

Good Afternoon and Thank you members of the Council, and staff.

My name is Gary Fleener, and I work for Hog Island Oyster Co. We're perhaps best known for our farm-to-table restaurants, but the company has been farming shellfish on the Northern California coast for more than forty years. Our direct relationship with the ocean and the California seafood system is at the heart of our business — and it's why moments like this one matter so much to us.

I'm speaking today to offer genuine support for the Aquaculture Action Plan.

The document presented is really important, and I want to begin by acknowledging the people who built it. Katie Cieri and her team at OPC did the hard, unglamorous work of convening and listening to all of us stakeholders. Her team has managed to distill something coherent, science-grounded, and actionable. That kind of coordination is genuinely difficult, and it shows in the quality of what's in front of this Council today. Katie, thank you so much!

The Action Plan says clearly what we have all been working toward for many years: we can maintain our state's world-class environmental protections without leaving aquaculture practitioners trapped in a fragmented, slow, and cost-prohibitive permitting maze. The roadmap in this plan — coordinated agency review, consolidated permit pathways, and predictable timelines — is exactly the right approach.

I also want to briefly speak to what this plan represents scientifically, perhaps even morally.

Shellfish and seaweed have nourished coastal peoples for as long as humans have lived near the sea. They are among the most nutritious foods on earth — and among the most ecologically important organisms in the coastal zone. What makes marine aquaculture so compelling is that, done well, it can mimic and support the very same ecosystem processes that have made them so abundant historically. Bivalves require no feed inputs, no freshwater, no antibiotics. They filter the water column and provide measurable habitat benefits. This is not some new-fangled, extractive industry. It is a careful, science-informed collaboration with natural coastal ecosystems — one that co-produces food system and ecosystem values at the same time.

This isn't just an industry claim. It's the conclusion of the peer-reviewed science cited in this very document. And it's the conclusion reached by the largest conservation organizations in the world: the Environmental Defense Fund, The Nature Conservancy, and WWF. California should be in alignment with where global conservation science has already arrived.

There is a vital food system dimension here too. California is one of the country's largest seafood markets, yet the vast majority of what we eat is imported. That is not a neutral fact. It means we are exporting the environmental and social costs of our seafood appetite to places with weaker protections. A well-regulated, thriving marine aquaculture sector here is a food security issue, an equity issue, and a climate issue — and a way to deepen the state's commitments to coastal community resilience.

This plan begins to address all of that.

What our industry is asking today is that we don't let this incredible work gather dust. The OPC team has built the policy foundation, and our SeaGrant colleagues will build the science-based scaffolding. Hog Island Oyster Company and the rest of California's marine aquaculture community stand ready to support the Legislature, the Governor, the Natural Resources Agency, and all the departments represented here today to turn this blueprint into action. Let's make sure more of the seafood on tomorrow's plate is grown right here in California, with a "best in class" marine aquaculture program that co-produces the ecological and food system values we all want!

Thank you for the opportunity to comment.

Gary B. Fleener, Ph.D.
Senior Director of Science and Policy
HOG ISLAND OYSTER CO.
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THRIVING OCEANS
FOR A HEALTHIER WORLD

June 15, 2026

Mr. Eric Sklar President,
California Fish and Game Commission
COPCpublic@resources.ca.gov

Re: Statewide Marine Aquaculture Action Plan

President Sklar and Members of the Commission:

I am writing on behalf of the Hubbs-SeaWorld Research Institute regarding the proposed **Statewide Marine Aquaculture Action Plan** scheduled for your consideration.

At the outset, I would like to acknowledge the significant effort undertaken by the Ocean Protection Council and participating agencies to improve coordination, permitting transparency, environmental oversight, and long-term planning for marine aquaculture in California. Many of the proposed actions, including development of a consolidated permitting process, standardized monitoring frameworks, aquaculture science planning, and pilot-scale permitting, are constructive and deserve support.

However, I am deeply concerned that the Action Plan, while presented as a framework for marine aquaculture development, effectively eliminates consideration of marine finfish aquaculture in California state waters without the best available scientific research being fully evaluated and before meaningful demonstration projects have been allowed to occur.

The Plan defines marine aquaculture in state waters as the cultivation of shellfish and seaweed while limiting finfish culture to land-based systems. In practice, this establishes a policy outcome that excludes marine finfish farming from future consideration regardless of the present advances in technology, siting methodologies, environmental monitoring, or adaptive management could demonstrate acceptable environmental performance.

This approach is inconsistent with the stated principles of science-based decision making that underlie the Action Plan itself.

The environmental concerns commonly cited regarding marine finfish aquaculture, such as nutrient enrichment, disease transmission, effects of escapes of wild fish, habitat impacts, and interactions with wildlife are legitimate issues requiring careful evaluation. However, they are not unresolved questions. They have been the subject of extensive scientific investigation over several decades throughout North America, Europe, Australia, and New Zealand. Modern regulatory frameworks,

engineering standards, site-selection methodologies, vaccination programs, monitoring protocols, and adaptive management approaches have been developed specifically to address these concerns.

The scientific literature increasingly demonstrates that environmental performance depends less on the type of species being cultured and more on how, where, and under what conditions aquaculture is conducted. A categorical exclusion of marine finfish aquaculture therefore represents a policy judgment rather than a scientific conclusion.

California imports the overwhelming majority of the seafood consumed by its residents, including substantial quantities of farmed finfish produced under environmental and regulatory standards over which California has little influence. Refusing to investigate whether marine finfish aquaculture can be conducted sustainably in California waters does not eliminate demand for farmed seafood. It simply exports production, jobs, economic benefits, and environmental accountability to other jurisdictions.

The Commission should instead adopt a science-based pathway for evaluation.

Notably, the Action Plan itself recognizes the importance of adaptive management, pilot-scale aquaculture permits, scientific research, monitoring, and the development of an Aquaculture Science Plan. It specifically proposes evaluating a Pilot-Scale Aquaculture Permit Program to test new species, technologies, and farming practices while generating data to inform future decision making.

That concept should be expanded to include marine finfish aquaculture.

Rather than precluding marine finfish farming, California should establish a carefully controlled demonstration program modeled after approaches currently being discussed at the federal level through the **Marine Aquaculture Research for America** (MARA) Act framework. Such a program would authorize a limited number of commercial-scale demonstration projects operating under rigorous scientific oversight and transparent public reporting.

These projects should be designed specifically to answer the questions that remain most relevant to California policymakers, including:

- Water quality effects;
- Benthic impacts;
- Fish health and disease management;
- Escape prevention and genetic risk;
- Wildlife interactions;
- Greenhouse gas emissions;

- Seafood production efficiency;
- Socio-economic impacts on coastal communities;
- Effects on commercial and recreational fisheries; and
- Overall ecosystem performance.

Such projects should include independent scientific review, continuous environmental monitoring, adaptive management requirements, and predefined performance thresholds that would trigger corrective actions if necessary.

This is how science-based regulation is supposed to work.

If California genuinely wishes to be guided by the best available science, then it should create opportunities to generate that science under California conditions rather than prohibit investigation of the question altogether.

The Action Plan repeatedly emphasizes adaptive management, scientific evaluation, and evidence-based governance. Those principles are difficult to reconcile with a framework that effectively removes marine finfish aquaculture from consideration before demonstration projects have been allowed to establish whether environmental impacts can be avoided, minimized, or mitigated.

California has historically been a leader in environmental innovation. Leadership does not mean refusing to evaluate emerging technologies. Leadership means establishing rigorous standards, demanding transparent scientific evidence, and allowing facts, not assumptions, to guide public policy.

I therefore respectfully urge the Commission to recommend modifications to the Statewide Marine Aquaculture Action Plan that:

1. Removes language that effectively forecloses consideration of marine finfish aquaculture in state waters.
2. Direct development of a science-based marine finfish demonstration program under intensive environmental oversight.
3. Incorporate marine finfish aquaculture into the proposed Aquaculture Science Plan.
4. Work with industry experts to use Marine Spatial Planning tools to assess areas where different forms of marine aquaculture (i.e., seaweed, shellfish and finfish) are most appropriate.
5. Utilize pilot-scale and commercial-scale demonstration projects to generate California-specific environmental and socioeconomic data.
6. Require transparent public reporting and independent scientific review of demonstration projects.
7. Finalize the draft Programmatic EIR that was mandated by law over 16 years ago by developing a collaborative group of marine farming industry and



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research experts to work with a qualified environmental engineering consulting firm.

8. Allow future policy decisions regarding marine finfish aquaculture to be based on measurable outcomes rather than assumptions regarding potential impacts.

California should not decide the future of marine finfish aquaculture before the appropriate research has been conducted. Instead, California should become the place where that research is performed under the most rigorous environmental standards in the world.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink that reads "D. B. Kent".

Donald B. Kent
President/CEO
Hubbs-SeaWorld Research Institute

cc: Senator Mike McGuire, Chair, and Assemblymember Diane Papan, Vice Chair,
Joint Committee on Fisheries and Aquaculture.
California Aquaculture Development Committee

June 12, 2026

Ocean Protection Council
California Natural Resources Agency
1416 Ninth Street, Suite 1311
Sacramento, CA 95814
Submitted via: COPCpublic@resources.ca.gov



Re: Comments on Implementation of the California Statewide Marine Aquaculture Action Plan

Dear Members of the Ocean Protection Council:

The Pacific Coast Shellfish Growers Association (PCSGA) congratulates the Ocean Protection Council (OPC) and the Aquaculture Leadership Team on the finalization of the Statewide Marine Aquaculture Action Plan (Action Plan). We supported the plan's direction in our prior comments and write now to offer observations on implementation priorities that we believe will be critical to the plan's success in practice.

PCSGA represents shellfish producers in Washington, Oregon, California, Alaska, and Hawaii. Our members have navigated California's permitting environment firsthand, and we offer these comments in the spirit of constructive partnership with the agencies responsible for carrying this plan forward.

1. CDPH Capacity is a Prerequisite for Growth (Action 2.8)

The Action Plan rightly identifies the need to expand CDPH laboratory and staffing capacity for product and water quality testing. For shellfish producers, CDPH's ability to conduct timely growing area sanitary surveys and maintain growing area certifications is not a background function, it is the precondition for any commercial harvest. Agencies should prioritize an early assessment of CDPH's capacity relative to anticipated permitting demand and identify a dedicated funding pathway for expansion. PCSGA and our members work closely with the Interstate Shellfish Sanitation Conference (ISSC) and the National Shellfish Sanitation Program (NSSP) and are glad to offer technical assistance in benchmarking California's capacity against national program standards.

2. Move Quickly on the Pilot Permit Program (Action 3.3)

The pilot-scale aquaculture permit program is one of the most consequential near-term opportunities in the Action Plan. Other coastal states have demonstrated that simplified, limited scope permitting pathways lower barriers to entry, generate useful scientific data, and enable small-scale and tribal operators to participate. We encourage the agencies to move from evaluation to design and implementation as quickly as possible, and to ensure that filter-feeding shellfish, with their well-documented environmental benefits and limited impact profile, are explicitly included in the program's scope.

3. Connect Water Quality Protections to Growing Area Viability (Action 2.7)

Protecting water quality in shellfish growing areas is simultaneously an ecological and an economic imperative. Growing area closures due to fecal coliform contamination or biotoxin events eliminate commercial production directly and immediately. As the Water Boards and CDPH implement Action 2.7, we encourage them to track and report publicly on growing area classification trends, including closures and reclassifications, and to coordinate watershed-level interventions at specific at-risk growing areas. PCSGA can provide data on growing area status from our members' experience that may be useful to agencies in this work.

4. Include Industry in Siting Guidance Development (Actions 2.1 and 2.5)

The siting guidance and spatial analysis tools developed under Actions 2.1 and 2.5 will shape where shellfish aquaculture can occur in California for years to come. We ask that agencies build structured, formal opportunities for operator input into these processes, particularly before avoidance areas are designated. Growers have on-the-water knowledge of productive growing conditions, water quality patterns, and site-specific sensitivities that are genuinely complementary to agency expertise. We also encourage draft siting guidance to be circulated to the Aquaculture Development Committee before finalization.

5. Recognize California's Seed Production Role

California hatcheries and nurseries produce the juvenile shellfish that supply grow-out operations throughout the West Coast. This regional role is significant and should be reflected in implementation priorities particularly in the Aquaculture Science Plan (Action 3.2), where ocean acidification research and hatchery-specific water quality needs deserve attention. Of particular and immediate concern is the proposed offshore wind energy development in the Humboldt Bay area, which has the potential to directly impact hatchery operations and seed production capacity in one of the state's most productive coastal zones. Agencies implementing this Action Plan should treat the protection of existing shellfish seed production infrastructure as a priority consideration in siting and planning decisions and actively coordinate with energy development authorities to avoid or mitigate conflicts with aquaculture operations. Losing California's hatchery capacity, whether to regulatory pressure, economic uncertainty, or displacement by competing coastal uses, would have consequences well beyond California's own shellfish sector, undermining production capacity for growers throughout the Pacific Coast region.

6. Make the Accountability Framework Measurable

The commitment to report progress to the OPC Council every three years is a meaningful starting point for accountability. To make it effective, we encourage OPC to establish quantitative benchmarks alongside narrative updates such as permit processing timelines, acreage under active cultivation, growing area classification trends, action completion status and associated cost to aquaculture businesses. Metrics of this kind will allow producers, communities, and the public to assess real progress and will help agencies identify where implementation is falling behind before problems compound. Critically, these metrics should also capture the time and cost burden permitting places on producers - establishing a formal record of delays, redundant requirements, and lost production cycles that can be weighed against regulatory objectives. The Aquaculture Development Committee (ADC), with its existing agency and industry membership, is well positioned to develop and maintain these metrics. We recommend this function be formally assigned to the ADC as part of its charge. Without

benchmarks, the three-year reports risk becoming narrative accounts of activity rather than evidence of outcomes.

Conclusion

PCSGA is committed to being a productive partner in the implementation of this Action Plan. The framework OPC has built is worthy of California's ambitions for a sustainable blue food economy. The work ahead lies in making its commitments operational — with adequate resources, genuine interagency coordination, and the active involvement of the shellfish industry. We look forward to that collaboration.

Thank you for the opportunity to comment.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "M. A. Pilaro". The signature is fluid and cursive, with a large initial "M" and a long, sweeping underline.

Margaret A. Pilaro
Executive Director



STATE OF CALIFORNIA
DEPARTMENT OF FISH AND WILDLIFE

GAVIN NEWSOM, Governor
MEGHAN HERTEL, Director

P.O. Box 944209
Sacramento, CA 94244-2090
wildlife.ca.gov

June 12, 2026

Wade Crowfoot, Secretary for Natural Resources
Chair, California Ocean Protection Council
California Natural Resources Agency
715 P Street, 20th Floor
Sacramento, CA 95814

SUBJECT: Support for Actions to Advance Strategic Plan Goal 4: Enable a Sustainable Blue Economy that Protects Ocean Health

Dear Secretary Crowfoot,

The California Department of Fish and Wildlife (Department) has worked closely with the Ocean Protection Council (OPC) to identify shared priorities and supports the proposed actions under Items 7, 8, and 9. The suite of activities proposed for approval and funding represents a coordinated, strategic investment in California's ability to manage its marine resources effectively and adaptively in alignment with the goals of OPC's Strategic Plan.

The work supported through Item 8: Support for Fisheries Management will significantly advance climate-ready fisheries management in California. Key advancements include development of responsive decision support tools that are tuned to California's dynamic marine ecosystem. These proposed investments will improve collection of essential fishery information that will directly support sustainable harvest and bycatch management while preparing the state for broader implementation of electronic monitoring and reporting systems. The funding will advance several major fishery specific initiatives that continue to modernize California's fishery management toolbox and will help ensure California's fisheries are managed with the best available science and have improved opportunities for stakeholders and California Native American tribes to participate.

Additionally, the proposed investments will ensure continuity in endangered white abalone restoration efforts by maintaining field capacity during a gap in federal funding. This work is

essential to advancing outplanting, recruitment surveys, and multi-partner restoration actions that underpin recovery of this iconic species.

Item 9 and the Adoption of the Blueprint for Building a West Coast Science Collaborative Blueprint for Offshore Wind represents an important step toward establishing a coordinated, science-driven approach to understanding and minimizing impacts from offshore wind development on fish, wildlife, marine, and estuarine ecosystems. The Department remains committed to working closely with OPC, California Native American tribes, and our other partners as implementation of the West Coast Science Collaborative advances and informs planning and permitting for offshore wind projects.

Finally, the Department has worked closely with OPC staff and supports adoption of the Statewide Marine Aquaculture Action Plan (AAP) and implementation of the AAP through disbursement of funds to support the development of the Aquaculture Science Plan (Item 7). The AAP will establish a coordinated, comprehensive management and regulatory framework for local, state, and federal resource managers, California Native American tribes, industry participants, and stakeholders, that maximizes sustainability of marine aquaculture operations while maintaining a robust level of environmental protection using the best available science.

These various efforts represent a comprehensive and forward-looking approach to marine resource science and management—improving data quality, enhancing transparency, modernizing management tools, supporting coastal communities, and strengthening resilience across California's marine ecosystems.

OPC's support has been and will continue to be critical to ensuring a sustainable blue economy that protects ocean health. If you have any questions or need additional information, please contact me at (805) 568-1246 or r7regionalmgr@wildlife.ca.gov.

Sincerely,



Craig Shuman, D. Env.
Marine Regional Manager

cc: Kirsten Ramey-Burbank, Environmental Program Manager
California Department of Fish and Wildlife
Kirsten.Ramey@wildlife.ca.gov

Randy Lovell, Aquaculture Coordinator
California Department of Fish and Wildlife
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Helen Killeen, Senior Environmental Scientist (Specialist)
California Department of Fish and Wildlife
Helen.Killeen@wildlife.ca.gov

Comment in support of Aquaculture Action Plan

From Ann Bishop <abishop@culturedabalone.com>

Date Tue 6/9/2026 2:50 PM

To CNRA COPC Public <COPCPublic@resources.ca.gov>

To Whom it May Concern,

I'm submitting a comment of support on behalf of The Cultured Abalone Farm for the Aquaculture Action Plan.

"The Cultured Abalone Farm supports the implementation of the proposed California Aquaculture Action Plan. We are particularly interested in the plan's efforts to streamline permitting, provide opportunities to pilot new aquaculture programs, and adopt data driven adaptive management frameworks."

Best,
Ann

*Ann Bishop
Hatchery & Research
abishop@culturedabalone.com
The Cultured Abalone Farm*

it is sometimes convenient for me to send emails at odd hours. please do not feel compelled to respond outside of your normal working hours

CALIFORNIA COASTAL COMMISSION

ENERGY, OCEAN RESOURCES AND FEDERAL CONSISTENCY
455 MARKET STREET, SUITE 300
SAN FRANCISCO, CA 94105
VOICE (415) 904-5200
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June 5, 2026

Ocean Protection Council
715 P St., 20th Floor
Sacramento, CA 95814

Re: Aquaculture Action Plan

Dear Members of the Ocean Protection Council:

This letter conveys California Coastal Commission staff's support for the Statewide Marine Aquaculture Action Plan (Action Plan). The Action Plan presents a vision for marine aquaculture in California that aligns with ecological, economic, and cultural goals and offers a thoughtful, forward-looking framework for advancing sustainable aquaculture in the state's coastal and ocean waters. We appreciate the Ocean Protection Council's role in undertaking this significant effort to develop a framework that balances responsible industry growth with necessary environmental protections and meaningful engagement with tribes and coastal communities.

Over the past several years, Coastal Commission (Commission) staff have worked closely with Ocean Protection Council (OPC) staff and partner state agencies through the Aquaculture Leadership Team to help develop the Action Plan. This collaboration has been consistently constructive, transparent, and solution-oriented. The resulting Action Plan reflects the benefits of that interagency coordination, bringing together diverse expertise, regulatory perspectives, and shared commitments to ecosystem health and public trust stewardship. We support the overarching goals of the Action Plan, including its commitment to a science-based, iterative approach for reviewing standards and criteria, and the intent to develop a State Aquaculture Science Plan. Strengthening scientific capacity to address key knowledge gaps in environmental effects, siting, and best management practices will be important for informed decision-making and for guiding environmentally sustainable aquaculture development.

We would also like to express our appreciation for the work of your staff over the past several years on the development of the Action Plan, including that of Katie Cieri. Ms. Cieri's thoughtful facilitation and coordination have been instrumental in shaping the draft document. Commission staff look forward to continued collaboration with OPC and other partner agencies to ensure that aquaculture in California is sustainable, environmentally responsible, consistent with the Coastal Act, and aligned with the State's broader coastal resilience goals.

Commission staff support the Ocean Protection Council's adoption of the Action Plan and will continue working cooperatively with your staff to support its implementation. Thank you for the opportunity to provide our perspective and for your ongoing work on this effort.

Sincerely,

A handwritten signature in cursive script, appearing to read "Cassidy Teufel".

Cassidy Teufel
Deputy Director, Energy, Ocean Resources and Federal Consistency Division
California Coastal Commission