

CALIFORNIA COASTAL COMMISSION

ENERGY, OCEAN RESOURCES AND FEDERAL CONSISTENCY
455 MARKET STREET, SUITE 300
SAN FRANCISCO, CA 94105
VOICE (415) 904-5200
WEB: WWW.COASTAL.CA.GOV



W10a

Filed: 7/16/26
180th Day: 1/12/26
270th Day: 4/12/26
Staff: JK,CB-SF
Staff Report: 8/28/26
Hearing Date: 9/9/26

STAFF REPORT: PERMIT AMENDMENT

Application No.: 9-17-0646-A5

Applicant: Pacific Shellfish – South Bend, LLC (formerly Coast Seafoods Company)

Location: Intertidal and subtidal lands of Arcata Bay, County of Humboldt

Project Description: 10-year authorization to continue existing off-bottom oyster aquaculture operations across approximately 279 acres of intertidal and subtidal mudflats of Humboldt Bay.

Staff Recommendation: Approval with conditions.

SUMMARY OF STAFF RECOMMENDATION

Pacific Shellfish – South Bend LLC (formerly Coast Seafoods Company and part of the Pacific Seafood Group, referred to herein as “Pacific”), requests an amendment to its Coastal Development Permit (CDP) No. 9-17-0646 to extend the expiration date to February 28, 2037, to allow continued oyster aquaculture operations in Humboldt Bay in alignment with the renewed use permit it received from the Humboldt Bay Harbor District. CDP 9-17-0646 was originally approved by the California Coastal Commission (Commission) on September 13, 2017, and authorized cultivation of Pacific oysters (*Magallana gigas*), Kumamoto oysters (*Magallana sikamea*), and Manila clams (*Venerupis philippinarum*) for commercial sale subject to certain special conditions requiring: 1) consolidation of the operational footprint of shellfish cultivation activities, 2) monitoring to evaluate the effect of aquaculture gear on sensitive coastal resources such as eelgrass and black brant, 3) minimization of marine debris, disturbance to

shorebirds and other wildlife habitat in the intertidal zone 5) protection of water quality and recreational access, and 6) protection of tribal cultural resources. For this permit amendment, Pacific requests to continue its existing aquaculture operations for another ten years, with no expansion of its existing intertidal aquaculture footprint, and would no longer cultivate Manila clams.

Since no operational changes are proposed, the key Coastal Act issues raised by this amendment relate to permit compliance as well as the potential for adverse impacts to marine resources from continued use of aquaculture gear in the intertidal areas of Humboldt Bay. The existing special conditions, along with those revised or newly added through this amendment, would address these concerns. **Special Condition 2** limits Pacific's cultivation footprint and requires the company to keep its broader 4,000-plus acres of owned or leased tidelands undeveloped. **Special Conditions 5, 14, and 16** collectively protect black brant by requiring vessel practices that avoid flushing birds, maintaining buffers around key grit sites, and requiring avoidance of actions that disturb marine mammals and water birds. **Special Condition 7** requires Pacific to postpone operations when herring spawn is detected on aquaculture gear. **Special Conditions 9 and 10** establish comprehensive marine debris reduction requirements by instituting a variety of best practices for marine debris prevention and prompt gear removal from beds taken out of production. **Special Conditions 11 and 12** protect water-oriented recreational uses by requiring clear marking of cultivation beds and restricting on-water operations during brant hunting days. Revised **Special Conditions 19, 20, and 21** protect cultural resources by requiring work to stop immediately if archaeological materials are discovered, prompt notification of Tribal and agency representatives, and development of appropriate treatment plans.

Commission staff conducted multiple site visits during review of this amendment and identified several instances of nonconformance with the CDP's special conditions intended to protect eelgrass habitat and reduce marine debris, including lack of gear marking, failure to implement required five-foot and ten-foot channels in one densely spaced shellfish bed (EB 1-1), and failure to convert two densely spaced shellfish cultivation beds (EB 6-1 and MR 11) to the wider configurations that Pacific previously committed to. Revised **Special Condition 10** requires that all bags, baskets, floats, and basket label tags currently deployed on culture beds are marked within 18 months of permit issuance. Newly added **Special Condition 23** memorializes Pacific's agreement to not carry out cultivation within the approximately 19 acres identified for cultivation bed relocation in CDP 9-17-0646 that have not yet been brought into use. This would offset the continued use of beds EB 6-1 and MR 11 in their existing configuration. Revised **Special Condition 15** requires completion of spacing channels in EB 1-1 with photo documentation at the time of its next harvest or by December 31, 2027.

With the existing and modified special conditions, Commission staff recommends the Commission find that the project would be carried out consistent with the marine resources, coastal access and recreation, and cultural resources policies of the Coastal Act. Staff therefore recommends the Commission **APPROVE** CDP amendment application 9-17-0646-A5, as conditioned. The motion is on Page 4. The standard of review for this project is Chapter 3 of the Coastal Act.

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EXHIBITS from CDP 9-17-0646

- [Exhibit 1 – Project Area showing Pacific Seafoods Leased and Owned Areas](#)
- [Exhibit 2 – Pacific Seafoods Existing Operation Area and Proposed Modifications](#)
- [Exhibit 3 – Longline, Basket on Longline, and Cultivation Raft Design and Configuration](#)
- [Exhibit 4 – Sample Photographs of Pacific Seafoods Oyster Cultivation Beds](#)
- [Exhibit 5 – Floating Upwelling System Raft Design](#)
- [Exhibit 6 – Resource Protection Measures Adopted by Humboldt Bay Harbor, Recreation and Conservation District](#)
- [Exhibit 7 – Herring Spawning Survey Results](#)
- [Exhibit 8 – Black Brant Grit Sites](#)
- [Exhibit 9 – Pacific Seafoods Memo Regarding Marine Debris](#)
- [Exhibit 10 – Example Cultivation Bed Mapping and Marking Plan](#)
- [Exhibit 11 – Other Proposed Aquaculture Projects](#)
- [Exhibit 12 – Estimated Project Implementation Schedule](#)
- [Exhibit 13 – March 31, 2017 Eelgrass Monitoring Plan](#)
- [Exhibit 14 – April 21, 2017 Brant Monitoring Plan](#)

NEW EXHIBITS

- [Exhibit 15 – Current Operational Footprint](#)
- [Exhibit 16 – List of Bed Names, Cultivation Method, and Existing Spacing](#)

APPENDICES

- [Appendix A – Standard and Special Conditions of CDP 9-17-0646](#)
- [Appendix B – Detailed Description of Pacific's Oyster Cultivation Methods and Operation for the Original Permit and Applicable to This Amendment](#)
- [Appendix C – Final Multi-year Black Brant Monitoring Report](#)
- [Appendix D – Final Multi-year Eelgrass Monitoring Report](#)

I. MOTION AND RESOLUTION

Motion:

I move that the Commission **approve** Coastal Development Permit Amendment No. 9-17-0646-A5 pursuant to the staff recommendation.

Staff Recommendation:

Staff recommends a **YES** vote on the forgoing motion. Passage of this motion will result in approval of the amendment as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution:

The Commission hereby approves the coastal development permit amendment on the grounds that the development, as amended and subject to the conditions, will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit amendment complies with the California Environmental Quality Act because either: 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the amended development on the environment, or 2) there are no feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the amended development on the environment.

II. SPECIAL CONDITIONS

NOTE: [Appendix A](#), included below, includes all standard and special conditions that apply to the permit, as approved by the Commission in its original actions and modified and/or supplemented by all subsequent amendments, including amendment Nos. 9-17-0646-A1, A2, A3, and A4. All of the Commission's adopted special conditions and any changes in the project description proposed by the applicant and approved by the Commission in this or previous actions continue to apply in their most recently approved form unless explicitly changed in this action. New conditions and modifications to existing conditions imposed in this action on amendment No. 9-17-0646-A5 are shown in the following section. Within [Appendix A](#), changes to the previously approved special conditions are also shown in strikeout/underline format. This will result in one set of adopted special conditions for the amended permit.

All standard and special conditions of Coastal Development Permit 9-17-0646, as amended, shall remain in full force and effect, and the following **Special Conditions 1, 2, 5, 7, 8, 9, 10, 11, 12, 15, 16, 18, 19, 20, 21, and 22** shall be modified (deletions are indicated in ~~strike through~~ and additions are underlined).

Special Condition 1 is modified as follows:

1. **Permit Term Limit.** This permit shall expire on ~~September 7, 2025~~ February 28, 2037. If the term of ~~Coast the Permittee's submerged lands lease~~ aquaculture use permit from the Humboldt Bay Harbor, Recreation, and Conservation District – currently also set to expire on ~~September 7, 2025~~ February 28, 2037 – is amended or a new ~~submerged lands lease~~ aquaculture use permit is issued by the Humboldt Bay Harbor, Recreation, and Conservation District, ~~Coast the Permittee~~ may submit an application for a permit amendment requesting an extension of the permit term.

Special Condition 2 is modified as follows:

2. **Operational Footprint.** ~~Prior to the installation of any of the test plots or relocation beds shown in~~ Exhibit 2, ~~Coast shall complete the removal of equipment from an equal or greater area of cultivation beds. By December 31, 2019,.~~ Except as modified by these Special Conditions (including Special Condition 23), the combined footprint of all of ~~Coast the Permittee's~~ intertidal cultivation beds in Arcata Bay shall be limited to the approximately 279 acres of individual cultivation beds shown in Exhibit 2 Exhibit 15. ~~Once attained, Coast the Permittee shall not exceed this acreage for the remaining term of this permit. Additionally, Coast the Permittee shall maintain in place its leases with the Harbor District, the City of Eureka, and the Karamu Corporation (approximately 3,800 acres). Coast The Permittee shall exercise its renewal options, and satisfy its payments and other obligations in each of the aforementioned leases to ensure that all three leases remain in effect until at least~~ September-February of 202537. ~~Aside from the operational footprint established pursuant to this permit, Coast the Permittee shall not conduct oyster harvesting activities on any of its leased or owned lands.~~

Special Condition 5 is modified as follows:

5. **Vessel Management Plan.** ~~PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, Coast The Permittee shall adhere to its submit, for Executive Director review and written approval, a Vessel Management Plan dated January 2018,~~ that includes: (1) a map showing the travel routes and landing or cultivation bed access sites that the Permittee's Coast's vessels shall use to access the cultivation areas; and (2) procedures to limit herding or flushing of black brant or shorebirds within Arcata Bay.

Special Condition 7 is modified as follows:

7. **Herring Spawn.** During herring spawning season, typically the months of December, January and February, ~~Coast the Permittee~~ shall visually inspect beds prior to planting and/or harvesting, to determine if Pacific herring (*Clupea pallasii*) has spawned on eelgrass, culture materials, or substrate. Visual inspections shall be conducted by trained staff in accordance with the survey protocols developed by the California Department of Fish and Wildlife (CDFW). In addition, ~~prior to at the beginning of the three month herring spawning period,~~

~~Coast the Permittee~~ shall provide staff of the CDFW Eureka Marine Region office a schedule of planting and/or harvesting activities anticipated to occur during the period. Further, ~~Coast the Permittee~~ shall inform CDFW Eureka office staff with the proposed location of planned planting and/or harvesting activities no less than 48 hours prior to the activities.

If herring spawning has been recently observed by ~~Coast the Permittee~~ or CDFW staff on or in the immediate vicinity of planned planting and/or harvesting activities, ~~Coast the Permittee~~ shall: 1) postpone planting, ~~and/or harvesting, or disturbance activities on any culture beds~~ in those areas ~~for two weeks, or until trained personnel or CDFW staff confirm that spawning activities have ceased, eggs have hatched, and spawn is no longer present on substrate (typically 14 - 21 days if successive spawn events occur)~~ herring eggs have hatched, and 2) notify the CDFW Eureka Marine Region¹ office of the spawn within 24 hours. ~~Coast The Permittee~~ shall keep records of when CDFW was notified of the spawning event, and those records shall be included with the annual report described in **Special Condition 8**.

Special Condition 8 is modified as follows:

- 8. Annual Report.** By December 31 of each year, ~~Coast the Permittee~~ shall submit to the Executive Director an annual report describing the status of each bed (including ~~bed identification numbers consistent with Exhibit 16,~~ harvest date, ~~and planting date, line spacing and method in use (i.e. cultch-on-longline or basket-on-longline), and total acreage in use~~) within the operation footprint. Annual reports shall be submitted via email to: EORFC@coastal.ca.gov and The annual report shall also include:
- a. ~~information regarding the results of quarterly cleanup events carried out as described in Special Condition 10; In addition, the annual report shall include~~
 - b. ~~a report on discussion of the status and effectiveness of the system used by Coast the Permittee to secure its cultivation baskets and prevent their loss into the marine environment. This report shall include information on~~
 - c. the number of baskets lost, replaced, and recovered throughout the course of the year as well as any design, management, or operational changes implemented to address issues that have arisen with the use of cultivation baskets;
 - d. A summary of wildlife interactions observed during the reporting period including instances of disturbance to marine wildlife such as shorebirds, brant, or sturgeon, and a brief description of any measures taken or planned to help minimize similar disturbances in the future;
 - e. A summary of any observed herring spawning activity, dates of notifications provided to CDFW, and whether planting or harvesting activities were adjusted in response to spawning.

¹ To determine the point of contact for the Northern Region CDFW Office, email askregion1@wildlife.ca.gov, call (530) 225-2300, or visit <https://wildlife.ca.gov/Regions/Marine/Contact/Ask-Marine>.

- f. Discussion of any cultural resource discovery protocols implemented pursuant to Special Condition 20 or 21.
- g. Anticipated operational and equipment changes or any other potential permit amendment needs.

Special Condition 9 is modified as follows:

- 9. Plot Abandonment or Fallow.** Within 30 days of harvest on any cultivation bed or plot that is being discontinued, abandoned, removed, fallowed, or taken out of production for six months or more, ~~Coast~~The Permittee shall notify the Executive Director and propose a schedule to remove all piles of oysters and oyster shells, and all culture apparatus from that plot, including but not limited to stakes, racks, baskets, floats, rope, ties, wires, tags and pallets as soon as feasible and in any event within no more than an additional 60 days. This deadline may be extended in writing by the Executive Director if ~~Coast~~The Permittee can establish, to the Executive Director's satisfaction, that ~~Coast~~The Permittee cannot meet this removal deadline due to tides or other weather conditions. In addition, ~~Coast~~The Permittee shall commission an independent third party, reviewed and approved by the Executive Director, to inspect the cultivation bed or plot and report directly to the Executive Director within 14 days on the status and completeness of the removal work.

Special Condition 10 is modified as follows:

- 10. Marine Debris Reduction and Management.** ~~Coast~~The Permittee shall carry out operations consistent with the following marine debris reduction and management practices.
 - a. Storm Damage and Debris.** As soon as safely possible following storm or severe wind or weather events, ~~Coast~~The Permittee shall patrol all active mariculture areas for escaped or damaged mariculture equipment. All equipment that cannot be repaired and placed back into service shall be properly recycled or disposed of at an appropriate onshore facility. In addition, ~~Coast~~The Permittee shall retrieve or repair any escaped or damaged mariculture equipment that it encounters while conducting routine daily and/or monthly maintenance activities associated with shellfish culture (e.g. bed inspections, shellfish grading and sorting). If the escaped gear cannot be repaired and replaced on the shellfish bed, it shall be properly recycled or disposed of on land.
 - b. Gear Marking.** ~~Coast~~The Permittee shall mark shellfish culture bags, baskets, floats, and basket label tags in an easily identifiable manner with its company name or other identification information. Markings shall be securely attached and robust enough to remain attached and legible after an extended period in the marine environment (e.g. heat transfer, hot stamp, etching, etc.). Existing culture bags, baskets, floats, and basket label tags currently in use in culture beds shall be marked or replaced with marked versions when replanted and all unmarked gear shall be replaced

in this way within 18 months. In the event that shellfish culture gear or equipment becomes dislodged from culture beds, it shall be ~~Coast the Permittee's~~ responsibility to retrieve the material from the shoreline, open water, eelgrass beds, mudflat, or submerged bottom with minimal damage to the resources affected. Such material shall be removed and properly disposed of, recycled, or returned to use.

DURING THE NEXT HARVEST OF CULTIVATION BEDS, AND NO LATER THAN 18 MONTHS AFTER ISSUANCE OF CDP Amendment 9-17-0646-A5, the Permittee shall provide photo confirmation to the Executive Director that all bags, baskets, floats, and basket label tags currently deployed on culture beds have been marked in accordance with the requirements of Special Condition 10b.

- c. **Marine Debris Reduction Training.** WITHIN 30 DAYS OF ISSUANCE OF THIS PERMIT, ~~Coast the Permittee~~ shall implement an employee training regarding marine debris issues, how to identify loose culture gear, proper gear repair methods and how to completely remove gear from out-of-production or fallow cultivation beds. Particular focus shall be placed on management and maintenance practices to reduce the loss of any gear type consistently found during bay cleanup and inspection activities. This training shall be repeated on an annual basis throughout the term of the permit. During trainings, ~~Coast the Permittee's~~ employees shall be encouraged to consider and implement field and management practices that reduce the amount of small plastic gear (such as zip-ties, tags and fasteners) and non-biodegradable material (such as PVC stakes and nylon or polypropylene rope) used in its operations.
- d. **Cleanup Events.** ~~Coast The Permittee~~ shall conduct quarterly baywide cleanups in coordination with other interested parties or organizations, which shall include walking different portions of the bay and shorelines to pick up escaped shellfish gear and other trash (regardless of whether it is generated by the Project). The volume and type of shellfish gear collected and the cleanup location (marked on a map) and duration of cleanup activity shall be recorded and documented in the annual report submitted to the Executive Director of the Commission. If consistent discoveries of certain gear types are made during cleanup events by ~~Coast the Permittee~~ or the public, ~~Coast the Permittee~~ shall evaluate (and if feasible, implement use of) alternative gear types or practices that would reduce these consistent sources of debris.
- e. **Ongoing Operations.** ~~Coast The Permittee~~ shall not leave or temporarily store tools, loose gear, or construction materials on its owned or leased tidelands or surrounding areas. All aquaculture gear installed in active culture beds shall be kept neat and secure and maintained in functional condition. ~~Coast The Permittee~~ shall carry out regular bed inspections and maintenance activities to help ensure that broken, collapsed, fallen, or buried gear is fixed or removed in a timely manner.

- f. **Bed Cleaning at Harvest.** At the time of harvest of each cultivation bed, ~~Coast the Permittee~~ shall carry out a thorough inspection to locate and remove loose or abandoned equipment, tools, and accumulations of oysters from the surrounding substrate.

Special Condition 11 is modified as follows:

11. Cultivation Area Mapping and Marking. ~~WITHIN 30 DAYS OF ISSUANCE OF THIS PERMIT, Coast the Permittee shall adhere to its submit for Executive Director review and written approval, an updated version of the Cultivation Bed Mapping and Marking Plan (Cultivation Area Plan), dated January 2018 submitted to Commission staff on April 5, 2017 (included as Exhibit 10). This Cultivation Area Plan shall be revised to that includes all growing areas and cultivation beds approved by the Commission and includes a consistent, standardized method of marking the location of Coast the Permittee's growing areas and culture beds in a manner that is obvious, identifiable, and understandable by boaters and recreational users not familiar with Coast the Permittee's operation. Unless a more effective approach can be developed by Pacific and approved in writing by the Executive Director, the Cultivation Area Plan shall include the removal of all existing marking stakes and the use of uniform marking stakes or posts that (1) remain visible and above water during maximum tidal heights; (2) are topped with reflective material; (3) identify the side of the stake on which the culture bed is located; and (4) are placed every 200-feet along the outer sides and at each corner of each of Coast's active culture beds. In addition, the Cultivation Area Plan shall include a method for Pacific to develop, consistently update, and distribute digital and hard copy maps of Arcata Bay showing the location of its rafts and culture beds. Upon approval of the Cultivation Area Plan by the Executive Director, Coast shall implement the Cultivation Area Plan and complete the removal, replacement, and installation of marking stakes or posts within 90 days from the date of the Cultivation Area Plan's approval by the Executive Director.~~

Special Condition 12 is modified as follows:

12. Brant Hunting. Except for emergency situations, activities to ensure the safety of its operations or operations required for regulatory compliance, such as marine debris cleanup response after storm events, ~~Coast the Permittee~~ shall avoid on-water operations within its leased and owned areas depicted on [Exhibit 1](#) from one hour before sunrise until sunset on days that are designated by CDFW as brant hunting days on Arcata Bay, including season opening and closing days (typically brant hunting within the bay is limited to Wednesdays, Saturdays, and Sundays between early November and mid-December).

Special Condition 15 is modified as follows:

15. Longline Spacing. During its next harvest, ~~Coast the Permittee~~ shall convert of all of its cultivation beds with 2.5-foot spacing throughout (including those culture

beds referred to in the December 23, 2016 "Annual Report for CDP E-06-003" submitted to the Executive Director as BI Wk, EB 2-3, MR 10, MR 2, MR 5-1 k, MR 5-2, MR 8-2, and MR 9, and EB 1-1, as described on page 3 of [Exhibit 15](#) of this report, and excluding beds that will be converted to greater spacing or removed) to a configuration that includes a five foot wide channel between each group of five lines and a ten foot wide channel between the end of one 100-foot line and the beginning of the next line, as represented in the diagram included in [Exhibit 3](#). At the time of its next harvest, or no later than December 31, 2027, the Permittee shall submit photo documentation to confirm that bed EB 1-1 has been converted to the configuration required under this condition.

Special Condition 16 is modified as follows:

16. Wildlife Disturbance. During vessel transit, harvest, maintenance, inspection, and plating operations, ~~Coast the~~ Permittee shall avoid approaching, chasing, flushing, or directly disturbing shorebirds, waterfowl, seabirds, or marine mammals.

Special Condition 18 is modified as follows:

18. Other Agency Review and Approval. ~~PRIOR TO COMMENCEMENT OF PROJECT CONSTRUCTION AND/OR INSTALLATION ACTIVITIES, Coast the~~ Permittee shall ~~adhere to its~~ submit to the Executive Director written evidence ~~that all necessary permits, permissions, approvals, and/or authorizations for the approved project that have been granted, including those from the North Pacific Regional Water Quality Control Board (RWQCB, Water Quality Certification WDID No. 1B01140WNHU, issued April 7, 2026) and U.S. Army Corps of Engineers (USACE, Permit No. 2002-269120). Any changes to the approved project required by these agencies shall be reported to the Executive Director. No changes to the approved project shall occur without an amendment to this permit unless the Executive Director determines that no amendment is legally necessary.~~

Special Condition 19 is modified as follows:

19. Cultural Resources Point of Contact. ~~Coast The~~ Permittee ~~has shall~~ designated its operational manager, ~~Greg Dale,~~ as single authorized point of contact (Cultural Resources POC) to be used on behalf of the Permittee in the event any cultural or archaeological resource, human remains, or Native American grave goods are discovered during its aquaculture operations. If this designated point of contact changes, ~~Coast the~~ Permittee shall provide the name and contact information for its new Cultural Resources POC to the Executive Director, staff of the Humboldt Bay Harbor, Recreation, and Harbor District (Harbor District), and the Tribal Historic Preservation Officers (THPOs) appointed by the Blue Lake Rancheria, Bear River Band of Rohnerville Rancheria and Wiyot Tribe.

Special Condition 20 is modified as follows:

20. Cultural Resource Discovery Protocols. In the event an archaeological resource is discovered during ground-disturbing activities, ~~Coast the Permittee~~ shall immediately notify the THPOs appointed by the Blue Lake Rancheria, Bear River Band of Rohnerville Rancheria and Wiyot Tribe. As soon as feasible after such a discovery, ~~Coast the Permittee~~ shall retain a qualified archaeologist with local experience to consult with Commission staff, the Harbor District, the three THPOs, ~~Coast the Permittee~~, and other applicable regulatory agencies to employ best practices for assessing the significance of the find, developing and implementing a mitigation plan if avoidance is not feasible, and reporting in accordance with this Special Condition and Harbor District Protocol. If no such discovery is made, no reporting is required. In addition:

- A. Ground-disturbing activities shall be immediately stopped if potentially significant historic or archaeological materials are discovered. Examples include, but are not limited to, concentrations of historic artifacts (e.g., bottles, ceramics) or prehistoric artifacts (chipped chert or obsidian, arrow points, groundstone mortars and pestles), culturally altered ash-stained midden soils associated with pre-contact Native American habitation sites, concentrations of fire-altered rock and/or burned or charred organic materials, and historic structure remains such as stone-lined building foundations, boats, wells or privy pits. Ground-disturbing aquaculture operations may continue in other areas outside the discovery locale.
- B. As soon as feasible after a discovery, ~~Coast the Permittee~~ shall establish (e.g., tape off or mark with stakes) an “exclusion zone” where unauthorized equipment and personnel are not permitted around the discovery area and a 100-foot buffer zone.
- C. ~~Coast The Permittee~~ shall secure (e.g., provide 24-hour surveillance) the discovery locale if directed to do so by the Harbor District or Executive Director, if either deems it necessary to avoid further disturbances.
- D. ~~Coast’s plant manager (located at 25 Waterfront Drive in Eureka)~~ or The party who made the discovery and initiated these protocols shall be responsible for immediately contacting by telephone the parties listed below to report the find:
 - i. The Permittee’s Cultural Resources POC
 - ii. Commission staff;
 - iii. The Harbor District’s authorized point of contact; and
 - iv. ~~Coast’s Cultural Resources POC~~
- E. Upon learning about a discovery, ~~Coast the Permittee’s~~ Cultural Resources POC shall be responsible for immediately contacting by telephone the POCs listed below to initiate the consultation process for its treatment and disposition:

- i. THPOs with Blue Lake Rancheria, Bear River Band and Wiyot Tribe; and
 - ii. Other applicable agencies involved in Project permitting (e.g., U.S. Army Corps of Engineers, etc.).
- F. In cases where a known or suspected Native American burial or human remains are uncovered, ~~Coast-the Permittee~~'s Cultural Resources POC shall also immediately notify the Humboldt County Coroner (707-445-7242), along with the property owner of the discovery site. In addition, the protocols established through **Special Condition 21** shall be followed.
- G. Ground-disturbing project operations at the find locality shall be suspended temporarily while the Executive Director, the Harbor District, the three THPOs, a consulting archaeologist and other applicable parties consult about appropriate treatment and disposition of the find. Based on this consultation, Pacific shall, within three working days of discovery notification, prepare a Treatment Plan and submit it for review and approval by the Executive Director, the Harbor District, and the three THPOs. Where the Project can be modified to avoid disturbing the discovery site (e.g., through project redesign), the Treatment Plan shall consider this as a preferred option. Should human remains be encountered, the provisions of State laws shall apply and **Special Condition 21** shall be followed. The Treatment Plan shall reference appropriate laws and include provisions for analyses, reporting, and final disposition of data recovery documentation and any collected artifacts or other archaeological constituents. If feasible, the field phase of the Treatment Plan shall be accomplished within five days after its approval (with the understanding that circumstances may require longer periods for data recovery).
- H. Any and all inadvertent discoveries shall be considered highly strictly confidential, with information about their location and nature being disclosed only to those with a need to know. The Commission's and Harbor District's authorized representatives shall be responsible for coordinating any requests by or contacts to the media about a discovery.
- I. ~~Coast-The Permittee~~ shall immediately communicate these protocols to its field work force (including contractors, employees, officers and agents), and such communications shall be made and documented at safety briefings.
- J. Ground-disturbing work at a discovery locale may not be resumed until authorized in writing by the Executive Director and Harbor District.
- K. The ~~plant manager or~~ party who made the discovery and initiated these protocols, shall make written notes available to the Executive Director and Harbor District describing: the circumstances, date, time, location and nature of the discovery; date and time each point of contact was informed about the discovery; and when and how security measures were implemented.

- L. Treatment Plans and corresponding Data Recovery Reports shall be authored by professionals who meet the Federal criteria for Principal Investigator Archaeologist and reference the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (48 Fed. Reg. 44734-44737).
- M. Final disposition of all collected archaeological materials shall be documented in a final Data Recovery report and its disposition determined in consultation with Tribal representatives.
- N. ~~Coast~~The Permittee shall file Final Data Recovery Reports, along with updated confidential, standard California site record forms (DPR 523 series), at the Northwest Information Center of the California Historical Resources Information System, with report copies provided to the three identified THPOs.

Special Condition 21 is modified as follows:

21. Discovery of Remains. In the event human remains or Native American grave goods are discovered during ground-disturbing activities, work at the discovery locale shall be halted immediately, Commission staff, the Harbor District, ~~and~~ County Coroner, ~~and~~ THPOs shall be contacted, and, consistent with State law, the following protocol shall be followed (in addition to the protocol described under **Special Condition 20**.

- A. If human remains are encountered, they shall be treated with dignity and respect. Discovery of Native American remains is a very sensitive issue and serious concern of affiliated Native Americans. Information about such a discovery shall be held in confidence by all Project personnel on a need-to-know basis. The rights of Native Americans to practice ceremonial observances on sites, in labs and around artifacts shall be upheld.
- B. Violators of Section 7050.5 of the California Health and Safety Code may be subject to prosecution to the full extent of applicable law (felony offense).
- C. In addition, the provisions of California law (Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the California Public Resources Code) shall be followed:
 - i. The Coroner has two working days to examine the remains after being notified of the discovery. If the remains are Native American, the Coroner has 24 hours to notify the NAHC in Sacramento at ~~(916) 653-4082~~ (916) 373-3710, nahc@nahc.ca.gov.
 - ii. The NAHC is responsible for identifying and immediately notifying the most likely descendant (MLD) of the deceased Native American.

- iii. Within 48 hours of their notification by the NAHC, the MLD shall be granted permission by the property owner of the discovery locale to inspect the discovery site if the MLD so chooses.
- iv. Within 48 hours of their notification by the NAHC, the MLD may recommend to the owner of the property (discovery site) the means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The recommendation may include the scientific removal and non-destructive or destructive analysis of human remains and items associated with Native American burials. Only those osteological analyses (if any) recommended by the MLD may be considered and carried out.

Whenever the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the property owner rejects the recommendation of the MLD and mediation between the parties by NAHC fails to provide measures acceptable to the property owner, ~~Coast the~~ Permittee shall cause the re-burial of the human remains and associated grave offerings with appropriate dignity on the property in a location not subject to further subsurface disturbance.

Special Condition 22 is modified as follows:

22. Indemnification by Permittee. By acceptance of this permit, ~~Coast the~~ Permittee agrees to reimburse the Coastal Commission in full for all Coastal Commission costs and attorney's fees -- including (1) those charged by the Office of the Attorney General, and (2) any court costs and attorney's fees that the Coastal Commission may be required by a court to pay -- that the Coastal Commission incurs in connection with the defense of any action brought by a party other than the applicant/permittee against the Coastal Commission, its officers, employees, agents, successors and assigns challenging the approval or issuance of this permit. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission. PRIOR TO ISSUANCE OF THIS PERMIT, ~~Coast the~~ Permittee shall enter into a separate written agreement with the Executive Director agreeing to reimburse the Coastal Commission for all court costs and attorney's fees, consistent with the requirements of this condition.

NEW SPECIAL CONDITIONS

23. Relocation Areas. The Permittee shall not carry out installation or use of cultivation equipment within those areas originally proposed for relocation in CDP 9-17-0646, as depicted in [Exhibit 2](#), that have not yet been brought into aquaculture use. Within these approximately 19 acres (identified in [Exhibit 2](#) as BI-D, MR-E and MR-B.), the Permittee shall not install, reinstall, or maintain any cultivation equipment, including but not limited to longlines, baskets, racks, stakes, floats, ropes, ties, wires, tags, or pallets. These areas shall remain free of aquaculture structures for the duration of this permit term unless otherwise

authorized by the Commission through a subsequent Coastal Development Permit or permit amendment. The Permittee shall include a brief confirmation in each annual report describing whether these areas remained free of cultivation equipment during the reporting period.

24. Spill Prevention and Response Plan. All aquaculture operations shall be carried out consistent with the provisions and requirements included in the final "Spill Prevention and Response Plan (SPRP) – Pacific Seafood- Humboldt- LLC" dated December 23, 2025. The Permittee shall undertake development in conformance with the approved final plan unless the Commission amends this permit or the Executive Director issues a written determination that no amendment is legally required for any proposed modifications.

25. Letter of Credit. PRIOR TO ISSUANCE OF THIS AMENDED PERMIT, the Permittee shall provide evidence that a letter of credit or other surety device acceptable to the Executive Director has been established in the amount of \$64,000 naming the Coastal Commission as the beneficiary/assured. This financial assurance is to ensure full compliance with Special Condition 9, including funding any facility removal activities not completed by the Permittee. The letter of credit or other surety device shall be maintained in full force and effect until the Permittee has successfully removed the entire facility - including all cultivation equipment on the substrate (such as but not limited to stakes, racks, baskets, floats, rope, ties, wires, tags and pallets) – and all associated debris or materials, including all piles of oysters and oyster shells. If the Permittee fails to meet the requirements of Special Condition 9, the Coastal Commission shall draw on the Letter of Credit or other surety device to carry out the complete removal of any cultivation equipment (including any associated debris) that has been abandoned or taken out of production on a plot for six months or more.

III. FINDINGS AND DECLARATIONS

A. BACKGROUND AND PREVIOUS PERMITTING

Project Location

The proposed project is situated in the northern and central sections of Humboldt Bay, California. Humboldt Bay encompasses approximately 17,759 acres at mean high tide in three distinct geographic areas: South Bay, Entrance Bay, and North Bay/Arcata Bay. Within the 7,354 intertidal acres of North Bay/Arcata Bay, Pacific Shellfish South Bend, LLC (a wholly owned subsidiary and operating brand of Pacific Seafood, and formerly known as Coast Seafoods Company, herein referred to as "Pacific") lease and/or own approximately 4,313 acres in North Bay. Pacific's leased area includes approximately 1,827 acres owned or held in trust by the City of Eureka, approximately 1,452 acres owned or held in trust by the Harbor District, approximately 515 acres owned by the Karamu Corporation, approximately 5 acres owned by the Manila Community Services District, and approximately 514 acres owned by Pacific. Pacific's combined 4,313 acres

of owned and leased intertidal land is roughly half of Arcata Bay's entire intertidal area. The boundaries of Pacific's owned and leased areas in Arcata Bay are detailed in [Exhibit 1](#). Within these holdings, Pacific operates an intertidal shellfish aquaculture facility spanning approximately 279 acres ([Exhibit 15](#)).

Previous Permitting

On September 13, 2017, the Commission approved CDP 9-17-0646, authorizing Pacific (then operating as Coast Seafoods) to continue its shellfish aquaculture cultivation operations in Arcata Bay. CDP 9-17-0646 consolidated Pacific's operations from approximately 300 acres to 279 acres while allowing for an increase in overall production levels through the use of higher density cultivation techniques, such as baskets on longlines.

Prior to the Commission's approval of CDP 9-17-0646, Pacific had been cultivating oysters on approximately 300 acres of tidelands in Arcata Bay under CDP E-06-003. Pacific initially proposed to expand its operations by an additional 190 acres under CDP application 9-15-1931, but the Commission denied this application in June of 2017, finding the project inconsistent with Coastal Act policies because the expansion would have resulted in adverse impacts to marine biological resources, water-oriented recreation, and cultural resources.² In response, Pacific revised its proposal and under the subsequent approval of CDP 9-17-0646, Pacific converted its 300-acre operation to occupy approximately 279 acres of intertidal mudflats. Specifically, CDP 9-17-0646 included (1) removal of 63 acres of densely-planted oyster cultivation beds from areas of dense eelgrass in the central and eastern regions of Arcata Bay; (2) abandonment of 21 of those acres and relocation of the remaining 42 acres of cultivation beds into areas of historic dredging and shell deposition in the Mad River and Bird Island areas of the bay, installed at wider spacing; (3) conversion of 20 acres of existing cultivation gear from densely-spaced longlines to widely-spaced basket lines; and (4) reconfiguration of all narrowly spaced cultch-on-longline beds to include five-foot and ten-foot-wide spacing channels. These measures were intended to facilitate greater use of and movement through cultivation beds by wildlife species such as black brant, shorebirds, and sturgeon. The wider spacing of gear was also intended to reduce conflicts with eelgrass habitat, contributing to associated benefits for herring spawning and bird foraging.

After its approval by the Commission in 2017, CDP 9-17-0646 was amended once to relocate an existing floating upwelling system (FLUPSY) and add an additional FLUPSY of an identical design and was amended a second time to replace that relocated FLUPSY with a new one of the same design.³ The CDP was amended a third time for a short extension of the permit term⁴ to allow time for the Commission to review Pacific's request to continue aquaculture operations until 2035. CDP 9-17-0646 was amended a

² See Adopted Findings for 9-17-0646 and E-06-003 for details on Pacific's permit history prior to 2017.

³ CDP Amendments Nos. 9-17-0646-A1 and 9-17-0646-A2.

⁴ CDP Amendment No. 9-17-0646-A3

fourth time for another brief extension of term, to February 28, 2027, to allow time for the Harbor District to act on the use permit.⁵

B. PROJECT DESCRIPTION

In the current permit amendment application, Pacific requests to continue its existing aquaculture operations for another ten years, largely consistent with the project authorized under CDP 9-17-0646, the use permit issued by the Harbor District on March 30, 2026 and its renewed leases from the Harbor District, City of Eureka and Karamu Corporation (See [Exhibit 1 – Location Maps](#)). Pacific proposes to continue planting, growing, and harvesting Pacific oysters (*Crassostrea gigas*) and Kumamoto oysters (*Crassostrea sikamea*) for commercial sale using the same off bottom basket and longline methods and same locations approved by the Commission in 2017 (and through subsequent CDP amendments). [Exhibit 3](#) of the original CDP 9-17-0646 depicts the various aquaculture methods that were authorized and would remain in use through the extended duration of operations under consideration in the current amendment request. Pacific states that the existing footprint includes approximately 31,4761 oyster cultivation longlines. As described further below, Pacific operates two longline aquaculture methods - “cultch-on-longline” and “basket-on-longline” - each authorized at narrow and wide spacing configurations designed to support habitat functions for marine wildlife by maintaining corridors for wildlife movement and reducing loss and disturbance of eelgrass habitat. As a part of this CDP amendment, Pacific proposes to discontinue its prior cultivation of Manila clams (*Ruditapes philippinarum*); this species would no longer be authorized for cultivation upon approval of this CDP amendment. The FLUPSYs previously used for Manila clam cultivation have been removed.

Cultch-on-Longline

Cultch-on-longline aquaculture is carried out on 100-foot-long lengths of nylon rope held up by embedded PVC pipes that are braided with oyster shell (cultch) set with spat (recently settled baby oysters, also known as seed). The PVC pipes hold the longlines approximately one foot above the substrate and are embedded into the substrate at 2.5-foot intervals.

Cultch-on-longline is authorized at two spacing types – “narrow cultch” and “wide cultch.” The “narrow cultch” spacing refers to sets of five longlines with 2.5-foot-wide gaps between each line and a 5-foot-wide channel between each cluster of five lines. A 10-foot-wide channel is also kept open between the end of one five-line cluster and the beginning of the next. The 5-foot and 10-foot gaps were required to be implemented in all narrow cultch beds under Special Condition 16 of CDP 9-17-0646 to reduce effects on habitat and wildlife. The “wide cultch” spacing type (See [Exhibit 3 – 10-ft Spaced Paired Longlines](#)) was a requirement for new cultch-on-longline beds that were brought into use under CDP 9-17-0646 and refers to lines spaced 10 feet apart with 10-foot gaps between the end of one 100-foot line and the next. Pacific originally planned to utilize a ‘double-hung cultch’ configuration in the wide cultch beds, consisting of two

⁵ CDP Amendment No. A-4, see 14 CCR § 13056

vertically arranged cultch lines - one suspended from a shorter PVC pipe and the other from an adjacent taller pipe. However, Pacific has determined that this double-hung configuration is not operationally feasible. Accordingly, Pacific proposes to use a single cultch line in all wide cultch beds.

Pacific maintains an average of 30,253 cultch longlines within its operational footprint. The number of lines varies by 5-10% depending on planting and harvesting cycles. Pacific states that up to 41,950 cultch longlines may be used at authorized spacing within approved cultivation bed locations.

Basket-on-Longline

Basket-on-longline oyster cultivation involves the use of 100-foot lengths of enclosed monofilament line stretched between metal stake anchors and elevated above the substrate by two-inch diameter PVC pipe posts installed every ten feet. Plastic mesh baskets (roughly two-feet long by one-foot wide) are filled with oysters and hung from the monofilament line with plastic clips. Baskets are often fitted with floats (approximately 2.5 inches in diameter and 5.5 inches long). The line is positioned approximately 2.5 feet to 3.0 feet off the bottom elevating the baskets roughly one foot from the bottom during low tides.

The basket-on-longline culture is authorized at two spacing types – “narrow basket” and “wide basket.” Narrow basket culture refers to groups of three lines, spaced 3 feet apart, with 20 feet between each three-line cluster. This spacing was originally authorized in 2013 under CDP E-06-003-A1 across 10.86 acres within the cultivation areas known as Mad River SEAPA and East Bay SEAPA shown on [Exhibit 15](#).⁶ Wide basket spacing includes sets of two lines spaced 9 feet apart with 16-foot gaps between sets of two lines. The wide basket spacing was a requirement of CDP 9-17-0646 for any new basket-on-longline culture installed pursuant to that permit. Areas currently containing basket-on-longline equipment are depicted on [Exhibit 15](#).

Altogether, Pacific maintains approximately 1,223 longlines with baskets that are 100 feet in length, each holding 40 baskets.

The tables below describe the gear types and spacing requirements originally authorized under CDP 9-17-0646 (Table 1) and identify the gear configurations and spacing that have been implemented and are proposed to continue under this permit amendment (Table 2). Note that Pacific has not planted in three of the relocation beds authorized for new cultivation under CDP 9-17-0646 (see beds BI-D, MR-E, and MR-B in [Exhibit 2](#)), leaving approximately 19 acres of permitted growing area empty. Beds EB 6-1 and MR 11 (totaling approximately 12.38 acres) are included under Narrow Cultch (2.5-ft spacing) in Table 2. Pacific proposed to convert these beds from narrow cultch to wide basket (9-ft spacing) under CDP 9-17-0646. However, this change was never implemented. To offset the continued dense spacing in these beds, Pacific has agreed to not install or use cultivation gear within the approximately 19 acres originally

⁶SEAPA baskets are durable cylindrical mesh baskets made by SEAPA, a manufacturer of plastic products designed specifically for oyster growers.

proposed for relocation in CDP 9-17-0646 that have not yet been brought into aquaculture use. This agreement is memorialized and established through **Special Condition 23** of this permit amendment and reflected in the revised authorized acreage in Table 2.

Table 1. Cultivation methods, spacing, and approximate area authorized in CDP 9-17-0646

Cultivation Method	Approx. Area
Narrow Cultch (2.5-ft spacing)	200 acres
Wide Cultch (10-ft spacing)	18.6 acres
Narrow and Wide Baskets	55.2 acres
Nursery	5 acres
Clam Cultivation rafts	7200 ft ² (30 rafts of 240 ft ² each)
Storage rafts	1600 ft ² (4 rafts of 400 ft ² each)
FLUPSY	Sq feet not listed in adopted findings

Table 2. Cultivation methods, spacing, and approximate area considered in this amendment, according to the list of beds currently in use, as described in [Exhibit 16](#).

Cultivation Method	Approx. Acres in Active Use	Approx. Acres for this Amendment
Narrow Cultch (2.5-ft spacing)	207.58	200
Wide Cultch (10-ft spacing)	8.36	18.6
Narrow Basket (3-ft spacing)	10.55	10.86
Wide Basket (9-ft spacing)	22.79	25.32
Nursery	5	5
Storage rafts	1	1 (30 clam rafts, 4 storage rafts)
FLUPSY	0	0
Total Culture	255.28 acres	260.78 acres

Planting and Harvesting

Longlines are planted by crews of two to six people at tides low enough to allow for walking on the mudflat. Bags from the nursery are transported to the bed and placed along the edge of an empty row. Bags containing 100-foot longlines braided with cultch are pulled out alongside the empty pipes and placed onto the notched PVC pipes, or an empty line is placed on the notched pipe if baskets of oyster will be attached to it. Due to the infrequency of appropriate low tides, the planting crew works every available low tide. Planted beds are inspected monthly, with virtually no other activity occurring on the bed until harvest. Inspection involves walking on the bed at low tide to make sure that the lines are in the notches. Two methods are used to harvest oysters when they reach market size after growing for roughly 18 to 36 months. The longline harvester method involves pulling individual lines onto a scow at high tide, either by hand or with a hydraulically operated roller. Hand-pulled lines are usually cut into individual clusters at the plant or on the boat and put on ice. Lines may also be pulled mechanically and run through a breaker that strips the oyster clusters from the line.

Wet Storage

Pacific proposes to continue to temporarily store harvested oysters on its floating wet storage rafts and repurpose the rafts previously used for Manila clam cultivation, located along the west side of the entrance to the Mad River Slough Channel, opposite Bird Island and approximately one-half mile north of the Samoa/Highway 255 bridges. The storage system consists of 30 rafts arranged in two groups of fifteen, each measuring 12 feet by 20 feet, where mature oysters ready for distribution to wholesalers are held to maintain freshness (see [Exhibit 3](#) – Clam Cultivation Raft Configuration and Design). Because Manila clam cultivation has been discontinued and the floating upwelling system has been removed, Pacific would repurpose the clam rafts exclusively for wet storage of Pacific and Kumamoto oysters during this permit term. The rafts are secured in roughly 20 feet of water by eight steel navy anchors. Each aluminum raft contains 24 tray wells and is supported by polyethylene-encapsulated Styrofoam flotation. Access to the rafts is by skiff, and oyster bags are placed into and retrieved from the trays by hand.

Operation and Maintenance of Existing Culture Areas

To operate and maintain its existing aquaculture footprint in Humboldt Bay, Pacific maintains six small watercraft and three larger vessels (Table 3). Five skiffs operate throughout the bay, with each skiff making an average of one four-hour trip per day, three days per week. Because all skiffs do not operate on the same day, skiffs are generally active seven days a week. Pacific also maintains two small scows, which make an average of two four-hour trips per day, five times a week. One or both scows are likely active seven days a week. Pacific also operates three larger vessels: a clam boat (the Pantherotti), a Kumamoto oyster harvester (Mary Elizabeth) and a harvest scow for hand-picked oysters (Elusive). The Mary Elizabeth is active four days a week, typically making one six-hour trip in a day with a crew of six. The Elusive is active two days a week, typically making one two-hour trip in a day with a crew of two. The Pantherotti is no longer being used for clam cultivation, but is active two days a week, typically making one two-hour trip as a backup boat for the scows to harvest oyster or move seed to the nursery.

Table 3. Summary of Pacific's existing vessel activity on Humboldt Bay that would continue under this amendment.

Vessel Name	Trips/day	Hours/trip	Days/week	Trip/week	Hours/week
Skiff 1	1	4	5	5	20
Skiff 2	1	4	5	5	20
Skiff 3	1	4	5	5	20
Skiff 4	1	4	5	5	20
Skiff 5	1	4	5	5	20
Scow 1	1	4	5	5	20
Scow 2	1	4	5	5	20
Pantherotti	1	2	2	2	4
Mary Elizabeth	1	6	4	4	24
Elusive	1	2	2	2	8

The Vessel Management Plan required by **Special Condition 5** of CDP 9-17-0646 and retained in this amendment establishes designated vessel routes and access points to ensure vessel transit occurs in predictable locations that minimize disturbance to wildlife and avoid sensitive eelgrass habitat. When working on oyster beds, larger vessels are anchored in deeper channels outside of tidal flats and eelgrass habitat. Smaller skiffs are anchored at the edge of the bed and where possible, anchors are dropped in sloughs without eelgrass. If anchoring over a tidal flat is necessary, the anchor is dropped on mudflats or on the edges of channels/sloughs where feasible in order to avoid eelgrass. Skiffs use ten-pound Danforth anchors and harvest vessels used 25- to 50-pound Danforth anchors. Heavier anchors on-board vessels are reserved for use in the event of breakdown. Anchor chains are approximately seven-feet-long on skiffs and 33-feet-long on harvest vessels.

Visits to any one shellfish cultivation bed varies based on the culture method employed and the type of activity being conducted. Visits to cultch-on-longline beds are the least frequent. Outside of the harvest and planting cycles, which occur every 1.5 to 3 years, cultch-on-longline plots are visited an average of once a month for maintenance and inspection. Basket-on-longline plots are visited more frequently to repair baskets, grade seed, and perform other tasks. Typically, crews are out on different areas of each basket-on-longline plots on an almost daily basis; however, a single line of baskets within a particular cultivation bed will typically be visited once every four months. Visits to wet storage rafts and the nursery generally occur on a daily basis. A detailed description of Pacific's aquaculture operations can be found in [Appendix B](#).

C. CONDITION COMPLIANCE REVIEW

To evaluate whether Pacific has adhered to the terms and requirements of CDP 9-17-0646 throughout the previous ten-year permit period, Commission staff undertook a detailed, multi-step condition compliance review. This review included a careful examination of the full permit file, submitted monitoring reports, cleanup reports, and Pacific's annual reporting history. Staff also conducted multiple site visits to Arcata Bay and requested extensive supplemental information from Pacific to verify current operations, gear configurations, vessel practices, and cultivation bed status. These efforts were intended to ensure that the Commission had an accurate and up-to-date understanding of the extent of aquaculture operations under the existing permit, whether the conditions of approval continue to be met, and to verify accurate information had been submitted regarding the scope and intent of continued operations over the next ten-year permit term Pacific has requested.

During site inspections, Commission staff identified areas where Pacific had not fully complied with previously imposed permit conditions. First, staff observed that cultivation bed EB 1-1 had not yet been reconfigured to include the five-foot and ten-foot wildlife and access corridors required under **Special Condition 15**, despite Pacific's commitment to complete that work during the prior permit cycle. As a result, narrow-spaced longlines remain in place in EB 1-1 without the spacing designed to reduce wildlife disturbance and improve eelgrass compatibility. Additionally, staff observed that cultivation beds EB 6-1 and MR 11 were still configured with densely spaced longlines

(2.5-foot spacing) rather than the wide-basket (9-foot spacing) method Pacific had committed to convert those areas to under its approved project description. The wider basket spacing was expected to reduce negative interactions with eelgrass habitat.

Commission staff discussed these compliance issues directly with Pacific. Pacific stated that it intends to complete the required corridor installations in bed EB 1-1 during its next harvest and will not plant 19 acres of new cultivation to offset the dense spacing that remains in beds EB 6-1 and MR 11. However, Pacific is not currently proposing to convert beds MR 11 and EB 6-1 to the wide basket gear spacing and plans to continue cultivating cultch-on-longline at the narrow spacing within these beds. **Special Conditions 15 and 23** would memorialize these intentions and establish a deadline for completing the corridor installation work in EB 1-1.

Furthermore, Commission staff noted during one site visit that shellfish culture bags, baskets, floats, and basket label tags in use on Pacific's operation had not been marked with the Company's name – a requirement of **Special Condition 10b** of CDP 9-17-0646. The gear marking requirement was established to ensure any dislodged equipment could be easily returned to its owner to promote marine debris reduction and upcycling or proper disposal of lost cultivation equipment. Finally, Commission staff reviewed the permit file for annual report submissions and results of quarterly cleanups submitted as part of this permit amendment application. Staff was unable to locate annual report submissions for years 2019, 2020, 2021, 2022, 2023, 2024, or 2025. This time period coincided with significant staff and business operations transitions with Coast Seafoods and Pacific that may have contributed to lapses in the submittal of annual reports. Pacific was able to confirm and document, however, that cleanup events consistently occurred throughout this period, including in 2021 (18 cleanups), 2022 (4 cleanups), 2023 (7 cleanups), 2024 (6 cleanups), and 2025 (3 cleanups). To date, 7 cleanups have been conducted in 2026. As detailed below in the findings pertaining to Section 30233, 30230, 30231, and 30232 of the Coastal Act, below, the amended permit includes revisions and new conditions to ensure full implementation of these measures during the next permit term.

D. CONSULTATIONS AND OTHER AGENCY APPROVALS FOR THIS AMENDMENT

Humboldt Bay Harbor Recreation and Conservation District

Pacific's aquaculture operation is carried out in part on submerged lands leased by the Humboldt Bay Harbor Recreation and Conservation District. The Harbor District renewed and restated its lease to Pacific in 2015, for a period of ten years, expiring on September 7, 2025. On July 23, 2025, the Harbor District approved Pacific's request to exercise its option to renew the lease for another five-year term. Pacific's amended and restated tide and submerged land lease now expires on September 7, 2030. On March 30, 2026, The Executive Director of the Harbor District renewed Pacific's aquaculture use permit administratively, extending the permit term to February 28, 2037. Revised **Special Condition 1** establishes a new term for this amended permit to align with the Harbor District's renewed use permit expiration date. **Special Condition 2** requires Pacific to exercise its renewal options and maintain in place its lease with the Harbor District through the permit term.

California Department of Public Health

The California Department of Public Health (CDPH) regulates the growing, harvesting, processing, and marketing of bivalve shellfish (including oysters, mussels, clams, and scallops) intended for sale for human consumption. Currently, all of the commercial shellfish growing areas in Humboldt Bay are classified as “conditionally approved.” This designation is used by CDPH to provide a mechanism for the declaration of harvest closures when a growing area does not meet the “approved” classification standard. In Humboldt Bay, the temporary water quality impact is due to rainfall, thus CDPH implements rainfall closure rules (CDPH 2025). Pacific maintains a Shellfish Growing Area certificate with CDPH and would continue to do so as part of this permit amendment.

California Department of Fish and Wildlife

Pacific’s aquaculture operations are required to be registered annually with the California Department of Fish and Wildlife (CDFW) and to adhere to a variety of protocols related to introduced species and the importation of oyster seed. Pacific has a consistent compliance record with these regulations and has a valid registration for 2026. Commission staff coordinated closely with CDFW staff throughout the review of this permit amendment, focusing particularly on Pacific herring spawning protections and the interpretation of the brant and eelgrass monitoring results. CDFW staff provided guidance on the appropriate implementation of Pacific herring spawning protocols, including confirmation of survey methods and timing for identifying spawn on eelgrass, culture materials, and nearby substrates. This input informed the revisions to **Special Condition 7**, ensuring that planting and harvesting activities would avoid periods when herring eggs remain vulnerable and that Pacific’s notifications and surveys would be carried out in accordance with CDFW-developed protocols. Although formal brant monitoring would no longer be required under this amendment, CDFW’s feedback helped staff interpret how brant use varied among narrow cultch, wide cultch, and wide basket configurations, and supported the conclusion that in cultivation beds, wide-spacing configurations provide improved brant foraging opportunities.

U.S. Army Corps of Engineers

The United States Army Corps of Engineers (USACE) administers and enforces Section 10 of the Rivers and Harbors Act of 1899, and Section 404 of the Clean Water Act of 1972, as amended. Under Section 10, a Corps permit is required for work or structures in, over, or under navigable waters of the United States. Commission staff engaged with USACE staff to ensure the proposed project remains consistent with federal requirements under Sections 10 and 404 of the Clean Water Act and Rivers and Harbors Act. This coordination focused on confirming the status of Pacific’s existing federal permits, clarifying the federal review timeline, and identifying whether any proposed project elements would require new or updated federal authorization. USACE informed Commission staff that individual permits could not be extended beyond their approved term, therefore Pacific would need to secure a new permit to continue operations beyond December 31, 2027. In response, Commission staff verified that Pacific intends to pursue a new USACE permit and coordinated with USACE staff to ensure that the scope of the proposed federal review is aligned with the project

description and operational footprint under this CDP amendment. Revised **Special Condition 18** requires Pacific to adhere to its USACE authorization for the originally approved project and Pacific expects to submit its application for a new permit in October 2026.

Pursuant to Section 307(c)(3)(A) of the Coastal Zone Management Act ("CZMA") the Corps cannot issue an individual permit to Pacific until the Commission either concurs or is conclusively presumed to concur in a federal consistency certification. Commission approval of this CDP amendment application constitutes concurrence under the CZMA.

National Marine Fisheries Service

Under Section 7(a)(2) of the Endangered Species Act (ESA), federal agencies must consult with the National Marine Fisheries Service (NMFS) when any project or action they take may affect an ESA-listed marine or anadromous species or designated critical habitat. USACE also consults with NMFS because NMFS is responsible for protecting marine resources, including fish, marine mammals, and their habitats. Commission staff engaged closely with NMFS staff during review of the proposed permit amendment, particularly concerning eelgrass protection and the implications of Pacific's multi-year eelgrass monitoring results. NMFS is responsible for managing and protecting essential fish habitat, including eelgrass, which provides critical nursery and foraging functions for federally listed salmonids, green sturgeon, and other sensitive species present in Humboldt Bay. NMFS staff reviewed the monitoring outcomes which demonstrated that that widely spaced aquaculture gear installed in the Bird Island and Mad River subareas did not produce effects on eelgrass density or vegetative cover beyond those initially anticipated. NMFS indicated that additional eelgrass monitoring may not be necessary under this amendment, given the available results and the fact that Pacific is not proposing any gear placement in new areas, or any change to denser spacing configurations that would introduce new eelgrass impact risks within tidal areas not previously cultivated.

North Pacific Regional Water Quality Control Board

Projects involving discharges of dredged or fill material to waters of the United States that require permits from the U.S. Army Corps of Engineers under Clean Water Act Section 404 are also required to obtain authorization from the Regional Water Quality Control Board (RWQCB) under Clean Water Act Section 401. Coastal Commission staff coordinated with the RWQCB regarding Pacific's proposed permit renewal and informed Pacific that a new water quality certification would be required due to a lapse in its 2017 certification. The RWQCB issued a new certification on April 7, 2026 and **Special Condition 18** requires Pacific to adhere to its authorization from the RWQCB.

E. FILL OF OPEN COASTAL WATERS

Section 30233(a) of the Coastal Act states:

The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division where there is no feasible less environmentally damaging alternative,

and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

- 1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.
- 2) Maintaining existing, or restoring previously dredged depths on existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.
- 3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.
- 4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.
- 5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.
- 6) Restoration purposes.
- 7) Nature study, aquaculture, or similar resource dependent activities.

Coastal Act Section 30108.2 defines “fill” as “earth or any other substance or material ... placed in a submerged area.” Pacific’s continued aquaculture operations in Humboldt Bay involve placing and maintaining substantial amounts of cultivation infrastructure within the intertidal mudflats, including PVC support posts, longlines, basket-on-longline systems, and associated equipment such as wooden pallets and large mesh bags of oyster shell. Additionally, Pacific will maintain eight anchoring devices within subtidal channels to support its wet storage rafts. In total, Pacific’s proposed project would result in the continued presence of approximately three acres of fill within Arcata Bay, an amount that is comparable to, or slightly less than, the fill authorized under CDP 9-17-0646, due to the removal of anchoring devices for floating upwelling rafts, discontinued use of such rafts, and commitment to not proceed with planting approximately 19 acres of cultivation beds within the Bird Island and Mad River areas of Arcata Bay (as further discussed below and memorialized through **Special Condition 23**).

The Commission may authorize development involving the placement of fill in wetland waters only if it satisfies the three criteria set forth in Coastal Act Section 30233. First, the activity must fall within one of the seven allowable use categories identified in Section 30233(a)(1)–(7). Second, there must be no feasible alternative that would result in less environmental harm. Third, the project must incorporate feasible mitigation measures sufficient to minimize its adverse effects on the environment.

Allowable use

The anchors, PVC posts, longlines, and related materials function as structural components necessary to carry out Pacific’s aquaculture activities. Because

aquaculture is an allowable use under Coastal Act Section 30233(a)(7), the Commission concludes that the project satisfies the allowable-use criterion for the placement of fill in wetland waters pursuant to Section 30233(a).

Alternatives

The Commission must also determine that no feasible alternative exists that would reduce environmental impacts associated with placing fill in coastal waters. Under Coastal Act Section 30108, a feasible alternative is one that can be accomplished successfully within a reasonable time frame, considering economic, environmental, social, and technological factors.

In evaluating this requirement, Commission staff examined other shellfish-cultivation methods and operational layouts – including bottom culture using loose shell, deployment of mesh bags on tidal flats, installation of elevated rack systems, and expanded use of floating rafts or barges – to assess whether any would require less fill or result in fewer environmental effects than the proposed configuration of floating rafts and longline equipment. Each of these methods was found to require equal or greater placement of materials in coastal waters, and in several cases would increase fill or create additional ecological impacts. As a result, these alternatives were determined not to be less environmentally damaging and were rejected.

Commission staff also examined alternative ways of configuring the project. This included evaluating whether additional relocation of cultivation beds outside sensitive habitats, such as eelgrass, or concentrating beds more tightly within fewer areas of Arcata Bay could reduce environmental impacts. As discussed in the findings for CDP 9-17-0646, locating cultivation beds entirely outside eelgrass habitat (at tidal elevations typically greater than 1.5 feet MLLW) was considered, but this alternative was infeasible due to the creation of new environmental impacts. Many of the potential higher-elevation sites fell within the East Bay Management Area, where previous public comment urged Pacific to avoid further expansion because of potential adverse impacts to black brant and Pacific herring (see below). These areas are also remote, difficult to access, and not certified for shellfish cultivation. Furthermore, the Commission found in 2017 that locating all cultivation beds at higher tidal elevations outside eelgrass habitat had the potential to create new disturbance to higher elevation mudflats that support important wintering and migratory shorebird populations. Establishing large cultivation beds in these areas would displace shorebirds and could alter invertebrate prey communities essential to their foraging. In 2017, the Commission also evaluated an alternative that would relocate all eastern bay cultivation beds – including the 13 beds totaling roughly 76 acres that Pacific proposes to retain under this amendment – into the western portion of Arcata Bay. Although the eastern bay supports high value biological resources, the Commission found that shifting these beds westward would introduce significant tradeoffs and feasibility concerns, including impacts to sensitive habitats, operational constraints, and limits on suitable growing areas. As a result, the Commission determined that this alternative was not less environmentally damaging than the configuration authorized in 2017 (see [Exhibit 15](#)), which would continue to be authorized under this amendment.

In its prior action on CDP 9-17-0646, the Commission approved a variety of wider gear spacing configurations, including the implementation of five-foot and ten-foot spacing corridors in all narrow cultch longline beds and the conversion of several narrow cultch longline beds to wide basket cultivation. These spacing requirements were intended to facilitate passage for larger marine species such as brant, shorebirds, and sturgeon, reduce negative impacts on eelgrass growth within and adjacent to cultivation beds, and reduce the likelihood of Pacific herring spawning on artificial structures rather than natural eelgrass. Most spacing requirements were implemented as approved; however, three beds—EB 6-1, EB 1-1, and MR 11—were not converted. EB 6-1 and MR 11 were not converted to the wide basket culture method as previously proposed, and EB 1-1 was not reconfigured to include the required five-foot and ten-foot spacing gaps. To ensure full implementation of the protective measures originally adopted to support eelgrass, herring, brant, and other sensitive species, **Special Condition 15** has been modified to require that EB 1-1 be brought into compliance with the spacing requirements at the time of its next harvest, or by the end of 2027, whichever is sooner. In addition, to offset the continued dense spacing at EB 6-1 and MR 11, Pacific has agreed to not carry out installation of cultivation gear within the roughly 19 acres of “relocation areas” that were originally permitted for new cultivation under CDP 9-17-0646 but have not yet been brought into use. This agreement is memorialized and established through the new **Special Condition 23**.

As further described in the marine resources section of this report, the amended permit includes additional modifications to the original **Special Conditions** to ensure that the continued operation and maintenance of aquaculture operations on Arcata Bay’s submerged lands will occur in a manner that remains consistent with the Coastal Act and avoids significant adverse impacts. Amended **Special Conditions 2 and 15** constrain the overall scale and distribution of activities and preserve more than 4,000 acres of its leased and owned tidelands as undeveloped habitat for the duration of the amended permit term, extending over two decades of protection first established when the Commission approved Pacific’s operations in 2006. In addition, amended **Special Conditions 5, 7, 12, 14, 15, and 16** further reduce potential effects on sensitive wildlife, including shorebirds, black brant, and Pacific herring, by strengthening operational protocols and protective buffers. Collectively, amended **Special Conditions 9 and 10** also improve protections for marine habitats by requiring continued and enhanced measures to prevent and recover marine debris and discarded oyster shell following plot abandonment. With these updated conditions in place, the potential impacts associated with oyster cultivation over the next ten-year permit term in Arcata Bay are effectively addressed, and the amended project is not expected to result in significant adverse environmental effects.

Mitigation Measures

The final criterion under Coastal Act Section 30233(a) allows fill in coastal waters only where feasible mitigation measures are incorporated to reduce environmental impacts. As detailed in the marine resources analyses in this report, the amended **Special Conditions** included in this permit amendment provide such mitigation and will effectively minimize potential project-related impacts. The requirements in **Special Conditions 8 and 10** reduce the likelihood of marine debris generation, improve debris recovery, and strengthen annual reporting requirements to ensure the special conditions

are adhered to over the next ten years. Revised **Special Condition 2** limits and defines the overall scale and footprint of Pacific's operations to protect the biological productivity of Arcata Bay and further concentrates operations away from more sensitive habitat areas to reduce disturbance to wildlife. In addition, the monitoring completed under **Special Conditions 3 and 4** of CDP 9-17-0646 indicate that Pacific's widely spaced longlines do not affect eelgrass cover and density in cultivation beds of the Mad River and Bird Island areas beyond initial expectations, and that the wider spacing appears to contribute to brant use of these cultivation sites. Together, the monitoring results and the imposition of the amended conditions of this permit satisfy the third and final mitigation test of Section 30233(a).

Finally, modified **Special Condition 9** would require that within 30 days of harvest on any cultivation bed or plot that is being discontinued, abandoned, removed, fallowed, or taken out of production for six months or more, Pacific shall propose a plan for timely recovery and full removal of all culture apparatus from that plot, including but not limited to stakes, racks, baskets, floats, rope, ties, wires, tags and pallets, and any piles of oysters and oyster shells.-This would also minimize potential adverse environmental effects associated with the placement of fill in Arcata Bay, including the generation of marine debris and the potential that abandoned, derelict aquaculture gear could pose a risk of entanglement or snagging to marine life. **Special Condition 25** further provides for the creation of a financial instrument to help guarantee that proper bed, plot and site fallowing or abandonment is carried out. The amount of funding required through this condition was estimated based on a review of past coastal development permits approved by the Commission, discussions with Pacific, and approximate labor and disposal costs associated with site cleanup.

Together, the monitoring results and the imposition of the amended conditions of this permit satisfy the third and final mitigation test of Section 30233(a).

Conclusion

The Commission therefore concludes that, with all three criteria satisfied, the project as conditioned is consistent with the requirements of Coastal Act Section 30233.

F. MARINE RESOURCES AND WATER QUALITY

Section 30230 of the Coastal Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum

populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30232 of the Coastal Act states:

Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

These sections of the California Coastal Act collectively require the protection of marine resources, coastal water quality, and species and areas of exceptional ecological or economic value, while also mandating the prevention and containment of hazardous substance spills.

Humboldt Bay is one of the most ecologically valuable coastal environments in California, known for its exceptional biological diversity. It contains the vast majority of the state's eelgrass habitat, including some of the largest and most continuous meadows. Eelgrass beds are globally recognized as a rare and critically important marine habitat and are designated for protection by the National Marine Fisheries Service and Pacific Fisheries Management Council as Essential Fish Habitat and a Habitat Area of Particular Concern. In Arcata Bay, eelgrass beds provide crucial habitat for numerous sensitive and legally protected species – from federally threatened fish like green sturgeon, steelhead, and coho and Chinook salmon to migratory birds and waterfowl such as the black brant, which is listed as a State Species of Special Concern.

The project area is home to ten species formally recognized as threatened or endangered under the California Endangered Species Act (CESA) and/or the federal Endangered Species Act (ESA) or are classified as California Species of Special Concern (SSC).⁷ The California Department of Fish and Wildlife assigns the SSC designation to species experiencing population declines, restricted distributions, or

⁷The 10 listed species noted in CDP 9-17-0646 are: Black brant, *Branta bernicla nigricans*, State SSC; Chinook salmon (*Oncorhynchus tshawytscha*, ESA-threatened [California Coastal ESU]); Coastal cutthroat trout (*Oncorhynchus clarki clarki*, State SSC); Coho salmon (*Oncorhynchus kisutch*, CESA and ESA-threatened [Southern Oregon/Northern California Coho Evolutionarily Significant Unit (ESU)]); Eulachon (*Thaleichthys pacificus*, ESA-threatened [southern Distinct Population Segment (DPS)]); Green sturgeon (*Acipenser medirostris*, ESA-threatened, [southern DPS], State SSC for northern and southern DPS); Longfin smelt (*Spirinchus thaleichthys*, CESA-threatened); Pacific lamprey (*Entosphenus tridentatus*, State SSC); Steelhead (*Oncorhynchus mykiss*, ESA-threatened, Northern California ESU); Tidewater goby (*Eucyclogobius newberryi*, CESA Endangered); and White sturgeon (*Acipenser transmontanus*, State SSC)

ongoing pressures that place them at heightened risk of extinction. Given the presence of many sensitive and legally protected species within and adjacent to the project area, safeguarding the habitats that support them is a central Coastal Act responsibility.

Eelgrass

The project area consists of submerged tidelands supporting extensive eelgrass (*Zostera marina*) habitat, which provide a variety of essential ecosystem functions, including primary production, predation refuge, nursery functions, physical structure, nutrient cycling, and forage. Eelgrass is a species of special biological significance under Section 30230 of the Coastal Act, and as such, the Commission is required to afford it special protection. The Commission's Adopted Findings for Pacific's 2006 CDP (No. E-06-003 and all subsequent amendments) and CDP No. 9-17-0646 summarize several of the critical ecosystem services eelgrass provides and are incorporated by reference into this report.

Pacific's use of intertidal eelgrass habitat for oyster cultivation has been a primary coastal resource concern throughout its permit history. In 2006, under CDP E-06-003, the Commission found that Pacific's former 300-acre operation would result in a total eelgrass habitat impact of approximately 137 acres.⁸ As mitigation for this substantial impact, the Commission required Pacific to: (1) maintain approximately 3,645 acres of leases with the Harbor District, City of Eureka, and Karamu Corporation until 2015 while keeping a fixed 300 acre operational footprint; (2) transfer 50 acres of its owned tidelands to an appropriate entity for permanent conservation; (3) continue efforts to identify and minimize or eliminate sources of water pollution in Humboldt Bay; (4) operate its shellfish harvesting vessel in a way that minimizes impacts to eelgrass; (5) avoid the intentional deposition of shell in to the bay; (6) avoid all hydraulic harvesting activities; (7) pay the California Coastal Conservancy \$100,000 for habitat improvements benefiting federal- and state-listed anadromous fish in the Humboldt Bay watershed; and (8) complete a feasibility study assessing oyster cultivation in areas where eelgrass is limited by higher elevations within the Bay.

In response to concerns raised by several parties that the previous mitigation measures required under CDP E-06-003 for the 300-acre farm were insufficient, Pacific proposed additional measures as part of its application for CDP 9-17-0646 to reduce impacts to eelgrass, including a reduction in the farm's overall footprint down to 279 acres and reconfiguration and relocation of cultivation equipment. The project elements designed to minimize eelgrass impacts were: (1) the removal of 63 acres of existing cultivation beds from within eelgrass habitat (including the approximately 11.7-acre EB 7-2 bed that was surrounded by dense eelgrass); and (2) the conversion of 20 acres of cultivation beds with densely-spaced aquaculture gear to more widely-spaced gear configurations. Both elements were expected to reduce the project's adverse impacts on eelgrass habitat within the project area.

⁸This acreage estimate is based on extensive analysis and technical review by Commission staff ecologist, Dr. John Dixon. The Commission re-evaluated and affirmed this impact estimate in 2017 for CDP No. 9-15-1931.

Special Condition 13 of CDP 9-17-0646 required permanent removal of all cultivation equipment from beds EB 7-2, SI 1-1, SI 2-1, SI 2-2, SI-N, and GI 1-2/II 1-2 no later than December 31, 2019, and all these required removals have since been completed. Forty-two acres of cultivation beds removed from eelgrass habitat were proposed for relocation to the Mad River and Bird Island regions, where new equipment would be installed using either widely spaced basket-on-longline or widely spaced cultch-on-longline configurations. To date, Pacific has only installed roughly 23 acres of relocation beds out of the 42 acres permitted for relocation, currently leaving approximately 19 acres unoccupied.

Special Condition 15 was also intended to reduce adverse impacts to eelgrass by requiring Pacific to reconfigure its narrowly spaced (2.5-foot spacing) cultch-on-longline beds to include five-foot and ten-foot-wide channels ([See Exhibit 3](#)). All but one of Pacific's cultch-on-longline beds (EB 1-1) have been reconfigured in this way to include the necessary five- and ten-foot wide wildlife and access corridors. Pacific reports that the necessary channels are planned to be added to Bed EB 1-1 at the time of its next harvest. To help ensure the required five-foot and ten-foot gaps are established, **Special Condition 15** is revised to require that this work be completed at the time of the next harvest or by December 31, 2027, with photo documentation submitted no later than that date.

Two cultivation beds that Pacific proposed for conversion to wider spacing—EB 6-1 and MR 11—remain configured with densely spaced longlines. Conversion of these beds to wider spacing was intended to reduce adverse impacts to eelgrass habitat, herring spawning, and black brant foraging. To compensate for the fact that these beds remain at dense spacing, Pacific has agreed to not carry out installation of cultivation gear within the roughly 19 acres of “relocation areas” that were originally permitted for new cultivation under CDP 9-17-0646 but have not yet been brought into use. This agreement is memorialized and established through the new **Special Condition 23**.

Eelgrass Monitoring

Special Condition 3 of CDP 9-17-0646 required Pacific to prepare and implement an Eelgrass Monitoring Plan to collect data on eelgrass density and percent vegetated cover within the designated gear-removal and relocation areas. This monitoring was intended to confirm that the gear removal and spacing reconfiguration in dense eelgrass reduced adverse impacts to eelgrass habitat associated with the project, that unexpected impacts did not emerge, and thus that the impacts of the ongoing aquaculture project had been appropriately assessed and minimized.

Following the Executive Director's approval of the final Eelgrass Monitoring Plan prepared by Confluence Environmental (January 2018), Pacific implemented the monitoring program and submitted annual reports evaluating the effects of aquaculture gear on eelgrass within three subareas of its cultivation footprint in Arcata Bay. The monitoring program was designed to quantify eelgrass spatial distribution and density in shellfish culture removal sites at Sand Island and East Bay, and to assess the relocation of cultch-on-longline and basket-on-longline gear into the Mad River and Bird Island growing areas. Monitoring of eelgrass density and distribution was conducted in 2018

(baseline year, pre-installation or removal of cultivation equipment), 2019 (year 2, first post-treatment monitoring), 2020, 2021, 2022, and 2023. Quantitative eelgrass density measurements were collected at ten monitoring plots across three study areas: Bird Island East (BIE) with two culture plots and one reference plot, Bird Island West (BIW) with two culture plots and one reference plot, and Mad River with two culture plots and two reference plots. Commission staff reviewed the eelgrass monitoring results to assess the findings and determine whether any additional monitoring or mitigation measures were warranted. The final eelgrass monitoring report can be found in [Appendix D](#).

The monitoring results confirmed the assumptions that gear removal in dense eelgrass habitat benefitted eelgrass recovery, while installation of widely spaced basket lines and double longlines⁹ in the Bird Island and Mad River areas did not affect eelgrass cover or density beyond expected levels. Across the six-year monitoring period (2018–2023), eelgrass across North Humboldt Bay generally expanded and recovered following baywide declines linked to the 2014–2015 marine heatwave and drought. By 2023, eelgrass areal extent had increased, often substantially, in nearly all study areas compared to 2018 baselines. Cultivation removal plots in Sand Island and the East Bay showed improved eelgrass density by the end of the monitoring period. In the test plots featuring widely spaced basket lines and double longlines, effects did not exceed expected levels after installation of new culture at wider spacing. In many areas, variation in eelgrass cover and density appeared to be driven primarily by natural factors, including seedling recruitment, elevation, weather, and baywide trends.

The eelgrass monitoring program demonstrated that eelgrass expanded in areas where aquaculture gear was removed and was able to persist in certain areas in which wider-spaced longline and basket configurations were implemented, confirming that the design changes previously required by the Commission effectively reduced adverse effects of aquaculture structures on eelgrass habitat. Based on the multi-year dataset, Commission staff determined that the study objectives were fully achieved, the results were consistent across monitoring years, and no new concerns or impact pathways were identified that would warrant continued monitoring. Because no expansion of aquaculture operations or increase in gear density is proposed over the next ten-year permit term, staff concludes that additional eelgrass monitoring is not necessary to avoid or further reduce project impacts, nor would it provide additional resource protection benefits.

Black Brant

The black brant (*Branta bernicla nigricans*) is a subspecies of the brant goose known for its long migration between Arctic breeding grounds and Pacific coastal wintering areas. As a smallish goose, roughly the size of a mallard, brant feed heavily on aquatic vegetation, especially eelgrass, by tipping forward and grazing in shallow water. The black brant is designated in California as a bird species of special concern and remains a management priority due to shifting wintering distribution patterns and declining breeding populations on the Yukon–Kuskokwim Delta in Alaska, where most of the

⁹ Note that double longlines are not proposed for this amendment.

species is believed to nest (USGS, 2025). Humboldt Bay serves as a primary wintering and spring migration staging area, providing brant with broad expanses of eelgrass, their primary food source outside the breeding season (Moore et al. 2004, Lee et al. 2007). No other goose species relies so heavily on a single plant species (Ward et al. 1997, Ward et al. 2005). Brant receive international attention because of their broad migratory range and importance to both sport and subsistence hunters, and their populations are jointly managed by Canada, the United States, and Mexico (Lewis et al. 2020). Since 2018, the Pacific Flyway Council's population estimates have been below the population objective of 322,000 birds, however the population has not declined to a level ($\geq 102,000$) that has warranted a hunting season closure (USFWS, 2025).

The potential for impacts to black brant was one of the primary coastal resource concerns evaluated by the Commission in its consideration of Pacific's most recent permit (CDP 9-17-0646). As discussed in the findings for CDP 9-17-0646, aquaculture can affect brant by reducing eelgrass availability within cultivation beds, potentially excluding birds from foraging areas due to the presence of aquaculture gear, and causing disturbance from vessel and human activity associated with planting, harvesting, and maintaining shellfish operations. To address these concerns, Pacific reduced its overall footprint under CDP 9-17-0646 and consolidated its operation in areas known to support limited brant use. **Special Condition 13** required Pacific to remove roughly 63 acres of aquaculture gear from the central and eastern portions of Arcata Bay. That removal has been completed and the requirement will continue to apply in the amended permit. Although Pacific proposed to relocate 42 of the 63 removed acres into areas of Bird Island and Mad River expected to support more limited brant use, only about 23 of those acres were ultimately installed. The relocated 23 acres that Pacific installed under the 2017 CDP were configured with wider-spaced gear (either as cultch-on-longline set 10 feet apart or basket-on-longline spaced 9 feet apart with 16-foot gaps between pairs of lines, as shown in [Exhibit 3](#)) in hopes of providing foraging space for brant between longlines should they occur in these areas. As discussed below, monitoring of brant within relocation areas was required to evaluate this assumption and determine if the presence of aquaculture gear fully prevented brant foraging from occurring.

To further reduce the proposed project's potential to adversely affect black brant, this amendment would also retain **Special Conditions 5, 14, and 16**, which require Pacific to implement a vessel management plan, establish a buffer zone around the brant grit site at Sand Island, and avoid disturbing wildlife during all vessel transit, harvest, maintenance, inspection, and planting operations. Together, these conditions are intended to limit disturbance to brant by reducing vessel activity in high-use areas, protecting important behavioral habitat, and prohibiting activities that could flush or disrupt foraging or staging birds. Revised **Special Condition 8** also requires Pacific to document any observed disturbances and the measures taken to reduce future disturbance in its annual reports.

Brant Monitoring

To evaluate the effect of longline oyster aquaculture gear and spacing on brant feeding, **Special Condition 4** of CDP 9-17-0646 required Pacific to implement a brant

monitoring plan. The brant monitoring plan was developed by H. T. Harvey & Associates and approved by the Executive Director in January 2018. The monitoring program was designed to verify the assumption that relocating widely-spaced cultivation beds to the Mad River and Bird Island sections of Arcata Bay would not result in additional adverse impacts to black brant and to address the uncertainty about whether the presence of aquaculture gear fully prevented brant foraging from occurring in cultivation areas. Monitoring of brant activity was conducted in 2018 (baseline year, prior to installation of wider-spaced cultivation equipment), 2019 (year 1 post-treatment), 2020, 2021, and 2023. Brant use of aquaculture and reference areas was documented through high-frequency time-lapse camera monitoring at clusters of treatment and control plots across the Bird Island and Mad River subareas, with additional East Bay plots monitored during the baseline and 2019 seasons. Cameras recorded one image per minute during six 5-day sampling periods each year that were specifically selected to cover tide ranges conducive to brant foraging (e.g. water depths between 0.5 and 3.5 feet). The photo monitoring was designed to capture brant presence, abundance, and behavior under standardized combinations of water-depth, tide direction, and time of day to support modeling relationships between brant activity and plot type (control (no aquaculture gear), narrow-spaced longlines, wide-spaced longlines, and basket lines¹⁰), eelgrass cover, water depth, tide direction, and year. Commission staff reviewed the brant monitoring results to assess brant use of plots containing aquaculture gear (treatment) versus control plots without gear and to determine whether any additional monitoring or mitigation measures were warranted. The final brant monitoring report is included in [Appendix C](#).

The monitoring results indicated that, during optimal lower water levels conducive to brant foraging, new wider-spaced cultch-on-longline plantings consistently attracted greater brant use than narrow-spaced cultch-on-longline plantings. New wider spaced basket plantings were not especially attractive to brant at lower water levels, likely due to sparser eelgrass in those planting areas. However, wider spaced basket plantings did attract above average brant activity at high water levels, likely because the taller basket structures remained exposed and provided supplemental gleaning opportunities when bed feeding was not possible. On balance, both the wide basket and wide cultch plots appeared to improve the foraging situation for brant under different conditions compared to plots planted with narrow-spaced longlines. The final brant monitoring report suggested two factors that could help explain the pattern of higher brant abundance on widely-spaced cultch plots: 1) wide-cultch plots have more space between longlines, which allows brant to move and forage more easily than in the narrower, more constricted narrow-cultch plots, and 2) the wider spacing enabled water flow, leading to greater accumulations of supplemental food resources (e.g. eelgrass wrack, algae, and invertebrates) compared to narrow-spaced gear. These findings affirm that converting to wider-spaced configurations reduces project effects on brant.

¹⁰See [Exhibit 3](#) for spacing types. Control plots contained no aquaculture equipment. Narrow-spaced longline plots had clusters of five longlines set 2.5 feet apart, with 5- and 10-foot gaps between clusters. Wide-spaced longlines of cultch were newly planted single lines, all spaced 10 feet apart. Wide-spaced basket line plots contained pairs of lines spaced 9 feet apart, separated by 16-foot gaps between each set. Plots containing the narrow basket configuration were not assessed as part of this study.

Based on the results of the brant monitoring program, Commission staff concluded that the study objectives were met and that continued monitoring would not yield additional resource-protection benefits. The multi-year dataset demonstrated that the installation of widely spaced longlines and basket culture in the Mad River and Bird Island areas did not result in significant adverse effects on brant foraging, and that the design changes required by the Commission successfully minimized gear-related impacts. The analyses also showed no emerging concerns, no new impact pathways, and no evidence of conditions that would alter the project's effects in the future - particularly because Pacific is not proposing to expand its cultivation footprint or increase gear density under this amended permit. With brant responses well-characterized for the main gear types used by Pacific, staff concludes that the management concerns regarding brant would be adequately addressed under this amended permit and is not recommending additional brant monitoring.

Ongoing Marine Resource Protections

The special conditions of CDP 9-17-0646 established a number of additional measures for the protection of marine resources that would remain in effect under this CDP amendment. These are described in detail in the Adopted Findings for CDP 9-17-0646, and are summarized briefly below.

Marine Debris

Pacific's proposed shellfish aquaculture operation includes the continued placement and maintenance of several hundred thousand individual pieces of plastic and PVC in Arcata Bay associated with roughly 600 miles of nylon rope and monofilament line (up to 29,700 longlines and 2,300 basket lines of 100-feet long each) and up to 92,000 two foot long by one foot wide mesh plastic cultivation baskets (up to 2,300 basket lines with 40 baskets per line). Some of this material can disperse into the environment as debris, posing risks to wide range of marine organisms through entrapment, entanglement and ingestion.

To reduce these risks, **Special Conditions 8, 9 and 10** require Pacific to implement a variety of best practices for marine debris prevention including gear marking, quarterly clean-up events, bed cleaning at harvest, removal of gear from inactive beds, and reporting on the efficacy of improved basket-attachment designs. The required annual reports indicate that Pacific has conducted quarterly cleanups regularly, though not in every year. In addition, Pacific reports that the use of an improved basket attachment clip has reduced the number of baskets lost during routine operations and has decreased the overall volume of aquaculture gear recovered during cleanup events. The comprehensive marine debris reduction requirements of **Special Conditions 8 - 10** remain part of the renewed permit, and several modifications to **Special Condition 8** have been added to strengthen annual reporting requirements to ensure full implementation of these measures during the next permit term.

Additionally, **Special Condition 9** includes requirements for the timely recovery and full removal of all culture gear and apparatus from any cultivation bed or plot that is being discontinued, abandoned, removed, fallowed, or taken out of production for six months

or more. This would minimize adverse environmental effects associated with marine debris, such as the potential that abandoned, derelict aquaculture gear could pose a risk of entanglement or snagging to marine life. **Special Condition 25** further provides for the creation of a financial instrument to help guarantee that proper bed, plot and site fallowing or abandonment is carried out if Pacific ceases operation and is not able to complete such efforts. The funding amount required under **Special Condition 25** was developed through a review of coastal development permits recently approved by the Commission, discussions with Pacific, and consideration of the approximate labor, vessel time, and disposal costs associated with conducting site cleanup and gear removal.

As noted above in Section IV.C (Condition Compliance Review), Commission staff observed during a recent site visit that culture gear had not yet been marked consistent with **Special Condition 10b**. Pacific has committed to correcting this oversight promptly, and a provision has been added to **Special Condition 10** requiring Pacific to provide confirmation to the Executive Director that all bags, baskets, floats, and basket label tags have been marked within 18 months of permit issuance.

Pacific Herring

Pacific herring rely on dense eelgrass beds for spawning, particularly in the eastern portions of Arcata Bay. Aquaculture poses risks by introducing structures that can attract spawning to artificial substrates where egg survival is lower and their eggs are sensitive to disturbance from vessel activity, gear handling, and in-water work. CDP 9-17-0646 required the removal of the 12-acre EB 7-2 cultivation bed within an area of dense eelgrass and critical spawning habitat and strengthened herring monitoring protocols through **Special Condition 7**, which required Pacific to use CDFW survey protocols to identify herring eggs, share its planting and harvesting schedule with CDFW during herring season, and postpone planting or harvesting activities if herring spawning is observed. To ensure that Pacific's mariculture operations continue to protect spawning events and avoid disturbance to herring eggs, Commission staff worked closely with biologists from the California Department of Fish and Wildlife (CDFW) to refine the timing, notification, and operational restrictions included in **Special Condition 7**. CDFW provided updated information on herring spawning patterns and offered to conduct trainings in herring spawn identification for Pacific's employees. CDFW also recommended that planting and harvesting should be postponed (typically for 14 to 21 days) if herring spawn are detected on aquaculture equipment to allow for successive spawning events to occur. Based on this coordination, **Special Condition 7** has been revised to strengthen protections for herring spawn by requiring that trained personnel or CDFW staff must confirm that spawning has ended and no spawn remains on the substrate, before any planting or harvesting activities may proceed. In addition, Commission staff recommend modifying **Special Condition 8** to ensure that Pacific's annual report includes documentation of observed herring spawn events, dates notifications were sent to CDFW, and dates plantings or harvests were postponed and re-initiated as a result of herring spawn.

Green and White Sturgeon

Green and white sturgeon regularly use Humboldt Bay's channels, margins, and inundated mudflats as foraging habitat, and the bay is federally designated critical habitat for the southern Distinct Population Segment of green sturgeon. Aquaculture gear can impede or exclude sturgeon movement or pose entanglement risk, particularly where densely spaced longlines occur near high-use areas. To address this, CDP 9-17-0646 required complete removal of all Sand Island beds located adjacent to a known sturgeon concentration area (**Special Conditions 9 and 13**) and mandated conversion of dense 2.5-foot spacing to wider configurations with five- and ten-foot channels to ensure safe movement through cultivation areas (**Special Condition 15**). All Sand Island beds have been removed, and all but one of Pacific's longline beds (EB 1-1) has been reconfigured to include necessary five- and ten-foot wide channels. To ensure longlines are removed from cultivation bed EB 1-1 and the required five-foot and ten-foot gaps are established, **Special Condition 15** is revised to require that this work be completed at the time of next harvest or December 31, 2027, whichever is sooner.

Longfin Smelt

Longfin smelt, a state-listed threatened species, occur in Humboldt Bay as juveniles and adults and are vulnerable to entrainment from seawater intake systems due to their small size and limited swimming ability. Pacific formerly used a saltwater intake system for cleaning of clam seed and clam cultivation trays. **Special Condition 6** of CDP 9-17-0646 required that Pacific use intakes aligned with CDFW recommendations for protection of longfin smelt, including ultra-low intake velocities (0.2 feet-per-second for active intake systems and 0.05 feet-per-second for passive) and 3/32-inch mesh screens. Pacific no longer proposes to grow manila clams, and use of a seawater intake system is not included in this permit amendment. However, **Special Condition 6** is retained to ensure that, if Pacific proposes to use a seawater intake system in the future, the screening and intake design would continue to meet these protective standards.

Migratory and Wintering Shorebirds

Humboldt Bay is one of the most important stopover estuaries on the Pacific Flyway, supporting more than 100,000 shorebirds annually across its mudflats and eelgrass mosaics. Intertidal aquaculture can alter prey availability, reduce foraging efficiency, and increase disturbance that forces energetically stressed migrants to flush or abandon high-quality feeding areas. Shorebirds rely heavily on open intertidal areas for probing and gleaning prey, and dense aquaculture gear can reduce the extent of accessible foraging habitat by limiting movement, obstructing substrate, and constraining the shallow margins where many species feed. CDP 9-17-0646 addressed these concerns by consolidating Pacific's aquaculture activities primarily within areas of the western portion of Arcata Bay that provide a lower abundance of shorebird foraging areas. This smaller scale, consolidated footprint was memorialized through **Special Condition 2**, which requires Pacific to maintain its limited footprint while retaining its lease of approximately 3,800 acres, effectively protecting large portions of mudflat habitat for shorebirds. In addition, **Special Condition 16** reduced potential adverse impacts to migratory birds by prohibiting Pacific personnel from disturbing foraging or resting

shorebirds or waterfowl during vessel transit or aquaculture operations. These conditions are retained in this permit amendment.

The potential loss of foraging habitat from the presence of aquaculture gear in tidal flats was also addressed by **Special Condition 15**, which requires five- and ten-foot wide channels at regular intervals within all of Pacific's densely planted cultch beds. However, one bed – EB 1-1 – has not yet been modified to include these required gaps. Therefore, **Special Condition 15** has been revised to ensure that EB 1-1 is converted to the appropriate spacing, creating additional open areas between gear and improving shorebird foraging opportunities in this part of the site.

The addition of **Special Condition 23** also enhances the protection of shorebirds by memorializing Coast's agreement to not install and use cultivation equipment within the approximately 19 acres identified for "relocation" of cultivation beds in CDP 9-17-0646 that have not been brought into aquaculture use. Maintaining these areas open would facilitate their continued use for shorebird foraging. Finally, revised **Special Condition 8** would require Pacific to document any wildlife interactions including instances of shorebird disturbance, and to report both the incident and the measures taken to avoid similar disturbance in the future in its annual report.

Marine Water Quality

Potential marine water quality effects from the proposed permit amendment include accidental discharge of fuel or bilge/ballast water from project vessels. Pacific uses vessels that contain between 5 and 250 gallons of gasoline or diesel fuel depending on the model. Pacific also stored portable UN/DOT-approved fuel containers (gasoline/diesel) containing 5 to 15 gal each, and 1 to 5 gallons of hydraulic fluid in sealed containers. The use of vessels for planting, maintaining, and harvesting oysters poses a potential risk of accidental discharge of fuel, bilge water, debris, or ballast water into Humboldt Bay. To address this risk, **Special Condition 24** requires Pacific to adhere to its Oil Spill Prevention and Response Plan (SPRP) which demonstrates that adequate spill response equipment is available in the event of an accidental release of hazardous fluids. Pacific estimates that a worst-case spill could release up to approximately 250 gallons of diesel fuel, so it maintains adequate response equipment on site, including 200 absorbent pads, 20 absorbent socks, multiple 100- to 200-foot floating containment booms, a skimmer or vacuum pump for small volumes, plug-and-patch kits, spill-response tool kits, and fire extinguishers to address any accidental spill that may occur. All project personnel would be trained in emergency spill procedures and adequate spill response equipment would be available on-board all project-related vessels. Pacific's SPRP also includes details on emergency response procedures, interagency coordination, notification processes, and actions that would be implemented in the event a spill response is necessary. Therefore, the SPRP provides the necessary measures for spill prevention, containment, and response, ensuring the project remains consistent with Section 30232 of the Coastal Act

G. RECREATION AND COASTAL ACCESS

Section 30210 of the Coastal Act states:

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30220 of the Coastal Act states:

Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Section 30222.5 of the Coastal Act states:

Oceanfront land that is suitable for coastal dependent aquaculture shall be protected for that use, and proposals for aquaculture facilities located on those sites shall be given priority, except over other coastal dependent developments or uses.

Water-oriented recreation throughout Arcata Bay includes boating; kayaking, canoeing, and stand-up paddleboarding; fishing and clamming; birdwatching and wildlife viewing; walking and hiking; beach play; and general enjoyment of scenic coastal views. Seasonal recreational hunting for waterfowl and wintering black brant also occurs throughout the bay during permitted hunting periods.

The proposed continuation of Pacific's aquaculture operations for an additional ten years could affect certain recreational uses—particularly boating, waterfowl hunting, and black brant scull hunting—by maintaining structures and equipment that present navigational hazards in areas used by boaters and hunters. Vessel traffic associated with routine operations may also disturb waterfowl and reduce hunting opportunities by flushing birds from the area.

These potential recreational impacts have been previously addressed through conditions in Pacific's existing CDPs. To support multiple uses of Arcata Bay and minimize navigational hazards, Pacific developed and periodically updated a standardized bed marking and mapping plan, as required by **Special Condition 11** of CDP 9-17-0646. This plan includes highly visible, standardized markers placed at high-tide elevations and updated maps identifying the locations of rafts and culture beds within the bay.

To reduce disturbance during the limited brant hunting season (typically 14 days between early November and mid-December), Pacific has historically restricted its on-water operations on hunting days, as required by **Special Condition 12**. On dates designated by CDFW for brant hunting, Pacific avoids vessel activity from one hour

before sunrise until sunset within Pacific's leased and owned areas depicted in [Exhibit 1](#).

Pacific has not proposed changes to its operational footprint, vessel routes, or timing and frequency of vessel use. Staff is not aware of changes in recreational use patterns that would alter the effectiveness of existing mitigation measures. Therefore, this amendment continues to require implementation of the bed marking and mapping plan under **Special Condition 11**, as modified herein, and carries forward **Special Condition 12** to limit operations during brant hunting days.

Conclusion

Under this amendment Pacific would be able to continue operations, consistent with Coastal Act Section 30222.5. With continued implementation of Special Conditions 11, and 12, the Commission finds that, as conditioned, the project is consistent with the public access and recreation policies of the Coastal Act.

H. CULTURAL RESOURCES

Section 30244 of the Coastal Act states:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

The project area is located within the ancestral and current territory of the Wiyot Tribe. Historically, the Wiyot people resided in villages primarily along the shores of Humboldt Bay (Wigi) and the mouth of the Eel River. Today, Wiyot peoples and their cultural heritage are represented by three federally recognized Tribes: the Wiyot Tribe, the Blue Lake Rancheria, and the Bear River Band of the Rohnerville Rancheria. These Tribes maintain cultural affiliation with the Humboldt Bay ethnographic area as defined by their own mapping.

Since time immemorial, the Wiyot Tribe has relied on Humboldt Bay for ceremonial practices, gathering, and subsistence. The Tribe identifies the bay's vast eelgrass beds as a significant cultural landscape under California Public Resources Code Section 21074(a). Beyond its direct use for tribal subsistence, eelgrass is the nursery of the Tribe's traditional food system, providing critical habitat for culturally essential species, including salmonids, Dungeness crab, Green sturgeon, and Pacific herring. For the Wiyot Tribe, Pacific herring (known in Soulatluk as wa'yit) is more than just a food source; it is a foundational component of their subsistence, ceremonial life, and environmental stewardship in Humboldt Bay (Wigi). Because herring spawn in the Bay's extensive eelgrass beds, the Tribe's relationship with the fish is inextricably linked to the protection of the eelgrass ecosystem. Without eelgrass, the fisheries the Tribe has relied on for thousands of years would suffer.

Eelgrass acts as a buffer for the Tribe's ancestral lands, stabilizing the bay floor with roots and helping to prevent erosion of sacred sites and village locations, like Tuluwat Island from wave energy. Furthermore, eelgrass habitat supports various avian species

of tribal importance, ranging from shorebirds like the curlew to waterfowl such as ducks, swans, and black brant.

Tribal Consultation

As part of this amendment review, on August 28, 2025, Commission staff invited representatives from Tribes understood to have current and/or historic connections to the project area to consult on the proposed project. These Tribes include the Bear River Band of Rohnerville Rancheria, Big Lagoon Rancheria, Blue Lake Rancheria, Cher-Ae Heights Indian Community of the Trinidad Rancheria, Hoopa Valley Tribe, Karuk Tribe, Tsnungwe Council, Wiyot Tribe, and Yurok Tribe. The Bear River Band of the Rohnerville Rancheria responded on August 29, 2025, that it agreed with the protection measures in Special Conditions 20 and 21. On December 10, 2025, Commission staff contacted the tribes that had not yet responded to provide another opportunity to provide input and/or to request consultation and received a response from the Wiyot Tribe on the same day requesting formal consultation. The consultation meeting was scheduled for January 15, 2026. During this meeting, representatives of the Tribe requested updated, larger maps of the cultivation footprint, noting that the current versions were too small and may not reflect all actual culture areas. They underscored the need to verify whether the westernmost polygons, located near their land, would remain part of the cultivation footprint once revised maps are submitted and expressed the need to avoid any impacts to eelgrass, particularly in areas used by brant near Tuluwat. The Tribe asked for confirmation on whether eelgrass beds occur within the three western blue polygons and expressed support for a project approach that reduces overall Bay impacts. They requested to be included in upcoming eelgrass-related meetings and noted that tribal fishermen, including the Tribal Chairman, should provide input since they know the area well. Additional questions included the source of oyster seed and assurance that introduced shellfish will not affect native species. They noted the Bay's muddy substrate and shared information about traditional uses of shells. Commission staff shared the meeting information for the interagency call during which the eelgrass monitoring results were discussed by Pacific Seafood's consultants who carried out the monitoring, and the Tribe attended that meeting. On February 11, 2026, Commission staff provided updated maps of Pacific's cultivation footprint confirming that the three western blue polygons were not part of the project footprint and had been included in error in the original application materials, and the beds at Sand Island and bed EB 7-2 in the East Bay have been removed in accordance with CDP 9-17-0646.

During a second government-to-government consultation with the Wiyot Tribe on March 6, 2026, Commission staff clarified that certain areas depicted on earlier cultivation maps provided to the Tribe were outdated, had already been decommissioned, and would not be used for shellfish production during the upcoming 10-year permit term. The Tribe provided substantive feedback regarding eelgrass, cultural resources, and operational coordination. The Tribe reviewed the results of Pacific's eelgrass monitoring program and agreed that oyster cultivation should not expand within the Bird Island area. The Tribe also requested revisions to **Special Conditions 19, 20, and 21** to ensure stronger protection for historic and prehistoric Tribal cultural features. In particular, the Tribe asked that the cultural resource conditions explicitly acknowledge and protect such features if encountered during Pacific's operations. These requested

changes have been incorporated into the updated Special Conditions included in this amended permit, along with a related revision to **Special Condition 8**, which now requires Pacific's annual report to describe any cultural resource discovery protocols implemented pursuant to these conditions.

On June 3, 2026, Commission staff contacted the Wiyot Tribe again to offer an additional consultation meeting in case the Tribe wanted to meet again prior to release of the staff recommendation and provided Commission staff's availability, however no meeting was scheduled. On August 4 and August 19, Commission staff again reached out to offer a meeting and called Tribal representatives on August 21. At the time of publication of this staff report and recommendation, no additional questions or concerns had been brought to the attention of Commission staff by representatives the Wiyot Tribe. Any concerns raised subsequent to the publication of this report will be brought to the attention of the Commission through the development of an addendum to this staff report and recommendation.

I. CUMULATIVE IMPACTS

In addition to Pacific's operation, Humboldt Bay supports a variety of other commercial shellfish harvesters, including Aqua Rodeo Farms, Hog Island Oyster Company, Humboldt Bay Oyster Company, and North Bay Shellfish LLC. This raises questions about the bay's carrying capacity, or ability to support extensive populations of cultivated non-native shellfish without adversely affecting native species that rely on similar sources of food. Although there is no widely established methodology to use for evaluating carrying capacity for filter feeders within an embayment (Filgueira et al., 2021), the Harbor District's 2015 EIR included an analysis of Pacific's former 300-acre operation that provides a useful frame of reference. Under the most conservative model using the highest feeding rates and slowest rate of tidal flushing, it was projected that oysters in Pacific's operation could filter over 16% of the water in Arcata Bay each day. Assuming the lowest feeding rates and fastest rate of tidal flushing, this fell to 1.8%. These percentages do not represent a direct loss of phytoplankton biomass, since oysters do not remove all of the phytoplankton from the water they filter. Therefore, this analysis provides little support for the concern that Pacific's aquaculture operation significantly reduces phytoplankton availability for wild native filter feeding shellfish in Arcata Bay.

Localized effects, however, may occur in areas of dense cultivation where large numbers of oysters filter water within relatively constrained spaces. Pacific's project design as permitted under CDP 9-17-0646 addressed this concern by ensuring that all newly established beds incorporate nine-, ten-, or sixteen-foot-wide corridors between cultivation lines. These wider channels increase water movement and tidal exchange across the beds, improving the delivery of food resources to both cultivated and native shellfish and reducing the likelihood and magnitude of any localized carrying capacity limitations.

When considered cumulatively, the combined effects of oyster filtration associated with Pacific's on-going operations and other existing aquaculture operations, remain below

thresholds associated with system-level carrying capacity concerns. The carrying capacity analysis in the Harbor District's 2015 Revised DEIR (R-DEIR) estimated a combined clearance efficiency (CE)¹¹ in the range of 0.24 – 0.46 for all projects in Arcata Bay, well below the threshold value of 1.0 at which cultured shellfish would filter the bay faster than it can be replenished by tidal exchange. Since then, aquaculture operations in Arcata Bay have expanded only modestly, with the Commission's approval of Hog Island Oyster Company's 27-acre aquaculture operation in 2022.¹² To date roughly 11.51 acres of that farm have been built and Hog Island Oyster Company estimates that about 16 acres will be built in total. The Harbor District's 2015 EIR considered a 300-acre footprint for Pacific, an overestimate compared to the consolidated 279-acre footprint permitted under CDP 9-17-0646 and smaller footprint currently in use by Pacific and that would result from the requested permit amendment. Therefore, Pacific's footprint plus Hog Island's 11.5-acre footprint are below the aquaculture acreage that was evaluated in the Harbor District's 2015 carrying capacity analysis. Although these estimates are based on conservative assumptions and early modeling approaches, they suggest that the proposed 10-year extension of Pacific's CDP is not expected to exceed the Bay's carrying capacity or result in significant cumulative impacts.

J. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 13096 of the Commission's administrative regulations requires Commission approval of coastal development permit applications to be supported by a finding showing the application, as modified by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act ("CEQA"). Section 21080.5(d)(2)(A) of CEQA prohibits approval of a proposed development if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant impacts that the activity may have on the environment. The Commission's regulatory program for reviewing and granting coastal development permits has been certified by the Resources Secretary to be the functional equivalent of environmental review under CEQA. (14 CCR § 15251(c)).

The Commission incorporates its findings on Coastal Act consistency as if set forth in full herein. As discussed in the findings, the project has been conditioned in order to be found consistent with the Chapter 3 policies of the Coastal Act. As conditioned, there are no feasible alternatives or additional feasible mitigation measures that would substantially lessen any significant adverse impacts the proposed project may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned, is the least environmentally damaging feasible alternative, has no

¹¹ Clearance efficiency (CE) is a measure of how effectively shellfish can process bay water during feeding compared to the efficiency of tidal flushing. Low CE values (<0.05) suggest that aquaculture operations will not result in significant changes to the bay's pelagic ecosystem, while CE values greater than 1.0 indicate that water in the bay is flushing slower than the water is being processed by cultured shellfish.

¹²<https://documents.coastal.ca.gov/reports/2022/2/F12a/F12a-2-2022-report.pdf>.

remaining significant environmental effects, and complies with the applicable requirements of the Coastal Act to conform to CEQA.

IV. SUBSTANTIVE FILE DOCUMENTS

Adopted findings and associated file for Coastal Development Permit Application No. 9-17-0646, its associated file, and all subsequent amendments.

Adopted findings and associated file for Coastal Development Permit Application No. E-06-003, its associated file, and all subsequent amendments.

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APPENDIX A – ORIGINAL PERMIT CONDITIONS FROM CDP 9-17-0646

STANDARD CONDITIONS

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the Permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. **Interpretation.** Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.
4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the Permittee to bind all future owners and possessors of the subject property to the terms and conditions.

SPECIAL CONDITIONS

1. **Permit Term Limit.** This permit shall expire on September 7, 2025. If the term of Pacific's submerged lands lease from the Humboldt Bay Harbor, Recreation, and Conservation District - currently also set to expire on September 7, 2025 - is amended or a new submerged lands lease is issued by the Humboldt Bay Harbor, Recreation, and Conservation District, Pacific may submit an application for a permit amendment requesting an extension of the permit term.
2. **Operational Footprint.** Prior to the installation of any of the test plots or relocation beds shown in [Exhibit 2](#), Pacific shall complete the removal of equipment from an equal or greater area of cultivation beds. By December 31, 2019, the combined footprint of all of Pacific's intertidal cultivation beds in Arcata Bay shall be limited to the approximately 279 acres of individual cultivation beds shown in [Exhibit 2](#). Once attained, Pacific shall not exceed this acreage for the remaining term of this permit. Additionally, Pacific shall maintain in place its leases with the Harbor District, the City of Eureka, and the Karamu Corporation (approximately 3,800 acres). Pacific shall exercise its renewal options, and satisfy its payments and other obligations in each of the aforementioned leases to ensure that all three leases remain in effect until at least September of 2025. Aside from the operational footprint established pursuant to this permit, Pacific shall not conduct oyster harvesting activities on any of its leased or owned lands.

3. **Eelgrass Monitoring Plan.** PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, COAST SHALL SUBMIT, for Executive Director review and written approval, a revised version of its March 31, 2017 Eelgrass Monitoring Plan (included as [Exhibit 13](#)). The Eelgrass Monitoring Plan shall focus on quantifying any loss of eelgrass density or percent vegetated cover within the three relocated cultivation beds referred to as “test plots.” Upon approval, the Eelgrass Monitoring Plan shall be implemented by a qualified, independent, third party approved by the Executive Director. Eelgrass performance shall be assessed on an annual basis over a 5-year monitoring term. Annual reporting of monitoring results, including raw sampling data, statistical analysis results, and a complete description of when and where sampling was carried out shall be provided as soon as possible after the completion of each year’s data collection efforts.
4. **Brant Monitoring Plan.** PRIOR TO INSTALLATION OF CULTIVATION EQUIPMENT WITHIN RELOCATION CULTIVATION BEDS, Pacific shall submit, for Executive Director review and written approval, a revised version of the April 21, 2017 Brant Monitoring Plan (included as [Exhibit 14](#)) capable of detecting and visually documenting and recording brant foraging activity on eelgrass beds within existing, relocated and converted cultivation beds (i.e. specifically feeding on eelgrass growing within beds rather than drift feeding) and determining how that level of foraging activity compares with foraging occurring on eelgrass growing outside cultivation beds. Survey techniques shall primarily rely on the use of remote cameras but may be augmented with other techniques, including field surveys and acoustic detection. The revised Brant Monitoring Plan shall include, at a minimum, surveys carried out during the appropriate seasons during baseline conditions and Year 1, 2, and 5 after installation of relocated cultivation beds or conversion of existing cultivation beds to configurations with wider spacing. The Executive Director’s review of the Brant Monitoring Plan shall be informed by the results of a 30-day independent peer review of the monitoring plan, overseen by the Executive Director and funded by Pacific in an amount not to exceed \$5,000 (not including administrative costs). Upon approval, the revised Brant Monitoring Plan shall be implemented by a qualified, independent, third party that shall be approved by and report to by the Executive Director.
5. **Vessel Management Plan.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, Pacific shall submit, for Executive Director review and written approval, a Vessel Management Plan that includes: (1) a map showing the travel routes and landing or cultivation bed access sites that the Pacific’s vessels shall use to access the cultivation areas; and (2) procedures to limit herding or flushing of black brant or shorebirds within Arcata Bay.
6. **Intake System Design.** All intake systems used by Pacific to supply water from Arcata Bay for maintenance cleaning and clam tray washing shall be designed with a screened intake with: (a) round or square openings of no more than 3/32 inches or slotted/wedge wire openings of no more than 1.75 millimeters, a screen area of at least 5 square feet per cubic foot per second water volume intake, a minimum open area of 27%, and a maximum intake water approach velocity of

0.2 feet per second if a self-cleaning device is installed that clears the entire screen face at least once every five minutes; or (b) round or square openings of no more than 3/32 inches or slotted/wedge wire openings of no more than 1.75 millimeters, a screen area of at least 20 square feet per cubic foot per second water volume intake, minimum open area of 27%, and a maximum intake water approach velocity of 0.05 feet per second if a self-cleaning device is not installed.

7. **Herring Spawn.** During the months of December, January and February, Pacific shall visually inspect beds prior to planting and/or harvesting, to determine if Pacific herring (*Clupea pallasii*) has spawned on eelgrass, culture materials, or substrate. Visual inspections shall be conducted in accordance with the survey protocols developed by the California Department of Fish and Wildlife (CDFW). In addition, at the beginning of the three month herring spawning period, Pacific shall provide staff of the CDFW Eureka Marine Region office a schedule of planting and/or harvesting activities anticipated to occur during the period. Further, Pacific shall inform CDFW Eureka office staff with the proposed location of planned planting and/or harvesting activities no less than 48 hours prior to the activities.

If herring spawning has been recently observed by Pacific or CDFW staff on or in the immediate vicinity of planned planting and/or harvesting activities, Pacific shall: 1) postpone planting and/or harvesting activities on any culture beds in those areas for two weeks, or until CDFW staff confirm herring eggs have hatched, and 2) notify the CDFW Eureka Marine Region office of the spawn within 24 hours. Pacific shall keep records of when CDFW was notified of the spawning event, and those records shall be included with the annual report described in **Special Condition 8**.

8. **Annual Report.** By December 31 of each year, Pacific shall submit to the Executive Director an annual report describing the status of each bed (including harvest date and planting date) within the operation footprint. The annual report shall also include information regarding the results of quarterly cleanup events carried out as described in **Special Condition 10**. In addition, the annual report shall include a report on the status and effectiveness of the system used by Pacific to secure its cultivation baskets and prevent their loss into the marine environment. This report shall include information on the number of baskets lost, replaced, and recovered throughout the course of the year as well as any design, management, or operational changes implemented to address issues that have arisen with the use of cultivation baskets.
9. **Plot Abandonment or Fallow.** Within 30 days of harvest on any cultivation bed or plot that is being discontinued, abandoned, removed, fallowed, or taken out of production for six months or more, Pacific shall notify the Executive Director and propose a schedule to remove all piles of oysters and oyster shells, and all culture apparatus from that plot, including but not limited to stakes, racks, baskets, floats, rope, ties, wires, tags and pallets as soon as feasible and in any event within no more than an additional 60 days. This deadline may be extended in writing by the Executive Director if Pacific can establish, to the Executive Director's satisfaction, that Pacific cannot meet this removal deadline due to tides

or other weather conditions. In addition, Pacific shall commission an independent third party, reviewed and approved by the Executive Director, to inspect the cultivation bed or plot and report directly to the Executive Director within 14 days on the status and completeness of the removal work.

10. Marine Debris Reduction and Management. Pacific shall carry out operations consistent with the following marine debris reduction and management practices:

- A. **Storm Damage and Debris.** As soon as safely possible following storm or severe wind or weather events, Pacific shall patrol all active mariculture areas for escaped or damaged mariculture equipment. All equipment that cannot be repaired and placed back into service shall be properly recycled or disposed of at an appropriate onshore facility. In addition, Pacific shall retrieve or repair any escaped or damaged mariculture equipment that it encounters while conducting routine daily and/or monthly maintenance activities associated with shellfish culture (e.g. bed inspections, shellfish grading and sorting). If the escaped gear cannot be repaired and replaced on the shellfish bed, it shall be properly recycled or disposed of on land.
- B. **Gear Marking.** Pacific shall mark shellfish culture bags, baskets, floats, and basket label tags in an easily identifiable manner with its company name or other identification information. Markings shall be securely attached and robust enough to remain attached and legible after an extended period in the marine environment (e.g. heat transfer, hot stamp, etching, etc.). Existing culture bags, baskets, floats, and basket label tags currently in use in culture beds shall be marked or replaced with marked versions when replanted and all unmarked gear shall be replaced in this way within 18 months. In the event that shellfish culture gear or equipment becomes dislodged from culture beds, it shall be Pacific's responsibility to retrieve the material from the shoreline, open water, eelgrass beds, mudflat, or submerged bottom with minimal damage to the resources affected. Such material shall be removed and properly disposed of, recycled, or returned to use.
- C. **Marine Debris Reduction Training.** WITHIN 30 DAYS OF ISSUANCE OF THIS PERMIT, Pacific shall implement an employee training regarding marine debris issues, how to identify loose culture gear, proper gear repair methods and how to completely remove gear from out-of-production or fallow cultivation beds. Particular focus shall be placed on management and maintenance practices to reduce the loss of any gear type consistently found during bay cleanup and inspection activities. This training shall be repeated on an annual basis throughout the term of the permit. During trainings, Pacific's employees shall be encouraged to consider and implement field and management practices that reduce the amount of small plastic gear (such as zip-ties, tags and fasteners) and non-biodegradable material (such as PVC stakes and nylon or polypropylene rope) used in its operations.
- D. **Cleanup Events.** Pacific shall conduct quarterly baywide cleanups in coordination with other interested parties or organizations, which shall

include walking different portions of the bay and shorelines to pick up escaped shellfish gear and other trash (regardless of whether it is generated by the Project). The volume and type of shellfish gear collected and the cleanup location (marked on a map) and duration of cleanup activity shall be recorded and documented in the annual report submitted to the Executive Director of the Commission. If consistent discoveries of certain gear types are made during cleanup events by Pacific or the public, Pacific shall evaluate (and if feasible, implement use of) alternative gear types or practices that would reduce these consistent sources of debris.

- E. **Ongoing Operations.** Pacific shall not leave or temporarily store tools, loose gear, or construction materials on its owned or leased tidelands or surrounding areas. All aquaculture gear installed in active culture beds shall be kept neat and secure and maintained in functional condition. Pacific shall carry out regular bed inspections and maintenance activities to help ensure that broken, collapsed, fallen, or buried gear is fixed or removed in a timely manner.
- F. **Bed Cleaning at Harvest.** At the time of harvest of each cultivation bed, Pacific shall carry out a thorough inspection to locate and remove loose or abandoned equipment, tools, and accumulations of oysters from the surrounding substrate.

11. Cultivation Area Mapping and Marking. WITHIN 30 DAYS OF ISSUANCE OF THIS PERMIT, Pacific shall submit for Executive Director review and written approval, an updated version of the Cultivation Bed Mapping and Marking Plan (Cultivation Area Plan) submitted to Commission staff on April 5, 2017 (included as [Exhibit 10](#)). This Cultivation Area Plan shall be revised to include all growing areas and cultivation beds approved by the Commission and include a consistent, standardized method of marking the location of Pacific's growing areas and culture beds in a manner that is obvious, identifiable, and understandable by boaters and recreational users not familiar with Pacific's operation. Unless a more effective approach can be developed by Pacific and approved in writing by the Executive Director, the Cultivation Area Plan shall include the removal of all existing marking stakes and the use of uniform marking stakes or posts that (1) remain visible and above water during maximum tidal heights; (2) are topped with reflective material; (3) identify the side of the stake on which the culture bed is located; and (4) are placed every 200-feet along the outer sides and at each corner of each of Pacific's active culture beds. In addition, the Cultivation Area Plan shall include a method for Pacific to develop, consistently update, and distribute digital and hard copy maps of Arcata Bay showing the location of its rafts and culture beds. Upon approval of the Cultivation Area Plan by the Executive Director, Pacific shall implement the Cultivation Area Plan and complete the removal, replacement, and installation of marking stakes or posts within 90 days from the date of the Cultivation Area Plan's approval by the Executive Director.

- 12. Brant Hunting.** Except for emergency situations, activities to ensure the safety of its operations or operations required for regulatory compliance, such as marine debris cleanup response after storm events, Pacific shall avoid on-water operations within its leased and owned areas depicted on [Exhibit 1](#) from one hour before sunrise until sunset on days that are designated by CDFW as brant hunting days on Arcata Bay, including season opening and closing days (typically brant hunting within the bay is limited to Wednesdays, Saturdays, and Sundays between early November and mid-December).
- 13. Bed Removal.** All cultivation bed removal activities shall be carried out consistent with the requirements of **Special Condition 9**. Once the growth cycle for oysters is complete on a bed that is to be removed (including those cultivation beds referred to as EB 7-2, SI 1-1, SI 2-1, SI 2-2, SI-N, and GI 1-2/II 1-2) that area shall be harvested, not replanted, and all cultivation gear and equipment, including all stakes, posts, lines, ropes, tags, wires, and fasteners, shall be permanently removed. This removal work shall also be carried out consistent with the requirements of **Special Condition 9** and shall be completed no later than December 31, 2019.
- 14. Protection of Brant Grit Sites.** Between the months of November and June, no vessel transit or cultivation activities shall be carried out within 384 meters of the black brant grit site at Sand Island shown in [Exhibit 8](#). Marine debris collection efforts and water quality sampling required by the California Department of Public Health shall be exempt from this requirement.
- 15. Longline Spacing.** During its next harvest, Pacific shall convert of all of its cultivation beds with 2.5-foot spacing throughout (including those culture bed referred to in the December 23, 2016 “Annual Report for CDP E-06-003” submitted to the Executive Director as BI Wk, EB 2-3, MR 10, MR 2, MR 5-1 k, MR 5-2, MR 8-2, and MR 9 and excluding beds that will be converted to greater spacing or removed) to a configuration that includes a five foot wide channel between each group of five lines and a ten foot wide channel between the end of one 100-foot line and the beginning of the next line, as represented in the diagram included in [Exhibit 3](#).
- 16. Wildlife Disturbance.** During vessel transit, harvest, maintenance, inspection, and planting operations, Pacific shall avoid approaching, chasing, flushing, or directly disturbing shorebirds, waterfowl, seabirds, or marine mammals.
- 17. Non-native Clam Cultivation.** Pacific shall implement management practices during grading and handling of non-native clams to prevent spillage, including by using screens during washing activities to contain all clams regardless of size during and by discarding all culls in appropriate onshore trash containers. All cultivated clams shall be removed from the clam cultivation rafts and bay prior to reaching 12mm shell size, at which size they are not sexually mature.
- 18. Other Agency Review and Approval.** PRIOR TO COMMENCEMENT OF PROJECT CONSTRUCTION AND/OR INSTALLATION ACTIVITIES, Pacific shall submit to the Executive Director written evidence that all necessary permits, permissions, approvals, and/or authorizations for the approved project have been

granted, including those from the North Pacific Regional Water Quality Control Board (RWQCB) and U.S. Army Corps of Engineers. Any changes to the approved project required by these agencies shall be reported to the Executive Director. No changes to the approved project shall occur without an amendment to this permit unless the Executive Director determines that no amendment is legally necessary.

19. Cultural Resources Point of Contact. Pacific has designated its operational manager, Greg Dale, as its authorized point of contact (Cultural Resources POC) to be used in the event any cultural or archaeological resource, human remains, or Native American grave goods are discovered during its aquaculture operations. If this designated point of contact changes, Pacific shall provide the name and contact information for its new Cultural Resources POC to the Executive Director, staff of the Humboldt Bay Harbor, Recreation, and Harbor District (Harbor District), and the Tribal Historic Preservation Officers (THPOs) appointed by the Blue Lake Rancheria, Bear River Band of Rohnerville Rancheria and Wiyot Tribe.

20. Cultural Resource Discovery Protocols. In the event an archaeological resource is discovered during ground-disturbing activities, Pacific shall immediately notify the THPOs appointed by the Blue Lake Rancheria, Bear River Band of Rohnerville Rancheria and Wiyot Tribe. As soon as feasible after such a discovery, Pacific shall retain a qualified archaeologist with local experience to consult with Commission staff, the Harbor District, the three THPOs, Pacific, and other applicable regulatory agencies to employ best practices for assessing the significance of the find, developing and implementing a mitigation plan if avoidance is not feasible, and reporting in accordance with this Special Condition and Harbor District Protocol. If no such discovery is made, no reporting is required. In addition:

- A. Ground-disturbing activities shall be immediately stopped if potentially significant historic or archaeological materials are discovered. Examples include, but are not limited to, concentrations of historic artifacts (e.g., bottles, ceramics) or prehistoric artifacts (chipped chert or obsidian, arrow points, groundstone mortars and pestles), culturally altered ash-stained midden soils associated with pre-contact Native American habitation sites, concentrations of fire-altered rock and/or burned or charred organic materials, and historic structure remains such as stone-lined building foundations, wells or privy pits. Ground-disturbing aquaculture operations may continue in other areas outside the discovery locale.
- B. As soon as feasible after a discovery, Pacific shall establish (e.g., tape off or mark with stakes) an "exclusion zone" where unauthorized equipment and personnel are not permitted around the discovery area and a 100-foot buffer zone.
- C. Pacific shall secure (e.g., provide 24-hour surveillance) the discovery locale if directed to do so by the Harbor District or Executive Director, if either deems it necessary to avoid further disturbances.

- D. Pacific's plant manager (located at 25 Waterfront Drive in Eureka) or party who made the discovery and initiated these protocols shall be responsible for immediately contacting by telephone the parties listed below to report the find:
 - i. Commission staff;
 - ii. The Harbor District's authorized point of contact; and
 - iii. Pacific's Cultural Resources POC
- E. Upon learning about a discovery, Pacific's Cultural Resources POC shall be responsible for immediately contacting by telephone the POCs listed below to initiate the consultation process for its treatment and disposition:
 - i. THPOs with Blue Lake Rancheria, Bear River Band and Wiyot Tribe; and
 - ii. Other applicable agencies involved in Project permitting (e.g., U.S. Army Corps of Engineers, etc.).
- F. In cases where a known or suspected Native American burial or human remains are uncovered, Pacific's Cultural Resources POC shall also immediately notify the Humboldt County Coroner (707-445-7242), along with the property owner of the discovery site. In addition, the protocols established through **Special Condition 21** shall be followed.
- G. Ground-disturbing project operations at the find locality shall be suspended temporarily while the Executive Director, the Harbor District, the three THPOs, a consulting archaeologist and other applicable parties consult about appropriate treatment and disposition of the find. Based on this consultation, Pacific shall, within three working days of discovery notification, prepare a Treatment Plan and submit it for review and approval by the Executive Director, the Harbor District, and the three THPOs. Where the Project can be modified to avoid disturbing the discovery site (e.g., through project redesign), the Treatment Plan shall consider this as a preferred option. Should human remains be encountered, the provisions of State laws shall apply and **Special Condition 21** shall be followed. The Treatment Plan shall reference appropriate laws and include provisions for analyses, reporting, and final disposition of data recovery documentation and any collected artifacts or other archaeological constituents. If feasible, the field phase of the Treatment Plan shall be accomplished within five days after its approval (with the understanding that circumstances may require longer periods for data recovery).
- H. Any and all inadvertent discoveries shall be considered strictly confidential, with information about their location and nature being disclosed only to those with a need to know. The Commission's and Harbor District's authorized representatives shall be responsible for coordinating any requests by or contacts to the media about a discovery.

- I. Pacific shall immediately communicate these protocols to its field work force (including contractors, employees, officers and agents), and such communications shall be made and documented at safety briefings.
- J. Ground-disturbing work at a discovery locale may not be resumed until authorized in writing by the Executive Director and Harbor District.
- K. The plant manager or party who made the discovery and initiated these protocols, shall make written notes available to the Executive Director and Harbor District describing: the circumstances, date, time, location and nature of the discovery; date and time each point of contact was informed about the discovery; and when and how security measures were implemented.
- L. Treatment Plans and corresponding Data Recovery Reports shall be authored by professionals who meet the Federal criteria for Principal Investigator Archaeologist and reference the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (48 Fed. Reg. 44734-44737).
- M. Final disposition of all collected archaeological materials shall be documented in a final Data Recovery report and its disposition determined in consultation with Tribal representatives.
- N. Pacific shall file Final Data Recovery Reports, along with updated confidential, standard California site record forms (DPR 523 series), at the Northwest Information Center of the California Historical Resources Information System, with report copies provided to the three identified THPOs.

21. Discovery of Remains. In the event human remains or Native American grave goods are discovered during ground-disturbing activities, work at the discovery locale shall be halted immediately, Commission staff, the Harbor District and County Coroner shall be contacted, and, consistent with State law, the following protocol shall be followed (in addition to the protocol described under **Special Condition 20**.

- A. If human remains are encountered, they shall be treated with dignity and respect. Discovery of Native American remains is a very sensitive issue and serious concern of affiliated Native Americans. Information about such a discovery shall be held in confidence by all Project personnel on a need-to-know basis. The rights of Native Americans to practice ceremonial observances on sites, in labs and around artifacts shall be upheld.
- B. Violators of Section 7050.5 of the California Health and Safety Code may be subject to prosecution to the full extent of applicable law (felony offense).
- C. In addition, the provisions of California law (Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the California Public Resources Code) shall be followed:

- i. The Coroner has two working days to examine the remains after being notified of the discovery. If the remains are Native American, the Coroner has 24 hours to notify the NAHC in Sacramento at (916) 653-4082.
- ii. The NAHC is responsible for identifying and immediately notifying the most likely descendant (MLD) of the deceased Native American.
- iii. Within 48 hours of their notification by the NAHC, the MLD shall be granted permission by the property owner of the discovery locale to inspect the discovery site if the MLD so chooses.
- iv. Within 48 hours of their notification by the NAHC, the MLD may recommend to the owner of the property (discovery site) the means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The recommendation may include the scientific removal and non-destructive or destructive analysis of human remains and items associated with Native American burials. Only those osteological analyses (if any) recommended by the MLD may be considered and carried out.

Whenever the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the property owner rejects the recommendation of the MLD and mediation between the parties by NAHC fails to provide measures acceptable to the property owner, Pacific shall cause the re-burial of the human remains and associated grave offerings with appropriate dignity on the property in a location not subject to further subsurface disturbance.

22. Indemnification by Permittee. By acceptance of this permit, Pacific agrees to reimburse the Coastal Commission in full for all Coastal Commission costs and attorney's fees – including (1) those charged by the Office of the Attorney General, and (2) any court costs and attorney's fees that the Coastal Commission may be required by a court to pay -- that the Coastal Commission incurs in connection with the defense of any action brought by a party other than the applicant/permittee against the Coastal Commission, its officers, employees, agents, successors and assignees challenging the approval or issuance of this permit. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission. PRIOR TO ISSUANCE OF THIS PERMIT, Pacific shall enter into a separate written agreement with the Executive Director agreeing to reimburse the Coastal Commission for all court costs and attorney's fees, consistent with the requirements of this condition.