



Sweetwater Authority

Notice

Request for Quote No.: S2022-04

For: On-Call Reverse Osmosis Membrane Replacement-
Richard A. Reynolds Groundwater Desalination Facility

Bid Release Date:

March 24, 2022

Question Deadline:

2:00 P.M. on April 7, 2022

Bids Due:

By 2:00 P.M. on April 14, 2022

In the Purchasing Division at:

Sweetwater Authority

744 F Street

Chula Vista, CA 91910

Buyer: Sylvia McCain

Phone (619) 409-6872

Email: Purchasing@sweetwater.org

SWEETWATER AUTHORITY

Sweetwater Authority (Authority) is seeking a vendor to provide brackish water reverse osmosis membranes on an as needed (on-call) basis over a 5-year contract period for the Richard A. Reynolds Groundwater Desalination Facility.

The Authority encourages participation by local, small and/or disadvantaged businesses. Persons or entities submitting a proposal in response to this Request for Quotes (RFQ) are referred to herein as “Vendor”, “Proposer” or “Responder”.

A. BACKGROUND INFORMATION

The Authority was formed in 1977 as a Joint Powers Agency between the City of National City and the South Bay Irrigation District. The Authority serves potable water to a population of approximately 200,000 in the City of National City, the western portion of the City of Chula Vista, and the unincorporated areas of Bonita and Lincoln Acres, in San Diego County, CA. The Authority’s service area covers approximately 36 square miles. The Authority has several sources of water supply including surface water, fresh and brackish groundwater, and raw and treated imported supplies purchased from the San Diego County Water Authority (SDCWA).

Richard A. Reynolds Facility Description

The Authority’s Richard A. Reynolds Groundwater Desalination Facility treats up to 10 MGD of brackish groundwater sourced from 11 production wells that extract groundwater from the San Diego Formation aquifer. Approximately 80% of the feed water is processed by 6 reverse osmosis (RO) trains where it is first treated with 1 ppm of Vitec 1000 scale inhibitor before passing through 5-micron cartridge filtration. The remainder of the plant feed water bypasses the RO and is treated by an iron and manganese removal system before it is blended with the permeate stream for stabilization. Post treatment includes fluoridation, pH adjustment, disinfection with free chlorine, and chloramination prior to entry into the treated water distribution system. A basic process flow schematic of the plant is provided in Figure 1.

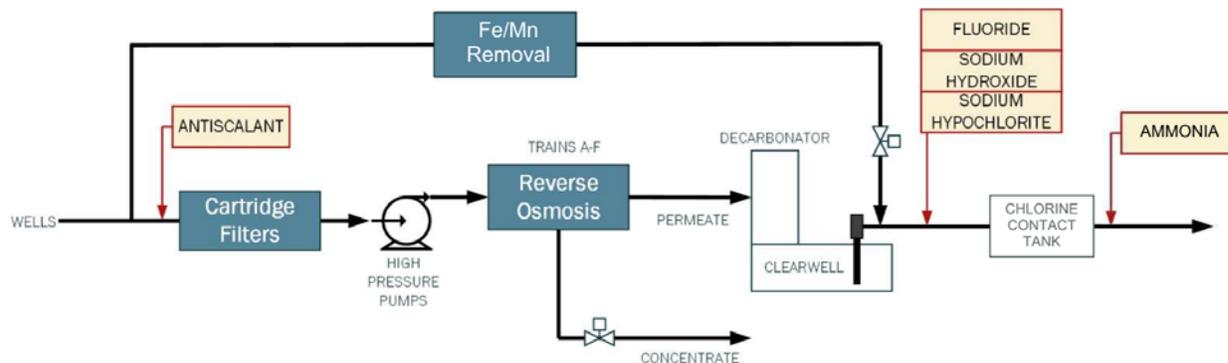


Figure 1. Richard A. Reynolds Groundwater Desalination Facility Process Schematic

The RO system consists of six RO trains labeled Trains A to F. Each train has a dedicated high pressure feed pump equipped with a variable frequency drive (VFD). Trains A to C were part of the original plant that commenced operation in 1999. Trains D to F were added as part of a plant expansion in 2017. All six RO trains have two RO membrane stages. Trains D to F include an interstage turbocharger pressure boost from Fedco. Trains A to C have 20 pressure vessels in the first stage and 10 pressure vessels in the second stage with 7 elements per vessel. The membranes model is Toray TMG20-400C (400 square feet of membrane per element).

Trains D to F have 24 pressure vessels in the first stage and 12 pressure vessels in the second stage with 7 elements per vessel. The membranes model is Toray TMG20-440 (440 square feet of membrane per element). The membranes in all trains were last replaced in June 2017. Pressure vessels for Trains A to C were provided by Codeline, model 80A30-7. Pressure vessels for Trains D to F were provided by Protec Arisawa, model Pro-8-300MSP-7.

Table 1 summarizes the current train configuration, the design flux, and the average operating flux over the past five years. The system was designed at 80% recovery, has operated at 76-80% recovery over the past five years, and it has produced an average of 5.5 MGD. The feedwater quality is presented in Appendix B. The layout and details of the RO system can be found in the facility as-builts attached as Appendix C.

Table 1. Current RO System Configuration

Trains	Membrane Model	Membrane Element Area (ft ²)	Pressure Vessels Stage 1	Pressure Vessels Stage 2	Membrane Elements per Vessel	Design Flux (gfd)	Operating Flux (gfd)
A, B, C	TMG20-400C	400	20	10	7	15.87	13.5
D, E, F	TMG20-440	440	24	12	7	15.03	12.3

Estimated Remaining Useful Membranes Life

In 2021, Hazen and Sawyer conducted a study to project the estimated remaining useful life of the membranes in the RO trains at Reynolds Facility. The estimates were based on membrane projections and the actual performance of the membranes. Table 2 provides a summary the estimated remaining membrane life determined from the study as well as recommendations for the membrane replacement for each RO train.

Table 2. Summary of Remaining Membrane Life as of March 2021

	Estimated Remaining Membrane Life	Membrane Replacement Recommendations
Train A to C	3 to 5 years	Plan for replacement in 3 years
Train D	1 to 2 years	Replacement in 1 year
Train E	3 years	Plan for replacement in 3 years
Train F	2 to 3 years (maximum)	Plan for replacement in 2 years unless determined differently after 12 months evaluation

RO Elements Replacement for Train D

The presence of iron and manganese in the well water is conducive to membrane fouling. Over the years of operation, it has been observed that Trains A to C which have 400 ft² membrane elements have performed superior to Trains D to F, which have 440 ft² membrane elements and have been operated at a lower average flux than designed. Trains D to F required more cleaning in place (CIP) due to escalations in the feed pressure and an increase in the normalized differential pressure in the feed-concentrate channel. The escalation in the normalized salt passage has also been higher in the Trains D to F than A to C. The 440 ft² elements have a narrower feed spacer than the 400 ft² elements and the narrower space can be a direct contributor to more iron and manganese fouling for Trains D to E, which oxidizes in the feed water before the membranes. As such, the Authority is planning the replacement of Trains D to F with 400 ft² elements. Train D's membranes will be replaced first and performance will be assessed before proceeding with membranes replacements for the remaining trains.

THE DESIRED SERVICE

This Request for Quote (RFQ) is issued to cover the cost to the Authority for reverse osmosis membrane replacement at the Richard A. Reynolds Groundwater Desalination Facility. From this RFQ, the Authority will award and contract to one service provider (Vendor). Sweetwater Authority encourages participation by local, small and/or disadvantaged businesses/contractors/vendors.

JOB SITES

Request for membrane replacement will be made for the Richard A. Reynolds Groundwater Desalination Facility at 3066 N Second Avenue, Chula Vista, CA 91910.

SCOPE OF WORK

The Authority is seeking a RO Membrane Supplier (Vendor) to award an on-call service contract for procurement and replacement of RO membranes on six (6) RO Trains, for a total of 1,386 RO membrane elements, over a five (5) year period at the Richard A. Reynolds Groundwater Desalination Facility.

During the first year of contract (June 2022 to June 2023), the Vendor will be required to replace 252 of 40" x 8" RO membranes in RO Train D with an element surface area of 400 ft². Vendor's scope of work also includes supply of all brine seals, interconnectors, interconnector o-rings, and other incidentals required for proper installation of the new membranes. Replacement of RO Membranes on Train D shall be accomplished by the Vendor in a one-week time frame.

The first one-year contract can be renewed on yearly basis, up to four (4) additional years. During each yearly renewal period, the Authority will determine whether a partial or a full train replacement of RO membranes in the other RO trains is necessary based on monitoring the membrane performance of each train. The Authority anticipates that all remaining 1,134 elements in Trains A, B, C, E, and F will be replaced within the additional 4-year period, however the replacement schedule will be determined based on the ongoing performance evaluation of the existing elements. The existing 440 ft² elements in Train E and F will be replaced with either 400

ft² or 440 ft² elements based on performance of Train D with the new 400 ft² elements replaced during Year 1. Replacement of all brine seals, interconnectors, and interconnector o-rings required for proper installation of the new membranes in the remaining trains shall also be performed by the Vendor.

The requirements for installations of RO membranes by the Vendor shall be at a minimum, but not limited to the following:

- Providing and staging necessary temporary structures (scaffolding, etc.) to aid in replacement of membranes as determined by the Vendor.
- Depressurizing and draining the RO train.
- Removing J-tubes and endcaps of RO vessels. Inspecting the tubes, caps, spacers and making recommendations to the Authority if not in a serviceable condition.
- Removal and proper disposal of used elements, interconnectors, interconnector O-rings, and any other waste materials generated during the element replacements.
- Performing a visual inspection of the pressure vessel and observe any damage(s), and verify the pressure vessels are clean and free of biological growth, oil, metal residues, organic deposits etc., and make necessary recommendations to the Authority.
- If the inside of the pressure vessels is dirty, they need to be cleaned. A soft mop or swab should be used, occasionally flushing with pre-treated, non-chlorinated water. Care must be taken not to scratch the inside surface of the vessels.
- If biological growth is found, disinfection and cleaning of all the affected vessels is required.
- Provide support during start-up of the Train with the newly installed RO membranes.
- Provide the Authority with a schematic of the order and ID/Serial number the elements installed for each pressure (membranes mapping).

All membrane installations shall be performed under the supervision of Reynolds Facility Staff, and the Vendor shall work with the Authority to ensure satisfactory water production is accomplished after installation of the new elements. The Vendor shall be considered a reputable supplier of RO membrane elements and must demonstrate previous experienced installing RO membranes at a brackish water treatment plant of similar size.

Vendors may choose to partner with a third-party service to assist with installation services. If choosing to include a third-party service as part of the RFQ response, the Vendor shall provide information for the third-party service where required in the **Bidders Response Table**.

A. MEMBRANE ELEMENTS DETAILS

A1. The following Vendors (or equal) are known to have products with the performance characteristics required for this project:

- Dupont Water Solutions (Dow)
- Hydranautics
- LG Chem Nano H₂O
- Toray Membrane USA

A2. Membrane Element Construction (for first-year replacement of Train D elements):

- The materials used in the fabrication of the membrane elements must be NSF 61 certified for the production of potable water prior to shipment to the jobsite.
- The membrane elements shall be spiral wound with feed and reject flow through the element parallel to the product water tube of the element. Elements shall have a reinforced fiberglass outer wrap. The element serial number and direction of feed/reject flow shall be clearly marked on each element.
- The element permeate connection design and dimensions shall be the same for all elements supplied in this contract.
- The elements shall be 8-inches in diameter by 40-inches long. The minimum active membrane surface area of each element shall be 400 square feet.
- The feed/reject spacer material shall have a minimum thickness of 31 mil.
- Each element shall be furnished complete with element-to-element interconnector, interconnector o-rings, and brine seal. O-rings and brine seals shall be standard products available across different vendors.
- The elements shall be fully compatible with Protec Pro-8-300-MSP-7, 7-element multi-ported pressure vessels.
- Prior to installation of the anti-telescoping device (ATD) on the feed and reject ends of each element, the rolled membrane sheets shall be flush-cut through the cured glue line to prevent the formation of membrane flaps or separation of the membrane sheets at the feed and reject ends of the element.
- The Vendor shall provide all cap adapters and adapter o-rings necessary to properly install the supplied elements in pressure vessels (including an o-ring providing seal between the adapter and pressure vessel end cap). Any required pressure vessel cap adapters will be procured by the Vendor from the vessel manufacturer.
- Packing slips shipped with each element shall contain Safety Data Sheets (SDSs) indicating the properties and safe handling of chemical solutions entrained within the elements as a preservative.
- Performance: Nominal membrane performance shall be as required under Quality Assurance, Section E3.

B. PRODUCT DELIVERY, STORAGE AND HANDLING

B1. Containers:

- All membrane elements shall be individually vacuum sealed in polyethylene bags containing 1.0% sodium bisulfite preservative or an Authority approved alternate preservation method. Bagged membrane elements shall be packaged in cardboard boxes designed to prevent damage during shipping.

B2. The Authority reserves the right to return membrane elements damaged during shipping. If damaged elements are to be returned to the Vendor, the Vendor shall cover the cost of freight.

B3. Membrane elements shall be packaged such that they can be stored for up to one year in an indoor conditioned storage area ranging in temperature of 40°F to 110°F. Vendor shall submit recommended storage procedure / conditions in writing.

B4. Vendor shall deliver the products at the location provided below. Prior to shipping, Vendor shall contact the Authority to schedule date and time of delivery.

RICHARD A. REYNOLDS GROUNDWATER DESALINATION FACILITY
3066 N. SECOND AVE.
CHULA VISTA, CA 91910

C. QUALITY ASSURANCE

C1. General: All equipment furnished under this specification shall be new and shall be the standard product of a manufacturer who is fully experienced, reputable, qualified and regularly engaged for at least 5 years in the manufacture of the equipment to be furnished, unless otherwise allowed herein.

C2. Certification: The Vendor shall assume responsibility for the satisfactory installation and operation of the RO membranes. Upon completion of installation, Vendor shall inspect the completed work and shall submit a certificate of proper installation.

C3. Equipment Factory Testing and Inspections:

Membrane Elements: Each membrane element shall be factory tested by the manufacturer and certified wet test data for each membrane element shall be supplied to the Authority at least 14 days prior to shipment. The test data shall be accepted by the Authority in writing prior to shipment.

The elements shall be tested under the manufacturer's standard published test conditions, for a period of 30 minutes prior to data collection. The test conditions include the following conditions:

- The test equipment instrumentation for data collection shall be configured such that the elements are tested in series.
- The feed water to each element shall contain between 500 and 2,000 mg/l of sodium chloride (as per manufacturer's standard test conditions) and it shall be at a temperature of 25°C (77°F) with a pH of between 6.5 and 8.0.
- The feed water shall contain no foreign substance, such as large dye molecules, that will mask performance of the element.
- The elements shall be tested at or under 150 psig, for a period of 20 - 30 minutes prior to data collection.
- The recovery of each 40-inch long element under test shall be set from 10 to 15 percent.

When tested under these conditions, individual elements shall be certified to have:

- Minimum Productivity = 8,200 gpd
- Minimum Rejection = 99.5%
- Maximum DP = 15 psi

While an individual element must have the test performance specified above, the average performance of all the elements provided shall meet the following average performance criteria:

- Average Productivity $\geq 10,200$ gpd
- Average Rejection $\geq 99.5\%$
- Average $\Delta P \leq 5$ psi

Certified test data shall be provided for each element and shall consist of the test conditions, element serial number, the feed flow, recovery, productivity, rejection, and differential pressure. The Authority reserves the right to have a representative observe factory testing at any time during regular testing by the element manufacturer. In addition, the Authority reserves the right to request retesting by the manufacturer of a random choice (by the Authority's Representative) of five (5) percent of the elements at no additional cost to the Authority. On retest, should any of the elements fail to meet the performance specified above, the Authority reserves the right to require the element manufacturer to retest up to 100% of the elements at no additional cost to the Authority or reject the proposed shipment, at the sole discretion of the Authority.

D. INSTALLATION

D1. Vendor shall ensure proper installation of membrane elements and to help evaluate initial operation of the system as it impacts the performance of the membrane elements. In particular, Vendor shall witness RO train conductivity profiling and shall help identify individual vessels which are producing permeate of unacceptable quality (vessels producing permeate with conductivity 50% higher than the average). Vendor shall identify these vessels and shall be present when the train is taken off-line and inspect the off-spec vessels to identify problems with element adapters, rolled brine seals, or other like causes. If warranted, Vendor shall participate in performing a conductivity probe of the vessel to locate the problem area within the vessel.

D2. Vendor shall develop a map of each train by membrane element serial number and location at start up. If any vessels have a permeate conductivity +/- 15% out of spec due to the predominance of lower-rejection elements within the vessel, Vendor shall redistribute the elements throughout the train in an effort to decrease the vessel permeate conductivity to levels within the range of average values.

E. PERFORMANCE TESTING

E1. Following the installation of the membrane elements, a 7-day performance test shall demonstrate successful operation of the membrane, at the design conditions described in the Background Information (80% recovery and 15 gfd average flux) and the average temperature and average feedwater quality provided in Appendix B. During the 7-day performance test, a conductivity profile shall be conducted for all pressure vessels with new RO elements. This should serve as baseline for initial RO elements performance.

At these conditions, the non-normalized supply pressure shall never exceed 130 psi (calculated as the feed pressure minus the permeate pressure for the entire train). If the non-normalized supply pressure exceeds 130 psi at any point during the acceptance test, then a chemical cleaning may be performed. The 24-hour post-clean non-normalized supply pressure would then be assessed to determine whether the permeability of the train is recoverable.

At these conditions, the permeate shall meet the water quality indicated below, based on the average of three (3) grab-samples taken during the 7-day test, on days 3, 5, and 7 since the beginning of the test.

- Total Dissolved Solids \leq 40 mg/L
- Chloride \leq 17 mg/L
- Sodium \leq 12 mg/L

In order to determine the membrane performance at warranted conditions, the actual RO permeate quality will be normalized to the design conditions and average feed water quality detailed in Background Information and Appendix A, respectively.

E2. Successful completion of the acceptance test will be determined at the end of the 7-day performance test. Any observed deficiency in performance of the membrane elements shall be corrected to the satisfaction of the Authority at no additional cost to the Authority

F. WARRANTIES

F1. The Vendor shall furnish a warranty for the RO membrane elements. This warranty must be signed by an individual authorized to execute contracts on behalf of the Vendor and shall state the following provisions with no additional conditions or exceptions:

- The Vendor shall warrant the performance of the membrane elements for a period of three (3) years from completion of the 7-day performance test. The Vendor shall guarantee the membrane elements during that three (3) year period in accordance with the performance requirements specified herein and the following prorated replacement conditions if the elements fail to meet the warranted performance.
- Failure to comply with the following requirements will constitute failure to meet warranted performance of the membrane elements:
 - At all times during the warranty period, the RO train shall require a non-normalized supply pressure of no more than 200 psi to produce design permeate capacity (1,050 gpm for Train D at average flux of 15 gfd) when operated under the conditions stated in Background Information, minimum feedwater temperature of 84°F and maximum feed water concentrations provided in Appendix A.
 - ASTM normalized salt passage must not exceed five (5) percent per year of the ASTM normalized salt passage specified in the Vendor's Specification sheets.

- A decrease in ASTM normalized permeate flow, must not exceed seven (7) percent per year of the ASTM normalized permeate flow at the end of the 7-day performance testing period.

F2. The warranty conditions specified above shall be valid under the following conditions:

- The RO train has been operated as designed in terms of product water recovery, flux, array configuration, and feedwater pH.
- The feedwater has not contained chemicals that chemically or physically destroy the elements.
- The elements are periodically cleaned with an effective cleaning solution to remove membrane foulants.
- The elements are cleaned using standard cleaning solutions prior to performance testing for warranty purposes.
- Biological matter or sparingly soluble substances in the feedwater have not irreversibly fouled the elements.

F3. Should the RO train performance not meet the warranty requirements, the Vendor shall provide sufficient replacement elements to achieve the specified train performance. The replacement elements will be provided at the original purchase price, less a credit of 1/36 of the purchase price for each unused month of the warranty period. The Vendor shall guarantee that future replacement elements will be sold to the Authority at a price not to exceed 125% of the original purchase price per element at any time within three years from acceptance of the RO membrane elements.

G. SUBMITTALS FOR RFQ

As part of this RFQ submittal, the Vendors shall submit the following documentation to Authority for review:

G1. RO Membrane Elements:

- Element construction details (e.g., active membrane surface area, feed brine spacer thickness, etc.), standard performance parameters, installation instructions, interconnection instructions, storage and handling requirements.
- Provide standard commercial part numbers for the interconnector o-rings (if applicable) and brine seals.
- Provide standard operating and maintenance data, including recommended cleaning solutions and long and short-term storage protocols.
- Safety Data Sheet that conforms with OSHA standard 29CFR1910-1200. List all chemicals in the proposed product(s) with their Chemical Abstract Registry Numbers (CAS).
- Copy of NSF/ANSI 61 certification for proposed product(s).

G2. Completed Bidder Response Form

G3. Completed Statement of Qualifications

G4. Completed Bidder Response Tables Part 1 and Part 2 (including membrane projections)

H. APPENDICES

Appendix A: Water Quality and Energy Equation

Appendix B: As-built Reference Drawings

Appendix C: RO Train Pictures

SITE ACCESS

Site access will typically be available for delivery and installation of membranes between 7:30 AM and 2:00 PM Monday through Friday.

PREVAILING WAGES

Pursuant to Public Contract Code section 22300, the successful Bidder may substitute certain securities for funds withheld by the Authority to ensure its performance under the Contract. The Director of Industrial Relations has determined the general prevailing rate of per diem wages in the locality in which this work is to be performed for each craft or type of worker needed to execute the Contract which will be awarded to the successful Bidder, copies of which are on file and will be made available to any interested party upon request at the Engineering Department of the Authority or online at <http://www.dir.ca.gov>. A copy of these rates shall be posted by the successful Bidder at the job site. The successful Bidder and all subcontractor(s) under him, shall comply with all applicable Labor Code provisions, which include, but are not limited to the payment of not less than the required prevailing rates to all workers employed by them in the execution of the Contract, the employment of apprentices, the hours of labor and the debarment of contractors and subcontractors. Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. No bid will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work. If awarded a Contract, the Bidder and its subcontractors, of any tier, shall maintain active registration with the Department of Industrial Relations for the duration of the Project. Notwithstanding the foregoing, the contractor registration requirements mandated by Labor Code sections 1725.5 and 1771.1 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code sections 1725.5 and 1771.1.

This Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. In bidding on this project, it shall be the Bidder's sole responsibility to evaluate and include the cost of complying with all labor compliance requirements under this contract and applicable law in its bid.

Each Bidder shall be a licensed contractor pursuant to the Business and Professions Code and shall be licensed as indicated in the RFQ for the work bid upon, and must maintain the license(s) throughout the duration of the Contract.

Pursuant to Public Contract Code section 3400(b), if the Authority has made any findings designating certain materials, products, things, or services by specific brand or trade name, such findings and the materials, products, things, or services and their specific brand or trade names will be set forth in the Special Conditions.

Award of Contract: The Authority shall award the Contract for the Project to the lowest responsive and responsible Bidder as determined by the Authority from the Total Bid Price in accordance with section 00200. The Authority reserves the right to reject any or all Bids or to waive any minor irregularities or informalities in any Bids or in the bidding process.

Questions regarding Prevailing Wage should be directed to:

Division of Labor Statistics and Research
P.O. Box 420603
San Francisco, CA 94142-0603
Phone: (415) 703-4774

INSTRUCTIONS TO BIDDER'S

Questions

All questions concerning bid specification or Scope of Work must be submitted in writing either by mail, facsimile, or e-mail, and received by **2:00 P.M. on April 7, 2022**

Sylvia McCain
744 F Street
Chula Vista, CA 91910
Fax: (619)427-9574
Email: Purchasing@sweetwater.org

Bid Opening

At the date and time set for the opening of bids, each and every bid received prior to the scheduled closing time for receipt of bids will also be opened. If any bid is otherwise irregular or informal, the facts will be noted at that time. Bids must be received by **2:00 P.M. on April 14, 2022**. Late bids will not be considered, and will be returned to the Bidder unopened.

Responses may be mailed or submitted electronic via Filedrop.

Mailing Address: Sweetwater Authority
744 F Street, Chula Vista, CA 91910
Attention: **Purchasing/Bid S2022-04**

Instructions for those opting for electronic submission, via the Authority's secure file transfer system:

- File Format: The response must be in pdf format, and include scanned copies of all pages with required signatures present.
- File Transfer system web page address:
<https://sendit.sweetwater.org/filedrop/On-CallMembraneReplacement>
- Response should be uploaded in advance of the response deadline. Time stamp on the file received by the system will be used to determine whether the response was submitted on time.
- The secure file transfer system will REQUIRE you to set up an account by providing a valid email address. This email address must be validated by the system before it will allow you to upload your response document. Please plan accordingly.
- The email address used to register for the system to submit the response will receive a confirmation email when the file is first accessed by Authority staff.

Evidence of Responsibility

Upon request by Sweetwater Authority, a Bidder shall submit promptly to the Authority's satisfaction, evidence showing the Bidder's financial resources, experience, qualifications, available organizational resources, and any other information or qualifications that may be required to determine the Bidder's responsibility, ability, and capability to perform under any resulting contract.

Quotations /Responses

All responses must be typewritten or in ink. No pencil figures or erasures are permitted. Mistakes must be crossed out, corrections inserted adjacent thereto, and initialed in ink by the person signing the quotation.

Withdrawal of Proposal

A Bidder may withdraw or revise (by withdrawal of one bid and submission of another) a bid, provided that the Bidder's request for withdrawal is received at the Purchasing Department in writing before the time specified for opening bids. Revised bids must be submitted as specified herein. The request for withdrawal shall be executed by the Bidder or by his duly authorized representative.

Proposal Forms

Proposal must be submitted on preprinted forms supplied by Sweetwater Authority. One original and one copy must be submitted on or before the Submittal Deadline. Please submit one (1) original proposal marked "MASTER" and one proposal marked "COPY". If discrepancies are found between the master and the copy, the original marked Master will provide the basis for resolving such discrepancies. If one document is not clearly marked "MASTER", Sweetwater Authority reserves the right to use the original as the Master. If no document can be identified as an original bearing the original signatures, the proposal may be rejected at the discretion of Sweetwater Authority

Proposals submitted in response to this RFQ shall include:

➤ **Bidder Response Form:**

Complete and return the Bidder Response Section. The Bidder Response Section must be signed by the officer or officers legally authorized to bind the company, partnership, or corporation. All responses must be typewritten or in ink. No pencil figures or erasures are permitted. Mistakes must be crossed out, corrections inserted adjacent thereto, and initialed in ink by the person signing the quotation.

➤ **Statement of Bidder's Qualifications and References:**

Bidder shall provide information demonstrating that the Bidder's company has the qualifications and experience capability to perform the requirements of this proposal. Include references for at least three customers that were similar to this project and include detailed descriptions of the scope of those projects.

➤ **Bidder Response Tables (Part 1 and Part 2):**

Bidder shall provide all information in Bidder Response Tables Part 1 and Part 2. Including membrane projections, pressure requirements, membrane cost, labor cost, etc.

➤ **RO Membrane Elements Specifications:**

- Element construction details (e.g., active membrane surface area, feed brine spacer thickness, etc.), standard performance parameters, installation instructions, interconnection instructions, storage and handling requirements.
- Provide standard commercial part numbers for the interconnector o-rings (if applicable) and brine seals.
- Provide standard operating and maintenance data, including recommended cleaning solutions and long and short-term storage protocols.
- Safety Data Sheet that conforms with OSHA standard 29CFR1910-1200. List all chemicals in the proposed product(s) with their Chemical Abstract Registry Numbers (CAS).
- Copy of NSF/ANSI 61 certification for proposed product(s).

➤ **Evidence of Insurance:**

Include proof of insurance for all insurance coverage required by the Agreement. Original certificates naming the Authority as additionally insured will be required upon award of contract.

Please note: The original RFQ or a copy of the RFQ **does not** need to be returned with the proposal, unless exceptions or comments are noted within the document.

Bid Validity

Proposals/bids are valid for ninety (90) days from bid opening.

Right to Waive or Reject

The Authority reserves the right to reject any or all proposals/bids or to waive any minor irregularities in any proposal/bid or in the bidding process. The Authority reserves the right to cancel, in whole or in part, this RFQ. This RFQ does not commit the Authority to award a contract, to defray any costs incurred in the preparation of a Quotation, or to procure or contract for work. This inquiry implies no obligation to buy. The right is reserved to accept all or part, or

decline the whole. Do not quote on goods or services that you cannot supply or provide. When substitutes are allowed and offered, attach complete specifications. The Authority's standard purchase order terms and conditions, copy attached hereto, will apply to any order(s) resulting from this quotation.

Bid Results

Bid results **will not** be given out over the phone or by email. To obtain bid results, please provide a self-addressed stamped envelope referencing the bid number. Envelopes may be submitted with the bid, or mailed directly to the Purchasing section. They will be kept on file until the bid opens and the extensions are verified. Bid results will be posted on the Authority website at www.sweetwater.org, under About Us, Bid Opportunities & Results.

Award

This RFQ will be awarded in its entirety based on the lowest total cost of the membranes, the energy cost to operate the membranes, additional materials, and labor. In addition to the pricing structure, other factors including proposal responsiveness, qualifications, experience of proposer, and prior performance may be considered. The Authority reserves the right to award contract(s) for all services, selected individual services, or reject all.

Contract Documents

The contract documents will consist of this RFQ; the successful Bidder's completed and signed Bidder's Response Section; Certificate of Insurance and an Annual Purchase Order from the Authority.

Period of Performance

If an award is made, the resulting contract shall be for a one (1) year period. No price increase shall be accepted during the initial contract period. The Authority reserves the right to extend the contract for four (4) additional, twelve (12) month contract periods under the terms and conditions herein stated beginning on the anniversary of the commencement of service. Renewal price and performance will be major factors when evaluating the renewal options. Sweetwater Authority or the Vendor may decline to confirm the renewal of the contract for any reason whatsoever, which shall render the renewal option null and void.

The Authority's initial letter offering the Vendor an opportunity to renew the contract does not constitute an award of the option period. If a price increase is requested by the Vendor, detailed supporting documentation to justify the requested increase must be provided. The requested increase will be evaluated by the Authority, and reserves the right to accept or reject.

The Authority may desire to extend a contract on a month-to-month basis upon expiration of the current contract period under the terms and conditions of the current contract unless modified in writing. The renewal is contingent on a mutual agreement between the Authority and the Vendor with such agreement to be confirmed in writing prior to the expiration of the contract period.

Cancellation/Termination

Sweetwater Authority reserves the right to cancel any contract resulting from this solicitation in its entirety at no cost, except for services rendered and goods delivered, and accepted upon a thirty (30) days' written notice stating the reasons for termination. Termination is normally

reserved for such reasons as unsatisfactory performance, or changes in funding, scope, or needs of Sweetwater Authority.

Method of Ordering

The Authority will issue a purchase order for materials and services as needed.

Billing Requirement

Invoices should be mailed to: Sweetwater Authority
505 Garrett Avenue
Chula Vista, CA 91910
Attention: Accounts Payable

Electronic invoices and/or statements can be emailed to: payables@sweetwater.org and the Authority's designated Project Manager.

Payment Terms: Invoices will be paid within thirty (30) days from date of acceptance of service, or receipt of invoice, whichever occurs later.

BIDDER RESPONSE FORM

Date: _____

Name of Company: _____

Contractor's License Number: _____

Department of Pesticide Regulation Pesticide Applicators Certification(s): _____

Address: _____

Signature: _____

Name (please print): _____

Title: _____

Phone Number: _____

Fax Number: _____

E-Mail: _____

Sales Representative:

Contact Name: _____ Phone Number: _____

E: Mail: _____ Fax Number: _____

Forman Information:

Contact Name: _____ Phone Number: _____

E: Mail: _____ Fax Number: _____

Billing Information:

Contact Name: _____ Phone Number: _____

E-Mail: _____ Fax Number: _____

STATEMENT OF BIDDER'S QUALIFICATIONS

The following statements, as to the experience and qualifications of the Bidder, are to be submitted with the bid, as a part thereof. The truthfulness and accuracy of the information is guaranteed by the Bidder.

1. Company Name: _____

Telephone: _____ Fax No: _____

Email: _____

2. The Bidder has been engaged in the business, under the present business name for _____ years. Experience in work of a nature similar to that covered in the Scope of Work extends over a period of _____ years.

3. Provide a history of your company including type of business, when organized, and the number of years you have been engaged in the business under the present firm name? _____

1. Provide the details regarding the size of your company.

2. List your major equipment. _____

3. Have you ever been licensed under a different license number? Yes ____ No ____

If "Yes," give name and license number. _____

4. The Bidder has successfully completed the following contracts in the last three years, which are similar to the magnitude and difficulty of this project.

Company Name: _____

Contact Name: _____

Contact e-mail: _____

Contact Phone Number: _____

Service Provided: _____

Project Amount: _____ Project Start Date: _____

Company Name: _____

Contact Name: _____

Contact e-mail: _____

Contact Phone Number: _____

Service Provided: _____

Project Amount: _____ Project Start Date: _____

5. Have you ever failed to complete any work awarded to you, or defaulted on a contract? _____

If so, please explain where and why? _____

6. Additional information: Any other relevant information that supports the proposal: _____

BIDDER RESPONSE TABLES

PART 1 – GENERAL QUESTIONS

1.	INDICATE THE MAKE/MODEL OF MEMBRANES QUOTED	40"X8"- 400 FT ² ELEMENT
2.	INDICATE IF THE MEMBRANE QUOTED COMPLY WITH THE PROVISIONS OF THIS DOCUMENT, OR LIST ANY EXCEPTIONS	<p>_____ FULLY COMPLIANT</p> <p>_____ COMPLIANT WITH THE FOLLOWING EXCEPTIONS:</p>
3.	BASED ON MEMBRANE PROJECTIONS FOR THE PROVIDED WATER QUALITY (APPENDIX B), INDICATE THE FEED PRESSURE REQUIRED FOR OPERATING TRAIN D AND MEMBRANES' AGE OF 0, 3 AND 5 YEAR	<p>YEAR 0: _____ PSI</p> <p>YEAR 3: _____ PSI</p> <p>YEAR 5: _____ PSI</p>
4.	INDICATE HOW LONG OF A WARRANTY IS OFFERED ON THE MEMBRANES	_____ YEARS
5.	INDICATE HOW LONG IT WOULD TAKE YOUR FIRM TO DELIVER 252 40" x 8", 400 FT ² RO MEMBRANE ELEMENTS TO 3066 N. SECOND AVE., CHULA VISTA, CA 91910 AFTER RECEIPT OF ORDER:	_____ DAYS AFTER RECEIPT OF ORDER
6.	INDICATE IF INSTALLATION WORK WILL BE DONE BY A THIRD PARTY PROVIDER:	<p>_____ YES</p> <p>_____ NO</p>
7.	IF APPLICABLE, PROVIDE THE FOLLOWING INFORMATION FOR YOUR CONTRACTED THIRD PARTY SERVICE PROVIDER:	<p>NAME: _____</p> <p>PLACE OF BUSINESS (CITY, STATE): _____</p> <p>SERVICE BEING PROVIDED: _____</p> <p>CONTRACTOR LICENCE #: _____</p> <p>LICENCE TYPE: _____</p>
8.	HAS YOUR FIRM PREVIOUSLY PERFORMED PREVAILING WAGE WORK IN CALIFORNIA AND SUBMITTED ELECTRONIC CERTIFIED PAYROLL RECORDS TO THE DEPARTMENT OF INDUSTRIAL RELATIONS SINCE JANUARY 1, 2020?	_____ YES _____ NO

9.	INDICATE IF YOUR FIRM (OR THIRD PARTY SERVICE PROVIDER) CAN COMPLY WITH THE REQUIREMENT TO REPLACE RO MEMBRANES FOR TRAIN D (252 40" x 8" ELEMENTS) IN ONE WEEK	<p>_____ CAN COMPLY</p> <p>_____ CANNOT COMPLY</p>	
10.	INDICATE WHERE USED MEMBRANES WOULD BE DISPOSED OF:		
11.	INDICATE THE WARRANTY OFFERED, IF ANY, ON THE RO MEMBRANE INSTALLATIONS TO BE PERFORMED:	_____ YEARS / MONTHS (CIRCLE ONE)	
12.	<p>PROVIDE THREE REFERENCES WITH PHONE AND E-MAIL ADDRESSES FOR WATER TREATMENT PLANT RO MEMBRANE REPLACEMENT PROJECTS YOUR FIRM HAS PERFORMED AND A BRIEF SUMMARY OF EACH JOB. IF A THIRD PARTY IS BEING USED FOR INSTALLATION, THEN PROVIDE REFERENCES FOR PROJECTS THEY HAVE PERFORMED.</p> <p>(ATTACH ADDITIONAL SHEETS IF NECESSARY)</p>	Job 1:	
		Agency Name:	
		Contact Name:	
		E-mail/Phone:	
		Job 2:	
		Agency Name:	
		Contact Name:	
		E-mail/Phone:	
		Job 3:	
		Agency Name:	
		Contact Name:	
		E-mail/Phone:	

PART 2 – COST

1.	PRICE FOR 252 RO MEMBRANE ELEMENTS (40" X 8") WITH BRINE SEALS, INTERCONNECTORS, INTERCONNECTOR O-RINGS, AND INCIDENTALS.	400 FT ² ELEMENTS \$
2.	SALES TAX x LINE 1 =	\$
3.	FREIGHT / SHIPPING / DELIVERY COST (IF APPLICABLE):	\$
4.	ADDITIONAL MATERIAL COSTS (IF ANY, PLEASE DESCRIBE BELOW):	\$
5.	TOTAL MATERIAL COST (SUM OF LINES 2 TO 4):	\$
6.	PLEASE DESCRIBE ANY OTHER COSTS IDENTIFIED IN LINE 4:	
7.	PROVIDE A COST ESCALATION RANGE (MIN/MAX) FOR MEMBRANE ELEMENTS OF 400 FT ² (AND ADDITIONAL MATERIAL IF NEEDED) BEING PROCURED OVER THE NEXT 5 YEARS.	MIN % PER YEAR: _____ MAX % PER YEAR: _____
8.	PROVIDE COST OF ENERGY CONSUMPTION FOR TRAIN D FOR 5-YEARS OF OPERATION BASED ON THE EQUATION PROVIDED IN APPENDIX B USING AVERAGE WATER QUALITY AND AVERAGE MEMBRANE AGE OF 3 YEARS	\$
9.	PREVAILING WAGE LABOR COST TO PROVIDE INSTALLATION SERVICES FOR REPLACEMENT OF RO MEMBRANES IN TRAIN D (36 VESSELS PER TRAIN x 7 ELEMENTS PER VESSEL = 252 ELEMENTS PER TRAIN) INCLUDING CERTIFIED PAYROLL AND ADMINISTRATION COSTS	# HOURS: _____ HOURLY RATE: \$ _____ INSTALLATION ALL INCLUSIVE PRICE: \$ _____
10.	OTHER LABOR COSTS FOR WORK ON TRAIN D MEMBRANE REPLACEMENT (IF APPLICABLE, PLEASE DESCRIBE BELOW):	\$
11.	TOTAL PRICE FOR LABOR (SUM OF LINES 9 AND 10):	\$
12.	DESCRIBE OTHER COSTS LISTED IN LINE 10, IF APPLICABLE:	
13.	PROVIDE A COST ESCALATION RANGE (MIN/MAX) FOR THE LABOR TO BE PROVIDED OVER THE NEXT 5 YEARS.	MIN % PER YEAR: _____ MAX % PER YEAR: _____
14.	TOTAL COST MATERIALS, ENERGY AND LABOR (SUM OF LINES 5, 8, AND 11)	



Terms and Conditions and Insurance Requirements

- 1. Purchase Order:** These terms and conditions govern the implementation of the purchase order to which they are attached (“Purchase Order”). In the case of any conflict between the Purchase Order, these terms and conditions, and any attachments incorporated herein by reference, these terms and conditions shall govern. The Purchase Order, these terms and conditions and any attachments incorporated herein are sometimes referred to herein as the “Contract”.
- 2. Definitions:** As used herein, “Goods” shall mean and refer to all articles, items, parts, materials, goods, supplies, or products, and any associated labor or services, furnished by Supplier. As used herein, “Services” shall mean all work or services furnished by Supplier.
- 3. Acceptance/Inspection:** Goods or Services shall be exactly as specified in the Purchase Order, free from all defects in design, workmanship and materials and are subject to inspection and testing by Authority or its authorized representative. Delivery does not constitute acceptance. Authority may reject nonconforming Goods or Services, or exercise any other right specified herein related to nonconforming Goods or Services.
- 4. Prices:** Unless expressly provided otherwise, all prices and fees specified in the Purchase Order are firm and shall not be subject to change without the written approval of Authority. No extra charges of any kind will be allowed unless specifically agreed to in writing by Authority’s authorized representative. Unless otherwise specified herein, the total price shall include (i) all federal, state and local sales, use, excise, privilege, payroll, occupational and other taxes applicable to the Goods or Services furnished to Authority hereunder; and (ii) all charges for packing, freight and transportation to destination.
- 5. Payment:** The time period allowed for payment as indicated on the Purchase Order shall commence upon receipt of Supplier’s invoice or upon receipt of the Goods or performance of the Services, whichever is later, and approval by Authority of the invoice. All shipping documents and invoices must reference Authority Purchase Order number in order to be processed. Orders delivered directly to job sites may require proof of delivery prior to payment. Acceptable proof is a signed packing slip acknowledging delivery. Payments otherwise due may be withheld by Authority on account of defective Goods or Services not remedied, liens or other claims filed, reasonable evidence indicating probable filing of liens or other claims, failure of Supplier to make payments properly to its subcontractors or for material or labor, the failure of Supplier to perform any of its other obligations under the Contract, or to protect Authority against any liability arising out of Supplier’s failure to pay or discharge taxes or other obligations. If the causes for which payment is withheld are removed, the withheld payments will be made promptly. If the said causes are not removed within a reasonable period after written notice, Authority may remove them at Supplier’s expense.
- 6. Schedule; Liquidated Damages:** The time of Supplier’s performance is of the essence for this Contract. The Goods or Services shall be delivered in accordance with any schedule set forth in the Purchase Order. Supplier must immediately notify Authority in writing any time delivery is behind schedule or may not be completed on schedule. If delivery does not occur on schedule it is understood that Authority will suffer damage. It being impractical and infeasible to determine the amount of actual damage, it is agreed that Supplier shall pay to Authority, as liquidated damages not as a penalty, the sum of one hundred (\$100.00) dollars per day for each and every calendar day delay in finishing the Contract and/or failing to deliver the Goods or completing the Services.
- 7. Packaging:** Packaging must be of sufficient quality and strength to adequately protect the Goods against jolting, rough handling, accidents, and all other dangers inherent in the movement, handling, transportation, and storage of the Goods.
- 8. All Shipments are F.O.B. Delivered:** Supplier assumes full responsibility for all transportation, transportation scheduling, packing, handling, insurance, and other services associated with delivery of all Goods under the Contract.
- 9. Title:** Supplier warrants that all Goods and Services are free and clear of all liens and encumbrances whatsoever, and that Supplier has a good and marketable title to same, and Supplier agrees to hold Authority free and harmless against any and all claimants to the Goods. Title to the Goods purchased hereunder shall pass to the Authority at the F.O.B. point designated on the Purchase Order, subject to the right of Authority to reject upon inspection.
- 10. Material Safety Data Sheets (MSDS):** Supplier shall provide a MSDS for any and all Goods that contain hazardous substances as defined by Cal OSHA. Supplier shall indemnify and hold harmless Authority from and against all losses costs, fees, liabilities and damages that Authority may suffer as a result of Supplier’s failure to comply with the above requirement.
- 11. AWWA Standards and Approved Materials List:** As applicable, Goods must meet or exceed AWWA specifications and be listed in Sweetwater Authority’s Approved Materials List - revised November 2008 (“Approved List”) which is incorporated herein and made a part hereof by this reference. The Approved List can be obtained by calling the Authority Engineering at 619-420-1413 or Purchasing at 619-409-6872.
- 12. Markings on Fittings:** All ductile-iron fittings shall have distinctly cast on the outside of the body the identity of the standard; the pressure rating; nominal diameter of the openings; manufacturer’s identification; the country where cast; the letters DI or word “Ductile”; and the number of degrees or fraction of the circle on all bends.
- 13. Assembly Bill 1953:** All bronze components in contact with potable water shall be low lead in accordance with Assembly Bill 1953 (AB1953), excluding service saddles, backflow preventers for non-potable service, such as irrigation and industrial, and water distribution main gate valves that are greater than two inches.
- 14. Artwork, Designs, Etc.:** If the Goods or Services are to be produced by Supplier in accordance with designs, drawings or blueprints furnished by Authority, Supplier shall return same to Authority upon completion or cancellation of this Contract. Any materials, equipment, tools, artwork, designs or other properties furnished by Authority or specifically paid for by Authority shall be Authority’s property.
- 15. Warranty and Quality Inspection:** Supplier warrants that all Goods furnished shall be new, unused, and free from defects and of a good quality for a period of one year, or such longer period as provided by a manufacturer’s warranty. Goods shall conform to drawings and/or specifications and shall be merchantable quality and fit for the purpose for which purchased, and shall be at all times subject to Authority’s inspection; but

On-Call RO Membrane Replacement

RFQ: S2022-04

neither Authority's inspection nor failure to inspect shall relieve Supplier of any obligation hereunder. Supplier further warrants that any Services provided hereunder will be performed in a professional and workmanlike manner and in accordance with the highest industry standards. If, in Authority's opinion, any Goods or Services fail to conform to specifications or are otherwise defective, Supplier shall, immediately after receiving notice from Authority, at the option of Authority, and at Supplier's own expense and without cost to Authority: (i) repair the defective Goods or Services; (ii) replace the defective Goods or Services with conforming Goods or Services, F.O.B. Authority's plant, office or other location of Authority where the Goods or Services were originally performed or delivered; or (iii) repay to Authority the purchase price of the defective Goods or Services. If Authority selects repair or replacement, any defects will be remedied without cost to Authority, including but not limited to, the costs of removal, repair and replacement of the defective Goods or Services, and reinstallation of new Goods or Services. All such defective Goods or Services that are so remedied will be similarly warranted as stated above. In addition, Supplier will repair or replace other items of the Goods or Services which may have been damaged by such defects or the repairing of the same, all at its own expense and without cost to Authority. No acceptance or payment by Authority shall constitute a waiver of the forgoing, and nothing herein shall exclude or limit any warranties implied by law.

16. **Site Maintenance.** The site of any installation work related to Goods or where Services are performed shall be kept clean and free of hazards at all times during use thereof by Supplier. After any installation of Goods or completion of Services, as applicable, Supplier shall clean the surrounding area to its prior condition.
17. **Changes:** Authority may make changes, at any time, to the Goods or Services, including but not limited to, Authority's requirements and specifications, by giving written notification to Supplier. If such changes affect the cost of or the time to deliver or perform under this Contract, an equitable adjustment in price, delivery, or both will be made. No changes by Supplier shall be recognized unless agreed to in writing by an authorized agent of Authority. Any claims of Supplier for an adjustment in price, delivery, or both must be made in writing within fifteen (15) calendar days from the date of notification by Authority, or shall be waived. Under no circumstance should Supplier stop performance of this Contract as changed. Any change in the price necessitated by such change will be agreed upon between Authority and Supplier and such change will be authorized by a change order document signed by Authority and accepted by Supplier.
18. **Termination:**
 - A. **Convenience:** With written notice stating the extent and effective date, Authority may terminate this Contract, in whole or in part, for convenience at any time without any further cost to Authority except for Goods or Services provided prior to the effective date of termination.
 - B. **Default:** If Supplier is in default of or willfully violates any of the conditions or covenants of this Contract, including refusal or failure to prosecute its obligations or any separable part thereof with diligence and in accordance with the schedule specified by the Purchase Order, or if Supplier should be adjudged a bankrupt, or if Supplier should make a general assignment for the benefit of Supplier's creditors, or if a receiver should be appointed on account of Supplier's insolvency, or Supplier or any of Supplier's subcontractors should violate any of the provisions of this Contract, Authority may serve written notice upon Supplier of Authority's intention to terminate this Contract. This notice of intent to terminate shall contain the reasons for such intention to terminate this Contract, and a statement to the effect that Supplier's right to perform this Contract shall cease and terminate upon the expiration of ten (10) days unless such violations have ceased and arrangements satisfactory to Authority have been made for correction of said violations. In such an event, Authority may:
 7. Require immediate delivery of conforming Goods or require Supplier to repair nonconforming Goods or re-perform nonconforming Services at Supplier's own expense to bring nonconforming Goods or Services into conformance;
 8. Rework the nonconforming Goods or Services with Authority's staff or authorized representatives, including other contractors, to bring the Goods or Services into conformance and reduce the price paid to Supplier by Authority's cost;
 9. Seek reimbursement or deduct from any payments due for any additional cost incurred including staff time to locate conforming Goods or Services, or otherwise related to Supplier's default.In addition to the above remedies, Authority may seek any other legal remedies available to it.
19. **Patent Indemnity:** Supplier agrees to indemnify Authority, its officers, board members, employees, and authorized volunteers against liability of any kind including the costs and expenses incurred for the use of any invention or discovery and for the infringement of any patent occurring in the performance of this Contract or arising by reason of the use or disposal by or for the account of Authority of Goods manufactured or supplied under this Contract, except items manufactured to detailed specifications supplied by Authority.
20. **Assignment/Subcontracting/Independent Contractor Status:** No performance of this Contract or any portion thereof may be assigned or sub-contracted by the Supplier without the express written consent of Authority, which may be withheld for any reason. Any attempt by Supplier to assign or sub-contract any performance of this Contract without the express written consent of Authority shall be invalid and shall constitute a breach of this Contract. Supplier is retained as an independent contractor and is not an employee of Authority. No employee or agent of Supplier shall be considered an employee of Authority. Authority shall not be obligated in any way to pay any wage claims or other claims made against Supplier by any such employees, agents, or any other person resulting from performance of this Contract.
21. **Safety:** All Goods and Services shall comply with all Federal, State and local safety rules and regulations including OSHA.
22. **Prevailing Wages:** Pursuant to prevailing wage, Supplier shall pay Supplier's employees and subcontractors the prevailing wage for any and all "public works" and "maintenance projects" as defined in Labor Code Section 1720, et seq., and 1770, et seq., as well as California Code of Regulations, Title 8, Section 16000, et seq., performed in connection with this Contract. Supplier shall indemnify, defend, hold harmless Authority, its officers, agents, employees and volunteers from all fines, suits, procedures, claims and actions of every kind, and all costs associated therewith arising out of or in any way connected with Supplier's failure to pay prevailing wage. Prevailing wage shall be as determined by the Director of the Department of Industrial relations in accordance with the standards set forth in Section 1770 et SEQ. of the Labor Code. Pursuant to labor code Section 1771, prevailing wages do not apply to jobs under \$1,000.
23. **Compliance with Law:** Supplier warrants that it will comply with all federal, state, and local laws, ordinances, rules and regulations applicable to its performance under this Contract and procure all permits and licenses, pay all charges and fees.
24. **Indemnification:** Supplier shall defend, indemnify and hold the Authority, its elected officials, officers, employees, and agents free and harmless from any and all claims, demands, causes of action, costs, expenses, liability, loss, damage or injury, in law or equity, to property or persons,

including wrongful death, in any manner arising out of or incident to any alleged acts, omissions, negligence or willful misconduct of Supplier, its officials, officers, employees, agents, and subcontractors arising out of or in connection with the Goods or Services or the performance of this Contract, including without limitation the payment of all attorneys' fees and other related costs and expenses except such loss or damage which was caused by the sole negligence or willful misconduct of the Authority. Supplier's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by the Authority, its elected officials, officers, employees or agents.

25. **Taxes:** Unless otherwise provided herein or required by law, Supplier, except out-of-state*, assumes exclusive liability for, and shall pay before delinquency, all sales, use, excise and other taxes, charges or contributions of any kind now or hereafter imposed on or with respect to, or measured by the or work furnished hereunder on the wages, salaries or other remuneration's paid to persons employed in connection with the performance of this Contract; and Supplier shall indemnify and hold harmless Authority from any liability and expense by reason of Supplier's failure to pay such taxes or contributions.
26. **Insurance:** Supplier shall take out and maintain, during the performance of all work under this Contract, Commercial General, Automobile and Worker's Compensation Liability Insurance at policy limits and with insurance companies acceptable to Authority, as further detailed below. Evidence of insurance shall be provided to Authority before work commences.
27. **Waiver:** Any action or inaction by Authority shall not constitute a waiver of any rights or remedy available herein or by law. The failure of Authority to enforce at any time any of the provisions of this Contract or to exercise any option provided herein, or to require at the any time performance of any of the provisions hereof, shall in no way be construed to be a present or future waiver of such provisions, nor in any way to affect the validity of this Contract or any part thereof, or the right thereafter to enforce each and every provision.
28. **Force Majeure:** Neither Authority or Supplier shall be liable for failure to perform its obligations under this Contract where such failure is a result from any act of God or other cause beyond its reasonable control.
29. **Successors and Assigns:** This Contract shall be binding on the successors and assigns of the parties.
30. **Governing Law:** This Contract and all orders shall be deemed to be made in the County of San Diego, State of California and shall in all respects be construed and governed by the laws of California. Venue shall be in the County of San Diego.
31. **Entire Agreement:** All orders may be accepted only on the terms and conditions set forth in this Contract. Terms in Supplier's acceptance in addition to or not identical with such terms will not become a part of this Contract. This Contract represents the entire agreement between the parties hereto related to the Goods or Services.
32. **Amendment:** No modification or amendment of this Agreement shall be binding unless executed in writing and signed by the parties hereto.
33. **Severability:** The unenforceability, invalidity or illegality of any provision of these terms and conditions shall not render the other provisions unenforceable, invalid or illegal.

*Out-of-state Suppliers without a California Sales and Use Tax Permit should not include sales tax on their invoice. Authority will pay the use tax directly to the California State Board of Equalization.

Commercial General Liability and Automobile Liability Insurance - Contractor shall provide and maintain the following commercial general liability and automobile liability insurance:

Coverage - Coverage for commercial general liability and automobile liability insurance shall be at least as broad as the following:

1. Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 0001)
2. Insurance Services Office (ISO) Business Auto Coverage (Form CA 0001), covering Symbol 1 (any auto)

Limits - Contractor shall maintain limits no less than the following:

1. General Liability - One million dollars (\$1,000,000) per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit or products-completed operations aggregate limit is used, either the general aggregate limit shall apply separately to the project/location (with the ISO CG 2503, or ISO CG 2504, or insurer's equivalent endorsement provided to the Sweetwater Authority) or the general aggregate limit and products-completed operations aggregate limit shall be twice the required occurrence limit.
2. Automobile Liability - One million dollars (\$1,000,000) for bodily injury and property damage each accident limit.

Required Provisions - The general liability and automobile liability policies are to contain, or be endorsed to contain, the following provisions:

1. "*The Sweetwater Authority, its directors, officers, employees, and authorized volunteers*" are to be given insured status (via ISO endorsement CG 2010, CG 2033, or insurer's equivalent for general liability coverage) as respects: liability arising out of activities performed by or on behalf of Contractor; products and completed operations of Contractor; premises owned, occupied or used by Contractor; and automobiles owned, leased, hired or borrowed by Contractor. The coverage shall contain no special limitations on the scope of protection afforded to Authority, its directors, officers, employees, or authorized volunteers.
2. For any claims related to this project, **Contractor's insurance shall be primary insurance** as respects Authority, its directors, officers, employees, or authorized volunteers. Any insurance, self-insurance, or other coverage maintained by Authority, its directors, officers, employees, or authorized volunteers shall not contribute to it.
3. Any failure to comply with reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to Authority, its directors, officers, employees, or authorized volunteers.
4. Contractor's insurance shall 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. Each insurance policy required by this agreement shall state, or be endorsed to state, that coverage shall not be canceled by the insurance carrier or Contractor, except after thirty (30) days (ten (10) days for non-payment of premium) prior written notice by U.S. mail has been given to Authority.

Such liability insurance shall indemnify Contractor and his/her sub-contractors against loss from liability imposed by law upon, or assumed under contract by, Contractor or his/her sub-contractors for damages on account of such bodily injury (including death), property damage, personal injury, completed operations, and products liability.

The general liability policy shall cover bodily injury and property damage liability, owned and non-owned equipment, blanket contractual liability, completed operations liability, explosion, collapse, underground excavation, and removal of lateral support.

The automobile liability policy shall cover all owned, non-owned, and hired automobiles.

All of the insurance shall be provided on policy forms and through companies satisfactory to Authority.

Deductibles and Self-Insured Retentions

Any deductible or self-insured retention must be declared to and approved by Authority. At the option of Authority, the insurer shall either reduce or eliminate such deductibles or self-insured retentions.

Acceptability of Insurers

Insurance is to be placed with insurers having a current A.M. Best rating of no less than A-: VII or equivalent or as otherwise approved by the Sweetwater Authority.

Workers' Compensation and Employer's Liability Insurance

Contractor and all sub-contractors shall insure (or be a qualified self-insured) under the applicable laws relating to workers' compensation insurance, all of their employees working on or about the construction site, in accordance with the "Workers' Compensation and Insurance Act," Division IV of the Labor Code of the State of California and any Acts amendatory thereof. The Contractor shall provide employer's liability insurance with limits of no less than \$1,000,000 each accident, \$1,000,000 disease policy limit, and \$1,000,000 disease each employee.

Pollution Liability Insurance. If Supplier is transporting hazardous materials, Supplier shall provide pollution liability insurance of at least \$1,000,000 per occurrence and \$2,000,000 aggregate.

Product Liability and/or Errors and Omissions Insurance. If Supplier is also the manufacturer of the Goods, Supplier shall carry Product Liability and/or Errors and Omissions Insurance which covers the Goods with limits of not less than \$1,000,000.

Freight. Supplier shall ensure that third party shippers contracted by Supplier have adequate insurance coverage for the shipped Goods.

APPENDIX A:
WATER QUALITY AND ENERGY
EQUATION

1. Membrane projections shall be provided for the average feed water quality from Table B.1 and design/operating parameters from Table B.2:

Table B.1: Feed Water Quality (2018-2021)

Constituent	Units	Average	Maximum
Total Dissolved Solids (TDS)	mg/L	1,860	2,300
Conductivity	mg/L	3,060	3,700
Ca	mg/L	124	170
Mg	mg/L	62	83
Na	mg/L	433	490
K	mg/L	6.0	6.5
Ba	mg/L	0.13	0.16
Sr	mg/L	1.6	2.3
NH3-N (total)	mg/L	0.10	0.16
Fe	mg/L	0.10	0.12
Mn	mg/L	0.08	0.16
HCO3	mg/L	181	200
Cl	mg/L	878	1100
SO4	mg/L	145	151
NO3-N	mg/L	0.03	0.14
F	mg/L	0.16	0.19
Br	mg/L	3.0	3.6
B	mg/L	0.3	0.3
SiO2	mg/L	18	21
PO4	mg/L	0.03	0.06
pH	-	7.8	8.0
Temperature	°F	85	86.5

Table B.2: Design/Operation Parameters Train D

Average Operating Flux	gfd	13.5
Recovery	%	80%
Stage 1 PV	-	24
Stage 2 PV	-	12
Elements per PV	-	7
Element Surface Area	ft ²	400
Membrane age	years	0,3, and 5

2. Equation for Energy Consumption Calculations for Train D

Please use the following equations and provided values to determine the cost of energy consumption for Train D for 5 years of operation. The feed pressure should be determined based on membrane projections with the average feed water quality and design information provided above as well as considering an average membrane age of 3 years.

$$Cost\ of\ Energy\ per\ Year\ (\$/year) = Power\ (kW) * Energy\ Unit\ Cost\ \left(\frac{\$}{kWh}\right) * Run\ Time\ \left(\frac{h}{day}\right) * 365\ \left(\frac{day}{year}\right)$$

$$Power\ (kW) = 0.746 \left(\frac{kW}{HP}\right) * \frac{Flow\ (gpm) * Feed\ Pressure\ (psi) * 2.31\ \left(\frac{ft}{psi}\right)}{3960 * Pump\ Efficiency * Motor\ Efficiency * VFD\ Efficiency}$$

Where:

RO Feed Pump Efficiency	%	74%
Motor Efficiency	%	90%
VFD Efficiency	%	95%
Energy Unit Cost Year 1	\$/kWh	0.35
Escalation Factor For Energy Unit Cost, per year	%	3.5
Average Run Time	h/day	17.8
Average Membrane Age	years	3

APPENDIX B:
AS-BUILT REFERENCE DRAWINGS

APPENDIX C: RO TRAIN D PHOTOGRAPHS



On-Call RO Membrane Replacement
RFQ: S2022-04



On-Call RO Membrane Replacement
RFQ: S2022-04



On-Call RO Membrane Replacement
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