PUBLIC NOTICE

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG®**
LOS ANGELES DISTRICT

APPLICATION FOR PERMIT
KZO Mariculture Project

Public Notice/Application No.: SPL-2012-00042-DPS
Project: KZO Sea Farms - Shellfish Mariculture Farm Project
Comment Period: January 1, 2014 through February 1, 2014
Project Manager: Daniel Swenson; 213-452-3414; Daniel.P.Swenson@usace.army.mil

Applicant
Philip Cruver
KZO Sea Farms
420 Redondo Ave., #110
Long Beach, California 90814

Contact
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KZO Sea Farms
420 Redondo Ave., #110
Long Beach, California 90814

Location (revised)
The project has a revised, proposed location approximately 6.6 miles from shore (3.6 miles seaward of the 3-nautical mile boundary of California State waters), southwest of Huntington Beach, south of Seal Beach, and approximately 0.89 miles north of oil platform Edith in the San Pedro Basin, California (see figures below). Exact corner coordinates of the 100-acre, square-shaped site are: 33° 36'36.64'N, 118° 8'40.78'W; 33°36'36.83'N, 118°8'15.82'W; 33°36'16.49'N, 118°8'15.75'W; 33°36'16.44'N, 118°8'40.84'W.

Activity
To construct an approximately 100-acre shellfish mariculture farm (see attached drawings). For more information see page 3 of this notice.

Interested parties are hereby notified that 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 support 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 of 1899. Comments should be mailed to:

LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P.O BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

Alternatively, comments can be sent electronically to: Daniel.P.Swenson@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 water 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 preliminary determination has been made that an environmental impact statement is not required for the proposed work.

Water Quality- As the proposed project is located approximately 3.6 miles seaward of the 3-nautical mile boundary of Clean Water Act jurisdiction (also outside of California State waters), the applicant is not required to obtain water quality certification, under Section 401 of the Clean Water Act, from the California Regional Water Quality Control Board.

Coastal Zone Management- This project is located outside the coastal zone; however, the California Coastal Commission (CCC) requested the National Oceanic and Atmospheric Administration's (NOAA's) Office of Ocean and Coastal Resource Management (OCRM) approval to review KZO Sea Farms' application as an unlisted "federal license or permit activity" under the Coastal Zone Management Act (CZMA), § 307(c)(3)(A), and NOAA regulations at 15 C.F.R. § 930.54. OCRM approved the CCC's request to review KZO's application as an unlisted activity. In reviewing the documentation provided by the CCC and comments by KZO and the National Marine Fisheries Service (NMFS), OCRM found the proposed offshore structures have reasonably foreseeable effects on California's coastal uses or resources. This finding did not address whether the activity is consistent with California's Coastal Management Program (CCMP); it merely authorized the CCC's review under CZMA §307(c)(3)(A) and NOAA regulations at 15 C.F.R. part 930, subpart D. Subsequently, the applicant has certified the proposed activity complies with and will be conducted in a manner consistent with the approved State Coastal Zone Management Program. The District Engineer hereby requests the CCC's concurrence or non-concurrence.

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- The Corps has determined the proposed activity would not affect federally-listed endangered or threatened species, or their critical habitat. Therefore, formal consultation under Section 7 of the Endangered Species Act is not required at this time.

Essential Fish Habitat- Preliminary determinations indicated the proposed activity may adversely affect essential Fish Habitat. In its original public notice dated March 26, 2012, pursuant to Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), the Los Angeles District requested initiation of abbreviated EFH consultation for the proposed project and provided the following information.

1. Description of the proposed action: see project description below.
2. On site inspection information: see baseline information on page 4 of this public notice.
3. Analysis of the potential adverse effects on EFH: EFH assessment dated March 19, 2012 mailed separately.
4. Proposed minimization, conservation, or mitigation measures: none
5. Conclusions regarding effects of the proposed project on EFH: Based on the project description and EFH assessment provided by the applicant, the proposed project would result

in disturbance of approximately 540 square feet of substrate. Furthermore, the affected substrate would likely consist of soft-bottom sediments, with little or no hard rock substrate affected. Therefore, it is my initial determination the proposed activity may adversely affect but would not have a substantial adverse impact on EFH or federally managed fisheries in California waters. My final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the NOAA Fisheries. If I do not receive written comments (regular mail or e-mail) within the 30-day notification period, I will assume concurrence by NOAA Fisheries that no mitigation measures are necessary.

In response to our original public notice, National Marine Fisheries Service (NMFS) submitted comments via letter dated May 3, 2012. The Corps subsequently accepted the two suggested conservation recommendations provided as part of the EFH consultation.

It should also be noted since circulation of the original public notice, the applicant has proposed use of a different anchor type (see below) which would further reduce the area of seafloor substrate disturbance. In addition, the number of longlines has been reduced from 45 to 40.

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 for holding a public hearing.

Proposed Activity for Which a Permit is Required

Basic Project Purpose- The basic project purpose comprises the fundamental, essential, or irreducible purpose of the proposed project, and is used by the Corps to determine whether the applicant's project is water dependent (i.e., requires access or proximity to or siting within the special aquatic site to fulfill its basic purpose). Establishment of the basic project purpose is necessary only when the proposed activity would discharge dredged or fill material in to a special aquatic site (e.g., wetlands, pool and riffle complex, mudflats, coral reefs). Because no fills are proposed within special aquatic sites, identification of the basic project purpose is not necessary.

Overall Project Purpose- The overall project purpose serves as the basis for the Corps' 404(b)(1) alternatives analysis and is determined by further defining the basic project purpose in a manner that more specifically describes the applicant's goals for the project, and which allows a reasonable range of alternatives to be analyzed. The overall project purpose for the proposed project is to construct an approximately 100-acre mariculture (shellfish) facility located on the San Pedro Shelf.

Additional Project Information

Baseline information- The San Pedro shelf is one of the broadest mainland continental shelf segments between Monterey, California, and the United States-Mexican border. Approximately 75 to 80 percent of this shelf segment is composed of low-relief, sediment-covered sea floor, and the remaining 20 to 25 percent is composed of rock outcrop interspersed with boulders and cobbles (USGS Mapping the Sea Floor on the San Pedro Shelf, Southern California by Brian Edwards, Pete Dartnell, and Eleyne Phillips, February 2005). Hard bottom habitats are uncommon in deep waters of southern California, and consequently, the proposed project site is anticipated to consist primarily of soft bottom substrate. The soft bottom macrobiota in the area is dominated by sea pens, sea stars, urchins, shrimp, and sea cucumbers, whereas polychaete worms, clams, and amphipods characterize the infauna. Echinoderms are common, including four urchins species (Echinoidea; fragile sea-urchin,

northern heart urchin, California heart urchin, Pacific heart urchin), sea cucumbers (Holothuroidea), and sea stars (Asteroidea and Ophiuroidea). Fishes seen in a past ROV survey were representative of outer shelf/ upper slope assemblages.

Revised Project Description-

The Project area will be developed with 40 longlines on 100 acres (see figures below). The longlines are 689 feet in length spaced 100 feet apart and anchored on each side to the ocean floor in depths of approximately 110 to 150 feet. Buoys will suspend the backbone longline about 20 feet under the water surface which will have a series of hanging nets containing shellfish and ropes with attached mussels and kelp. Each longline will be marked with a support buoy. In addition, the four corners of the 100-acre site will be marked with Coast Guard-approved lighted anchor buoys.

Longline Backbone Components:
750 feet of 1-inch-thick poly-blue steel rope
28 - 16 inch polyethylene floats
Oyster Longlines will suspend 60 5-level lantern nets
Mussel Longlines consist of 1,800 feet of looped fuzzy rope

Each longline will have two (2) anchors with one (1) anchor attached at each end of the longline backbone which will be submerged approximately 20 feet below the surface in ocean depths of about 150 feet. The applicant intends to deploy an anchor design from Hafbor EHF, Siglufjordur, Iceland, a firm with worldwide ocean floor anchor installation experience. Each anchor is comprised of a 12-foot long steel shaft with an approximately one square foot helical screw plate which is rotated into the seafloor using a video controlled, rotary hydraulic jig. Disturbance of the sea floor would be negligible since the only protrusion is the eye attached to the top end of the shaft which protrudes only several inches from the sea floor. Contrary to many other anchoring systems, there is no disturbance from the typical 5-feet of steel chain typically attached to the eye. In this system the 1-inch diameter rope leading to the longline is attached directly to the eye. The anchors will be removed if the project is vacated. There would be no obstruction to recreational or commercial vessels since the longlines will be submerged 20 feet below the surface.

The proposed project would cultivate up to four species of shellfish and one species of kelp: Olympia oyster (*Ostrea lurida*) Pacific oyster (*Crassostrea gigas*), Mediterranean mussel (*Mytilus galloprovincialis*), Giant Rock Scallop (*Hinnites multirugosus*) and Giant kelp (*Macrocystis pyrifera*). All species are native or naturalized and approved for cultivation in the Southern California Bight by the California Fish and Game Commission.

Proposed Mitigation– Due to its extremely small footprint on the seafloor, no compensatory mitigation would be required to offset permanent impacts to waters of the U.S. In addition, measures would be incorporated into the project to avoid and minimize impacts to marine mammals, obviating the need for compensatory mitigation.

For additional information please call Dr. Daniel P. Swenson of my staff at 213-452-3414 or via e-mail at Daniel.P.Swenson@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.

U.S. ARMY CORPS OF ENGINEERS – LOS ANGELES DISTRICT
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P.O BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

WWW.SPL.USACE.ARMY.MIL

Figure 1. Current proposed location:

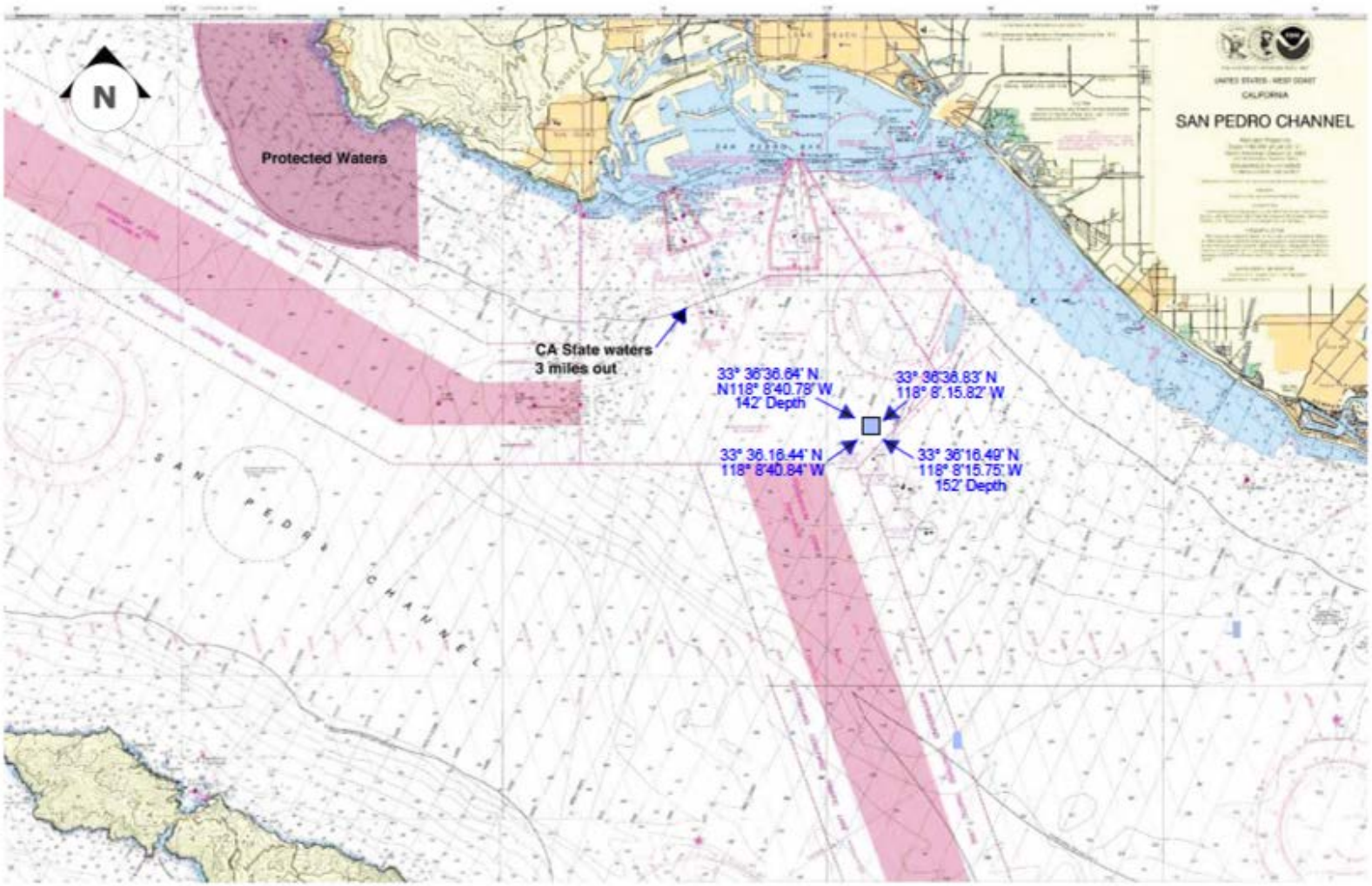

Figure 2. Previous proposed location:

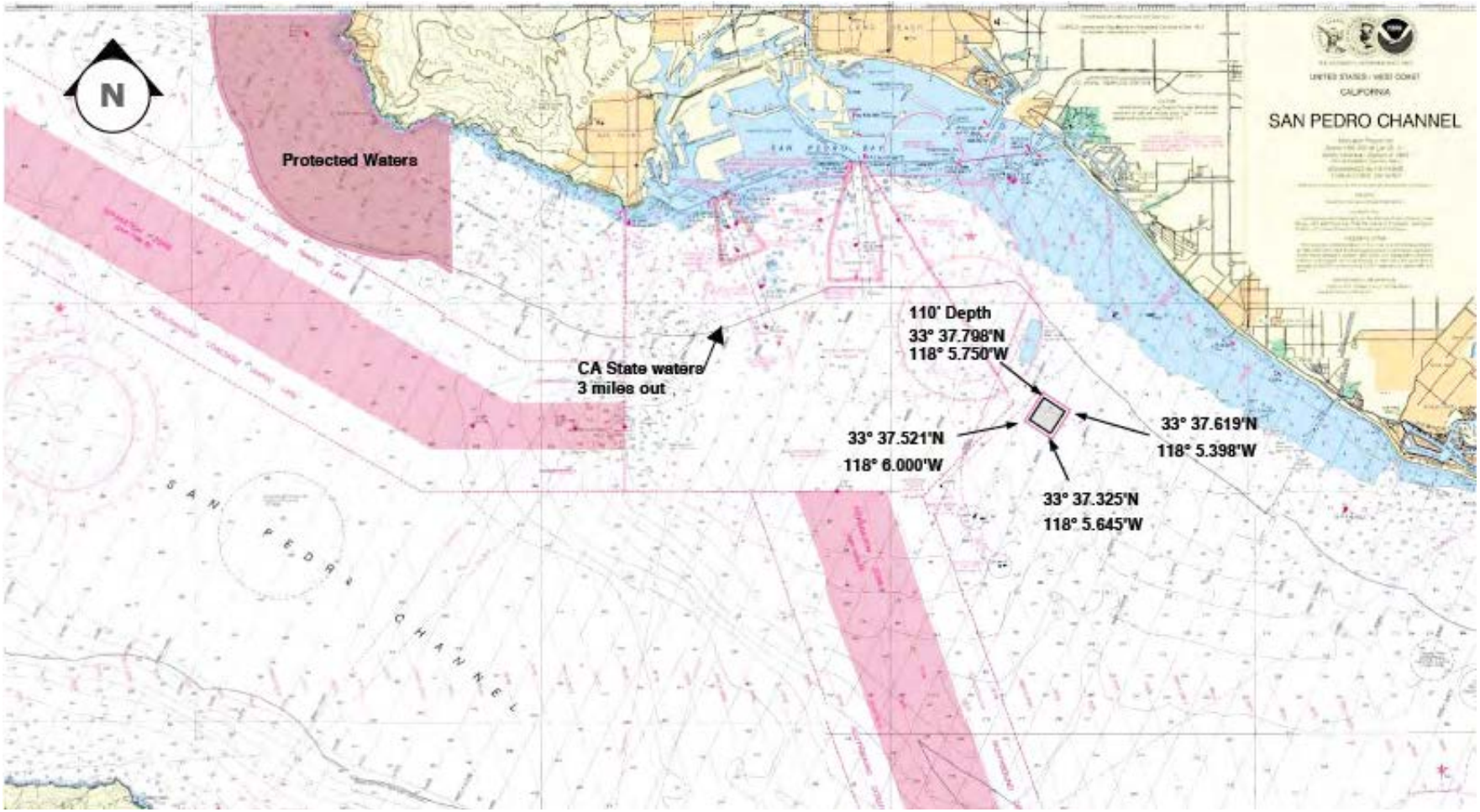

Figure 3: Current and previous proposed locations in relation to offshore oil platforms.

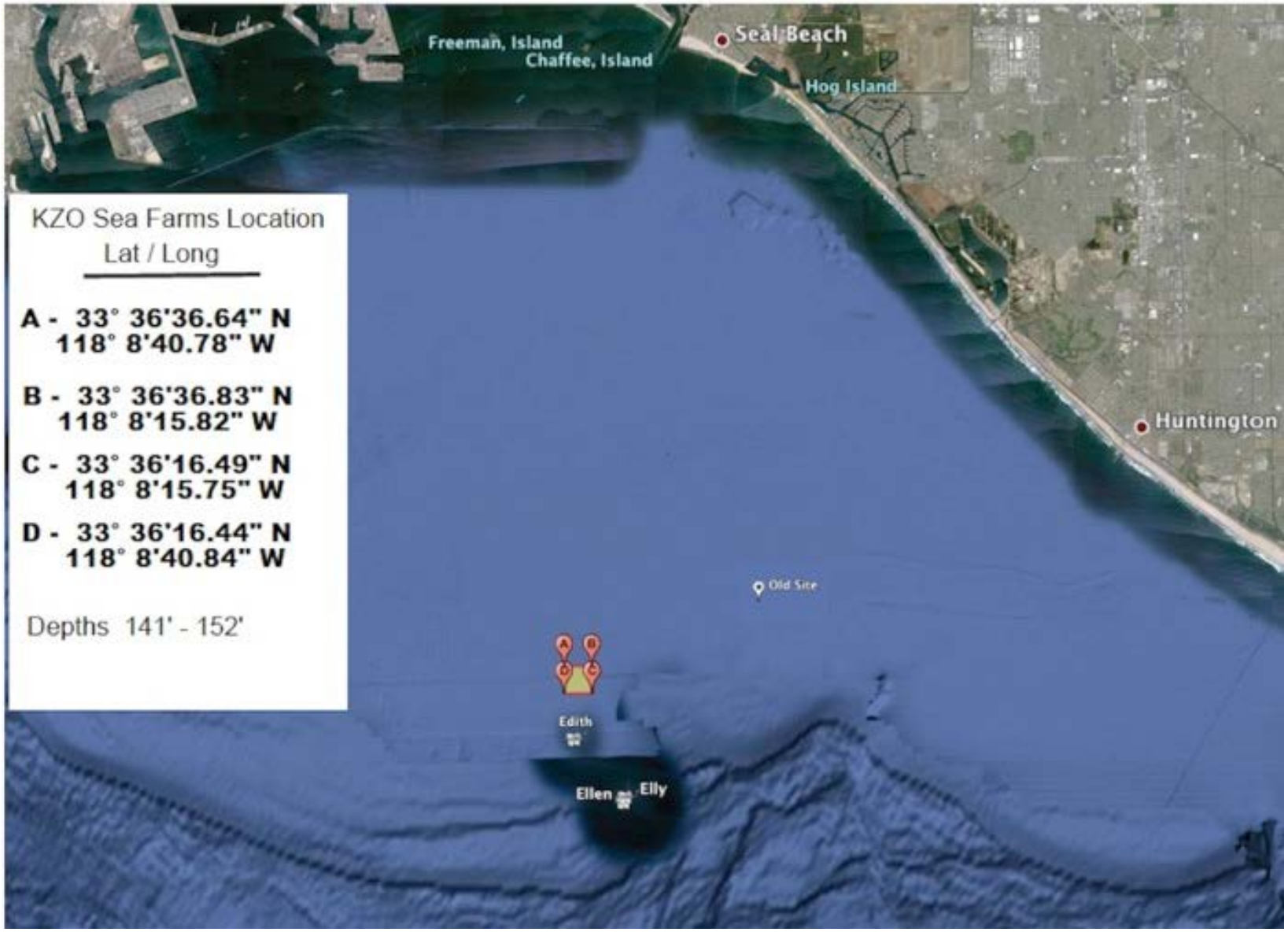

Figure 4:

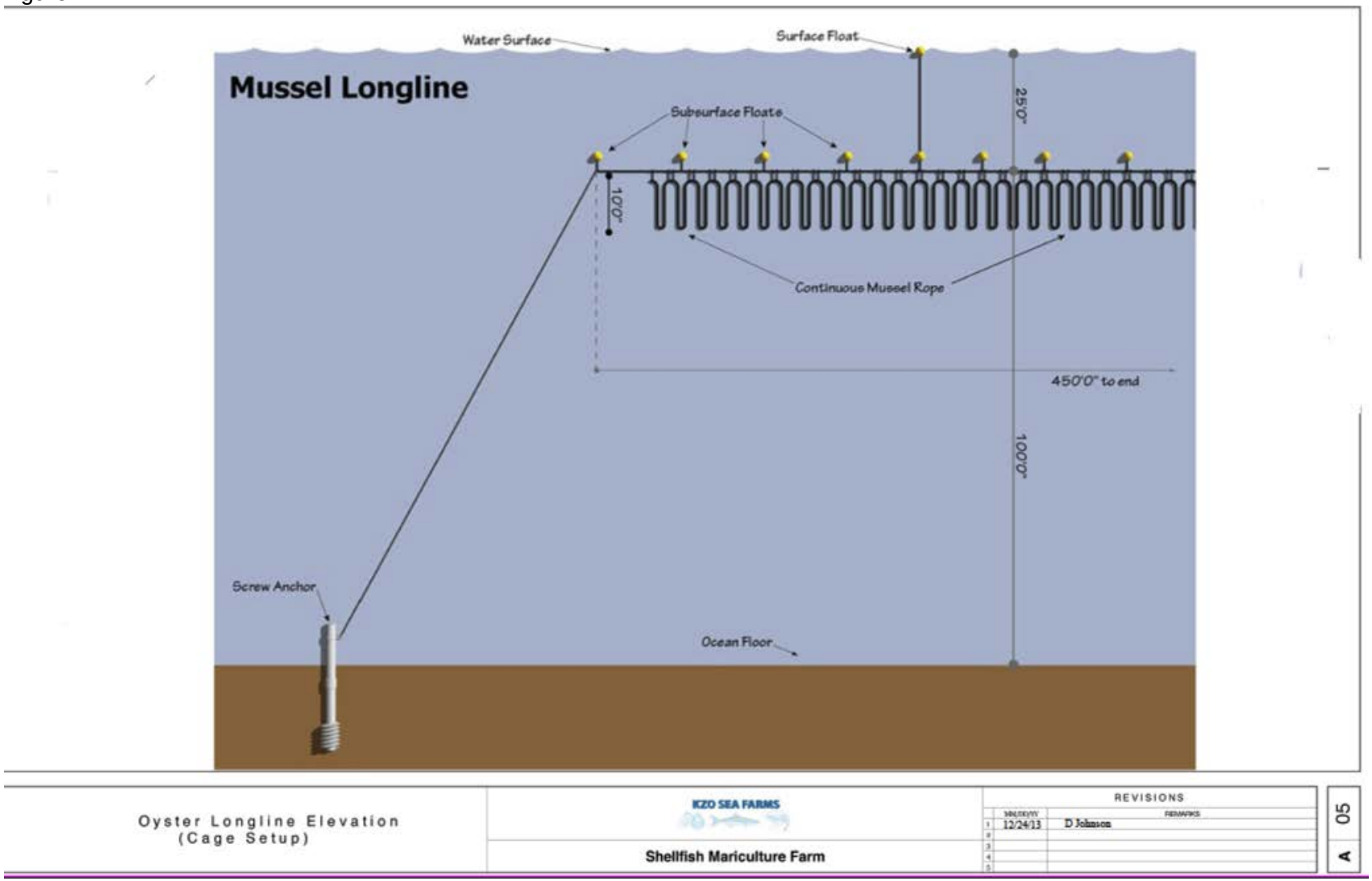
Water Surface
Surface Float
Mussel Longline
Subsurface Floats
25'0"
10'0"
Continuous Mussel Rope
450'0" to end
100'0"
Screw Anchor
Ocean Floor
Oyster Longline Elevation
(Cage Setup)
KZO SEA FARMS
Shellfish Mariculture Farm
REVISIONS
12/24/13
D Johnson
05
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Figure 5:

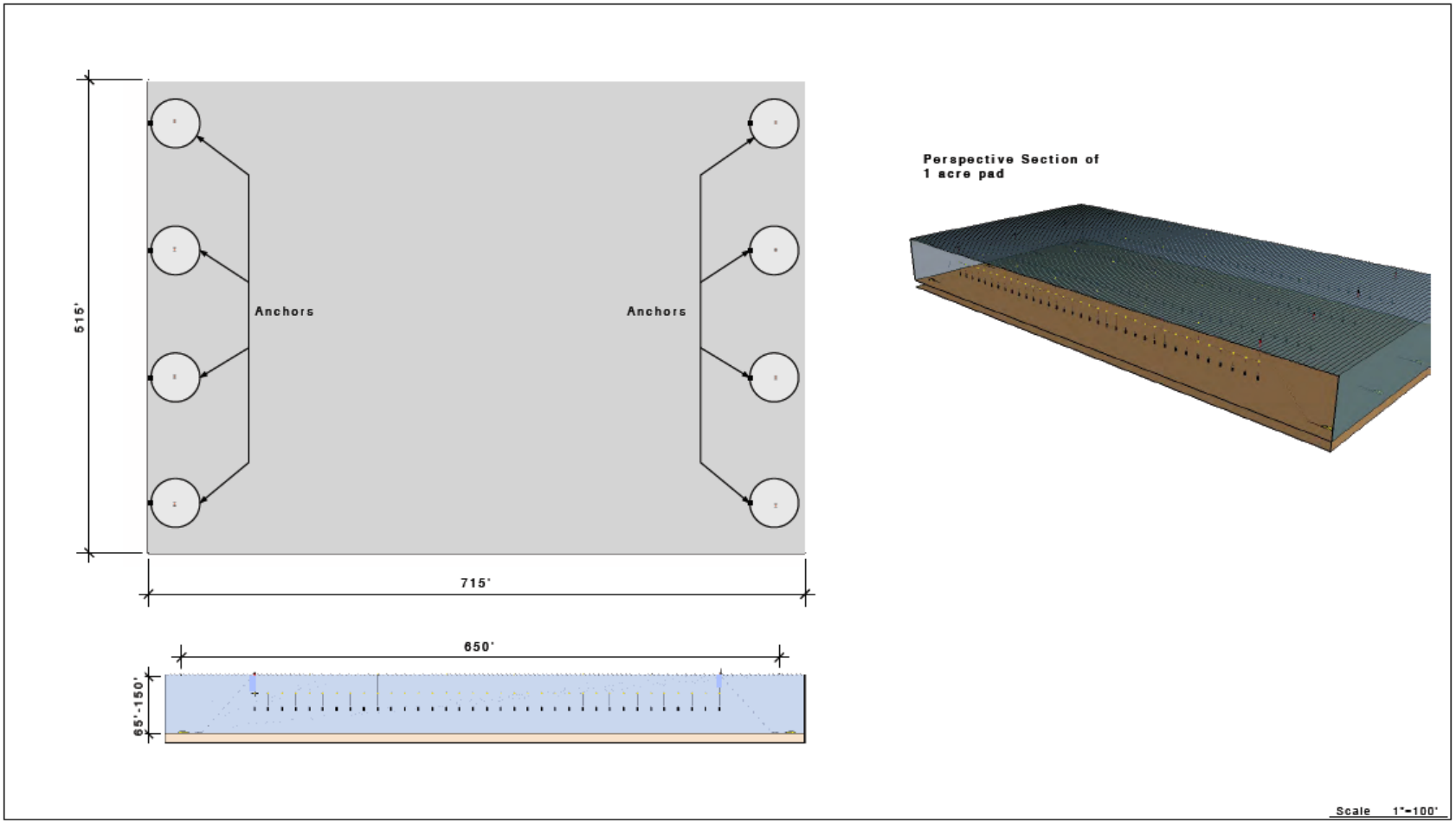
KZO SEA FARMS
RANCH LAYOUT

Shellfish Mariculture Farm
100 Acre Layout = 40 Longlines

KZO SEA FARMS

Revised: 6/2/13

Figure 6:


515'
Anchors
Anchors
715'
650'
65'-150'
Perspective Section of
1 acre pad
Scale 1"=100'
KZO SEA FARMS
Shellfish Mariculture Farm
Block Layout
REVISIONS
MM/DD/YY
REMARKS
1 12/24/13 D Johnson
2
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