

**AGREEMENT BETWEEN
SAN DIEGO UNIFIED PORT DISTRICT
and
MARINE TAXONOMIC SERVICES, LTD
for
AS-NEEDED CAULERPA MONITORING AND MANAGEMENT SERVICES
AGREEMENT NO. 146-2025MB**

The parties to this Agreement are the SAN DIEGO UNIFIED PORT DISTRICT, a public corporation (District) and MARINE TAXONOMIC SERVICES, LTD, an Oregon Corporation (Service Provider). The parties agree to the following:

1. **SCOPE OF SERVICES.** Service Provider shall provide services to satisfactorily comply with Attachment A, Scope of Services, attached hereto and incorporated herein, as requested by District. Service Provider shall keep the Executive Director of the District or their designated representative informed of the progress of said services at all times.
 - a. **As-Needed Services.**
 - (1) Service Provider is aware that the services to be provided under this Agreement are on an as-needed basis as determined by the District. Service Provider may or may not receive a request to provide such services, and Service Provider may not receive the maximum expenditure of funds allocated for these services. No work or services will be performed until a Task Authorization (TA) has been signed by the District Representative.
 - (2) Service Provider shall furnish all technical and professional labor, and materials to satisfactorily comply with Attachment A: Scope of Services as requested by District by issuance of specific Task Authorization and agreed to by Service Provider.
 - (3) Services rendered under this Agreement shall be undertaken by Service Provider only upon issuance of a Task Authorization (TA) for said services, in the format as shown in the attached Exhibit A, attached hereto and incorporated herein. A Task Authorization shall

not be considered effective until the Task Authorization has been signed by the District's designated representative.

2. **TERM OF AGREEMENT.** This Agreement shall commence on December 10, 2025 and shall terminate on December 31, 2030, subject to earlier termination as provided below.
3. **COMPENSATION.** For performance of services rendered pursuant to this Agreement and as further described in Attachment B, Compensation and Invoicing, attached hereto and incorporated herein; District shall compensate Service Provider based on the following, subject to the limitation of the maximum expenditure provided herein:
 - a. **Maximum Expenditure.** The maximum expenditure under this Agreement shall not exceed \$2,000,000. Said expenditure shall include without limitation all sums, charges, reimbursements, costs and expenses provided for herein. Service Provider shall not be required to perform further services after compensation has been expended. In the event that the Service Provider anticipates the need for services in excess of the maximum Agreement amount, the District shall be notified in writing immediately. District must approve an amendment to this Agreement before additional fees and costs are incurred.
 - b. **Payment Procedure.** For work performed on an hourly basis, Service Provider agrees to assign the person with the lowest hourly rate who is fully competent to provide the services required. If Service Provider finds it necessary to have work, which would usually be performed by personnel with a lower rate, performed by personnel paid at the higher hourly rate, Service Provider shall nevertheless, bill at the lower rate.
 - c. **Progress Documentation.**
 - (1) Service Provider shall provide District progress reports in a format and on a schedule as District directs. Progress reports shall include

a description of work completed, cumulative dollar costs incurred, anticipated work for the next reporting period, percentage of work complete, and the expected completion date for remaining work. The report shall identify problem areas and important issues that may affect project cost and/or schedule. The report shall present actual percent completion versus planned percent completion.

(2) Service Provider shall also provide applicable SBE Sub Participation Verification Monthly Report, Exhibit D, attached hereto and as provided by the District. SBE Sub Participation Verification Monthly Report shall be provided to monitor and verify Service Providers small business participation commitment at time of award. Monthly reports shall be submitted by email to the Project Labor & Compliance Administrator by the 15th of each month following award at sparsons@portofsandiego.org.

4. **RECORDS.**

- a. Service Provider shall maintain full and complete records of the cost of services performed under this Agreement. Such records shall be open to inspection of District at all reasonable times in the City of San Diego and such records shall be kept for at least three (3) years after the termination of this Agreement.
- b. Such records shall be maintained by Service Provider for a period of three (3) years after completion of services to be performed under this Agreement or until all disputes, appeals, litigation or claims arising from this Agreement have been resolved, whichever is later.
- c. Service Provider understands and agrees that District, at all times under this Agreement, has the right to review project documents and work in progress and to audit financial records, whether or not final, which Service Provider or anyone else associated with the work has prepared or which

relate to the work which Service Provider is performing for District pursuant to this Agreement regardless of whether such records have previously been provided to District. Service Provider shall provide District at Service Provider's expense a copy of all such records within five (5) working days of a written request by District. District's right shall also include inspection at reasonable times of the Service Provider's office or facilities, which are engaged in the performance of services pursuant to this Agreement. Service Provider shall, at no cost to District furnish reasonable facilities and assistance for such review and audit. Service Provider's failure to provide the records within the time requested shall preclude Service Provider from receiving any compensation due under this Agreement until such documents are provided.

5. **SERVICE PROVIDER'S SUB-SERVICE PROVIDERS.**

- a. It may be necessary for Service Provider to sub-contract for the performance of certain technical services or other services for Service Provider to perform and complete the required services; provided, however, all Service Provider's Sub-Service Providers shall be subject to prior written approval by District. The Service Provider shall remain responsible to District for any and all services and obligations required under this Agreement, whether performed by Service Provider or Service Provider's Sub-Service Providers. Service Provider shall compensate each Service Provider's Sub-Service Providers in the time periods required by law. Any Service Provider's Sub-Service Providers employed by Service Provider shall be independent Service Providers and not agents of District. Service Provider shall insure that Service Provider's Sub-Service Providers satisfy all substantive requirements for the work set forth by this Agreement, including insurance and indemnification.

- b. Listed below are the firms that the District has approved as Service Provider's sub-contractors to provide services under this Agreement:

NAME OF FIRM

TYPE OF SERVICES PROVIDED

Merkel & Associates

Marine Biological Services

- c. Service Provider shall also include a clause in its Agreements with Service Provider's Sub-Service Providers which reserves the right, during the performance of this Agreement and for a period of three (3) years following termination of this Agreement, for a District representative to audit any cost, compensation or settlement resulting from any items set forth in this Agreement. This clause shall also require Service Provider's Sub-Service Providers to retain all necessary records for a period of three (3) years after completion of services to be performed under this Agreement or until all disputes, appeals, litigation or claims arising from this Agreement have been resolved, whichever is later.

6. **COMPLIANCE.**

- a. In performance of this Agreement, Service Provider and Service Provider's Sub-Service Providers shall comply with the California Fair Employment and Housing Act, the American with Disabilities Act, and all other applicable federal, state, and local laws prohibiting discrimination, including without limitation, laws prohibiting discrimination because of age, ancestry, color, creed, denial of family and medical care leave, disability, marital status, medical condition, national origin, race, religion, sex, or sexual orientation. Service Provider shall comply with the prevailing wage provisions of the Labor Code, and the Political Reform Act provisions of the Government Code, as applicable.
- b. Service Provider shall comply with all Federal, State, regional and local laws, and district Ordinances and Regulations applicable to the performance of services under this Agreement as exist now or as may be added or amended.

7. **INDEPENDENT ANALYSIS.** Service Provider shall provide the services required by this Agreement and arrive at conclusions with respect to the rendition of information, advice or recommendations, independent of the control and direction

of District, other than normal contract monitoring provided, however, Service Provider shall possess no authority with respect to any District decision.

8. **ASSIGNMENT.** This is a personal services Agreement between the parties and Service Provider shall not assign or transfer voluntarily or involuntarily any of its rights, duties, or obligations under this Agreement without the express written consent of District in each instance.

9. **INDEMNIFY, DEFEND, HOLD HARMLESS.**

a. **Duty to Indemnify, duty to defend and hold harmless.** To the fullest extent provided by law, Service Provider agrees to defend, indemnify and hold harmless the District, its agents, officers or employees, from and against any claim, demand, action, proceeding, suit, liability, damage, cost (including reasonable attorneys' fees) or expense for, including but not limited to, damage to property, the loss or use thereof, or injury or death to any person, including Service Provider's officers, agents, subcontractors, employees, ("Claim"), caused by, arising out of, or related to the performance of services by Service Provider as provided for in this Agreement, or failure to act by Service Provider, its officers, agents, subcontractors and employees. The Service Provider's duty to defend, indemnify, and hold harmless shall not include any Claim arising from the active negligence, sole negligence or willful misconduct of the District, its agents, officers, or employees.

b. The Service Provider further agrees that the duty to indemnify, and the duty to defend the District as set forth in 9.a, requires that Service Provider pay all reasonable attorneys' fees and costs District incurs associated with or related to enforcing the indemnification provisions, and defending any Claim arising from the services of the Service Provider provided for in this Agreement.

- c. The District may, at its own election, conduct its defense, or participate in the defense of any Claim related in any way to this Agreement. If the District chooses at its own election to conduct its own defense, participate in its own defense or obtain independent legal counsel in defense of any Claim arising from the services of Service Provider provided for in this Agreement, Service Provider agrees to pay all reasonable attorneys' fees and all costs incurred by District.

10. **INSURANCE REQUIREMENTS.**

- a. Service Provider shall at all times during the term of this Agreement maintain, at its expense, the following minimum levels and types of insurance:

- (1) Commercial General Liability (including, without limitation, Contractual Liability, Personal Injury, Advertising Injury, and Products/Completed Operations) coverages, with coverage at least as broad as Insurance Services Office Commercial General Liability Coverage (occurrence Form CG 0001) with limits no less than one million dollars (\$1,000,000) per Occurrence and two million dollars (\$2,000,000) Aggregate for bodily injury, personal injury and property damage.
 - (a) The deductible or self-insured retention on this Commercial General Liability shall not exceed \$5,000 unless District has approved of a higher deductible or self-insured retention in writing.
 - (b) The Commercial General Liability policy shall be endorsed to include the District; its agents, officers and employees as additional insureds in the form as required by the District. An exemplar endorsement is attached (Exhibit B, Certificate of Insurance, attached hereto and incorporated herein).

- (c) The coverage provided to the District, as an additional insured, shall be primary and any insurance or self-insurance maintained by the District shall be excess of the Service Provider's insurance and shall not contribute to it.
 - (d) The Commercial General Liability policy shall be endorsed to include a waiver of transfer of rights of recovery against the District ("Waiver of Subrogation").
- (2) Commercial Automobile Liability (Owned, Scheduled, Non-Owned, or Hired Automobiles) written at least as broad as Insurance Services Office Form Number CA 0001 with limits of no less than one million dollars (\$1,000,000) combined single limit per accident for bodily injury and property damage.
- (3) Workers' Compensation, statutory limits, is required of the Service Provider and all sub-consultants (or be a qualified self-insured) under the applicable laws and in accordance with "Workers' Compensation and Insurance Act", Division IV of the Labor Code of the State of California and any Acts amendatory thereof. Employer's Liability, in an amount of not less than one million dollars (\$1,000,000) each accident, \$1,000,000 disease policy limit and \$1,000,000 disease each employee. This policy shall be endorsed to include a waiver of subrogation endorsement, where permitted by law.
- (4) Professional Liability insurance in the amount of \$1,000,000 per claim and \$1,000,000 aggregate.
 - (a) At the end of the agreement period, Consultant shall maintain, at its own expense, continued Professional Liability insurance of not less than five (5) years, in an amount no less than the amount required pursuant to this Agreement.

companies or underwriters is attached to the certificate of insurance, the addendum shall indicate the insurance carrier or underwriter who is the lead carrier and the applicable policy number for the CGL coverage.

- d. Furnishing insurance specified herein by the District will in no way relieve or limit any responsibility or obligation imposed by the Agreement or otherwise on Service Provider or Service Provider's sub-contractors or any tier of Service Provider's sub-contractors. District shall reserve the right to obtain complete copies of any of the insurance policies required herein.
11. **ACCURACY OF SERVICES.** Service Provider shall be responsible for the technical accuracy of its services and documents resulting therefrom and District shall not be responsible for discovering deficiencies therein. Service Provider shall correct such deficiencies without additional compensation. Furthermore, Service Provider expressly agrees to reimburse District for any costs incurred as a result of such deficiencies. Service Provider shall make decisions and carry out its responsibilities hereunder in a timely manner and shall bear all costs incident thereto so as not to delay the District, the project, or any other person related to the project, including the Service Provider or its agents, employees, or Sub-Service Providers.
12. **INDEPENDENT CONTRACTOR.** Service Provider and any agent or employee of Service Provider shall act in an independent capacity and not as officers or employees of District. The District assumes no liability for the Service Provider's actions and performance, nor assumes responsibility for taxes, bonds, payments or other commitments, implied or explicit by or for the Service Provider. Service Provider shall not have authority to act as an agent on behalf of the District unless specifically authorized to do so in writing. Service Provider acknowledges that it is aware that because it is an independent contractor, District is making no deductions from its fee and is not contributing to any fund on its behalf. Service Provider disclaims the right to any fee or benefits except as expressly provided for in this Agreement.

13. **ADVICE OF COUNSEL.** The parties agree that they are aware that they have the right to be advised by counsel with respect to the negotiations, terms and conditions of this Agreement, and that the decision of whether or not to seek the advice of counsel with respect to this Agreement is a decision which is the sole responsibility of each of the parties hereto. This Agreement shall not be construed in favor of or against either party by reason of the extent to which each party participated in the drafting of the Agreement. The formation, interpretation and performance of this Agreement shall be governed by the laws of the State of California.
14. **INDEPENDENT REVIEW.** Each party hereto declares and represents that in entering into this Agreement it has relied and is relying solely upon its own judgment, belief and knowledge of the nature, extent, effect and consequence relating thereto. Each party further declares and represents that this Agreement is being made without reliance upon any statement or representation not contained herein of any other party, or any representative, agent or attorney of any other party.
15. **INTEGRATION AND MODIFICATION.** This Agreement contains the entire Agreement between the parties and supersedes all prior negotiations, discussion, obligations and rights of the parties in respect of each other regarding the subject matter of this Agreement. There is no other written or oral understanding between the parties. No modifications, amendment or alteration of this Agreement shall be valid unless it is in writing and signed by the parties hereto.
16. **OWNERSHIP OF RECORDS.** Any and all materials and documents, including without limitation drawings, specifications, computations, designs, plans, investigations and reports, prepared by Service Provider pursuant to this Agreement, shall be the property of District from the moment of their preparation and the Service Provider shall deliver such materials and documents to District at the Don L. Nay Port Administration Building (located at 3165 Pacific Highway, San Diego, California 92101) whenever requested to do so by District. However, Service Provider shall have the right to make duplicate copies of such materials

and documents for its own file, or other purposes as may be expressly authorized in writing by District. Said materials and documents prepared or acquired by Service Provider pursuant to this Agreement (including any duplicate copies kept by the Service Provider) shall not be shown to any other public or private person or entity, except as authorized by District. Service Provider shall not disclose to any other public or private person or entity any information regarding the activities of District, except as expressly authorized in writing by District.

17. **TERMINATION.** In addition to any other rights and remedies allowed by law, the Executive Director (President/CEO) of District may terminate this Agreement at any time with or without cause by giving thirty (30) days written notice to Service Provider of such termination and specifying the effective date thereof. In that event, all finished or unfinished documents and other materials shall at the option of District be delivered by Service Provider to the Don L. Nay Port Administration Building (located at 3165 Pacific Highway, San Diego, California 92101). Termination of this Agreement by Executive Director (President/CEO) as provided in this paragraph shall release District from any further fee or claim hereunder by Service Provider other than the fee earned for services which were performed prior to termination but not yet paid. Said fee shall be calculated and based on the schedule as provided in this Agreement.

18. **DISPUTE RESOLUTION.**

a. If a dispute arises out of or relates to this Agreement, or the alleged breach thereof, and is not settled by direct negotiation or such other procedures as may be agreed, and if such dispute is not otherwise time barred, the parties agree to first try in good faith to settle the dispute amicably by mediation administered at San Diego, California, by the American Arbitration Association, or by such other provider as the parties may mutually select, prior to initiating any litigation or arbitration. Notice of any such dispute must be filed in writing with the other party within a reasonable time after the dispute has arisen. Any resultant Agreements shall be documented and may be used as the basis for an amendment or directive as appropriate.

- b. If mediation is unsuccessful in settling all disputes that are not otherwise time barred, and if both parties agree, any still unresolved disputes may be resolved by arbitration administered at San Diego, California, by the American Arbitration Association, or by such other provider as the parties may mutually select, provided, however, that the Arbitration Award shall be non-binding and advisory only. Any resultant Agreements shall be documented and may be used as the basis for an amendment or directive as appropriate. On demand of the arbitrator or any party to this Agreement, Sub-Service Provider and all parties bound by this arbitration provision agree to join in and become parties to the arbitration proceeding.
- c. The foregoing mediation and arbitration procedures notwithstanding, all claim filing requirements of the Agreement documents, the California Government Code, and otherwise, shall remain in full force and effect regardless of whether or not such dispute avoidance and resolution procedures have been implemented, and the time periods within which claims are to be filed or presented to the District Clerk as required by said Agreement, Government Code, and otherwise, shall not be waived, extended or tolled thereby. If a claim is not timely filed or presented, such claim shall be time barred and the above dispute avoidance and resolution procedures, whether or not implemented or then pending, shall likewise be time barred as to such claims.
19. **PAYMENT BY DISTRICT.** Payment by the District pursuant to this Agreement does not represent that the District has made a detailed examination, audit, or arithmetic verification of the documentation submitted for payment by the Service Provider, made an exhaustive inspection to check the quality or quantity of the services performed by the Service Provider, made an examination to ascertain how or for what purpose the Service Provider has used money previously paid on account by the District, or constitute a waiver of claims against the Service Provider by the District. The District may in its sole discretion withhold payments or seek reimbursement from the Service Provider for expenses, miscellaneous charges, or

other liabilities or increased costs incurred or anticipated by the District which are the fault of or as result of work performed or negligent conduct by or on behalf of the Service Provider. Upon five (5) day written notice to the Service Provider, the District shall have the right to estimate the amount of expenses, miscellaneous charges, or other liabilities or increased costs and to cause the Service Provider to pay the same; and the amount due the Service Provider under this Agreement or the whole or so much of the money due or to become due to the Service Provider under this Agreement as may be considered reasonably necessary by the District shall be retained by the District until such expenses, miscellaneous charges, or other liabilities or increased costs shall have been corrected or otherwise disposed of by the Service Provider at no expense to the District. If such expenses, miscellaneous charges, or other liabilities or increased costs are not corrected or otherwise disposed of at no expense to the District prior to completion date of the Agreement, the District is authorized to pay for such expenses, miscellaneous charges, or other liabilities or increased costs from the amounts retained as outlined above or to seek reimbursement of same from the Service Provider. It is the express intent of the parties to this Agreement to protect the District from loss because of conduct by or on behalf of the Service Provider.

20. **COMPLIANCE WITH PREVAILING WAGE LAWS (IF APPLICABLE).**

- a. Service Provider acknowledges and agrees that it is the sole and exclusive responsibility of Service Provider to: (a) ensure that all persons and/or entities (including, but not limited to, Service Provider or Subcontractors) who provide any labor, services, equipment and/or materials (collectively, "Services") in connection with any work shall comply with the requirements of California's and any other prevailing wage laws ("PWL") to the extent such laws are applicable and (b) determine whether any Services are subject to the PWL by obtaining a determination by means that do not involve the District.
- b. Certified Payrolls. Service Provider acknowledges and agrees that it is the sole and exclusive responsibility of the Service Provider to insure that all

certified payrolls are provided to the District. Service Provider shall submit certified payrolls electronically via the software LCPtracker.

- (1) LCPtracker is a web-based system, accessed on the World Wide Web by a web browser. Service Provider will be given a Log-On identification and password to access the San Diego Unified Port District's reporting system upon Service Provider's request.
- (2) The use of LCPtracker by the Service Provider is mandatory. Access to LCPtracker will be provided at no cost to the Service Provider.
- (3) In order to utilize LCPtracker, the Service Provider needs a computer and internet access. A digital camera and a scanner may be useful. For more information, go to www.lcptracker.com. To Login, go to www.lcptracker.net and from the homepage, select LOGIN and enter the Username and Password that will be provided to you by the District upon Service Provider's request.
- (4) Use of the system will entail data entry of weekly payroll information including; employee identification, labor classification, total hours worked and hours worked on this project, wage and benefit rates paid etc. The Service Provider's payroll and accounting software might be capable of generating a 'comma delimited file' that will interface with the software.
- (5) Service Provider must require all lower-tier sub participants the mandatory requirement to use LCPtracker to provide any required labor compliance documentation. Lower-tier sub participants will be given a Log-On identification and password from the Service Provider.

- (6) Training options can be provided to the Service Provider upon request.

21. **SERVICE PROVIDER/CONTRACTOR REGISTRATION PROGRAM (IF APPLICABLE).**

- a. In accordance with the provisions of Labor Code section 1771.1. (a) A contractor or subcontractor shall not be qualified to bid on; be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.
- b. No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].
- c. No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.
- d. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

22. **CAPTIONS.** The captions by which the paragraphs of this Agreement are identified are for convenience only and shall have no effect upon its interpretation.
23. **EQUAL OPPORTUNITY EMPLOYMENT.** Service Provider represents that it is an equal opportunity employer, and it shall not discriminate against any subconsultant, employee or applicant for employment because of race, religion, color, national origin, handicap, ancestry, sex, gender, gender expression, sexual orientation, or age. Such non-discrimination shall include, but not be limited to, all activities related to initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination.

Service Provider will, within forty-five (45) days of the effectiveness of this Agreement, provide a written statement of its commitment to diversity, equity, and inclusion, which shall include a commitment and brief description of its plan to implement good faith efforts to recruit subconsultants and employees in a non-discriminatory manner. If Service Provider fails to provide such written statement as required, the District may terminate this Agreement, effective immediately, by providing written notice of such termination. Service Provider shall, not later than sixty (60) days prior to the expiration of each anniversary of the effective date of this Agreement, provide a written report describing Service Provider's actions and results in furtherance of its commitment to diversity, equity, and inclusion, as well as provide an updated Employment & Ownership Report in the form attached hereto as Exhibit C, or updated form provided by District. Service Provider's report shall not identify individual subconsultants and employees by name. If Service Provider fails to provide such report and/or Exhibit C, as required, the District may terminate this Agreement, effective immediately, by providing written notice of such termination.

24. **EXECUTIVE DIRECTOR'S SIGNATURE.** It is an express condition of this Agreement that said Agreement shall not be complete nor effective until signed by either the Executive Director (President/CEO) or Authorized Designee on behalf of the District and by Authorized Representative of the Service Provider.

- a. Submit all correspondence regarding this Agreement to:

Heather Carroll
 Environmental Conservation
 San Diego Unified Port District
 P.O. Box 120488
 San Diego, CA 92112-0488
 Tel. 619-686-8198
 Email: hcarroll@portofsandiego.org

- b. The Service Provider’s Authorized Representative assigned below has the authority to authorize changes to the scope, terms and conditions of this Agreement:

Robert Mooney, Vice President
 Marine Taxonomic Services, Ltd
 920 Rancheros Dr. Suite F1
 San Marcos, CA 92069
 Tel. 760-331-7898
 Email: robert@consultmts.com

***** END OF PAGE *****

- c. Written notification to the other party shall be provided, in advance, of changes in the name or address of the designated Authorized Representative.

SAN DIEGO UNIFIED PORT DISTRICT

MARINE TAXONOMIC SERVICES, LTD

Heather Carroll
Director, Environmental Conservation

Robert Mooney

Robert Mooney
Vice President

Approved as to form and legality:
GENERAL COUNSEL

By: Assistant/Deputy

A manually signed copy of this Agreement transmitted by email or any other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

ATTACHMENT A SCOPE OF SERVICES

San Diego Unified Port District

Project Background

Invasive *Caulerpa* spp. can grow in any substrate and form dense mats, smothering other benthic species. This alga is capable of extremely rapid growth and spreads via sexual reproduction, frond fragmentation, and sending out runners in the substrate. *Caulerpa* spp. are well documented as having rapidly displaced native habitat and species in the Mediterranean Sea, New Zealand, and California. *Caulerpa* spp. pose a threat to native eelgrass populations and have been shown to displace existing eelgrass beds.

As directed by the District, Service Provider will provide biological monitoring and treatment of invasive *Caulerpa* spp. and eelgrass mitigation and monitoring services, including reporting in conformance with the California Eelgrass Mitigation Policy (CEMP) in San Diego Bay. The activities to be provided are broken down into two items, Item A: *Caulerpa* Monitoring and Management Services and Item B: Eelgrass Mitigation Monitoring Services, as shown below (Task Authorizations are needed for ALL work under the Agreement):

Item A: *Caulerpa* Monitoring and Management Services

1. Service Provider shall conduct *Caulerpa* surveys on an as-needed basis pursuant to Task Authorizations within San Diego Bay to control and prevent *Caulerpa* spp. infestations. Service Provider shall implement eradication treatments on new findings of *Caulerpa* as soon as possible after discovery and ensure high efficacy of treatments through follow-up infestation area surveys. Surveys shall consist of Eradication Level (100% of seafloor covered) and High Intensity Level (50% of seafloor covered) surveys. All survey divers shall have passed the *Caulerpa* surveyor certification exam administered by the National Atmospheric and Oceanic Administration (NOAA) or California Department of Fish and Wildlife (CDFW) and have a minimum of eight hours experience surveying for *Caulerpa prolifera*. Service Provider shall submit the following to District Staff: dive safety plan, dive permits obtained from Harbor Police, *Caulerpa* certifications, GIS data, maps and images from survey and treatment efforts.
2. To treat known occurrences of *Caulerpa*, divers shall systematically survey the designated area. Any loose fragments of *Caulerpa* shall be picked up. Following completion of the survey, divers shall treat the area using benthic barriers or a potential combination of treatment methods determined using the best available science and in coordination with the District and the Southern California *Caulerpa* Action Team (SCCAT) (Exhibit G – *Caulerpa* Control Protocol). Benthic barriers shall be secured to the seafloor using rebar pins and sandbags. Service Provider

shall coordinate installation of all treatment materials with the District, San Diego Regional Water Quality Control Board, National Wildlife Refuge, and other partners as necessary. Service Provider shall assist the District with permitting needs and provide all personnel, equipment, materials, and supplies necessary to perform this task.

3. Following treatment, Service Provider shall survey the infestation area to check for *Caulerpa* fragments and any potential release of *Caulerpa*. Treatments shall be adjusted as necessary. Barrier Treatments will be left in place for a minimum of 6 months or until *Caulerpa* is no longer viable. Following placement of selected treatment methods, the infestation area will be re-surveyed at the following time points: 1 day, 3 days, 1 week, 2 weeks, 1 month with adjustments as needed. Service Provider shall provide all personnel, equipment, materials, and supplies necessary to perform this task.
4. After a treatment period of 6 months (or longer, pursuant to confirmation that *Caulerpa* tissues are no longer viable), Service Provider shall remove all treatment materials with minimal disturbance to the seafloor. Treatment materials shall be disposed of appropriately. Service Provider shall coordinate removal of all treatment materials with the District, San Diego Regional Water Quality Control Board, National Wildlife Refuge, and other partners as necessary.
5. Service Provider shall meet regularly with District, SCCAT, and agency partners as needed to provide data deliverables and updates where appropriate. Service Provider shall report on survey dates, treatment installation dates, maps and shapefiles of treatment and survey areas, and photos of *Caulerpa* and treatments.

Item B: Eelgrass Mitigation Monitoring Services

Service Provider shall conduct eelgrass mitigation and monitoring services for Port construction projects pre and post-construction monitoring and annual monitoring at the following three sites within San Diego Bay:

- The Shelter Island Boat Launch
- The Former Campbell Shipyard Habitat Cap Eelgrass Mitigation Area
- The Borrow Pit in South San Diego Bay

All work will be completed in conformance with the California Eelgrass Mitigation Policy (CEMP) and the requirements set forth in this Agreement.

Prior to commencement of any work activities, Service Provider shall obtain digital confirmation from Port staff confirming scope of work and budget. Eelgrass surveys shall be conducted using diver-based observation, side-scan sonar, or similar technology to map eelgrass distribution, density, and the relationship to depth contours as outlined in the CEMP. Eelgrass surveys shall also be conducted at a

control/reference site, to assess if any outside influences are impacting the eelgrass survey areas. Service Provider shall provide an electronic copy of the monitoring report within 30 days following each survey event that includes an overall health assessment of the eelgrass including establishment, density, shoot growth, comparison to previous sampling events, and conclusions regarding next steps (Exhibit F).

6. Service Provider shall conduct eelgrass mitigation monitoring services and reporting for the Shelter Island Boat Launch Facility Improvement (SIBLFI) project pursuant to the project's 2017 Eelgrass Mitigation Plan (Exhibit E: Shelter Island Boat Launch Facility Improvements Project Eelgrass Mitigation Plan, dated August 2016) and approved Army Corps of Engineers (ACOE) 404 Permit and San Diego Regional Water Quality Control Board (SDRWQCB) 401 Water Quality Certification.
 - a. The SIBLFI project was completed in 2019 with a requirement to conduct five years of post-construction eelgrass mitigation monitoring, per the approved mitigation plan. Service provider shall conduct the required post-construction eelgrass monitoring to assess the establishment and overall health of planted eelgrass habitat and to complete the post-construction monitoring requirement per the 2017 eelgrass mitigation plan.
 - b. Annual eelgrass monitoring shall be conducted if excess eelgrass is present after the 60-month survey indicates that the mitigation requirements were met at the Shelter Island Boat Launch. The final 60-month post-construction report shall include an overall assessment of the eelgrass mitigation site and determine that mitigation responsibilities were met.
 - c. Attached for reference is the 36 Month Post-Transplant Monitoring Report for the SIBLFI project, dated June 2022 (Exhibit F).
7. Service Provider shall conduct annual eelgrass monitoring and any necessary algae removal activities at The Former Campbell Shipyard Habitat Cap and Eelgrass Restoration Site. Algae removal efforts shall be confirmed by Port staff prior to commencement. Monitoring is to be completed in conformance with CEMP guidelines.
8. Service Provider shall conduct annual eelgrass monitoring and any necessary algae removal activities at The Borrow Pit in South San Diego Bay. Algae removal efforts shall be confirmed by Port staff prior to commencement. Monitoring is to be completed in conformance with CEMP guidelines.
9. Pending approved Task Authorizations, Service Provider shall conduct eelgrass and Caulerpa surveys on an as-needed basis within San Diego Bay to support pre- and post-construction permitting requirements and to ensure compliance

with Port Balanced Capital Program and Major Maintenance construction projects.

- a. Service Provider shall complete the Caulerpa reporting form as required by California Department of Fish & Wildlife and National Marine Fisheries Service.

10. Pending approved Task Authorization, Service Provider shall prepare a report evaluating potential areas within San Diego Bay suitable for the potential establishment of new eelgrass habitat. The report shall include discussion on existing opportunities and constraints as well as an overview of requirements needed to prepare the site to support eelgrass (i.e. disposal of clean dredge material).

This award will be based on demonstrated scientific/technical ability and experience monitoring eelgrass as outlined in the CEMP and identifying, mapping, and treating aquatic invasive species.

Task No.	Description of Task
Task 1	Caulerpa Surveys
Task 2	Caulerpa Treatment
Task 3	Caulerpa Infestation Area Surveys
Task 4	Caulerpa Treatment Removal
Task 5	Project Support/Admin
Task 6	Eelgrass Monitoring and Maintenance activities associated with the Shelter Island Boat Launch Facility Improvement (SIBLFI) project
Task 7	Eelgrass Monitoring and Maintenance activities associated with the Former Campbell Shipyard Habitat Cap and Eelgrass Restoration Site

Task 8	Eelgrass monitoring and maintenance activities associated with the Borrow Pit in South San Diego Bay
Task 9	Eelgrass and Caulerpa surveys within San Diego Bay to support project specific pre- and post-construction permitting requirements.
Task 10	Preparation of a report evaluating additional potential areas within San Diego Bay suitable for establishment of new eelgrass beds.

**ATTACHMENT B
COMPENSATION & INVOICING
San Diego Unified Port District**

1. **COMPENSATION.**

a. For the satisfactory performance and completion of the services under this Agreement, District shall pay Service Provider compensation as set forth hereunder.

(1) Service Provider shall be compensated and reimbursed by District on the basis of invoices submitted each month for services performed during the preceding month. Task Authorizations shall be Lump Sum, Fixed Fee, or Time and Materials or any combination of all three.

(a) Each invoice for Lump Sum work shall include:

Date work performed;
Description of the work performed;
Direct Costs.

(b) Each invoice for Fixed Fee work shall include:

Date work performed;
Description of the work performed;
Percent of total work being invoiced;
Percent of total work completed;
Direct Costs.

(c) Each invoice for Time and Materials work shall include:

Date work performed;
Description of the work performed;
Hours worked by personnel classification;
Rate per personnel classification;
Total personnel cost by classification; and
Direct Costs.

(2) Professional services shall be invoiced in accordance with the following Rate Schedules:

LABOR CLASSIFICATION	POSITION TITLE	FULLY BURDENED HOURLY RATE
1. Project Principal	Principal Consultant	\$210
2. Associate Scientist	Associate Scientist/Associate Project Manager	\$115
3. Associate Scientist Diver	Associate Scientist Diver	\$145
4. Technician	Technician II	\$90
5. Technician Diver	Technician II Diver	\$115

Task No.	Description of Task	Compensation
Item A: Caulerpa Monitoring and Management Services		
Task 1	As-Needed Caulerpa Surveys	To be negotiated via Task Authorization using the approved hourly rates.
Task 2	Caulerpa Treatment	To be negotiated via Task Authorization using the approved hourly rates.
Task 3	Caulerpa Infestation Area Surveys	To be negotiated via Task Authorization using the approved hourly rates.
Task 4	Caulerpa Treatment Removal	To be negotiated via Task Authorization using the approved hourly rates.
Task 5	Project Support/Admin	To be negotiated via Task Authorization using the approved hourly rates.
Item B: Eelgrass Mitigation Monitoring Services		
Task 6	Eelgrass Monitoring and Maintenance activities associated with the Shelter Island Boat Launch Facility Improvement (SIBLFI) project (Services will commence only upon receipt of an approved Task Authorization from the San Diego Unified Port District)	Annual Fixed Fee \$5,598
Task 7	Eelgrass Monitoring and Maintenance activities associated with the Former Campbell Shipyard Habitat Cap and Eelgrass Restoration Site	Annual Fixed Fee \$5,598

	(Services will commence only upon receipt of an approved Task Authorization from the San Diego Unified Port District)	
Task 8	Eelgrass monitoring and maintenance activities associated with the Borrow Pit in South San Diego Bay (Services will commence only upon receipt of an approved Task Authorization from the San Diego Unified Port District)	Annual Fixed Fee \$5,598
Task 9	Eelgrass and Caulerpa surveys within San Diego Bay to support project specific pre- and post-construction permitting requirements. (Services will commence only upon receipt of an approved Task Authorization from the San Diego Unified Port District)	Fixed Fee \$5,800 / event
Task 10	Preparation of a report evaluating additional potential areas within San Diego Bay suitable for establishment of new eelgrass beds. (Services will commence only upon receipt of an approved Task Authorization from the San Diego Unified Port District)	Fixed Fee \$8,850

- (a) The following shall be considered part of the fully burdened hourly rates stated in this Agreement: vehicle expenses, parking, tolls, film, postage, facsimiles, computer usage, printing, normal copying and document reproduction, blue print services, travel, telecommunications, photography, and all other costs and expenses incurred in completing such services.
- (b) Additional classifications and fully burdened hourly rates not listed in the Rate Schedule above may be authorized via Task Authorization with the approval of the District's Project Manager.

(3) **Reimbursable Expenses.**

Sub-Service Provider Costs	0% mark-up
Direct Costs	At Cost (zero mark-up)

Note: Reimbursement for direct costs in excess of \$50.00 shall require the advance written approval by District's Project Manager. All other project related direct costs shall require appropriate documentation for reimbursement.

2. **INVOICING.**

- a. **Payment Documentation.** As a prerequisite to payment for services, Service Provider shall invoice District for services performed and for reimbursable expenses authorized by this Agreement, accompanied by such records, receipts and forms as required.
- b. Service Provider shall include the following information on each invoice submitted for payment by District, in addition to the information required in Section I, above:
 - (1) Agreement No. 146-2025MB
 - (2) If applicable, the Task Authorization(s) (TA) number being charged.
 - (3) The following certification phrase, with printed name, title and signature of Service Provider's project manager or designated representative:

"I certify under penalty of perjury that the above statement is just and correct according to the terms of Document No. _____, and that payment has not been received."
 - (4) Dates of service provided
 - (5) Date of invoice
 - (6) A unique invoice number
- c. District shall, at its discretion, return to Service Provider, without payment, any invoice, which has been submitted without the above information and certification phrase.
- d. Invoices shall be emailed to the attention of: Gabriella Kalbach, Environmental Conservation, gkalbach@portofsandiego.org
- e. Should District contest any portion of an invoice, that portion shall be held for resolution, but the uncontested balance shall be processed for payment. District may, at any time, conduct an audit of any and all records kept by Service Provider for the Services. Any overpayment discovered in such an audit may be charged against the Service Provider's future invoices and any retention funds.
- f. Service Provider shall submit all invoices within thirty (30) days of completion of work represented by the request and within sixty (60) days of incurring costs to be reimbursed under the Agreement. Payment will be made to Service Provider within thirty (30) days after receipt by District of a proper invoice.

**EXHIBIT A
TASK AUTHORIZATION FORM
San Diego Unified Port District**



(DEPARTMENT NAME)
 San Diego Unified Port District
 P.O. Box 120488
 San Diego, CA 92112-0488
 (619) 686-____
 Fax (619) 725-____

TASK AUTHORIZATION NO. _

(Date)

(Name)

(Title)

(Name of Company)

(Address)

(City, State, Zip)

Email:

Subject: Task Authorization for Agreement No. - 20 -
 (Agreement Title)

You are authorized to proceed with the work described in this correspondence, in an amount not to exceed \$ _____. This Task Authorization is in accordance with the terms of the subject agreement. **Please cite TA #_** on invoice(s) for this Task.

TASK DESCRIPTION

1. Requestor:		4. WBS or IO/ Cost Center:	
2. Date of Request:		5. Task Start Date:	
3. Task Budget:	\$	6. Task End Date:	
7. Task Title:			

8. **Scope of Services.**

9. Contractor Staffing (If applicable)

Name	Classification	Hours
	Staff as needed per Agreement rates	

10. List of Sub-Contractors (If applicable)

N/A

11. Please acknowledge acceptance of this Task Authorization by signing below and returning via mail to _____, Contracts Administrator, at the address above.

APPROVALS

Service Provider:

Signature: _____
 Name: _____
 Title: _____
 Firm: _____
 Date: _____

Project Manager:

Signature: _____
 Name: _____
 Title: Project Manager
 Date: _____

Manager:

Signature: _____
 Name: _____
 Title: Manager
 Date: _____

Director/Chief Engineer:

Signature: _____
 Name: _____
 Title: Director/Chief Engineer
 Date: _____

EXHIBIT B CERTIFICATE OF INSURANCE San Diego Unified Port District

By signing this form, the authorized agent or broker **certifies** the following:

- (1) The Policy or Policies described below have been issued by the noted Insurer(s) [Insurance Company(ies)] to the Insured and is (are) in force at this time.
- (2) As required in the Insured's agreement(s) with the District, the policies include, or have been endorsed to include, the coverages or conditions of coverage **noted on page 2 of this certificate**.
- (3) Signed copies of **all** endorsements issued to effect require coverages or conditions of coverage are attached to this certificate.

Return this form to: **San Diego Unified Port District**
c/o Ebix BPO
P.O. Box 100085 – 185
Duluth, GA 30096 – OR –
Email: portofsandiego@ebix.com
Fax: 1-866-866-6516

Name and Address of Insured (Consultant)	SDUPD Agreement Number: _____ This certificate applies to all operations of named insureds on District property in connection with all agreements between the District and Insured.
------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

CO LTR	TYPE OF INSURANCE	POLICY NO.	DATES	LIMITS
	Commercial General Liability <input type="checkbox"/> Occurrence Form <input type="checkbox"/> Claims-made Form Retro Date _____ <input type="checkbox"/> Liquor Liability Deductible/SIR: \$ _____		Commencement Date: Expiration Date:	Each Occurrence: \$ _____ General Aggregate: \$ _____
	Commercial Automobile Liability <input type="checkbox"/> All Autos <input type="checkbox"/> Owned Autos <input type="checkbox"/> Non-Owned & Hired Autos		Commencement Date: Expiration Date:	Each Occurrence: \$ _____
	Workers Compensation – Statutory Employer's Liability		Commencement Date: Expiration Date:	E.L. Each Accident \$ _____ E.L. Disease Each Employee \$ _____ E.L. Disease Policy Limit \$ _____
	Professional Liability <input type="checkbox"/> Claims Made Retro-Active Date _____		Commencement Date: Expiration Date:	Each Claim \$ _____
	Excess/Umbrella Liability		Commencement Date: Expiration Date:	Each Occurrence: \$ _____ General Aggregate: \$ _____

CO LTR	COMPANIES AFFORDING COVERAGE	A. M. BEST RATING
A		
B		
C		
D		

A. M. Best Financial Ratings of Insurance Companies Affording Coverage Must be A-VII or better unless approved in writing by the District.

Name and Address of Authorized Agent(s) or Broker(s)	E-mail Address: Phone: _____ Fax Number: _____ Signature of Authorized Agent(s) or Broker(s) Date: _____
------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------

SAN DIEGO UNIFIED PORT DISTRICT
REQUIRED INSURANCE ENDORSEMENT

<u>ENDORSEMENT NO.</u>	<u>EFFECTIVE DATE</u>	<u>POLICY NO.</u>
NAMED INSURED:		
GENERAL DESCRIPTION OF AGREEMENT(S) AND/OR ACTIVITY(IES): All written agreements, contracts and leases with the San Diego Unified Port District and any and all activities or work performed on district premises		

Notwithstanding any inconsistent statement in the policy to which this endorsement is attached or in any endorsement now or hereafter attached thereto, it is agreed as follows:

1. The San Diego Unified Port District, its officers, agents, and employees are additional insureds in relation to those operations, uses, occupations, acts, and activities described generally above, including activities of the named insured, its officers, agents, employees or invitees, or activities performed on behalf of the named insured.
2. Insurance under the policy(ies) listed on this endorsement is primary and no other insurance or self-insured retention carried by the San Diego Unified Port District will be called upon to contribute to a loss covered by insurance for the named insured.
3. This endorsement shall include a waiver of transfer of rights of recovery against the San Diego Unified Port District ("Waiver of Subrogation").
4. The policy(ies) listed on this endorsement will apply separately to each insured against whom claim is made or suit is brought except with respect to the limits of the insurer's liability.
5. As respects the policy(ies) listed on this endorsement, with the exception of cancellation due to nonpayment of premium, thirty (30) days written notice by certified mail, return receipt requested, will be given to the San Diego Unified Port District prior to the effective date of cancellation. In the event of cancellation due to nonpayment of premium, ten (10) days written notice shall be given.

Except as stated above, and not in conflict with this endorsement, nothing contained herein shall be held to waive, alter or extend any of the limits, agreements or exclusions of the policy(ies) to which this endorsement applies.

 (NAME OF INSURANCE COMPANY)

 (SIGNATURE OF INSURANCE COMPANY AUTHORIZED REPRESENTATIVE)

<p>MAIL THIS ENDORSEMENT AND NOTICES OF CANCELLATION:</p> <p>San Diego Unified Port District c/o Ebix BPO P.O. Box 100085 – 185 Duluth, GA 30096 – OR – Email to: portofsandiego@ebix.com</p>

EXHIBIT C



Employment and Ownership Report

Submitted to:

**Diversity, Equity, and Inclusion
Port of San Diego**

Submitted by:

Name of Business	
Contact Person	
Address	
City, State, Zip Code	
Phone Number	
E-Mail Address	
Date	
Signature	

The submittal of this information and subsequent DEI updates and/or reports required by Agreement language is for recordkeeping and tracking purposes only and will not be used as a basis for decisions, unless Service Provider fails to provide such information.

A. Employment Report

Job Categories	Number of Employees – Report Employees in only one category						
	Race/Ethnicity						
	Women						
	White	Black or African American	Hispanic	Native Hawaiian or Other Pacific Islander	Asian	American Indian or Alaska Native	Two or More Races
A	B	C	D	E	F	G	
Executives							
Mid-Level Executives							
Professionals							
Technicians							
Sales Workers							
Admin Support							
Craft Workers							
Operatives							
Laborers							
Service Workers							
Total							

Number of Employees – Report Employees in only one category	
Job Categories	Race/Ethnicity
	Men
	White Black or African American Hispanic Native Hawaiian or Other Pacific Islander Asian American Indian or Alaska Native Two or More Races H I J K L M N
Executives	
Mid-Level Executives	
Professionals	
Technicians	
Sales Workers	
Admin Support	
Craft Workers	
Operatives	
Laborers	
Service Workers	
Total	

Job Categories	Number of Employees – Report Employees in only one category							Total Col A-U
	Race/Ethnicity							
	Nonbinary							
	White	Black or African American	Hispanic	Native Hawaiian or Other Pacific Islander	Asian	American Indian or Alaska Native	Two or More Races	
	O	P	Q	R	S	T	U	V
Executives								
Mid-Level Executives								
Professionals								
Technicians								
Sales Workers								
Admin Support								
Craft Workers								
Operatives								
Laborers								
Service Workers								
Total								

B. Explanation for Completing Employment Data

Employment data must include ALL current full-time and part-time employees. Employees must be counted by sex and race/ethnic category for each of the occupational categories. You may acquire the race/ethnic information necessary for this report either by voluntary self-identification surveys of the workforce, or from post-employment records, or visual surveys of the workforce. Eliciting information on the race/ethnic identity of an employee by direct inquiry is not allowed.

For the purpose of this report, an employee may be included in the group to which they appear to belong, identifies with, or is regarded in the community as belonging. However, no person should be counted in more than one race/ethnic group. The race/ethnic categories for this survey are:

- Hispanic or Latino – A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race.
- White – A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.
- Black or African American – A person having origins in any of the Black racial groups of Africa.
- Native Hawaiian or Other Pacific Islander – A person having origins in any of the peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
- Asian – A person having origins in any of the original peoples of the Far East, Southeast Asian, or the Indian Subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
- American Indian or Alaska Native – A person having origins in any of the original peoples of North and South America (including Central America), and who maintain tribal affiliation or community attachment.
- Two or More Races – All persons who identify with more than one of the above five races.

To assist you in determining where to place your jobs within the occupational categories, a description of job categories is as follows:

- ***Executives (Officials and Managers):*** Individuals, who plan, direct and formulate policies, set strategy and provide the overall direction of enterprises/organizations for the development and delivery of products or services, within the parameters approved by boards of directors or other governing bodies. Residing in the highest levels of organizations, these executives plan, direct or coordinate activities with the support of subordinate executives and staff managers. They include, in larger organizations, those individuals within two reporting levels of the CEO, whose responsibilities require frequent interaction with the CEO. Examples of these kinds of managers are chief executive officers, chief operating officers, chief financial officers, line of business heads, presidents or executive vice presidents of functional areas or operating groups, chief

information officers, chief human resources officers, chief marketing officers, chief legal officers, management directors and managing partners.

- **Mid-Level Executives:** Individuals who serve as managers, other than those who serve as Executive/Senior Level Officials and Managers, including those who oversee and direct the delivery of products, services, or functions at group, regional or divisional levels of organizations. These managers receive directions from the Executive/Senior Level management and typically lead major business units. They implement policies, programs, and directives of executive/senior management through subordinate managers and within the parameters set by Executive/Senior Level management. Examples of these kinds of managers are vice presidents and directors, group, regional or divisional controllers; treasurers; human resources, information systems, marketing, and operations managers. The First/Mid-Level Officials and Managers subcategory also includes those who report directly to middle managers. These individuals serve at functional, line of business segment or branch levels and are responsible for directing and executing the day-to-day operational objectives of enterprises/organizations, conveying the directions of higher-level officials and managers to subordinate personnel and, in some instances, directly supervising the activities of exempt and non-exempt personnel. Examples of these kinds of managers are: first-line managers; team managers; unit managers; operations and production managers; branch managers; administrative services managers; purchasing and transportation managers; storage and distribution managers; call center or customer service managers; technical support managers; and brand or product managers.
- **Professionals:** Most jobs in this category require bachelor and graduate degrees, and/or professional certification. In some instances, comparable experience may establish a person's qualifications. Examples of these kinds of positions include accountants and auditors; airplane pilots and flight engineers; architects; artists; chemists; computer programmers; designers; dietitians; editors; engineers; lawyers; librarians; mathematical scientists; natural scientists; registered nurses; physical scientists; physicians and surgeons; social scientists; teachers; and surveyors.
- **Technicians:** Jobs in this category include activities that require applied scientific skills, usually obtained by post-secondary education of varying lengths, depending on the particular occupation, recognizing that in some instances additional training, certification, or comparable experience is required. Examples of these types of positions include drafters; emergency medical technicians; chemical technicians; and broadcast and sound engineering technicians.
- **Sales Workers:** These jobs include non-managerial activities that wholly and primarily involve direct sales. Examples of these types of positions include advertising sales agents; insurance sales agents; real estate brokers and sales agents; wholesale sales representatives; securities, commodities, and financial services sales agents; telemarketers; demonstrators; retail salespersons; counter and rental clerks; and cashiers.
- **Administrative Support Workers:** These jobs involve non-managerial tasks providing administrative and support assistance, primarily in office settings. Examples of these types of positions include office and administrative support workers; bookkeeping; accounting and auditing clerks; cargo and freight agents; dispatchers; couriers; data entry keyers; computer operators; shipping, receiving and traffic clerks; word processing and typists; proofreaders; desktop publishers; and general office clerks.
- **Craft Workers:** Most jobs in this category include higher skilled occupations in construction (building trade craft workers and their formal apprentices) and natural resource extraction workers. Examples of these types of positions include boilermakers; brick and stone masons;

carpenters, electricians, painters (both construction and maintenance); glaziers; pipe layers; plumbers, pipe fitters and steamfitters; plasterers; roofers; elevator installers; earth drillers; derrick operators; oil and gas rotary drill operators; and blasters and explosive workers. This category also includes occupations related to the installation, maintenance and part replacement of equipment, machines, and tools, such as: automotive mechanics; aircraft mechanics; and electric and electronic equipment repairers. This category also includes some production occupations that are distinguished by the high degree of skill and precision to perform them, based on clearly defined task specifications, such as millwrights, etchers, and engravers; tool and die makers; and pattern makers.

- **Operatives:** Most jobs in this category include intermediate skilled occupations and include workers who operate machines or factory-related processing equipment. Most of these occupations do not usually require more than several months of training. Examples include textile machine workers; laundry and dry-cleaning workers; photographic process workers; weaving machine operators; electrical and electronic equipment assemblers; semiconductor processors; testers, graders, and sorters; bakers; and butchers and other meat, poultry, and fish processing workers. This category also includes occupations of generally intermediate skill levels that are concerned with operating and controlling equipment to facilitate the movement of people or materials, such as: bridge and lock tenders; truck, bus, or taxi drivers; industrial truck and tractor (forklift) operators; parking lot attendants; sailors; conveyor operators; and hand packers and packagers.
- **Laborers:** Jobs in this category include workers with more limited skills who require only brief training to perform tasks that require little or no independent judgment. Examples include production and construction worker helpers; vehicle and equipment cleaners; laborers; freight, stock, and material movers; service station attendants; construction laborers; refuse and recyclable materials collectors; septic tank services; and sewer pipe cleaners.
- **Service Workers:** Jobs in this category include food service, cleaning service, personal service, and protective service activities. Skill may be acquired through formal training, job-related training, or direct experience. Examples of food service positions include cooks; bartenders; and other food service workers. Examples of personal service positions include medical assistants and other healthcare support positions; hairdressers; ushers; and transportation attendants. Examples of cleaning service positions include cleaners; janitors; and porters. Examples of protective service positions include transit and railroad police and fire fighters; guards; private detectives and investigators.

C. Statement of Ownership

Is your firm currently certified as any of the following (check all that apply) and if so, please identify the certifying agency:

- | | |
|------------------------------------------------------------------------|---------------------------------------------------------------------|
| <input type="checkbox"/> Small Business Enterprise (SBE) certified by: | <input type="checkbox"/> Veteran owned business (VBE) certified by: |
| <input type="checkbox"/> Woman owned business (WBE) certified by: | <input type="checkbox"/> LGBTQIA+ owned business certified by: |
| <input type="checkbox"/> Minority owned business (MBE) certified by: | <input type="checkbox"/> HUBZone |
| <input type="checkbox"/> | <input type="checkbox"/> Other: |

Please check here if you believe you are eligible for any of the above certifications, and for WBE or MBE please voluntarily self-identify as follows and DEI staff will contact you with certification information:

Gender:		Ethnicity:	
<input type="checkbox"/> Woman	<input type="checkbox"/> Hispanic or Latino	<input type="checkbox"/> Native Hawaiian/Pacific Islander	
<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> American Indian/Alaska Native	
<input type="checkbox"/> Nonbinary	<input type="checkbox"/> Black or African American	<input type="checkbox"/> Two or More Races	

Type of Legal Business Structure: (check all that apply)

<input type="checkbox"/> Sole Proprietorship	<input type="checkbox"/> Corporation
<input type="checkbox"/> Limited Liability Partnership	<input type="checkbox"/> Limited Liability Company
<input type="checkbox"/> Partnership	<input type="checkbox"/> Privately Held
<input type="checkbox"/> Publicly Traded	<input type="checkbox"/> Other, please describe:

Identify the majority owner(s) of the firm:

Name/Title:	Address:	Email:	Phone:	% Owned:	Years Owned:



**San Diego Unified Port District
Project Labor & Compliance - SBE Sub Participation Verification Monthly Report**

The purpose of this **monthly report** is to verify Small Business Enterprise (SBE) sub participation on District projects. All awarded Proposers / Respondents / Bidders who listed SBEs in their proposal / submittals / bids are required to submit the monthly report for the duration of the project. Reports shall be emailed to sparsons@portofsandiego.org

Name of Prime:		Project #:	
Prime Contact:		Project Title:	
Contact Telephone:		Project Start Date:	
Contact Email:		Project End Date:	
Reporting Month:		Final Report:	<input type="checkbox"/> Yes <input type="checkbox"/> No (Indicates all SBE subs have completed their portion of work and have been paid in full.)

SBE Sub Participant	SBE Sub Email	Description of Work	Start Date	End Date	Payment to SBE This Month	Total Payments to SBE to Date
Totals					\$	\$

Total Contract Value	Total received by Prime to Date	SBE Commitment At Time of Award	SBE Participation to Date (SBE Payments/Payment to Prime)
\$	\$	%	% / \$

By affixing my signature below, I certify that the information contained in this form is true and correct.

Signature	Date	Print Name

Invoices, canceled checks or other documentation deemed necessary to verify payments to SBEs may be required at a later date.

EXHIBIT E - SIBLFI EELGRASS MITIGATION PLAN

Shelter Island Boat Launch Facility Eelgrass Mitigation Plan



August 2016



Prepared for:
San Diego Unified Port District
Environmental & Land Use Management
San Diego, California
Agreement No. 131-2015, Task 4

Prepared by:
Tierra Data Inc.
10110 West Lilac Rd.
Escondido, CA 92026
(760) 749-2247

This Page Intentionally Blank

Table of Contents

1.0 Introduction.....	1
2.0 Project Description	1
2.1 Location.....	1
2.2 Description of the Project Area	1
2.3 Brief Description of Proposed Action	3
3.0 Eelgrass Occurrence and Projected Impacts	5
3.1 Results of Preliminary Eelgrass Survey	5
3.2 Description of Projected Eelgrass Impacts.....	5
4.0 Mitigation.....	6
4.1 Mitigation Site.....	6
4.2 Donor Sites	7
4.3 Reference Site(s)	7
5.0 Proposed Mitigation Methods.....	7
5.1 Eelgrass Donor Harvest Methods.....	7
5.2 Eelgrass Transplant Methods	8
6.0 Schedule	8
6.1 Construction Schedule.....	8
6.2 Mitigation Timing	8
7.0 Mitigation Monitoring and Performance	9
7.1 Pre-Impact and Post-Impact Assessment Surveys	9
7.2 Eelgrass Mitigation Monitoring Surveys	9
7.3 Mitigation Performance Milestones	9
7.4 Mitigation Contingency/Adaptive Management	10
8.0 Mitigation Coordination and Schedule.....	10
8.1 Letter of Permission and Notifications.....	10
8.2 Monitoring Reports	10
8.3 Notification of Completion	11
9.0 References.....	11

List of Figures

Figure 1. Project location for the Shelter Island Boat Launch Facility. 2
 Figure 2. Proposed construction and eelgrass at the Shelter Island Boat Launch Facility. 4

List of Tables

Table 1. Mitigation Performance Milestones for Eelgrass Transplanting (CEMP, NFMS 2014). 10

List of Acronyms and Abbreviations

CDFW	California Department of Fish and Wildlife
CEMP	California Eelgrass Mitigation Policy
ft	foot/feet
ft ²	square foot/feet
m	meter(s)
m ²	square meter(s)
MLLW	Mean Lower Low Water
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
SIBLF	Shelter Island Boat Launch Facility
TDI	Tierra Data Inc.

1.0 Introduction

The Port of San Diego is proposing the redevelopment of the Shelter Island Boat Launch Facility (SIBLF) in north San Diego Bay (herein after referred to as “SIBLF Improvements Project” or “project”). Presence/absence surveys of eelgrass habitat for the project were conducted by Tierra Data Incorporated (TDI) in May of 2013 (TDI 2013). Based on the results of this survey, it is estimated that approximately 30 square meters (m^2 ; 323 square feet [ft^2]) of eelgrass habitat will be directly impacted due to construction activities (San Diego Unified Port District 2015). The California Eelgrass Mitigation Policy (CEMP) (National Marine Fisheries Service [NMFS] 2014) outlines a replacement or mitigation ratio of 1.2:1 for impacts to eelgrass habitat. As a result, the project will be required to establish an estimated 36 m^2 (388 ft^2) of new eelgrass habitat to mitigate for impacts.

This document provides a mitigation plan to account for impacts to eelgrass due to construction. It includes details on the location, method, and timing for creating new eelgrass habitat as part of the proposed mitigation. In addition, the plan includes a five-year monitoring plan to assess establishment of the eelgrass habitat that is created and to ensure that the minimum coverage and density obligations are met per the CEMP.

2.0 Project Description

2.1 Location

The project site is located at 2210 Shelter Island Drive, San Diego, California 92106, within the Bay Corridor subarea of Planning District 1, Shelter Island/La Playa, of the District’s certified Port Master Plan (San Diego Unified Port District 2015) (Figure 1).

2.2 Description of the Project Area

The project is located on Shelter Island in a small basin that opens onto San Diego Bay. The current facilities include a free public boat launching facility that provides waterfront access opportunities to the public. The boat launching area is protected from exposure to open bay waters by rock jetties. A boat launching ramp extends into the launch basin waters; boarding docks, gangways, and piers are located on either side of the boat launching ramp. The project site is located in an urbanized area surrounded by San Diego Bay to the south and east and by developed park and commercial uses, including hotels, restaurants, and marine sales and services uses to the north and west. The specific land and water use designations for the project site include Boat Launching Ramp, Boat Navigation Corridor, Park, and Promenade (San Diego Unified Port District 2015).



Figure 1. Project location for the Shelter Island Boat Launch Facility.

2.3 Brief Description of Proposed Action

The SIBLF Improvements Project includes the repair, maintenance, and replacement of several elements comprising the SIBLF, including the existing concrete boat ramp, docks, and portions of the rock jetties. The purpose of the project is to provide accessibility for users with disabilities; to provide more navigable water area within the existing basin to launch, maneuver, and retrieve boats; to reduce boat congestion; and to improve boat safety and operations at the SIBLF (San Diego Unified Port District 2015).

As described in the Mitigated Negative Declaration for the project (San Diego Unified Port District 2015), the project specifically includes the following components: replacement of the existing 10-lane boat launching ramp; replacement of the existing rock jetties with concrete sheet pile (bulkhead) walls; installation of publicly accessible walking platforms with viewing areas atop the bulkhead walls; replacement of the existing floating docks; installation of new gangways to the floating docks; improvements to the existing kayak launching area; construction of a sidewalk with curb and gutter; re-grading and re-paving of the vehicle/trailer maneuvering area to raise the elevation of the upper area of the launch ramp; installation of signage; minor re-grading of the beach area to reinstate the pre-construction beach profile; completion of rock slope protection measures within the basin; and installation of updated launch ramp lighting (Figure 2). The project would not increase the number of lanes comprising the existing boat launching ramp; therefore, an increase in the operational capacity of the SIBLF would not occur. Thus, no changes to parking, sanitary facilities, or other ancillary facilities are proposed.

Dredging using landside and barge-mounted waterside equipment would be used to remove the rock and soil jetties. A total of 14,500 cubic yards of material would be excavated, which includes: jetty riprap (6,100 cubic yards), jetty core fill (7,500 cubic yards), and dredged sediment (900 cubic yards). This maintenance dredging of the basin sediment would be required to maintain the existing depths. A portion (approximately between 1,150 and 1,350 cubic yards) of the jetty riprap, jetty core fill, and dredged materials is planned to be beneficially reused on-site for various project improvements. The remainder of the riprap, jetty core fill, and dredged material (between approximately 13,150 and 13,350 cubic yards) would be removed and transported offsite (San Diego Unified Port District 2015).

In addition, construction of the 10-lane new concrete boat launching ramp would require installation of a temporary cofferdam consisting of approximately 200 vertical steel sheet piles and 25 battered steel 'H' piles (the latter would be slightly angled to provide support) (Figure 2). They would be installed over approximately 3 to 4 weeks using a vibratory pile driving hammer, or an impact pile driving hammer when necessary. The area behind (landward of) the cofferdam would be dewatered during construction in compliance with regulatory requirements. The temporary sheet pile cofferdam and supporting batter piles would be removed entirely after construction and curing of the concrete launch ramp (San Diego Unified Port District 2015).



Figure 2. Proposed construction and eelgrass at the Shelter Island Boat Launch Facility.

3.0 Eelgrass Occurrence and Projected Impacts

3.1 Results of Preliminary Eelgrass Survey

The extent of eelgrass resources in the SIBLF has historically fluctuated on annual and seasonal bases encompassing portions of shallow areas less than -15 feet (ft) Mean Lower Low Water (MLLW) where suitable habitat and conditions exist. Bay-wide side scan sonar surveys conducted since 1994 generally have not identified eelgrass habitat within the basin; eelgrass was detected in the basin during the 2011 survey (Navy 1994, 1999, 2004, 2009, 2011, and 2014). Figure 2 illustrates the variability of SIBLF-area eelgrass resources detected by the latest Bay-wide surveys (2011 and 2014); however, these results were not verified by divers.

In May 2013, eelgrass surveys were conducted with single beam sonar and diver transects within the basin, along the bayside portions of the jetties offshore, southwest, and northeast of the basin (TDI 2013). Approximately 2,150 m² (0.53 acre) of eelgrass was identified within the survey area, which is larger than the project area and includes areas within the launch basin and along the southwest beach. Eelgrass was also observed approximately 90 meters (m; 295 ft) northeast of the project area (Figure 2).

Eelgrass resources observed within the launch basin were generally clustered near the southwest boat dock; they were sparse and did not form a distinguishable bed. Rather, they consisted of primarily small (<6 inch) solitary individual plants greater than 1 m apart nearest the outermost rock jetty (likely representing recent recruitment), and three locations comprised of three to six larger (>12 inch) plants clustered in individual patches less than 1 m² (in an area with less frequent disturbance from vessel traffic).

Mapped eelgrass beds along the beaches on either side of the launch basin were dense and healthy; their extents were relatively consistent with eelgrass delineations recorded during Bay-wide surveys conducted by the Port and the U.S. Navy in 2011 (Navy 2011). The majority of the eelgrass resources observed in 2013 in the SIBLF project area occur within the southwest portion in waters between -4 and -18 ft MLLW. They were located within 6 m (20 ft) of the existing rock jetty and varied in width between 2.5 m (8 ft) and 7.6 m (25 ft). The substrate drops off rapidly moving offshore, limiting eelgrass suitability in close proximity of the outer portions of the rock jetty (TDI 2013; San Diego Unified Port District 2015).

3.2 Description of Projected Eelgrass Impacts

Impacts to vegetated and un-vegetated soft bottom benthic habitat would occur from dredging operations inside the basin and proposed replacement of the rock jetty. The project's direct impacts would be to eelgrass located on the southwest side of the SIBLF rock jetty and would be less than approximately 30 m² (323 ft²) based on 2013 surveys (Figure 2) (San Diego Unified Port District 2015). There is also potential for impacts to the few eelgrass plants located within the launch basin

from installation and removal of the temporary cofferdam and other construction activities; pre-construction surveys will more accurately determine the level of potential impact in the basin.

Pursuant to the requirements of the lead federal agency and NMFS, the actual level of impact to eelgrass will be determined during the pre- and post- construction eelgrass surveys, as described below (Section 7.1).

4.0 Mitigation

Under the proposed project, direct impacts to eelgrass habitat are anticipated to total less than 30 m² (323 ft²) (San Diego Unified Port District 2015). Because eelgrass habitat occurs adjacent to proposed basin dredging and construction activities, there is also the potential for indirect impacts to eelgrass habitat. To address this potential, measures will be taken during construction to avoid and minimize impacts to eelgrass habitat to the maximum extent practical by informing the construction contractor of eelgrass presence prior to construction, using silt curtains to minimize turbidity, and providing contractor education and coordination regarding protection of eelgrass habitat.

Any direct loss or significant indirect impacts to vegetated and un-vegetated eelgrass habitat (as determined by surveys described in Section 7.1) would be mitigated in-kind in accordance with the provisions of the CEMP (NMFS 2014). The CEMP requires that mitigation be provided for losses to eelgrass beds directly or indirectly damaged by project construction. For each square meter of eelgrass adversely impacted, 1.2 m² of new eelgrass habitat must be created.

4.1 Mitigation Site

An area for in-kind eelgrass mitigation has been identified generally between the proposed east dock and the existing eastern jetty (Figure 2; San Diego Unified Port District 2015). It encompasses approximately 296 m² (3186 ft²), which is sufficient to accommodate the potential mitigation need based on the current estimate of potential impacts: if the project impacts 30 m² (323 ft²) of eelgrass, as estimated, 36 m² (388 ft²) of eelgrass mitigation area would be required to satisfy the 1.2:1 mitigation ratio specified in the CEMP. An appropriately sized mitigation site would be located within the proposed mitigation area (Figure 2) based on site conditions and actual impacts. It would be designed to mitigate for impacts to both vegetated and un-vegetated eelgrass habitat (as defined by the CEMP¹), as needed. To ensure that the mitigation site bathymetry is suitable for eelgrass growth and persistence, on-site dredge material from within the basin may be used to reduce the

¹ “To encompass fluctuating eelgrass distribution and functional influence around eelgrass cover, for the purposes of this policy and guidelines, eelgrass habitat is defined as areas of vegetated eelgrass cover (any eelgrass within 1 m² quadrat and within 1 m of another shoot) bounded by a 5 m wide perimeter of unvegetated area. [...] Unvegetated areas may have eelgrass shoots a distance greater than 1 m from another shoot, and may be internal as well as external to areas of vegetated cover. For isolated patches and on a case-by-case basis, it may be acceptable to include an unvegetated area boundary less than or greater than 5 m wide. The definition excludes areas of unsuitable environmental conditions such as hard bottom substrates, shaded locations, or areas that extend to depths below those supporting eelgrass” (NMFS 2014).

depth in the area of the mitigation site to match the bathymetry of the impacted eelgrass area. Rip rap removed during construction would be used to stabilize the slope of placed sediment, as necessary. Any eelgrass habitat that is created beyond that required to satisfy the 1.2:1 mitigation ratio will be included in a mitigation bank.

4.2 Donor Sites

The eelgrass bed southwest of the SIBLF will serve as the donor site for eelgrass transplanting efforts (Figure 2). Though a portion of this eelgrass bed may be potentially impacted by the project, the donor material will be harvested from an area of the bed located outside of the SIBLF project footprint.

The donor bed will be harvested in an evenly spaced manner and will be thinned without leaving any noticeable bare patches (refer to Section 5.1). To prevent any undesirable impacts, no more than 10% of the eelgrass in the donor bed will be harvested and transplanted. The donor site was selected based on the following factors:

1. Proximity to the mitigation site allows for logistical suitability, including similar oceanographic conditions for the transplant material, similar environmental conditions between donor and mitigation sites, ease of access and diver safety.
2. Appropriate size and eelgrass density of the donor bed to provide transplant material.
3. Long-term persistence and recovery potential of the donor bed.

4.3 Reference Site(s)

The eelgrass bed located northeast of the project area (Figure 2) will be used as the reference site for determining mitigation success. This site was selected based on its proximity (approximately 100 m [328 ft] north of the existing jetty) and its similar oceanographic and physical conditions relative to the proposed mitigation area. In addition, the reference site (445 m² [0.11 acres]) is greater than the anticipated size of the mitigation site to account for potential minor changes in the reference site eelgrass bed.

5.0 Proposed Mitigation Methods

5.1 Eelgrass Donor Harvest Methods

Donor material will be harvested by first removing loose sediment around the rhizome and then removing the rhizome using a raking method. Care will be taken when removing rhizomes to avoid tearing or ripping them so as to preserve as much root as possible. This method minimizes disturbance to surrounding eelgrass and substrate. Divers will perform donor salvaging in a systematic fashion collecting no more than 10% of eelgrass from the donor bed. Collected rhizomes will be loosely placed in mesh bags for processing at the surface. Salvage material will be considered viable if there are a minimum of three internodal segments per rhizome. Higher numbers of internodal segments are preferred for higher transplant success.

Once on the surface, donor salvage material will be stored in a flow-through seawater source prior to processing. Material will be stored no longer than 8 hours from harvesting to transplant unit preparation. Once prepared, transplant units will be stored in open water no longer than 24 hours.

5.2 Eelgrass Transplant Methods

Eelgrass harvested from the donor site will be bundled into transplant units comprised of approximately eight to twelve turions each. This bundling method has a high success rate in achieving self-sustaining eelgrass habitat post-transplanting (Merkel 1988). Transplant units will be installed by hand digging a hole approximately the size of the unit and placing the unit with the rhizome two inches below the surface. The unit will then be anchored to the substrate using biodegradable stakes and the hole will be backfilled. Divers will conduct planting on a defined grid system: 2-m-wide lanes moving from the shore out to the edge of the mitigation site. The grid layout will provide for ease of tracking and quality control of planting. Transplant units will be spaced 1 m apart on center (one unit per m²). The mitigation site will be planted with more than the 36 units that are required to achieve a final 36 m² (388 ft²) mitigation site. Guidance from the CEMP (NMFS 2014) will be used to inform the initial overplanting amount; the overplanting is intended to provide a buffer to offset any potential losses of individual transplants so that the site achieves the 1.2:1 mitigation requirement.

6.0 Schedule

6.1 Construction Schedule

Construction is anticipated to start in January 2017 and be completed in November 2017.

6.2 Mitigation Timing

Mitigation will begin upon receipt of state, federal, and local permits and authorizations (including California Department of Fish and Wildlife [CDFW] Letter of Permission for eelgrass harvest) for the project. All mitigation work shall be conducted within the eelgrass growing season from March through October, as specified in the CEMP (NMFS 2014).² Based on the current estimated construction start and end dates, mitigation activities would commence around March 2018, which is the beginning of the next active growing season after construction completion. This timing is suggested in order to avoid any construction impacts to the mitigation site while it is being planted.

² Per the CEMP, mitigation should begin no later than 135 days following the start of in-water construction that results in eelgrass habitat impacts so that mitigation begins within the same eelgrass growing season as impacts occur. If possible, mitigation should be initiated prior to or concurrent with impacts. For impacts initiated within 90 days prior to, or during, the low-growth period for southern California, mitigation may be delayed to within 30 days after the start of the following growing season, or 90 days following impacts, whichever is longer, without the need for additional mitigation (NMFS 2014).

7.0 Mitigation Monitoring and Performance

7.1 Pre-Impact and Post-Impact Assessment Surveys

To assess impacts from the project, pre- and post-construction surveys will be conducted using side-scan sonar and diver verification at potential impact and reference sites. All pre- and post-construction surveys will be conducted during the active growing season (March through October) to accurately assess both vegetated and un-vegetated eelgrass habitat, as defined by the CEMP (refer to Section 4.1). Reports of all surveys will be provided within 30 days of survey completion.

The pre- and first post- construction surveys will be conducted within 30 days of construction start and completion, respectively, to document the extent of direct impacts to eelgrass from the project. A reference site will also be surveyed congruently to determine any loss of eelgrass habitat not attributable to construction. Surveys will document aerial coverage, percent vegetated cover, turion density, and shoot height. Any significant impacts calculated through this comparison and analysis of surveys will be mitigated at a ratio of 1.2:1 in accordance with provisions of the CEMP for Southern California region.

Additional post-construction surveys will be conducted in the impact area and reference site 12 and 24 months after construction to determine the occurrence and extent of any significant indirect impacts attributable to the project. Any significant indirect impacts identified by these surveys would be mitigated.

7.2 Eelgrass Mitigation Monitoring Surveys

Once the planting effort has concluded, monitoring of the mitigation site will be conducted for 60 months (5 years) to document the success of the mitigation, as outlined in the CEMP. Monitoring surveys will begin immediately after transplanting has been completed and then at intervals of 0, 6, 12, 24, 36, 48, and 60 months post-transplant. The monitoring program will assess the aerial extent, percent cover, and density of eelgrass in the transplant site using twelve 1/16 m² quadrats. Monitoring dates will be scheduled during the active eelgrass growing season to collect information on growth and survival.

Additional monitoring after the fifth year may be necessary if the aerial extent and density of eelgrass in the mitigation site does not meet the mitigation performance milestones. The reference site (Figure 2) will be monitored in concert with the mitigation site to account for any natural fluctuations in the aerial extent and density of eelgrass in the area.

7.3 Mitigation Performance Milestones

Criteria for transplanting success will be determined based on the mitigation performance milestones outlined in Table 1.

Table 1. Mitigation Performance Milestones for Eelgrass Transplanting (CEMP, NMFS 2014).

Monitoring Date (post transplanting)	Performance Milestones
Month 0	Confirmation of full coverage distribution of planting units over the initial mitigation site
Month 6	Persistence and growth of eelgrass in the initial mitigation site 50% survival of initial planting units and well distributed coverage Monitoring date should be flexible to fall within active growing season
Month 12	40% eelgrass coverage in the initial mitigation site 20% density of reference site No less than 1.2 times the area of the impact site
Month 24	85% eelgrass coverage in the initial mitigation site 70% density of reference site No less than 1.2 times the area of the impact site
Month 36	100% eelgrass coverage in the initial mitigation site 85% density of reference site No less than 1.2 times the area of the impact site
Month 48	100% eelgrass coverage in the initial mitigation site 85% density of reference site No less than 1.2 times the area of the impact site
Month 60	100% eelgrass coverage in the initial mitigation site 85% density of reference site No less than 1.2 times the area of the impact site

7.4 Mitigation Contingency/Adaptive Management

In the event that the eelgrass transplanting fails to meet the established success criteria in the initial mitigation site, supplemental mitigation may be required in consultation with CDFW and NMFS.

8.0 Mitigation Coordination and Schedule

8.1 Letter of Permission and Notifications

Prior to beginning the eelgrass transplant work, a letter of permission to harvest and plant eelgrass will be obtained from the CDFW. A minimum five-day notification and a preliminary transplanting schedule will be given to CDFW prior to commencement of the transplant work.

8.2 Monitoring Reports

Monitoring reports shall be provided to the resource agencies (CDFW, NMFS) within 30 days after the completion of each required monitoring period and shall include spatial data. Per the CEMP (NMFS 2014), these reports will include: a description of the action, action party, mitigation consultants, relevant points of contact, and relevant permits; the size of permitted impacted estimates, location of activities, actual eelgrass impacts, and eelgrass mitigation needs; a detailed

description of eelgrass habitat survey methods, donor harvest methods, and transplant methods; and mitigation performance milestone progress. The initial monitoring report (0 months) will document any variances from the mitigation plan, sources of donor materials, and the full area of planting. The final monitoring report will include an overall assessment of the performance of the eelgrass mitigation site relative to natural variability of the reference site to evaluate if mitigation responsibilities were met.

8.3 Notification of Completion

If Mitigation Performance Milestones (refer to Table 1) have been met once the final monitoring event has been completed, a Notice of Completion will be forwarded along with the final Monitoring Report. At that point, implementation of the Mitigation Plan will be considered complete.

9.0 References

- Merkel, K.W. 1988. Growth and survival of transplanted eelgrass: The importance of planting unit size and spacing. In: Proceedings of the California Eelgrass Symposium. Chula Vista, CA.
- National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), 2014. California Eelgrass Mitigation Policy and Implementation Guidelines. NOAA Fisheries, West Coast Region, Long Beach, CA.
- San Diego Unified Port District. 2015. Shelter Island Boat Launch Facility Improvements Project and Port Master Plan Amendment, Final Mitigated Negative Declaration and Appendices A-E. San Diego County, California. October.
- Tierra Data Inc. (TDI). 2013. Eelgrass (*Zostera marina*) Presence/Absence Survey, Shelter Island Boat Ramp, San Diego Bay, California. Report prepared for ECORP Consulting and TranSystems, July 2013.
- U.S. Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC) Southwest. 1994. 1994 San Diego Bay Eelgrass Survey. NAVFAC SW Natural Resources Branch.
- U.S. Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC) Southwest. 1999. 1999 San Diego Bay Eelgrass Survey. NAVFAC SW Natural Resources Branch.
- U.S. Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC) Southwest. 2004. 2004 San Diego Bay Eelgrass Survey. NAVFAC SW Natural Resources Branch.
- U.S. Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC) Southwest. 2009. 2009 San Diego Bay Eelgrass Survey. NAVFAC SW Natural Resources Branch.
- U.S. Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC) Southwest. 2011. 2011 San Diego Bay Eelgrass Survey. NAVFAC SW Natural Resources Branch.

U.S. Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC) Southwest. 2014. 2014 San Diego Bay Eelgrass Survey. NAVFAC SW Natural Resources Branch.

EXHIBIT F - MONITORING REPORT

MARINE TAXONOMIC SERVICES, LTD.

Year 14 Monitoring of Eelgrass Resources at the Former Campbell Shipyard Eelgrass Restoration Site, San Diego, California

July 5, 2022

Prepared for:

Port of San Diego
P.O. Box 120488
San Diego, CA 92112



Prepared By:

Marine Taxonomic Services, Ltd.

SOUTHERN CALIFORNIA OFFICE

920 RANCHEROS DRIVE, STE F-1
SAN MARCOS, CA 92069

OREGON OFFICE

2834 NW PINEVIEW DRIVE
ALBANY, OR 97321

LAKE TAHOE OFFICE

1155 GOLDEN BEAR TRAIL
SOUTH LAKE TAKOE, CA 96150



Marine Taxonomic Services Ltd. 2022. Year 14 Monitoring of the Former Campbell Shipyard Eelgrass Restoration Site, San Diego, California. Prepared for the Unified Port of San Diego. July 5, 2022.



Robert Mooney, PhD
Principal Scientist

Participating Marine Taxonomic Services Ltd. Team Members;

Project Manager and Report Draft – Grace Teller, MSc.
Diver and Field Technician II– Hannah Tannenbaum, MAS.

Contents

1	Introduction	1
2	Methods.....	3
2-1	Side-Scan Sonar Survey	3
2-2	Scuba and Transect Survey	3
2-3	Historical Comparison	4
2-4	Mitigation Calculations	4
3	Results.....	5
3-1	Side-Scan Sonar Survey.....	5
3-2	Scuba and Transect Survey	5
3-3	Historical Comparison	8
4	Discussion.....	11
5	Literature Cited	12
	Appendix A: Southern California Eelgrass Mitigation Policy Monitoring and Compliance Reporting Summary	A-1

List of Figures and Tables

Figure 1.	Location of the former Campbell Shipyard (study site) and reference area within San Diego Bay, California.	2
Figure 2.	Distribution of eelgrass and <i>Gracilaria</i> within the former Campbell Shipyard study site during the May 2021 survey.....	6
Figure 3.	Distribution of eelgrass resources within the reference area during the May 2021 survey.....	7
Figure 4.	Historical eelgrass coverage at Campbell Shipyard study site relative to the reference area and restoration requirements. Historical data through year 9 adapted from M & A 2017.	9
Figure 5.	Historical eelgrass shoot density at former Campbell Shipyard study site relative to the reference area. Historical data through year 9 adapted from M&A 2017.	10
Table 1.	Position of the SCUBA-based diver transects during the May 2021 survey.	5

Format Page

Year 14 Monitoring of Eelgrass Resources at the Former Campbell Shipyard Eelgrass Restoration Site, San Diego, California

June 5, 2022

1 Introduction

The former Campbell Shipyard eelgrass (*Zostera marina*) transplant site in San Diego Bay was created to offset permanent eelgrass habitat losses resulting from implementation of dredging and capping activities performed as part of sediment remediation of the site's contaminated marine sediments (Figure 1). Information related to the original transplantation effort, including the planting methods, can be found in the post-transplant monitoring report (M&A 2008).

The area that currently supports eelgrass at the former Campbell Shipyard was a portion of the overall remediation program. A shallow-water eelgrass habitat site was created by placing a submerged rock berm from the existing mole pier projecting into the bay, and then turning to join the seawall. The area was then backfilled with rock, membrane, and sand. The completed site provided for 6,395 square meters (1.58 acre) of eelgrass planting area. The eelgrass mitigation requirement which resulted from impacts to eelgrass that previously occurred within this remediation footprint was 1,780 square meters (0.44 acre). The eelgrass transplant was successful and resulted in the creation of eelgrass beds above the 1,780 square meters (0.44 acre) mitigation requirement.

Since the completion of the 5-year post-transplant monitoring program, this site has been monitored annually so that the Port of San Diego (Port) can utilize excess eelgrass as credits within a mitigation bank. Eelgrass density and percent cover has fluctuated since the creation of the former Campbell Shipyard eelgrass transplant site (study site). To maintain the study site as a mitigation bank, the Port is required to conduct a yearly evaluation of the eelgrass habitat. This report presents the results of the Year 14 monitoring effort. Data from previous monitoring events are also compiled and presented so that the transplant site's performance can be viewed since the initial transplant effort. The data are discussed relative to the site's performance as an eelgrass mitigation bank with potential credits that are available above the original mitigation requirement.



Figure 1. Location of the former Campbell Shipyard (study site) and reference area within San Diego Bay, California.

2 Methods

Marine Taxonomic Services, Ltd. (MTS) staff conducted the year 14 post-transplant survey of the study site and reference area on May 16, 2022 (Figure 2). The side-scan sonar survey was performed to get a complete view of the seafloor for eelgrass mapping. The SCUBA survey was performed to visually verify the presence of eelgrass, inform researchers of the presence of other potential species of interest, to provide data to calculate eelgrass density, and to act as quality control of the sonar-based mapping effort.

2-1 Side-Scan Sonar Survey

To detect and map any eelgrass present, a side-scan sonar survey was performed by navigating a small vessel along a series of transects through the study site and reference area. The vessel was fitted with a pole-mounted side-scan sonar operating at 450 kHz. The sonar was set to scan 30 meters on both the port and starboard sides of the vessel for a total scanning swath of 60 meters. Multiple side-scan sonar survey transects within proximity to one another were navigated within each area surveyed. This allowed for complete coverage of each survey area while providing overlapping data, providing redundancy within the sonar record. The survey boundaries of the study site and reference area are provided in Figure 2 and Figure 3, respectively.

Following the field surveys, the collected side-scan sonar files were geographically registered using the vessel's navigation data collected during the survey. The side-scan files were then compiled to create a contiguous view of the seafloor across the entirety of the surveyed locations. The boundaries of the eelgrass present were then digitized from the compiled data set using ESRI ArcMap software and were plotted on a geographically registered image of the surveyed locations.

2-2 Scuba and Transect Survey

The SCUBA surveys were implemented to visually verify the sonar data, inform researchers of other marine plants present that may cause competition to eelgrass growth (e.g. *Gracilaria* spp.), and provide eelgrass density data. SCUBA survey data were obtained by swimming three 30m or more transects in both the study site and reference area. Within the survey boundaries the diver anchored a fiberglass tape measure to the seafloor and used a compass to navigate across the study site and reference area.

The diver placed a surface marker buoy fitted with a differential global positioning system (dGPS) antenna with sub-meter accuracy at the surface. The diver placed the surface marker buoy at the start and end location of each survey transect. The dive tender, topside on a research vessel connected to the surface marker buoy and recorded the start and end locations of each transect. While swimming the transect, the diver recorded transect start/end and eelgrass start/end points. Upon completion of the transects, the buoys were removed by the dive tender.

Along each transect, the diver was primarily surveying for presence, location and density of eelgrass. The diver noted the portions of the transect that intercepted the eelgrass bed. Within the study site, areas where transects intercepted *Gracilaria* and artificial reef/rip-rap were noted. The diver transects were subsequently plotted in ArcMap. If eelgrass was noted, the data and corresponding start/stop positions were used to validate bed outlines described in the side-scan sonar data. Generally, the data were used to help refine the side-scan sonar digitizing. If eelgrass was found by a diver that had not been digitized, the GIS specialist would inspect the sonar record. If the sonar record showed a return in that region, the eelgrass boundary was refined and similar returns in that area were also used to refine the eelgrass boundaries. If there was no sonar return that could be justified to represent eelgrass, no attempt was

made to draw additional eelgrass patches. The two methods are sampling techniques and so variation with sampling error is considered a valid result.

In addition to the intercept data, the diver used the transects to randomly place a 1/16 square meter quadrat within the eelgrass beds. The quadrat data were used to calculate eelgrass density by using the diver's counts of eelgrass leaf shoots (turions) within each quadrat.

2-3 Historical Comparison

The data summarized in this report are a continuation of a long-term monitoring effort and as such were compared to historical results. Results and historical information provided in the 108-month survey, 120-month survey, 132-month survey, 144-month survey, and 156-month survey report (M&A 2017, MTS 2018, MTS 2019, MTS 2020, MTS 2021) were used to evaluate changes in eelgrass coverage and density over the prior five monitoring events (Year 9, Year 10, Year 11, Year 12, and Year 13, respectively). The evaluation of the cumulative history at both survey areas can be used to infer future eelgrass management strategies at the study site. Graphically displayed historical data values were estimated from graphical information provided in M&A 2017.

2-4 Mitigation Calculations

Mitigation calculations are utilized to scale values based on the reference (control) condition at the beginning of the mitigation transplant and monitoring effort.

The mitigation requirement and adjusted mitigation requirement were calculated as follows:

$$\left(\frac{0_{mo} \text{ Mit. Req.}}{0_{mo} \text{ Reference Eelgrass Cover}} \right) \times (X \text{ Reference Eelgrass Cover}) = X \text{ Mit. Req.}$$

Where X indicates the time of sampling (i.e. Year-14).

3 Results

Substrate at the two survey locations consisted primarily of medium to fine sand with sediments at the study site having a higher and coarser sand content than the reference area. The study site also had some hard substrate associated with reef structures that were placed on top of the eelgrass habitat cap. The surface water temperature was approximately 16.2°C, salinity was 33 ppt, and horizontal visibility was approximately 8 feet at the time of the survey.

3-1 Side-Scan Sonar Survey

The side-scan sonar mapping resulted in identification of a total of 1,592 square meters (0.39 acre) of eelgrass in the study site (Figure 2). Eelgrass was generally spread across the study site but there were notable gaps; in the areas where eelgrass was present, it was patchy.

There were 6,204 square meters (1.53 acre) of eelgrass mapped within the reference area (Figure 3). Eelgrass was found consistently throughout the reference area.

3-2 Scuba and Transect Survey

The SCUBA diver swam three transects, at least 30 m each, at the study site and reference area (Table 1). Results from diver transects complement the side-scan sonar data while informing researchers of the presence of *Gracilaria* (Figure 2). The diver noted substantial coverage by *Gracilaria* along all diver transects completed within the study site. In most areas where eelgrass was observed, *Gracilaria* was also present. Rip-rap was not observed within transects swam in the study site. Portions of bare substrate were observed along the nearshore transect and generally present within the expanded survey area. This information is helpful to not over or underestimate the extent of eelgrass coverage by accidentally mapping non-eelgrass as eelgrass or missing portions of eelgrass not detected during the side-scan sonar digitization. In general, eelgrass, where present, was patchy and appeared to be competing with *Gracilaria*.

Eelgrass coverage within the reference area was consistent with coverage observed during the prior two surveys (MTS 2020, MTS 2021). Generally, the bay-ward edge of the eelgrass bed changed slightly and gaps in offshore eelgrass, not present during the 2021 survey, were present during this year’s survey.

The diver transect survey revealed that estimates of eelgrass density within the study site and reference area were moderate to high. Eelgrass density within the study site was 156 (± 126) leaf shoots per square meter. Eelgrass density at the study site was lower than the reference area where density was 374 (± 203) leaf shoots per square meter. A total of 31 quadrats (n=31) each were sampled at the study site and reference area to determine the leaf shoot density estimates. Statistical comparison of density across the surveyed areas indicate a significant difference (df=60; tStat=5.097; P-value<0.001).

Table 1. Position of the SCUBA-based diver transects during the May 2022 survey.

Location	Transect #	Start Coordinates		End Coordinates	
		Latitude	Longitude	Latitude	Longitude
Study Site	1	32.702791	-117.160348	32.703084	-117.160863
Study Site	2	32.703015	-117.160219	32.703301	-117.160670
Study Site	3	32.703123	-117.160104	32.703495	-117.160528
Reference Area	4	32.692542	-117.163445	32.692225	-117.163436
Reference Area	5	32.692524	-117.163037	32.692218	-117.162958
Reference Area	6	32.692564	-117.162645	32.692194	-117.162670



Figure 2. Distribution of eelgrass and *Gracilaria* within the former Campbell Shipyard study site during the May 2022 survey.

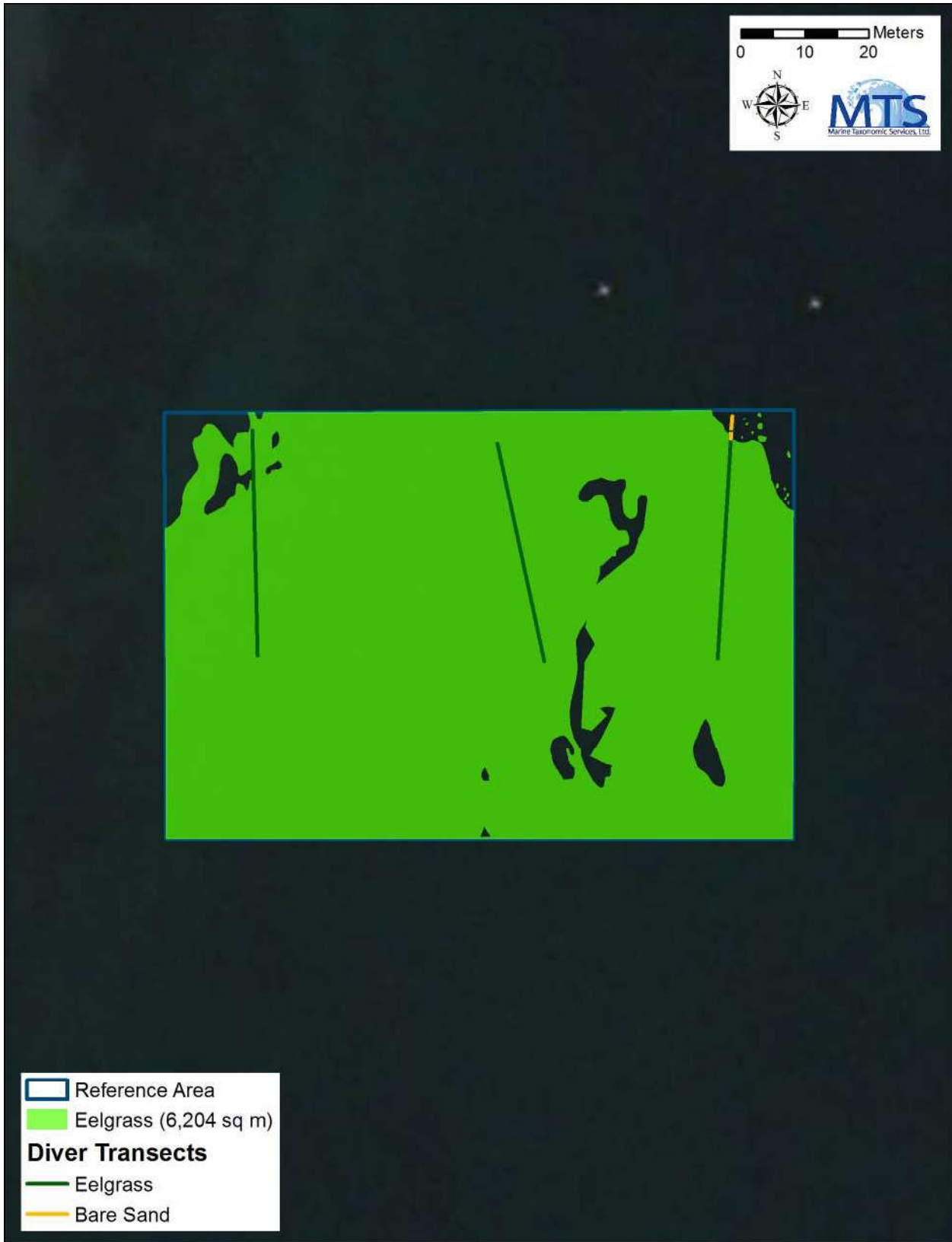


Figure 3. Distribution of eelgrass resources within the reference area during the May 2022 survey.

3-3 Historical Comparison

Eelgrass cover has decreased since the year 13 monitoring survey at the study site and reference area. Currently, less eelgrass was mapped at the study site than has ever been mapped (Figure 4). Eelgrass coverage within the reference site remained within the range of historical coverage and appeared to be consistent with natural variation of the resource.

Eelgrass densities at the study site and reference area have fluctuated over the past fourteen years. Density decreased at the study site and is comparable to densities recorded during the year-1 and year-10 monitoring efforts (Figure 5). The variation is evident in the error bars shown in Figure 5. When accounting for variation in the data, density can generally be viewed as similar across the locations over time except year 7 when the reference area had much higher measured shoot density compared to the study site.

Historical Eelgrass Coverage

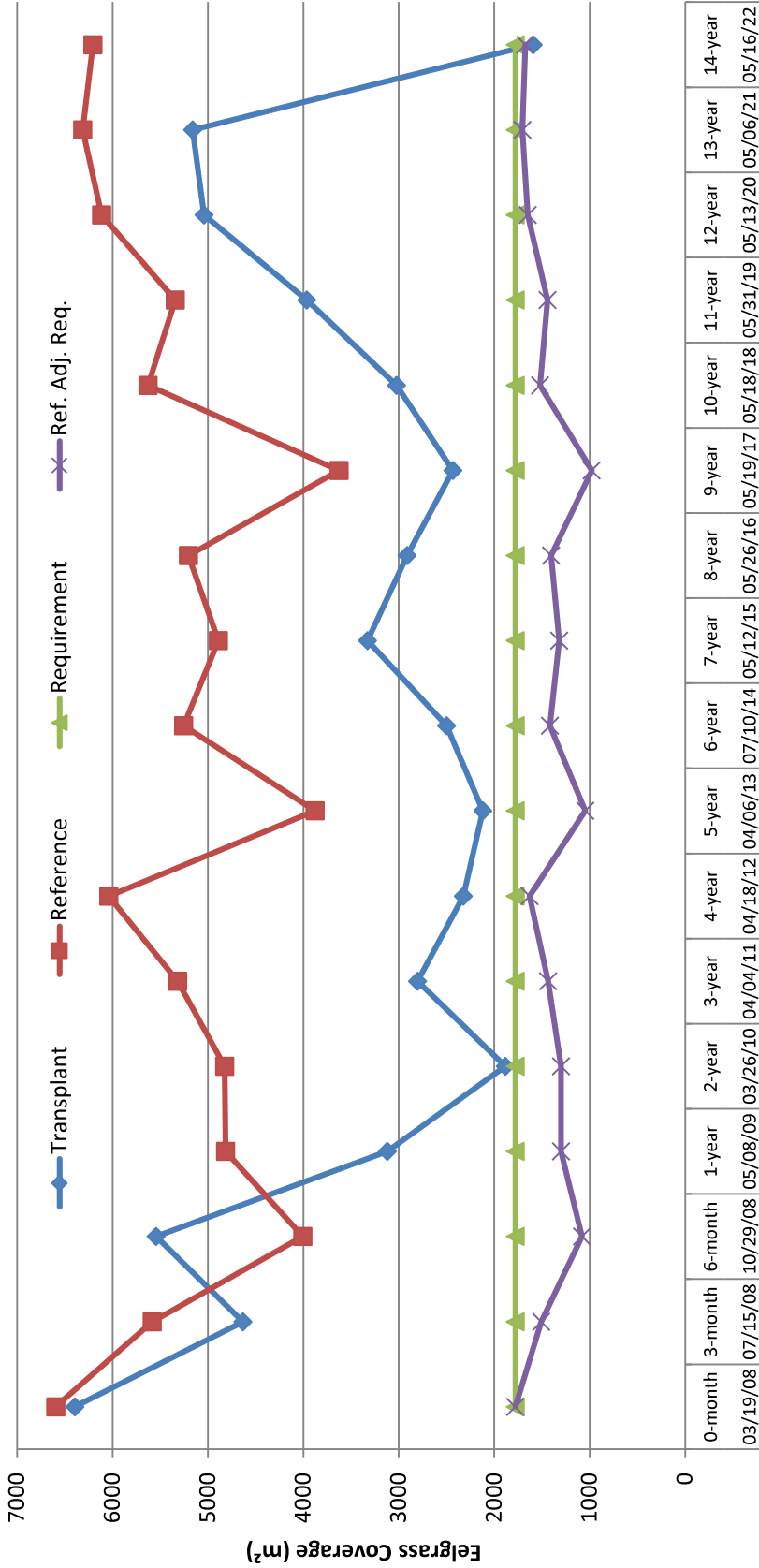


Figure 4. Historical eelgrass coverage at Campbell Shipyard study site relative to the reference area and restoration requirements. Historical data through year 9 adapted from M & A 2017.

Historical Eelgrass Density

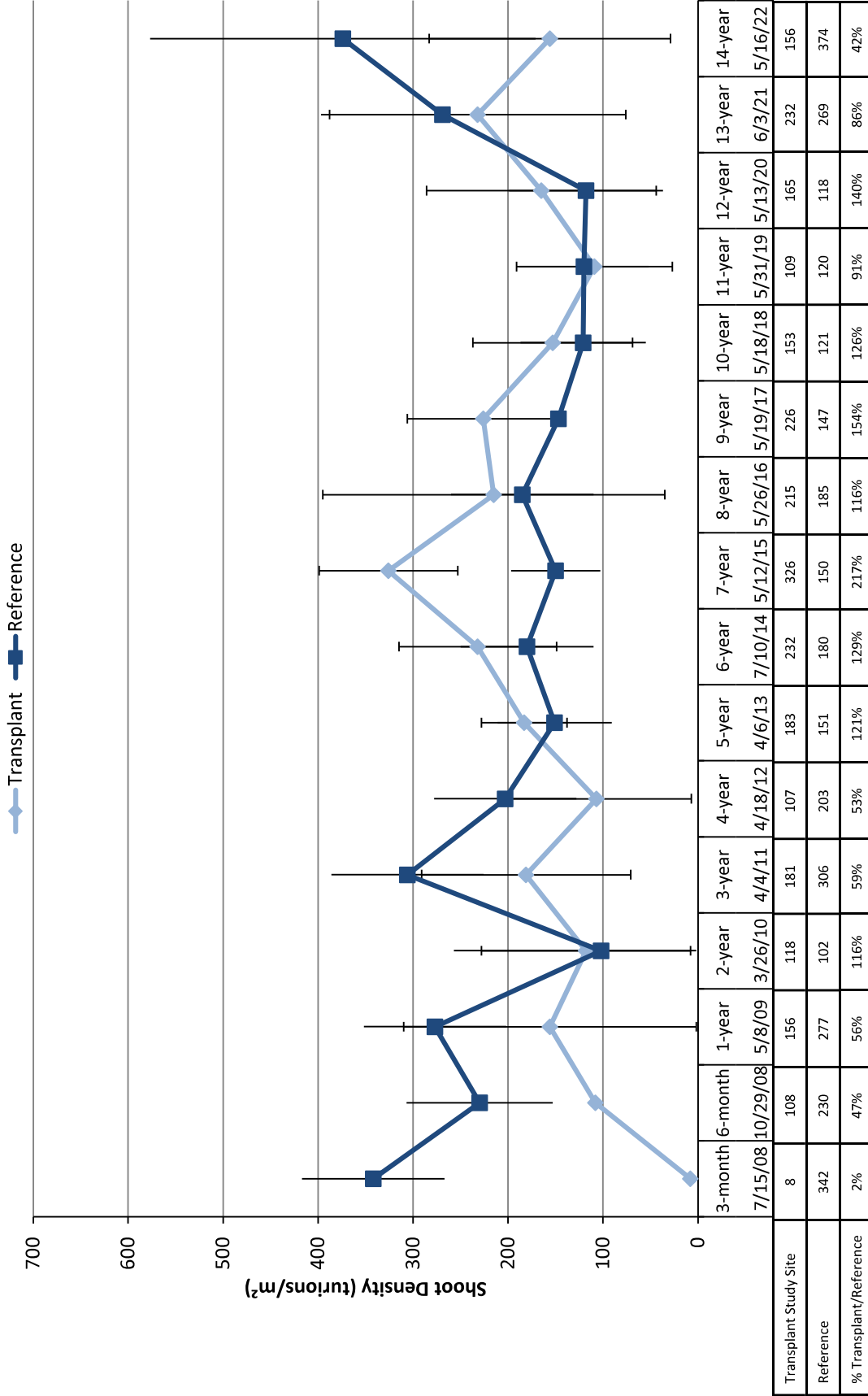


Figure 5. Historical eelgrass shoot density at former Campbell Shipyard study site relative to the reference area. Historical data through year 9 adapted from M&A 2017.



4 Discussion

The year-14 post-transplant survey was conducted to evaluate the current condition of eelgrass within the eelgrass transplant site at the former Campbell Shipyard. The monitoring results show that eelgrass cover has recently declined. The eelgrass cover across the study site and reference area decreased relative to the year-13 monitoring effort. This would tend to indicate that environmental conditions for promoting eelgrass growth were not present from the year-13 to year-14 at the areas surveyed. However, declines in eelgrass within the reference area were minor and may be a result of natural variation and mapping error. The decline in eelgrass coverage was high in the study site, likely due to competition with *Gracilaria*.

Decreasing coverage by eelgrass at the study site resulted from two primary observations. First, *Gracilaria* appears to have colonized portions of the study site previously mapped as eelgrass and bare sand (MTS 2018, MTS 2019, MTS 2020). Second, during prior monitoring it was noted that the historical boundary for the study site did not capture eelgrass growth along the northwest portion of the habitat cap. In year-12 and year-13 this excess eelgrass was included. During this year's survey eelgrass was not present within the expanded survey boundary. While eelgrass declined throughout the study site, the additional eelgrass included during the year-12 and year-13 monitoring effort results in a relatively greater decrease in eelgrass coverage due to the recent expansion of the area included as part of the survey effort.

The minimal change observed across the reference area illustrates the relative stability of eelgrass beds at the reference area. The reference area appears to be within a depth range that is suitable for eelgrass and in an area that is stable with regards to eelgrass growth. There is little available space for eelgrass cover to expand within the reference area and so little ability to assess whether there were large-scale increases in eelgrass cover in the region.

Eelgrass decline was not proportionate between the study site and reference area. Eelgrass cover declined by 70.8% at the study site and by 1.9% in the reference area. Within the study site there were larger portions of the transect composed of *Gracilaria* and a mixture of eelgrass with *Gracilaria*. The amount of transect composed only of eelgrass was lower than was previously observed in 2021 (MTS 2021). This may indicate that eelgrass was able to expand for a few years when *Gracilaria* was present at low density (MTS 2018, 2019, 2020, 2021). However, dense growth of *Gracilaria* appears to have impacts the growth of eelgrass.

It should also be noted that *Gracilaria* removal efforts were performed in 2016 and 2017. The removal efforts were specifically implemented to help reduce the competitive pressure on eelgrass. Those efforts may be responsible for the recovery of eelgrass coverage that appears to have occurred between 2018 and 2021. A reduction of *Gracilaria* will likely be necessary either by natural processes or by intervention for eelgrass cover to increase.

The results of this survey show that eelgrass has declined significantly within the study site while substantial eelgrass resources remain within the reference area. The patterns of eelgrass occurrence observed within the study site are somewhat consistent with mapping efforts performed in 2018 (MTS 2018). However, in this year's mapping effort eelgrass was patchier and eelgrass co-occurred more frequently with *Gracilaria* relative to historical observations.

The 1,592 square meters (0.39 acre) of eelgrass within the mitigation site falls below the 1,780 square meters (0.44 acre) mitigation goal by 188 square meters (0.05 acre). Adjusting the mitigation goal by the proportion of current reference area eelgrass cover relative to reference area cover at the beginning of the monitoring program means the adjusted requirement is 1,674 square meters (0.41 acre). Considering

this adjustment for eelgrass performance at the reference area, there remains an eelgrass deficit of 82 square meters (0.02 acre) of adjusted eelgrass. This means there are no available eelgrass credits that can be used as a mitigation bank to offset future eelgrass impacts within San Diego Bay.

5 Literature Cited

Merkel & Associates, Inc. [M&A]. 2008. Post Transplant Report for the Former Campbell Shipyard Habitat Cap and Eelgrass Restoration Site. Prepared for San Diego Unified Port District, April 2008.

Merkel & Associates, Inc. [M&A]. 2017. 108-Month Post Eelgrass Transplant Report for the Former Campbell Shipyard Habitat Cap And Eelgrass Restoration Site. Prepared for San Diego Unified Port District, June 2017.

Marine Taxonomic Services, Ltd. [MTS]. 2018. Year 10 Monitoring of Eelgrass Resources at the Former Campbell Shipyard Eelgrass Restoration Site, San Diego, California

Marine Taxonomic Services, Ltd. [MTS]. 2019. Year 11 Monitoring of Eelgrass Resources at the Former Campbell Shipyard Eelgrass Restoration Site, San Diego, California

Marine Taxonomic Services, Ltd. [MTS]. 2020. Year 12 Monitoring of Eelgrass Resources at the Former Campbell Shipyard Eelgrass Restoration Site, San Diego, California

Marine Taxonomic Services, Ltd. [MTS]. 2021. Year 13 Monitoring of Eelgrass Resources at the Former Campbell Shipyard Eelgrass Restoration Site, San Diego, California

Appendix A: Southern California Eelgrass Mitigation Policy Monitoring and Compliance Reporting Summary

Southern California Eelgrass Mitigation Policy Monitoring and Compliance Reporting Summary

PERMIT DATA:

Permit (Type, Number)	Issuance Date	Expiration Date	Agency Contact
ACOE:199915203-JLB	11/5/2004	10/28/2009	Joshua L. Burnham
CDP:			
Other:			

EELGRASS IMPACT AND MITIGATION REQUIREMENT SUMMARY:

Permitted Eelgrass Impact Estimate	1,483 (m ²)	
Actual Eelgrass Impact	1,483 (m ²)	No post-con survey performed - all eelgrass lost
Eelgrass Mitigation Requirement	1,780 (m ²)	Mitigation plan is M&A 2004
Impact Site Location	Former Campbell Shipyard, Port of San Diego	
Impact Site Center Coordinates	UTM11 N, WGS84 484959 E, 3618377 N	
Mitigation Site Location	Former Campbell Shipyard Habitat Cap	
Mitigation Site Center Coordinates	UTM11 N, WGS84 484959 E, 3618377 N	

PERMITTEE CONTACT INFORMATION:

Project Name	Former Campbell Shipyard Sediment Remediation and Aquatic Enhancement
Permittee Information	Port of San Diego
	P.O. Box 120488, Phone: 619.686.6254
	San Diego, CA 92112
	Eileen Maher
	619.686.6254, emaher@portofsandiego.org
Mitigation Consultant	Keith W. Merkel, Merkel & Associates, Inc. 858.560.5465, kmerkelmerkelinc.com

PROJECT ACTIVITY DATA:

Activity	Start Date	End Date	Reference info.
Eelgrass Impact	10/31/2005	12/17/2007	Kristine Kam, Port of San Diego
Installation of Eelgrass Mitigation		3/19/2008	M&A 2008
Initiation of Mitigation Monitoring	3/19/2008	3/19/2013	M&A 2008

MITIGATION STATUS DATA:

Mitigation Milestone Requirement	Scheduled Survey	Survey Date	Area (m ²)	Density (turions/m ²)	Reference Info
			1,780		
0-month	March 2008	3/19/2008		5	M&A 2008
3-month	July 2008	7/15/2008	4,633	8(approx.)	M&A 2008
6-month	October 2008	10/20/2008	5,544	108	M&A 2008
9-month	January 2009	1/30/2009	4,978	95	M&A 2009
12-month	April 2009	3/13/2009	3,122	156	M&A 2009
24-month	April 2010	3/26/2010	1,885	118	M&A 2010
36-month	April 2011	4/4/2011	2,803	181	M&A 2011
48-month	April 2012	4/18/2012	2,325	107	M&A 2012
60-month	April 2013	4/6/2013	2,121	183	M&A 2013
72-month	July 2014	7/10/2014	2,498	232	M&A 2014
84-month	April 2015	5/12/2015	3,329	325	M&A 2015
96-month	May 2016	5/26/2016	2,912	215	M&A 2016
108-month	May 2017	5/25/2017	2,432	226	M&A 2017
120-month	May 2018	5/18/2018	3,024	153	MTS 2018
132-month	May 2019	5/28/2019	3,966	109	MTS 2019
144-month	May 2020	5/5/2020	5,040	165	MTS 2020
156-month	May 2021	5/6/2021	5,162	232	MTS 2021
168-month	May 2022	5/16/2022	1,592	156	MTS 2022

Final Assessment:

Was mitigation met?	No
Were mitigation and monitoring performed timely?	Yes
Was delay penalty required or were supplemental mitigation programs necessary?	NA

APPENDIX C **EXHIBIT G - CAULERPA CONTROL PROTOCOL****CAULERPA CONTROL PROTOCOL**

(Version 5 – October 20, 2021)

A. Background Information:

The genus *Caulerpa* comprises a group of green algae with a wide global distribution throughout the marine realm. Although primarily found in shallow tropical and subtropical waters, some species can inhabit brackish lagoons. *Caulerpa* species possess unique characteristics that enable them to withstand a broad range of environmental conditions and give them great invasive potential. Recognizing the threat posed by *Caulerpa* species, the Aquatic Nuisance Species Task Force¹ developed the “National Management Plan for the Genus *Caulerpa*.” This National Management Plan contains specific goals to address *Caulerpa* at the genus level, including preventing the introduction and spread of *Caulerpa* and eradicating populations in U.S. waters where they are not native.

There are no *Caulerpa* species native to California. Therefore, *Caulerpa* species pose a substantial threat to marine ecosystems in California, particularly to the extensive eelgrass meadows and other benthic environments that make coastal waters such a rich and productive environment. The eelgrass beds and other coastal resources that could be impacted by an invasion of *Caulerpa* are part of a food web that is critical to the survival of numerous native marine species including those of commercial and recreational importance.

Infestations from two *Caulerpa* species, *C. taxifolia* and *C. prolifera*, have been detected in California. Both species can rapidly colonize new areas from small fragments and have the potential to cause substantial negative impacts on native ecosystems. For instance, a particularly cold tolerant clone (tolerant of temperatures at least as low as 10 °C for a period of three months) of *C. taxifolia* has proven to be highly invasive in areas of the Mediterranean Sea, and efforts to control its spread have been unsuccessful. In areas where the species has become well established, it has caused ecological and economic devastation by overgrowing and eliminating native seaweeds, seagrasses, reefs, and other communities. *C. taxifolia* had previously been detected in 2000, but was eradicated in two locations in southern California. Another *Caulerpa* species detected in California, *C. prolifera*, can grow at least as deep as 50 meters and appears more tolerant of low light environments than most other macroalgae. In some areas, especially the Mediterranean Sea, seagrass meadows have been impacted, and even replaced, by *Caulerpa* species, including *C. prolifera*, which can have ecosystem scale implications. In March 2021, *C. prolifera* was discovered in Newport Bay, California. In response, the Southern California *Caulerpa* Action Team reconvened and implemented eradication efforts shortly thereafter, and those efforts are ongoing. Other infestations of *Caulerpa* species may also exist but remain undetected.

¹ The Aquatic Nuisance Species Task Force (ANSTF) is an intergovernmental body responsible for coordination of national efforts to prevent the introduction and spread of aquatic invasive species. Co-chaired by the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration, the ANSTF is composed of 13 Federal and 15 ex-officio members.

In September 2001, Assembly Bill 1334 was enacted by the State of California banning the transport, sale, and possession of nine potentially invasive species of *Caulerpa*, including *C. taxifolia*, *C. mexicana*, *C. racemosa*, *C. cupressoides*, *C. sertularioides*, *C. ashmeadii*, *C. floridana*, *C. scalpelliformis*, and *C. verticillata*. There was no evidence that *C. prolifera*, a popular saltwater aquarium plant, was potentially invasive in California at the time and it was not included in this list. However, new information, including the discovery of a *C. prolifera* infestation in Newport Bay, demonstrates that it, and all species in the genus *Caulerpa*, should be considered potentially invasive.

In order to detect existing infestations as well as avoid the spread of these invasive species within other systems, the following provisions have been established for California nearshore coastal and enclosed bays, estuaries, and harbors from Morro Bay to the U.S./Mexican border. This protocol outlines the certification, survey, and reporting guidelines required when surveying for all *Caulerpa* species with the exception of those exempted areas listed in Section G.

B. Definitions:

Bottom Disturbing Activity – a work activity (e.g., bulkhead repair, pile driving, dredging, placement of navigation aids, research) initiated by a permit holder which could fragment or disseminate *Caulerpa*.

Area of Potential Effect (APE) – the area surrounding an authorized project site that could be affected by a Bottom Disturbing Activity related to the implementation of the project work. This includes the project footprint, areas where equipment is stored or moored, areas where vessel prop-wash could occur in association with work, or in-water disposal areas used by the project. It does not include U.S. Environmental Protection Agency (EPA) designated deep-ocean disposal sites.

High Growth Period – March 1 to October 31.

Infected System – any bay, harbor, estuary, lagoon, or ecological unit in which *Caulerpa* has been identified, regardless of where the infestation occurs geographically within the system, unless determined otherwise by NOAA's National Marine Fisheries Service (NOAA Fisheries) and California Department of Fish and Wildlife (CDFW). Following eradication and subsequent verification surveillance for at least two High Growth Periods, an Infected System may be re-designated as a "*Caulerpa*-Free System" by NOAA Fisheries and CDFW. Prior infected systems where eradication was successfully completed include:

Agua Hedionda Lagoon

Huntington Harbour (including Seal Beach Weapons Station/National Wildlife Refuge and Anaheim Bay)

Current infected systems are:

Newport Bay

NOAA Fisheries/CDFW Contacts – the designated federal and state agency contacts for submittal of survey reports and reports of *Caulerpa* findings. All submitted material must be provided to these agencies at the following addresses:

**National Marine Fisheries Service
West Coast Regional Office**
501 West Ocean Boulevard, Suite 4200
Long Beach, CA 90802
Attn: Bryant Chesney
ph.: (562) 980-4037
fx.: (562) 980-4092
e-mail: nmfs.wcr.caulerpa@noaa.gov

**Calif. Dept. of Fish & Wildlife
Marine Region**
3883 Ruffin Rd.
San Diego, CA 92123
Attn: Christopher Potter
ph: (415) 740-9869
e-mail: Caulerpa@wildlife.ca.gov

Survey Area – the area over which surveys are conducted, typically synonymous with the Area of Potential Effect.

Survey Level – the level of intensity of the survey within the survey area. Survey levels are defined as either:

- 1) *Surveillance Level* – General survey coverage providing a systematic sub-sampling of the entire APE during which at least 20% of the bottom is inspected and widespread occurrences of *Caulerpa* would be expected to be identified if present. Surveys may be accomplished using diver transects, remote cameras, and acoustic surveys with visual ground truthing. Other proposed methods may be approved on a case-by-case basis by NOAA Fisheries and CDFW.
- 2) *High Intensity Level* – More intensive survey using a systematic sub-sampling of the entire APE during which at least 50% of the bottom is inspected. Surveys may be accomplished using diver or remote camera transects. Other proposed methods may be approved on a case-by-case basis by NOAA Fisheries and CDFW.
- 3) *Eradication Level* – This is the most intensive survey using a systematic and comprehensive survey of the entire APE during which 100% of the bottom is inspected. Surveys must be accomplished using divers moving at a rate appropriate to the site conditions to ensure that all areas are comprehensively searched irrespective of site conditions which may complicate surveys. Other proposed methods may be approved on a case-by-case basis by NOAA Fisheries and CDFW.

Surveyors – Individuals conducting *Caulerpa* surveys must be certified by NOAA Fisheries or CDFW. That certification shall consist of passing an exam demonstrating their ability to identify all *Caulerpa* species. Upon successfully passing that exam, individuals shall be certified for a set two-year period. Recertification may be completed up to 120 days prior to expiration of current certification. Any individual who fails the exam may retake the exam once within a six month period.

C. Reporting Requirements:

1. Surveys conducted in accordance with requirements outlined in this document shall be submitted to the NOAA Fisheries/CDFW Contacts within 15 calendar days of completion of each survey. Surveys shall be completed by certified *Caulerpa* surveyors and submitted on the attached survey form or in a suitable reproduction of the form fields.
2. If *Caulerpa* is identified at an authorized project site during a survey or at any other time prior, during, or after completion of authorized activities, the NOAA Fisheries/CDFW Contacts shall be contacted within 24 hours of first noting the occurrence.
3. For surveys that will be conducted within an Infected System or for actions requiring input from NOAA Fisheries/CDFW contacts, please provide information in a timely fashion and allow at least 5 working days for agency coordination and feedback.
4. Eradication Level survey reports require NOAA Fisheries/CDFW approval prior to conducting any authorized Bottom Disturbing Activity.

D. Surveys within *Caulerpa*-Free System:

The following survey conditions shall apply to any authorized Bottom Disturbing Activity within *Caulerpa*-Free Systems.

1. Prior to initiation of any authorized Bottom Disturbing Activity, a pre-construction survey of the project APE shall be conducted to determine the presence or absence of *Caulerpa*. This survey shall be conducted at a Surveillance Level. Survey work shall be completed not earlier than 90 days prior to the Bottom Disturbing Activity and not later than 30 days prior to the Bottom Disturbing Activity and shall be completed, to the extent feasible, during the high growth period of March 1 – October 31. Surveys outside of the high growth period shall be allowed on a case-by-case basis by the appropriate regulatory agency in consultation with NOAA Fisheries and CDFW.
2. In the event that *Caulerpa* is detected, the Bottom Disturbing Activity shall not be conducted until such time as the infestation has been isolated, treated or the risk of spread from the proposed Bottom Disturbing Activity is eliminated in accordance with section F.
3. Exemptions – Individual, privately owned boat docks and related structures are exempt from provisions 1 and 2 of this section when such facilities are found in *Caulerpa*-Free Systems and authorized activities are limited to structural repairs, replacement, modification, and pile driving and do not include dredging or other significant Bottom Disturbing Activities.

E. Surveys within Infected Systems:

The following survey conditions shall apply to any authorized Bottom Disturbing Activity within Infected Systems.

1. Prior to initiation of any authorized Bottom Disturbing Activity within an Infected System, two surveys, initiated not less than 60 days apart, shall be conducted within the project APE. The first survey shall be conducted using High Intensity Level techniques and the second survey shall be conducted using Eradication Area Level techniques. Both surveys shall be conducted within the same High Growth Period. Deviations from this condition may be considered on a case-by-case basis by the appropriate regulatory agency in consultation with NOAA Fisheries and CDFW.
2. At least one survey shall be conducted within 45 days of initiation of an authorized Bottom Disturbing Activity (a "Pre-Act Survey"). This survey could be the second (Eradication Area Level) survey conducted during the High Growth Period. However, project delays may require that a third survey be conducted prior to initiation of the Bottom Disturbing Activity in order to meet this 45-day requirement. If a third survey is required, this survey shall be conducted at either a High Intensity Level or Eradication Area Level as determined by the NOAA Fisheries/CDFW Contacts based upon site circumstances and proximity to infestations. To determine appropriate survey level, please contact the NOAA Fisheries/CDFW Contacts with project specific information.
3. If the Bottom Disturbing Activity extends for over 90 calendar days, the portions of the APE that would be expected to be impacted by a Bottom Disturbing Activity within the subsequent 90 days must be re-surveyed at a High Intensity Level. This subsequent survey must be conducted within 15 days following the first 90 days. Prolonged activities would require a repetition of this phased survey requirement.
4. If dredged material is removed from the APE and placed elsewhere in the marine environment, then between 60 and 120 days after placement of the dredged materials and, to the extent feasible, during the High Growth Period, the applicant shall conduct a Surveillance Level survey at all disposal areas except where material is disposed of within an existing U.S. EPA designated deep ocean disposal site. Deviations from this condition may be considered on a case-by-case basis by the appropriate regulatory agency in consultation with NOAA Fisheries and CDFW.

F. If *Caulerpa* is Found:

1. If *Caulerpa* is found, then the NOAA Fisheries/CDFW Contacts shall be notified within 24 hours of the discovery.

2. All *Caulerpa* assessment and treatment shall be conducted under the auspices of the CDFW and NOAA Fisheries as the state and federal lead agencies for implementation of *Caulerpa* eradication in California.
3. Within seven days of notification, NOAA Fisheries and CDFW will coordinate with the SCCAT and relevant permitting and resource agencies (and project proponent, as warranted) to fully document the extent of the *Caulerpa* infestation within the project APE. *Caulerpa* eradication activities, which are subject to review and approval by NOAA Fisheries and CDFW, in coordination with the SCCAT and relevant permitting and resource agencies, shall be undertaken using the best available technologies at the time and will depend upon the specific circumstances of the infestation. This activity may include in situ treatment using contained chlorine applications, mechanical removal, or other appropriate methods. The eradication technique is subject to change at the discretion of NOAA Fisheries and CDFW and as technologies are refined.
4. The efficacy of treatment shall be determined prior to proceeding with authorized bottom disturbing activities. To determine effectiveness of the treatment efforts, a written Survey Plan shall be prepared. The plan shall be developed in conjunction with the CDFW and NOAA Fisheries and shall be approved by these agencies prior to implementation.
5. This policy does not vacate any additional restrictions on the handling, transport, or disposal of *Caulerpa* that may apply at the time of permit issuance or in the future. It is incumbent upon the permittee to comply with any other applicable State or Federal regulations, restrictions, or changes to the Protocol that may be in effect at the time of initiation of authorized activities.

G. Exempted Areas and Activities from the Requirements of Sections B-D.

1. The Channel Islands off of southern California including all areas of Anacapa, San Miguel, Santa Cruz, Santa Rosa, San Clemente, San Nicolas, and Santa Barbara Islands. The exempted area also applies to all of Santa Catalina with the exception of the Avalon and Two Harbors areas.
2. Pile driving activities by the U.S. Navy in San Diego Bay and Ports of Los Angeles, Long Beach, and San Diego.