

CALIFORNIA COASTAL COMMISSION

ENERGY, OCEAN RESOURCES AND FEDERAL CONSISTENCY

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Staff:	HM-SF
Staff Report:	6/26/26
Previous Concurrence:	10/15/21
Hearing Date:	7/8/26

STAFF REPORT: REGULAR CALENDAR

Reconsideration of Consistency Certification No. CC-0003-21

Applicant:	Ocean Rainforest, Inc.
Location:	Federal waters offshore of Santa Barbara County
Project Description:	Staff report and recommendation on reopening previously-concurred-with consistency certification for a temporary, pilot-scale aquaculture facility for the cultivation of giant kelp (<i>Macrocystis pyrifera</i>) 4.4 miles offshore of Santa Barbara, Santa Barbara County.
Staff Recommendation:	Reopen consistency certification and request remedial actions.

SUMMARY OF STAFF RECOMMENDATION

Ocean Rainforest, Inc. (Ocean Rainforest) received a conditional concurrence for Consistency Certification No. CC-0003-21 from the California Coastal Commission (Commission) in 2021 to install and operate a temporary pilot-scale kelp aquaculture facility in federal waters offshore Santa Barbara. The purpose of the project was to evaluate the feasibility of cultivating kelp in open ocean waters and to inform the development of a future commercial-scale project, to be pursued at a different location under separate authorization. The project was fully constructed in 2023 and successfully operated for 31 months before decommissioning began in 2025, pursuant to Condition 11 of the Commission's conditional concurrence. Condition 11 requires full

removal of the aquaculture facility at the completion of the project term, including all associated lines, equipment, and anchors, in order to ensure that the project area can be returned to use for commercial and recreational fishing and marine debris and marine life entanglement risks are eliminated. During decommissioning, Ocean Rainforest removed all kelp grow lines, buoys, moorings, and grow line anchors, as well as the facility's four larger corner-marker buoys. However, two of the four block-anchor sets that were installed to keep the corner marker buoys in place were not recovered and remain on the seafloor. Ocean Rainforest has indicated that the anchors were embedded in the seafloor more than they expected, causing the lines that were being used to recover them to break during recovery. Ocean Rainforest made substantial efforts to find and recover the anchors but has not been successful (as further detailed in [Exhibit 2](#)).

Because the Commission's conditional concurrence requires complete removal of the aquaculture facility and all associated gear—including anchors, Ocean Rainforest's failure to remove two of its block-anchor sets represents a condition compliance violation. The continued presence of the anchors creates a long-term seafloor obstruction on soft-bottom commercial fishing trawl grounds and introduces ongoing risk of fishing gear snagging, gear damage, and displacement of commercial fishing activity. Snagged and abandoned fishing gear may also pose a risk to marine life. Because the Commission's 2021 concurrence relied on findings that all project effects to fishing would be temporary and fully mitigated through complete infrastructure removal, the continued presence of the block-anchors results in coastal effects substantially different from those originally considered by the Commission and would be inconsistent with Coastal Act Section 30234.5, which requires protection of commercial fishing.

Under the Coastal Zone Management Act's federal consistency regulations, 15 CFR § 930.65¹, a consistency certification concurrence may be "re-opened" for a project "previously determined to be consistent with the management program, but which the State agency later maintains is being conducted or is having an effect on any coastal use or resource substantially different than originally described and, as a result, is no longer consistent with the management program." Commission staff recommend that the Commission find that this "re-opener" provision applies to the current situation with Ocean Rainforest's consistency certification due to Ocean Rainforest's failure to fully comply with a condition of the Commission's concurrence and the resulting adverse impacts to coastal resources. To resolve such a situation, the Commission is able to identify remedial actions that should be taken.

In the present case, Commission staff has been in close coordination with Ocean Rainforest as well as participants and representatives of a range of commercial fisheries

¹ <https://www.ecfr.gov/current/title-15/section-930.65>

from the project area to identify appropriate remedial actions. These discussions have resulted in Ocean Rainforest's development of the remedial action proposal reflected in this report. Under this proposal, Ocean Rainforest would work with local fishermen, the Commercial Fishermen of Santa Barbara (CFSB) and the Pacific Coast Federation of Fishermen's Associations (PCFFA). Specifically, Ocean Rainforest would provide funds to PCFFA to support a fisherman-led effort to attempt to recover or, if recovery is not successful, relocate the block-anchors to an area avoided by the trawl fishery due to existing snag hazards. If recovery or relocation is unsuccessful, funds would be directed to the removal of other marine debris or man-made fishing obstructions within the Santa Barbara Channel. To help ensure these actions are taken, \$14,000 of the surety funds required under Condition 10 of the consistency certification would be retained until confirmation of successful removal of the block-anchors or an equivalent weight of other marine debris. The remainder of the surety funds, \$105,000, would be returned to Ocean Rainforest upon execution of a final agreement between Ocean Rainforest and PCFFA.

In addition to recommending the "re-opening" of Ocean Rainforest's consistency certification, Commission staff also recommends that the Commission approve these proposed remedial actions.

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EXHIBITS

[Exhibit 1 – Adopted Findings CC-0003-21](#)

[Exhibit 2 – Ocean Rainforest Recovery Efforts Report](#)

[Exhibit 3 – Proposed Funding Agreement](#)

I. MOTION AND RESOLUTION

Motion:

I move that the Commission find that the project carried out under CC-0003-21 is being conducted and is having effects on coastal uses and resources substantially different than the project originally described in CC-0003-21 and that, as a result, the project is inconsistent with the enforceable policies of the California Coastal Management Program. I further move that the Commission authorize staff to seek the remedial actions described herein to address the inconsistencies.

Staff recommends a **YES** vote on the motion. Passage of this motion will result in adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution:

The Commission hereby finds that the project carried out under CC-0003-21 is being conducted and is having effects on coastal uses and resources substantially different than the project originally described in CC-0003-21 and that, as a result, the project is inconsistent with the enforceable policies of the California Coastal Management Program. The Commission authorizes staff to seek the remedial actions described herein to address the inconsistencies.

II. STAFF SUMMARY

Project History

On October 15, 2021, the Commission conditionally concurred with consistency certification No. CC-0003-21 for Ocean Rainforest, Inc.'s (Ocean Rainforest) installation and operation of a temporary pilot-scale seaweed aquaculture facility in federal waters 4.4 nautical miles offshore of Santa Barbara, California ([Exhibit 1](#)). The purpose of the project was to evaluate the feasibility of cultivating kelp in the open ocean environment of the Santa Barbara Channel and to inform the development of a future commercial-scale project to be pursued at a different location under separate authorization². Ocean Rainforest installed the facility in the spring of 2023 and successfully operated it until the summer of 2025, at which time it began its planned decommissioning activities. The limited duration of operations and these decommissioning activities were proposed by Ocean Rainforest as part of its project and were memorialized through the Commission's conditional concurrence. Ocean Rainforest accepted and supported the terms of that concurrence. Specifically, the Commission established a project duration through Condition 1 that aligned with Ocean Rainforest's proposal and required, through

² Ocean Rainforest has submitted a consistency certification for this second project, a roughly 2,000 acre facility to be located in federal waters offshore of Ventura, California. This project is expected to be brought to the Commission for its consideration later in 2026.

Condition 11, that upon project completion, all facility equipment and material would be removed:

11. Facility Removal. NO LESS THAN 90 DAYS PRIOR TO THE EXPIRATION OF THIS CERTIFICATION, ORI shall submit a plan for (a) the timely removal of all seaweed, grow-out structures, anchoring devices, equipment, debris, and materials associated with the cultivation facility, and (b) the conduct of a thorough inspection of the facility site by a qualified independent third party to verify the completion of removal activities. Upon approval by the Executive Director of the plan, ORI shall implement the removal and inspection plan in accordance with the schedule specified therein and shall completely remove the seaweed cultivation facility, including all lines, ropes, buoys, anchors, and associated equipment, materials, debris and infrastructure.

Alternatively, ORI shall comply with the conditions above, including to submit the plan for removal of the facility, within 60 days of a written request by the Executive Director if the Executive Director determines that there is a significant lapse in planting, harvest, maintenance, monitoring or condition compliance activities that causes the facility to either no longer be maintained in its approved condition or become a danger to mariners or wildlife or cause a risk of spreading marine debris.

This condition aligned with Ocean Rainforest's consistency certification which committed to full removal of the facility upon project completion. The facility consisted of horizontal, gridded seaweed grow lines suspended 45 feet (15 meters) below the sea surface by surface buoys and secured to the seafloor with drag-embedment anchors (**Figure 1**). The cultivation area was 16 acres, and the overall project footprint was 86 acres, including mooring lines. The perimeter of the project area was marked with four U. S. Coast Guard-approved, Private Aids To Navigation (PATON) buoys, each secured to the seafloor by a set of block-anchors.

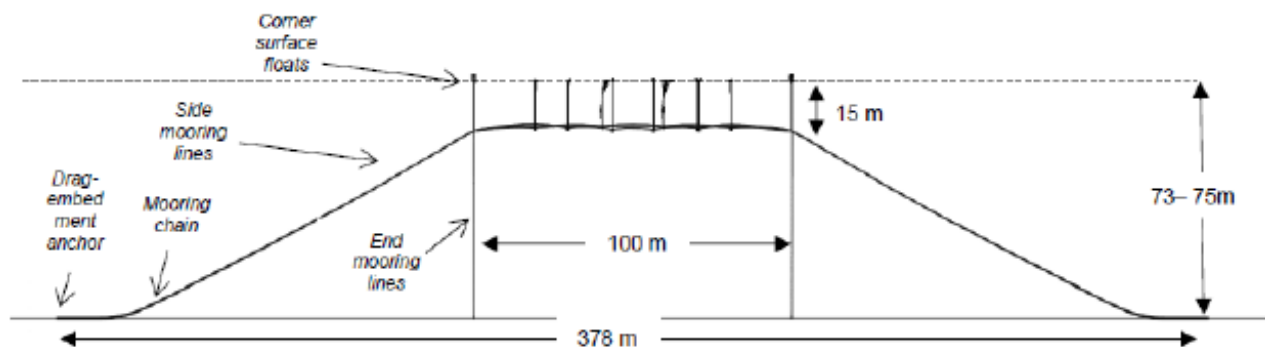


Figure 1 Cultivation system with dimensions, horizontal grow lines are moored to the sea floor with anchors and suspended with buoys. Dimensions are listed in meters.

Ocean Rainforest operated the facility for 31 months, testing multiple methods of seeding, cultivating and harvesting giant kelp in an open-ocean setting. During

decommissioning, the company removed all cultivation lines, backbone lines, buoys, plough anchors, and associated mooring components, as well as the four PATON buoys. However, Ocean Rainforest recovered only two of the four sets of PATON block-anchors. A third-party verification survey confirmed complete removal of cultivation gear and the presence of two unrecovered PATON anchor sets on the seafloor.

Each PATON block-anchor consisted of two concrete blocks (each block is approximately 2 x 2 x 1 ft and weighs 600 pounds) connected by chain (**Figure 2**). Ocean Rainforest has asserted that because two of the block-anchor sets were embedded more than they expected, the mooring lines linking the surface buoys to the block-anchors ruptured during retrieval, leaving the two anchor pairs and associated chains on the seafloor.



Figure 2 PATON marker buoy and the pair of concrete clump weights prior to deployment.

Recovery efforts

Ocean Rainforest attempted multiple methods to locate and retrieve these block-anchors. First, they dragged grappling hooks over the seafloor in a grid pattern near the last known location of each of the block anchors. The goal was to hook any exposed portions of the block-anchors, mooring line, or connection chain between the blocks. GPS track lines of the grappling drags can be seen in the report from Ocean Rainforest on attempted recovery efforts ([Exhibit 2](#)).

After the first grappling hook drags were unsuccessful, Ocean Rainforest then used an ROV, equipped first with a camera and then with acoustic sonar, to try to better pinpoint the location and orientation of the block-anchors. The block-anchors were not seen or detected with the ROV. Ocean Rainforest then conducted more grappling-drag through the area and deployed a higher resolution ROV with sonar. None of these efforts led to the successful recovery and removal of the anchors.

Following discussions with Commission staff after Ocean Rainforest notified them of the unrecovered block-anchors, Ocean Rainforest also worked with a researcher from

University of California, Santa Barbara to conduct a higher resolution benthic survey with side scan sonar to attempt to locate the block-anchors. The survey identified two anomalies, one in the northwest of the project area, at the anticipated location of one of the unrecovered anchors, and one 150 feet (50 meters) away from the assumed position of the southeast block-anchor. Because the survey suggested a different location of one of the block-anchors, Ocean Rainforest conducted another grappling-drag effort over the updated location but was again unable to recover the block-anchor.

Procedures

Section 930.65³ of the federal regulations under the Coastal Zone Management Act provides a process for addressing previously reviewed activities that were determined to be consistent with the management program, but that a State agency later finds are being conducted, or are having effects, in a manner substantially different from what was originally described and that, as a result, are no longer consistent with the management program (15 CFR § 930.65(b)(1)). In such cases, the State agency may request appropriate remedial action by notifying the relevant federal agency and applicant (15 CFR § 930.65(c)(3)).

In this case, staff recommends that the Commission find that the project is being conducted and having substantially different coastal effects than those considered under CC-0003-21 and that the substantially different effects make the project inconsistent with the enforceable policies of the CCMP. Staff also recommends that the Commission authorize staff to seek remedial actions to address the inconsistencies, as discussed below.

Project being conducted differently

After multiple unsuccessful attempts, Ocean Rainforest concluded that they could not recover the two sets of block-anchors and that they would be abandoned in place. The abandonment and continued presence of the block-anchors on the seafloor conflicts with the terms of the Commission's conditional concurrence as well as Ocean Rainforest's consistency certification (which committed to full removal of the facility upon project completion). As a result, the project is being conducted substantially differently than originally described in Ocean Rainforest's consistency certification (No. CC-0003-21), which specified full removal of all project materials during decommissioning.

Substantially different coastal effects

The Commission's 2021 conditional concurrence relied on findings that the project's adverse impact on commercial fishing, including displacement from fishing grounds and increased risk of gear loss or entanglement, would be temporary and fully mitigated through complete removal of all infrastructure at the project's conclusion. As described

³ <https://www.ecfr.gov/current/title-15/section-930.65>

in [Section III. A](#), the continued presence of the block-anchors creates substantially different coastal effects because they create a long-term seafloor obstruction that introduces ongoing risk of snagging for bottom-contact fishing gear. Fishing gear that becomes snagged and abandoned in such a manner would also pose a risk to marine life.

Remedial Actions

In close coordination with Commission staff and informed by input from commercial fishing practitioners and representatives from the project area, Ocean Rainforest has proposed remedial actions to address the adverse impacts to fishing operations from the continuing presence of the two block-anchors. To minimize those impacts, Ocean Rainforest has shared the final known and estimated coordinates of the remaining block-anchors with local trawlers and the Commercial Fishermen of Santa Barbara (CFSB). Additionally, Ocean Rainforest proposes to enter into a funding agreement with the Pacific Coast Federation of Fishermen's Associations (PCFFA) to administer funds to fishermen to remove or relocate the existing blocks, or secondarily, remove other known, marine debris. The proposed funding agreement is included as [Exhibit 3](#). These remedial actions are discussed in further detail below.

Fisherman interaction with block-anchor

On May 27, 2026, Ocean Rainforest met with Commission staff in ongoing discussions of potential remedial action options for the unrecovered block-anchors. At that meeting, Ocean Rainforest shared that a local trawler informed Ocean Rainforest during a recent meeting with CFSB that he had snagged and relocated one of the block-anchor sets while fishing.

Commission staff followed up directly with the fisherman to understand the circumstances. The fisherman explained that, while towing his bottom trawl gear through the area near the southeast block-anchor, he felt an unexpected increase in weight and began hauling the gear aboard. As the net approached the vessel, the crew observed that two concrete blocks, connected by chain, had wrapped around the leading bottom edge of the trawl gear.

The fisherman stated that, due to sea state and safety concerns, the crew was unable to bring the block-anchor aboard. Instead, they maneuvered the vessel to tow the snagged blocks toward an existing seafloor obstruction already avoided by trawlers, with the intent of consolidating hazards and avoiding the establishment of a new area of lost fishing grounds. The crew then loosened enough of the gear for the blocks to separate and fall to the seafloor at this new location. The fisherman recorded the GPS coordinates of where the blocks were released as N 34° 19.627', W 119° 43.264'.

Commission and Ocean Rainforest staff are in the process of seeking confirmation or documentation of this information, such as through vessel AIS or log-book information, a written report by the fisherman, or evidence that the block-anchor is at the new

location or no longer within its original location. If confirmed, remedial actions would prioritize the block-anchor set that remains at the project site.

III. FINDINGS AND DECLARATIONS

A. COMMERCIAL AND RECREATIONAL FISHING

Section 30234.5 of the Coastal Act states:

The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.

The two unrecovered block-anchor sets constitute seafloor obstructions that create a hazard for bottom-contact commercial fishing gear, in particular, bottom trawl gear such as that used in the halibut fishery. Bottom trawl gear is used by a limited number of fishermen operating in this region and consists of a net held open by two heavy doors, with a “tickler chain” and the footrope of the net continuously contacting the seafloor as the vessel tows the gear across the fishing grounds. This gear type is particularly vulnerable to snagging on hard obstructions such as the concrete block-anchors that Ocean Rainforest has been unable to successfully recover and remove.

The site of the temporary kelp aquaculture pilot facility was located on historically unobstructed soft bottom habitat that trawl fishermen used prior to installation of the facility. The continuing presence of block-anchors in this area increases the risk of snagging and damage to trawl gear, including potential loss of nets, doors, and associated hardware, and introduces safety concerns. Additionally, knowing the potential risk to their gear, trawl operators may choose to avoid the area. Trawl operators have indicated to Commission staff that they generally do not set gear within approximately 0.5 miles of a known obstruction to account for drift, currents, and gear sweep. As a result, the unrecovered anchors could displace fishing operations from an area that was previously fishable and reduce the availability of productive trawl grounds.

The abandoned block-anchors have direct economic implications, including the potential cost of gear repair or replacement, increased time spent avoiding the hazard, and loss of fishing opportunity if fishermen avoid the area altogether. The unrecovered anchors therefore have the potential to result in significant adverse effects on commercial fishing, a protected coastal use.

Although Ocean Rainforest has taken steps to minimize these effects by meeting with the Commercial Fishermen of Santa Barbara (CFSB) and individual operators to share information regarding the estimated anchor locations and committing to continued communication with CFSB to ensure that updated anchor positions are widely disseminated, adverse impacts to commercial fisheries would remain.

The abandonment and continued presence of the block-anchors on their seafloor location create substantially different effects on coastal uses and resources than in the

project originally described in CC-0003-21. Specifically, those actions create a new and significant risk of impacts to fishing operations in that area. As a result of those substantially different effects, the project is inconsistent with Section 30234.5 of the CCMP, which requires protection for commercial fishing activities.

Proposed remedial actions

Ocean Rainforest has proposed funding a fisherman-led gear recovery effort, facilitated by the Pacific Coast Federation of Fishermen's Associations (PCFFA), as remedial action for the adverse impacts to fishing operations from its abandonment of the two block-anchor sets. The proposal reflects the views, expertise, and on-the-ground understanding shared by local trawlers with Commission staff and Ocean Rainforest. Commission staff has been working closely with fishermen in the Santa Barbara area to understand how the abandoned blocks affect their activities and to identify feasible options for removing them or otherwise addressing their impacts. Fishermen expressed a clear preference for the blocks to be recovered so they can safely resume trawling in the region, and noted that fisherman-assisted retrieval or relocation could be a viable solution. The resulting remediation proposal is intended to address Ocean Rainforest's failure to comply with Condition 11 of the Commission's conditional concurrence and bring its project back into consistency with the California Coastal Management Program's commercial and recreational fishing protection policy.

Ocean Rainforest would provide \$10,000 to PCFFA under a funding agreement, which shall be substantially similar to the proposed funding agreement in [Exhibit 3](#). The amount of \$10,000 is based on (1) discussions with locals experienced in gear-recovery operations, cost information from past gear-recovery efforts in the region, and typical vessel day rates for the equipment and crew required, which together provided an estimate of the expected costs of recovering and removing the anchor-block sets and (2) \$3,000 of those funds set aside for other marine debris recovery efforts within the Santa Barbara Channel area facilitated by PCFFA.

PCFFA would facilitate the management of the funds in partnership with the Commercial Fishermen of Santa Barbara (CFSB). CFSB would work with local fishermen experienced and capable of conducting gear-recovery operations. As a first priority, funds would be spent to recover the block-anchors abandoned by Ocean Rainforest. Secondly, if anchor recovery is not feasible, attempts would be made support relocation of Ocean Rainforest's block-anchors to an existing seafloor obstruction already avoided by commercial fishermen, with the intent of consolidating hazards and avoiding the establishment of a new area of lost fishing grounds. Finally, if removal or relocation is unsuccessful, PCFFA would facilitate removal of other debris or obstructions that affect trawl fishing operations in the Santa Barbara Channel. The funds proposed by Ocean Rainforest were estimated to cover fishermen's time, fuel, equipment, disposal fees, and project administration, which includes broadcasting known and updated block-anchor locations (as information evolves) to PCFFA's network.

The remedial actions would be considered complete if the two block-anchor sets are (1) fully recovered and/or (2) relocated to be consolidated at the site of other known hazards that already limit commercial fishing activities. In the event that the recovery and relocation actions are not feasible or unsuccessful, remedial actions would be completed by recovering marine debris from the Santa Barbara Channel area, such as lobster and crab traps, equivalent in weight to the block-anchors that remain a hazard to trawling. For example, roughly eight, 150-pound crab traps could be retrieved to remediate for one block-anchor set which weighs 1200 pounds. A final report would be provided to Ocean Rainforest and the Executive Director that details the use of funds, items recovered, activities completed, and maps of recovery locations.

Both sets of block-anchors would be addressed through the remedial action. As described above, a local Santa Barbara fisherman reported that he believes he moved the southeast block-anchor to a new location. He indicated that the block-anchor is now situated near an area that trawlers already avoid due to a pre-existing snag hazard. If the fisherman is able to provide documentation of this to CFSB, the southeast block-anchor will be considered successfully remediated. However, if the required documentation (as specified under the proposed funding agreement) cannot be provided, the southeast block-anchor would still need to be retrieved, relocated, or addressed through the removal of an equivalent weight of marine debris.

Surety Funds

Condition 10 of the Commission's conditional concurrence requires Ocean Rainforest to provide a \$119,000 letter of credit, or similar surety mechanism, to guarantee full removal of the aquaculture facility and associated materials if the company failed to meet the decommissioning requirements in Condition 11. Under the proposed remedial actions, \$105,000 of the surety funds would be returned to Ocean Rainforest upon execution of the final funding agreement with PCFFA. This amount reflects the near-complete removal of the aquaculture facility that has already occurred successfully, including all lines, buoys, and the large majority of anchors.

\$14,000 of the surety bond would be retained. This amount represents the estimated cost of two days of vessel time for the Lost Fishing Gear Recovery Program, formerly operated through the University of California, Davis. The Commission has a long history of partnering with this program to mitigate hardbottom impacts associated with coastal development, including fiber-optic cable installation (e.g., CDP 9-24-0741). As noted above, Ocean Rainforest would provide \$10,000 to PCFFA to facilitate removal or relocation of the blocks-anchors or an equivalent amount of marine debris. If Ocean Rainforest cannot provide proof that those remediation efforts facilitated by PCFFA have been successfully completed by August 1, 2027, the final \$14,000 in surety funds would be released to an organization approved by the Executive Director to remove either the block-anchors or an equivalent amount of marine debris, such as crab traps or lobster pots, from the Santa Barbara Channel area. Any surety funds in excess of those needed for the remedial actions would be returned to Ocean Rainforest.

Conclusion

With implementation of the proposed remedial actions, including execution of the funding agreement with PCFFA, the potential long-term impacts to fishing operations resulting from the unrecovered anchor blocks would be remediated to address the present inconsistency with Section 30234.5 of the Coastal Act, which requires recognition and protection of commercial fishing activities.