PUBLIC NOTICE

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

BUILDING STRONG®

APPLICATION FOR PERMIT
Ventura Shellfish Enterprise

Public Notice/Application No.: SPL-2017-00093-BLR
Project: Ventura Shellfish Enterprise Aquaculture Project, Ventura Port District
Comment Period: August 27, 2019 through September 27, 2019
Project Manager: Theresa Stevens, Ph.D.; (805) 585-2146; theresa.stevens@usace.army.mil

Applicant
Brian Pendleton General Manager
Ventura Port District
1603 Anchors Way Drive
Ventura, California 93001

Contact
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1630 San Pablo Ave. Suite 300
Oakland, California 94612

Location
The project is located in the Pacific Ocean approximately 3.53 miles from shore in federal waters, near the city of Ventura, Ventura County, California (latitude: 34.2418918562646, longitude: -119.292983992192).

Activity
To authorize construction of 20 offshore aquaculture plots, each 100 acres in size (for a total of 2,000 acres) approximately 3.53 miles from shore to cultivate mussels for commercial harvest, in association with Ventura Shellfish Enterprise (VSE) Aquaculture Project (see attached map and drawings). For more information see Additional Project Information section below.

Interested parties are hereby notified an application has been received for a Department of the Army permit for the activity described herein and shown on the attached drawing(s). We invite you to review today's public notice and provide views on the proposed work. By providing substantive, site-specific comments to the Corps Regulatory Division, you provide information that supports the Corps' decision-making process. All comments received during the comment period become part of the record and will be considered in the decision. This permit will be issued, issued with special conditions, or denied under Section 10 of the Rivers and Harbors Act. Comments should be mailed to:

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS
REGULATORY DIVISION
ATTN: Theresa Stevens, Ph.D. (Corps File No. SPL-2017-00093-BLR)
60 South California Street, Suite 201
Ventura, California 93001-2598

Alternatively, comments can be sent electronically to: theresa.stevens@usace.army.mil.

The mission of the U.S. Army Corps of Engineers Regulatory Program is to protect the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands. The Regulatory Program in the Los Angeles District is executed to protect aquatic resources by developing and implementing short- and long-term initiatives to improve regulatory products, processes, program transparency, and customer feedback considering current staffing levels and historical funding trends.

Corps permits are necessary for any work, including construction and dredging, in the Nation's navigable waters and their tributary waters. The Corps balances the reasonably foreseeable benefits and detriments of proposed projects and makes permit decisions that recognize the essential values of the Nation's aquatic ecosystems to the general public, as well as the property rights of private citizens who want to use their land. The Corps strives to make its permit decisions in a timely manner that minimizes impacts to the regulated public.

During the permit process, the Corps considers the views of other Federal, state and local agencies, interest groups, and the general public. The results of this careful public interest review are fair and equitable decisions that allow reasonable use of private property, infrastructure development, and growth of the economy, while offsetting the authorized impacts to the waters of the United States. The permit review process serves to first avoid and then minimize adverse effects of projects on aquatic resources to the maximum practicable extent. Any remaining unavoidable adverse impacts to the aquatic environment are offset by compensatory mitigation requirements, which may include restoration, enhancement, establishment, and/or preservation of aquatic ecosystem system functions and services.

Evaluation Factors

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof. Factors that will be considered include conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people. In addition, if the proposal would discharge dredged or fill material, the evaluation of the activity will include application of the EPA Guidelines (40 CFR Part 230) as required by Section 404 (b)(1) of the Clean Water Act.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Preliminary Review of Selected Factors

EIS Determination- A determination regarding the need for an environmental impact statement (EIS) for the proposed project has not yet been made.

Water Quality- The proposed project is located in federal waters beyond the 3-mile state water boundary, and would not result in a discharge of dredged or fill material as defined in the Corps implementing regulations at 33 CFR 323.2. Therefore water quality certification under Section 401 of the Clean Water Act is not required. However, the U.S. EPA may determine if a National Pollutant Discharge Elimination System permit is required for the proposed facility construction and/or operation.

Coastal Zone Management- The project is located approximately 3.53 miles from shore, beyond the 3-mile state water boundary and therefore beyond the state designated coastal zone. However, the California Coastal Commission (CCC) has determined the proposed project would affect coastal zone resources; therefore the applicant must obtain concurrence from the CCC that the project is consistent with state's coastal zone management program under the federal Coastal Zone Management Act (CZMA). The applicant has submitted project information to the CCC and the CCC's CZMA consistency certification is pending.

Essential Fish Habitat (EFH)- The Corps of Engineers has determined the proposed activity may adversely affect EFH and federally managed fisheries in the Pacific Groundfish, Coastal Pelagics and Highly Migratory Species Fishery Management Plans. Pursuant to Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), the Corps will conduct EFH consultation for the proposed project with the NOAA Fisheries separately from this public notice. In order to comply with the MSA, pursuant to 50 CFR 600.920(e)(3), the following information has been identified:

1. Description of the proposed action: see project description below.

2. On-site review information: see baseline information below.

3. Analysis of the potential adverse effects on EFH and managed fisheries: The potential adverse effects of the proposed project are: entanglement in loose fishing gear that becomes caught in longlines; temporary loss of sandy seafloor habitat from anchor installation and associated turbidity; shell debris accumulation; increased noise during construction; hazardous contaminants from potential oil spills; loss of prey resources due to fouling organisms; and disturbance of the benthic environment from project operations.

4. Applicant-proposed minimization, conservation, or mitigation measures have been proposed to reduce adverse effects on EFH and managed fisheries; the Corps does not have ongoing federal control and responsibility over operational activities:

MM BIO-1 **Marine Wildlife Entanglement Plan.** No less than once per month, each grower/producer operating on a VPD lease shall visually inspect all ropes, cables, and equipment via depth/fish finders to determine if any entanglement of a marine mammal has occurred and to ensure that (a) no lines have been broken, lost or removed; (b) all longlines, anchor lines, and buoy lines remain taught and in good working condition; and (c) any derelict fishing gear or marine debris that collects in the growing gear is removed

and disposed of at an identified onshore facility. All equipment and materials accidentally released or found to be missing from the facility during monthly inspections, including buoys, floats, lines, ropes, chains, cultivation trays, wires, fasteners, and clasps, shall be searched for, collected, properly disposed of onshore, and documented in the annual inspection report. Monitoring shall occur monthly for the first two years following deployment and, in the event that there are no marine wildlife entanglements within the first two years, may be reduced to quarterly inspections thereafter.

Inspections shall include recordings by depth/fish finder or ROV surveys of lines and/or monitoring performed by SCUBA divers. Recorded video shall be provided along with the annual report described above. Any maintenance issues including wear, loosening, or fatigue of materials shall be remedied as soon as possible. All incidents of observed whale entanglement shall be immediately reported to SOS WHALe. Any other marine wildlife (i.e., other marine mammals, turtles) observed to be entangled will be immediately reported to NOAA Fisheries Marine Mammal Stranding Network Coordinator, West Coast Region, Long Beach Office. Only personnel who have been authorized by NOAA Fisheries and who have training, experience, equipment, and support will attempt to disentangle marine wildlife. If possible, the grower/producer shall document and photograph entangled wildlife and the entangling gear material so as to modify gear and avoid any future entanglements.

MM BIO-2 **Entanglement Prevention.** Grow-ropes will be attached to the head rope with a low-breaking-strength twine (4-millimeter (0.16-inch) diameter; <1,000 pounds), which will facilitate rapid detachment in the unlikely event of any interaction with the longline. A 1,100-pound breakaway link will be installed between surface marking buoys and the vertical lines.

MM BIO-3 **Marine Wildlife Observer**. A Marine Wildlife Observer shall be present on each project construction vessel during all construction activities, including the installation of long lines and anchoring systems. The observer shall monitor and record the presence of all marine wildlife (marine mammals and sea turtles) within 100 yards of the work area. The observer shall have the authority to halt operations if marine wildlife are observed or anticipated to be near a work area and construction activities have the potential to result in injury or entanglement of marine wildlife. In addition, all work (including vessel motors) will be halted if a cetacean is observed within the monitoring area or if a pinniped or sea turtle is observed within 50 yards of the work area. Work may commence after the observed individuals have moved out of the monitoring area.

Observers' reports on marine mammal monitoring during construction activities shall be prepared and submitted to NOAA Fisheries on a monthly basis. Reports shall include such information as the (1) number, type, and location of marine mammals observed; (2) the behavior of marine mammals in the area of potential sound effects during construction; (3) dates and times when observations and in-water project construction activities were conducted; and (4) dates and times when in-water construction activities were suspended because of marine mammals.

VPD shall prepare a list of qualified marine wildlife observers who meet the following minimum qualifications: visual acuity in both eyes (correction is permissible) sufficient to discern moving targets at the water's surface with ability to estimate target size and distance; (2) use of binoculars or spotting scope may be necessary to correctly identify the target; (3) advanced education in biological science, wildlife management, mammalogy, or related fields (bachelor's degree or higher is preferred); (4) experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience); (5) experience or training in the field identification of marine mammals (cetaceans and pinnipeds) and sea turtles; and (6) ability to communicate orally, by radio or in person, with project personnel to provide real time information on marine wildlife observed in the area, as needed.

MM BIO-4 **Cultivation of Spat Off site.** Only hatchery-reared mussel spat grown at a facility certified by CDFW will be used in order to ensure that spat are free of introduced invasive species, parasites, and pathogens of concern; however, natural mussel spat collected on farm grow-out lines and buoys may also be harvested and cultivated.[1]

MM BIO-5 **Marine Wildlife Education.** Each grower/producer will be required to provide bi-annual (twice per year) marine wildlife education to its employees regarding proper procedures relating to marine wildlife. The training curriculum will include identifying the presence of specified marine wildlife and procedures for avoiding impacts to marine wildlife during operations. These procedures will include (1) reducing speed and observing safe distances from marine wildlife; (2) providing a safe path of travel for marine mammals that avoids encirclement or entrapment of the animal(s) between the vessel and growing apparatus; (3) if approached by a marine mammal, reducing speed, placing the vessel in neutral and waiting until the animal is observed clear of the vessel before making way; (4) avoiding sudden direction or speed changes when near marine mammals; (5) refraining from approaching, touching or feeding a marine mammal; and (6) immediately contacting their supervisor and other identified parties/agencies identified in MM BIO-1 should an employee observe an injured marine mammal.

MM BIO-7 **Spill Prevention and Response**. Discharges of feed, pesticides, or chemicals (including antibiotics and hormones) in ocean waters are prohibited. Fuel, lubricants and chemicals must be labeled, stored and disposed of in a safe and responsible manner, and marked with warning signs. Precautions shall be taken to prevent spills, fires and explosions, and procedures and supplies shall be readily available to manage chemical and fuel spills or leaks. Each grower/producer shall comply with the Spill Prevention and Response Plan (SPRP) for vessels and work barges that will be used during project construction and operations. Each grower/producer operating in the project area shall be trained in, and adhere to, the emergency procedures and spill prevention and response measures specified in the SPRP during all project operations. The SPRP shall provide for emergency response and spill control procedures to be taken to stop or control the source of the spill and to contain and clean up the spill. The SPRP shall include, at a

[1] MM BIO-4 is not subject to the Corps federal control and responsibility.

minimum: (a) identification of potential spill sources and quantity estimates of a project specific reasonable worst case spill; (b) identification of prevention and response equipment and measures/procedures that will be taken to prevent potential spills and to protect marine and shoreline resources in the event of a spill. Spill prevention and response equipment shall be kept onboard project vessels at all times; (c) a prohibition on at-sea vessel or equipment fueling/refueling activities; and (d) emergency response and notification procedures, including a list of contacts to call in the event of a spill; (e) assurance that all hydraulic fluid to be used for installation, maintenance, planting, and harvesting activities shall be vegetable based.

MM BIO-9 **Sediment Quality Monitoring Plan.** A Sediment Quality Monitoring Plan shall be developed requiring monitoring of sediment conditions within the project area, including monitoring the quantity, type, and distribution of biological materials (such as shellfish, shell material, and fouling organisms) that accumulate on the seafloor. Monitoring will also include an evaluation of any changes to oxygen demand of benthic infaunal and epifaunal communities, and changes to the chemical and biochemical conditions of seafloor sediments along with a description of performance standards to meet.

If performance standards are not met, corrective actions will be outlined. The Plan will include reporting requirements, including annual report submittals to NOAA, NMFS, and the Corps for review. If performance standards are met for a period of time, the plan will provide for appropriately scaling down monitoring and intervals over time.

MM BIO-10 **Aquaculture Gear Monitoring and Escapement Plan.** Include in overall management plan an aquaculture gear monitoring and escapement plan. Any farm gear that has broken loose from the farm location shall be retrieved. The farm site shall be visited at minimum twice per month to examine the aquaculture gear for potential loss or non-compliant deployment, including inspections for fouling organisms. Any organisms that have a potential to cover the sea floor will be removed and disposed of at an identified upland facility. A Marine Debris Management Plan shall also be prepared that includes (a) a plan for permanently marking all lines, ropes, buoys, and other facility infrastructure and floating equipment with the name and contact information of the grower/producer; (b) a description of the extent and frequency of maintenance operations necessary to minimize the loss of materials and equipment to the marine environment resulting from breakages and structural failures; and (c) a description of the search and cleanup measures that would be implemented if loss of shellfish cultivation facility materials, equipment, and/or infrastructure occurs.

5. Conclusions regarding effects of the proposed project on EFH and managed fisheries:
Implementation of the project could result in temporary adverse impacts associated with construction activities and impacts from project operations including entanglement, changes in sediment composition, and potential oil spills. However, implementation of the applicant-proposed mitigation measures is expected to reduce potential impacts on EFH and managed fisheries to negligible levels.

In light of the applicant-proposed mitigation measures, it is the Corps' initial determination the proposed project may adversely affect but would not have a substantial adverse impact on EFH or

managed fisheries in California waters. A final determination and the need for additional mitigation measures will be made during consultation with the NOAA Fisheries.

Cultural Resources- The latest version of the National Register of Historic Places has been consulted and this site is not listed. This review constitutes the extent of cultural resources investigations by the District Engineer, and he is otherwise unaware of the presence of such resources.

Endangered Species and Marine Mammal Protection Act- Preliminary determinations indicate the proposed project may affect federally listed endangered or threatened species and marine mammals. The project would have no effect on designated critical habitat because no critical habitat occurs in the project area. Consultation under Section 7 of the Endangered Species Act, and the Marine Mammal Protection Act will be conducted with NOAA Fisheries for potential impacts on federally listed and federally protected marine mammal species. The following preliminary determinations have been made by the Corps:

Proposed Effects Determinations

Federally Protected Species	No Effect	May Affect, But Is Not Likely to Adversely Affect	Is Likely to Adversely Affect
Balarnoptera acutorostrata Common Minke Whale		✓	
Balaenoptera physalus physalus Fin Whale		✓	
Caretta caretta Loggerhead Sea Turtle		✓	
Chelonia mydas Green Sea Turtle		✓	
Delphinus capensis capensis Long-beaked Common Dolphin		✓	
Delphinus delphis delphis Short-beaked Common Dolphin		✓	
Eschrichtius robustus Gray Whale		✓	
Lagenorhynchus obliquidens Pacific White-sided Dolphin		✓	
Lepidochelys olivacea Olive Ridley Sea Turtle		✓	
Megaptera novaeangliae Humpback Whale		✓	
Phoca vitulina Pacific Harbor Seal		✓	
Tursiops truncatus Common Bottlenose Dolphin		✓	
Zalophus californianus California Sea Lion		✓	

In addition, the Corps has made a preliminary determination the proposed project would have no effect on the federally listed endangered steelhead trout (*Oncorhynchus mykiss*) or the threatened Guadalupe fur seal (*Arctocephalus townsendi*).

Public Hearing- Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearing shall state with particularity the reasons a public hearing is needed.

Proposed Activity for Which a Permit is Required

The proposed activity for which a permit is required is to conduct work and construct structures in 2,000 acres of navigable waters of the U.S. (Pacific Ocean) approximately 3.53 miles from shore (i.e., federal waters) for the purpose of establishing a commercial shellfish aquaculture site; individual plots within the site would be leased by the applicant to commercial operators.

Corps' Scope of Analysis

Operations and activities to maintain the structures and monitor the plots following construction may affect navigation safety, navigable capacity, or potentially impact aquatic species or aquatic functions. While such activities are not subject to a Department of the Army permit, such activities are within the Corps' scope of analysis. To this end, the Corps would require monitoring reports to insure navigation safety is being maintained, and aquatic resource impacts are monitored and addressed. Operations and activities related to shellfish cultivation and harvesting do not require a Department of the Army permit and are not subject to the Corps' continuing federal control and responsibility.

Additional Project Information

Baseline information-

The project site is characterized by a gradually sloping sandy/soft bottom habitat and was selected based on the findings of a U.C. Santa Barbara and NOAA siting analysis to avoid (to the extent feasible) naturally occurring biological resources (reefs, kelp beds), migratory corridors, trawling grounds, marine protected areas, known obstructions, and other resources uses (e.g., shipping lanes, offshore energy production facilities) (see avoidance below for more information). The project area does not include any known rocky reef or kelp forest habitat. The Southern California Bight (SCB) provides the regional context for the project site. The SCB is located along the curved coastline of Southern California from Point Conception south to Cape Colnett in Baja California and includes the Channel Islands and the Pacific Ocean. The habitats and biological communities of the SCB are influenced by dynamic relationships among climate, ecology, and oceanography (e.g., currents). The SCB provides essential nutrients and marine habitats for a range of species and organisms. Submarine canyons, ridges, basins, and seamounts provide unique deep water habitats within the region. The basins provide habitats for a significant number of mid-water and benthic deep-sea fish near the Channel Islands, whereas nearshore areas provide habitats for kelp and seagrass communities. Nearshore geology includes a variety of bottom types, including soft sediments and rocky bottoms. Hard-substrate environments, such as the rocky intertidal, shallow subtidal reefs, and deep rocky reefs, are a key component of the high productivity found within the SCB. Due to linkages among ecosystems, the impacts of ecosystem dynamics contained within the SCB extend to interactions with species in the greater Eastern Pacific Ocean. The Santa Barbara Channel is located within the SCB and extends from Point Conception to Point Mugu.

The project application included information which indicates the project site would not be located in commercial shipping lanes but would be in an area used by commercial fishing vessels and recreational boaters; see discussion of the siting analysis below.

Project description-

The project would consist of twenty (20) aquaculture plots each 100-acres in size for a total of 2,000 acres (site map attached). The plots would be located in federal waters of the Santa Barbara Channel approximately 3.53 miles from the shore, northwest of Ventura Harbor, in water depths ranging from 78 to 114 feet below sea level and an average depth of 98 feet. The plots would range from 2,900 to over 3,000 feet seaward of the 3-mile state water boundary. The City of Ventura is 4.5 miles from the nearest proposed plot. Ventura Harbor is 4.1 miles from the nearest proposed plot.

The proposed project would establish a commercial bivalve aquaculture operation based from Ventura Harbor. Installation of anchors, longlines, and other facilities would be performed by individual shellfish companies, and would be subject to all permit requirements. Submerged longlines consist of a horizontal structural header line, or “backbone,” that is attached to the seafloor by sand screw anchors at each end and is marked and supported by a series of buoys along the central horizontal section. Sand screw anchors have been shown to exhibit superior holding power as compared to other anchoring systems and are removable. Sand screw anchors would be installed by a hydraulic drill with a drill head that operates from a rig lowered to the ocean floor. The sand screw anchors would be screwed into the sandy bottom ocean floor approximately 10 to 20 feet (3 to 6 meters) deep. Each 100-acre plot would contain up to 48 anchors for a total of 960 anchors at full project build out.

Buoys marking the corners of each plot would identify the cultivation area for navigational safety purposes, and would be required to comply with U.S. Coast Guard regulations for height, illumination, and visibility, including radar reflection. The four corner buoys marking each plot would include radar reflectors and be illuminated with a flashing light that is visible within a two-mile range. Surface buoys for each longline would consist of two 16-inch surface corner buoys (one corner buoy supporting and marking either end of the backbone), as well as one 16-inch buoy supporting and marking the center pickup line, for a total of three surface buoys per longline. All surface buoys would be uniquely colored for each operator and marked with the grower/producer name and phone number. Buoys attached to the central horizontal portion of the backbone line support the line, would provide a means of lifting the backbone line to access the cultivation ropes, and determine the depth of the submerged backbone, which would vary seasonally from 15 to 45 feet below the surface. Additionally, a combination of surface and submerged buoys attached to the backbone line would be used during the mussel production cycle to maintain tension on the structural backbone line as the weight of the mussel crop increases. These would consist of 24-inch buoys attached at required intervals along the surface and connecting to the backbone line, in combination with smaller submerged buoys affixed directly to the backbone line. The combination of surface and submerged buoyancy is designed to create a tensioned but flexible structure that is capable of responding dynamically to surface waves and storms.

The longlines that would be utilized are thick (1-inch diameter), tensioned (to approximately 800 pounds) rope. The longline configuration produces a fairly rigid tensioned structure from which the cultivation ropes, or “fuzzy ropes” are attached. Fuzzy ropes are characterized by extra filaments that provide settlement substrate for mussels to attach. Fuzzy ropes may be attached to and suspended from the backbone rope either as individual lengths or as a continuous looping single length that drapes up and down over the backbone. The length of each section or loop of fuzzy rope would be approximately 20 feet but would depend on the lifting capacity of the servicing vessel. The length of the central horizontal section of backbone line would be 575 feet, which would support approximately 8,000 feet of fuzzy cultivation line.

The shape of each of the 100-acre plots would be a function of the geometry of the submerged backbone line and anchoring. Each horizontal section of the longline would be approximately 575 feet and would require an anchor scope of approximately 2.5 times depth. Therefore, in 100 feet of water depth, scope from the horizontal section of backbone to the helical screw anchor would require 250 feet on each end of the line, making a total length of 1,075 feet from anchor screw to anchor screw. There would be a 50-foot setback on each end of the pairs (for a total of 100 feet of spacing between lines of adjacent plots) and 50 foot spacing between the two center pins. Parallel lines would be spaced 150 feet apart, with a 125 foot setback at each of the long sides (for a total of 250 feet of spacing between lines of adjacent plots). A 100-acre plot would therefore accommodate up to 24 individual longlines. The submerged longline growing gear configuration would be specifically engineered for open ocean conditions with respect to size and strength of all lines, anchoring, hardware, and buoyancy.

Applicant-proposed mitigation–

The proposed mitigation may change as a result of comments received in response to this public notice, the applicant's response to those comments, and/or the need for the project to comply with EFH or ESA consultation and/or other effects to aquatic resources. In consideration of the above, the proposed mitigation sequence (avoidance/minimization/ compensation), as applied to the proposed project is summarized below:

Avoidance:

An initial candidate project area in state waters was selected by the applicant based on a marine spatial planning analysis prepared by the U.C. Santa Barbara Bren School. The site selection analysis included numerous factors related to the suitability of the candidate growing area for mussels including: location in state waters near Ventura Harbor for product landing; avoidance of potential pollution sources; and avoidance of conflicts with existing subsurface leases for oil and gas pipelines, etc.

Through the stakeholder engagement process and consultation with the applicant’s aquaculture specialist, it became clear that location of the project in state waters posed certain issues. Most importantly, the applicant received information from local halibut trawlers that the proposed state waters candidate area was located in one of only two areas designated statewide by the California Department of Fish and Wildlife (CDFW) as halibut trawl grounds. Further, a minimum 80’ bottom depth (versus the initial criterion of 60’ bottom depth) would reduce exposure to various mussel predator species (e.g., diving ducks) and potential storm surge. The applicant subsequently selected an alternative location in federal waters, which was identified based on further refinement of the spatial planning analysis by the Bren School.

Subsequently, NOAA’s National Ocean Service (NOS) staff undertook a second siting study focused on federal waters proximate to Ventura Harbor. The results of this siting analysis identified an alternative site near Ventura Harbor and gave equal consideration to existing uses and conflicts, including:

- Existing vessel traffic corridors
- Oil and gas production
- Commercial fishing (specifically trawl and squid fisheries)
- Obstructions, including submerged cables and wrecks

The NOAA NOS alternative site is the currently proposed project location; it is located in the northern portion of the siting analysis study area, which was determined to have the least potential for overlap or conflict with existing uses. The site overlaps with the federal waters alternative site identified in the Bren School spatial planning analysis, indicating the area has been shown by two independent studies to have the fewest potential conflicts with existing uses and sensitive environmental resources.

Minimization:

The proposed project has been designed to minimize direct and indirect impacts to waters of the U.S. to the maximum extent practicable through implementation of the following applicant-proposed measures.

Applicant-proposed measures to minimize debris and impacts to water quality

1. Sediment Quality Monitoring Plan. A Sediment Quality Monitoring Plan shall be developed requiring monitoring of sediment conditions within the project area, including monitoring the quantity, type, and distribution of biological materials (such as shellfish, shell material, and fouling organisms) that accumulate on the seafloor. Monitoring will also include an evaluation of any changes to oxygen demand of benthic infaunal and epifaunal communities, and changes to the chemical and biochemical conditions of seafloor sediments along with a description of performance standards to meet.

If performance standards are not met, corrective actions will be outlined. The Plan will include reporting requirements, including annual report submittals to NOAA and NMFS and the Corps for review. If performance standards are met for a period of time, the plan will provide for appropriately scaling down monitoring and intervals over time.

2. Spill Prevention and Response. Discharges of feed, pesticides, or chemicals (including antibiotics and hormones) in ocean waters are prohibited. Fuel, lubricants and chemicals must be labeled, stored and disposed of in a safe and responsible manner, and marked with warning signs. Precautions shall be taken to prevent spills, fires and explosions, and procedures and supplies shall be readily available to manage chemical and fuel spills or leaks. Each grower/producer shall comply with the Spill Prevention and Response Plan (SPRP) for vessels and work barges that will be used during project construction and operations. Each grower/producer operating in the project area shall be trained in, and adhere to, the emergency procedures and spill prevention and response measures specified in the SPRP during all project operations. The SPRP shall provide for emergency response and spill control procedures to be taken to stop or control the source of the spill and to contain and clean up the spill. The SPRP shall include, at a minimum: (a) identification of potential spill sources and quantity estimates of a project specific reasonable worst case spill; (b) identification of prevention and response equipment and measures/procedures that will be taken to prevent potential spills and to protect marine and shoreline resources in the event of a spill. Spill prevention and response equipment shall be kept onboard project vessels at all times; (c) a prohibition on at-sea vessel or equipment fueling/refueling activities; and (d) emergency response and notification procedures, including a list of contacts to call in the event of a spill; (e) assurance that all hydraulic fluid to be used for installation, maintenance, planting, and harvesting activities shall be vegetable based.

3. Aquaculture Gear Monitoring and Escapement Plan. Include an overall management plan and aquaculture gear monitoring and escapement plan. Any farm gear that has broken loose from the farm location shall be retrieved. The farm site shall be visited at minimum twice per month to examine the aquaculture gear for potential loss or non-compliant deployment, including inspections for fouling organisms. Any organisms that have a potential to cover the sea floor will be removed and disposed

of at an identified upland facility. A Marine Debris Management Plan shall also be prepared that includes (a) a plan for permanently marking all lines, ropes, buoys, and other facility infrastructure and floating equipment with the name and contact information of the grower/producer; (b) a description of the extent and frequency of maintenance operations necessary to minimize the loss of materials and equipment to the marine environment resulting from breakages and structural failures; and (c) a description of the search and cleanup measures that would be implemented if loss of shellfish cultivation facility materials, equipment, and/or infrastructure occurs.

4. Decommissioning Plan. A decommissioning plan for the timely removal of all shellfish, structures, anchoring devices, equipment, and materials associated with the shellfish cultivation facility and documentation of completion of removal activities will be a requirement of each permit or sub-permit. Financial assurances to guarantee implementation of the plan will be in place and reviewed periodically.

Applicant-proposed measures to prevent spread of invasive species

1. Cultivation of Spat Offsite. Only hatchery-reared mussel spat grown at a facility certified by CDFW will be used in order to ensure that spat are free of introduced invasive species, parasites, and pathogens; however, natural mussel spat collected on farm grown-out lines and buoys may also be harvested and cultivated.

2. Invasive Species. Grower/producers operating in the project area shall be required to receive training from NMFS to identify potential invasive species and how to properly dispose of such invasive species if discovered.

Applicant-proposed measures to prevent navigational impacts

1. Update NOAA Charts. VPD shall submit to the NOAA Office of Coast Survey: (a) the geographical coordinates of the facility boundaries obtained using a different geographic position unit or comparable navigational equipment; (b) as-built plans of the facility and associated buoys and anchors; (c) each grower/producer's point of contact and telephone number; and (d) any other information required by the NOAA Office of Coast Survey to accurately portray the location of the shellfish cultivation facility on navigational charts.

2. Notice to Mariners. No less than 15-days prior to the start of in-water activities associated with the installation phase of the project, VPD shall submit to (a) the U.S. Coast Guard (for publication in a Notice to Mariners); and (b) the harbormasters (for posting in their offices of public noticeboards), notices containing the anticipated start date of installation, the anticipated installation schedule, and the coordinates of the installation sites. During installation, VPD shall also make radio broadcast announcements to the local fishers' emergency radio frequency that provide the current installation location and a phone number that can be called for additional information.

Applicant-proposed measures to prevent impacts to threatened or endangered species

1. Marine Wildlife Entanglement Plan. No less than once per month, each grower/producer operating on a VPD lease shall visually inspect all ropes, and equipment via depth/fish finders to determine if any entanglement of a marine mammal has occurred and to ensure that (a) no lines have been broken, lost or removed; (b) all longlines, anchor lines, and buoy lines remain taught and in good working condition; and (c) any derelict fishing gear or marine debris that collects in the growing gear is removed and disposed of at an identified onshore facility. All equipment and materials accidentally released or found to be missing from the facility during monthly inspections, including buoys, floats,

lines, ropes, chains, cultivation trays, wires, fasteners, and clasps, shall be searched for, collected, properly disposed of onshore, and documented in the annual inspection report. Monitoring shall occur monthly for the first two years following deployment and, in the event that there are no marine wildlife entanglements within the first two years, may be reduced to quarterly inspections thereafter.

Inspections shall include recordings by depth/fish finder or ROV surveys of lines and/or monitoring performed by SCUBA divers. Recorded video shall be provided along with the annual report described above. Any maintenance issues including wear, loosening, or fatigue of materials shall be remedied as soon as possible. All incidents of observed whale entanglement shall be immediately reported to SOS WHALe. Any other marine wildlife (i.e., other marine mammals, turtles) observed to be entangled will be immediately reported to NOAA Fisheries Marine Mammal Stranding Network Coordinator, West Coast Region, Long Beach Office. Only personnel who have been authorized by NOAA Fisheries and who have training, experience, equipment, and support will attempt to disentangle marine wildlife. If possible, the grower/producer shall document and photograph entangled wildlife and the entangling gear material.

2. Predator Control. Potential shellfish predator species will be identified. Specified humane methods of predator deterrence will be utilized, favoring non-lethal methods. No controls, other than non-lethal exclusion, shall be applied to species that are listed as threatened or endangered.

3. Marine Wildlife Observer. A Marine Wildlife Observer shall be present on each project construction vessel during all construction activities, including the installation of long lines and anchoring systems. The observer shall monitor and record the presence of all marine wildlife (marine mammals and sea turtles) within 100 yards of the work area. The observer shall have the authority to halt operations if marine wildlife are observed or anticipated to be near a work area and construction activities have the potential to result in injury or entanglement of marine wildlife. In addition, all work (including vessel motors) will be halted if a cetacean is observed within the monitoring area or if a pinniped or sea turtle is observed within 50 yards of the work area. Work may commence after the observed individuals have moved out of the monitoring area.

Observers' reports on marine mammal monitoring during construction activities shall be prepared and submitted to NOAA Fisheries on a monthly basis. Reports shall include such information as the (1) number, type, and location of marine mammals observed; (2) the behavior of marine mammals in the area of potential sound effects during construction; (3) dates and times when observations and in-water project construction activities were conducted; and (4) dates and times when in-water construction activities were suspended because of marine mammals.

VPD shall prepare a list of qualified marine wildlife observers who meet the following minimum qualifications: visual acuity in both eyes (correction is permissible) sufficient to discern moving targets at the water's surface with ability to estimate target size and distance; (2) use of binoculars or spotting scope may be necessary to correctly identify the target; (3) advanced education in biological science, wildlife management, mammalogy, or related fields (bachelor's degree or higher is preferred); (4) experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience); (5) experience or training in the field identification of marine mammals (cetaceans and pinnipeds) and sea turtles; and (6) ability to communicate orally, by radio or in person, with project personnel to provide real time information on marine wildlife observed in the area, as needed.

4. Entanglement Prevention. Grow-ropes will be attached to the head rope with a low-breaking-strength twine (4-millimeter (0.16-inch) diameter; <1,000 pounds), which will facilitate rapid

detachment in the unlikely event of any interaction with the longline. A 1,100-pound breakaway link will be installed between the surface marking buoys and the vertical lines.

5. Marine Wildlife Education. Each grower/producer will be required to provide bi-annual (twice per year) marine wildlife education to its employees regarding proper procedures relating to marine wildlife. The training curriculum will include identifying the presence of specified marine wildlife and procedures for avoiding impacts to marine wildlife during operations. These procedures will include (1) reducing speed and observing the distances from marine life specified in Wildlife-7; (2) providing a safe path of travel for marine mammals that avoids encirclement or entrapment of the animal(s) between the vessel and growing apparatus; (3) if approached by a marine mammal, reducing speed, placing the vessel in neutral and waiting until the animal is observed clear of the vessel before making way; (4) avoiding sudden direction or speed changes when near marine mammals; (5) refraining from approaching, touching or feeding a marine mammal; and (6) immediately contacting their supervisor and other identified parties/agencies identified in Wildlife-1 should an employee observe an injured marine mammal.

6. Lighting. All growing area operations shall be completed during daylight hours. No growing area operations will be conducted at night and no permanent artificial lighting of the shellfish cultivation facility shall occur, except for that associated with the use of navigational safety buoys required by the U.S. Coast Guard.

7. Vessel Management. Vessels in transit to and from the growing area shall maintain a distance of 100 yards from any observed cetacean and 50 yards between any observed pinniped or sea turtle. If cetaceans are observed within 100 yards or pinnipeds or sea turtles observed within 50 yards, the vessel shall reduce speeds to 12 knots or less until it is the appropriate distance (as required by this condition) from the particular marine life. If a cetacean is heading into the direct path of the vessel (i.e., approaching a moving vessel directly into the bow), the vessel shall shut off the engine until the cetacean is no longer approaching the bow and until a greater separation distance is observed. If small cetaceans are observed bow-riding, and the vessel is operating at speeds of 12 knots or less, the vessel shall remain parallel to the animal's course and avoid abrupt changes in direction until the cetaceans have left the area.

Each sighting of a federally listed threatened or endangered whale or turtle shall be recorded and the following information shall be provided:

a. Date, time, coordinates of vessel
b. Visibility, weather, sea state
c. Vector of sighting (distance, bearing)
d. Duration of sighting
e. Species and number of animals
f. Observed behaviors (feeding, diving, breaching, etc.)
g. Description of interaction with aquaculture facility

Compensation: No compensatory mitigation is proposed.

For additional information please contact Theresa Stevens, Ph.D. of my staff at (805) 585-2146 or via e-mail at theresa.stevens@usace.army.mil. This public notice is issued by the Chief, Regulatory Division.

Regulatory Program Goals:

- To provide strong protection of the nation's aquatic environment, including wetlands.
- To ensure the Corps provides the regulated public with fair and reasonable decisions.
- To enhance the efficiency of the Corps' administration of its regulatory program.

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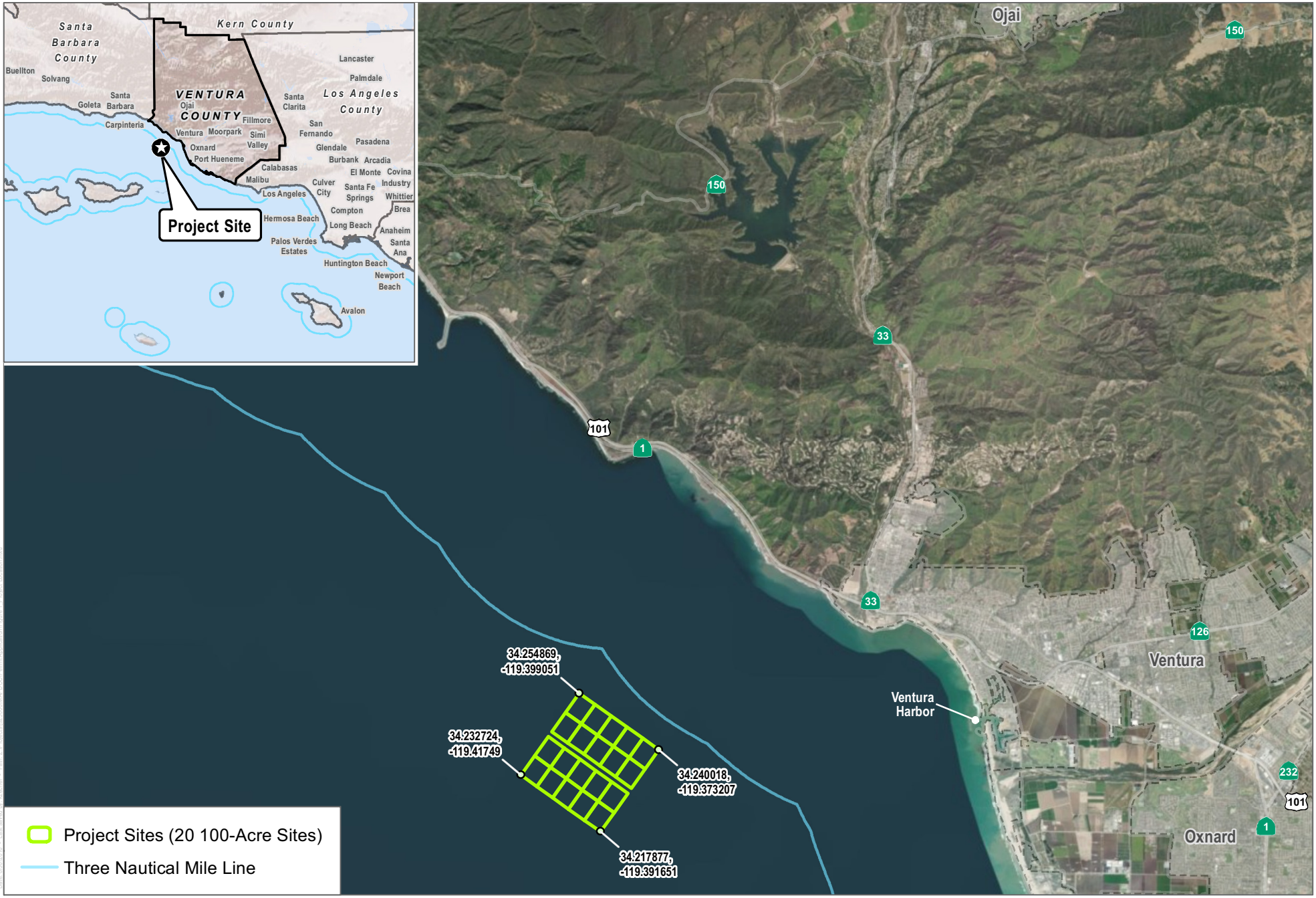


SOURCE: NAIP 2016
DATE OF PREPARATION: 8/30/2018

DUDEK

0 6,250 12,500 Feet

FIGURE 1

Project Location

Ventura Shellfish Enterprise Project

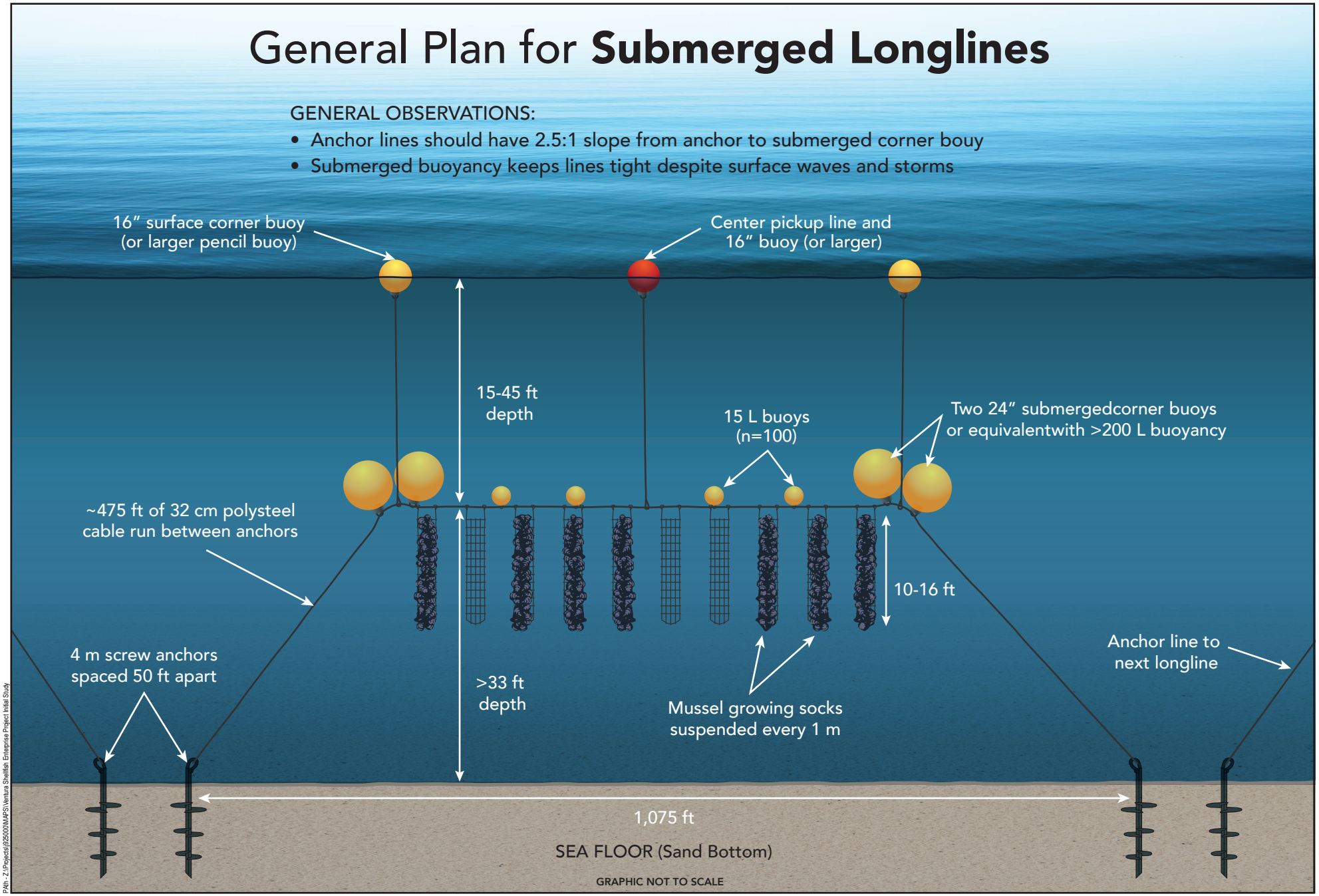
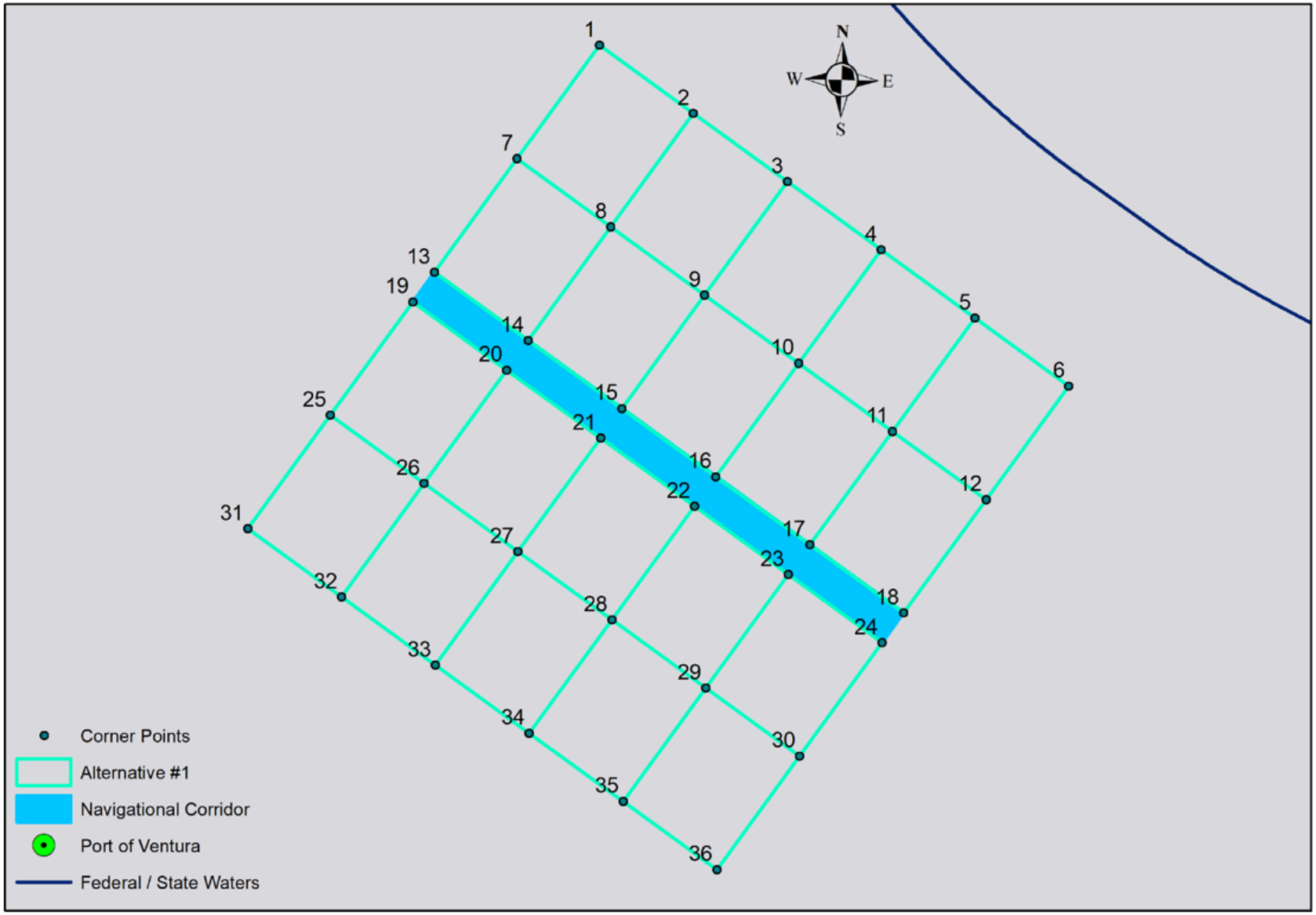


FIGURE 2

Detailed Plan for Shellfish Longlines

Ventura Shellfish Enterprise Project

DUDEK



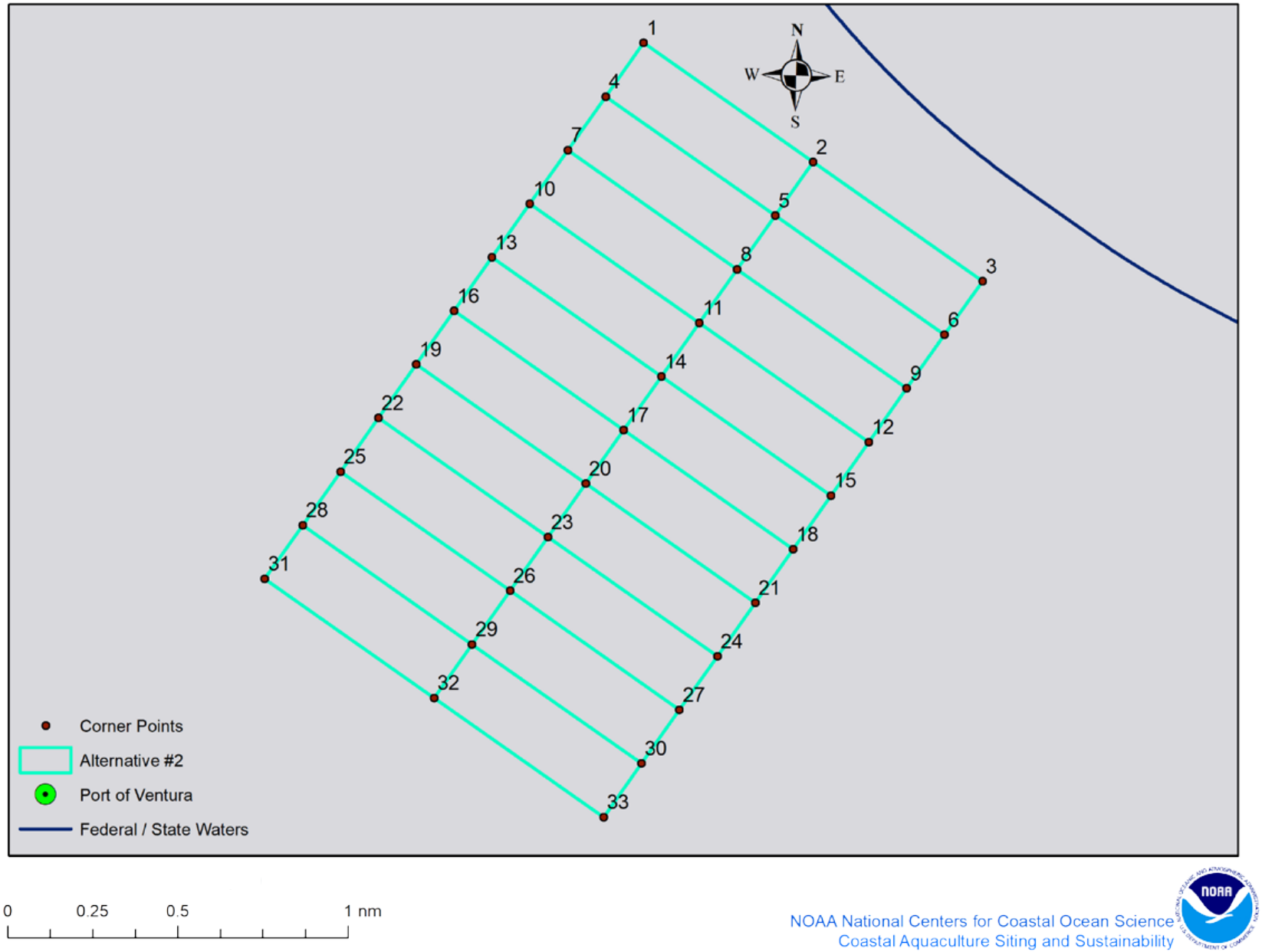
SOURCE: NOAA 2018

FIGURE 3

Proposed Project (CASS Report Alternative 1)

Ventura Shellfish Enterprise Project

DUDEK



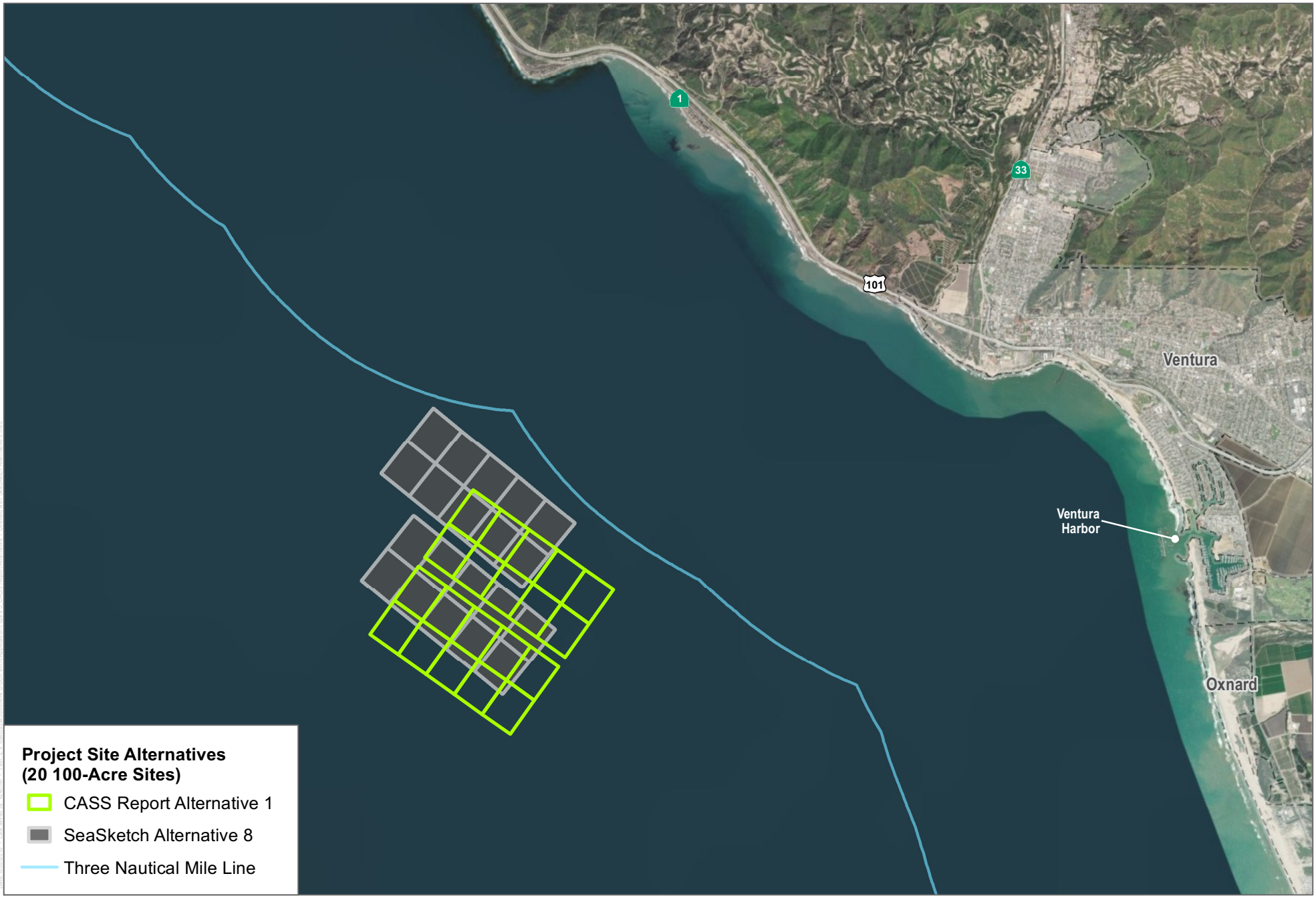
SOURCE: NOAA 2018

FIGURE 4

Proposed Alternative (CASS Report Alternative 2)

Ventura Shellfish Enterprise Project

DUDEK



SOURCE: NAIP 2016

DUDEK

0 3,600 7,200 Feet

FIGURE 5

CASS Report Alternative 1 Overlaid with SeaSketch Alternative 8

Ventura Shellfish Enterprise Project