@Coastal <karen.vu@coastal.ca.gov>

fyi

---

**From:** Julie Groves <juliegroves111@gmail.com>
**Sent:** Wednesday, March 4, 2026 9:32 PM
**To:** ExecutiveStaff@Coastal <ExecutiveStaff@coastal.ca.gov>
**Subject:** Public Comment on March 2026 Agenda Item Wednesday 6d - Nature-Based Adaptation Strategies Guidance.

You don't often get email from juliegroves111@gmail.com. Learn why this is important

Hello and thank you for your attention to the California coastal Trail

I am concerned about the continuity and sustainability of the California Coastal Trail due to climate change. I encouraged decisions about the nature based solutions being discussed give full consideration to the impact on the Coastal Trail

And I'm concerned that the mapping of the trail might not be up-to-date when erosion occurs, giving the trail a bad reputation

I was already concerned that the signage for this trail is so minimal.

Please do all you can to support and promote this amazing resource.

Julie Groves

Julie Groves, OTRL
408-499-1328 Cell
147 Vista Del Monte, Los Gatos, CA 95030-6335
JulieGroves111@gmail.com
Founder: Therapy In Your Home - OT, PT, ST
Skills for the Art of Living = Occupational Therapy

**CALIFORNIA COASTAL COMMISSION**
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# W6d

**Final Draft Nature-Based Adaptation Strategies Guidance**

**February 24, 2026**

**CORRESPONDENCE**

Outlook

## Re: Reminder-Opportunity to review Coastal Commission draft guidance document

**From** Costanoan Rumsen Carmel Tribe CRD <crct.crd@gmail.com>
**Date** Mon 1/5/2026 9:37 AM
**To** Vu, Karen@Coastal <karen.vu@coastal.ca.gov>
**Cc** TinkerGomez@yahoo.com <tinkergomez@yahoo.com>

You don't often get email from crct.crd@gmail.com. Learn why this is important

Dear Karen Vu, Commissioners and Coastal Commission Staff,

On behalf of the Costanoan Rumsen Carmel Tribe, thank you for the opportunity to review and provide comments on the Draft Nature-Based Adaptation Strategies Guidance and for your outreach to California Native American Tribes. We acknowledge and appreciate the Commission's recognition that advancing sea level rise adaptation planning is essential to protecting coastal communities, infrastructure, ecosystems, and human health, and we recognize the importance of this effort within the broader mandate of the Coastal Act.

The Tribe agrees that the impacts of sea level rise are far-reaching and interconnected, affecting not only transportation corridors, utilities, and critical facilities, but also coastal cultural landscapes, ancestral village sites, burial areas, traditional gathering places, and relationships between human, non-human, and more-than-human communities. From our perspective, sea level rise is not solely an environmental or engineering challenge, but a cultural and intergenerational one that implicates Tribal sovereignty, continuity of cultural practice, and stewardship responsibilities that extend across time.

We are encouraged by the Draft Guidance's emphasis on nature-based adaptation strategies and the recognition that healthy coastal ecosystems can respond to, adjust to, and withstand changing conditions while minimizing disruption. These concepts closely align with Tribal Nature-Based Solutions, which are grounded in Indigenous knowledge systems, long-term place-based observation, and relational stewardship. For Tribes, nature-based solutions are not new interventions, but continuations of practices that have sustained coastal landscapes for millennia through balance, reciprocity, and respect for natural processes.

In this context, we view nature-based adaptation strategies as consistent with the goals articulated in California's 30×30 initiative, particularly the commitment to conserve lands and waters in a manner that is inclusive, equitable, and informed by Indigenous knowledge. Meaningful Tribal engagement is essential to achieving durable conservation and resilience outcomes, as Tribes hold unique cultural, historical, and ecological knowledge of coastal systems that cannot be replicated through technical analysis alone.

We specifically acknowledge and appreciate Draft Principle #4, which commits the Commission to meaningful coordination with Tribal communities. For this commitment to be effective, coordination must occur early, often, and in ways that recognize Tribes as sovereign governments and long-standing stewards of coastal lands and waters. This includes consultation that goes beyond procedural

notice, incorporates Tribal priorities and concerns into project design and permitting decisions, and respects Tribal cultural landscapes as living systems rather than isolated resources.

As the Commission moves forward with this Guidance, we encourage continued dialogue 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. We also encourage the Commission to explicitly acknowledge Tribal-led and Tribal-informed nature-based solutions as a distinct and valuable category of adaptation practice within the Guidance.

The Costanoan Rumsen Carmel Tribe appreciates the opportunity to engage in this process and will consider participating through written comments, public hearing testimony, and/or direct coordination with Commission staff. We look forward to continued collaboration to advance coastal resilience strategies that honor Indigenous knowledge, protect cultural landscapes, and support healthy coastal ecosystems for present and future generations.

Respectfully,

Samuel Rodriguez

Cultural Resource Officer

Costanoan Rumsen Carmel Tribe

**Isa Elias**

December 5, 2025

California Coastal Commission
455 Market Street, Suite 300
San Francisco, CA 94105

**RE: Public Comment on Draft Nature-Based Adaptation Strategies Guidance**

Dear Executive Director Huckelbridge and Commissioners,

As a graduate student studying coastal policy, I appreciate the opportunity to comment on the Commission's draft Nature-Based Adaptation Strategies Guidance. This document represents an important step forward in proactively addressing sea level rise and coastal hazards while prioritizing ecological benefits and community resilience.

I would like to begin by commending several key elements in this document. It has a clear framework with guiding principles that clearly communicate the Commission's commitment to supporting nature-based solutions. It also has a sensible approach that is scaled and phased rather than parcel-by-parcel. Lastly, the detailed monitoring framework supports adaptive management and will advance our collective understanding of these strategies.

**Areas for Strengthening**

While I support the overall direction of this guidance, I offer the following recommendations to enhance its effectiveness:

**1. Clarify the Spectrum of Nature-Based Solutions**

*Concern:* The document appropriately categorizes nature-based strategies along a spectrum from soft to hybrid, but the criteria for classification could be more explicit. Without clear thresholds, there is risk that projects with minimal ecological benefit could be approved under this framework.

*Recommendation:* Develop quantifiable criteria or performance standards that projects must meet to qualify as nature-based adaptation strategies. This could include minimum percentages of natural materials, required ecological functions, or habitat value thresholds.

**2. Strengthen Connection to Managed Retreat**

*Concern:* The guidance mentions managed retreat only briefly, yet nature-based strategies will often serve as interim solutions in areas where long-term retreat is inevitable.

*Recommendation:* Expand the discussion of phased adaptation to explicitly address how nature-based strategies can buy time for communities to plan and implement managed retreat. Include guidance on establishing triggers that would initiate retreat planning when nature-based strategies no longer provide adequate protection.

**3. Address Sediment Management More Comprehensively**

*Concern:* Beach nourishment is categorized as a soft strategy, but its ecological benefits depend heavily on implementation details.

*Recommendation:* Require beach nourishment projects to incorporate additional nature-based elements such as dune restoration, sand retention features, or other habitat enhancements. This would ensure projects deliver both physical and ecological benefits.

**4. Expand Community Engagement Standards**

*Concern:* While the guidance calls for meaningful community engagement, it provides limited detail on what this entails or how to ensure equitable participation.

*Recommendation:* Incorporate specific community engagement standards, including:

- Early notification and accessible meeting times/locations
- Multilingual outreach materials
- Transparent reporting on how community feedback influenced decisions

**Conclusion**

This guidance document represents thoughtful work by Commission staff and demonstrates leadership in advancing nature-based approaches to coastal resilience. With these enhancements, the guidance can provide even greater certainty for applicants while ensuring projects deliver meaningful ecological benefits, maintain public access, and advance equitable adaptation planning. I look forward to seeing this guidance finalized and implemented.

Respectfully submitted,

Isa Elias

**CC:**
California Coastal Commissioners
Erin Prahler, Statewide Planning Manager
Kelsey Ducklow, Statewide Coastal Resilience Coordinator

| | |
|---|---|
| **From:** | ExecutiveStaff@Coastal |
| **To:** | Vu, Karen@Coastal; Ducklow, Kelsey@Coastal; Prahler, Erin@Coastal |
| **Subject:** | FW: Public Comment on December 2025 Agenda Item Wednesday 6e - Draft Nature-Based Adaptation Strategies Guidance. |
| **Date:** | Friday, December 5, 2025 9:10:17 AM |

**From:** nancy Okada <nxxokada@gmail.com>
**Sent:** Thursday, December 4, 2025 9:33 PM
**To:** ExecutiveStaff@Coastal <ExecutiveStaff@coastal.ca.gov>
**Subject:** Public Comment on December 2025 Agenda Item Wednesday 6e - Draft Nature-Based Adaptation Strategies Guidance.

Please send proof of receipt. Thank you.

To: California Coastal Commission

Re: W6e: Draft Nature-Based Adaptation Strategies and the Coastal Act

Dear Commissioners:

The Sierra Club appreciates the opportunity to address the Coastal Commission regarding its draft document “Nature-based Adaptation Strategies. Guidance on Nature-Based Adaptation Strategies Through a Coastal Act Lens”

The Sierra Club would like the Coastal Commission’s Guidance document to have a strong presentation regarding natural and nature based solutions (N/NBS) as Bay Conservation Development Commission (BCDC) has created in their Regional Shoreline Area Plan. (RSAP). These strengths include educating staff and developers about the benefits of N/NBS, requiring an explanation why N/NBS were not utilized and levying penalties for not considering N/NBS.

Educate: An educated BCDC staff included in the RSAP that local governments be required to implement strong policies considering N/NBS or face penalties. In this way developers will be educated through reading the Guidance.

Justify Why Not: By being required to justify why they are not using N/NBS, developers are more likely to consider N/NBS as a beneficial alternative.

Penalties: We suggest the Coastal Commission Guidance’s wording not only encourages N/NBS, but require its consideration with potential penalties for not doing so. Penalties will assure that N/NBS is not overlooked.

Education of governmental staff and developers is key to gaining the understanding of the value of N/NBS. For example, in Redwood City the application of N/NBS is proving to be a winning strategy, compared to the challenges facing Foster City’s hardened shoreline. In Foster City, despite having cement walls, problems continue

to plague their bayfront as sea level rises.
For reasons like these and the proven value of nature-based solutions, local governments educated on these principles will better understand the impact of sea level rise and its challenges.  Better-educated decision makers will be able consider all solutions, including N/NBS and to best compare and choose alternatives. The Coastal Commission retains control by being able to implement penalties as needed.
Thank you for your consideration of our comments and we hope that a strong Guidance is the result.

Sincerely,

Julie Kortum Groves,

Sierra Club CA,

Coastal Subcommittee member

Sent from my iPhone

Draft Nature-Based Adaptation Strategies (NBAS) Policy Guidance- Public Comment

To whom it may concern,

I want to submit my public comment on the California Coastal Commission's Nature-Based Adaptation Strategy guidelines. After reviewing the Draft document and using its recommendations to assess and review local projects, I firmly believe that the Draft needs to implement a system of balance and checks to ensure that Local Governments and Projects adhere to the guidelines with periodic & systematic reviews of their projects.

As stated in the Draft document, the California Coastal Commission, it "…ensures that coastal and marine environments are protected and enhanced for the benefit of all people rather than being appropriated for private or exclusive use." In certain projects, I have found that additional emphasis is placed on areas of greater wealth, to the exclusion or minimalization of other communities vulnerable at risk. There is a tendency at local levels to focus greater resources to these wealthy locations due greater financial ability to mobilize and draw more attention. Private beaches that restrict public access are given preferential treatment.

In addition, certain projects need to ensure that all research is conducted using evidenced based data and analytical approaches are implemented to ensure that less environmentally damaging alternatives are given preference. In some projects that I have seen, studies have ignored conducting extensive research into changes in wave dynamics, that were never been tested in a laboratory setting thus creating potential safety hazards to the public, adversely effecting marine habitat, and that conflicts with mooring and boating activities, or changes biological resources in an area that may impact nearby fishing activities, diver experiences, or bird-watching opportunities. One study did not incorporate how massive emergent breakwaters would impact Wheeler Reef. There were no diagrams, illustrations, or discussion about emergent breakwaters or its significance to the reef. Marine life was not addressed in the study and this was a blatant disregard to environmental impacts such as Whale migration and Marine life.

Often this is done due to costs of providing extensive research and unwillingness to devote the necessary time to do so, which runs contrary to the Guidelines set forth in this document. As such, the California Coastal Commission needs to ensure that cities perform their due diligence to protect our Coast.

Thank you for your time.

Sincerely,

Amanda Quintanilla

To: California Coastal Commission at
statewideplanning@coastal.ca.gov

Re: Nature-Based Adaptation Strategies: Guidance on Nature-Based Adaptation Strategies Through a Coastal Act Lens.

Dear Commissioners:

The Sierra Club appreciates the opportunity to comment on the public draft:
Nature-Based Adaptation Strategies: Guidance on Nature-Based Adaptation Strategies Through a Coastal Act Lens.

We appreciate the Commission's desire to accelerate the use of Nature-Based Adaptation Strategies (NBAS) wherever possible as a Sea Level Rise (SLR) adaptation tool. We concur with that desire and recognize that it is essential for communities to employ NBAS wherever possible in order for our coast's shallow water habitats to survive the threat of sea level rise as well as to protect those communities from the impacts of SLR.

We are, however, very disappointed to see that while spending a relatively short amount of text explaining that the Coastal Commission is hoping jurisdictions will implement NBAS, and that other agencies also hope that jurisdictions will consider NBAS, the Guidance document spends many more pages discussing the potential problems to be met in trying to implement NBAS projects on the coast. While we do not pretend that this is not a newish science that necessitates careful planning it is nonetheless true that NBAS projects have been implemented world-wide including on the East and Gulf coasts of the United States. We urge that there be a a revised draft that emphasizes the need for implementing NBAS wherever possible, both for our communities and for the health of our coastal ecosystem, and make NBAS sound more accessible and achievable.

This is particularly important because after attending webinars with persons who work in this field, such as agency staff (Public Works departments and flood control districts), consultants and city officials developing LCPs and CDPs, we believe that many have never heard of NBAS and have no idea what it means or why they should include it in their thinking when considering SLR.

While the Coastal Commission may have discussed these issues in other documents, it is likely that these practitioners will go directly to the Guidance and not read through other those documents first.

Recognizing this, we believe that the Guidance document should spend more time explaining why NBAS is so important a tool for shoreline resilience and adaptation. The Guidance should educate readers to the fact that over 70% of our commercial fisheries depend upon the shallow water habitats, such as tidal marshes, beaches, mudflats, oyster reefs, and submerged aquatic vegetation such as eelgrass and kelp beds, that are the primary tools for NBAS. They should also be informed that these habitats can sequester huge amounts of carbon thus helping in the fight against climate change, as well as providing recreational opportunities along with many other benefits to our communities and to maintaining a healthy, functioning aquatic environment. All of these factors attract tourists and support our aquatic food sources.

Instead, the Guidance simply provides six illustrations with minimal text describing soft and hybrid NBAS strategies.

Local office holders, agency staff and contractors must understand that NBAS play an important role not only in adapting to sea level rise by helping to provide community resilience but also play an important economic and recreational role for their communities. The current draft does not adequately perform this function.

Since, to our reading, the Guidance does not indicate a requirement that local governments consider NBAS for their shoreline, nor why they should provide any rationale for why they are not including NBAS in their Adaptation Plans, we think it likely that many jurisdictions will ignore NBAS and immediately go to well-known hard solutions to sea level rise.

We urge the Commission to spend as much time emphasizing the need to utilize NBAS whenever feasible (and explain why it is not feasible if they choose to ignore it) as the Guidance does in explaining how NBAS is new and unproven and may not be suitable for many situations.

Here are some examples of this lack of prioritization of NBAS in the Guidance:

> "3) Nature-based adaptation strategies **can** support Coastal Act goals to

> protect coastal resources. (pg. 5)", but evidently may not do so.
>
> "5) The Coastal Commission **encourages** planning for and implementing nature-based adaptation strategies as part of a holistic, proactive adaptation approach. (Pg.8)" Encouragement is nice but not a clear directive.

The closest the Guidance comes to **requiring** local jurisdictions to consider NBAS is found here:

> "B. Nature-Based Adaptation Strategies in Local Coastal Programs
> After the Commission certifies a local government's Local Coastal Program (LCP), most Coastal Development Permitting authority is delegated to the local government, with CDP applications then reviewed and acted on by the local government pursuant to the certified LCP… local jurisdictions are **encouraged** to prioritize and implement nature-based adaptation strategies whenever feasible (pg.15)

But even here jurisdictions are only encouraged to prioritize with no evident penalty for not considering NBAS nor required to indicate why they ignored NBAS or rejected it if they did, indeed, look into its feasibility.

To end on a more positive note, we appreciate the Commission's recognition of the need to bring local communities into the SLR adaptation process. This should be made as strong a statement as possible:

> Conduct early and meaningful engagement with surrounding communities and tribal organizations. When feasible, outreach efforts should address language, accessibility, and financial constraints, ensuring that community-driven planning informs project design and maximizes community engagement. (pg. 25)

And,

> project applicants should seek to avoid exacerbating burdens to affected communities and tribal people and resources. Collaborative planning with tribal groups and community-based organizations can further help refine project designs to maximize social and ecological benefits. (pg. 25)

To conclude, we greatly appreciate the Commissions' recognition that NBAS is a critical tool for shoreline adaptation. We are disappointed that the Guidance does not make it clear to local jurisdictions that they must prioritize NBAS wherever feasible. We hope a revised draft can take a more affirmative approach to NBAS.

Sincerely yours,

Charming Evelyn

William Martin
Co-Chairs Water Committee
Sierra Club California

**From:** Brad Nelson
**To:** Coastal Statewide Planning
**Subject:** Draft Nature Based Strategies Guidance
**Date:** Wednesday, October 22, 2025 8:11:34 PM

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[You don't often get email from bkburrito62@gmail.com. Learn why this is important at https://aka.ms/LearnAboutSenderIdentification ]

Read the entire draft. Looks good and well reasoned to me. Somebody put in a lot of work.
Brad Nelson (Davis, CA)
Sent from my iPad

**From:** Sam Casillas
**To:** Coastal Statewide Planning
**Subject:** Draft Nature-Based Adaptation Strategies Policy Guidance Public Comment
**Date:** Friday, October 24, 2025 2:48:28 PM

You don't often get email from sam@pacifica-land-trust.org. Learn why this is important

Thank you for the opportunity to comment on the *Draft Nature-Based Adaptation Strategies Policy Guidance.*

Here are my comments:

In section C. California Coastal Act Lens there should be stronger wording that "incorporating" hard armoring should not be allowed as part of NBAS when it causes ecological and habitat loss or to offset coastal habitat loss as a mitigation measure for new development and/or hard armoring

In section ii. Coastal and Marine Habitats it should be noted that gray-scale/hard armoring should not be allowed to have adverse impacts on marine resources. Limited adverse impacts need to be carefully defined so that enhanced "coastal access" is not used to justify hard armoring by stating that, for example, there will be bathrooms or sideways built for increased coastal access at the expense of the coastal resources

In section iii. Public Access and Recreation the use of gray-scale projects that will adversely affect beaches and/or augmenting the destruction with beach nourishment in perpetuity should not be considered an NBAS compliant. "Proposed long-term or permanent improvements to access and recreation can help offset or mitigate temporary adverse impacts"... should not be mitigated with the addition of hard construction projects like bathrooms and sidewalks which should not be considered as acceptable NBAS projects

In section iv. Sea Level Rise Adaptation Planning under *Temporal Considerations and Phased Adaptation* should recommend that SLR planning include planning for (State of California SLR Guidance 2024) Sea Level Scenario 2020-2150 target value of global mean sea level (GMSL) rise in 2100 of High (2.0m or 6.6ft by 2100) SLR since it is more than likely to rise to this level or above due to the continued record breaking CO2 emissions

Thank you,
Sam Casillas

**From:** Jayme Timberlake
**To:** Coastal Statewide Planning
**Subject:** Nature based solutions - draft guidance comments
**Date:** Friday, October 24, 2025 2:17:10 PM

You don't often get email from jtimberlake@oceansideca.org. Learn why this is important

Hi there,

Thank you so much for drafting guidance on nature based practices. This term has been so widely used/abused, and as a adaptation project planner and implementer, I really appreciate the effort to steer the rhetoric.

In reviewing the guidance, I have only a few comments:

- Sand nourishment/sediment bypass/opportunistic beach fill programs should always be considered as nature-based approaches. This is an important management technique to highlight because sustaining beaches can lead to major recreational and ecological benefits restored to a shoreline, sometimes for decades and sometimes for a few years. By and large sand is desirable and natural and should be encouraged to be used to the maximum extent practicable. The "maximum extent practicable" is something that can be worked out in the individual permits for the location-specific project, but on the whole, beneficial use of sand should be lauded as a plausible technique for adapting to the shoreline.
- Shifting "from reacting to coastal hazards events as they occur to proactively identifying and implementing adaptation strategies that reflect varied contexts across the coastline and are able to respond to changing conditions over time," is an extremely hard things for cities to do, due to 1) competition for funds and resources (i.e. staff) for more immediate priorities, 2) the public awareness (or lack in understanding) about the need for proactive adaptation, and 3) cities processes and governance structure, which is directed by public demand, not being set up to easily accomplish proactive tasks without establishing a campaign, initiative or major need for the work to happen.
- Establishing a major need for proactive coastal management and advocating for a proactive effort needs to be done by an internal dedicated staff person with a background in coastal processes and/or policy. Without that internal advocate, encouraging proactive, innovative approaches, both internally in the cities and externally with the public, a switch to proactive management will be near impossible. Along with encouraging nature based adaptation strategies, I implore the Coastal Commission to enable and encourage local cities and asset owners to establish these in-house staff roles.
- The City of Oceanside very much appreciates that we were able to get a waiver for our latest nature based adaptation effort (i.e. coastal dunes restoration project). We will continue to pursue this streamlined permitting approach, as applicable.

Thank you!

Jayme

**Jayme Timberlake**

Coastal Zone Administrator
City Manager's Office
City of Oceanside
300 N. Coast Highway
Oceanside, CA 92054

**Phone**: (760) 435-3073
**Mobile:** (760) 277-4356
**www.oceansideca.org**
Oceanside Coastal Management

| | |
|---|---|
| **From:** | Michael Jones |
| **To:** | Coastal Statewide Planning |
| **Subject:** | NATURE-BASED ADAPTATION STRATEGIES Guidance on Nature-Based Adaptation Strategies Through a Coastal Act Lens California Coastal Commission \| September 2025 DRAFT |
| **Date:** | Wednesday, October 22, 2025 5:36:37 PM |
| **Attachments:** | preview.png |

This document promotes the use of Nature-Based Adaptation Strategies to counter the impact of climate change related phenomena like sea level rise. After reviewing this document I would agree that Nature-Based Adaptation Strategies are preferable where they are applicable. However, there are shoreline areas where people's homes are on the boundary between land and sea, and hard armoring, like revetment walls, are necessary to protect those homes. Nature-Based Adaptation Strategies are not practical if a person's house is threatened. The Coastal Commission should not make maintaining existing revetment walls or other forms of hard armoring an onerous and bureaucratic nightmare, if the purpose is to protect private property and people's homes. One might conclude that the Coastal Commission does not support private property rights, and is using bureaucracy and regulations in a duplicitous effort to undermine Californians rights to protect their private property.

preview.png



CCCNBASGuidance_PubReviewDraft_Oct2025
PDF Document · 1.3 MB


**Michael G. Jones**

216 Ventana Way, Aptos, CA, 95003

831.332.9754 **mgjones@mac.com**

**From:** Mcfarlane, Lorna@DOT
**To:** Coastal Statewide Planning
**Subject:** NBS comment
**Date:** Thursday, October 9, 2025 2:26:29 PM
**Attachments:** image001.png

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You don't often get email from lorna.mcfarlane@dot.ca.gov. Learn why this is important

Hello,

I have a comment on the draft Nature-Based Adaptation Strategies Guidance

> The Coastal Commission's NBS guidance seems focused on NBS strategies that fall under the "protection" category of adaptation strategies. I'm curious how other strategies and infrastructure, such as viaducts or bridges that accommodate flood waters, will be categorized by the Coastal Commission and how this could impact pathways to permitting. Accommodation strategies can allow for natural processes to occur, but aren't necessarily comprised of "mostly natural elements", so don't seem to clearly fit into the NBS guidance coming from the CC. Will the guidance as written negatively impact how or whether viaducts/bridges are permitted in the Coastal Zone? Can any edits be incorporated to better reflect the agency's (seeming) desire for accommodate strategies that allow for natural processes to occur?"

Best,
Lorna

**Lorna J. McFarlane**
*Climate Change Adaptation Branch Supervisor*
*California Department of Transportation*
*District 1–Eureka*

(707) 499-6533
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NORTH COAST CLIMATE ACTION
Humboldt • Del Norte • Lake • Mendocino

October 23, 2025

**SENT VIA EMAIL**

California Coastal Commission
455 Market Street, Suite 300
San Francisco, CA 94105
Via email: statewideplanning@coastal.ca.gov

**SUBJECT: Port of San Diego Comments on the Draft Nature-Based Adaptation Strategies Guidance**

The Port of San Diego (Port) appreciates the opportunity to comment on the California Coastal Commission's (Commission) Draft Nature-Based Adaptation Strategies (NBAS) Guidance (Guidance). The Port has been a leader in NBAS innovation space, leveraging our unique shoreline conditions to develop strategies that enhance the ecosystem services of soft, hard, and hybrid shoreline types. The Port agrees that NBAS can simultaneously provide habitat enhancement, protect coastal resources, improve shoreline access, serve as carbon sinks, and enhance infrastructure resilience to coastal hazards.

The Port is a public corporation and regional government entity created in 1962 through the California State Legislature's adoption of the San Diego Unified Port District Act (Port Act). Through the Port Act, the Port was granted the state tidelands and submerged lands around San Diego Bay and is entrusted to manage the diverse waterfront uses on these lands in a manner that is consistent with the Public Trust Doctrine, promoting and balancing navigation, commerce, fisheries, and recreation, as well as aligning with its mission to enhance and protect the environment. As a part of its' environmental responsibilities, the Port oversees the protection, conservation, and enhancement of the San Diego Bay's natural resources, including management of endangered species and sensitive wetland habitats. The Bay supports over 300 species of marine and coastal birds, over 640 species of marine invertebrates, over 100 species of marine fishes, over 45 species of algae, over 2,500 acres of eelgrass beds, and more.

The Port is supportive of the development of guidance for NBAS to clarify permitting pathways and ensure projects are consistent with the Coastal Act. The Port appreciates the Guidance's clear articulation of potential funding mechanisms, relevant policy, and the permitting process for NBAS projects. The following comments address areas where the Port believes additional information or context could strengthen the Guidance to further support NBAS by identifying pathways that consider the overall environmental and ecological benefits of these solutions, and reduce the time and risks to implement them.

**Continue to prioritize NBAS**
Throughout the Guidance, and in other Commission guidance documents, NBAS are highlighted as a type of adaptation strategy that should be considered and prioritized. The Port is currently building a portfolio of NBAS throughout San Diego Bay and we appreciate the continued Statewide support for these types of solutions.

**Amend the NBAS definition to be more inclusive**
Some text in the Guidance appears to be less favorable towards hybrid solutions, despite being the only option for some shorelines. For example, on page 17, the Guidance states that "some

projects may be labeled as nature-based adaptation strategies while still incorporating elements of hard armoring, which can diminish their ecological value…" whereas the description on page 4 states that the Commission recognizes that NBAS can be categorized as "soft" or "hybrid" where the latter "combines fixing the shoreline, such as with a buried revetment or other shoreline protective device, with a nature-based feature to provide ecological and other benefits." The Port recommends that Guidance continue to advance information about NBAS more in line with the description on page 4, as it does not caveat the benefits that hybrid strategies can offer.

The Port further recommends amending the definition of NBAS in the Guidance as follows: "A coastal adaptation and/or erosion control method that ***weaves natural features or processes into the built environment*** which contributes to the persistence and enhancement of coastal processes and ecological benefits while also protecting inshore areas." This language is consistent with the FEMA definition (FEMA, 2020) of nature-based solutions and is inclusive of approaches that leverage natural processes on engineered materials, which allows for more innovative approaches to address shoreline protection.

The Port hopes that the Guidance will support and encourage hybrid solutions that improve or provide ecological benefits, particularly when compared to traditional hard armoring, rather than categorizing them as a less favorable option. The Port's ECOncrete pilot project (see more information on this pilot project below) poses numerous ecological benefits when compared to surrounding riprap, and projects like these should be prioritized in areas where other NBAS are not available or feasible.

**Support the Unique NBAS Opportunities of Ports, Harbors, and Working Waterfronts**

The Port appreciates that the Commission's Sea Level Rise Policy Guidance (2024) acknowledged that "given the coastal-dependent nature of many port structures, it may not be feasible to site or relocate development to avoid hazards." This advanced similar language from prior State guidance documents related to sea level rise and coastal adaptation. In line with this statement, the Guidance also acknowledges that there are a variety of adaptation strategies, and specifically a variety of NBAS, to consider when addressing future sea level rise impacts. The Port will continue to advocate for a flexible approach for adaptation planning to address sea level rise and enhance coastal resiliency, as a one-size-fits-all approach is not appropriate for California's diverse shorelines.

The Port recommends that the Guidance further expand on this point by including more narrative on the unique maritime, navigation, and commerce needs of ports and harbors (such as San Diego Bay) and how these considerations affect the planning and implementation of NBAS. For instance, within these types of waterfronts, projects may be able to transition from fully armored shorelines to hybrid solutions, but not to a full "soft" strategy; this context is not directly addressed in the Guidance. Furthermore, a greater recognition of spatial constraints in the Guidance would be helpful, particularly in areas where existing coastal infrastructure and navigation channels leave limited room for wetlands, dunes, or marsh creation. The Port recommends that the Guidance provide more case studies highlighting previous port-related NBAS to assist and guide applicants and regulators in supporting NBAS projects in port and harbor settings. At the Port, we have deployed two NBAS pilot projects that we recommend including in the Guidance as examples of NBAS that should be supported in an urban waterfront.

**SUBJECT: Port of San Diego Comments on the Draft Nature-Based Adaptation Strategies Guidance**

- ECOncrete: The Port has replaced traditional riprap with the ECOncrete COASTALOCK system, a bio-enhancing concrete that promotes biodiversity. Monitoring results documented rapid colonization by a diverse assemblage of species not found on adjacent riprap. This demonstrates a NBAS that simultaneously protects shoreline communities, maintains navigation channels, and creates habitat for coastal-dependent species.
- Native oyster living shoreline: The Chula Vista Wildlife Reserve has faced ongoing challenges related to shoreline erosion. To address this, the Port implemented a NBAS using custom-designed rugose reef balls and castles to establish an oyster reef along the northern shoreline of the Reserve. Monitoring results indicate that native Olympia oysters (*Ostrea lurida*) have successfully recruited to the structures at rates statistically higher than those observed in reference areas. The oyster reef is effectively mitigating shoreline erosion, dissipating wave energy, and enhancing biodiversity in the area.

**Include guidance about beneficial reuse of dredge material**

The Guidance does not address regional differences in sedimentation rates or sediment transport dynamics. The sedimentation of many southern California estuaries and embayments has been substantially altered by historic changes to watersheds for human uses. In San Diego Bay, sediment inputs are minimal following the diversion of the San Diego River and the damming of the Sweetwater and Otay rivers. This Guidance, which emphasizes soft shoreline approaches, may not be useful in San Diego Bay without also including strategies for innovative sediment management, including remediation, storage, and beneficial reuse. The Port views sediment as an asset that should be prioritized for beneficial reuse in habitat enhancement, restoration, or creation projects, rather than removed altogether from the Bay. The current description of dredge and fill activities in the Guidance lacks beneficial reuse terminology, principles, or pathways for implementation. Beneficial reuse of sediment is a priority for the U.S. Army Corps of Engineers and poses a great opportunity for NBAS. Clear guidance on beneficial reuse of dredge material could lead to more streamlined pathways for permitting the activity as an NBAS.

**Allow more flexibility on monitoring requirements**

Section IV.D.ii, *Monitoring and Adaptive Management*, in the Guidance is informative. However, if monitoring requirements for NBAS are substantially greater than those for traditional “hard” strategies (e.g., armoring), they could inadvertently discourage the use of NBAS. The guidance should clearly distinguish between required elements and recommended best practices. To avoid creating unnecessary barriers, the Guidance should promote flexibility in monitoring approaches; for example, allowing projects that assess ecosystem function rather than focusing on species-specific, quantitative targets. Furthermore, the success criteria should consider regional differences, as NBAS could be expected to perform differently throughout California due to differences in climate, ecology, and human uses.

**Provide pathways that incentivize NBAS**

The Guidance describes various existing pathways that NBAS may be permitted through a Coastal Act lens. The pathways included in the Guidance focus on de minimis waivers and coastal development permits (CDP). The Port recommends that exemptions and categorical exclusions also be included as additional viable permitting pathways for NBAS. The Guidance also identifies Administrative CDPs as a less intensive permitting mechanism for NBAS with costs under $100,000. However, in 2025, it is not feasible for most NBAS to be implemented within that

budget, especially when accounting for monitoring, reporting, and adaptive management requirements.

The Guidance highlights past NBAS pilot projects and positions them as proofs of concept for future expanded efforts; however it does not outline a clear pathway to streamline permitting for full-scale projects that may subsequently develop based on the success of a NBAS pilot project. To effectively incentivize NBAS, the Guidance should include mechanisms to (1) streamline permitting for projects developed from proven pilot efforts and (2) adjust monitoring requirements when previous pilot projects have already demonstrated success, and duplicative monitoring at broader scales would be cost-prohibitive.

The implementation of NBAS can be challenging and require multi-agency coordination. As more shorelines may be poised to incorporate NBAS or to scale NBAS from pilot projects to larger scale efforts, implementation may be further complicated by property ownership, tenant approval requirements, and conflicting regulatory landscapes. This can complicate planning, implementation, and monitoring of NBAS, and can make implementation NBAS untenable. The Port recommends that the Commission identify permitting and entitlement pathways in the Guidance that can ease some of these hurdles so that more NBAS can be implemented.

**Continued coordination**

The Port appreciates the opportunity to comment on the Guidance and we look to future collaboration with the Commission and others on the topic. The Port appreciates the Commission's commitment in the Guidance to meaningful coordination to advance permitting of nature-based adaptation strategies and the Port would like to continue to be a part of these discussions. The Port offers continued support of proactive planning for the future for California's coast, as well as other state and federal policies to protect and support ocean and coastal communities, coastal economies, and thriving ocean ecosystems. We welcome the opportunity to assist Commission staff on revisions to the Guidance, as well as other opportunities to discuss and collaborate on statewide and regional goals, plans, and strategies to conserve, protect, and manage the California coast and Port Tidelands. There is great potential for NBAS along the California coast, and the Port would like to continue to remain on the forefront of deploying these solutions in San Diego Bay.

Thank you for the opportunity to provide feedback. Please let us know if you would like to discuss any of our comments in more detail. If you have any questions, please contact Lesley Nishihira at 619.686.6469 or via email at lnishihi@portofsandiego.org or Heather Carroll at 619.686.8198 or via email at hcarroll@portofsandiego.org

Sincerely,



Lesley Nishihira
Vice President, Planning & Development

**From:** Susan Kirks
**To:** Coastal Statewide Planning
**Subject:** Comment - Draft NBAS
**Date:** Friday, October 24, 2025 4:16:02 PM

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You don't often get email from susankirks@sbcglobal.net. Learn why this is important

Dear Coastal Commissioners and Staff,

I reviewed the draft document. I appreciate the description of effects of global warming known to adversely impact "wildlife, habitats, infrastructure, and people's livelihoods in California..."

I hope the Commission will continue to accept and consider input from conservationists who can contribute ground truthing and relevant information about living species in coastal areas. The draft, to me, appears well constructed and comprehensive. The Key Takeaways sections are informative.

Even with this plan, unanticipated impacts from events such as wildfires, storms, drought and potentially development are likely to be issues faced by you - and by those of us who advocate for environmental protection and upholding the California Coastal Act.

Sincerely,
Susan Kirks, Natrualist
(American Badger specialist)
Sonoma County, CA

October 15, 2025

California Coastal Commission
455 Market St, Suite 300
San Francisco, CA 94105

**RE: Comments on Nature-Based Adaptation Strategies Guidance Document**

Dear Executive Director Huckelbridge

Surfrider Foundation appreciates the Commission's leadership in developing comprehensive guidance that prioritizes nature-based solutions for coastal resilience. Overall, we are supportive of the document's intent and many of its core provisions. However, we offer the following comments to strengthen the Nature-Based Adaptation Strategies Guidance and ensure it effectively advances coastal protection while preserving public access, ecological function, and community priorities.

**Overview**

We commend Commission staff for:

- Providing a clear definition of nature-based adaptation that emphasizes natural or mostly natural systems, process enhancement, and dual ecological and protective benefits
- Explicitly prioritizing soft strategies (dunes, wetlands, sand replenishment) before hybrid or armoring approaches, which aligns with efforts to avoid new hard armoring
- Recognizing community engagement and Tribal consultation as essential components of permitting and planning processes
- Integrating the guidance with state policy drivers, including the 30x30 initiative and OPC Sea Level Rise Guidance
- Promoting a scaled and phased adaptation approach with neighborhood-scale planning and near-term nature-based solutions
- Including monitoring and adaptive management requirements to ensure transparency and learning from pilot projects
- Acknowledging the public trust doctrine and its relationship to nature-based adaptation strategies

**Key Concerns and Recommendations**

**1. Hybrid Armoring and "Greenwashing" Risk**

**Concern:** While the document includes hybrid approaches under the nature-based umbrella, there is insufficient guidance to prevent projects that function primarily as gray infrastructure from being

approved as nature-based solutions. Even with natural elements added, such projects could result in loss of beach, public access, and sediment supply.

**Recommendation:** Establish explicit criteria for determining the extent to which a project qualifies as nature-based, and clearly distinguish between projects that are fully nature-based and those that incorporate hard protective elements. When hard elements are included, applicants should be required to provide justification as to why fully "soft" nature-based strategies or alternatives are infeasible. Stronger guardrails are needed to ensure greenwashed projects do not circumvent Coastal Act protections.

**2. Sand Replenishment as a Standalone Strategy**

**Concern:** While we understand the tendency to define sand replenishment under "soft" strategies, it does not provide the same ecosystem benefits as habitat restoration when implemented as a standalone measure. Additionally, there is a significant difference between various hybrid approaches (e.g., buried seawall versus buried cobble berm) that should be acknowledged.

**Recommendation:** Sand replenishment should not be considered a standalone nature-based strategy eligible for CDP waivers or permitting exemptions without associated restoration components. We recommend requiring robust restoration plans as part of sand replenishment projects, such as passive sand capture fencing, dune space reallocation, or other habitat enhancement measures where site conditions permit. For larger sand replenishment projects, the Commission should consider conditioning approval on the inclusion of nature-based elements to ensure ecological benefits, improve project durability through sand retention, and enhance protection of inshore areas.

**3. Managed Retreat Integration**

**Concern:** Managed retreat is referenced only once in the entire strategies document. While the document promotes "holistic, proactive" adaptation approaches, it does not adequately connect the dots between nature-based strategies and managed retreat or explain how nature-based adaptation fits within a phased approach that includes eventual retreat.

**Recommendation:** Include explicit discussion of how nature-based adaptation strategies work in conjunction with managed retreat planning, particularly in the context of phased adaptation approaches where nature-based solutions serve as short- to mid-term measures.

**4. Public Access Requirements**

**Concern:** The document frames improvements to public access as "encouraged" rather than required. Nature-based adaptation strategies have the potential to limit access and recreation, especially during construction—a concern that applies equally to sand replenishment and other protective strategies.

There is concern that access could be lost long-term in the name of "restoration" without adequate safeguards.

**Recommendation:** Project applicants should be required (not merely encouraged) to identify existing access points, recreational uses, and cultural uses to inform appropriate siting of projects. Access should be protected and maintained to the maximum extent feasible, with any temporary or permanent access restrictions clearly justified and minimized.

**5. Community Engagement Framework**

**Concern:** While the draft calls for community engagement, the guidance is vague and provides no framework for what meaningful engagement entails or how to ensure equitable participation.

**Recommendation:** Develop stronger, more structured community engagement guidelines that promote equitable participation. The monitoring section outlines a monitoring plan for each project; there could be a similar plan or schedule for community engagement. However, we recognize that the Commission has limited ability to mandate pre-application engagement since most proposals have already been locally approved before a CDP application is submitted. The Commission could consider conditioning after-the-fact, ongoing engagement where appropriate, though care should be taken not to unduly burden applicants, including community-based organizations and non-profits.

**6. Proportional Requirements and Application Process**

**Concern:** The checklist and Appendix A requirements may be overwhelming for community-based organizations or small non-profit projects with limited capacity.

**Recommendation:** Consider establishing proportional requirements based on project scale, scope, and potential impacts, without compromising environmental protections. This could facilitate smaller pilot projects while maintaining appropriate review for larger, more complex proposals.

**7. Monitoring and Adaptive Management Resources**

**Concern:** Monitoring expectations are resource-intensive. Feedback from practitioners indicates that while funding is often available for project implementation, long-term monitoring is chronically underfunded. Relying solely on applicant responsibility for monitoring may not be sustainable.

**Recommendation:** Advocate for dedicated state funding to support long-term monitoring of nature-based adaptation projects, separate from project construction budgets. This would ensure projects are appropriately assessed over time and lessons learned can inform future coastal management decisions.

**Conclusion**

We strongly support efforts to incentivize nature-based adaptation projects that genuinely integrate natural features, contribute to measurable habitat enhancement or restoration, and align with community priorities. With the refinements suggested above, this guidance document can provide a robust framework for advancing coastal resilience while upholding the Coastal Act's required legal protections for public access, coastal resources, and environmental justice.

Thank you for your consideration of these comments. We look forward to working with the Commission to advance effective, equitable, and ecologically beneficial nature-based adaptation strategies along California's coast.

Sincerely,

Jennifer Savage
California Policy Associate Director
Surfrider Foundation

Emma Haydocy
Senior Manager, Coasts & Climate Initiative
Surfrider Foundation

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*General Manager*

**October 24, 2025**

**To:**
California Coastal Commission
455 Market Street, Suite 300
San Francisco, CA 94105

**Subject:** Comments on the Public Review Draft of *"Nature-Based Adaptation Strategies – Guidance on Nature-Based Adaptation Strategies Through a Coastal Act Lens"* (October 2025)

Dear Commissioners and Staff,

The Alameda County Mosquito Abatement District (ACMAD) appreciates the California Coastal Commission's leadership in advancing *Nature-Based Adaptation Strategies*. The draft guidance represents a forward-looking, science-based approach to protecting both ecological and community resilience along our state's coastline. We commend the Commission for highlighting the integration of habitat restoration, adaptive management, and community impacts as essential elements of responsible coastal planning.

**About ACMAD**
Established in 1930, the Alameda County Mosquito Abatement District is an independent special district dedicated to protecting public health and welfare through the surveillance and control of mosquitoes and the diseases the vector. ACMAD serves more than 1.6 million residents across all 14 cities and unincorporated areas of Alameda County. Our programs include comprehensive mosquito monitoring, laboratory diagnostics for vector-borne pathogens such as West Nile virus, and field operations designed to manage larval mosquito populations in habitats such as wetlands, tidal marshes, and stormwater systems.

Because we work extensively within coastal and wetland environments, ACMAD has a long history of collaborating with land management agencies, regulatory bodies, and restoration practitioners to ensure that habitat and public-health objectives are met together. ACMAD respectfully requests that **Section IV.D, "Other Key Considerations and Issues," explicitly include "Mosquito and Vector Control"** as a new subsection. As demonstrated through the *Oro Loma Horizontal Levee Pilot Project* and other San Francisco Bay Area nature-based shoreline efforts, ongoing **mosquito and vector management is essential to maintaining public health** in these restored and constructed wetland environments.

**Rationale for Inclusion**
1. **Public Health Protection:**
The Operations and Maintenance of Horizontal Levees –Lessons from the Oro Loma Pilot Project (https://www.sfestuary.org/wp-content/uploads/2025/06/Horizontal-Levee-OM_Report_Final.pdf) (Section 4, *Maintaining Public Health*) show that even when systems are designed for subsurface flow, *periodic pooling, clogged conveyances, or tidal influence* can create mosquito breeding conditions. Integrating vector control considerations at the design and

permitting stage—such as avoiding standing water and providing access for inspection—prevents potential public-health issues before they arise.

2. **Alignment with Existing "Public Health" Framing:**
   Section D already recognizes the importance of community well-being through subsections on adaptive management and community impacts. Explicitly naming **Mosquito and Vector Control** aligns with the Commission's intent to safeguard human health while advancing ecological restoration.
3. **Agency Coordination and Long-Term Stewardship:**
   Mosquito and vector control districts are statutory public-health agencies under California Health and Safety Code § 2000 et seq. Including them among the agencies to be consulted (alongside the State Lands Commission, Coastal Conservancy, and others noted in the guidance) will strengthen adaptive-management outcomes and reduce risks during operation and maintenance of nature-based projects.

**Recommended Text Addition**

Under **Section IV.D – Other Key Considerations and Issues**, ACMAD recommends inserting the following new subsection after *"ii. Monitoring and Adaptive Management"*:

**iii. Mosquito and Vector Control**

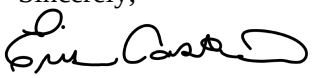
Nature-based adaptation strategies that incorporate wetland, marsh, or ponded-water elements should be planned, designed, and maintained in coordination with local Mosquito and Vector Control Districts to prevent conditions conducive to mosquito breeding. Early consultation ensures that design features—such as promoting subsurface flow, maintaining water circulation, and providing inspection access—protect both ecological integrity and public health. Incorporating vector management as a standard adaptive-management element supports long-term resilience and community safety.

**Closing**

The Alameda County Mosquito Abatement District appreciates the opportunity to review and comment on the draft of *"Nature-Based Adaptation Strategies – Guidance on Nature-Based Adaptation Strategies Through a Coastal Act Lens"* (October 2025). The clear and concise guidance that the Commission provides is critically important for the advancement of Nature-Based Adaptation Strategies and assisting project proponents to integrate practical, science-based mosquito management into future nature-based adaptation projects. Doing so will reinforce the Commission's commitment to protecting California's coastal ecosystems *and* the public health of the communities that depend on them.

Thank you for your attention to this important addition.

Sincerely,



**Erika Castillo**
Regulatory and Public Affairs Director
Alameda County Mosquito Abatement District