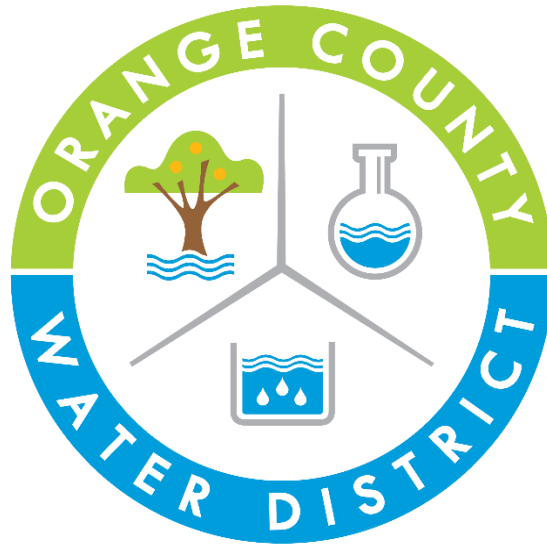


ORANGE COUNTY WATER DISTRICT

**INVITATION FOR QUOTES
IFQ-25-004
FOR
SUPPLY AND DELIVERY OF
Reverse Osmosis (RO) Membranes - Dupont**

ISSUED: Tuesday, December 16, 2025



QUOTES DUE:

Tuesday, December 30, 2025 at 10:00AM PT

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List of Exhibits:

- Exhibit A: Scope of Services
- Exhibit A-1 Price Sheet
- Exhibit B: OCWD Purchase Order Terms and Conditions

OCWD – IFQ-25-004 - SUPPLY AND DELIVERY OF
Reverse Osmosis (RO) Membranes - Dupont

The Orange County Water District (“OCWD” or “District”) is seeking cost quotations from qualified and experienced firms for the supply and delivery of Reverse Osmosis (RO) Membranes - Dupont to the District’s Groundwater Replenishment System (GWRS), as further indicated on Exhibit A, Scope of Services.

Quotes will be evaluated by OCWD for best value, including considerations of price, payment discount terms, general competency, reputation of the firm, and other factors relevant to award. By submitting a quote, each Respondent agrees that OCWD, in determining the successful Respondent and its eligibility for the award, may consider the Respondent’s experience, facilities, delivery abilities, conduct and performance under other contracts, financial condition, reputation in the industry and other factors which could affect the Respondent’s performance. OCWD reserves the right to reject any or all quotes, to waive any informality in any quotes, and to make awards in the interest of OCWD.

Respondents to this Invitation for Quotes (IFQ) must carefully review this IFQ in its entirety before submitting a quote. Quotes must be accompanied by a completed Price Sheet in the form attached as Exhibit A-1 (“Price Sheet”), and all other information required by this IFQ. Failure to submit information in accordance with these requirements and procedures may be cause for disqualification. For the purpose of this IFQ, the term “Respondent” shall refer to any entity submitting a quote in response to this IFQ, and the term “Vendor” shall refer to any successful Respondent selected for the Agreement subject to this IFQ.

1. Introduction

OCWD is an internationally recognized leader in the water industry that was formed in 1933 by the California State Legislature which entrusted OCWD to guard and protect the region’s groundwater basin and limited water supply. OCWD’s mission is to provide a reliable supply of high-quality water that is sourced in an environmentally responsible manner to the more than 2.5 million residents and businesses within the 270 square mile service area of Orange County, California that OCWD serves. OCWD manages three of Southern California’s greatest water supplies, this includes protecting rights to the Santa Ana River, managing and replenishing the Orange County Groundwater Basin, and operating and maintaining the Groundwater Replenishment System (GWRS), the world’s largest advanced water purification system for potable water reuse. More information regarding OCWD can be found at www.ocwd.com.

1.1. Project Background

The District owns and operates the GWRS, which has a design capacity of 130 million gallons per day (MGD) and produces a total of 44 billion gallons annually. Approximately 30 MGD of GWRS water is pumped into injection wells to create a seawater intrusion barrier, while another 100 MGD is directed to OCWD’s percolation basins in the City of Anaheim where the water naturally filters through sand and gravel to replenish the deep aquifers of the groundwater basin to increase the local drinking water supply. An additional 10 MGD of GWRS water can also be injected into injection wells that are in the City of Santa Ana to further boost the local drinking water supply.

The GWRS RO treatment facility consists of 27 RO units each capable of producing 5-mgd with one unit in reserve. There are 15 original RO units in operation since 2008. Six

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units that were added in 2015 as part of the GWRS Initial Expansion, and 6 additional units added as part of the recently completed GWRS Final Expansion. Each unit contains 1,050 RO membranes. As membranes age, overall performance, including permeability and rejection decline. The expected industry lifespan of membranes is 4 to 5 years when operating in a water reuse application such as GWRS. This lifespan is based on several factors with the two most important being increasing feed pressure requirements (due to irreversible fouling) and loss of salt rejection efficiency. The RO membranes in 3 of the 15 original RO units (known as Train A) contain LG BW400ES membranes that have been in operation since October 2018 and now require replacement.

2. Solicitation Schedule

The solicitation schedule is summarized in the table below. OCWD reserves the right to modify the schedule below at its discretion. Notification of changes will be made to interested Respondents through an addendum.

IFQ Issued	Tuesday, December 16, 2025
Questions Due Date	Monday, December 22, 2025 at 10:00AM PT
Quotes Due	Tuesday, December 30, 2025 at 10:00AM PT
Board Award Date	January 2026

2.1. Questions Concerning Invitation for Quotes

All questions regarding the IFQ must be submitted in writing before the deadline due date of Monday, December 22, 2025 at 10:00AM PT. All questions must be titled “Question – IFQ-25-004 SUPPLY AND DELIVERY OF Reverse Osmosis (RO) Membranes - Dupont”. Responses to questions received from prospective respondents will be formally documented in a Question and Answer (Q&A) table that will be distributed to prospective respondents. The Q&A table will be updated regularly as questions are received from prospective bidders. Questions received after the questions due date will not be considered.

Attention: Bobby Velasco

Email: procurement@ocwd.com

2.2. Deadline for Quotes

Quotes must be submitted no later than Tuesday, December 30, 2025 at 10:00AM PT, or such later time as announced by OCWD by addendum before the submission deadline. To be accepted, quotes must be submitted by **BOTH** email and one (1) hardcopy as described below.

1. Quotes submitted by email shall be sent to procurement@ocwd.com. The email subject header must be titled “Quote Submittal - IFQ-25-004 Supply and Delivery of Reverse Osmosis (RO) Membranes - Dupont.
2. Quotes submitted by mail or delivered in person to OCWD at:

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Orange County Water District

Administration Office Building

Attention: Bobby Velasco

Address: 18700 Ward Street

Fountain Valley, CA 92708

The envelope for physical mail or deliveries, must be plainly marked with the IFQ number and title, and the Respondent's name, company name, and address. To deliver submittal packages in person or via courier, please notify the guard at the main gate for quote drop off. Envelopes will be timestamped upon receipt at the receptionist desk.

Quotes must include all information required by this IFQ, including a Price Sheet and acknowledgement, and acceptance and acknowledgement of all addenda (if any) issued by OCWD in connection with this IFQ. Respondents may supplement their quotes prior to the submittal deadline by mail, personal delivery, or email as indicated above.

It is the Respondent's responsibility to ensure that quotes are received prior to the submittal deadline. Only responses properly submitted to OCWD will be considered. OCWD reserves the right to reject any and/or all responses received. There will be no formal opening of the quotes.

2.3. Pre-Submittal Activities

OCWD reserves the right to revise the IFQ prior to the submittal deadline and reserves the right to issue a written addendum or addenda to provide further clarification or make revisions or corrections to the IFQ. All addenda will be issued via <https://www.ocwd.com/working-with-us/rfp-contracts/> for all interested Respondents. If an addendum is necessary within 72 hours of the submittal deadline, or for any other reason deemed appropriate by OCWD, OCWD, at its discretion, reserves the right to extend the submittal deadline.

Any addenda issued must be acknowledged and accepted by the Respondent in writing signed by the Respondent prior to the submittal deadline. Failure to acknowledge any addenda may result in the quote being considered nonresponsive and subject to rejection.

The Respondent shall be responsible for ensuring that its quote reflects any and all addenda issued by OCWD prior to the submittal due date. Therefore, OCWD recommends that Respondents check the OCWD website for this IFQ periodically prior to making their submission and again prior to the submittal deadline.

2.4. Quotes Prepared at Respondent's Expense

This IFQ does not commit OCWD to award any work nor to pay any costs incurred from the preparation of quotes. Respondents will be solely responsible for all costs and expenses incurred during the selection process, even in cases where the Respondent is selected for award.

3. Scope of Services

See Exhibit A, attached at the end of this RFP, for the scope of services and performance standards that are required for the supply and delivery of RO Membranes.

The Vendor shall be required to provide quality service in accordance with industry standards and worker safety. The firm must demonstrate experience with the type of anticipated work and must be dependable and have the ability to perform all services in a timely manner upon the request(s) from OCWD. The Vendor is solely responsible to comply with all laws, rules, policies, and regulations related to the work, including workplace and transport safety requirements.

4. Elements of Quote

Quotes must include all of the information listed in this Section. Quotes that do not contain all documents and information required by this IFQ and otherwise comply with this Section may be deemed non-responsive and rejected.

Quotes shall be simple and economically prepared. Excessive or irrelevant materials may result in a quote being rejected. Quotes shall contain sufficient depth and detail to describe and demonstrate the Respondent's understanding and approach to the work, and compliance with the requirements of this IFQ.

4.1. Title Page.

The title page should identify the IFQ title, name and title of the firm's contact person, address, telephone number, fax number, email address, and date of quote submission.

4.2. Cover Letter.

The cover letter should contain a signed commitment by a principal of the Respondent authorized to bind the Respondent must discuss the Respondent's commitment to providing high-quality services, describe the firm's understanding and approach to the services, and ability to perform the services. The cover letter must contain a brief background of the firm including history, type of service provided, number of employee, number of offices and locations with staff size and discipline, and other relevant information for OCWD to evaluate the firm's qualifications.

4.3. Table of Contents.

The quote shall contain a clear and complete table of contents identifying each section of the quote and all submitted materials by page number.

4.4. Quote and Price Sheet.

The Respondent shall include a quote with all pricing information required for performance of the work identified in the Scope of Services. The quote shall include a completed Price Sheet attached hereto as **Exhibit A-1**.

It is expected that the indicated rates will remain in effect for the duration of 6 months or

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until Awarded Firm receives a Purchase Order from OCWD, whichever comes first.

OCWD encourages Respondents to propose favorable discount structures as an attachment to their Price Sheet that includes payment discount incentives for early payments made within a specified number of days (e.g. 2% discount if paid within 10 days, net 30, and etc.). Favorable payment discount terms will be factored into the selection process.

The proposed price shall be fully-loaded to include all costs to supply and deliver RO Membranes to the GWRS plant. Respondent shall be responsible for and pay all costs of delivery and assume risk of loss and damage to the destination point. OCWD shall not pay Contractor nor its subcontractors for any direct or reimbursable expenses incurred for implementation of the scope of services described in this IFQ, including but not limited to the manufacture RO Membranes, labor, cartage, any taxes, mileage, freight equipment, supplies, any taxes, assessments, surcharges, permits, licenses, overhead, profit, markups, etc. Although OCWD does not anticipate compensating the Vendor for any additional items or expenses, any such additional amounts to be charged to OCWD shall be built into the Price Sheet. Costs NOT identified in the Price Sheet, may not be added at the time of invoicing. If applicable, the Price Sheet shall include any delivery pricing for special order deliveries outside of normal scheduled delivery orders.

4.5. OCWD Purchase Order

Respondents responding to this IFQ must be prepared to proceed with OCWD's Purchase Order which will serve as the contractual mechanism for the scope of services and compensation outlined in this IFQ. Respondent shall provide a statement that the Respondent accepts OCWD's Purchase Order Terms and Conditions, attached as **Exhibit B**.

4.6. Billing.

Proposers shall provide a statement that it will meet the minimum requirements specified here. At a minimum, the invoice for services shall include the Purchase Order Number, and the itemized equipment and services summary. OCWD may provide reporting requirements to the selected firm, and the selected firm shall prepare invoices that comply with the requirements. Failure to satisfy the reporting requirements may result in rejection, payment delay, or short pay of the invoices submitted to OCWD for payment.

4.7. Equal Employment Opportunity and Affirmative Action Requirements

The proposers shall provide a Statement of Equal Employment Opportunity/Affirmative Action. The selected contractor and each subcontractor shall not discriminate in the employment of persons on the work because of race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status, sexual preference or sex of such persons except as permitted by Section 12940 of the California Government Code. The selected contractor is expected to maintain policies similar to those of the District regarding equal employment opportunities and affirmative action as

set forth in the District's Administrative Policies.

5. Quote Submission Requirements

It is the Respondent's responsibility to ensure that quotes are received prior to the submittal deadline. Quote packages should also contain acknowledgement of all addenda that may be issued by OCWD as part of this IFQ process, and all other items required by the IFQ. Late quotes, late modifications, or late withdrawals will not be considered under any circumstances. There will be no formal opening of the received quotes.

This IFQ does not commit OCWD to award any work nor to pay any costs incurred from the preparation of quotes. Respondents will be solely responsible for all costs and expenses incurred during the selection process, even in cases where the Respondent is selected for award.

6. Selection Process

Quotes will be evaluated by OCWD for best value, including considerations of price, payment discount terms, general competency, reputation of the firm, and other factors relevant to award. By submitting a quote, each Respondent agrees that OCWD, in determining the successful Respondent and its eligibility for the award, may consider the Respondent's experience, facilities, delivery abilities, conduct and performance under other contracts, financial condition, reputation in the industry and other factors which could affect the Respondent's performance under this Agreement. OCWD reserves the right to reject any or all quotes, to waive any informality in any quotes, and to make awards in the interest of OCWD.

7. Special Conditions

7.1. Reservations

This IFQ does not commit OCWD to award a contract, to defray any costs incurred in the preparation of a quote pursuant to this IFQ, or to procure or contract for any work. OCWD reserves the discretion to (i) decline to award any Agreement, (ii) reject any or all quotes deemed by OCWD to be non-responsive or to be submitted by a non-responsible Respondent, and/or (iii) reject all quotes and readvertise the work pursuant to any procurement method permitted by applicable law and OCWD's Policies and Procedures.

7.2. Public Records

All quotes submitted in response to this IFQ become the property of OCWD and are public records and as such may be subject to public review regardless of whether any material in such quotes is labelled as confidential, privileged, or proprietary, or otherwise protected.

7.3. Right to Cancel or Revise

OCWD reserves the right to cancel or revise, for any or no reason, in part or in its entirety, this IFQ including but not limited to: solicitation schedule, submittal date, and submittal

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requirements. If OCWD cancels or revises the IFQ, OCWD will issue an addendum on its website. Posting the addendum on OCWD's website will be the only notification to Respondents. It is the Respondent's responsibility to check the OCWD website periodically and prior to making their quote submission.

7.4. Additional Information

OCWD reserves the right to request additional information and/or clarifications from any or all Respondents.

7.5. Public Information

Respondents shall not disclose to any third party any of the information provided by OCWD in connection with the project or this IFQ absent express prior written approval of OCWD. Requests for public records should be directed to OCWD for processing in compliance with applicable law.

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Reverse Osmosis (RO) Membranes - Dupont

EXHIBIT A

SCOPE OF SERVICES

EXHIBIT A
REVERSE OSMOSIS (RO) MEMBRANES

PART 1 – GENERAL

1.01 DESCRIPTION

A. The membrane element manufacturer (herein called Membrane Supplier) shall furnish the membrane elements and accessories to the Orange County Water District (District), for installation into Reverse Osmosis Units in accordance with the requirements specified herein.

1. The Groundwater Replenishment System (GWRS) is an existing wastewater reclamation facility located in Fountain Valley, CA which is operated by the District. This document pertains to the specification of reverse osmosis membrane elements operating on secondary municipal treated and microfiltered effluent.

2. The following items define the scope of work for this project:

a. Furnish a quantity of 1050 membrane elements (8 x 40 inches) plus 10 spare membrane elements for a total of 1060 membrane elements. The 1050 membrane elements will be initially installed in one of the A Trains with 150 vessels containing 7 elements per vessel or 1050 elements per unit.

b. Provide the spare parts required by the specification.

3. The following services shall be provided by the manufacturer:

a. Provide the submittals, test results, warranties and other information required by the specification.

b. Provide on-site representation during membrane installation, two days per unit for a total of six days. Additional on-site representation may be required pursuant to Section 3.03 of this specification.

B. Reference Specifications

1. None

1.02 QUALITY CONTROL / QUALITY ASSURANCE

A. Reference Standards

1. American Society for Testing and Materials (ASTM)

a. ASTM-D4516

- b. ASTM D4194
 - c. ASTM D6161
 - d. ASTM D6284
 - 2. American Nation Standards Institute (ANSI)/ National Sanitary Foundation (NSF) Standard 61
- B. Manufacturers QA/QC
 - 1. Membrane elements shall be manufactured in accordance with ISO/9000-9001.
- C. NSF Certification
 - 1. Requirements for NSF Standard 61 for membranes supplied shall apply to this specification.

1.03 SUBMITTALS

- A. Shop Drawings
 - 1. Membrane Supplier shall submit drawings and other information necessary to describe the membrane elements and related accessories, including:
 - a. Dimensions.
 - b. Weight.
 - c. Materials of construction.
 - d. Active membrane surface area.
 - e. Feed channel spacer thickness.
 - f. Standard performance parameters (including flow and salt rejection).
 - g. Standard application data including limits for pH, (operating and cleaning) temperature (operating and cleaning), maximum feed water flow, maximum feed water turbidity, maximum feed water SDI, applied pressure, differential pressure (element and vessel), chlorine tolerance, chloramine tolerance, and cleaning limitations.

- h. Storage and handling requirements.
 - i. Commercial part numbers and standard o-ring size nomenclature for the elastomer interconnector o-rings and brine seals.
 - j. NSF 61 Certification for the membrane and model provided.
 - 2. Documentation including Quality Control Limits for factory wet testing to certify membrane elements tested at the factory will obtain the stabilized salt rejection and productivity upon installation as stated in the manufacturer's literature and software projection programs.
 - 3. Normalization equations used for calculation of system values including:
 - a. Salt passage temperature correction factor
 - b. Water temperature correction factor
 - c. Normalization equation for system monitoring calculations including:
 - 1) Net driving pressure
 - 2) Normalized differential pressure
 - 3) Normalized permeate conductivity
 - 4. Software projections of the membrane performance using year 0, 1, 2, 3 and 5 year performance and the conditions described in paragraph 2.01 and 2.02. The supplier shall use the following constants in the projection of membrane performance:
 - a. 1 psi interstage manifold pressure losses.
 - 5. Manufacturers Manufacturing and Quality Control Procedures as required by Section 3.01.A.6.
- B. Factory Testing and Reports
- 1. Factory Testing
 - a. Subject to the requirements of section 3.01, 5 percent of the membrane elements shall be factory wet tested by the membrane supplier and signed test data for each membrane element shall be supplied to the District or its Representative prior to shipment (Refer to Paragraph 3.01).

- b. The test data shall be accepted by the District or its Representative in writing prior to shipment.
- C. Installation Instructions
 - 1. The supplier shall provide installation instructions with the membranes.
 - 2. If the supplier requires membranes to be installed in any particular manner, a loading schedule shall be prepared and delivered to the District by the supplier. Membranes shall be organized by rejection and/or productivity and delivered to the project site to facilitate installation.
- D. Operation and Maintenance Manuals
 - 1. Provide 3 copies of printed materials, and an electronic file in (PDF) format.
 - 2. Provide technical data related to proper installation, operation, cleaning and storage of the products supplied.
 - 3. Provide standard operating and maintenance data and instruction sheets for the membrane elements, covering such topics as recommended cleaning solutions as well as long and short-term storage protocols.
- E. Warranty
 - 1. The Membrane Supplier shall furnish a separate warranty for the RO membrane elements. This warranty must be signed by an individual authorized to execute contracts on behalf of the Membrane Supplier and shall state the following provisions with no additional conditions or exceptions:
 - a. The Membrane Supplier shall warrant the performance of the membrane elements for a period of three (3) years from the start of System Performance Testing (30-day acceptance test) or 6 months (wet elements)/12 months (dry elements) from the date of delivery, whichever occurs first.
 - b. The membrane elements provided shall be free of defects in workmanship and materials. Membranes shall be replaced if they exhibit defects in workmanship or materials inclusive of dimensional tolerances (out-of-round), glue line leaks and/or pinholes.
 - c. The Membrane Supplier shall warrant 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.
 - 1) During the warranty period, permeate conductivity will be continuously monitored and periodically normalized. Conductivity profiling of vessels is also performed periodically. Individual element testing may be performed as required by the District to assess cleaning performance

- and/or verify the integrity of elements. Routine sampling of feed, concentrate and permeate for ionic constituents is also performed.
- 2) The overall unit salt passage for the average sodium and chloride ions in the permeate water quality shall increase by no more than 50 percent over the average initial water quality at Year 0 established in Section 3.04 when normalized to the design conditions using ATSM Method D4156-00 (2010). Salt passage is defined as 100 percent minus the percent rejection.
 - 3) The above criteria shall not apply for a period of one week after membrane installation or cleaning to allow the membrane performance to stabilize.
- d. The warranty shall commence on the date that System Performance Testing begins as described in 3.03.F
2. The warranty conditions specified above shall be valid under the following conditions:
- a. The RO system has been operated as designed in terms of product water recovery, array configuration, and feed water pH.
 - b. The feed water has not contained chemicals that chemically or physically destroy the elements.
 - c. The elements are periodically cleaned with an effective cleaning solution to remove membrane foulants.
 - d. The elements are cleaned using standard cleaning solutions prior to performance testing for warranty purposes.
 - e. Biological matter or sparingly soluble substances in the feed water have not irreversibly fouled the elements.
3. Should the RO unit performance not meet the warranty requirements, the Membrane Supplier shall provide sufficient replacement elements to achieve the specified unit performance. Membrane elements shall be replaced if they exhibit higher than acceptable salt passage, individually or as a group necessary to achieve the water quality performance requirements.
4. After successful completion of the System Performance Test (30-day acceptance test), 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 Membrane Supplier shall warrant that future replacement elements will be sold to the District at a price not to exceed 15% above the original purchase price per 40-inch element at any time within three years from acceptance of the RO membrane elements.

1.04 PRODUCT DELIVERY STORAGE AND HANDLEING

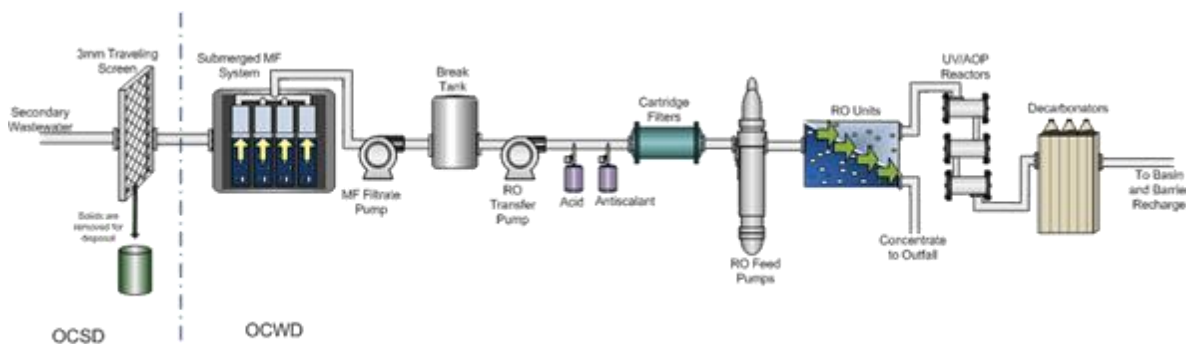
- A. Membranes shall be sealed in a heavy bag. Performance (wet) tested membranes shall include sodium bisulfite solution as a preservative. Other inorganic preservatives or non-organic based preservatives will be considered on a case by case basis. However, the use of organic based solution preservatives is not acceptable.
- B. The membrane elements, interconnector and brine seal shall be supplied in a cardboard box which is constructed from 180 lb/1000ft² cardboard. The packaging shall contain spacers to center and secure the membrane element in the box. The membrane model and serial number shall be displayed on the box.
- C. If applicable, membrane elements shall be organized in accordance with the membrane suppliers loading schedule and serial number.
- D. Membrane boxes shall be palletized and shrink wrapped for shipment.
- E. For orders in excess of 100 elements, the District will consider alternative packaging approaches to eliminate cardboard and packaging waste.
- F. Membranes shall be transported to the jobsite using methods to prevent freezing.

PART 2 – PRODUCTS

2.01 PROCESS SYSTEM DESIGN AND PERFORMANCE

- A. Service Conditions
 - 1. The feedwater to each RO system will be a microfiltered municipal wastewater effluent that has been further pretreated as shown in Figure 1. The microfiltration system is operated in order to maintain a log removal of Giardia and Cryptosporidium greater than 4.0 and turbidity less than 0.2 ntu (0.5 ntu maximum). Antiscalant (threshold inhibitor- AWC A-108 currently) is added at a dose of 2.0 to 4.0 mg/L (average 2.8 mg/L) to prevent precipitation of sparingly soluble salts. Sulfuric acid is added as needed to maintain a pH of 6.9.

Figure 1: GWRS System Diagram



2. A monochloramine residual of 2 – 5 mg/L as total chlorine is targeted in the RO feed water to control biogrowth.
3. The following table contains the water quality, after chemical addition, which is expected for feed to each RO System. The average value column gives the water quality that will be the basis of the performance requirements.
4. Table 1 lists the most recent analysis for the RO feedwater after chemical addition. The design water quality shall be used to establish performance and removal requirements. Membrane projections, when required shall be prepared using the design water quality, unless otherwise stated.

Table 1: GWRS RO Feedwater Quality Basis for Design

Constituent	Units	Concentration	
		Average (Design) Mean Value	Range
Temperature	°F	80.6	67.1-80.6
pH	Units	7.5	7.2-7.7
Total Dissolved Solids	mg/L	1,442	1,102-1,925
Total Organic Carbon	mg/L	10.7	6.5-16.1
Residual Chloramine	mg/L	4	3-6
Silt Density Index	Units	<3.0	<5.0
Total Alkalinity	mg/L as CaCO ₃	235	210-289
Total Hardness	mg/L as CaCO ₃	267	239-352
Silica	mg/L	20.8	13.8 – 27.7
Aluminum	mg/L	0.01	0.004-0.019
Cations			
Sodium	mg/L	350	215 – 472
Potassium	mg/L	22.4	20.0– 27.3
Calcium	mg/L	73	52-98
Magnesium	mg/L	20.3	16.8-26.3
Iron	mg/L	0.46	0.01-1.36
Manganese	mg/L	0.064	0.025-0.12
Barium	mg/L	0.0001	0.0001
Strontium	mg/L	0.34	0.09-0.78
Ammonia Nitrogen	mg/L	6.8	3.0-13.1
Anions			
Bicarbonate	mg/L	314	257 – 353
Chloride	mg/L	434	329-618

Constituent	Units	Concentration	
		Average (Design) Mean Value	Range
Sulfate	mg/L	173	124-245
Fluoride	mg/L	0.8	0.7 – 1.0
Phosphate	mg/L as PO ₄	0.67	0.13 – 1.6
Nitrate	mg/L (as N)	6.3	5.6 – 8.55
Nitrite	mg/L (as NO ₂)	0.56	0.05-2.3
Total Nitrogen	mg/L (as N)	18.3	12.1 – 29.4

B. Process Design Requirements

1. The unit is configured in a 3 stage 78:48:24 array. There are a total of 150 pressure vessels. Each vessel contains seven spiral-wound 8-inch diameter by 40-inch long membrane elements.
2. The design permeate flow is 3472 gpm (5.0 mgd) at 85 percent recovery.
3. The maximum permeate is 3472 gpm (5.0 mgd) at 85 percent recovery.
4. The minimum permeate is 2772 gpm (4.0 mgd) at 85 percent recovery.
5. Based on an active membrane element area of 400 square feet per RO element, the maximum operating flux is 11.9 gallons per square foot per day (gfd) at the design flow.
6. Each unit has a dedicated RO feed pump equipped with a variable frequency drive. The maximum available pump discharge pressure is approximately 300 psig. The backpressure on the system is nominally 17 psi.
7. Each unit is connected to a CIP system. The CIP system has been designed to provide a minimum of 40 gpm per vessel at 60 psi of pressure. The unit is divided into 4 sections for cleaning with the first stage split into two sections. Cleaning may be performed up to 3 times per year under the following conditions.
 - a. Water: RO Permeate
 - b. Chemicals
 - 1) Sodium Tri Poly Phosphate (STPP) (1-2.5 percent)
 - 2) Sodium Dodecyl Benzene Sulphonate (SDDBS) (0.1 to 0.25 percent)
 - 3) pH adjustment (up to 12.0)

c. Duration

- 1) 3 hours circulation,
- 2) 1 hour soak,
- 3) 1 hour recirculation,
- 4) 1 hour flushing

d. Temperature

- 1) 38 degrees C. maximum
8. The District may use proprietary chemical formulations specifically designed for the cleaning of polyamide RO membranes at the time, temperature and concentration limits provided by the supplier without voiding the membrane warranty. The District currently uses AWC-227 and Avista-192 as proprietary cleaning chemicals.
9. The District may use membrane supplier approved chemicals and formulations designed for the cleaning of RO polyamide membranes at the time, temperature and concentration limits provided by the membrane supplier without voiding the membrane warranty.
10. Other cleaning regimes may be used on a case by case basis. The District will notify and obtain approval for the use of alternative cleaning procedures with the membrane supplier if required to maintain warranty.

C. Performance and Filtered Water Requirements

1. Membranes shall be provided that meet the performance criteria described in Section 2.02 and as indicated by the membrane supplier's projection software.
2. The RO unit will be operated at the 85 percent recovery for the specified water quality with the use of sulfuric acid and antiscalant without scaling of the membranes.
3. The RO concentrate shall have an LSI of less than +2.0 and a maximum silica (SiO₂) concentration of less than 185 mg/L.

2.02 PRODUCT DESIGN AND FABRICATION

A. General

1. All equipment furnished under this specification shall be new and standard product of a manufacturer, regularly engaged in the manufacture of the products to be furnished.
2. The membrane supplier shall maintain offices and service facilities in the United States.
3. The membrane elements shall be fully compatible with the Protec PRO 8-450-SP pressure vessels.

4. The membrane elements and elastomers and other components must be NSF 61 certified for the production of potable water.
5. Membranes shall be limited to the models and manufacturers listed as it is acknowledged that the treatment of municipal wastewater effluents using some polyamide composite type RO membranes has resulted in unsustainable permeability and irrevocable fouling.
6. Acceptable Membrane Suppliers and Models are listed below.
 - a. Dupont: BW30XFRLE-400/34

B. Performance Requirements

1. Membranes provided shall satisfy the following operational limits
 - a. pH, range (operating) 2-11
 - b. pH range (cleaning) 1-12
 - c. Free chlorine tolerance 0.1 mg/L maximum
 - d. Monochloramine tolerance 5.0 mg/L max. continuous
 - e. Maximum temperature (cleaning) 45°C
 - f. Maximum feed water flow 60 gpm/vessel or higher
 - g. Maximum element recovery 20 percent
 - h. Maximum feed water turbidity 1.0 ntu
 - i. Maximum feed water Silt Density Index SDI 3
 - j. Maximum applied pressure 450 psi or higher
 - k. Maximum differential pressure (element) 10 psi or higher
 - l. Maximum differential pressure (vessel) 60 psi or higher

2. Performance Testing: Membranes shall be manufactured and performance tested prior to shipment. Performance testing shall demonstrate that individual and lot acceptance performance criteria shall be satisfied. The quantity of elements required to be tested is described in Section 3.01.A.
 - a. Performance shall be established by wet testing performed by the membrane supplier.
 - b. Testing shall be performed under the following conditions:
 - 1) The test equipment instrumentation for data collection shall be configured such that there are no more than two elements in parallel or in series. Permeate flow from each membrane shall be individually measured.
 - 2) The feedwater 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. Testing procedures must comply with ASTM Method A, D4194-08 (2008) as described in State of California Groundwater Replenishment with Recycled Water 60320.201 a (1). Membrane rejection performance values may be higher than those stated above, and the values contained in this section shall apply.
 - 3) The feedwater shall contain no foreign substance, such as large dye molecules, which will mask performance of the element.
 - 4) The elements shall be under test at 100 - 225 psig (as per manufacturer's standard test conditions) for a period of 30 minutes prior to data collection. (Any change in test duration shall be approved at the discretion of OCWD.)
 - 5) The recovery for each element during the test shall be set at 15 percent.
 - c. In the event that the membrane elements initial salt rejection and/or productivity is different from the stabilized performance after installation, the supplier shall provide documentation including quality control limits for the specific membrane to demonstrate that the stabilized performance is different from initial salt rejection.
3. Individual Element Performance Testing: When tested under these conditions, individual elements shall have rejection equal to or better than the rejection indicated, the productivity shall fall within the range specified, and the differential pressure shall be equal to or less than that specified below:

Supplier	Model No.	Productivity Range [gpd]	Minimum Stabilized Rejection [%]
Dupont	BW30XFRLE-400/34 _(a)	9,775 – 13,225	99.1

a. Elements shall be tested at 2000 mg/L, 150 psi., pH 7-8, 15% recovery.

4. Lot Acceptance Performance Testing: The average performance of all the elements (lot acceptance) supplied under this specification shall meet the following minimum performance criteria:

Supplier	Model No.	Minimum Average Lot Productivity [gpd]	Minimum Stabilized Average Lot Element Rejection [%]
Dupont	BW30XFRLE- 400/34 _(a)	11,500 _(b)	99.3

a. Elements shall be tested at 2000 mg/L, 150 psi., pH 8, 15% recovery.

b. At the District's discretion, the minimum average lot productivity may be accepted at a value +/- 5% the stated minimum.

C. Fabrication and Material Requirements

1. Membrane Element Construction

a. The membrane shall be a composite structure consisting of a support material, a coarse base membrane and a fine "thin film" polymer membrane of polyamide composition.

b. The elements shall have nominal dimensions of eight inches in diameter and 40 inches in length. The active membrane area of the elements shall be 400 square feet.

c. The membrane elements shall be spiral wound with feed and concentrate flow through the element parallel to the permeate (product water) tube of the element.

d. The element permeate connection design and dimensions shall be the same for all elements supplied in this contract.

e. The feed/concentrate spacer material shall have a nominal thickness of 0.034 inches (based on product specification).

f. The membrane shall include a permeate collection spacer designed to transport water to the permeate tube.

- g. The membrane edges shall be sealed or glued around the permeate collection spacer. If membranes are glued, 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 concentrate ends of the element.
- h. Elements shall have a reinforced fiberglass outer wrap.
- i. Elements shall use a nominal 1 inch diameter permeate tube.
- j. The element serial number and a method for identification as to the direction of installation.

2. Accessories

- a. Each element shall be furnished complete with the following:

- 1) interconnector,
- 2) brine seal.

3. Elastomers

- 1) O-rings and brine seals shall be constructed of “chloramine resistant” ethylene propylene (EPDM) elastomers

2.03 SPARE PARTS

- A. The Membrane Supplier shall furnish the following spare components, in addition to those required for original installation of the elements. Spare parts packaging shall indicate both an explicit written description (as shown below) and part number of the contents.

- 1. 12 brine seals.

PART 3 – EXECUTION

3.01 MANUFACTURING AND TESTING PRIOR TO SHIPMENT

A. Factory Testing

- 1. 5 percent of the membrane elements shall be factory tested by the Membrane Supplier.
- 2. Signed performance test data for each membrane element shall be supplied to the District or its Representative prior to shipment.
- 3. The performance test data shall be accepted by the District or its Representative in writing prior to shipment.

4. The District reserves the right to have a representative observe factory testing at any time during regular testing by the Membrane Supplier.
5. 5 percent performance (wet) testing requirements:
 - a. The membrane supplier shall demonstrate the following manufacturing and Quality Control practices to the satisfaction of the District.
 - 1) Lot acceptance testing (flow/rejection) of membrane flat sheet media across the width and length of each production roll at predetermined intervals.
 - 2) Automated membrane element (gluing and rolling) assembly.
 - 3) Automated dimensional analysis of membrane element diameter and length.
 - 4) Intermediate integrity testing of membrane subassemblies with air or vacuum based test methods.
 - 5) Finished membrane element defect rates of less than 0.1 percent (1 in 1000)
 - 6) 5 years minimum prior experience with the packaging and supply of dry membrane elements.
 - 7) A statistical analysis of the performance wet test data to demonstrate within a 99 percent confidence interval that all membrane provided will satisfy the specified limits for salt rejection and productivity.
 - 8) Documentation to demonstrate wet test requirements correlate to the stated stabilized salt rejection and productivity specifications provided in the manufacturer's literature and software projections.
 - b. Membrane elements that are not wet tested by the Membrane supplier shall be packaged and shipped dry.

B. Performance Test Data

1. The signature for all test data shall be of the Membrane Suppliers quality control person responsible and witness to the testing of elements.
2. The test data shall be submitted at least 3 days prior to shipment of the membrane elements in Microsoft Excel spreadsheet format.
3. Raw test data shall be normalized to the reference conditions indicated. The membrane supplier shall provide the Quality Control information used for the wet testing of the elements.
4. The membrane supplier shall sign and submit test data for elements furnished as specified herein. The test data shall include productivity, and salt rejection for each element. The District reserves the right to waive any or all portions of the test data listed at its sole discretion.

5. The membrane supplier shall sign and submit lot acceptance average calculations for the membranes to be provided.
6. Membranes (individual or as a lot) which do not satisfy the stated performance criteria shall not be shipped.

3.02 SHIPMENT, HANDLING, AND STORAGE

- A. All equipment, including spare components, shall be delivered complete by the date required by the District.
- B. Shipment shall be made only after the District's written acceptance of Membrane Supplier's factory test data.
- C. The supplier shall provide packing information to the District prior to delivery.
- D. Deliver the membranes in accordance with the conditions outlined in the bid documents.
- E. The District shall store the membrane per the manufacturer's requirements. If no requirements are provided, store membrane in a dry location temperature controlled between 40 and 110 degrees F.

3.03 INSTALLATION

- A. The Membrane Supplier shall provide the services of an official representative to be present at the GWRS to ensure proper installation of membrane elements and to help evaluate initial operation of the system as it impacts the performance of the membrane elements. Alternatively, the Membrane Supplier shall provide in writing that the District has capabilities to install membrane without the assistance of the Membrane Supplier. The Membrane Supplier and District shall establish protocols and methods of communication (Zoom/Teams) to Discuss installation issues that may arise.
- B. District Responsibilities
 1. The District is responsible for unloading existing membrane elements.
 2. The District is responsible for any testing required before membrane installation.
 3. The District is responsible for cleaning the pressure vessels.
 4. The District will provide glycerin for use as a lubricant for installation.
- C. The Membrane Supplier or District shall visibly inspect each pressure vessel prior to membrane installation.
- D. The Membrane Supplier shall provide written instruction to the District on the proper installation of membranes. Installation shall include the lubrication of o-rings and seals and adapters using the lubricant provided by the District.

- E. The Membrane Supplier shall provide a bar code scanner to the District with instructions on its use. The Membrane Supplier or District shall document membrane vessel, position and serial number of membranes as they are installed into the pressure vessels. The data shall be provided to the District in an Excel (.xls or.xlsx) file format.
- F. After Start Up and Flushing the membrane supplier or District shall perform the following:
 - 1. The Membrane Supplier or District shall perform unit conductivity profiling and identify individual vessels which are producing permeate of unacceptable quality (vessels producing permeate with conductivity 40 percent higher than the median stage conductivity).
 - 2. The Membrane Supplier or District shall identify these vessels and shall be present when the unit is taken off-line to inspect the off-spec vessels and help identify problems with element adapters, rolled brine seals, or other like causes.
 - 3. The Membrane Supplier or District shall continue conductivity profiling and identification until all pressure vessels are conforming.
 - 4. If required, the Membrane Supplier or District shall perform single element testing on questionable vessels to locate the problem area within the vessel using District provided test equipment. The membrane supplier may exchange installed membrane elements with spare membrane elements. Membrane elements that have been exchanged shall be replaced at no charge to the District.
 - 5. The Membrane Supplier and District shall share the results of installation and both parties shall agree that the elements are properly installed without apparent leakage before proceeding.
- G. Operational Data for the RO unit is normalized by the control system. The District shall normalize operational data for the RO Unit feed pressure required for production after 2 hours of operation shall be no more than 20 percent higher than the projected pressure required as indicated in the Year 0 projection.
- H. Once the operating pressure and conductivity of the membranes has been determined to be acceptable, the membrane supplier shall provide written acknowledgment to the District that the membranes have been properly installed and are operating in a manner acceptable to the membrane supplier.

3.04 SYSTEM PERFORMANCE TESTING

- A. Following installation of the membrane and receipt of the acknowledgment of proper installation and initial operation, a System Performance Test (30-day acceptance test) shall demonstrate successful operation of the membrane, at the design conditions equal to or less than the design limits for design flow and recovery.
 - 1. Water quality and operational performance data shall be normalized to the design conditions using ASTM, membrane supplier provided, or other generally recognized methodology agreeable to the District and membrane supplier and shall include a temperature compensation factor for salt rejection and water permeability. A single method shall be used and established prior to system performance testing. The

parameters of specific flux, normalized differential pressure, and normalized permeate conductivity shall be calculated.

2. Membrane vessel integrity shall be established using conductivity profiling from pressure vessels weekly. Conductivity profiling will be performed by the District. Permeate quality of vessels outside of a statistical sampling (a conductivity result greater than 40 percent of the median for vessels in the stage) shall inspected and/or repaired to the satisfaction of the District.
 3. The feed and permeate water quality shall be established using grab samples, based on the average of grab-samples taken once per week over the 30 days. The first water quality sample for compliance with the specifications shall be taken no sooner than on the 7th day after initial operation. This value will be used to establish the normalized permeate conductivity and average feed water quality. Normalized parameters shall be calculated using the average of the second, third and fourth sample (average initial water quality).
- B. Successful completion of the acceptance test will be determined at the end of the System Performance Test (30-day acceptance test. Any observed deficiency in performance of the membrane elements shall be corrected to the satisfaction of the District at no additional cost to the District.
- C. A deficiency is defined as the permeate water quality as having higher than projected levels of constituents. A deficiency in water quality occurs when the average permeate water quality is greater than 15 percent higher than software projected Year 0 water quality normalized to the design conditions for any of the following constituents
1. Sodium
 2. Chloride

END OF SECTION

OCWD – IFQ-25-004 - SUPPLY AND DELIVERY OF
Reverse Osmosis (RO) Membranes - Dupont

EXHIBIT A-1

PRICE SHEET

PRICE SHEET

BY

(Name of Firm)

FOR

RO MEMBRANES

The undersigned declares that he or she has examined the Invitation for Quotes for Supply and Delivery of RO Membranes-Dupont and hereby proposes to supply and deliver the RO membrane that is required by the District during the period specified in the IFQ documents, and in accordance with all provisions of the IFQ documents, for the following price:

Product Name and Number:: _____

Price per Membrane: _____

Sales tax: _____

Delivery Fees: _____

Other: _____

Total Price per Membrane: _____

* The proposed price shall be fully-loaded to include all costs to supply and deliver RO Membranes to the District. Respondent shall be responsible for and pay all costs of delivery and assume risk of loss and damage to the destination point. OCWD shall not pay Contractor nor its subcontractors for any direct or reimbursable expenses incurred for implementation of the scope of services described in this IFQ, including but not limited to the manufacture, labor, cartage, any State and/or Federal taxes, mileage, freight equipment, supplies, assessments, surcharges, permits, licenses, overhead, profit, markups, etc. Although OCWD does not anticipate compensating the Vendor for any additional items or expenses, any such additional amounts to be charged to OCWD shall be built into the Price Sheet. Costs NOT identified in the Price Sheet, may not be added at the time of invoicing. If applicable, the Price Sheet shall include any delivery pricing for special order deliveries outside of normal scheduled delivery orders.

Special Delivery Order Charge:

OCWD - IFQ-25-004 – SUPPLY AND DELIVERY OF RO MEMBRANES - DUPONT

Payment Discounts: please specify below.

Name of Firm

Address

Date

Signature Name/Title

Telephone

Authorized Signature

OCWD – IFQ-25-004 - SUPPLY AND DELIVERY OF
Reverse Osmosis (RO) Membranes - Dupont

EXHIBIT B

OCWD PURCHASE ORDER TERMS AND CONDITIONS

PURCHASE ORDER TERMS AND CONDITIONS

This purchase order ("Order") by the Orange County Water District ("District") is governed by the following terms and conditions. The purchase order and the following terms and conditions will collectively be referred to as the "Order," the individual or entity from which goods and/or services are ordered will be referred to as "Seller," and the goods and supplies, services, equipment, materials or products listed on this order will be referred to as "Goods" or "Services." Seller, by accepting and performing to the conditions of the Order, understands, agrees to, and accepts these terms and conditions.

1. Terms of Order.

- (A) This Order constitutes an offer to purchase which may be changed at any time before it is accepted by Seller. This offer to purchase may be accepted by signing and returning to District written indication of acceptance, but in any event, the performance of any Services purchased under this order, as well as the shipment of any conforming or non-conforming Goods, shall constitute acceptance by Seller of this offer to purchase and all of its terms and conditions. District shall not be responsible for payment for any Goods or Services rendered without a valid Order by District and acceptance by Seller.
- (B) District's acceptance of this Order is expressly limited to the terms of this Order. District specifically objects to the addition, deletion, or substitution by Seller in acknowledging and accepting this Order, and any alternatives to the Goods and Services specified. If Seller includes addition, deletion, or substitution of terms and conditions in its acknowledgement acceptance, confirmation, invoice, or other written form sent in response to this Order, and Seller expressly conditions its acceptance of this Order upon acceptance by District of such different and additional terms and conditions, neither District's acceptance of delivery of all or part of the Goods nor District's payment for the Goods or Services shall constitute acceptance of such different terms.
- (C) District may at any time, by a written change order or written amendment, make changes in the specifications, designs or drawings, samples or other description to which the items are to conform, in methods of shipment and packaging, or in the time, place, or quantity of delivery of any items. If any such change causes an increase or decrease in the cost of, or the time required for, the performance of any part of the work under this Order, an equitable adjustment shall be made in the price or delivery schedule, or both, and the Order shall be modified in writing accordingly. Any claim by Seller for such an adjustment must be made in writing. Nothing in this clause shall excuse Seller from proceeding without delay to perform this Order as changed.
- (D) District reserves the right to terminate this Order at any time, with or without cause, upon written notice to Seller. Upon receipt of any notice of termination from District, Seller shall immediately cease all services, work or deliveries under this Order except such as may be specifically approved in writing by District. If Seller is not in breach of this Order, Seller shall be entitled to compensation consistent with this Order for all Goods and Services delivered (or, in the case of Goods, shipped) prior to receipt of District's notice of termination, and for any Goods or Services specifically authorized in writing by District thereafter.

2. Delivery, Invoices, Risk of Loss.

- (A) Seller shall ship, deliver or provide services to locations as specified in this Order. Title to and risk of loss or damage to goods in transit shall remain with Seller (F.O.B. DESTINATION) until delivered as specified, unless otherwise confirmed in writing by District. COD shipments ARE NOT acceptable. Delivery shall be made during District's receiving hours provided below. Unless specified to the contrary in this Order, delivery shall be made to District's central headquarters located at 18700 Ward Street, Fountain Valley, CA 92708.

Central Headquarters	18700 Ward Street., Fountain Valley, CA 92708	Monday thru Thursday 7:00 AM - 3:00 PM, and Friday 7:00 AM - 2:00 PM only
Field Headquarters	4060 East La Palma Ave., Anaheim, CA 92807	Monday thru Thursday 7:00 AM - 3:00 PM, and Friday 7:00 AM - 2:00 PM by appointment only

- (B) Invoices shall be delivered by Seller to the District within ninety (90) days of delivery of Goods or completion of Services hereunder. District pays undisputed invoices per the Purchase Order Terms. Invoices shall be delivered electronically to District at APInvoices@ocwd.com, or mailed to Orange County Water District, ATTN: ACCOUNTS

PAYABLE, P.O. Box 20845, Fountain Valley, CA 92728-0845. Invoices shall not be delivered directly to other District staff. Failure to comply with this requirement may delay timely payment.

- (C) No amounts not included on the Order shall be due or payable by District, including without limitation taxes, gratuities, transportation, boxing, packaging, cartage, or other fees or costs. Any Seller outside of California that charges Sales tax must indicate the authorized California tax license number on the invoice. District is exempt from all Federal Excise taxes.
- (D) Time of delivery is the essence of this Order. District reserves the right to refuse any Goods and to cancel all or any part of the Goods not delivered by the due date and/or not conforming to applicable specifications, drawings, samples or descriptions. Acceptance of any part of the Goods shall not bind District to accept future shipments of Goods, nor deprive it of the right to return Goods already accepted, at Seller's expense. Over-shipments and under-shipments shall only be as agreed to by District in writing.
- (E) If upon delivery, or reasonable time thereafter, material or equipment is found to be defective in quality, performance, workmanship, or otherwise not in conformance with the requirements of this Order, District shall have the right to reject and return such goods for a full refund at Seller's expense.
- (F) Seller shall deliver maintenance/operation manuals on all equipment supplied hereunder to District with delivery of Goods. Manuals shall include wiring schematics, parts lists and diagrams, and all pertinent information necessary for proper installation and maintenance of purchased equipment where appropriate. Where equipment may require replacement parts for continued maintenance, Seller shall make available replacement parts for a minimum ten (10) year period following date of purchase.
3. Warranties. In addition to any other warranties contained within this Order or specified in applicable law, Seller hereby provides the following warranties:
- (A) Seller shall comply fully with all applicable federal, state and local laws and regulations in the performance of this Order.
- (B) The Goods (if any) will be free from defects of material workmanship, design or fabrication, will be of merchantable quality, will be fit and sufficient for the purposes for which they are purchased, which Seller acknowledges it is aware of, and will conform strictly to the terms of this Order and to any specifications furnished in connection herewith. Goods shall be warranted by their manufacturer for a period of at least twelve (12) months.
- (C) All Services shall be completed in a professional, workmanlike manner, with the degree of skill and care that is required by current, good and sound professional procedures. Services shall be completed in accordance with applicable specifications and shall be correct and appropriate for the purposes contemplated in this Order.
- (D) Seller has full title to all Goods identified in this Order and the authority to enter into this Order and transfer title to the Goods to District. Title to the Goods is free from any claims, liens or other encumbrances.
- (E) The Goods and/or Services do not and will not infringe upon any United States or foreign patent or any trademark, copyright, trade secret, proprietary process or right, or other similar process or right.
- (F) No Federal or State statute, regulation, or Municipal ordinance has been or will be violated by Seller's entry into or performance of this Order.
- (G) Seller shall pay promptly all indebtedness for labor, materials, and equipment used in performance of any Services required under this Order. Seller shall not permit any lien or charge to attach to the work or the premises, but if any does so attach, Seller shall promptly procure its release.

4. Insurance. Seller shall be solely responsible for maintaining and requiring Seller's subcontractors to maintain such adequate health, auto, workers' compensation, unemployment compensation, disability, liability, and other insurance, as is required by law, as is the common practice in Seller's and Seller's subcontractors' trades or businesses, or as required by District and specified in this Order, whichever is more

protective. Upon request, Seller shall provide District with certificates of insurance or evidence of coverage before commencing performance under this Order. .

5. Breach by Seller. In the event of breach of any provision of this Order by Seller, District may exercise any and all rights available at law or in equity. In addition to the foregoing, District shall have the right to cancel this Order. If Seller fails to deliver the Goods or Services as required herein or fails to perform which inhibits the progress of this Order, District may terminate this Order and contract with an alternate vendor to complete the Order. Seller shall be liable to District for the differences in price plus expenses of enforcing its rights hereunder, including reasonable attorney's fees.
6. Breach by District. For the purchase of Goods, Seller's sole remedy in the event of breach of this Order by District shall be the right to recover damages in the amount equal to the difference between market price at the time of breach and the purchase price specified in the Order.
7. Indemnification. To the fullest extent permitted by law, Seller agrees to defend at its sole cost and expense, to indemnify, and to hold harmless District, its elected and appointed officials, agents, employees, and volunteers, from and against any and all claims, liabilities, expenses, costs, and losses, including attorneys' fees, for injury or death of any person, or damage to property, or interference with use of property, or for damages, arising from or in any way connected with the performance of or failure to perform this Order or breach of any warranty provided hereunder, except to the extent such liability, damages, costs, losses, claims, or expenses are caused by District's gross negligence or unlawful acts.
8. Force Majeure. When an actual or potential labor dispute or other non-economic cause outside the control of Seller delays or threatens to delay the timely performance of this Order, Seller shall immediately give written notice thereof to District. In the event of such delay, District may, in its discretion, consent to, condition, or reject delayed performance of this Order resulting from force majeure.
9. Miscellaneous.
 - (A) This Order is governed by the laws of the State of California. Any action arising out of this Order shall be brought and tried in the County of Orange, State of California, and the prevailing party shall be entitled to reasonable attorneys' fees, costs, and expenses.
 - (B) Seller shall comply with all applicable federal, state, and local laws, rules, and regulations in regard to nondiscrimination in employment

because of race, color, ancestry, national origin, religion, sex, marital status, age, medical condition, pregnancy, disability, or other prohibited basis. All nondiscrimination rules or regulations required by law to be included in this Order are incorporated by this reference.

- (C) Any approved additions, deletions, or modifications to the terms of this Order are included on Exhibit A attached hereto and incorporated herein by this reference.
- (D) Seller is acting as an independent contractor, not an agent or employee of District. There are no express or implied third-party beneficiaries to this Order.
- (E) Unless specified in the Order, Seller shall not release any advertising, client-list, or other promotional material mentioning District or attributing any review or quotes to District without the prior written consent of District for such material.
- (F) No portion of this Order may be assigned or subcontracted by Seller or by operation of law without the prior written approval of District's Purchasing Manager or designee.
- (G) No waiver of any term or condition of this Order shall be a continuing waiver thereof. District may at any time insist upon strict compliance with the Order, notwithstanding any previous customary practice or course of dealing to the contrary, or any prior waiver of any term or condition.
- (H) This Order represents the entire agreement between District and Seller as to those matters set forth herein, and no prior oral or written understanding or agreement shall be of any force or effect with respect to those matters covered by this Order.
- (I) This Order may be amended only in a specific writing executed by both District and Seller and identified as an amendment hereto.
- (J) Any obligations and duties which by their nature extend beyond the expiration or termination of this Order, including the warranties and obligations pursuant to Sections 3 and 7 hereof, shall survive the expiration or termination of this Order.
- (K) If any provision of this Order shall be deemed to be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.