

CALIFORNIA COASTAL COMMISSION

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W11a

Application No. 9-21-0258

(City of Santa Barbara)

June 11, 2021

EXHIBITS

Table of Contents

- [Exhibit 1](#) – Location Map
- [Exhibit 2](#) – Project Site
- [Exhibit 3](#) – Schematic of Intake Platforms
- [Exhibit 4](#) – CDP 9-14-1781
- [Exhibit 5](#) – Anchoring Plan
- [Exhibit 6](#) – Turbidity Monitoring and Mitigation Plan
- [Exhibit 7](#) – Special Marine Species Monitoring and Mitigation Plan
- [Exhibit 8](#) – Hazardous Material Spill Prevention and Response Plan
- [Exhibit 9](#) – Alternative Scour Protection Method - Vertical Sheet Piles
- [Exhibit 10](#) – Alternative Scour Protection Method - Modified Rock Gabions
- [Exhibit 11](#) – Selected Scour Protection Method - Rock Apron



SOURCE: BING



FIGURE 1
Project Vicinity

Scour Protection for the Charles E. Myers Desalination Facility's Intake Platforms



EXHIBIT 2



PUBLIC WORKS
DEPARTMENT
ENGINEERING DIVISION

APPROVED: _____ DATE _____
CITY ENGINEER ORIGINAL SIGNED DATE _____

DESIGN	JNW	30% DRAFT
DRAWN	US	
CHECKED	JH	
DATE		
NO.		

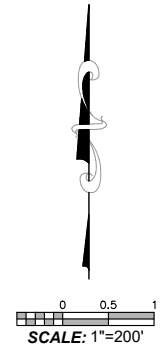
DESALINATION PLANT OFFSHORE INTAKE PLATFORM REPAIRS GENERAL SITE PLAN

NOTES:

1. THE INFORMATION SHOWN HAS BEEN GEO-REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD-83) CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS-83), ZONE 5 IN U.S. SURVEY FEET. OUTFALL COORDINATES SHOWN WERE CONVERTED FROM ORIGINAL AS-BUILT PLANS AND SHOULD BE CONSIDERED APPROXIMATE.
2. BATHYMETRY DATA SHOWN IS APPROXIMATE. TIDE LEVELS ARE CONTINUOUSLY FLUCTUATING, CONTRACTOR SHALL REFER TO APPROPRIATE PREDICTED TIDE CHARTS FOR ESTIMATED TIDAL RANGE DURING THE CONSTRUCTION PERIOD.
3. INFORMATION SHOWN ON THIS DRAWING IS BASED ON THE ORIGINAL AS-BUILT CONSTRUCTION DRAWINGS FOR THE DESALINATION PLANT INTAKE LINES AND SUPPORT PLATFORMS. CONTRACTOR SHALL REFER TO THESE REFERENCE DRAWINGS FOR ADDITIONAL INFORMATION.
4. LOCATION OF DESALINATION PLANT INTAKE LINES AND SUPPORT PLATFORMS SHOWN IS APPROXIMATE AND PROVIDED FOR INFORMATION ONLY. CONTRACTOR IS RESPONSIBLE FOR CONSULTING NAVIGATIONAL CHARTS TO IDENTIFY OTHER STRUCTURES IN THE PROJECT VICINITY.
5. DRY LAND STAGING & STORAGE AREA WILL NOT BE PROVIDED.
6. ALL CONTRACTOR WORK ACTIVITIES AND STORAGE OF ALL EQUIPMENTS SHALL STAY WITHIN PROJECT LIMITS.

LEGEND:

- (25) BATHYMETRY CONTOURS (FT. MLLW)
- PROJECT LIMITS
- ▣ AREA REQUIRING REPAIR



Know what's below.
Call before you dig.

PBW. NO.	-
BID. NO.	-
SHT. DES.	G-101
DWG. NO.	
SHT.	4 OF 8

EXHIBIT 3

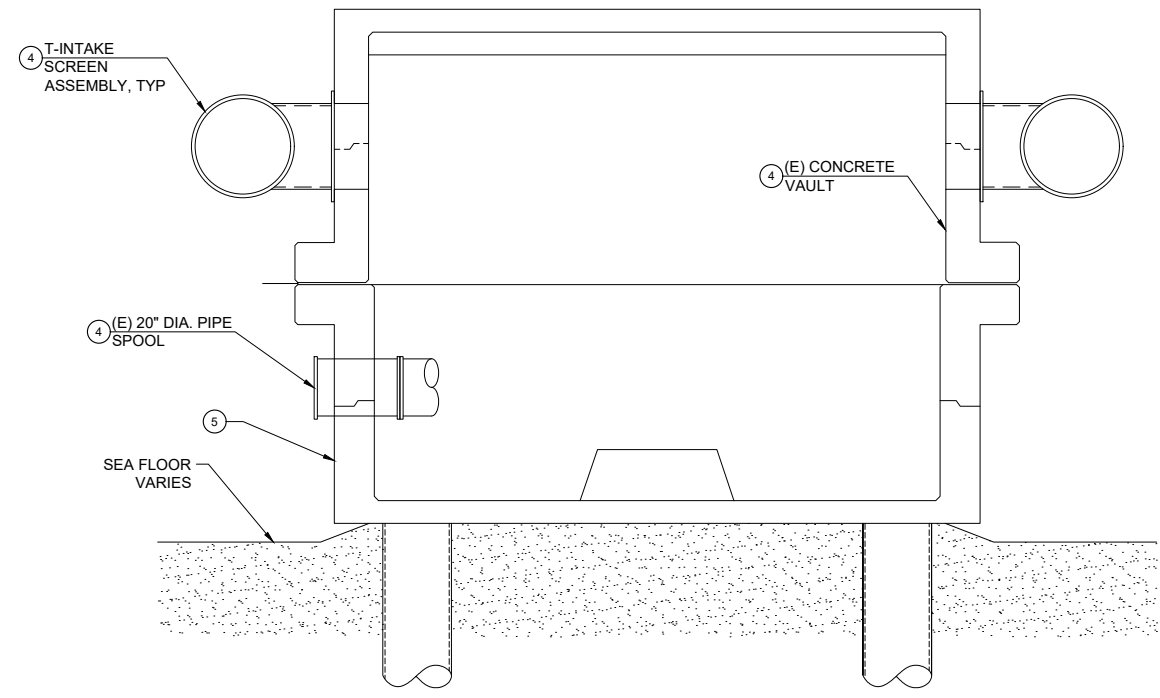


PUBLIC WORKS
DEPARTMENT
ENGINEERING DIVISION

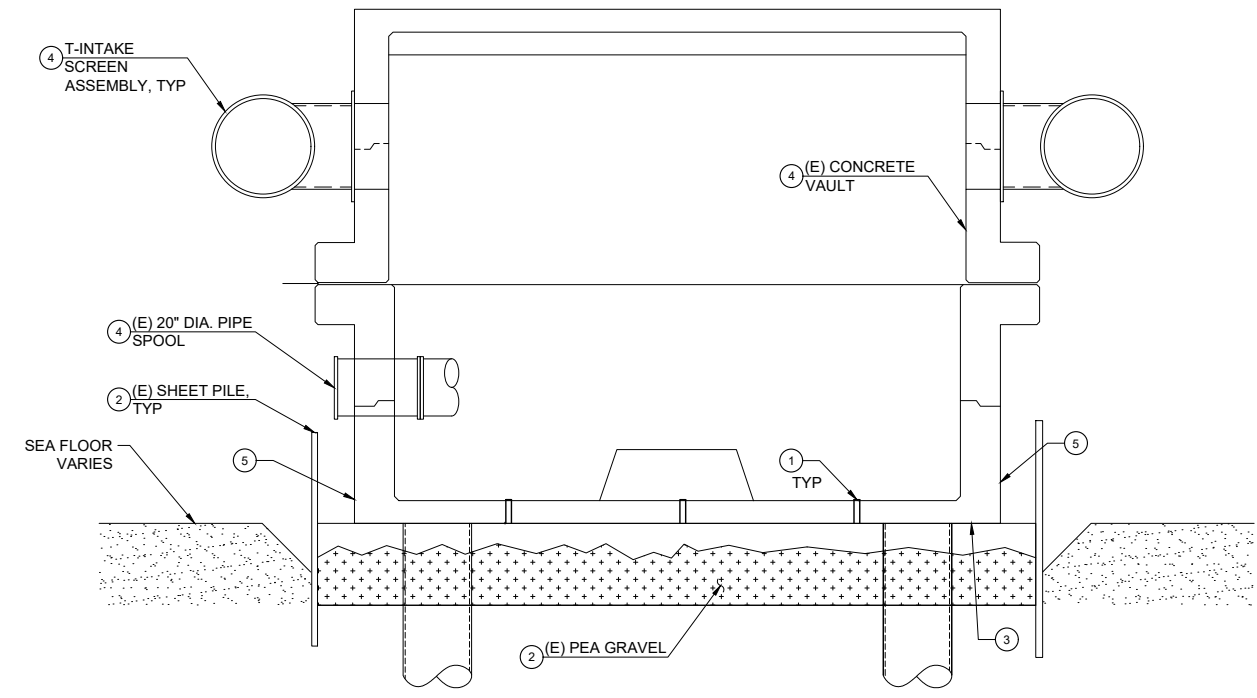
APPROVED: _____ DATE _____
CITY ENGINEER ORIGINAL SIGNED DATE _____

DESIGN	JNW
DRAWN	JS
CHECKED	JH
30 % DRAFT	
DATE APPROVED	
NO.	
REVISIONS	

DESALINATION PLANT OFFSHORE INTAKE PLATFORM REPAIRS
DEMOLITION SECTIONS



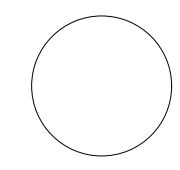
A INTAKE PLATFORM A DEMOLITION - SECTION
D-101 SCALE: 3/8"=1'-0"



B INTAKE PLATFORM B DEMOLITION - SECTION
D-101 SCALE: 3/8"=1'-0"

CONSTRUCTION NOTES:

- ① DIVERS CLEAN AND DRILL CORE HOLES IN UNDERSIDE OF PLATFORM.
- ② REMOVE AND DISPOSE OF EXISTING VINYL SHEET PILE AND PEA GRAVEL BELOW PLATFORM.
- ③ LEVEL PLATFORM AND PROVIDE TEMPORARY STABILIZATION MEASURES
- ④ PROTECT-IN-PLACE
- ⑤ CLEAN SURFACE OF THE EXISTING PLATFORM TO FACILITATE REPAIRS



PBW. NO.	-
BID. NO.	-
SHT. DES.	-
DWG. NO.	D-201
SHT.	6 OF 8

CALIFORNIA COASTAL COMMISSION

Energy and Ocean Resources
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219
(415) 904-5260

**COASTAL DEVELOPMENT PERMIT**

On February 13, 2015, by unanimous vote, the California Coastal Commission granted to the City of Santa Barbara Coastal Development Permit No. 9-14-1781, subject to the attached standard and special conditions, for development consisting of:

Repair and maintenance activities needed to recommission and operate components of the City's desalination facility located on the beach and in coastal waters offshore of the City of Santa Barbara.

Issued on behalf of the Coastal Commission on August 31, 2015.

CHARLES LESTER
Executive Director

A handwritten signature in cursive script, appearing to read "Alison J. Dettmer".

By: ALISON J. DETTMER
Deputy Director
Energy, Ocean Resources, and Federal Consistency Division

Permit 9-14-1781
August 31, 2015 – Page 2 of 9

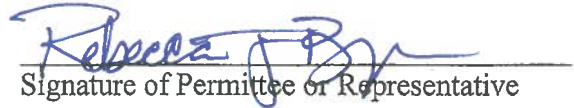
Acknowledgment:

The undersigned Permittee acknowledges receipt of this permit and agrees to abide by all terms and conditions thereof.

The undersigned Permittee acknowledges that Government Code Section 818.4, which states in pertinent part, that: "A public entity is not liable for injury caused by the issuance... of any permit..." applies to the issuance of this permit.

IMPORTANT: THIS PERMIT IS NOT VALID UNLESS AND UNTIL A COPY OF THE PERMIT WITH THE SIGNED ACKNOWLEDGMENT HAS BEEN RETURNED TO THE COMMISSION OFFICE (14 Cal. Admin. Code Section 13158(a).)

9/1/2015
Date


Signature of Permittee or Representative

STANDARD CONDITIONS

This permit is subject to the following standard conditions:

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

III. SPECIAL CONDITIONS

1. **Other Approvals.** PRIOR TO PERMIT ISSUANCE, the Permittee shall provide to the Executive Director a copy of the following permits and approvals or evidence that the permits or approvals are not needed: (i) from the City of Santa Barbara, an approved coastal development permit or Substantial Compliance Determination; and, (b) from the Central Coast Regional Water Quality Control Board, an approved National Pollutant Discharge Elimination System (“NPDES”) permit and Section 401 Water Quality Certification.

In addition, and PRIOR TO STARTING CONSTRUCTION ACTIVITIES, the Permittee shall provide to the Executive Director a copy of the project’s General Construction Activity Stormwater Permit as issued by the Regional Water Quality Control Board.

The Permittee shall inform the Executive Director of any changes to the project required by these permits or approvals. Such changes shall not be incorporated into the project until the Permittee obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

2. **Assumption of Risk, Waiver of Liability and Indemnity.** By acceptance of this permit, the Permittee acknowledges and agrees:
 - a. That the site may be subject to hazards from coastal erosion, storm conditions, wave uprush, and tsunami runup;
 - b. To assume the risks to the Permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development;
 - c. To unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and,
 - d. To indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

3. **Anchoring Plan – Initial Repair and Maintenance Activities.** PRIOR TO THE START OF INWATER PROJECT ACTIVITIES, the Permittee shall submit, for Executive Director review and approval, a revised Offshore Anchoring Plan that is consistent with the submitted *Utility Work Boat Anchoring Locations – Subtidal Biological Survey Report*, dated September 30, 2014, but with the following modifications:
 - a. Clarify that offshore anchoring will be conducted at one location using a four-point anchoring system.
 - b. Incorporate results of a seafloor survey conducted no more than 60 days prior to Plan submittal.
 - c. Identify all areas of kelp, seagrasses, and hard substrate found within the survey area, including the bathymetric relief of all identified hard substrate. The Plan shall identify proposed anchor locations that will avoid kelp, seagrasses, and hard substrate and will avoid the possibility of dragging anchor lines or cables across those areas.
 - d. Identify the owner/operator of the active pipeline located within the anchor survey area and identify measures the Permittee will implement to contact the pipeline owner/operator prior to and during times the Permittee will be conducting offshore work.

If anchoring cannot avoid kelp, seagrasses, or hard substrate, or if the Permittee proposes to change the method of anchoring, it shall seek an amendment to this permit to address the changed conditions or methods. The Permittee shall implement the revised Offshore Anchoring Plan as approved by the Executive Director. Any proposed changes to the approved Plan, including those resulting from a use of different vessels or equipment than originally proposed, shall be reported to the Executive Director. No changes to the approved Plan shall occur without a Commission approved amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

4. **Anchoring Plans – Ongoing Repair and Maintenance Activities:** At least 45 days prior to future offshore repair and maintenance activities that will involve anchoring, the Permittee shall submit, for Executive Director review and approval, an updated Anchoring Plan that includes measures consistent with those in the Anchoring Plan approved pursuant to **Special Condition 3**, but that has been modified to include updated information based on seafloor surveys conducted no more than 60 days prior to submittal of each updated Plan. The updated Plans shall include proposed anchoring locations that avoid kelp, seagrasses, and hard bottom substrate as identified during the most recent seafloor survey.

If anchoring cannot avoid kelp, seagrasses, or hard substrate, or if the Permittee proposes to change the method of anchoring, it shall seek an amendment to this permit to address the changed conditions or methods. The Permittee shall implement the revised Offshore Anchoring Plan as approved by the Executive Director. Any proposed changes to the approved Plan, including those resulting from a use of different vessels or equipment than originally proposed, shall be reported to the Executive Director. No changes to the approved Plan shall occur without a Commission approved amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

5. **Turbidity Minimization and Monitoring, PRIOR TO THE START OF INWATER ACTIVITIES,** the Permittee shall submit, for Executive Director review and approval, a Turbidity Minimization and Monitoring Plan that includes the following:
 - a. Names of qualified observers who will be present at the offshore project site to monitor for turbidity during repair and maintenance activities. The submittal shall include the qualifications each observer;
 - b. Maximum allowable waste discharge and turbidity levels as provided by the California Ocean Plan and all measures the Permittee will implement to remain within those levels;
 - c. The type of equipment to be used to conduct pressurized cleaning of offshore structures. Flow rates on any hydraulic pumping system shall be set as low as is practicable in order to minimize the generation of a suspended sediment plume during the disposal of dredged sediment; and,
 - d. Identification of proposed nearby locations where discharged material will be deposited where it will not adversely affect hard substrate, kelp beds, or other sensitive habitat areas.

The Permittee shall implement the Plan as approved by the Executive Director. Any proposed changes to the approved Plan, including those resulting from a use of different vessels or equipment than originally proposed, shall be reported to the Executive Director. No changes to the approved Plan shall occur without a Commission approved amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

6. **Sensitive Marine Species Monitoring and Mitigation Plan.** PRIOR TO THE START OF INWATER ACTIVITIES, the Permittee shall submit, for Executive Director review and approval, a Sensitive Marine Species Monitoring Plan. At a minimum, the Plan shall include the following:
- a. Names of qualified biologists who will be present at the project site during all project activities. The submittal shall include the qualifications and proposed role of each biologist during monitoring activities. The selected biologists shall be able to identify the various marine mammals, sea turtle and special-status marine bird species that have the potential to occur in the project area, and will have knowledge of the ecology and behavior of these species.
 - b. Procedures to be followed and measures to be taken should marine mammals, sea turtles or special-status bird species be sited in the project area during active operations. At a minimum, the biological monitor shall be granted the authority to temporarily halt project activities if those activities pose a threat to individuals of a special-status species, and to suspend project activities until the animals have left the area.
 - c. Within 30 days of the last day of each offshore work period that require onboard monitors, the Permittee shall submit to the Executive Director a marine wildlife monitoring report prepared by the approved monitors that includes: (i) an evaluation of the effectiveness of monitoring protocols and procedures; (ii) reporting of all marine mammal, sea turtle, and other wildlife sightings (including species and numbers); (iii) any wildlife behavioral changes that may be attributed to project operations; and (iv) all project changes (e.g., delays, work stoppages, etc.) due to the presence in the area of marine wildlife species.

Project work involving the movement or positioning of vessels offshore, use of heavy equipment onshore, and attachment or removal of project components shall occur during daylight hours only. Artificial lighting associated with this work shall be limited to headlamps or hand-held devices used by the divers, and necessary running or deck lights on diver support vessels. Night lighting of project vessels remaining on site shall be limited to that necessary to maintain navigational safety and to serve the nighttime site monitors who may be present on project vessels.

The Permittee shall implement the Plan as approved by the Executive Director. Any proposed changes to the approved Plan, including those resulting from a use of different vessels or equipment than originally proposed, shall be reported to the Executive Director. No changes to the approved Plan shall occur without a Commission approved amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

7. **Hazardous Material Spill Prevention and Response.**

- a. PRIOR TO STARTING PROJECT ACTIVITIES, the Permittee shall submit for Executive Director review and approval a project-specific Hazardous Materials Spill Prevention and Response Plan for all vessels and vehicles to be used for project activities. The Plan shall include:
- a list of all fuels and hazardous materials that will be used or might be used during the proposed project, together with Material Safety Data Sheets for each of these materials;
 - specific protocols for monitoring and minimizing the use of fuel and hazardous materials during project operations, including Best Management Practices that will be implemented to ensure minimal impacts to the environment;
 - an estimate of a reasonable worst case release of fuel or other hazardous materials on the project site or into coastal waters resulting from project repair or maintenance activities;
 - all identified locations within the project footprint of known or suspected buried hazardous materials, including current or former pipelines, underground storage tanks, and the like;
 - a list of all spill prevention and response equipment that will be maintained on-site;
 - the designation of the onsite person who will have responsibility for implementing the plan;
 - a detailed response and clean-up plan in the event of a spill or accidental discharge or release of fuel or hazardous materials; and,
 - a telephone contact list of all regulatory and public trustee agencies, including Coastal Commission staff, having authority over the development and/or the project site and its resources to be notified in the event of a spill or material release.

The Permittee shall ensure that all onsite project personnel participate in a training program that describes the approved Plan, identifies the Plan's requirements for implementing Best Management Practices to prevent spills or releases, specifies the location of all clean-up materials and equipment available on site, and specifies the measures that are to be taken should a spill or release occur.

- b. No less than 10 days prior to conducting offshore repair or maintenance activities, the Permittee shall notify the owner(s)/operator(s) of active pipelines within 500 feet of offshore project activities and shall identify the proposed type and timing of offshore work.
- c. In the event that a spill or accidental discharge of fuel or hazardous materials occurs during project construction or operations, all non-essential project construction and/or operation shall cease and the Permittee shall implement spill response measures of the approved Plan, including notification of Commission staff. Project construction and/or operation shall not start again until authorized by Commission staff.
- d. If project construction or operations result in a spill or accidental discharge that causes adverse effects to coastal water quality or other coastal resources, the Permittee shall submit an application to amend this permit, unless the Executive Director determines no amendment is required. The application shall identify proposed measures to prevent

future spills or releases and shall include a proposed restoration plan for any coastal resources adversely affected by the spill or release.

The Permittee shall implement the Plan as approved by the Executive Director. Any proposed changes to the approved Plan, including those resulting from a use of different vessels or equipment than originally proposed, shall be reported to the Executive Director. No changes to the approved Plan shall occur without a Commission approved amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

8. **Protection of Onshore Avian Species.** PRIOR TO PERMIT ISSUANCE, the Permittee shall submit, for Executive Director review and approval, a Nest Survey Plan that includes the protocols described below and identifies measures to be implemented that will avoid and reduce project-related effects on breeding or nesting birds. One or more qualified biologists, approved by the Executive Director, shall prepare a Plan that provides, at a minimum:
- a. Prior to starting project-related activities between March 1 and September 1 of any year, the biologist(s) shall conduct at least two breeding behavior and nesting surveys for birds protected by the Fish and Game Code, the Migratory Bird Treaty Act, and any birds that are included on state or federal lists of threatened or endangered species. The first survey shall take place no more than 30 days before the start of construction activity. The second survey shall take place at least 10 days after the first survey and within 14 days of the start of construction. The surveys shall encompass all environmentally sensitive habitat areas, wetlands, and other areas of potential nesting habitat within 300 feet of project-related activities.
 - b. Follow-up surveys are to be conducted by the approved biologist(s) if there is a period of construction inactivity of three weeks or more between March 1 and September 1 of any year.
 - c. No project activities shall occur within 100 feet of an occupied nest. In addition, if occupied nests are identified in the survey area, the Permittee shall implement all measures necessary to ensure that noise levels resulting from project-related activity do not exceed 60 dB peak at the nest sites until the approved biologist(s) certifies that the nest is vacated, juveniles have fledged, left the area, and are no longer being fed by the parents, and there is no longer any evidence of a second attempt at nesting. Project activities shall be postponed if available measures do not allow a reduction in noise levels to below 60 dB peak during the active nesting and fledging period.
 - d. The Plan shall specify that results of the breeding behavior and nesting surveys and the monitoring surveys will be provided to Coastal Commission staff upon request.

The Permittee shall undertake development in accordance with the approved Plan. Any proposed changes to the approved Plan shall be reported to the Executive Director. No changes to the approved Plan shall occur without a Commission approved amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

9. **Protecting Public Access, Recreation, and Fishing in Coastal Waters.** At least 15 days prior to starting any inwater activities for project repair or maintenance, the Permittee shall provide to the Executive Director documentation showing that the Permittee has submitted to the U.S. Coast Guard information required for a *Notice to Mariners* describing the location and timing of expected inwater work.
10. **Visual Resources.** All lighting used for project activities shall be directed downward and away from offsite areas to the extent allowed pursuant to applicable human health and safety requirements.

Santa Barbara Desalination Plant Reactivation

Utility Work Boat Anchoring Locations Subtidal Biological Survey Report

September 30, 2014

Prepared for:

DUDEK
605 Third Street
Encinitas, CA 92024

Prepared by:

Tenera Environmental
141 Suburban Rd., Suite A2
San Luis Obispo, CA 93401

Introduction

Tenera marine biologist-divers completed subtidal surveys of proposed utility work boat anchoring locations as part of a biological assessment for the proposed repair and maintenance activities that will be involved in reactivating the City of Santa Barbara's Charles Meyer seawater desalination facility. Please refer to Exhibit B, Project Description, of the City's Coastal Development Permit ("CDP") application, submitted concurrently herewith, for additional detail on the existing facilities, as well as the proposed repair and maintenance activities. The facility includes an ocean intake pipeline and two concrete intake structures that, when in operation, housed intake pumps, check valves and intake screen attachments. Each intake structure is constructed of concrete with a footprint of 5.7 by 5.7 meters (m) (18.8 by 18.8 feet [ft]). For the purposes of this report, the two intakes are referred to as Intake A ("inshore", or nearest to shore) and Intake B ("offshore", or farthest from shore) (**Figure 1**). The original pumps, check valves, and intake screen attachments, as well as the 51-centimeter (cm) (20-inch [in.]) HDPE spool pieces that connect each intake structure to the intake pipeline were removed as part of the City's decision to place the facility in long-term standby in 1992.

The repair and maintenance activities would involve reinstalling the equipment with existing or updated technology. The repair and maintenance activities would be conducted from a utility work boat, from which the intake screens, pumps, and other equipment would be lowered into place. Anchoring the vessel using multiple anchor locations is required to provide the needed stability for handling of the large pieces of equipment, and therefore determination of an appropriate location for utility work boat anchoring is needed to ensure that there are no adverse impacts to sensitive hard/rocky benthic habitats. Specifically, a four-point anchoring system is proposed to provide for the optimal level of vessel stability. With a four-point system, the vessel can be repositioned to perform the necessary work activities by pulling and slacking on lines attached to each of the four anchors, thereby avoiding the need for weighing and resetting the



anchors, and consequently avoiding disturbance to the sea floor. Diving surveys for eight potential anchoring locations were conducted on 25 July 2014. A survey of the overall mooring/anchoring field using multi-beam sonar was also conducted on 25 July 2014 to provide additional data on objects and substrates within the proposed mooring field around each intake. Additional dive work completed on 31 July 2014 to locate and inspect the two intake structures (see Biological Assessment Report for Intake Repair and Maintenance Activities, Tenera 2014) found the location of Intake B to be approximately 45.5 m (150 ft) north of the coordinates on file for Intake B. (By using more accurate data from the multi-beam sonar survey, described further below, this difference was later adjusted to approximately 32 m (105 ft) north). This finding resulted in modifications to the anchor locations, as further discussed below. The objective of the work analyzed in this report was to determine suitable anchor locations that will avoid potential impacts to sensitive hard/rocky benthic habitats. The survey methodology and results are described below and include habitat characterizations for benthic habitats within each proposed anchoring location.

Survey Methodology

Survey work was completed from a Tenera research vessel/dive boat by a three person dive team using SCUBA equipment and a diver communication system. Using a Differential Global Positioning Service (DGPS) on the boat, the dive team deployed an anchored surface float at the coordinates of the center of each of eight potential anchor zones provided prior to the survey. Surveys of each anchor location were conducted by two divers using standard circle search methods and a 50 m (164 ft) fiberglass tape reel. The third diver remained aboard the research vessel to monitor communications and vessel traffic in the area. One of the divers was stationed at the center of the anchor location and the second diver swam a series of incrementally increasing diameter circles out to a total distance of 15 m (49 ft) from the anchor location. The first diver monitored the progress of the second diver with a compass and signaled the second diver when he had completed an entire circle. The second diver then swam out an additional five meters and began another circle, with this process repeating until the second diver reached 15 m (49 ft) from the anchor location. The 15 m (49 ft) radius resulted in an area of approximately 700 m² (7,532 ft²) of seafloor being surveyed around each proposed anchor location. This area is referred to as the anchor zone. Divers noted the distance and heading from the anchor location of any hard substrate and objects encountered during the circle search. Algae, epibenthic macroinvertebrates, and fishes observed within each anchor zone were identified and recorded on waterproof datasheets. The relative abundance of each species within each anchoring zone was also noted. When a proposed anchoring zone was found to contain more than 10% hard substrate or an existing intact pipeline, the surrounding area was searched to determine if an alternate site could be located with a radius of 15 m (49 ft) that contained less than 10% hard substrate. Once a new location was found, a surface float was deployed by the dive team at the center of that area. When all anchoring zones had been surveyed, the boat was moved to the new location, the float line was retrieved and pulled tight and vertical over the subsurface weight, and the coordinates of the new location recorded.



A multi-beam sonar survey of the overall mooring/anchoring field was conducted following completion of the diving survey. The multi-beam sonar survey entailed running seven parallel tracks, spaced approximately 20 m (66 ft) apart, through the mooring/anchoring field. The parallel tracks were oriented in a north-south direction and each track was run twice, once from a south to north direction on a 0° heading and once from a north to south direction on a 180° heading. Approximately 3.6 hectares (ha) (9 acres) of the seafloor were imaged during the multi-beam survey.



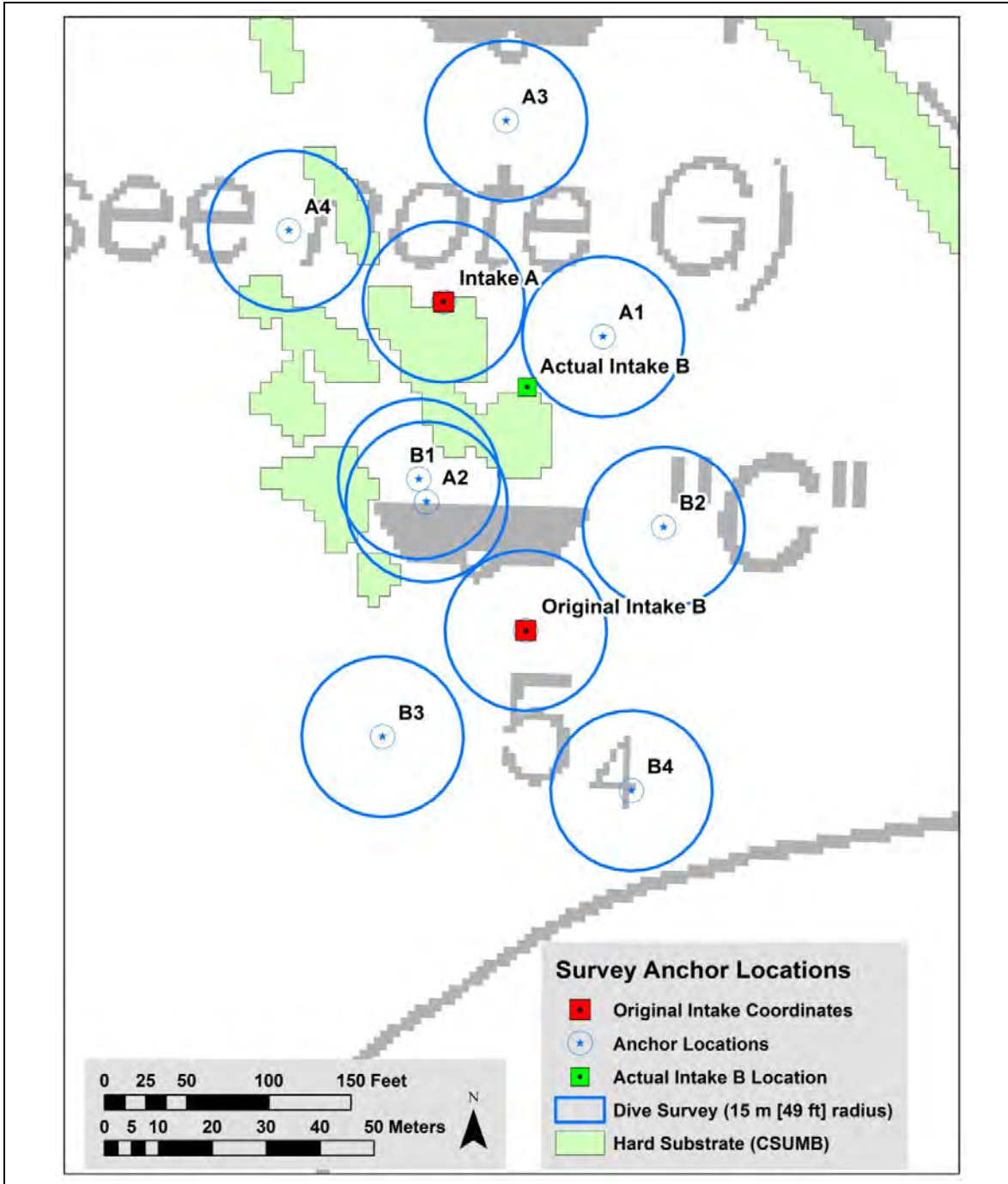


Figure 1. View showing locations of the original and actual intake locations and potential anchor locations (after rotation to avoid hard substrate) and areas surveyed by divers around anchor locations. Also shown are areas of hard substrate (light green) from California State University Monterey Bay (CSUMB) bathymetry data.

Results

Based on the proposed four-point anchoring system described earlier, a total of eight potential anchoring locations, four associated with each intake, were surveyed by divers on 25 July 2014 based on the GPS coordinates provided for the center of each anchoring location (**Table 1**). Prior to the diving survey the locations of the anchoring locations were revised (rotated) to avoid hard substrate shown on the Cal State University Monterey Bay (CSUMB) bathymetry layer. The coordinates of the revised anchoring locations are also shown in **Table 1**. The plotted coordinates of the original and revised anchoring locations, intakes, and surveyed areas around the anchoring locations are presented in **Figure 1**. Additional GPS data collected on 31 July 2014 to locate and inspect the two intake structures found the location of Intake B to be approximately 45.5 m (150 ft) north of the coordinates originally provided for Intake B. As a result, survey information for the two southernmost anchoring locations for Intake B (Stations B3 and B4) surveyed on 25 July 2014 were not used. Multi-beam sonar data and information from the dive surveys of benthic habitats surrounding Intake B on 31 July 2014 were used to recommend adjustments to the anchoring locations that avoid, to the greatest degree possible, impacts to hard substrate.

Dive conditions were generally poor during the surveys of the anchor locations. A layer of turbid water was present on the bottom during the survey and visibility was generally less than one meter (3.3 ft). Water temperature on the bottom ranged from 14° C (58° F) to 17° C (62° F).

Table 1. Original and revised coordinates (NAD83) in decimal degrees for each intake and associated proposed anchoring locations. The original locations of the anchoring locations were rotated to avoid hard substrate shown on the Cal State University Monterey Bay (CSUMB) bathymetry layer.

Station	Original Locations		Revised Locations	
	Longitude	Latitude	Longitude	Latitude
Intake A	-119.6797833	34.4079500		
A1	-119.6795333	34.4077333	-119.67945986000	34.40789845500
A2	-119.6800333	34.4077333	-119.67980704400	34.40761217120
A3	-119.6795333	34.4081667	-119.67966695200	34.40825783260
A4	-119.6800333	34.4081667	-119.67937833300	34.40713500000
Intake B	-119.6796000	34.4074000		
B1	-119.6798500	34.4076167	-119.67982379400	34.40765024080
B2	-119.6793500	34.4076167	-119.67932738200	34.40758019270
B3	-119.6798500	34.4071833	-119.67988318100	34.40721472390
B4	-119.6793500	34.4071833	-119.67937833300	34.40713500000



Intake A (Inshore Intake)

Station A1

One hundred percent of the seafloor was sand/soft sediment with no hard substrate encountered within the 15 m (49 ft) radius. The abundance of submerged aquatic vegetation at the anchor location was moderate to low and consisted of various red algae species. The spiny sand star (5 individuals) was the only epibenthic macroinvertebrate noted within the proposed anchor location.

Station A2

The seafloor within Station A2 was sand/soft sediment; however, as many as six abandoned pipe sections were present within the anchor location. Pipe sections were encountered at 8 m (26 ft) on headings of 270° (2 sections) and 180°, 9.5 m (31 ft) on a heading of 190°, 12.5 m (41 ft) on a heading of 290°, and 15 m (49 ft) on a heading of 90°. The pipe sections were over one meter (>3.3 ft) in diameter and approximately 2.5 m (8.0 ft) in length. The abundance of submerged aquatic vegetation on the sandy substrate was moderate to high and consisted of various species of red algae. Epibenthic macroinvertebrates encountered on soft substrate within the anchor location included four Kellet's whelks (*Kelletia kelletii*) and ornate tube worms (*Diopatra ornata*). The pipe sections provide hard substrate that supported a variety of algae and macroinvertebrate species. This anchoring location is recommended for relocation west of the pipe sections to avoid fouling of the anchors or ground tackle.

Station A3

Nearly one hundred percent of the seafloor was sand/soft sediment with only one large cobble noted on the perimeter of the anchor area at 15 m (49 ft) from the center of the anchor location on a heading of 60°. The abundance of submerged aquatic vegetation at the anchor location was moderate to low and consisted of various red algae species. Epibenthic macroinvertebrates encountered within the anchor area include several Kellet's whelks (3) and spiny sand stars (*Astropecten armatus*) (3 individuals).

Station A4

The seafloor within Station A4 was mostly sand/soft sediment; however, an intact pipeline crosses through the northeastern quadrant of the anchoring area approximately 13 m (43 ft) from the center point and a single large abandoned pipe section was present 8 m (26 ft) from the center on a heading of 270°. The pipe section appeared to be similar in diameter and length to the pipe sections found at Station A2. In addition to the pipeline and pipe section, an area of low-relief rock with a thin layer sand on top was encountered 14 m (46 ft) from the center point of the station area at a heading of 120°. The abundance of submerged aquatic vegetation on the transect was moderate and consisted of various red algae species, a single juvenile giant kelp plant (*Macrocystis pyrifera*) growing from a holdfast buried in the sand within one meter of the center point, and a giant sea palm (*Pterygophora californica*) growing on the low relief rock. Epibenthic macroinvertebrates encountered within the anchor area include a single Kellet's



whelks and four spiny sand stars. Based on diver observations we recommend moving the center point of the anchoring area 5 m (16 ft) to the west to avoid the pipeline and rock substrate.

Intake B (Offshore Intake)

Station B1

The seafloor around Station B1 was 100 percent sand/soft sediment with no hard substrate out to a radius of 12 m (39 ft) radius. Two large abandoned sections of pipe were encountered beyond 12 m (39 ft), one at 12 m (39 ft) on a 340° heading and one at 14 m (46 ft) on a 270° heading. The pipe section appeared to be similar in diameter and length to the pipe sections found at Stations A2 and A4. Additionally, a low relief rock approximately 2 m (7 ft) in length and a meter (3.3 ft) in width was encountered at 13 m (43 ft) on a heading of 60° from the center point. A moderate abundance of submerged aquatic vegetation was encountered and consisted of various red algae species, a juvenile giant kelp plant and a giant sea palm growing on the low relief rock. Kellet's whelks (8 individuals) and ornate tube worms were the only epibenthic macroinvertebrates noted within the proposed anchor area.

Station B2

One hundred percent of the seafloor was sand/soft sediment with no hard substrate encountered within the 15 m (49 feet) radius. The abundance of submerged aquatic vegetation at the anchor location was moderate to low and consisted only of various red algae species. The spiny sand star (2) was the only epibenthic macroinvertebrate noted within the proposed anchor area.

Stations B3 and B4

New locations for Stations B3 and B4 were surveyed on 31 July 2014. The seafloor to the north (0°) and east (90°) of Intake B was surveyed out to 35 m (115 ft) and consisted of 100 percent sand/soft sediment with a moderate to low abundance of various red algae. To the south (180°) a partially buried metal sphere (possibly a 0.9 m [36 in.] mooring buoy) was located 20 m (65.6 ft) from the intake and an intact pipeline was intersected at 28 m (92 ft) that paralleled the course out to 35 m (115 ft). A low relief rocky reef was present to the west of Intake B starting approximately 8 m (26 ft) from the intake on a heading of 270°.

As noted earlier, additional dive work completed on 31 July 2014 to locate and inspect the two intake structures found the location of Intake B to be approximately 45.5 m (150 ft) north of the coordinates on file for Intake B. This finding resulted in modifications to the anchor locations. Because the intake structures are closer together than previously documented, the utility work boat would be able to access both from a single set of anchor locations, eliminating the need for four of the eight anchor locations, as further discussed below.

Recommendations

Diving surveys established the presence of a pipeline and number of pipe sections in several of the potential anchoring areas. The multi-beam sonar survey provided additional information on



the number and locations of pipe sections scattered about on the seafloor to the west of the intake structures (**Figure 2**). The results of the multi-beam data verified the information collected from the anchoring location surveys and other observations that the seafloor to the north and east of the intakes was mostly or completely comprised of sand and soft sediment. Potential anchoring locations to the west and south of the intakes should be adjusted to avoid the intact pipeline and as many as 17 pipe sections scattered on the seafloor. If feasible, we recommend moving the anchoring locations farther west, outside the debris field, and using only four anchoring locations to reactivate and service both intake structures (**Table 2**). The recommended four anchoring locations would all be located in sandy, soft-bottom areas, containing lower biodiversity and habitat value than hard substrate. **Figure 3** shows recommended anchoring locations for a four point mooring configuration to work on both intakes. Four point mooring was recommended to the City by marine contractors based upon the type of work involved. The multi-beam survey also provided more accurate data on the locations of both intakes A and B. As a result, the locations of both intakes relative to the areas of hard substrate are somewhat different in **Figures 1** and **3**, with Figure 3 showing the more accurate locations.

Table 2. Coordinates in decimal degrees (NAD83) for recommended anchoring locations (R1-R4) for a single four point mooring.

Station	Longitude	Latitude
Recommended Locations		
R1	-119.68019271700	34.40749638570
R2	-119.67983396800	34.40825724300
R3	-119.67931000800	34.40800731540
R4	-119.67939257300	34.40742018950



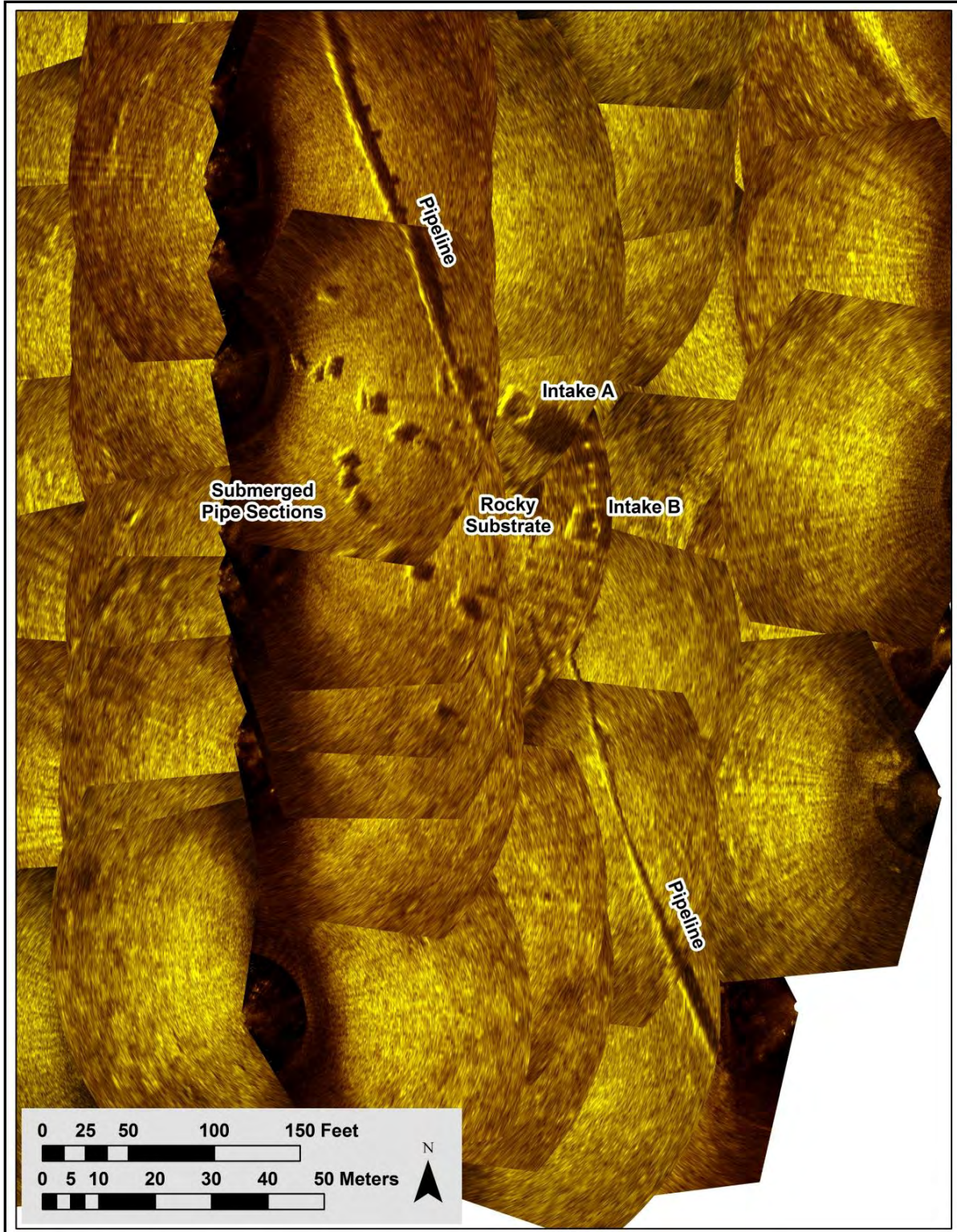


Figure 2. Composite of multi-beam sonar images showing the intakes, pipeline, scattered pipe sections, and rocky substrate.



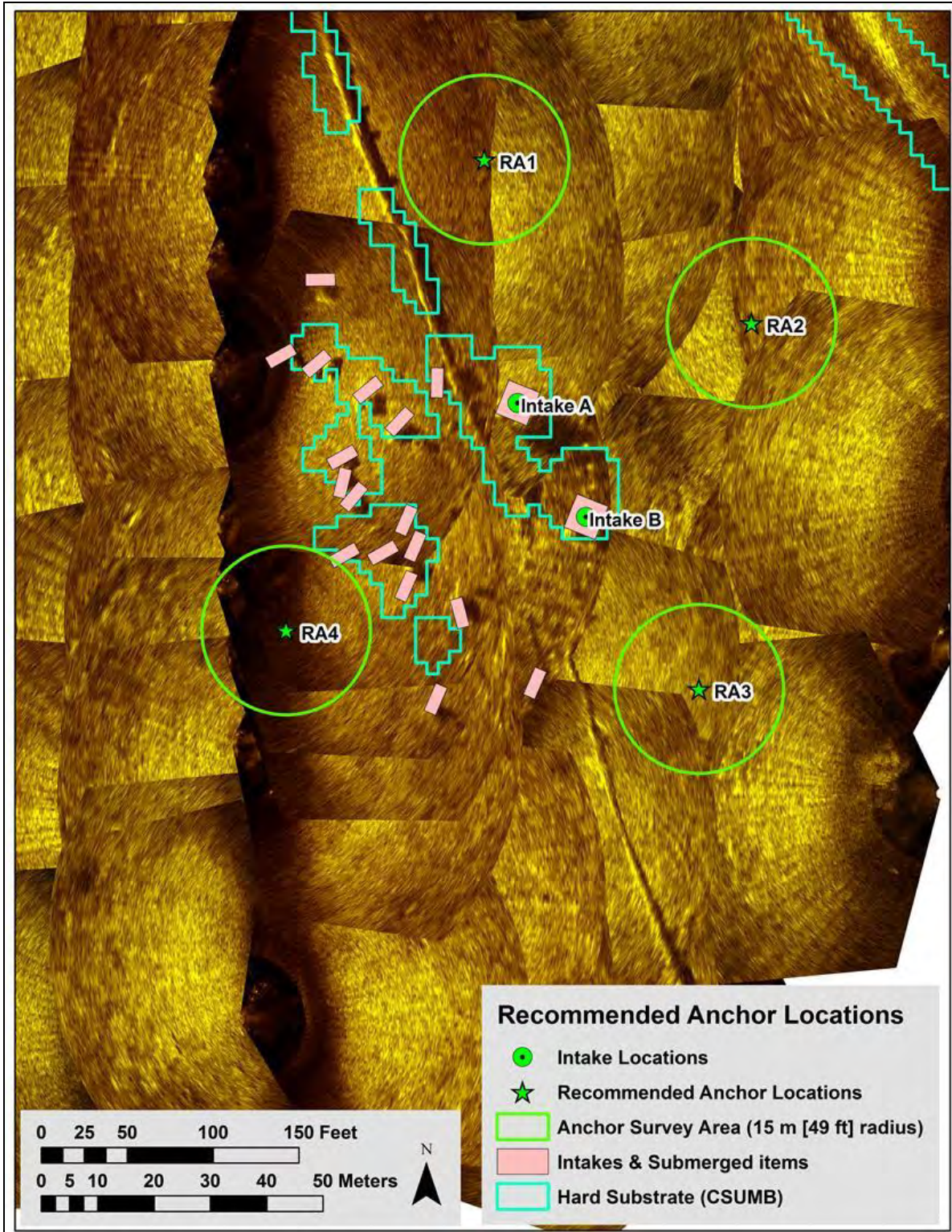


Figure 3. Composite of multi-beam sonar images showing the intake locations and recommended anchoring sites for a single four point mooring configuration.

*Charles Meyer Desalination Facility Reactivation
Project*

Turbidity Minimization and Monitoring



May 2016

TURBIDITY MINIMIZATION AND MONITORING PLAN

CHARLES MEYER DESALINATION FACILITY REACTIVATION PROJECTSANTA BARBARA, CALIFORNIA

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May 2016

TABLE OF CONTENTS

1.0 Introduction/Purpose.....	1
1.1 Project Location.....	2
1.2 Project Description.....	3
1.3 Existing Water Quality Conditions and Oceanic Conditions.....	8
2.0 Avoidance and Minimization Measures.....	10
2.1 Turbidity Monitoring.....	11
3.0 Reporting.....	13
4.0 Amendments.....	13
5.0 Limitations.....	13
6.0 References.....	14

FIGURES

Figure 1: Project Vicinity

Figure 2: Project Site and Offshore Intake Structures

APPENDICES

Appendix A: Offshore Project Observers Names and Qualifications



1.0 INTRODUCTION/PURPOSE

This Turbidity Minimization and Monitoring Plan (TMMP) was prepared to avoid and minimize impacts to water quality during in-water repair and maintenance activities planned for the Charles Meyer Desalination Reactivation Project (Project) and to satisfy Mitigation Monitoring and Reporting Program (MMRP) Number WQ-9 or Special Condition #5 of the project's Coastal Development Permit (CDP), issued by the California Coastal Commission (CCC). This plan is consistent with avoidance and minimization measures outlined in the Biological Assessment (BA) Report for Intake Repair and Maintenance Activities (Tenera 2014) and in accordance with the following project documents:

- Biological Assessment (BA) report titled Biological Assessment for the Charles Meyer Desalination Facility (Dudek 2015)
- Water Quality Control Plan Ocean Waters of California (2012)
- City Of Santa Barbara's California Environmental Quality Act (CEQA) Addendum to: City Of Santa Barbara's And Ionics, Incorporated's Temporary Emergency Desalination Project (Sb-106-90) State Clearinghouse No. 9010859 Final EIR Certified March 15, 1991 and Long Term Water Supply Program Environmental Impact Report (Sb-97-91) State Clearinghouse No. 91121020 Final EIR Certified May 24, 1994.
- Coastal Development Permit 9-14-1781 (California Coastal Commission)

The purpose of this TMMP is to describe the protocols and methods that would be implemented to minimize impacts to water quality (specifically turbidity) and monitor, and turbidity levels defined in the Water Quality Control Plan Ocean Waters of California (Ocean Plan). Additionally, this plan identifies suitable discharge locations for excavated materials from offshore intake vaults to avoid adversely affecting hard substrate, kelp beds, or other sensitive habitats, in accordance with WQ-9 of the CEQA MMRP, revised in September 2015. This TMMP provides specific information about the equipment and methodology proposed to be employed to measure and record turbidity levels during and in the absence of the various in water project activities as well as the names and qualifications of observers who would conduct the monitoring during repair and maintenance activities. The in-water construction activities including placement of anchors, removal of offshore intake vault sediment, cleaning of external surfaces of associated structures both inside and outside the vaults, and regular maintenance cleaning of intake screens would be conducted by commercial divers and the minimization and monitoring of water quality impacts are compulsory of CDP requirement integrated into the Project's MMRP. The management, monitoring, and reporting practices in this TMMP are intended to accomplish the following objectives:

- Avoid or minimize Project-related impacts to water quality
- Meet the requirements of WQ-9 of the Project's MMRP (provided below)



MMRP Mitigation Measures stipulate:

To avoid or minimize adverse impacts to water quality, Permittee shall implement the measures listed below.

- ***WQ-9 Turbidity Minimization and Monitoring Plan***

PRIOR TO THE START OF IN-WATER PROJECT ACTIVITIES, the Permittee shall submit, for Executive Director review and approval, a Turbidity Minimization and Monitoring Plan that includes:

- a) Names and qualifications of observers who will be present at the offshore project site to monitor for turbidity during repair and maintenance activities;
- b) Maximum allowable waste discharge and turbidity levels as provided by the California Ocean Plan and all measures that will be implemented to remain within those levels;
- c) Type of equipment to be used to conduct pressurized cleaning of offshore structures. Flow rates on any hydraulic pumping system shall be set as low as practicable; and
- d) Identification of proposed nearby locations where discharged material will be deposited and not adversely affect hard substrate, kelp beds, or other sensitive habitats.

1.1 PROJECT LOCATION

The locations of the various Project components include the offshore project area, intake structures located in approximately -30 feet Mean Lower Low Water (MLLW), and a Beach Weir Box located on East Beach in Santa Barbara, California. The main Desalination Facility plant site is located at 525 East Yanonali Street in Santa Barbara, Santa Barbara County, California. All project components are in Sections 17 and 23 of Township 4 North, Range 27 West, of the Santa Barbara U.S. Geological Service (USGS) 7.5' topographic quadrangle.



1.2 PROJECT DESCRIPTION

The existing offshore portions of the Project are located offshore of East Beach and southeast of the terminus of Stearns Wharf in the City of Santa Barbara (Figure 1). The ocean intake consists of two offshore concrete intake structures that are designed and installed with intake pumps, check valves, and intake screens. Each intake structure is constructed of concrete with a footprint of 5.7 by 5.7 meters (m) (18.83 by 18.83 feet [ft]). The concrete intake structures were constructed with removable 20-inch, high-density, polyethylene (HDPE) spools, which connected the structures to a single, 36-inch diameter HDPE pipe. The 20-inch spools were removed when the plant was placed into long-term storage mode, but the 36-inch HDPE piping remains on the surface of the sea floor until transitioning to an abandoned 42-inch diameter reinforced concrete outfall pipe (RCP) that was slip-lined with the 36-inch diameter HDPE intake pipe when the intake was originally constructed in 1992. The 36-inch diameter HDPE intake pipeline continues inside the 42-inch RCP abandoned outfall to a raw water booster pump station, located onshore at 420 Quinientos Street. Prior to reaching the booster pump station, the intake pipeline connects to an abandoned outfall weir box on the beach. The weir box serves as a transition point for power and communication wires for the off-shore intake pumps. These wires transition from inside the 36-inch HDPE piping to a duct bank that continues along the intake pipe alignment to the filter feed pump station at 420 Quinientos Street, which is located on the site of the El Estero Wastewater Treatment Plant (EEWWTP). Once seawater is pumped from the offshore intakes through the 36-inch diameter HDPE pipe to the filter feed pump station, it is pumped through a pipeline beneath the EEWWTP to the Desalination Facility located at 525 East Yanonali Street. The entire offshore intake structure complex is located below sea level at an approximate depth of 30 feet (5 fathoms), in an area of soft/sandy seafloor.

Initial in-water construction activity proposed for the Project in the offshore waters consists of a multi-phase approach that includes the inspection and cleaning of portions of the offshore intake structure, attachment areas (bolts and joints) of the intake flanges, removal of the existing power and control cable wires, removal of sand and material from the intake vaults, inspection of the intake pipe conduit, installation of a new pump and intake hardware into the existing intake vaults, and scheduled maintenance (cleaning) of intake screens after completion of initial repair activities. All offshore repair and maintenance activities would be managed by Global Diving & Salvage Inc., (Global) including anchoring of working vessels, excavation of sediment, vault structure cleaning, equipment repairs and replacement, and intake screen cleaning.

Global would conduct initial inspection surveys of the intake vaults and flanges from the M/V *Danny C*, a 77-foot steel utility vessel based in Santa Barbara with crew experienced with operations at the proposed location. The M/V *Danny C* would use a three- or four-point anchoring system and utilize the proposed anchoring locations. Global inspection surveys would include the hand tool cleaning of the intake flange joint and attachment areas as well as the areas on the top of the intake vaults. The inspection surveys conducted by Rincon scientific divers will take two consecutive days and inspection dives of the intakes will take commercial divers up to three consecutive days.

Once the inspections are completed, a tug and barge would anchor using a four-point mooring system utilizing the proposed anchor locations to further support repair activities. Work is



scheduled to take up to 15 total days pending repair requirements and weather and would be conducted between May and September 2016.

1.2.1 Operations Potentially Affecting Water Quality

Proposed offshore work activities, including excavation of biofoul material from the concrete intake structure, cleaning portions of the structure and intake flange, and scheduled maintenance (cleaning) of the intake screens, have the potential to disturb sediment and reduce light transmissivity. A water lift will be used to displace sediment from the concrete intake vault structures to areas adjacent to the vaults (Figure 2). The water lift will utilize a pipe section, or educator, placed in a horizontal position on the seafloor near the excavation location and the suction end utilizes approximately 30 feet of flexible hose for diver manipulation to remove material. The pipe discharge consists of 50 feet of flexible hose routed to a preferred disposal location (Refer to Section 2.1.2). This system uses a diesel-powered, 1500-gallon per minute (GPM) pump stationed topside, with a fire hose running to the educator positioned on the seafloor. The discharge volume is directly related to the volume of water pushed through the water lift and can be adjusted to account for the type and depth of the material needed to be removed. The discharge discharges the excavated material (water and sand) within 3 meters of the terminus of the discharge pipe location and within one meter of the seafloor.

For cleaning of surfaces or screens three different methods will be used depending on access and surface area. Prior to the cleaning of submerged components of the intake structures or internal parts divers will remove large invertebrates by hand and relocate them to adjacent hard substrate. The cleaning of submerged components of the pipeline and intake structures will use: 1) hand tools (scrapers and wire brushes); 2) air and/or hydraulic underwater power cleaning tools (broad blade chippers and rotary wire brushes); and 3) a high pressure water blaster. Hand tools or air/hydraulic power tools are effective in exposed accessible locations with relatively small (< 1square meters [10 square feet]) surface areas. The water blaster is very similar to a pressure washer, with the exception that output pressures are much higher, commonly in the 10,000 to 15,000 psi range. The diver holds a “wand” to direct the focused discharge. Various wand tips are used to achieve the most efficient production rate based on the extent of biofouling. The cleaned material, surface biofouling less than 0.1 meter (0.33 feet) in depth, will drop to the bottom in the immediate area of work. The topside unit is a large, diesel powered, multiple piston water pump.

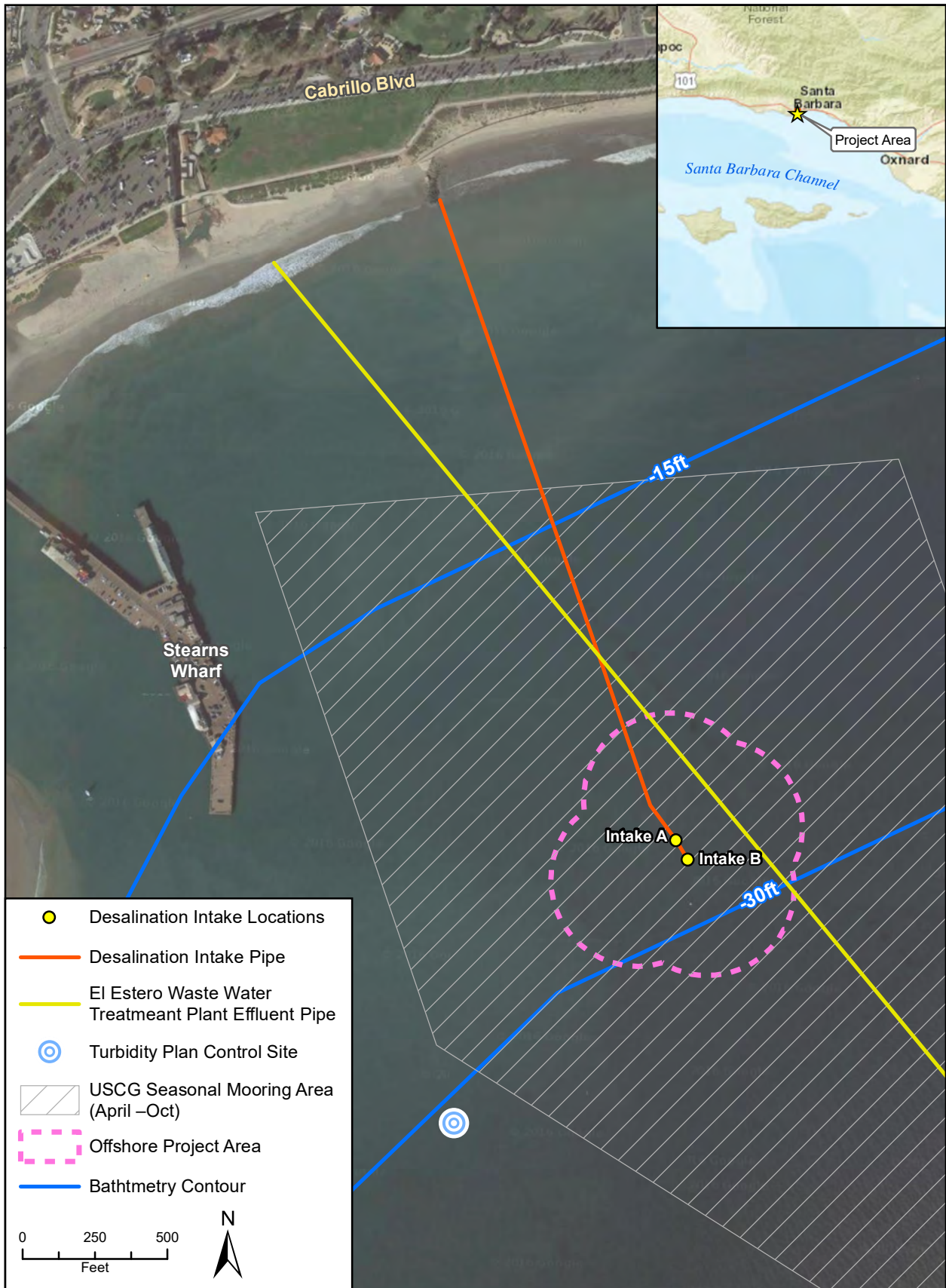


1.2.2 Proposed Sediment Discharge Location

From review of USGS Potential Marine Benthic Habitats, Offshore of Santa Barbara Map Area, California (2013), in conjunction with site specific surveys conducted in association with the BA (Dudek 2015) benthic habitat in the offshore project area is nearly 100 percent soft/sand substrate. Considering the proximity of in-water construction to Santa Barbara Harbor, location within a seasonal mooring area, and calm oceanic conditions likely to be persistent during construction periods, Rincon proposes placing discharged material from in-water construction excavated using the water lift as close as possible to excavation locations using the flexible discharge pipe, without forming noticeable features on the seafloor. Proposed discharge areas are approximately 15 meters (50 feet) from the areas of sediment extraction and the soft bottom habitat associated with the discharge areas consist of similar sand/silt sediment as the discharge material. Selected discharge locations specifically avoid redistribution of the material in close proximity to hard reef or noticeable benthic features (Figure 2). Surrounding benthic habitat is primarily, soft, unconsolidated, rippled sediment, and the discharging of material adjacent to the intakes located within the offshore project area would not adversely affect hard substrate, kelp beds, or other sensitive habitat. The amount of excavated and discharged material is estimated to be approximately 18 cubic yards of material for each intake vault, based on the vault being half full. The likelihood of noticeable or measureable impacts to turbidity are not anticipated and changes to light transmissivity would be temporary and localized considering the typical large grain size associated with the documented sand/silt description of the material reported for initial site surveys and lack of significant circulation in the offshore project area.

In review of activities that may affect water quality, specifically turbidity, the process of cleaning submerged intake structures and internal parts begins with the hand removal and relocation of macroinvertebrates as well as removal and disposal of kelp located on the submerged structures. Cleaning is initiated using through the use of hand tools (scrapers and brushes) followed by the use of hand power tools and lastly use of a high pressure water blaster set on the lowest setting functionally effective.



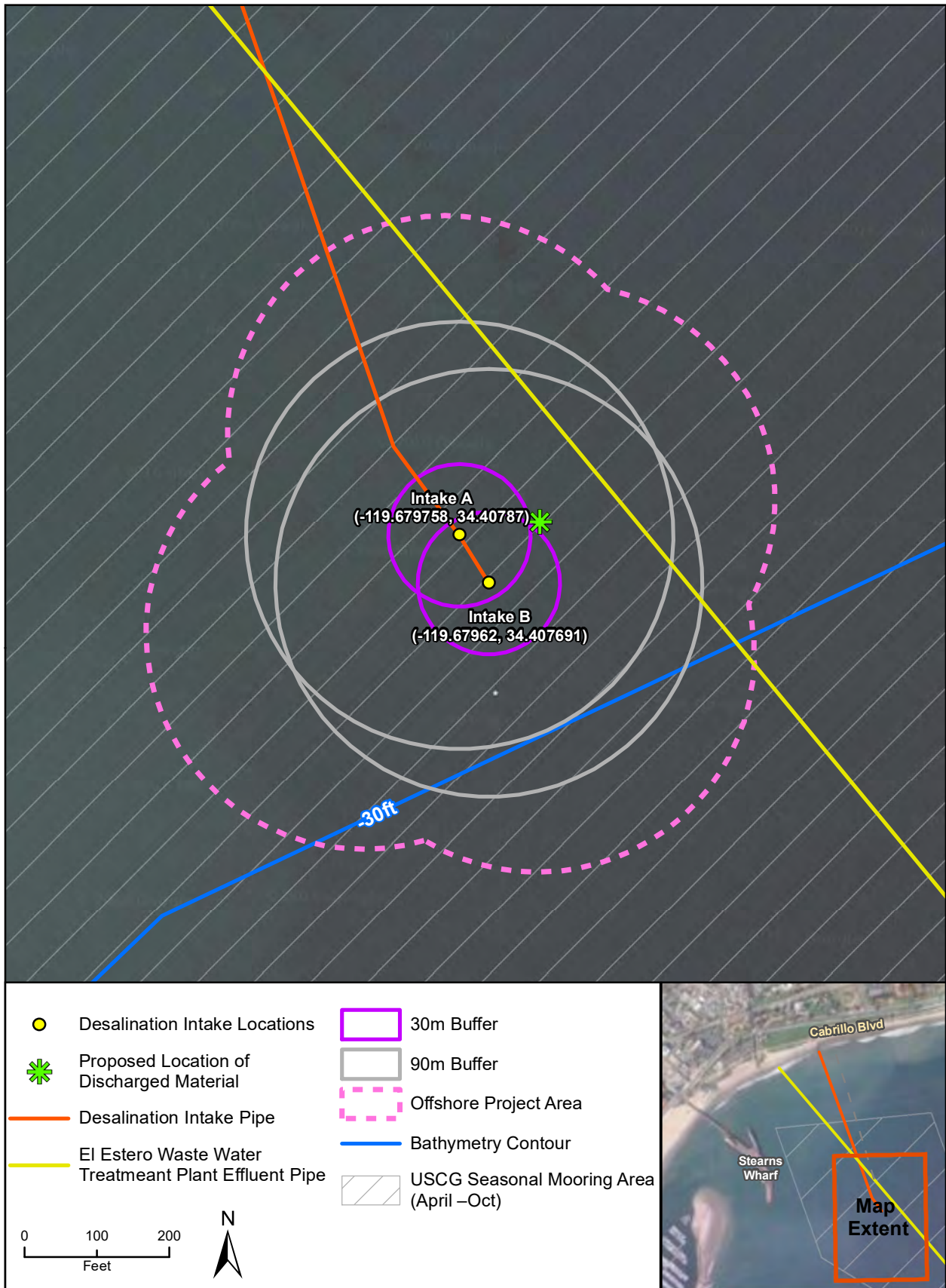


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 Additional data provided by TENERA Environmental, 2016;
 CDFW, 2016; NOAA, 2016.

Project Area Overview

Figure 1





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 Additional data provided by TENERA Environmental, 2016;
 CDFW, 2016; NOAA, 2016.

Project Area

Figure 2

1.3 EXISTING WATER QUALITY CONDITIONS AND OCEANIC CONDITIONS

1.3.1 Regulatory Requirements

The Central Coast Regional Water Quality Control Board (Regional Board) implements the *Water Quality Control Plan for the Central Coast Region* (amended March of 2016) which establishes Regional water quality objectives for surface and ground waters for Santa Cruz, San Benito, Monterey, San Luis Obispo, and Santa Barbara Counties. The Regional Board designates beneficial uses, water quality objectives, and oversees programs and policies to protect water uses and benefits of the State’s water. To address ocean waters, the *Water Quality Control Plan for the Central Coast Region* incorporates objectives contained in the Ocean Plan. The State Water Resources Control Board (State Water Board) adopted the Ocean Plan in 1972 and has revised it numerous times, and as recently as 2012. The Ocean Plan is clear that there shall not be degradation of marine communities or other exceedances of water quality objectives due to waste discharges. This is true for all near coastal ocean waters, regardless of whether a Marine Protected Area is present.

The proposed cleaning and removal of material (sediment) from the two concrete intake vault structures and the redistribution of that material on the seafloor adjacent to the vault structures does not strictly fall under effluent discharge regulations. Turbidity limitations stipulated for effluent discharge outlined in the Ocean Plan provide established limitations to point source impacts to water quality, with respect to turbidity, that serve as measureable thresholds. Table 1 includes Effluent Limitations for Major Constituents Based upon Table A of the Ocean Plan.

Table 1. Effluent Limitations for Major Constituents Based on Table A of the Ocean Plan

Parameters	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Maximum Daily
Oil and Grease	Mg/L	25	40	75
Settleable Solids	MI/L	1.0	1.5	3.0
Turbidity	NTU	75	100	225
pH*	Standard Units	-	6.0 – 9.0 at all times	-



1.3.2 Ocean Characteristics and Conditions

According to USGS Potential Marine Benthic Habitats, Offshore of Santa Barbara Map Area, California (2013), potential substrate consists primarily of soft, unconsolidated, rippled sediment (sand and mud). Seafloor habitat conditions vary from seagrass, kelp beds, and rocky habitats. The project is within the Santa Barbara Littoral Cell (Patsch, Griggs 2006), faces south to southeast, and has variable oceanic conditions dependent upon season. Primary wave direction is south-south west during spring and summer months switching to west-northwest in fall and winter months. On average, wave action is limited at the project location due to refraction from Santa Barbara Point and proximity of project site offshore. The project area is located in a permitted mooring area. Due to close proximity to seasonal permitted mooring areas and Santa Barbara Harbor, heavy recreational use is consistently, year-round at the offshore project area. Based on observations and survey results from the Utility Work Boat Anchoring Locations Subtidal Biological Survey Report (Tenera 2014), habitat adjacent to the intake values is primarily soft, unconsolidated, rippled sediment (sand and mud).



2.0 AVOIDANCE AND MINIMIZATION MEASURES

This section describes the methods to be used to avoid and minimize turbidity related to in-water construction activities with the potential to disturb sediment in the offshore project area and associated with maintenance and repair of Project intake structures, components, and support vessel anchoring. To address MMRP WQ-9 the section discusses the methodology employed to excavate sediment from the concrete intake structure, clean upper portions of the structure, portions of the intake flange to gain access to the internal components that require upgrade, and conduct scheduled maintenance (cleaning) of the intake screen. The purpose of this TMMP is to identify the most effective methods to execute in-water construction activities while minimizing negative effects to turbidity and ultimately water quality.

Consistent with proposed project construction that results in the placement of structures or consists of work in or affecting a navigable water of the United States and pursuant of Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and USACE Permit (SPL-2015-00079-TS) divers would remove any large, slow-moving macroinvertebrates located on project structures or the hard reef structure near intake B and cut and bag any large kelp plants (dispose of offshore or at landfill) prior to pressure cleaning activities. Global commercial divers propose to utilize a water lift to clear the sand/sediment out of the concrete intake structure. The water lift reduces air entrainment thus reducing sediment dispersion into the water column as well as focuses the placement of discharge material. The discharge of the excavated material (water and sand) occurs within three meters of the terminus of the discharge pipe location and within one meter of the seafloor. If accumulation of vault material (sand) is noticed in a particular spot, the discharge hose can be repositioned in a different area to reduce development of noticeable features. If turbidity levels are documented to exceed or approach Ocean Plan limits (Table 1) a shroud could potentially be fabricated to fit on the end of the discharge pipe to further reduce sediment plume dispersion.

To minimize impacts to turbidity associated with cleaning activities of the offshore concrete vaults and associated structures pressure cleaning would be utilized to the minimum extent possible. Hand cleaning (scraping and wire brushing) in conjunction with power tool cleaning would be used first and the pressure washer would be implemented at the lowest pressure setting, suitable to displace biofouling of the intake services and structures.



2.1 TURBIDITY MONITORING

For compliance with the June 2015 Coastal Development Permit Special Condition #5 contained in MMRP WQ-9, names and qualifications of observers who would be present at the offshore project site to monitor for turbidity during repair and maintenance activities are include in Appendix A of this report.

2.1.1 Receiving Water Monitoring

Sampling for receiving water monitoring shall commence at least one day prior to the start of in-water construction and continue at least one day following completion of all in-water construction. Sampling shall be conducted a minimum of once a day during in-water construction. Sampling shall be conducted down current of in-water work at least one hour after the initiation of daily in-water construction. Down current direction may fluctuate over the course of the project; current direction would be determined each day with in-water observations and measurements. When in-water construction is not scheduled, receiving water monitoring may not be conducted. All receiving water monitoring data shall be obtained using remote electronic detection equipment (water quality sonde), YSI EXO-6 or similar. Receiving water monitoring sample locations shall be sited at the following stations:

Table 3 – Receiving Water Monitoring Locations

Station	Description
1	30 meters up current of the in-water construction, safety permitting
2	30 meters down current of the in-water construction, safety permitting
3	90 meters down current of the in-water construction, safety permitting
C	Control site (not impacted by in-water construction activities)

Water column monitoring would consist of light transmittance, depth, and temperature monitoring taken throughout the water column at 5 feet intervals. Additionally, dissolved oxygen, pH, and conductivity (salinity) measurements may be collected. During days when multiple in-water construction activities (e.g. phases discussed in project description) are scheduled, receiving water monitoring locations may be sampled multiple times per day to capture representative water column measurements from each phase. All monitoring equipment would be calibrated each day using standards suggested by equipment manufacturer. Table 4 denotes water column monitoring schedule.



Table 4 – Water Column Monitoring Schedule

Parameter	Units	Station	Frequency
Light Transmittance	NTU or % Transmittance	1-3, C	Daily
Depth	Meters (m)	1-3, C	Daily
Temperature	Celsius	1-3, C	Daily
pH	Standard	1-3, C	Opportunistically
Dissolved Oxygen	Milligrams/liter (mg/l)	1-3, C	Opportunistically
Conductivity	millisiemens per centimeter (mS/cm)	1-3, C	Opportunistically

Water column light transmittance measurements from stations 3 and C shall be compared for near surface (3 feet below surface), mid water column (average excluding surface and bottom measurements), and bottom (3 feet above bottom). Surface visibility would be measured using a secchi disk and recorded in meters. Light transmittance would be recorded using a multi-parameter water quality sonde or nephelometer capable of recording light transmittance measured in nephelometric turbidity units (NTUs). If percent difference in NTUs between 3 and C is 30 percent or greater for near surface, mid-water column, or bottom measurements or exceeds Ocean Plan effluent discharge limitation, Rincon would notify the City of Santa Barbara and Global within 24 hours of observance of the transmissivity exceedance. Rincon would discuss transmissivity exceedance events with in-water construction operators and implement additional BMPs to control sediment resuspension from in-water activities. If the NTU threshold is exceeded for three consecutive days following initial exceedance and additional BMP action, more aggressive BMPs may be deployed. Global would be contacted to discuss additional, more aggressive, BMP deployment requirements for sediment resuspension control occurring around in-water construction zone, if needed.

During receiving water monitoring, observations would be recorded describing oceanic and atmospheric conditions present each day. Narrative as well as photographic observations would be recorded as identified below and transmitted to the city daily:

- I. Date and time
- II. Direction of current
- III. General weather conditions and wind speed
- IV. Tidal action (height and stage)
- V. Observed appearance of trash, floatables, grease, oil, or other materials foreign to ocean environments
- VI. Discoloration or turbidity changes
- VII. Odors
- VIII. Depth of water where water column measurement occurring
- IX. Phase of in-water construction (note multiple phases occurring, if applicable)
- X. Observed recreational activity near in-water construction area
- XI. Color photographs to record visible daily observations



If additional water quality parameters are required to be taken during in-water construction activities the City of Santa Barbara and Global would be notified within 48 hours. Water column sampling and analyses would follow Ocean Plan promulgated methods where applicable.

3.0 REPORTING

3.1.1 Monitoring Results and Documentation

Receiving water monitoring results and observation would be arranged to display daily data collected as outlined in Section 2.1.1 above and daily reports transmitted to the City of Santa Barbara. A Final Report would be generated summarizing results of daily monitoring and observations and be provided to the City of Santa Barbara. The Final Report would contain a section titled "Summary of Light Transmittance Exceedances" which discusses dates and phases of in-water construction which led to the exceedance of the 30 percent or greater light transmittance threshold or Ocean Plan requirements. This section would include a discussion of additional, more aggressive, BMPs deployed to control resuspension of sediment and water quality outcomes from BMP deployment.

4.0 AMENDMENTS

It may be necessary to include updated and additional information to this plan as the project progresses. Any changes to the approved Plan require an approved amendment to the Coastal Development Permit issued by the CCC, unless the Executive Director determines that no amendment is legally required. Amendments to the approved Plan shall be inserted into the appropriate sections of this report with the approval of Global Diving and Salvage, Inc. and CCC Executive Director.

5.0 LIMITATIONS

This Turbidity Minimization and Monitoring Plan has been prepared for and is intended for the exclusive use by Global Diving and Salvage Inc. The content of this document should not be relied upon by any other party without the written consent of Rincon Consultants, Inc. or Global Diving and Salvage Inc. Conclusions regarding water column conditions are based upon limited field monitoring and observations collected during in-water construction activities.



6.0 REFERENCES

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Appendix A

Water Quality Monitor Qualifications (Resumes)





DEREK LERMA

Marine Resources Manager/Senior Marine Scientist
Rincon Consultants, Inc.

Derek Lerma is Rincon Consultants, Inc.'s Marine Resources Manager, and a Senior Marine Scientist. He has comprehensive and diverse experience executing project management of marine, estuarine, and coastal resources and development of regulatory documents, mitigations strategies, and monitoring programs for capital improvement construction and development projects. Mr. Lerma possesses expansive knowledge of California marine ecosystem habitats, function, protected species, and potential impact vectors with extensive and diverse experience in multidisciplinary study design, field execution, data analysis, report preparation, regulatory integration, and technical supervision. He acted as Project Manager and Senior Marine Scientist for the development of multiple Integrated Natural Resources Management Plans (INRMPs), Environmental Impact Statements (EIS), construction monitoring, biological characterizations, and marine special studies for federal, state, city and private clients.

TECHNICAL CAPABILITIES

- Mr. Lerma has diverse experience in implementing state and federal biological surveying protocols involving monitoring and reporting of sensitive species and habitats.
- Mr. Lerma's biological expertise includes submerged aquatic vegetation (eelgrass) ecology, subtidal and intertidal marine biological characterizations and impact assessments, beach ecology, estuarine systems and essential fish habitat analysis.
- Mr. Lerma's additional technical skills and knowledge encompasses diving safety, marine mammals, acoustics, aquatic invasive species, water quality monitoring, sediment evaluations and regulatory consultations.
- Mr. Lerma possesses diverse experience as a project manager directing NEPA & CEQA documents, identifying potential impacts, developing mitigation alternatives, achieving conflict resolution, and monitoring for compliance.

EDUCATION/CERTIFICATIONS

B.S., Biological Oceanography, Humboldt State University, 1990
National Marine Fisheries Service (NMFS) Certified Marine Mammal Observer (current)
NMFS and CDFW Invasive Species Caulerpa Certified (current)
US Coast Guard 100 Ton Captain (current)
American Academy of Underwater Science, Diving Safety Officer (current)
40 Hour Hazwoper Trained and Supervisor (current)
First Aid/CPR/Oxygen Administration (current)
Transportation Worker Identification Credential (TWIC) (current)

EMPLOYMENT HISTORY

Rincon Consultants, Inc. (2016 - Present)
Tierra Data Inc. (2007 - 2014)
American Marine (2002 - 2007)
Channel Islands National Park (1994-2002)
Humboldt State University Foundation (1988-1994)

PROJECT EXPERIENCE

Biological Resource Evaluations

- Acoustic Thermometry Ocean Climate (ATOC) Cable Marine Habitat Special Study, Point Pillar, CA.,
- US Navy NAVFAC SW (2012-2014)
- Sunroad Enterprises Harbor Island Restaurant Essential Fish Habitat, Eelgrass, and Caulerpa Evaluations, San Diego, CA., Sunroad Enterprises (2014 & 2015)
- San Diego County Shoreline Feasibility Study, City of Oceanside, CA Nearshore Survey
- US Army Corps of Engineers (under subcontract to Moffett Nickel) (2015)
- Permanent Transect Eelgrass Monitoring, San Diego Bay, CA.,
- US Navy NAVFAC SW, (2009-present)

Mitigation Design and Compliance Monitoring

- Naval Base Point Loma Fuel Pier Replacement Project, Marine Mammal and Protected Species Monitoring and Compliance, US Navy NAVFAC SW (2013- Present)
- Naval Weapons Station Seal Beach Sediment and Eelgrass Evaluation, Seal Beach, CA.,
- US Navy NAVFAC SW (2015-present)
- Advanced Water Treatment Facility and Utility Corridor Project (P-113) Biological Construction Monitoring, Camp Pendleton, Oceanside, CA., US Marine Corps, NAFAC SW (2012-2014)

NEPA/CEQA

- Marine Resources Section Author, San Diego Bay Integrated Natural Resources Management Plan,
- US Navy & San Diego Unified Port District, 2010-2013
- Marine Resources Section Author for Fish, and Sea Turtles, Silver Strand Training Complex EIS,
- Man-Tech SRS (2008-2010)
- Navy Base Ventura County, San Nicolas Island INMRP Project Manager and Marine Resources Technical Lead, US Navy NAVFAC SW (2009-2010)



PETER SHELLNBARGER, MESM

Environmental Scientist
Rincon Consultants, Inc.

Mr. Shellenbarger supports a variety of projects within the Environmental Site Assessment and Remediation and Water Resources groups. His experience includes Phase I and Phase II environmental assessments, storm water quality management, groundwater and surface water sampling, technical review of environmental permits and documents, report generation.

TECHNICAL CAPABILITIES

- Mr. Shellenbarger has conducted groundwater, surface water, soil, air, and waste sampling for Phase I & II Environmental Site Assessments.
- Mr. Shellenbarger has experience in profiling, labeling, manifesting, transporting, and disposing of hazardous and non-hazardous materials.
- Mr. Shellenbarger has experience in borehole logging, excavation, soil sampling, soil classification, and laboratory analyses.
- Mr. Shellenbarger has experience implementing storm water quality management plans and projects.
- Mr. Shellenbarger's knowledge includes water quality objectives, total maximum daily loads, monitoring and reporting plans, dredging operations, publically owned treatment works, and municipal separate storm sewer systems.
- Mr. Shellenbarger's skills include constructing soil vapor extraction and groundwater remediation systems, reviewing regulatory documents, technical writing, public interaction/outreach, public testimony, and report preparation.

EDUCATION, REGISTRATIONS AND AFFILIATIONS

Master of Environmental Science & Management, University of California, Santa Barbara (2013)
B.A., Environmental Economics, University of California, Santa Cruz (2008)
40-hour Hazardous Waste Operations Emergency Response (HAZWOPER) certification

EMPLOYMENT HISTORY

Rincon Consultants, Inc. (2015 - Present)
Heal the Bay (2013 - 2015)
Santa Barbara Audubon Society (2012 – 2013)
The Nature Conservancy (2012)

SPECIFIC PROJECT EXPERIENCE

Environmental Site Assessments

- Phase II Environmental Site Assessments, various, throughout Santa Barbara, Ventura, Kern, and Los Angeles Counties.

Water Resources

- City of Malibu Civic Center Wastewater Treatment Facility Groundwater and Surface Water Monitoring
- Various groundwater and surface water monitoring throughout Santa Barbara and Los Angeles Counties
- SWPPP monitoring throughout Santa Barbara, Ventura, and Los Angeles Counties.



TRAVIS MARELLA

Biologist

Rincon Consultants, Inc.

Travis Marella is a Biologist with Rincon Consultants' Natural Resources Group with extensive experience and training in water quality sampling and analysis, aquatic ecology, storm water procedures, and permitting. His water quality experience includes freshwater, estuarine and saltwater (marine). Specific water quality sampling procedures include dissolved oxygen, temperature, pH, turbidity, copper levels, ammonia levels, and nitrite levels. Other surveying and monitoring tasks include testing lower trophic levels (phytoplankton, zooplankton and aquatic insects), hydrology and physical conditions. Mr. Marella graduated from California State University, Sacramento with a Bachelor's of Science degree in Environmental Studies with an emphasis in Fish and Wildlife. Additionally, Mr. Marella has the familiarity of permitting and applications on the city, state and federal levels.

TECHNICAL CAPABILITIES

- Mr. Marella has extensive experience in conducting water quality sampling in freshwater environments for dissolved oxygen, pH, turbidity, and temperature.
- Mr. Marella has extensive experience in conducting water quality sampling in estuarine and marine environments for dissolved oxygen, pH, turbidity, temperature, and copper, ammonia, and nitrite levels.
- Mr. Marella has extensive experience in conducting surveys for special status and non-special status aquatic species in freshwater, estuarine and marine environments.
- Mr. Marella has experience implementing storm water quality management plans and projects.
- Mr. Marella's knowledge includes water quality objectives and implementations and Regional Water Board rules and requirements.

EDUCATION, REGISTRATIONS AND AFFILIATIONS

B.S., Environmental Studies, Sacramento State University 2012

Qualified Storm Water Practitioner (SWPPP), Certification # 25535

Certified Inspector of Sediment and Erosion Control (CISEC), Certification # 1697

American Fisheries Society member

First Aid and CPR Certified

EMPLOYMENT HISTORY

Rincon Consultants, Inc. (2014 – present)

Stellar Biotechnologies, Inc. (2012 – 2014)

Central Valley Regional Water Quality Control Board (2010 – 2012)

SPECIFIC PROJECT EXPERIENCE

Freshwater Water Quality Monitoring and Analysis

- Water Quality Sampling and Analysis (dissolved oxygen, pH, turbidity, and temperature), various, throughout Santa Barbara, Ventura, and Los Angeles Counties.

Estuarine and Marine Water Quality Monitoring and Analysis

- Water Quality Sampling and Analysis (dissolved oxygen, temperature, pH, turbidity and copper, ammonia and nitrite levels), various, Santa Barbara, Ventura and Los Angeles Counties.

Stormwater (SWPPP) Monitoring

- SWPPP monitoring throughout Santa Barbara, Ventura, and Los Angeles Counties.

*Charles Meyer Desalination Facility Reactivation
Project*

**Sensitive Marine
Species Monitoring
Plan**

May 2016



SENSITIVE MARINE SPECIES MONITORING PLAN

CHARLES MEYER DESALINATION FACILITY REACTIVATION PROJECT SANTA BARBARA, CALIFORNIA

Prepared for:

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May 2016



TABLE OF CONTENTS

1.0	Introduction/Purpose	1
1.1	Project Location.....	3
1.2	Project Description	4
1.3	Existing Marine Habitat and Resources	7
2.0	Avoidance and Minimization Measures	9
2.1	Biological Monitor	12
2.2	Environmental Awareness Program	13
3.0	Reporting	14
3.1	Surveys and Findings documentation.....	14
4.0	References	15
	Appendix A	16
	Appendix B.....	18
	Appendix C.....	19

FIGURES

Figure 1.	Project Area	5
Figure 2.	Offshore Project Area and Intake Structures	6

TABLES

Table 1.	Special-Status Species with the Potential to Occur in the Project Area.	7
Table A-1.	List of Special Status Avian Species Potentially Occurring in the Project Area.	16
Table A-2.	List of Special Status Marine Mammal Species Potentially Occurring in the Project Area.	16
Table A- 3.	List of Special Status Sea Turtle Species Potentially Occurring in the Project Area.	17



1.0 INTRODUCTION/PURPOSE

This Sensitive Marine Species Monitoring Plan SMSMP was prepared to avoid impacts to marine species during in-water repair and maintenance activities planned for the Charles Meyer Desalination Reactivation Project (Project) and to satisfy Mitigation Monitoring and Reporting Program (MMRP) Mitigation Measures BIO-21 and BIO-22.

The MMRP Mitigation Measures stipulate the following:

To avoid or minimize adverse impacts to fish and wildlife resources identified, Permittee shall implement the measures listed below:

- ***BIO-21.*** *The maximum boat speed limit between Santa Barbara Harbor and the anchor sites shall be 5 mph (4.34 knots) for any boat used for repair and maintenance of the intakes, anchor sites, or any other component of the Charles Meyers Desalination Plant. Within 24 hours of the commencement of repair and maintenance activities in the ocean, a City-approved qualified biologist shall monitor the ocean water between the Santa Barbara Harbor and approximately 300 feet south and west of the anchor sites from Stearns Wharf using a spotting scope and/or binoculars for the presence or absence of marine mammal species. A second marine mammal survey shall be conducted within an hour of the boat departing from the harbor to the anchor sites. The biologist will record the location and abundance of all marine mammal species and report the findings to the City within an hour of observation. During all travel, as well as repair and maintenance activities, a City-approved biologist shall monitor all activities from Stearns Wharf to ensure no marine mammals are harassed. The biologist shall remain in radio or cell phone contact with the boat captain informing the captain of any marine mammals within the path of the boat or any marine mammals that may be approaching the boat on the port or starboard side. It is recommended that the boat remains a minimum of 25 feet distance from seals or sea lions in the water or on buoys during travel. NOAA Fisheries recommends a distance of 100 yards (300 feet) between boats and seals and sea lions on land or rocks. Divers shall not attempt interact with any marine mammals during maintenance operations.*

If a whale, dolphin, or porpoise are observed in the harbor and maintenance activities proceed, a City-approved biologist shall be present on the boat to observe whale location and behaviors, and ensure the boat maintains a 100 yard (300 foot) distance separation. If the whale exhibits any adverse¹ behaviors (evasive or defensive), the biologist will direct the boat to decrease speed and change direction and increase distance from the whale until the whale has either left the area or until the distance is sufficient to reduce stress displayed by the whale.

¹ For the purposes of this SMSMP, “adverse behaviors” are defined as a change in swim rate, change in inter-breath interval, abrupt change in direction, or breaching.



Sensitive Marine Species Monitoring Plan

- ***BIO-22 Sensitive Marine Species Monitoring and Mitigation Plan.*** *Prior to the Start of In-water Activities, the Permittee shall submit, for Executive Director review and approval, a Sensitive Marine Species Monitoring Plan. At minimum, the Plan shall include:*
 - a. *Names of qualified biologists who will be present during all project activities, including biologist qualifications and proposed role during monitoring activities. The selected biologists shall be able to identify and have knowledge of the ecology and behavior of various marine mammals, sea turtles, and special-status marine bird species that have a potential to occur in the project area;*
 - b) *Procedures to be followed and measures to be taken if marine mammals, sea turtles, or special status birds are sighted in the project area during active operations. At minimum, the biological monitor will have authority to temporarily halt project activities if those activities pose a threat to special-status species, and to suspend project activities until the animals have left the area; and*
 - c) *Submittal of a marine wildlife monitoring report prepared by the approved monitors within 30 days of the last day of each offshore work period that requires onboard monitors. The report shall include: i) evaluation of the monitoring protocols and procedures; ii) reporting of all wildlife sightings (including species and numbers); iii) wildlife behavioral changes attributed to project operations; iv) all project changes (e.g., delays, work stoppages, etc.) due to the presence of marine wildlife species in the area.*

Project work during daylight hours will only involve the movement or positioning of vessels offshore, use of heavy equipment onshore, and attachment or removal of project components. Artificial lighting during daylight hours will be limited to head-lamps or hand-held devices used by divers and necessary running or deck lights on diver support vessels. Nighttime lighting of project vessels remaining on site shall be limited to that necessary to maintain navigational safety and to serve the nighttime site monitors who may be present on project vessels.

Permittee shall implement the Plan as approved by the Executive Director. Any proposed changes from the approved Plan shall be reported to the Executive Director. Any changes to the approved Plan will require an approved amendment to the CDP (unless the Executive Director determines that no amendment is legally required).

This plan is consistent with the following project-related documents and statutes:

- Compliance with the Federal Endangered Species Act (ESA) of 1973
- Compliance with the Marine Mammal Protection Act (MMPA) of 1972
- Coastal Development Permit (CDP) 9-14-1781, California Coastal Commission (CCC)
- Biological Assessment (BA) report titled Biological Assessment for the Charles Meyer Desalination Facility, prepared by Dudek in 2014
- City of Santa Barbara's California Environmental Quality Act (CEQA) Addendum to City Of Santa Barbara's And Ionics, Incorporated's Temporary Emergency Desalination Project (Sb-106-90) State Clearinghouse No. 9010859 Final EIR Certified March 15, 1991, and Long Term Water Supply Program Environmental Impact Report Sb-97-91 State Clearinghouse No. 91121020 Final EIR Certified May 24, 1994



Sensitive Marine Species Monitoring Plan

The purpose of this SMSMP is to comply with the CDP and to describe the protocols and methods that will be implemented to avoid impacts to sensitive marine species and their habitat from the proposed Project, in accordance with BIO-21 and BIO-22 of the CEQA MMRP (September 2015). This SMSMP provides specific information about sensitive marine species and their habitats that may occur in the offshore project area. The offshore project area is defined as area of 300 feet (91 m) around the proposed anchor sites and project-related working vessels during transit. Sensitive marine species for this SMSMP are defined as marine mammals, sea turtles and avian special status species that may occur in the offshore project area, including habitat in which they reside or transit.

The anchoring locations associated with the offshore project area require working platforms (barges and vessels) be anchored to support offshore construction activities conducted by commercial divers. The SMSMP provides avoidance measures for sensitive marine species and their habitats that are compulsory of ESA, MMPA and regulations integrated into the Project's MMRP. The management, monitoring, and reporting practices in this SMSMP are intended to accomplish the following objectives:

- Avoid Project-related impacts to sensitive marine species and their habitat
- Meet the requirements of BIO-21 and BIO-22 of the Project's MMRP (provided above)

1.1 PROJECT LOCATION

The locations of the various components of the Project consist of the offshore project area, intake structures located in approximately -30 feet Mean Lower Low Water (MLLW), and a Beach Weir Box located on East Beach in Santa Barbara, California. The main Desalination Facility plant site is located at 525 East Yanonali Street in Santa Barbara, Santa Barbara County, California. All project components are in Sections 17 and 23 of Township 4 North, Range 27 West, of the Santa Barbara U.S. Geological Service (USGS) 7.5' topographic quadrangle.

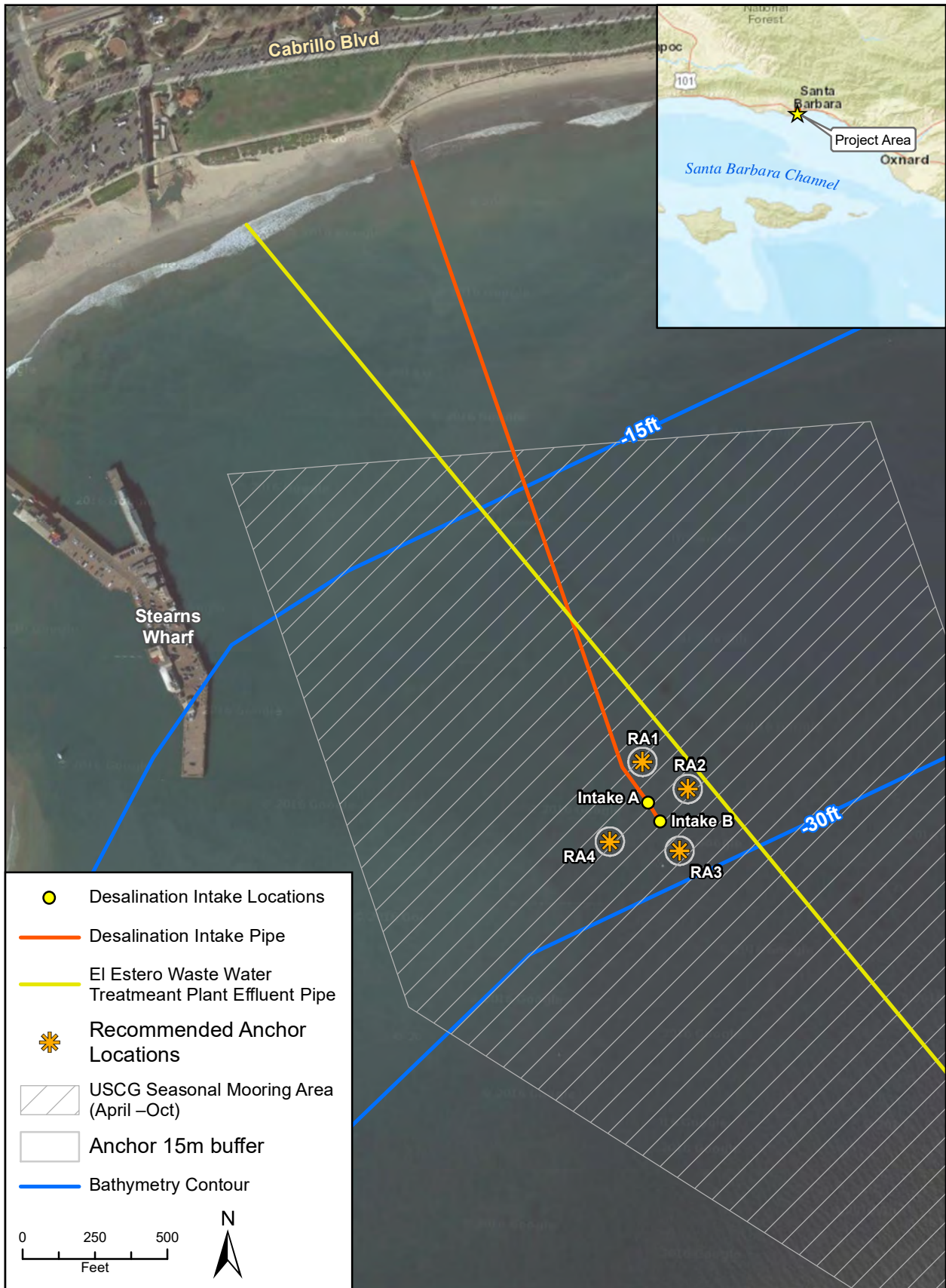


1.2 PROJECT DESCRIPTION

The existing offshore Project area is located off East Beach and southeast of the terminus of Stearns Wharf in the City of Santa Barbara (Figure 1). The offshore project area consists of four proposed anchoring locations and two offshore concrete intake structures designed to house intake pumps, check valves, and intake screens (Figure 2). Each concrete intake structure has a footprint of 5.7 by 5.7 meters (m; 18.83 by 18.83 feet [ft]). The concrete intake structures were constructed with removable, 20-inch, high-density polyethylene (HDPE) spools, which connected the structures to a single 36-inch diameter HDPE pipe. The 20-inch spools were removed when the plant was placed into long-term storage mode. The 36-inch HDPE piping remained on the surface of the sea floor until it was transitioned to an abandoned 42-inch diameter reinforced concrete outfall pipe (RCP that was slip-lined with the 36-inch diameter HDPE intake pipe when the intake was originally constructed in 1992). The 36-inch diameter HDPE intake pipeline runs inside the 42-inch RCP abandoned outfall, to a raw water booster pump station, located onshore at 420 Quinientos Street. Prior to reaching the booster pump station, the intake pipeline connects to an abandoned outfall weir box on the beach. The weir box serves as a transition point for power and communication wires for the offshore intake pumps. These wires transition from inside the 36-inch HDPE piping to a duct bank that continues along the intake pipe alignment to the filter feed pump station at 420 Quinientos Street, which is located on the site of the El Estero Wastewater Treatment Plant (EEWWTP).

Initial in-water construction activities that are proposed in the offshore waters for the Project consist of a multi-phase approach that includes the inspection and cleaning of portions of the offshore intake structure, attachment areas (bolts and joints) of the intake flanges; removal of the existing power and control cables wires; removal of sand and material from the intake vaults; inspection of the intake pipe conduit; and installation of a new pump and intake hardware into on the existing intake vaults. Global Diving & Salvage Inc., (Global) will manage all work activities, including barge and tug operations, commercial diving, and Offshore Anchoring Plan (OAP) survey dives conducted by Rincon Consultants, Inc. (Rincon) scientific divers.

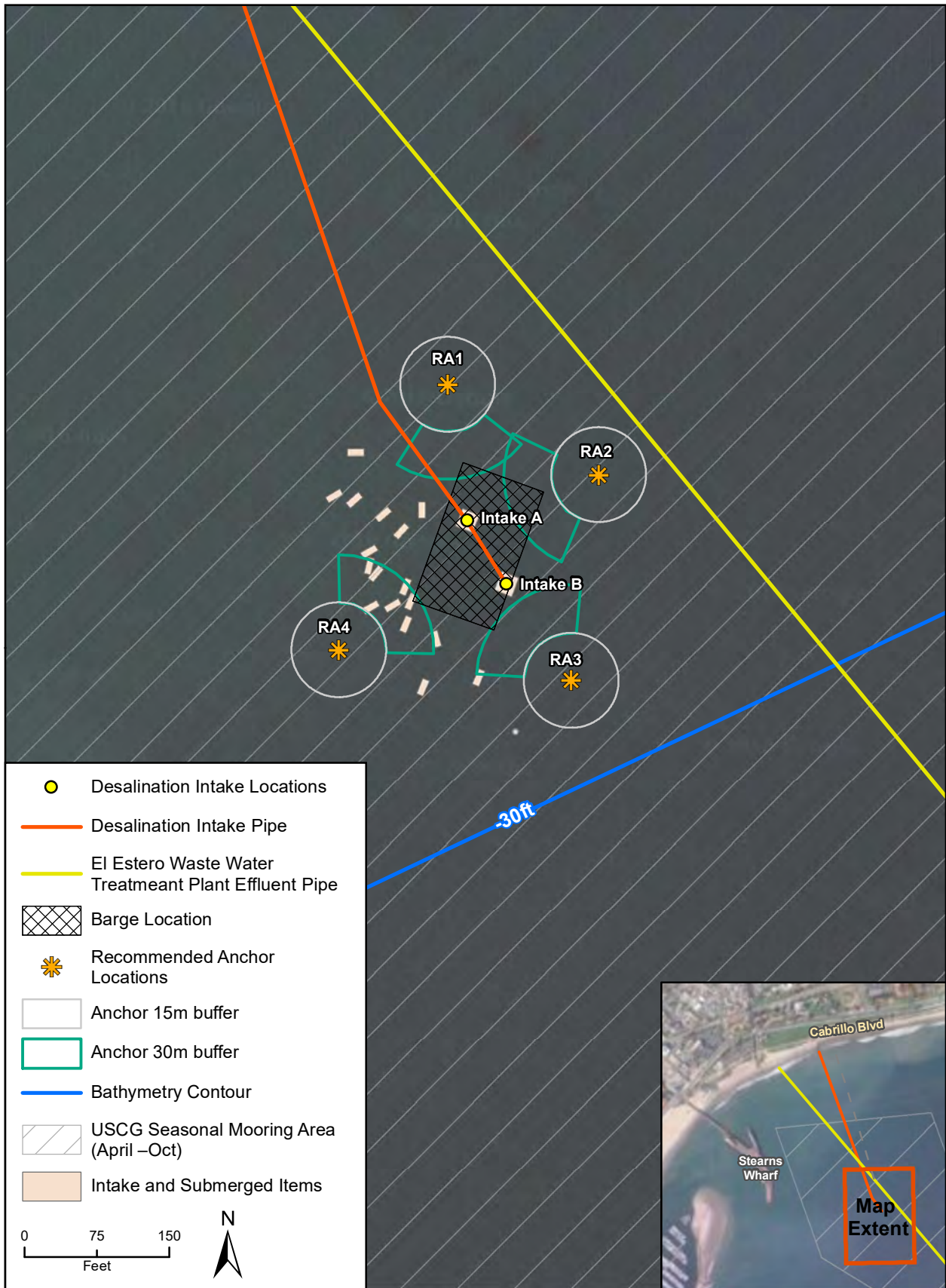




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 Additional data provided by TENERA Environmental, 2016;
 CDFW, 2016; NOAA, 2016.

Project Area Overview

Figure 1



Imagery provided by Google and its licensors © 2016.
 Additional data provided by TENERA Environmental, 2016;
 CDFW, 2016; NOAA, 2016.

Project Area

Figure 2

Sensitive Marine Species Monitoring Plan**1.3 EXISTING MARINE HABITAT AND RESOURCES**

As detailed in the CEQA Addendum for the Project Dudek 2015, potential existing special-status marine species include all species known to occur, and those that have the potential to occur, in and adjacent to the Project area. Sensitive species that may occur in the area include marine mammals (whales, dolphins, seals, and sea lions), sea turtles, and avian special status species (see Appendix A for a summary of all special status species that may occur in the project area). Avian special status species of California are not expected to occur in the offshore project area but may occur in the general project vicinity either offshore or closer to the shoreline, based on range distributions and natural history tendencies for individual species described in *The Birds of North America* (2015). Western snowy plover (*Charadrius alexandrinus nivosus*) nesting and foraging areas documented to occur at or adjacent to shore based project areas are currently monitored under separate project provisions and captured in weekly reporting requirements. All marine mammals are protected by the MMPA and certain large whales and sea turtles are also protected by the ESA (Table 1). Potential special-status species that are likely to occur in the nearshore environment of the Project area include bottlenose dolphins (*Tursiops truncatus*), California sea lions (*Zalophus californianus*), harbor seals (*Phoca vitulina*), northern elephant seals (*Mirounga angustirostris*) (Dudek 2015). The leatherback sea turtle (*Dermochelys coriacea*) and green sea turtle (*Chelonia mydas*) are known to occur in the Channel Island National Marine Sanctuary and may occur in the nearshore environments associated with the Project (Dudek 2015; NOAA 2016). Potential special-status cetacean species that are less likely to occur in the Project area, but do occur in the Santa Barbara Channel, include gray whales (*Eschrichtius robustus*), humpback whales (*Megaptera novaeangliae*), minke whales (*Balaenoptera acutorostrata*), blue whales (*B. musculus*), fin whales (*B. physalus*), Sei whales (*B. borealis*), and sperm whales (*Physeter macrocephalus*), and killer whales (*Orcinus orca*). While these species are less likely to occur in the Project area, they may occur depending on prey availability, and/or migratory patterns (Dudek 2015).

Table 1. Marine Special-Status Species with the Potential to Occur in the Project Area.

Common Name	Scientific name	Federal Statute(s)	Status (MMPA/ESA) ¹	Potential to Occur in Project area ²
Cetaceans				
Blue whale	<i>Balaenoptera musculus</i>	MMPA/ESA	D / E	Possible
Bottlenose dolphin	<i>Tursiops truncatus</i>	MMPA	D / NA	Likely
Fin whale	<i>Balaenoptera physalus</i>	MMPA/ESA	D / E	Possible
Gray whale	<i>Eschrichtius robustus</i>	MMPA	D / NA	Possible
Humpback whale	<i>Megaptera novaeangliae</i>	MMPA/ESA	D / E	Possible
Killer whale	<i>Orcinus orca</i>	MMPA/ESA ³	D / NA	Possible
Minke whale	<i>Balaenoptera acutorostrata</i>	MMPA	D / NA	Possible
Sei whale	<i>Balaenoptera borealis</i>	MMPA/ESA	D / E	Possible
Sperm whale	<i>Physeter macrocephalus</i>	MMPA/ESA	D / E	Possible
Pinnipeds				
California sea lion	<i>Zalophus californianus</i>	MMPA	P / NA	Likely
Harbor seal	<i>Phoca vitulina</i>	MMPA	P / NA	Likely
Northern elephant seal	<i>Mirounga angustirostris</i>	MMPA	P / NA	Likely
Sea Turtles				
Green sea turtle	<i>Chelonia mydas</i>	ESA	NA / T	Possible
Leatherback sea turtle	<i>Dermochelys coriacea</i>	ESA	NA / E	Possible

¹D=Depleted, E=Endangered, T=Threatened, NA=Not applicable, P=Protected, no specific status.²Source: Dudek 2015, NOAA 2016.

Sensitive Marine Species Monitoring Plan

³The Southern Resident Killer Whale population is listed under the ESA as Endangered, all other populations are not ESA-listed.

Marine habitat within the offshore project area is shallow (< 50 ft. [15 m]) soft bottom with only isolated hard substrate (Tenera 2014). The offshore project area is confined to a seasonal anchorage utilized by recreational and commercial vessels and provides limited foraging habitat for sensitive marine species. No marine mammal haulout locations, turtle nesting beaches, or avian special status roosting or nesting sites occur within the offshore project area. Surveys conducted during the OAP and SMSMP will document the extent, quality and use of the various habitat contained within the offshore project area including benthic substrate, kelp forests, eelgrass, haul out locations and roosting structures or platforms.



2.0 AVOIDANCE MEASURES

This section describes the methods to be used to avoid disturbance and impacts to sensitive marine species. As defined in the MMPA the term "harassment" means any act of pursuit, torment, or annoyance which: (i) has the potential to injure a marine mammal or marine mammal stock in the wild; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering. For ESA harassment is defined as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly impair normal behavioral patterns including breeding, feeding or sheltering. To address mitigation and monitoring requirements identified in the project MMRP (BIO-21 and BIO-22), two qualified biologists (Marine Species Monitors [MSMs]) will monitor all boat travel and repair and maintenance offshore activities (offshore activities) for a maximum of four hour shifts with a minimum of a thirty minute break provided between shifts. MSMs will work in tandem to facilitate safety and observational readiness. The MSMs will utilize observational equipment and methods including a vessel, SCUBA gear, cameras, binoculars and/or spotting scopes to describe and identify marine species and their habitat along the vessel transit corridor and the offshore project area. Observational equipment utilized during daily monitoring of marine species surface activities will include a survey vessel (20 ft. Boston Whaler or similar), a laser rangefinder, binoculars (7X50 or better), a compass, watch, handheld GPS, VHF radio, and a tablet with a project-specific database for data logging. Observers will maintain a notebook with copies of relevant permits, hardcopy datasheets, nautical charts and a marine mammal identification guide. MSMs will maintain personnel protective equipment suitable for site specific hazards including but not limited to a high visibility vest, hard hat, hearing protection and steel toe boots. A cell phone will provide backup communication, and a list of phone numbers of all project-related personnel will be available for all project-related personnel (Appendix B).

The MSM will employ different monitoring protocols depending on the boat movements and offshore activities and will utilize three monitoring platforms²: 1) The south end of Stearns Wharf, 2) a small (~18 foot [5.5 m]) project-related working vessel or survey vessel, or 3) the deck of the barge or project-related working vessel associated with the project. While these three monitoring platforms will afford different perspectives, the same basic technique will be employed in all three monitoring locations. The specific observation point will be determined depending on environmental conditions, consideration for the safety of the MSM and crew, and the MSM's best judgement. MSMs will have no other job related duties during marine species monitoring. Regardless of the observation location, the protocols below will be followed for all observation time periods:

- Prior to the day's activities, the MSMs will proceed to the Stearns Wharf observation location and perform, at a minimum, a 15 minute pre-activity visual survey of the area directly associated with the vessel transit corridor and offshore project area. The MSM will move to an appropriate observation platform to observe the day's activities at the end of the 15 minutes.

² The best observation platform for the day will be determined by the MSM, depending on environmental conditions, consideration for the safety of the MSM and crew, and the MSM's best judgement.



Sensitive Marine Species Monitoring Plan

- When the project-related working vessel, tugboat, barge or any other working vessel operator is ready to transit to the project area, the operators will contact the MSMs via VHF radio (Channel 66, or another VHF channel of mutual agreement), or cell phone.
- All project-related vessels will maintain a speed of no greater than 5 mph (4.34 knots).
- The MSM will scan for marine species in an area of 300 feet (91 m) around the vessel transit corridor and directly around the offshore project area.
- If an animal is observed, the MSM will note the following:
 - Time of the observation
 - Latitude and longitude of the MSM
 - Species
 - Distance and bearing to the animal
 - Number of individuals
 - Behavior at the time of the observation
 - Project activity
 - Behavioral reactions to the activity (if any)
- If an animal is observed, and **no** project-related vessels or offshore activities are occurring in the offshore project area, then the MSM will collect the information above and monitor the animal until it has left the vessel transit corridor or offshore project area (outside of 300 feet [91 m]).
- If an animal is observed, and a project-related vessel or offshore activity is underway in the offshore project or transit areas, the MSM will notify the vessel captain and/or person in charge (POC) that there is an animal(s) near the vessel or in the offshore project area. Depending on the species, the vessel operator, POC and the MSM will determine what course of action to take:
 - If a sea turtle, seal or sea lion is observed near a transiting vessel or offshore activity (at or within 25 feet [7.6 m]), the vessel operator or POC will take actions to move to or maintain a distance of at least 25 feet (7.6 m) from the animal. Alternatively the operator or POC will halt vessel transit or offshore activities.
 - If **no** adverse behavior is observed, the vessel operator will maintain a distance of 25 feet (7.6 m) and the MSM will continue to monitor the animal until it has left the vessel transit corridor or the offshore project area.
 - A notification to the City will be made as soon as possible via phone, email, or text, as specified by the City of Santa Barbara.
 - If an adverse behavior is observed, the MSM will direct project-related working vessels to reduce speed and change direction to increase the distance from the animal or for offshore activities to stop. The vessel should remain at this distance until the animal either leaves the area or until the distance is sufficient to reduce stress displayed by the animal.
 - The MSM may stop work if they feel that the adverse reaction was directly attributable to project-related activities³.

³ Each adverse reaction will be evaluated on a case-by-case basis and the MSM may or may not stop work, depending on the activities in the general project area. For instance, if a non-project-related vessel is transiting through the area and elicits an adverse reaction, the MSM may decide to let work continue.



Sensitive Marine Species Monitoring Plan

- A notification to the City will be made immediately via phone, email, or text, as specified by the City of Santa Barbara.
- If a whale, dolphin, or porpoise is observed inside the vessel transit corridor or offshore project area, the vessel operator will take appropriate actions to maintain a distance of at least 300 feet (91 m) from the animal.
 - If **no** adverse behavior is observed, the vessel operator will maintain a distance of 300 feet (91 m) and the MSM will continue to monitor the animal until it has left the vessel transit corridor or the offshore project area.
 - A notification to the City will be made as soon as possible via phone, email, or text, as specified by the City of Santa Barbara.
 - If an adverse behavior is observed, the MSM will direct project-related working vessels to reduce speed and change direction to increase the distance from the animal or for offshore activities to stop. The vessel should remain at this distance until the animal either leaves the area or until the distance is sufficient to reduce stress displayed by the animal.
 - The MSM may stop work if they feel that the adverse reaction was directly attributable to project-related activities⁴.
 - A notification to the City will be made immediately via phone, email, or text, as specified by the City of Santa Barbara.
- If a whale, dolphin, or porpoise is observed outside of the offshore project area and exhibits an adverse behavioral reaction, a notification to the City will be made immediately via phone, email, or text, as specified by the City of Santa Barbara. However, it will be at the MSMs discretion as to whether to stop work or not.
- If the project-related working vessels must leave the offshore project area (300 feet [91 m] around the barge):
 - The vessel operator will contact the MSM prior to leaving the area, and the MSM will visually follow the vessel from the offshore project area and through the vessel transit corridor with binoculars. The MSM will focus on the area around the vessel until it has entered Santa Barbara Harbor.
- If the project-related working vessel or activity is responsible for an entanglement, stranding, or an incidental take of a marine species the MSM will:
 - Stop all work
 - A notification to the City will be made immediately via phone, email, or text, as specified by the City of Santa Barbara.
 - A notification to NOAA Fisheries will be made immediately via phone, email, or text, as specified by the City of Santa Barbara.

When the project-related working vessel is ready to return, the vessel operator will contact the MSM via VHF radio or cell phone before the vessel leaves Santa Barbara Harbor. The MSM will visually follow the vessel with binoculars through the vessel transit corridor until it reaches the project area.

⁴ The MSM may or may not stop work, depending on the activities in the general project area. For instance, if a non-project-related vessel is transiting through the area and elicits an adverse reaction, the MSM may decide to let work continue. Each adverse reaction will be evaluated on a case-by-case basis.



Sensitive Marine Species Monitoring Plan

While the above monitoring protocols will be followed in all cases, the exact monitoring location will direct how the MSMs perform their duties. The protocols outlined below provide specific protocols, based on the observation platform or project-related action. The specific observation location will be determined via consultation with the Rincon Marine Resources Manager.

- **Movement of Project-related Working Vessels (including Utility Vessels, Tugboats, and Deck Barge)**
 - Once the 15-minute pre-survey has been completed from Stearns Wharf, the MSM will:
 - Board the project-related working vessel to monitor from the deck; or
 - Board a dedicated survey vessel.
 - While transiting from Santa Barbara Harbor to the offshore project area, the MSM will actively observe an area of 300 feet (91 m) around the moving vessels.
 - If a dedicated survey vessel is the observation platform, the vessel will travel ahead of all project-related working vessels.
 - Once at the offshore project area, and on a project-related working vessel or dedicated survey vessel, the MSMs will stay on the vessel until the barge is securely anchored.
 - If the MSM is on a dedicated survey vessel, the MSM will either:
 - Anchor in a location that provides the best observation position
 -
 - If the MSM is on one of the project-related working vessels, with the approval of the vessel crew, the MSM will:
 - Establish the best vantage point on that vessel; or
 - Transfer to the barge to continue to observe an area of approximately 300 feet (91 m) around the barge during offshore activities.
 - At the end of the day's activities the MSM will either transfer to one of the project-related working vessels, or pull anchor of the dedicated survey vessel and lead the project vessel back to the dock.
- **Day-to-Day Activities (Stearns Wharf/Dedicated Survey Vessel/Project-related Working Vessel)**
 - Once the 15-minute pre-survey has been completed, the MSM will use the best vantage point for observations for the duration of the day's project activities by doing one of the following:
 - Utilize a dedicated survey vessel; or
 - Transit to the barge via a project-related working vessel
 - All animals observed within the prescribed distances (25 feet [7.6 m] or 300 feet [91 m]) will be relayed to the vessel operators in a timely manner.
 - If a designated survey vessel is deemed the best observation platform, arrangements will be made via VHF radio for the MSM to transit with the project-related working vessel. The MSM will focus on observing 300 feet (91 m) around the vessels during transit.

2.1 BIOLOGICAL MONITOR

For compliance with BIO-22 and CDP Special Condition #6, all MSM(s) will be National Marine Fisheries Service (NMFS)-certified marine mammal observers the Project will submit to the CCC in writing the name, qualifications, business address, and contact information of MSM(s) responsible for monitoring of project activities. Resumes for the qualified MSM's are provided in Appendix C. The MSM(s) shall be qualified, knowledgeable, and experienced in the identification, biology, natural history of appropriate species. The MSM(s) shall be responsible



Sensitive Marine Species Monitoring Plan

for surveying and monitoring activities addressed by this SMSMP. To ensure compliance with the measures of this SMSMP, the MSMs(s) shall have the authority to halt immediately any activity that does not comply with this SMSMP, and/or to order any reasonable measure to avoid the violation of any measure of this SMSMP. The MSM(s) shall halt construction activities if threatened or endangered species are identified and notify the City of Santa Barbara and NMFS.

2.2 ENVIRONMENTAL AWARENESS PROGRAM

All personnel with access to the offshore Project area will receive environmental awareness training from the Rincon Marine Resources Manager (Derek Lerma) and/or the MSM. The training will include the appropriate work practices necessary to effectively implement the SMSMP and communicate applicable environmental laws and regulations. The training will also include appropriate wildlife avoidance methodologies, such as avoidance and minimization measures and methods for protecting marine species in the project area and those occurring in the general area. Information about the importance of these resources and the purpose of protecting wildlife will also be described in the training. A participation sign in sheet will be signed by all project personnel following the completion of the environmental awareness training and will be included in the associated weekly report as an appendix.



3.0 REPORTING

3.1 SURVEYS AND FINDINGS DOCUMENTATION

For compliance with CDP conditions, a Sensitive Marine Species Report describing the findings of the sensitive marine species monitoring efforts will be submitted to the City of Santa Barbara after Project activities have been completed. The report will include the survey dates, methods, weather conditions, and a summary of sensitive species and habitat observed. A daily report will be sent by email to the City of Santa Barbara identifying what species were observed, project activities at the time of the observation, work stoppages and any behaviors exhibited. If a whale, dolphin, or porpoise is observed within 300 feet (91 m) of the offshore Project area, a report will be provided as soon as possible detailing the observation via phone, email, or text. Furthermore, if an adverse behavioral reaction is observed anywhere within 300 feet (91 m) of the offshore project area, a report will be provided immediately detailing the observation via phone, email, or text. A detailed draft Marine Species Report will be provided 30 days after project-related activities end. A final Sensitive Marine Species Report will be provided 14 days after comments have been received on the draft report. Depending on the type of report, the items below will be reported:

- Report of whales, dolphins, or porpoises within 300 feet (91 m) or with an adverse reaction
 - Time of observation
 - Species
 - Project-related activities
 - Observed behavior(s)
 - Notes on the encounter
- Daily report
 - Time of observation
 - MSM initials
 - MSM position (Stearns Wharf, survey vessel, project-related working vessel)
 - MSM latitude and longitude
 - Weather conditions
 - Beaufort Sea State
 - Species
 - Number of individuals
 - Sex
 - Age
 - Distance and bearing to animal
 - Direction of travel
 - General behavior(s)
 - Adverse behavior(s) (if applicable)
 - Project-related activities
 - Notes on the encounter
- Marine Species Report:
 - A summary and evaluation of monitoring protocols and procedures
 - A summary of all wildlife observations (including species and numbers)
 - Maps of all observations
 - Summary of wildlife behavioral changes attributed to project operations
 - Summary of all project changes (e.g., delays, work stoppages, etc.) due to the presence of marine wildlife species in the area.



4.0 REFERENCES

- Dudek. 2015. *California Environmental Quality Act (CEQA) Addendum to: City of Santa Barbara's and Ionics, Incorporated's Temporary Emergency Desalination Project (SB-106-90) and Long Term Water Supply Program (SB-97-91)*. Prepared by Dudek for City of Santa Barbara.
- National Oceanic and Atmospheric Administration (NOAA). 2016. *Encyclopedia of the National Marine Sanctuaries: Channel Islands National Marine Sanctuary*. Accessed 18-April-2016. <http://www8.nos.noaa.gov/onms/park/>.
- Tenera. 2014. "Santa Barbara Desalination Plant Reactivation Utility Work Boat Anchoring Locations Subtidal Biological Survey Report." Prepared for Dudek. September 30, 2014.
- The Birds of North America Online (P. Rodewald, Ed.). Ithaca: Cornell Laboratory of Ornithology; Retrieved from The Birds of North America Online database: <http://bna.birds.cornell.edu/BNA/>; AUG 2015.



Sensitive Marine Species Monitoring Plan**APPENDIX A****List of All Special Status Species Potentially Occurring in the Project Area****Table A-1. List of Special Status Avian Species Potentially Occurring in the Project Area*.**

Common Name	Scientific name	Federal/State Statute(s) ¹	Status (ESA / CESA) ²	Potential to Occur in Project area
Ashy Storm-Petrel	<i>Oceanodroma homochroa</i>	BBSC	NA	Possible
Black Skimmer	<i>Rynchops niger</i>	BBSC	NA	Possible
Black Storm-Petrel	<i>Oceanodroma melania</i>	BBSC	NA	Possible
Brandt	<i>Branta bernicla</i>	BBSC	NA	Possible
California least tern	<i>Sternula antillarum browni</i>	ESA / CESA	E / E	Possible
Cassin's Auklet	<i>Ptychoramphus aleuticus</i>	BBSC	NA	Possible
Fork-tailed Storm-Petrel	<i>Oceanodroma furcata</i>	BBSC	NA	Possible
Gull-billed Tern	<i>Gelochelidon nilotica</i>	BBSC	NA	Possible
Tufted Puffin	<i>Fratercula cirrhata</i>	BBSC	NA	Possible
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>	ESA / NA	T / NA	Possible

*California Bird Species of Special Concern (CDFW 2008)

¹ESA=Federal Endangered Species Act, CESA=California Endangered Species Act, BBSC=Bird Species of Special Concern, NA=Not Applicable²T=Threatened, E=Endangered, NA=Not Applicable**Table A-2. List of Special Status Marine Mammal Species Potentially Occurring in the Project Area.**

Common Name	Scientific name	Federal Statute(s) ¹	Status (MMPA / ESA) ²	Potential to Occur in Project area ³
Blue whale	<i>Balaenoptera musculus</i>	MMPA / ESA	D / E	Possible
Bottlenose dolphin	<i>Tursiops truncatus</i>	MMPA	D / NA	Likely
Fin whale	<i>B. physalus</i>	MMPA / ESA	D / E	Possible
Gray whale	<i>Eschrichtius robustus</i>	MMPA	D / NA	Possible
Humpback whale	<i>Megaptera novaeangliae</i>	MMPA / ESA	D / E	Possible
Killer whale	<i>Orcinus orca</i>	MMPA ⁴	D / NA	Possible
Minke whale	<i>B. acutorostrata</i>	MMPA	D / NA	Possible
Sei whale	<i>B. borealis</i>	MMPA / ESA	D / E	Possible
Sperm whale	<i>Physeter macrocephalus</i>	MMPA / ESA	D / E	Possible
California sea lion	<i>Zalophus californianus</i>	MMPA	P / NA	Likely
Harbor seal	<i>Phoca vitulina</i>	MMPA	P / NA	Likely
Northern elephant seal	<i>Mirounga angustirostris</i>	MMPA	P / NA	Likely

¹MMPA=Marine Mammal Protection Act, ESA=Federal Endangered Species Act²D=Depleted, E=Endangered, NA=Not applicable, P=Protected, no specific status³Source: Dudek 2015, NOAA 2016⁴The Southern Resident Killer Whale population is listed under the ESA as Endangered, all other populations are not ESA-listed.

APPENDIX A (Continued)

Table A- 3. List of Special Status Sea Turtle Species Potentially Occurring in the Project Area.

Common Name	Scientific name	Federal Statute ¹	Status (ESA) ²	Potential to Occur in Project area ³
Green sea turtle	<i>Chelonia mydas</i>	ESA	T	Possible
Leatherback sea turtle	<i>Dermochelys coriacea</i>	ESA	E	Possible

¹ESA=Federal Endangered Species Act

²T=Threatened, E=Endangered

³Source: Dudek 2015



APPENDIX B**List of All Personnel and Contact Information**

Name	Affiliation	Project Role	Phone	EMail
Sara Iza	City of Santa Barbara	Project Manager	805-252-1861 (C)	siza@santabarbaraca.gov
Linda Sumansky	City of Santa Barbara	Project Manager	805-564-5361	lsumansky@ santabarbaraca.gov
Daniel Leuthold	Kiewit Construction	Environmental	310-709-4013	Daniel.Leuthold@kiewit.com
Rick Heaslet	Global Diving & Salvage	Project Manager	707-486-7499	rheaslet@gdiving.com
Derek Lerma	Rincon	Project Manager	805-798-7162 (C) 805-644-4704 (W)	dlerma@rinconconsultants.com
Jaime McClain	Rincon	MSM	760-525-8066 (C)	jaimeamclain@gmail.com
Michael Moss	TDI	MSM	310-907-6944 (C)	tortugamoss@hotmail.com
Todd McConchie	TDI	Data QA/QC	703-577-9556 (C)	todd@tierradata.net
Andrew Fredell	TDI	MSM	805-395-0429	andrew@tierradata.net



APPENDIX C
Resumes of Qualified Marine Species Monitors





DEREK LERMA

Marine Resources Manager/Senior Marine Scientist
Rincon Consultants, Inc.

Derek Lerma is Rincon Consultants, Inc.'s Marine Resources Manager, and a Senior Marine Scientist. He has comprehensive and diverse experience executing project management of marine, estuarine, and coastal resources and development of regulatory documents, mitigations strategies, and monitoring programs for capital improvement construction and development projects. Mr. Lerma possesses expansive knowledge of California marine ecosystem habitats, function, protected species, and potential impact vectors with extensive and diverse experience in multidisciplinary study design, field execution, data analysis, report preparation, regulatory integration, and technical supervision. He acted as Project Manager and Senior Marine Scientist for the development of multiple Integrated Natural Resources Management Plans (INRMPs), Environmental Impact Statements (EIS), construction monitoring, biological characterizations, and marine special studies for federal, state, city and private clients.

TECHNICAL CAPABILITIES

- Mr. Lerma has diverse experience in implementing state and federal biological surveying protocols involving monitoring and reporting of sensitive species and habitats.
- Mr. Lerma's biological expertise includes submerged aquatic vegetation (eelgrass) ecology, subtidal and intertidal marine biological characterizations and impact assessments, beach ecology, estuarine systems and essential fish habitat analysis.
- Mr. Lerma's additional technical skills and knowledge encompasses diving safety, marine mammals, acoustics, aquatic invasive species, water quality monitoring, sediment evaluations and regulatory consultations.
- Mr. Lerma possesses diverse experience as a project manager directing NEPA & CEQA documents, identifying potential impacts, developing mitigation alternatives, achieving conflict resolution, and monitoring for compliance.

EDUCATION/CERTIFICATIONS

B.S., Biological Oceanography, Humboldt State University, 1990
National Marine Fisheries Service (NMFS) Certified Marine Mammal Observer (current)
NMFS and CDFW Invasive Species Caulerpa Certified (current)
US Coast Guard 100 Ton Captain (current)
American Academy of Underwater Science, Diving Safety Officer (current)
40 Hour Hazwoper Trained and Supervisor (current)
First Aid/CPR/Oxygen Administration (current)
Transportation Worker Identification Credential (TWIC) (current)

EMPLOYMENT HISTORY

Rincon Consultants, Inc. (2016 - Present)
Tierra Data Inc. (2007 - 2014)
American Marine (2002 - 2007)
Channel Islands National Park (1994-2002)
Humboldt State University Foundation (1988-1994)

PROJECT EXPERIENCE

Biological Resource Evaluations

- Acoustic Thermometry Ocean Climate (ATOC) Cable Marine Habitat Special Study, Point Pillar, CA.,
- US Navy NAVFAC SW (2012-2014)
- Sunroad Enterprises Harbor Island Restaurant Essential Fish Habitat, Eelgrass, and Caulerpa Evaluations, San Diego, CA., Sunroad Enterprises (2014 & 2015)
- San Diego County Shoreline Feasibility Study, City of Oceanside, CA Nearshore Survey
- US Army Corps of Engineers (under subcontract to Moffett Nickel) (2015)
- Permanent Transect Eelgrass Monitoring, San Diego Bay, CA.,
- US Navy NAVFAC SW, (2009-present)

Mitigation Design and Compliance Monitoring

- Naval Base Point Loma Fuel Pier Replacement Project, Marine Mammal and Protected Species Monitoring and Compliance, US Navy NAVFAC SW (2013- Present)
- Naval Weapons Station Seal Beach Sediment and Eelgrass Evaluation, Seal Beach, CA.,
- US Navy NAVFAC SW (2015-present)
- Advanced Water Treatment Facility and Utility Corridor Project (P-113) Biological Construction Monitoring, Camp Pendleton, Oceanside, CA., US Marine Corps, NAFAC SW (2012-2014)

NEPA/CEQA

- Marine Resources Section Author, San Diego Bay Integrated Natural Resources Management Plan,
- US Navy & San Diego Unified Port District, 2010-2013
- Marine Resources Section Author for Fish, and Sea Turtles, Silver Strand Training Complex EIS,
- Man-Tech SRS (2008-2010)
- Navy Base Ventura County, San Nicolas Island INMRP Project Manager and Marine Resources Technical Lead, US Navy NAVFAC SW (2009-2010)



JAMIE MCCLAIN

Marine Scientist
Rincon Consultants, Inc.

Jamie McClain is a Marine Scientist and has comprehensive knowledge of California's marine ecosystems including threatened and endangered aquatic species, population dynamics, ecosystem relationships, exotic species, and public health and safety issues. Ms. McClain has extensive experience in conducting subtidal and intertidal field studies, managing long-term datasets, drafting technical annual reports and performing data analysis for presentations and publications.

TECHNICAL CAPABILITIES

- Ms. McClain's biological expertise includes subtidal and intertidal marine biological characterizations, sandy beach ecology, estuarine systems, groundfish species composition and submerged aquatic vegetation (eelgrass) ecology.
- Ms. McClain's additional technical skills and knowledge encompasses diving safety, marine mammals, aquatic invasive species, water quality monitoring, and biological data collection.

EDUCATION/CERTIFICATIONS

B.S., Biology emphasis Marine, Humboldt State University, 2011
National Marine Fisheries Service (NMFS) Certified Marine Mammal Observer (current)
NMFS and CDFW Invasive Species Caulerpa Certified (current)
American Academy of Underwater Science, Diver (current)
First Aid/CPR/Oxygen Administration Instructor (current)
NAUI Instructor (current)
NOAA/NMFS West Coast Groundfish Observer Certified

EMPLOYMENT HISTORY

Rincon Consultants Inc. (2016 - Present)
Tierra Data Inc. (2014- Present)
United Water Conservation District (2015- Present)
Channel Islands National Park (2013- 2015)
Alaskan Observers Inc. (2011- 2013)
Catalina Island Marine Institute (2011- 2012)
Humboldt State University Center Activities (2005 - 2011)

PROJECT EXPERIENCE

Compliance Monitoring

- Performed Pinniped and Cetacean monitoring activities at Point Lomas' Naval Base fuel pier replacement project, US Navy NAVFAC SW (2013-Present)
- Federal Energy Regulatory Commission Compliance Monitoring of Invasive quagga mussel (*Dreissena bugensis*), exotic species and endangered species monitoring and water quality sampling in Lake Piru and associated waterways (2015-Present)

Biological Resource Evaluations

- Subtidal monitoring of eelgrass, Caulerpa and kelp forest communities, Oceanside, CA and San Diego Bay, CA
- Sandy beach monitoring for Channel Islands National Park on Santa Rosa Island
- Subtidal and Intertidal monitoring for Channel Islands National Park

TODD MCCONCHIE

Marine Scientist
Tierra Data Inc.

Todd McConchie is a Marine Scientist at Tierra Data, Incorporated. Mr. McConchie possesses an extensive knowledge of marine ecosystems, habitat use and function, sensitive species, and assessment of potential impacts to marine ecosystems and species. He has acted as a Project Manager, technical document author and reviewer, and a marine and terrestrial construction monitor. He has also performed biological characterizations, and marine-related special studies for federal, state, city and private clients relative to federal and state regulatory requirements.

TECHNICAL CAPABILITIES

- Mr. McConchie has extensive knowledge of federally- and state-protected species, with a focus on assessments of impacts to marine mammals.
- Mr. McConchie's biological expertise includes field studies of multiple marine mammal species, assessments of impacts on submerged aquatic vegetation (eelgrass) ecology, as well as subtidal and intertidal marine biological characterizations and impact assessments.
- Mr. McConchie's additional technical skills and knowledge encompasses database development, data management, and marine acoustics.

EDUCATION/CERTIFICATIONS

M.S., Biological Science, George Mason University 2007
B.S., Biological Science, George Washington University 1997
National Marine Fisheries Service (NMFS) Certified Marine Mammal Observer (current)
10-hr HAZWOPER Training (current)
First Aid/CPR Administration (current)

EMPLOYMENT HISTORY

Tierra Data Inc. (2014 - Present)
Cardno, Inc. (2013-2014)
HDR, Inc. (2008-2013)
McLaughlin Research Corporation (2007-2008)
KT Consulting, Inc (2005-2007)
Integrated Taxonomic Information System (1997-1999, 2001-2005)

PROJECT EXPERIENCE

Biological Resource Evaluations

- US Navy NAVFAC SW (2014 to present)
- Port of San Diego (2015 to present)
- US Army Corps of Engineers (2015)

Mitigation Design and Compliance Monitoring

- Navy Base Point Loma Fuel Pier Replacement Project, Marine Mammal and Protected Species Monitoring and Compliance, US Navy NAVFAC SW (2014-present)
- Naval Weapons Station Seal Beach Sediment and Eelgrass Evaluation, Seal Beach, CA, US Navy NAVFAC SW (2016-present)
- Naval Amphibious Base Coronado Maintenance Dredging, Marine Mammal and Protected Species Monitoring and Compliance, US Navy NAVFAC SW (2016-present)

ANDREW FREDELL

Marine Scientist
Tierra Data Inc.

Andrew Fredell is a Marine Scientist at Tierra Data Incorporated. Mr. Fredell possesses expansive knowledge of California marine ecosystem habitats, function, protected species, and potential impact vectors with extensive and diverse experience in multidisciplinary study design, field execution, data analysis, report preparation, and technical supervision. He acted as Assistant Project Manager for construction monitoring, biological characterizations, and marine special studies for federal, state, city and private clients.

TECHNICAL CAPABILITIES

- Mr. Fredell's has experience implementing state and federal biological surveying protocols involving monitoring and reporting of sensitive species and habitats.
- Mr. Fredell's biological expertise includes submerged aquatic vegetation (eelgrass) ecology, subtidal and intertidal marine biological characterizations and impact assessments, beach ecology, estuarine systems and essential fish habitat analysis.
- Mr. Fredell's additional technical skills and knowledge encompasses diving safety, marine mammals, acoustics, aquatic invasive species, and water quality monitoring.

EDUCATION/CERTIFICATIONS

M.S., Biological Science, California State University Fullerton 2014
B.A., Marine Sciences, University of Hawaii Hilo 2007
National Marine Fisheries Service (NMFS) Certified Marine Mammal Observer (current)
NMFS and CA DF & W Invasive Species Caulerpa Certified (current)
American Academy of Underwater Science, Diver (current)
First Aid/CPR/Oxygen Administration (current)

EMPLOYMENT HISTORY

Tierra Data Inc. (2014 - Present)
Marine Rocky Intertidal Network (2009-2010)
Ocean Studies Institute (2008-2009)
California State University Fullerton (2007-2009)
University of Hawaii Hilo (2005-2007)

PROJECT EXPERIENCE

Biological Resource Evaluations

- US Navy NAVFAC SW (2014 to present)
- Sunroad Enterprises Harbor Island Restaurant Eelgrass and Caulerpa Evaluations (2014, 2015)
- Portside Pier Project Essential Fish Habitat Evaluation (under subcontract to RECON Environmental)
- Port of San Diego (2015 to present)
- Permanent Transect Eelgrass Monitoring, San Diego, CA

Mitigation Design and Compliance Monitoring

- Navy Base Point Loma Fuel Pier Replacement Project, Marine Mammal and Protected Species Monitoring and Compliance, US Navy NAVFAC SW (2014-present)
- Naval Weapons Station Seal Beach Sediment and Eelgrass Evaluation, Seal Beach, CA, US Navy NAVFAC SW (2016-present)
- Naval Amphibious Base Coronado Maintenance Dredging, Marine Mammal and Protected Species Monitoring and Compliance, US Navy NAVFAC SW (2016-present)

Michael Moss

Biologist/ Marine Scientist

Tierra Data Inc.

Michael Moss is a marine biologist with an extensive working background in temperate ecology in intertidal, subtidal, estuarine, oceanic, and beach communities. Mr. Moss possess expansive knowledge of California's marine ecosystems, essential fish habitat, fisheries, oceanographic, ichthyoplankton, endangered species, threatened species, invasive species, data collection and reporting protocols. The experience has been through his involvement in water regulatory acts (316 A & B), Marine Life Protection Acts (MLPA), Marine Protected Areas (MPA's), Coastal Environmental Quality Initiative (CEQA), and National Science Foundation (NSF). This vast amount of experience comes from working in private, federal, city, and state clients.

TECHNICAL CAPABILITIES

- Mr. Moss has diverse experience in implementing state and federal biological surveying protocols involving monitoring and reporting of sensitive species and habitats.
- Mr. Moss biological expertise includes ecology, subtidal and intertidal marine biological characterizations and impact assessments, beach ecology, estuarine systems and essential fish habitat analysis.
- Mr. Moss additional technical skills, marine mammals, aquatic invasive species, and marine fish, invertebrates, algae identification and natural history.

EDUCATION/Certifications

B.S. Marine Biology University of California at Santa Cruz 2004

National Marine Fisheries Service, Certified Marine Mammal Observer (current)

California Department of Fish and Wildlife, California Caulerpa Certified (current)

American Academy of Underwater Science Scientific Diver (current)

First Aid/CPR/Oxygen Administration (current)

EMPLOYMENT HISTORY

Tierra Data Inc. (2007 - Present)

Channel Islands National Park (2005 - 2007)

MSI UCSB (2004 - 2005)

UCSC Long Marine Lab 2002-2004)

Tenera Environmental Inc. (1997-2003)

PROJECT EXPERIENCE

Biological Resource Evaluations

- Acoustic Thermometry Ocean Climate (ATOC) Cable Marine Habitat Special Study, Point Pillar, CA.,
- Permanent Transect Eelgrass Monitoring, San Diego Bay, CA.,
- US Navy NAVFAC SW, (2009-present)
- 316A & 316B Entrainment, Impingement, and Temperature studies Diablo Canyon Power Plant Avila Beach Ca, Duke Power Plant Morro Bay and Moss Landing Ca (1997-2003)
- Partnerships for Interdisciplinary Studies of Coastal Oceans (PISCO) Intertidal and Subtidal Monitoring UCSC and UCSB
- VENCO surveys of Ventura Oil Platforms comprehensive biological assessments

Compliance Monitoring

- Naval Base Point Loma Fuel Pier Replacement Project, Marine Mammal and Protected Species Monitoring and Compliance, US Navy NAVFAC SW (2013- Present)
- Cal Trans Cuesta Grade Creek retrograde monitoring Western Newts (*Taricha torosa*)
- AT&T Fiber Optic landing project
- Western Mojave Desert tortoise surveys Beatty, Nevada

Technical Documents

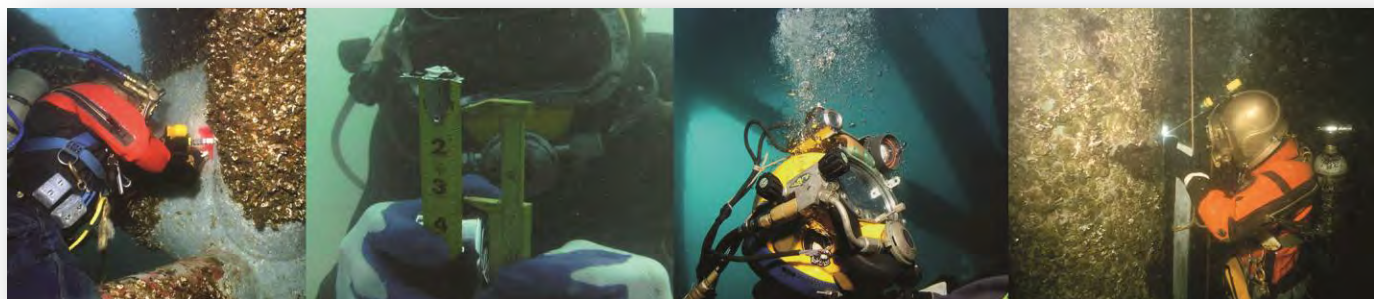
- Long Term Ecological Research (LTER) project examining interactions between kelp forest ecosystems and the waters that flow through them, focusing on kelp communities in the Santa Barbara Channel.



**Charles Meyer Desalination Plant
Reactivation Project**

HAZARDOUS MATERIAL SPILL PREVENTION AND RESPONSE PLAN

April 18, 2016 *(revised 5/6/2016)*



Prepared for:



Submitted By:

Global Diving & Salvage, Inc.
1080 Nimitz Ave. Suite 440
Mare Island, Vallejo, CA 94592

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1. PROJECT INFORMATION

1.1 Site Description

The Charles Meyer Desalination Plant Reactivation Project involves both inshore and offshore work sites as noted in the project specifications. This plan is for the offshore portion of the work. The offshore effort will utilize a barge and support vessels operating in the area shown in *Appendix B – Offshore Construction Site Location*. Global Diving & Salvage is unaware of any known or suspected locations (buried or otherwise) of existing hazardous materials within the footprint of the offshore work site. An active sanitary outfall pipeline discharging secondary-treated effluent is located nearby, but outside the recommended barge anchor area. Operational planning will ensure the protection of the existing outfall during the offshore work activities.

Offshore activity of this kind creates potential for fuel, oil or other hazardous material spills. Global Diving & Salvage, in cooperation with subcontracted vessel operators, makes implementation of this spill prevention and response plan the highest priority. ***The notifications and procedures detailed in this plan will be strictly adhered to by all Global subcontractors/vessel operators.***

Floating equipment projected for use at the offshore worksite includes the 77' foot long workboat *Danny C* (home ported in Santa Barbara) and the 135' long x 58' wide barge *DB San Diego* supported by the 69' long tugboat *A.N. Tillett*. The barge and tug are home ported in San Diego, CA. For pre-mobilization scientific diving, a trailerable 26' dive vessel will be utilized.

The barge will remain anchored at the intake location with the tug, while a small skiff(s) shuttles personnel to and from the inner harbor. The *Danny C* has a permanent slip in Santa Barbara harbor, and will berth there when not at the project site.

1.2 Potential for Hazardous Spill

The potential spill source during the offshore work will be associated with equipment on the Derrick Barge, Tug, and support vessel engine fuel tanks. The table below identifies equipment with total fuel/oil capacities:

Equipment Description	Fuel/Oil Capacity
Barge 300 Ton Deck Crane	125 Gallons Diesel/250 Gallons Hydraulic Oil
Barge Anchor Winches	90 Gallons Diesel Each
Barge Auxiliary Fuel Tank	1000 Gallons Diesel
Barge Air Compressor	40 Gallons Diesel
Barge Welder	25 Gallons Diesel
Tug <i>A.N. Tillett</i>	18,000 Gallons Main Fuel Tank
<i>Danny C</i> (77' Support Vessel)	925 Gallons Diesel Fuel/120 Gallons Hydraulic Reservoir
26' Vessel for Scientific Diving	I/O Engine – 250 Gallons Gasoline/1.5 Gallons Hyd Steering Fluid
17' Work Skiff	4 Stroke Outboard Engine- 3 gallons Gas/1 Quart Oil
Miscellaneous Dive Station Equipment	35 Gallons Diesel/5 Gallons Motor Oil

The 1000 gallon auxiliary fuel tank on the barge is new construction, double walled, USCG compliant fuel tank, and sits in a containment area. The deck winches also have containment barriers to prevent overboard discharge in the event of fuel leakage. The remaining barge support equipment (welder, air compressor) are permanently installed on the interior of the barge workshop, and therefore contained. Dive station support equipment will be placed

inside individual spill containment modules. The *A.N. Tillet and Danny C* fuel and hydraulic tanks are below deck, inside the hulls, and also therefore contained. The 26' scientific dive boat fuel tank has an integral tank below deck.

A reasonably anticipated, worst case release of hazardous material would likely be associated with a ruptured hydraulic or fuel line associated with operating deck equipment. This scenario would also require the unlikely additional failure of equipment secondary containment for a release into the water to occur. This plan addresses proactive procedures and inspections to ensure that the potential for any release, including that described above, is mitigated to the fullest practical extent possible. The contingency planning in the HMPRP provides a response matrix for a spill of any size possible for the equipment/vessels on site, regardless of causation.

All Global employees working on the site will be 24 or 40 hour trained in Hazardous Waste Operations and Emergency Response, and will take immediate action to identify, secure, contain and clean up any spills.

The following measures will be employed to control the risks of hazardous material spills from equipment on the barge or support vessels:

- Properly Maintained Equipment – All equipment used on the project will be in good condition with no fuel or oil leakage.
- Immediate Response to Equipment Leakage – Should any equipment begin to leak, defective equipment will be removed immediately from the project and repaired or replaced.
- Spill Kits Required Onsite – Spill kits will be maintained onsite for use in containing and cleaning up minor equipment spills. The kits will be stored in an easily accessible area on deck (exact location to be determined during mobilization) with all personnel briefed on spill kit locations and contents during the Emergency Spill Briefing described in Paragraph 2. A minimum of two 90 gallon *Overpak* spill kits will be stationed on the barge, and one kit on each support vessel. See *Appendix D* for a spill kit item inventory.
- Equipment Fueling – Equipment fueling will be carefully monitored and administrated. All equipment will be equipped with drip pans or other forms of secondary containment capable of handling the full volume of the fuel/oil equipment capacity. Absorbent boom will be placed around equipment when it is refueled and the spill kit will be immediately available.
- An absorbent boom shall be kept in readiness for immediate deployment around the barge as a contingency control measure.
- Mitigation from Pollution due to Rainwater Runoff – During rain events, marine equipment will be covered with waterproof tarps to prevent the equipment and work area from getting wet. These tarps will help prevent polluted rainwater runoff from equipment sources. Rainwater (and any other accumulated liquid) from secondary containment shall be placed in approved DOT 55 gallon drums and labeled accordingly. Drum contents will be properly disposed of offsite.

All refueling will take place using a low volume electric transfer pump. Equipment that may require fueling includes dive compressors, hot water machines, anchor winches, generators, welders, and the crane. Sorbents will be staged at the fuel fill on the receiving equipment. A dedicated fueling attendant will monitor the nozzle during refueling to determine fuel level in the equipment being fueled. Appropriately-trained personnel will check the connections at the transfer hoses, ensure secondary containment is properly in place, close open drains on the deck as necessary, and note the fuel level in the receiving fuel tank prior to and following loading. Verbal communication will be used between the fuel shut off worker and the fueling attendant to minimize the likelihood of a spill during fueling operations.

2. ENVIRONMENTAL CONTROLS MANAGEMENT

Global Diving & Salvage, Inc. ensures that environmental hazards are addressed to protect site personnel and the environment. In the event of an environmental spill, spill kits with PPE and recovery materials will be onboard the vessel and available for immediate deployment. All onsite crew members shall participate in an emergency spill orientation conducted by Rick Heaslet, Global Project Manager (contact information listed on Notification List, Paragraph 2.3) with documentation in both the daily log and tailgate safety meeting record. During the orientation, crew members will be informed of potentially hazardous exposures, location of spill response booms and spill kits, and contingency/emergency action plans.

2.1.1 Pollution Control Management

In the day-to-day operations at the job site, personnel will routinely handle chemicals and other materials that may degrade the environment. Global will take proactive measures, including routine daily inspections, to mitigate any potential hazard that could occur from products released from inventory or equipment. *Material Safety Data Sheets* are attached (see *Appendix D*) that include the primary hazardous materials listed in Section 1.2. A complete library of MSDS will be kept on site in electronic format during the offshore work for all other small items typically found on the barge or vessels; i.e., lubricants, degreasers, aerosol cans, etc. These items will be handled and stored in accordance with the procedures described below.

2.1.2 Pollution Control Prevention

Only chemicals used for routine maintenance of equipment are expected on this project. All equipment will be visually inspected daily prior to use, and include the following checks:

- Visible signs of leakage or accumulation around the tank, concrete pad or containment.
- Water in the containment systems, including signs of oil or oil sheen on the water.
- Debris or fire hazard in the containment or near the storage location.
- Containment in proper condition with secondary containment drain valves, where applicable, operable and in a closed position.
- Tanks/containers, including ladders, platforms, pipes and valves, secure with no signs of severe corrosion or damage.
- Mobile containers/tanks stored (when not in use) within containment areas.
- Tank/container openings properly sealed.

During inspections, personnel will clean up free-floating oils and products from equipment or the work area. Hoses and fittings will be inspected and repaired as necessary to prevent an unplanned release. Preventative booming and absorbent materials/equipment will be available for emergency deployments. The *Oil Spill Prevention Inspection Log* (Appendix A) will be used to document the inspections.

2.1.3 Control Procedures

Work in well-ventilated areas when working with hazardous chemicals or where portable ventilation can be installed.

2.1.4 Work Practices

- Handle all hazardous material containers with care.
- Isolate hazardous materials from other materials so that no combining can occur.
- Do not leave hazardous materials unattended for any amount of time.
- Clean up spills promptly.
- Wash hands and face after working with hazardous materials.

- No smoking is allowed around any hazardous chemicals.
- Avoid heat and sparks when working with hazardous materials.
- Store all flammable materials in tightly closed approved containers properly labeled, and in a single location.
- Know where fire extinguishers are when working with hazardous materials; make certain you have the correct type of extinguisher for the material.

2.1.5 Prevention of Exposure

To prevent employee exposure to hazardous chemicals, ensure control procedures, work practices, and proper personal protective equipment are to be available to trained employees.

2.1.6 Symptoms of Over-Exposure

The symptoms of exposure are classified in two groups:

Acute: symptoms generally occur during or shortly after exposure to sufficiently-high concentrations of contaminants.

Chronic: symptoms generally occur after exposure to lower concentrations of contaminants over longer periods of time.

After appropriate emergency and first aid procedures are taken, the incident should be immediately reported to the Project Manager or Diving Supervisor.

2.2 Fuel Spill Emergency Response

If a fuel spill occurs, all resources will be devoted to containment and cleanup of the fuel. If a diver is in the water, he will be instructed to surface or come up to his decompression stop (if applicable) and complete his decompression obligation. After the diver and tenders have undergone decontamination procedures, all hands will assist in the containment and cleanup. The PRIMARY concern during a spill event will always be the safe recovery and decontamination of the diver.

Global will stage all equipment in containment or be able to contain leakage. Furthermore Global will provide absorbent boom and absorbent pads capable of encompassing and securing any leakage. In the event the spill occurs during hours of darkness, barge and/or vessel deck lighting will be directed toward the spill to assist skiff crews deploying absorbent boom and other cleanup materials. If any leakage occurs, the GDS crew will perform the following remediation:

The PRIMARY concern during a spill event will always be the safe recovery and decontamination of the diver. Should Global Diving & Salvage, Inc. have a release from equipment or products on the job site, personnel will follow the Spill Response Action Steps:

1. STOP PRODUCT FLOW
2. WARN PERSONNEL
3. SHUT OFF IGNITION SOURCES/ACCESS SITUATION FOR THREAT OF FIRE OR EXPLOSION
4. DON PERSONAL PROTECTIVE EQUIPMENT
5. CONTAIN/CONTROL SPILL
6. CLEAN SPILL UP
7. MAKE NOTIFICATIONS
8. FILL OUT SPILL REPORT FORM (Submit to EPA Regional Administrator and State of California within 60 days)
9. DISPOSE OF WASTE MATERIALS IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
10. INCIDENT ANALYSIS

2.3 Notification List and Spill Response Short Form

Agency/Person	Telephone No	Notification Criteria	Notification Time	Information To Report
National Response Center	(800)424-8802	All Spills	Immediately	1. Location of Release 2. Qty Released 3. Type of Product 4. Your Name/Number 5. Actions taken 6. Record Information on Spill Report Form
Rick Heaslet Global Diving & Salvage Project Manager	(707) 486-7499	All Spills	Immediately	
Global Diving & Salvage Incidents	(800) 424-8802	All Spills	Immediately	
California Coastal Commission	(805) 585-1800	All Spills	Immediately	
Kiewit District Environmental Manager	(562)777-5957	All Spills	Immediately	
Santa Barbara County Environmental Health Services	(805) 681-4900	All Spills	Immediately	
CA Office of Environmental Services	(805) 962-7430	All Spills <i>or Probable Spill Potential</i>	Immediately	
Santa Barbara Harbor Patrol	(805) 564-5531 VHF Ch 12 or 16	All Spills	Immediately	
USCG Marine Safety Office (Detachment-Santa Barbara)	(805) 965-0407	All Spills	Immediately	
US Fish of Wildlife Office of Spill Prevention and Response	(800) 852-7550	All Spills	Immediately	
NRC Environmental	(800) 899-4672	Spills Requiring Additional Cleanup Assistance and Assets	As Required	
Santa Barbara County Lifeguard Services	(805) 729-7508	If Spill Threatens Shoreline	Immediately	
Santa Barbara Fire Department	(805) 965-5254	If Spill Threatens Shoreline	Immediately	

SPILL REPORT SHORT FORM
(Page 1 of 3)

FACILITY ORIGINATING REPORT

Name:

Address:

City:

State:

Zip:

INCIDENT DESCRIPTION

Location Where Incident Occurred:

Date Incident Began:

Start Time:

End Time:

SPILL RELEASED INTO AIR GROUND WATER

ENVIRONMENTAL CONDITIONS (Rain, Wind, Sea Conditions):

MATERIAL/PRODUCT INFORMATION:

EXTREMELY HAZARDOUS SUBSTANCE (EHS) INVOLVED: YES NO

AMOUNT OF PRODUCT RELEASED:

AMOUNT RECOVERED:

SPILL REPORT SHORT FORM
(Page 2 of 3)

Spill/Release Source Information:

(Source Description/Equipment ID)

Product/Material Source Container(s) Capacity:

Amount of Product/Material Required to Re-fill:

Equipment Repairs/Replacement Needs:

Incident Details (Include Cause of Release and Injuries):

Corrective Action Taken:

SPILL REPORT SHORT FORM
(Page 3 of 3)

Notifications Made:

Agency	Telephone No	Contact Name	Date/Time

Agency Instructions:

Agency	Instructions Given

Report Prepared by:

(Print Name)

(Signature)

(Date)



Alternate 1A - SCOUR PROTECTION SHEET PILE BARRIER

- + Applicable for Platform A - No Existing Scour
- + Applicable for Platform B - Has Existing Scour

EXHIBIT 9

Construction Sequence

- 1 Divers clean and drill core holes in underside of platform.
- 2 Remove and dispose of existing vinyl sheet pile and pea gravel beneath platform.

- 3 Install grout bag and/or geobag formwork and filter fabric to act as formwork around perimeter of platform.

- 4 Inject tremie grout until grout emerges from core holes.

- 5 Construct steel sheet pile scour protection barrier around perimeter of platform.

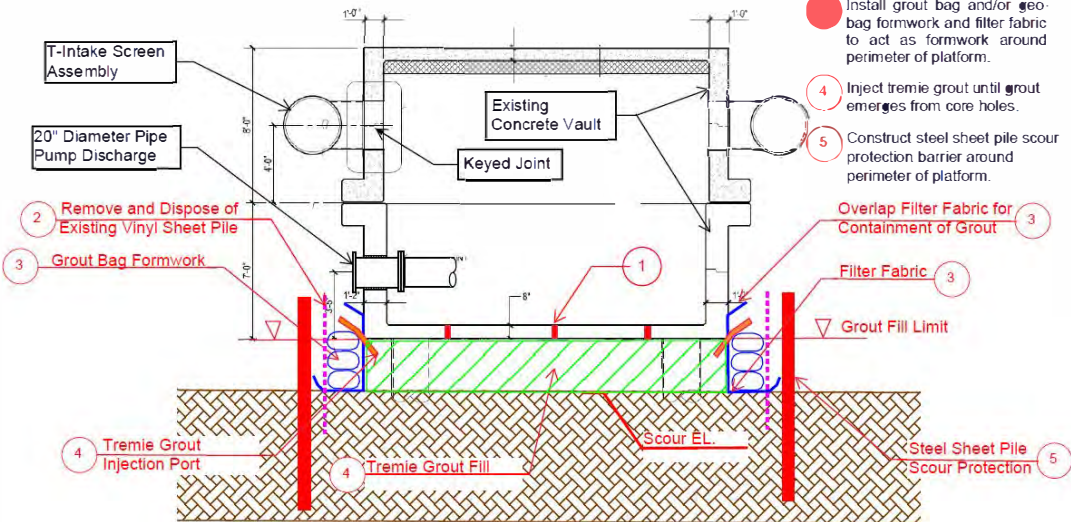


EXHIBIT 10

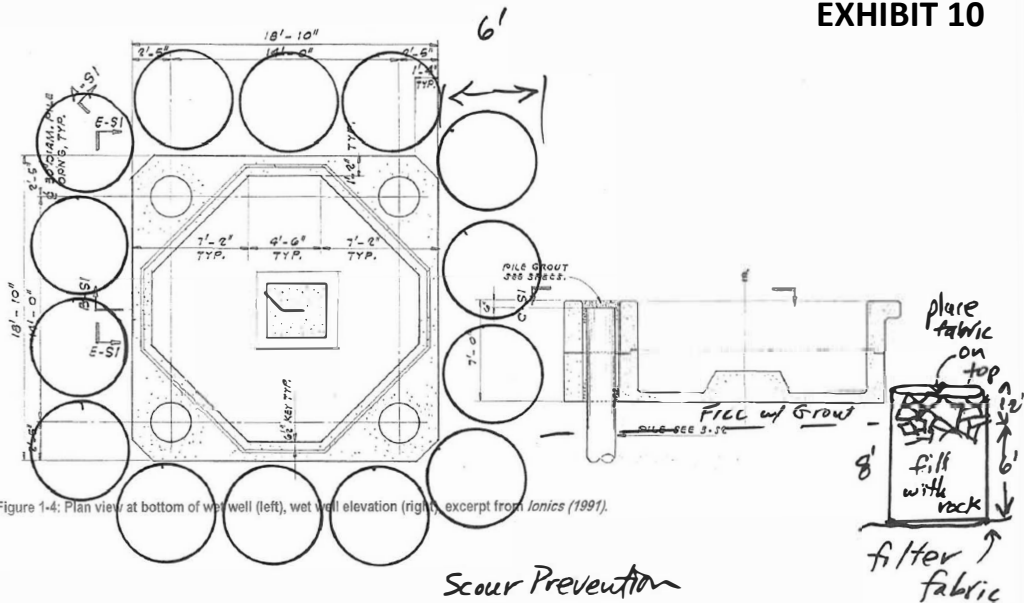


Figure 1-4: Plan view at bottom of wet well (left), wet well elevation (right), excerpt from *Ionics* (1991).

Scour Prevention
w/ RCP filled with rock

Alternate 1 - SCOUR PROTECTION APRON

- +Applicable for Platform A - No Existing Scour
- +Applicable for Platform B - Has Existing Scour

EXHIBIT 11

Construction Sequence

- 1 Divers clean and drill core holes in underside of platform.
- 2 Remove and dispose of existing vinyl sheet pile and pea gravel below platform.
- 3 Install grout bag formwork and filter fabric to act as formwork around perimeter of platform.
- 4 Pour tremie grout until grout emerges from core holes.
- 5 Place Caltrans Backing No. 1 RSP around perimeter of platform.

