

SOLE SOURCE SERVICE CONTRACT

Scripps Institution of Oceanography Development and Operation of an Upgraded Real-Time Ocean Acidification and Hypoxia Mooring

THIS SOLE SOURCE SERVICE CONTRACT (hereinafter referred to as "Contract") is made and entered into as of the date fully executed below, by and between Orange County Sanitation District with a principal place of business at 18480 Bandilier Circle, Fountain Valley, CA 92708 (hereinafter referred to as "OC San") and The Regents of the University of California on behalf of its San Diego campus's Scripps Institution of Oceanography with a principal place of business at 9500 Gilman Drive, La Jolla, CA 92093-0210 (hereinafter referred to as "University") collectively referred to as the "Parties".

WITNESSETH

WHEREAS, OC San desires to obtain the services of University to provide a real-time mooring to monitor the ocean acidification and hypoxia (OAH) state of the nearshore waters on the San Pedro Shelf ("Services"); and

WHEREAS, on May 28, 2025, OC San's Board of Directors, by minute order, authorized execution of this Agreement.

WHEREAS, University is qualified by virtue of experience, training, and education and expertise to accomplish such Services.

NOW THEREFORE, in consideration of the promises and mutual benefits exchanged between the Parties, it is mutually agreed as follows:

1. Introduction

1.1 This Contract and all exhibits hereto (called the "Contract") is made by OC San and University.

1.2 The following exhibits, in order of precedence, are incorporated by reference and made part of this Agreement.

Exhibit "A" – Scope of Work
Exhibit "B" – Not used
Exhibit "C" – Not used
Exhibit "D" – Contractor Safety Standards
Exhibit "E" – Human Resources Policies

1.3 In the event of any conflict or inconsistency between the provisions of this Contract and any of the provisions of the exhibits hereto, the provisions of this Contract shall in all respects govern and control.

1.4 The provisions of this Contract may be amended or waived only by a writing executed by authorized representatives of both Parties hereto.

1.5 The various headings in this Contract are inserted for convenience only and shall not affect the meaning or interpretation of this Contract or any Paragraph or provision hereof

1.6 The term “days”, when used in the Contract, shall mean calendar days, unless otherwise noted as business days.

1.7 OC San holidays (non-working days) are as follows: New Year’s Day, Martin Luther King Jr. Day, Presidents’ Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Day after Thanksgiving, Christmas Eve, and Christmas Day.

1.8 University shall provide OC San with all required premiums and/or overtime work at no charge beyond the price provided under “Compensation” below.

1.9 Except as expressly provided otherwise, OC San accepts no liability for any expenses, losses, or action incurred or undertaken by University as a result of work performed in anticipation of purchases of said services by OC San.

2. Compensation

2.1 Compensation to be paid by OC San to University for Services provided under this contract shall be a total amount not to exceed Two Hundred Ninety Thousand Dollars (\$290,000.00).

2.2 If OC San elects to renew the Contract for three (3) optional one-year renewals, it shall not exceed \$130,000.00 for each renewal.

3. Payments

Payments shall be made upon approval by OC San Project Manager or designee, of invoices submitted for services completed as described in Exhibit “A”. OC San, at its reasonable sole discretion, shall be the determining party as to whether the services have been satisfactorily completed.

4. Invoices

4.1 University shall invoice OC San upon completion of the services as described in Exhibit “A”.

4.2 OC San shall pay within 30 days of completion and receipt and approval by OC San Project Manager of an invoice, submitted in a form consistent with University’s standard procedures including a certification that all costs are required by the work statement and are allowable under federal and state regulations.

4.3 Invoices shall be emailed by University to OC San Accounts Payable at APStaff@OCSAN.gov and reference the following in the subject line: “INVOICE”, the Purchase Order number, the Project Manager and Contract SIO OAH.

5. California Department of Industrial Relations Registration and Record of Wages

5.1 To the extent University’s employees and/or its subconsultants perform work related to this Contract for which Prevailing Wage Determinations have been issued by the California Department of Industrial Relations (DIR) as more specifically defined under Labor Code section 1720 et seq., prevailing wages are required to be paid for applicable work under this Contract. It is University’s responsibility to interpret and implement any prevailing wage requirements and University agrees to pay any penalty or civil damages resulting from a violation of the prevailing wage laws.

5.2 University and its subconsultants shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4(a)(1), the work is subject to

compliance monitoring and enforcement by the California Department of Industrial Relations (DIR).

5.3 Pursuant to Labor Code section 1773.2, a copy of the prevailing rate of per diem wages is available upon request at OC San's principal office. The prevailing rate of per diem wages may also be found at the DIR website for prevailing wage determinations at <http://www.dir.ca.gov/DLSR/PWD>

5.4 University and its subconsultants shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e). Pursuant to Labor Code sections 1773.2 and 1771.4(a)(2), University shall post a copy of the prevailing rate of per diem wages at the job site.

5.5 University and its subconsultants shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776. University and its subconsultants shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Pursuant to Labor Code section 1776, the University and its subconsultants shall furnish a copy of all certified payroll records to OC San and/or the general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement of the Department of Industrial Relations. Pursuant to Labor Code section 1776(h), penalties for non-compliance with a request for payroll records may be deducted from progress payments.

5.5.1 As a condition to receiving payments, University agrees to present to OC San, along with any request for payment, all applicable and necessary certified payrolls and other required documents for the period covering such payment request. Pursuant to Title 8, California Code of Regulations section 16463, OC San shall withhold any portion of a payment, up to and including the entire payment amount, until certified payroll forms and any other required documents are properly submitted. In the event certified payroll forms do not comply with the requirements of Labor Code section 1776, OC San may continue to withhold sufficient funds to cover estimated wages and penalties under the Contract.

5.5.2 The University and its subconsultants shall comply with Labor Code section 1774 and section 1775. Pursuant to Labor Code section 1775, the University and any of its subconsultants shall forfeit to OC San a penalty of not more than two hundred dollars (\$200) for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the DIR for the work or craft in which the worker is employed for any work.

5.5.3 In addition to the penalty and pursuant to Labor Code section 1775, the difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the University or its subconsultant.

5.6 University and its subconsultants shall comply with Labor Code sections 1810 through 1815. University and its subconsultants shall restrict working hours to eight (8) hours per day and forty (40) hours per week, except that work performed in excess of those limits shall be permitted upon compensation for all excess hours worked at not less than one and one-half (1.5) times the basic rate of pay, as provided in Labor Code section 1815. The University shall forfeit, as a penalty to OC San, twenty-five dollars (\$25) per worker per calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week in violation of Labor Code sections 1810 through 1815.

5.7 University and its subconsultants shall comply with Labor Code sections 1777.5, 1777.6, and 1777.7 concerning the employment of apprentices by University or any subconsultant.

5.8 University shall include, at a minimum, a copy of the following provisions in any contract it enters into with any subconsultant: Labor Code sections 1771, 1771.1, 1775, 1776, 1777.5, 1810, 1813, 1815, 1860, and 1861.

5.9 Pursuant to Labor Code sections 1860 and 3700, the University and its subconsultants will be required to secure the payment of compensation to employees. Pursuant to Labor Code section 1861, University, by accepting this Contract, certifies that:

“I am aware of the provisions of section 3700 of the Labor Code which require every employer to be insured against liability for workers’ compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.”

University shall ensure that all its contracts with its subconsultants provide the provision above.

6. Audit Rights University agrees that, during the term of this Contract and for a period of three (3) years after its termination, OC San shall have access to and the right to examine any directly pertinent books, documents, and records of University relating to the invoices submitted by University pursuant to this Contract.

7. Scope of Work Subject to the terms of this Contract, University shall perform the Services identified in Exhibit “A”. University shall perform said Services in accordance with generally accepted academic and professional standards.

8. Modifications to Scope of Work Requests for modifications to the Scope of Work hereunder can be made by OC San at any time. All modifications must be made in writing and signed by both Parties.

9. Contract Term

9.1 The Services to be provided by University under this Contract shall commence on July 1, 2025 (Effective Date), and be completed by June 30, 2026.

9.2 Renewals. At its sole discretion, OC San may exercise the option to renew this Contract for an additional three (3) one-year period as defined in Exhibit “A”. This Contract may be renewed by an OC San Purchase Order. OC San shall have no obligation to renew the Contract nor to give a reason if it elects not to renew it.

9.3 Extensions. The term of this Contract may be extended only by an amendment signed by both Parties.

10. Termination

10.1 Either Party may terminate this Contract for its convenience, with or without cause, in whole or in part, at any time, by written notice to the other Party (delivered by certified mail, return receipt requested) of intent to terminate. Upon receipt of a termination notice from OC San, University shall promptly discontinue all work under this Contract. OC San shall thereafter, within thirty (30) days, pay University for work performed (cost and fee) to the date of termination and any uncancellable obligations incurred prior to receiving the written notice of termination. University expressly waives any claim to receive anticipated profits to be earned during the uncompleted portion of this Contract.

10.2 OC San may also immediately cancel for default of this Contract in whole or in part by written notice to University:

- if University becomes insolvent or files a petition under the Bankruptcy Act; or
- if University sells its business; or
- if University breaches any of the terms of this Contract; or
- if total amount of compensation exceeds the amount authorized under this Contract; or
- if OC San determines that University is not meeting specification requirements.

10.3 All OC San property in the possession or control of University shall be returned by University to OC San upon demand, or at the termination of this Contract, whichever occurs first.

11. Insurance University is a self-insured public entity. University shall maintain, throughout the life of this Contract and any periods of warranty or extensions, self-insurance in amounts sufficient to fulfill its obligations under this Contract. Failure to maintain required self-insurance coverage shall result in termination of this Contract.

12. Confidentiality and Non-Disclosure

12.1 University acknowledges that in performing the Services hereunder, OC San may have to disclose to University orally and in writing certain confidential information that OC San considers proprietary and has developed at great expense and effort.

12.2 University agrees to maintain in confidence and not disclose to any person, firm, or corporation, without OC San's prior written consent, any confidential information of OC San.

12.3 University further agrees to maintain in confidence and not to disclose to any person, firm, or corporation any deliverable data, information, technology, or material developed or obtained by University during the term of this Contract.

12.4 It is agreed that OC San shall disclose only information necessary to the work and, if any such information is considered confidential, it shall be clearly marked "Confidential Information" and sent by OC San in writing only to the University's technical lead or, if orally disclosed, reduced to writing by OC San within thirty (30) days of disclosure (hereinafter "Confidential Information"). University shall inform the technical lead that for a period of two years from the end of the Contract, Confidential Information shall not be used or disclosed to others, to the extent permitted by law, except in furtherance of this Contract unless Confidential Information: (i) is or shall have been known to the technical lead before his receipt thereof; (ii) is disclosed to the technical lead by a third party; (iii) is required to be disclosed by law; (iv) was independently developed by the University without the benefit of any disclosure from OC San and such independent development can be properly demonstrated by University; or (v) is or shall have become known to the public through no fault of the technical lead.

12.5 University agrees as follows:

- To use the Confidential Information only for the purposes described herein; to not reproduce the Confidential Information; to hold in confidence and protect the Confidential Information from dissemination to and use by anyone not a party to this Contract; and to not use the Confidential Information to benefit itself or others.
- To restrict access to the Confidential Information to its University or personnel of University who (1) have a need to have such access and (2) have been advised of and have agreed to treat such information in accordance with the terms of this Contract.
- To return all Confidential Information in University's possession upon termination of this

Contract or upon OC San's request, whichever occurs first.

12.6 The provisions of this Section shall survive termination or expiration of this Contract and shall continue for two (2) years after the termination or expiration of this Contract.

13. Ownership of Documents All deliverable drawings, specifications, reports, records, documents, memoranda, correspondence, computations, and other materials prepared by University, its employees, and its agents in the performance of this Contract shall be the property of OC San and shall be promptly delivered to OC San upon request of the Project Manager or upon the termination of this Contract, and University shall have no claim for further employment or additional compensation as a result of the exercise by OC San of its full rights of ownership of the deliverable documents and materials hereunder. Any use of such completed documents for other projects and/or use of incomplete documents without specific written authorization by the University will be at OC San's sole risk and without liability to University.

14. Ownership of Intellectual Property

14.1 University agrees that all designs, plans, reports, specifications, drawings, schematics, prototypes, models, and all other information and items delivered to OC San in the performance of the Services (hereinafter referred to as "Deliverables") shall be and are assigned to OC San as its sole and exclusive property. Notwithstanding the foregoing, University shall have the unrestricted right to use such Deliverables for academic purposes consistent with University's mission as an academic and research institution.

14.2 There is not anticipated to be the development of any invention or other intellectual property under this Contract.

14.3 The originals of all Deliverables prepared by University in connection with these Services shall be delivered to and shall become the exclusive property of OC San. OC San may utilize these documents for OC San applications on other projects or extensions of this project, at its own risk.

15. Indemnification and Hold Harmless Provision Each Party agrees to save, indemnify, defend and hold harmless the other Party, its officers, employees and agents against any and all liability, claims, judgments, cost and demands, including demands arising from injuries or death of persons and damage to property, arising directly out of the performance of this Contract but only in proportion to and to the extent such liability, claims, judgments, costs and demands are caused by or result from the negligence or willful misconduct of the indemnifying Party, its employees or agents, in relation to the rendition of Services pursuant to this Contract.

16. Safety Standards and Human Resources (HR) Policies OC San requires all contractors and service providers to follow and ensure their employees follow all State and Federal regulations as well as OC San requirements while working at OC San locations. If during the course of a contract it is discovered that OC San policies, safety manuals, or contracts do not comply with State or Federal regulations then the University is required to follow the most stringent regulatory requirement at no cost to OC San. University and all their employees shall adhere to all applicable OC San Safety Standards and Human Resources Policies attached hereto as Exhibits "D" and "E" respectively, or the University equivalent.

17. Quality Assurance If, within the 12-month period following completion of its Services, OC San informs University that any part of the Services fails to meet the standards required under this Contract, University shall, within the time agreed to by OC San and University, take all such actions as are necessary to correct or complete the noted deficiency(ies) at University's sole expense.

18. Performance The parties acknowledge that it is important to complete the Services in the anticipated period of performance and will make good faith reasonable efforts to do so.

19. Force Majeure Neither party shall be liable for delays caused by accident, flood, acts of God, fire, labor trouble, war, acts of government or any other cause beyond its control, but said party shall use reasonable efforts to minimize the extent of the delay. Work affected by a Force Majeure condition may be rescheduled by mutual consent or may be eliminated from the Contract.

20. Freight (F.O.B. Destination) University assumes full responsibility for all transportation, transportation scheduling, packing, handling, insurance, and other services associated with delivery of all products deemed necessary under this Contract.

21. Familiarity with Work By executing this Contract, University affirms that: 1) it has investigated the work to be performed; 2) it has investigated the site of the work and is aware of all conditions there; and 3) it understands the facilities, difficulties and restrictions of the work under this Contract. Should University discover any latent or unknown conditions materially differing from those inherent in the work or as represented by OC San, it shall immediately inform OC San of this and shall not proceed, except at University's risk, until written instructions are received from OC San.

22. Regulatory Requirements University shall perform all work under this Contract in strict conformance with applicable federal, state, and local regulatory requirements and laws.

23. Licenses, Permits, Ordinances and Regulations University represents and affirms to OC San that it has obtained all licenses, permits, qualification and approvals of whatever nature that are legally required to engage in this work. Any and all fees required by State, County, City and/or municipal laws, codes and/or tariffs that pertain to work performed under the terms of this Contract will be paid by University.

24. Applicable Laws and Regulations University shall comply with all applicable federal, state, and local laws, rules, and regulations. University also agrees to indemnify and hold harmless from any and all damages and liabilities assessed against OC San in proportion to and to the extent such are a result of University's noncompliance therewith. Any permission required by law to be included herein shall be deemed included as a part of this Contract whether or not specifically referenced.

25. South Coast Air Quality Management District's (SCAQMD) Requirements It is University's responsibility that all equipment furnished and installed be in accordance with the latest rules and regulations of the South Coast Air Quality Management District (SCAQMD). All contract work practices, which may have associated emissions such as sandblasting, open field spray painting or demolition of asbestos containing components or structures, shall comply with the appropriate rules and regulations of the SCAQMD.

26. California Air Resources Board Mobile Source Regulations. Contractor and its applicable consultants, subconsultants, and subcontractors shall comply with the following California Air Resources Board Mobile Source Regulations:

- Advanced Clean Fleet (ACF): 13 CCR 2013-2013.4; 13 CCR 2015-2015.6
- Truck & Bus Regulation (T&B): 13 CCR 2025
- Clean Truck Check (CTC): 13 CCR 2195-2199.1
- Off-Road Diesel Amendments (ORD): 13 CCR 2449-2449.2

27. Governing Law This Contract shall be governed by and interpreted under the laws of the State of California in the event any action is brought in connection with this Contract or the performance thereof.

28. Breach The waiver of either party of any breach or violation of, or default under, any provision of this Contract, shall not be deemed a continuing waiver by such party of any other provision or of any subsequent breach or violation of this Contract or default thereunder. Any breach by one party to which the other does not object shall not operate as a waiver of that other party's rights to seek remedies available to it for any subsequent breach.

29. Remedies In addition to other remedies available in law or equity, if the University fails to make delivery of the goods or Services or repudiates its obligations under this Contract, or if OC San rejects the goods or Services or revokes acceptance of the goods or Services, OC San may cancel the Contract.

30. Dispute Resolution

30.1 In the event of a dispute as to the construction or interpretation of this Contract, or any rights or obligations hereunder, the Parties shall use their best efforts to settle the dispute, claim, question, or disagreement. To this effect, they shall consult and negotiate with each other in good faith and recognizing their mutual interests, attempt to reach a just and equitable solution satisfactory to both parties. If they do not reach solution within a period of sixty (60) days, they shall attempt, in good faith, to resolve the dispute by mediation. The Parties shall mutually select a mediator to facilitate the resolution of the dispute. If the Parties are unable to agree on a mediator, the mediation shall be conducted in accordance with the Commercial Mediation Rules of the American Arbitration Agreement, through the alternate dispute resolution procedures of Judicial Arbitration through Mediation Services of Orange County ("JAMS"), or any similar organization or entity conducting an alternate dispute resolution process.

30.2 In the event the Parties are unable to timely resolve the dispute through mediation, the issues in dispute shall be submitted to arbitration pursuant to California Code of Civil Procedure, Part 3, Title 9, Sections 1280 et seq. For such purpose, an agreed arbitrator shall be selected, or in the absence of agreement, each party shall select an arbitrator, and those two arbitrators shall select a third. Discovery may be conducted in connection with the arbitration proceeding pursuant to California Code of Civil Procedure Section 1283.05. The arbitrator, or three arbitrators acting as a board, shall take such evidence and make such investigation as deemed appropriate and shall render a written decision on the matter in question. The arbitrator shall decide each and every dispute in accordance with the laws of the State of California. The arbitrator's decision and award shall be subject to review for errors of fact or law in a California court of competent jurisdiction, with a right of appeal from any judgment issued therein. As an alternative to arbitration, either Party may choose to submit the issues in dispute to a California court of competent jurisdiction.

31. Survival The provisions of this Contract dealing with Payment, Quality Assurance, Indemnity, and Dispute Resolution shall survive termination or expiration of this Contract.

32. Severability If any section, subsection, or provision of this Contract, or any agreement or instrument contemplated hereby, or the application of such section, subsection, or provision is held invalid, the remainder of this Contract or instrument in the application of such section, subsection or provision to persons or circumstances other than those to which it is held invalid, shall not be affected thereby, unless the effect of such invalidity shall be to substantially frustrate the expectations of the Parties.

33. Damage to OC San's Property Any of OC San's property damaged by University in the performance of this Contract will be subject to repair or replacement by University at no cost to OC San. Any University property damaged by the sole negligence of OC San in the performance of this Contract will be subject to repair or replacement by OC San at no cost to University.

34. Disclosure Subject to Section 14.1, University agrees not to disclose, to any third party, deliverable data or information generated from this project without the prior written consent from OC San unless required by law.

35. Independent Contractor The legal relationship between the parties hereto is that of an independent contractor, and nothing herein shall be deemed to make University an OC San employee. During the performance of this Contract, University and its officers, employees, and agents shall act in an independent capacity and shall not act as OC San's officers, employees, or agents. University and its officers, employees, and agents shall obtain no rights to any benefits which accrue to OC San's employees.

36. Use of Name OC San agrees that it will not use the names of University or its employees in any advertisement, press release or publicity with reference to this Contract without the prior written approval of University. University shall have the right to acknowledge OC San's support of the Services performed under this Contract in academic or scientific publications and communications.

37. Limitations upon Subcontracting and Assignment University shall not delegate any duties nor assign any rights under this Contract without the prior written consent of OC San. Any such attempted delegation or assignment shall be void. There shall be no subcontracts under this Contract.

38. Third Party Rights Nothing in this Contract shall be construed to give any rights or benefits to anyone other than OC San and University.

39. Non-Liability of Party Officers and Employees No officer or employee of either party shall be personally liable to the other, or any successor-in-interest, in the event of any default or breach by either party or for any amount which may become due to the other party or to its successor, or for breach of any obligation for the terms of this Contract.

40. Read and Understood By signing this Contract, each party represents that it has read and understood the terms and conditions of the Contract.

41. Conflict of Interest and Reporting University shall comply with its internal conflict of interest procedures as they relate to this Contract.

42. Authority to Execute The persons executing this Contract on behalf of the Parties warrant that they are duly authorized to execute this Contract and that by executing this Contract, the Parties are formally bound.

43. Entire Agreement This Contract constitutes the entire agreement of the Parties and supersedes all prior written or oral and all contemporaneous oral agreements, understandings, and negotiations between the Parties with respect to the subject matter hereof.

44. Notices All notices under this Contract must be in writing. Written notices shall be delivered by personal service or sent by registered or certified mail, postage prepaid, return receipt requested, or by any other overnight delivery service which delivers to the noticed destination and provides proof of delivery to the sender. Rejection or other refusal to accept or

the inability to deliver because of the changed address for which no notice was given as provided hereunder shall be deemed to be receipt of the notice, demand or request sent. All notices shall be effective when first received at the following addresses:

OC San:	Donald Herrera Senior Buyer Orange County Sanitation District 18480 Bandilier Circle Fountain Valley, CA 92708-7018 dherrera@ocsan.gov
University:	Sabrina Bakit Principal Contract & Grant Officer SIO Office of Contracts and Grant Administration Scripps Institution of Oceanography at UC San Diego 9500 Gilman Drive 0210 La Jolla, CA 92093-0210 s2bakit@ucsd.edu

Each party shall provide the other party written notice of any change in address as soon as practicable.

[Intentionally left blank. Signatures follow on the next page.]

IN WITNESS WHEREOF, intending to be legally bound, the Parties hereto have caused this Contract to be signed by the duly authorized representatives.

ORANGE COUNTY SANITATION DISTRICT

Dated: _____

By: _____
Ryan P. Gallagher
Chair, Board of Directors

Dated: _____

By: _____
Kelly A. Lore
Clerk of the Board

Dated: _____

By: _____
Kevin Work
Purchasing & Contracts Manager

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

Dated: _____

By: _____

Print Name and Title of Officer

IG

Exhibit “A”

Scope of Work

Development and Operation of an Upgraded Real-Time Ocean Acidification and Hypoxia Mooring

Background: Orange County Sanitation District (OC San) requires a real-time mooring to monitor the ocean acidification and hypoxia (OAH) state of the nearshore waters on the San Pedro Shelf. This would also complement ongoing observations collected at the nearby Newport Beach Pier. Scripps Institute of Oceanography’s (SIO) Ocean Time Series Group has developed a low-cost mooring system that is easy to deploy and operate in shallow coastal regions, which is ideally suited for OC San’s needs. Since 2023, OC San and SIO have successfully deployed, operated, and maintained a pilot mini-mooring in our coastal monitoring region. OC San is ready to fully implement SIO’s mini-mooring system which requires a backup mini-mooring to eliminate the lag time between deployments and minimize data interruptions.

Purpose: The primary goal of this contract is to develop, build, test and deploy a new version of mini-mooring, adapt its sensors and electronics, and operate it for a total of 4 years. The development effort is concentrated in Year 1, as is the acquisition of a second SeapHOx sensor. Also, there will be 3 total swap outs spaced roughly 6 months apart in Year 1, with the first swap out commencing on contract initiation. In later years there is only routine operation of the system and a swap out every 6-12 months or when needed due to hardware/sensor issues. OC San will provide vessel services for deployments and recoveries. Data will be quality controlled using approved US Integrated Ocean Observing System (IOOS) data quality checking routines and delivered in real-time to the Southern California Coastal Ocean Observing System (SCCOOS) data portal (<https://data.caloos.org>).

Duration/Cost: The total cost for this 4-year contract is NTE \$680,000, which includes NTE \$290,000 in Year 1 (FY 2025-26) to swap the existing mooring with an upgraded SeapHOx sensor and to develop and deploy the new mini-mooring version. The NTE of \$130,000 in Year 2 (FY 2026-27), Year 3 (FY 2027-28), and Year 4 (FY 2028-29) includes the annual 12-month operations and swap outs. The contract will become effective on July 1, 2025.

Scope of Work:

1. Upgrade the existing SeapHOx sensor to the new optode design, and swap for a more robust processor/controller circuit board.
2. Develop, build, and test a new mini-mooring version.
3. Integrate sensors and telemetry into new controller configuration.
4. Acquire a second SeapHOx sensor measuring pH, oxygen concentration, and integrate it into the mooring including real-time data delivery.
5. Carry out testing and on-land “burn-in” to assure proper functioning prior to each deployment.
6. Together with OC San staff, and using a ship provided by OC San, deploy/recover/operate the mini-mooring in approximately 30m water depth.

7. Provide Data Management consisting of:
 - (a) Real-time data retrieval from the mooring.
 - (b) Real-time data QC following at minimum the required IOOS QUARTOD standards.
 - (c) Dissemination of the data to SCCOOS's data portal.
8. Provide technical support for swap-out of mooring components every 6-12 months and provide consumable mini-mooring components that need to be replaced. Have a full swap-out system available routinely at short notice such that the mini-mooring or sensors can be replaced in case of problems.
9. Provide troubleshooting support in case of malfunction of components of the OAH mooring.
10. Provide continued evolution and improvement of the overall system, based on observations and experiences in this and other projects.