



State of California - Department of Fish and Wildlife

2025 ENVIRONMENTAL DOCUMENT FILING FEE**CASH RECEIPT**

DFW 753.5a (Rev. 01/01/25) Previously DFG 753.5a

RECEIPT NUMBER:

37-01/21/2025-0027

STATE CLEARING HOUSE NUMBER (If applicable)

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.

LEAD AGENCY

SAN DIEGO UNIFIED PORT DISTRICT

LEAD AGENCY EMAIL**DATE**

01/21/2025

COUNTY/STATE AGENCY OF FILING

SAN DIEGO

DOCUMENT NUMBER

37-2025-0027

PROJECT TITLE

SAN DIEGO BAY NATIVE OYSTER LIVING SHORELINE PILOT PROGRAM

PROJECT APPLICANT NAME

SAN DIEGO UNIFIED PORT DISTRICT

PROJECT APPLICANT EMAIL**PHONE NUMBER**

619-686-6544

PROJECT APPLICANT ADDRESS

3165 PACIFIC HIGHWAY

CITY

SAN DIEGO

STATE

CA

ZIP CODE

92101

PROJECT APPLICANT (Check appropriate box)☐ Local Public Agency☐ School District☒ Other Special District☐ State Agency☐ Private Entity**CHECK APPLICABLE FEES:**☐ Environmental Impact Report (EIR)

\$4,123.50

\$

0.00

☐ Mitigated/Negative Declaration (MND)/(ND)

\$2,968.75

\$

0.00

☐ Certified Regulatory Program (CRP) document - payment due directly to CDFW

\$1,401.75

\$

0.00

☒ Exempt from fee☒ Notice of Exemption (attach)☐ CDFW No Effect Determination (attach)☐ Fee previously paid (attach previously issued cash receipt copy)☐ Water Right Application or Petition Fee (State Water Resources Control Board only)

\$850.00

\$

0.00

☒ County documentary handling fee

\$

50.00

☐ Other

\$

0.00

PAYMENT METHOD☐ Cash☒ Credit☐ Check☐ Other**TOTAL RECEIVED**

\$

50.00

SIGNATURE

X

AGENCY OF FILING PRINTED NAME AND TITLE

San Diego County Clerk, KARINA ORTIZ, Deputy

Payment Reference #: ORDER: 194718952 aUTH: 005077



**SAN DIEGO COUNTY CLERK
CEQA FILING COVER SHEET**

FILED
Jan 21, 2025 10:44 AM
JORDAN Z. MARKS
SAN DIEGO COUNTY CLERK
File # 2025-000034
State Receipt # 37012120250027

THIS SPACE FOR CLERK'S USE ONLY

Complete and attach this form to each CEQA Notice filed with the County Clerk

TYPE OR PRINT CLEARLY

Project Title

SAN DIEGO NATIVE OYSTER LIVING SHORELINE PILOT PROJECT

Check Document being Filed:

- ☒ Environmental Impact Report (EIR)
- ☐ Mitigated Negative Declaration (MND) or Negative Declaration (ND)
- ☐ Notice of Exemption (NOE)
- ☐ Other (Please fill in type):

**FILED IN THE OFFICE OF THE SAN DIEGO
COUNTY CLERK ON** January 21, 2025
Posted January 21, 2025 **Removed** _____
Returned to agency on _____
DEPUTY _____

Filing fees are due at the time a Notice of Determination/Exemption is filed with our office. For more information on filing fees and No Effect Determinations, please refer to California Code of Regulations, Title 14, section 753.5.

Notice of Exemption**CEQA Guidelines Appendix E**

To: ■ Office of Planning and Research 1400 Tenth Street, Room 121 Sacramento, CA 95814 ■ San Diego County Recorder/County Clerk 1600 Pacific Highway, Suite 260 San Diego, CA 92101-2480	From: (Public Agency) San Diego Unified Port District Planning & Green Port 3165 Pacific Highway San Diego, CA 92101
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Project Title: San Diego Bay Native Oyster Living Shoreline Pilot Project

Project Location – Specific: Chula Vista Wildlife Reserve (32.36.49 N, 117. 06.14 W)

Project location – City: Chula Vista, California

Project Location – County: San Diego County

Description of Nature, Purpose, and Beneficiaries of Project:

This project involves supplemental work for a pilot study originally approved on December 8, 2020. For the original pilot project, a CEQA Notice of Exemption was filed on December 30, 2020 (State Clearinghouse Number: 2021010025) and a Non-Appealable Coastal Development Permit was approved on March 9, 2021. A description of the original pilot project is included below, followed by a description of the proposed supplemental effort.

Original Pilot Project

The project is a pilot study in collaboration with the California Coastal Conservancy (Coastal Conservancy) to create and evaluate the success of native Olympia oyster (*Ostrea lurida*) reefs in a portion of south San Diego Bay (Bay). The project is managed by a Project Team, which consists of the District, the Coastal Conservancy, the U.S. Fish and Wildlife Service, the Southwest Wetlands Interpretive Association, and California State University Fullerton. The project is supported by a Technical Advisory Committee (TAC), which includes technical experts from the Universities of California Davis and Santa Cruz, California Sea Grant, National Marine Fisheries Service, California Coastal Commission, along with many others. The project is designed to determine if native Olympia oysters successfully recruit on constructed reef ball elements, the effect of tidal elevation on recruitment of native and non-native oysters, the ability of constructed reefs to protect shorelines from erosion and flooding, and whether constructed reefs support higher degrees, or levels, of biodiversity compared to the adjacent areas. The project site is adjacent to the Chula Vista Wildlife Reserve (CVWR) in Chula Vista, California, and within the jurisdictional boundaries of the San Diego Unified Port District (District). The project site is within Planning District 7, the Chula Vista Bayfront, of the District's certified Port Master Plan, and has a land use designation of Wetlands. The project site is an intertidal mudflat located in south San Diego Bay adjacent to the CVWR — an area known to have historical erosion issues.

The project would utilize a modular approach under which constructed oyster reef ball elements would be placed in a series of six arrays at two tidal elevations along the project site's mudflat (three arrays at each of two elevations). Each array will also have a paired control array at the same tidal elevation. Individual reef ball elements (baycrete reef balls, described below) would be organized into reef groups consisting of four reef ball elements placed in a square pattern; the approximate footprint of each reef group would be 8 feet by 8 feet (including some open space between each element), or 64 square feet. Reef arrays would consist of 15 reef groups arranged in a checkerboard pattern with spacing of 14 to 20 feet between the center of each group. Therefore, each reef array would consist of 60 reef ball elements. Each array would have overall dimensions of approximately 88 feet long by 45 feet wide. It is important to note that the actual footprint of the array would be significantly less than the overall dimensions due to the open spaces between the element groups and within the elements themselves. The slightly larger square footage has been factored into the design as a conservative

estimate to account for slight fluctuation in spacing when the reef balls are placed. In total, the "footprint" of the reef ball elements for all six proposed arrays to be placed along the shoreline would be approximately 5,760 square feet (0.13 acres).

Each oyster reef element would consist of a baycrete (concrete mixed with local sand and shell aggregate) reef ball with a top circumference of approximately 2 feet, and a wider base which is 3 feet in circumference. The height of each element would be approximately 2 feet above the mudline. Reef balls may also be installed with removable tops. Native Olympia oysters are known to recruit at lower tidal elevations than non-native Pacific oyster (*Crassostrea gigas*). The ability to remove the tops of reef balls is an adaptive management measure that would allow for modification of the total height of the reef balls to allow for Olympia oyster to grow. Removal of the higher portion of reef balls may occur to prevent or eliminate habitat for non-native oysters and other non-native and invasive invertebrate species. As higher elevation structures are expected to have greater wave dampening benefits, the removal of the tops of reef balls would be conducted only if they become heavily colonized by non-native species during the 5-year post installation monitoring period. Existing eelgrass on the project site is negligible, and the reef balls would not be located within existing eelgrass beds, which would be marked by temporary polyvinyl chloride (PVC) posts during the pre-installation survey at the project site. See Attachment A, which shows where the reef balls (or arrays) will be located in relation to frequency of eelgrass occurrence at this project site. The reef controls shown in Attachment A are sites that will not have reef balls or arrays placed, but are control sites for the project. Each control has been located with consideration to exact elevations and similar environmental conditions with a respective reef array, while ensuring that none of the controls are impacted by the shadowing effect of another array. The control limits are defined only by Global Positioning System (GPS) coordinates and are used for comparative monitoring, there will be no physical structures placed within them and, as such, they will have no impacts on eelgrass. Attachment B shows the respective "zones of affect" of sediment distribution for each reef array. Based upon wave energy dissipation from the north-west, Attachment B demonstrates that sediment distribution would be directed away from where eelgrass frequently occurs at this project location.

Existing eelgrass on the project site is negligible, and the reef balls would not be located within existing eelgrass beds, which would be marked by temporary polyvinyl chloride (PVC) posts during the pre-installation survey at the project site. See Attachment A, which shows where the reef balls (or arrays) will be located in relation to frequency of eelgrass occurrence at this project site. The reef controls shown in Attachment A are sites that will not have reef balls or arrays placed, but are control sites for the project. Each control has been located with consideration to exact elevations and similar environmental conditions with a respective reef array, while ensuring that none of the controls are impacted by the shadowing effect of another array. The control limits are defined only by Global Positioning System (GPS) coordinates and are used for comparative monitoring, there will be no physical structures placed within them and, as such, they will have no impacts on eelgrass. Attachment B shows the respective "zones of affect" of sediment distribution for each reef array. Based upon wave energy dissipation from the north-west, Attachment B demonstrates that sediment distribution would be directed away from where eelgrass frequently occurs at this project location.

Installation of the project is anticipated to occur in early Spring 2021. The primary consideration for installation corresponds to the period just prior to seasonal recruitment for native Olympia oysters. Installation of the project's reef ball elements is anticipated to take approximately four weeks or less. The project site is accessible by water and or existing shoreline, and materials would be transported to the project site at high tide, thereby restricting available work times and limiting installation vessels to small, shallow-draft vessels. Additionally, installation of the project would not require any dredging or substantial below grade disturbances (e.g., pile driving or digging).

Installation of the project would include several additional project features. A localized access corridor across the eelgrass beds would be marked to minimize the potential for vessel grounding in eelgrass during installation of the project, as well as implementation of a vessel positioning system that avoids the need for ground chains or other tackle that may damage eelgrass. The project would comply with the California Eelgrass Mitigation Policy (CEMP), which requires the District to retain a qualified biologist to conduct pre- and post-installation surveys to

determine if any eelgrass is affected by project activities. Construction activities associated with the project are expected to be completed outside of the nesting season for California least tern (*Sternula antillarum browni*) which typically begins in mid-April. Due to the minor scale and scope of the Project, there are no construction activities with the potential to create turbidity and the project is not expected to have any impacts on California least tern if the construction schedule overlaps with the nesting season. Construction would also comply with any permit requirements issued by other resource agencies, such as the National Marine Fisheries Service, to avoid construction activity interactions with Green Sea Turtles and other sensitive species. All vessel operations associated with the project would require compliance with District Code Section 4.30(c) which precludes vessel speeds of greater than 5 mph outside of navigational channels.

The Applicant would be responsible for compliance with all laws and regulations associated with the activities on or in connection with the above-described premises, and in all uses thereof, including those regulating stormwater, biological resources, and hazardous materials, as well as acquiring necessary permits from relevant resource agencies, such as the California Coastal Commission, Army Corps of Engineers, National Marine Fisheries Service, and Regional Water Quality Control Board.

Following installation, a 5-year study would be initiated, including biological monitoring and structural investigations to assess the project's success, which will be measured against established success criteria that have been approved by a technical advisory committee. The Project Team and TAC will track and discuss results at least annually and consider adaptive management measures if deemed necessary for success criteria that are not being met. Since biological systems take many years to stabilize, data collection is anticipated to occur monthly or quarterly in years one through five post-installation, with further detailed monitoring incorporated if funding allows. Each element of the monitoring program would require sampling at varying frequencies with seasonal timing. Data collection would require accessing the reef arrays and adjacent unmodified control (reference) areas of the shoreline either by shallow draft vessel or by land. Land access would be limited to foot traffic from existing roads and upland shoreline access points. Upon its conclusion, the project's reef ball elements would be expected to be left in place as habitat.

The project's reef ball elements would be removed if, at the conclusion of the five-year monitoring period, adaptive management measures are not successful or feasible and the project meets one or more of established removal criteria that have been approved by a technical advisory committee. The modular construction of the baycrete reef ball elements would allow for full removal (removal of all reef ball elements within an oyster reef array), or for partial removal (removal of a portion of each reef ball element). It is anticipated that zonation of oyster species, and possibly of other colonizing invertebrates, would be apparent between oyster reef arrays placed at different tidal elevation treatments, as well as across the two-foot vertical relief of each reef ball element. For this reason, results would be partitioned by tidal elevation prior to removal of any reef ball elements. Only reef ball elements, or portions of reef ball elements, that meet one of the removal criteria would be considered for removal.

Success and Removal Criteria

The Project Team has worked with the TAC to receive and incorporate feedback throughout the design process. In order to address the overall success of the project, success criteria would be implemented as part of the proposed Project. It is anticipated that there would be interannual variability in the recruitment and densities of desired organisms. It is further anticipated that there would be variability in densities of desired organisms based on tidal elevation treatments of reef arrays, and vertical elevation across individual reef elements. For this reason, success criteria are identified specifically by oyster reef array to the measured metric. Comparable sites will be reviewed and approved by the TAC during the monitoring plan development. Project success would be based on achievement of the following criteria within the five-year period following construction.

SUCCESS CRITERIA:

1. Native Olympia oysters (*O. lurida*) recruit with mean densities per square meter of substrate on constructed oyster reef elements at statistically significantly higher densities than comparable sites in San Diego Bay. Comparable sites will be hard substrate in similar configurations, such as cobble and rip-rap, at similar elevations.
2. The ratio of native to non-native species* (including invertebrates & algae) areal coverage on constructed oyster reef elements is statistically significantly higher than comparable sites in San Diego Bay.
3. The ratio of non-native Pacific oyster (*C. gigas*) areal coverage to native Olympia oyster (*O. lurida*) that occupy constructed oyster reef elements are equivalent to or lower than ratios at comparable sites in San Diego Bay.
4. The percent change in native species richness of fish and mobile invertebrates captured within oyster reef arrays over the five year post-construction monitoring period is equivalent to or higher than the percent change in native species richness of these organisms at adjacent mudflat/eelgrass controls and comparable sites within San Diego Bay.
5. Presence of oyster reef arrays result in significant accretion or lower erosion of sediment shoreward of the arrays, as compared to control plots.

REMOVAL CRITERIA:

1. Native Olympia oysters (*O. lurida*) recruit with mean densities on constructed oyster reef elements at statistically significantly lower densities than comparable sites in San Diego Bay.
2. Constructed oyster reef elements are more dominated by non-native* species with statistically significantly higher aerial coverages of non-natives than comparable sites.
3. Shoreline erosion occurs shoreward of constructed oyster reef elements at rates statistically significantly higher than comparable sites.

**Some non-native species may not be included in analysis. The Project will follow TAC guidance on cryptogenic and unspecified species. San Diego Bay's cryptogenic species can be found in the U.S. Navy's TECHNICAL REPORT 2038 (March 2013)*

Supplemental Effort

The District and Coastal Conservancy propose to create additional native oyster habitat within the elevation line that was erroneously left out of the original pilot project. Due to an error in the placement of the reef ball elements, there is an elevation line of optimal native oyster habitat that was intended to be included in the original pilot project, but currently is not in place. It is important to note that despite this error, the pilot project is currently performing well with a healthy native oyster habitat establishing within the project footprint. This proposed supplemental effort would deploy approximately 600 additional oyster reef elements (referred to as "oyster castles") at the missing optimal tidal elevation of -1 to 0 foot within the existing pilot project footprint. The additional oyster reef elements are 12" X 12" X 8" units weighing approximately 35 lbs each. Their composition is similar to traditional construction blocks, however they are developed with molds to create a semi-rough surface anticipated to encourage native oyster recruitment. The additional oyster reef elements can be stacked in a variety of ways to provide ideal native oyster habitat. The ability to stack and arrange the additional oyster reef elements allows for manual deployment and allows for the project team to make field-based decisions on optimal arrangements to avoid adverse impacts during deployment. The total footprint of the proposed supplemental effort would be between approximately 300-400 square feet distributed in sections over a total of approximately 100-200 linear feet of shoreline. This would be an addition of less than ten percent of the original pilot project square footage. See Attachment C for an exhibit of the existing layout of the original pilot project and proposed example locations for the supplemental effort.

Installation of the supplemental effort would occur using a shallow draft vessel during high tide. The additional oyster elements would be placed by hand from the shallow draft vessel and arranged or stacked to create optimal

native oyster habitat. It is anticipated that installation would occur in Spring 2025 during the native oyster recruitment window and would take up to two weeks to complete. The same project features for installation of the original pilot project would apply to the installation of the supplemental effort. As monitoring continues for the original pilot project, the additional oyster reef elements would be included in monitoring. The success and removal criteria from the original pilot project would also apply to the supplemental effort.

Name of Public Agency Approving Project: *San Diego Unified Port District*

Name of Person or Agency Carrying Out Project: *Tim Barrett, Environmental Conservation Department, San Diego Unified Port District, 3165 Pacific Highway, San Diego, CA 92101, (619) 686-6544*

Exempt Status: (Check one):
☐ Ministerial (Sec. 21080(b)(1); 15268);
☐ Declared Emergency (Sec. 21080(b)(3); 15269(a));
☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
☒ Categorical Exemption: *Minor Alterations to Land (SG § 15304) (Class 4), Information Collection (SG § 15306) (Class 6)*
☐ Statutory Exemption. State code number:

Reason why project is exempt: *The proposed project is determined to be Categorically Exempt pursuant to the CEQA Guidelines and the Sections of the District's Guidelines for Compliance with CEQA as identified above. These are appropriate for the proposed project because it is located along a degraded shoreline and includes the installation of reef ball elements that would not involve the removal of mature, scenic trees and would be for the purpose of basic data collection and resource evaluation activities which would not result in a serious or major disturbance to an environmental resource. Sections 3.d (6) and 3.f of the District's CEQA Guidelines are as follows:*

3.d. *Minor Alterations to Land (SG § 15304) (Class 4): Includes minor alterations in the condition of land, water and/or vegetation not involving removal of mature, scenic trees.*

(6) *Minor placement of revetment or other shore protection structures on eroded shoreline to protect the public safety, public or private structures or facilities, or to provide or reestablish bank alignment.*

AND/OR

3.f. *Information Collection (SG § 15306) (Class 6): Includes basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be for information gathering purposes, or as part of a study leading to an action which has not yet been approved, adopted or funded.*

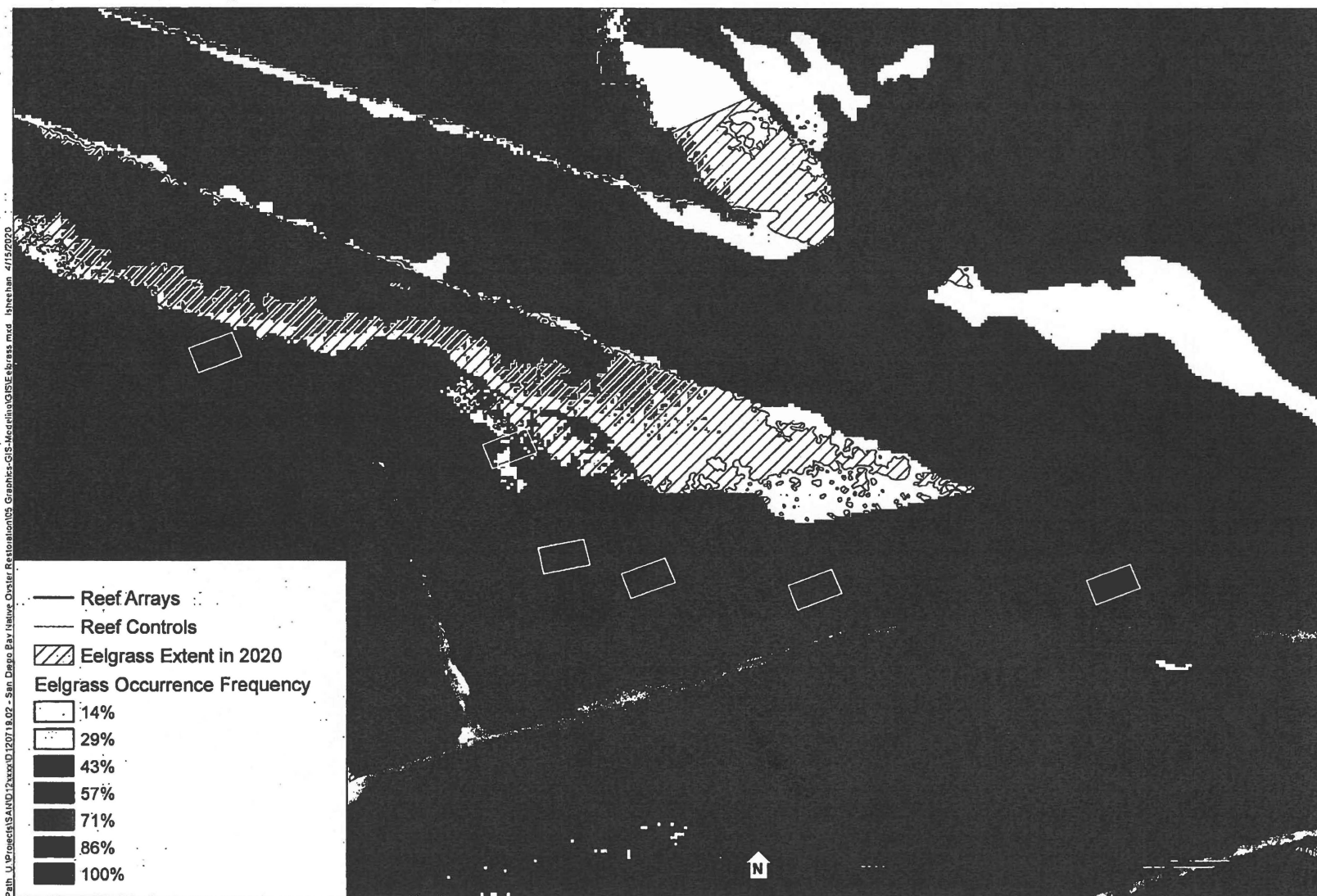
Lead Agency Contact Person and telephone number: *Lily Tsukayama (619) 686-8199*

Signature:  **Date:** *1/14/2025* **Title:** *Program Manager*

- ☒ Signed by Lead Agency
- ☐ Signed by Applicant

Date received for filing at
OPR/Clerk

Attachment A

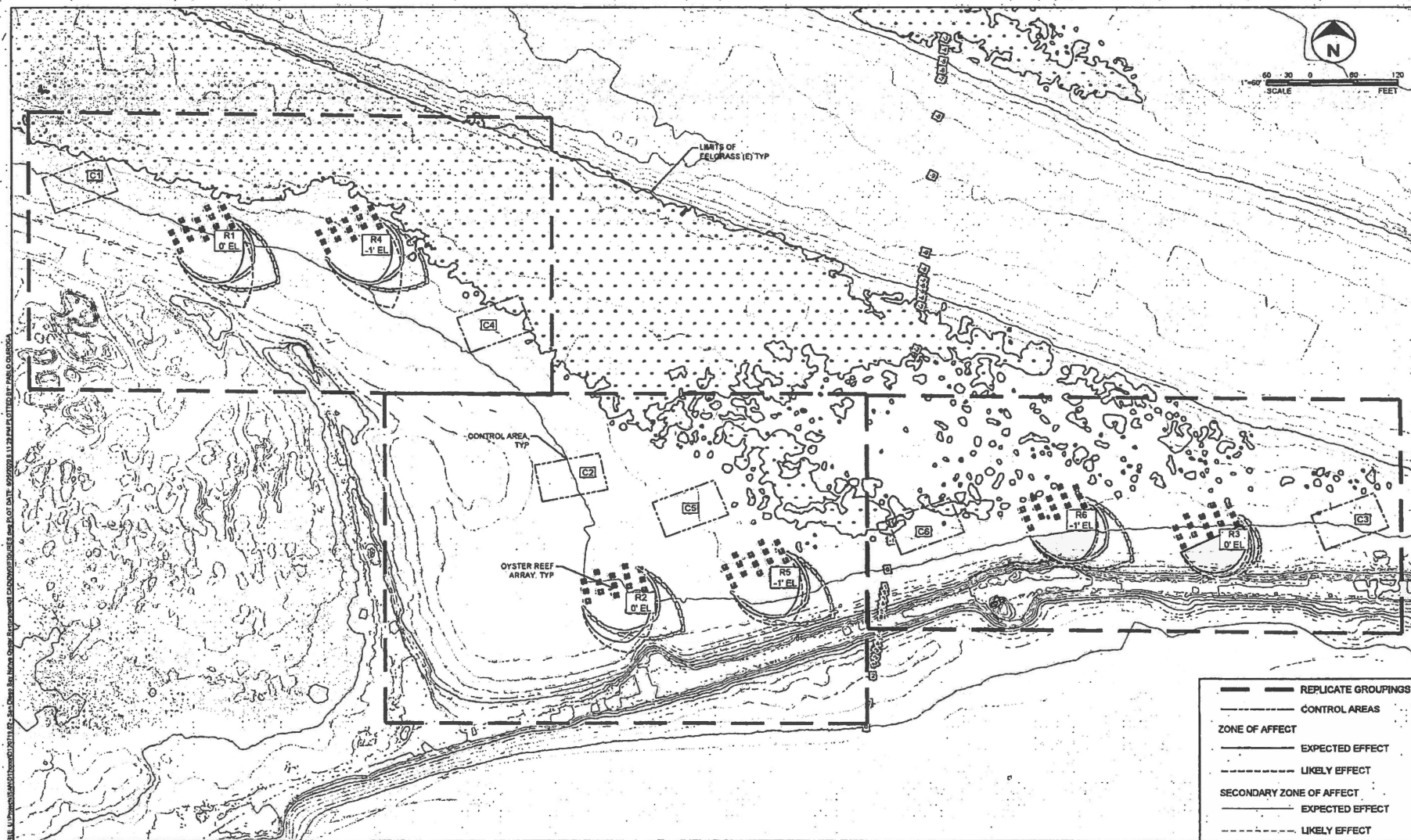


SOURCE: ESA, 2020; ESRI

San Diego Bay Oyster Restoration
Figure 1
 Array and Eelgrass Occurrence



Attachment B



SOURCE: SOURCE: 2010 NOAA Ortho-Image, ESA Survey 2018, Mankal Survey 2019

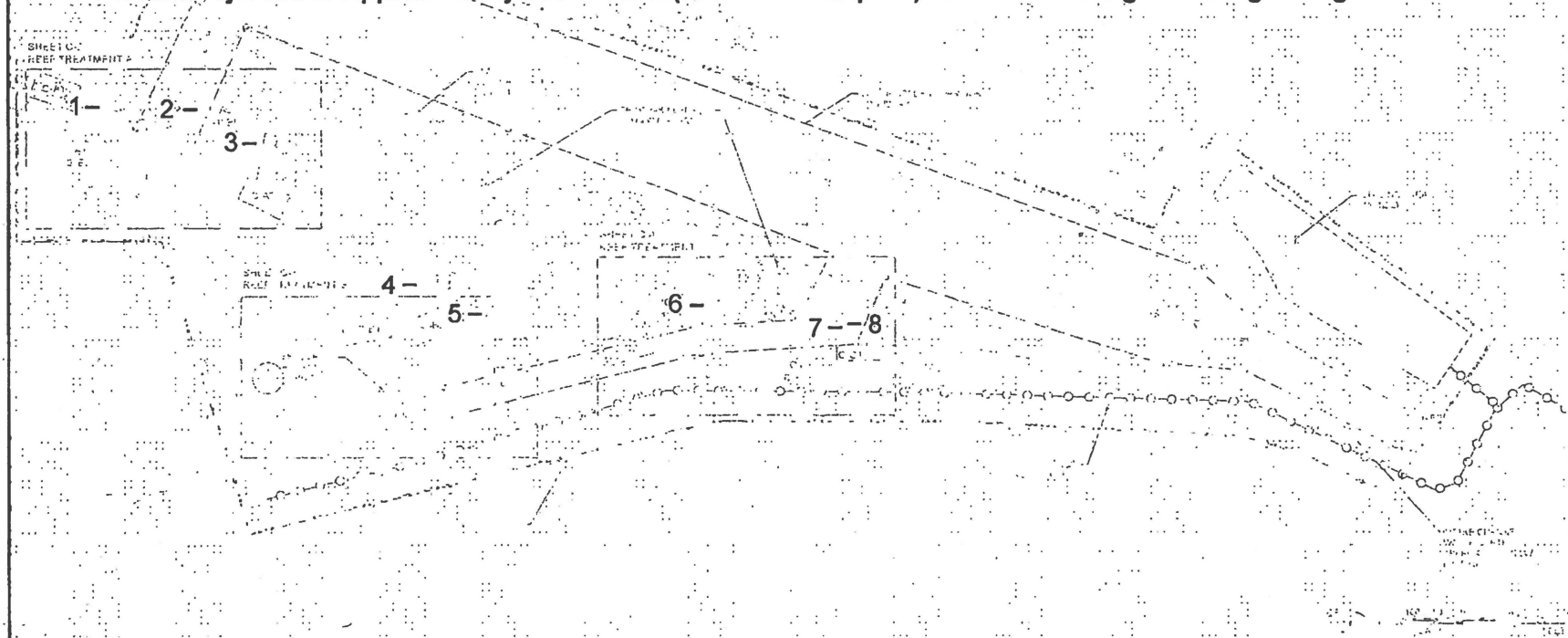
0120718.02 San Diego Bay Native Oyster Restoration

Figure 3
ZONE OF AFFECT

Attachment C

Example Location for Supplemental Elements

Total Project Size: Approximately 200 linear ft (300-400 sf footprint) distributed as eight 25' long arrangements



SHEET NOTES:

- EELGRASS PATCHES EXIST THROUGH THE WORK AREA. REEF LOCATIONS ARE SHOWN AS APPROXIMATE AND MAY BE ADJUSTED BEFORE INSTALLATION AT THE DIRECTION OF THE OWNERS REPRESENTATIVE TO AVOID IMPACTS TO EXISTING EELGRASS BEDS.
- REEF ELEMENTS TO BE BUILT AND INSPECTED BEFORE PLACEMENT ON THE STAGING AREA.

- LIMITS OF EELGRASS SHOWN DERIVED FROM SURVEY DATA COMPILED BY MERKEL ASSOCIATES 2020. LIMIT REPRESENTS THE EELGRASS EXTENT IN 2020. EELGRASS DENSITY VARIES AND ACTUAL EXTENTS OF EELGRASS DURING CONSTRUCTION MAY VARY FROM THOSE DEPICTED.

- LAND ACCESS TO THE SITE IS LIMITED. HEAVY EQUIPMENT AND INSTALLATION BY LAND IS NOT ALLOWED.

- CONTRACTOR TO SURVEY OR SOUND THE INTAKE CHANNEL TO PLAN ACCESS FOR THE RETRIEVAL OF THE OYSTER REEF BALLS FROM THE STAGING AREA.

**90% SUBMITTAL
NOT FOR CONSTRUCTION**



RECORD DRAWING THIS DRAWING MAY BE A REDUCED SCALE PART OF THE ORIGINAL DRAWING. IT IS NOT TO BE USED FOR CONSTRUCTION. TO VERIFY IF DRAWING IS A REDUCED SCALE, CHECK THE SCALE BAR.		SPECIES: _____ REVISION: _____ DATE: _____	SHEET NO.: _____ OF _____ DATE: _____	DESIGNED: _____ DRAWN: _____ CHECKED: _____ APPROVED: _____	SAN DIEGO UNIFIED PORT DISTRICT SAN DIEGO BAY NATIVE OYSTER RESTORATION	DATE: _____ SHEET: _____ OF _____ C-1
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San Diego County



Transaction #: 8182241
Receipt #: 2025022605

JORDAN Z. MARKS

Assessor/Recorder/County Clerk
1600 Pacific Highway Suite 260
P. O. Box 121750, San Diego, CA 92112-1750
Tel. (619) 237-0502 Fax (619) 557-4155
www.sdarcc.gov

Cashier Date: 01/21/2025
Cashier Location: SD

Print Date: 01/21/2025 10:45 am

Payment Summary

Total Fees:	\$50.00
Total Payments:	\$50.00
Balance:	\$0.00

Payment

VITALCHEK PAYMENT \$50.00

Total Payments \$50.00

Filing

CEQA - NOE FILE #: 2025-000034 Date: 01/21/2025 10:44AM Pages: 10

State Receipt # 37-01/21/2025-0027

Fees: Fish & Wildlife County Administrative Fee \$50.00

Total Fees Due: \$50.00

Grand Total - All Documents: \$50.00