

WEST BASIN MUNICIPAL WATER DISTRICT
REQUEST FOR PROPOSALS (RFP)
FOR
MEMBRANE TECHNOLOGY SUPPORT SERVICES
PROFESSIONAL SERVICES

I. INTRODUCTION

West Basin Municipal Water District (WBMWD) is requesting Proposals from interested firms in providing Membrane Technology Support Services. This RFP describes the required scope of services, the minimum information that must be included in the Proposal, and the selection process. Failure to submit the Proposal in accordance with the procedures outlined may be cause for disqualification.

A Pre-Proposal Meeting will be held at the WBMWD Main Office at 17140 S. Avalon Blvd. in Carson on (date and time).

II. GENERAL INFORMATION / PROJECT DESCRIPTION

WBMWD seeks consulting services from a qualified firm to support several aspects of the WBMWD's operations related to the implementation and use of membrane technology for water and wastewater treatment. These services will include both pre-defined activities in support of the existing facility operations and as-needed services supporting the WBMWD's facilities expansion planning, and recycled water marketing program. The desired services require a wide range of expertise in the application, treatment system design, facility planning, and operation and maintenance of membrane processes. The WBMWD's needs for membrane technology support services include the application of microfiltration, ultrafiltration, nanofiltration and reverse osmosis for treatment of wastewater and groundwater sources.

The WBMWD's facilities include several membrane-based treatment systems (microfiltration and reverse osmosis) as part of their overall water treatment processes. An overview of these facilities, including design capacities, follows:

- The West Basin Water Recycling plant (WRP) located in El Segundo, CA is the WBMWD's main treatment facility. The facility treats secondary municipal effluent from the City of Los Angeles' Hyperion Treatment Plant. The WRP produces several grades of recycled water, including:

- Title 22 water - by conventional filtration and disinfection, which is distributed to numerous industrial and irrigation customers.
 - Seawater barrier water - Desalinated recycled water for use as seawater barrier injection water, which is produced by two treatment schemes. The Phase 1 facilities consist of lime clarification, multimedia filtration and reverse osmosis. The Phase 2 facilities consist of microfiltration, followed by reverse osmosis.
 - High pressure and low pressure boiler feed water – This high quality recycled water is produced by microfiltration and reverse osmosis (single pass reverse osmosis for low pressure boiler feed and double pass reverse osmosis for high pressure boiler feed) in the Phase 3 (Chevron) facilities.
- The Mobil Boiler Feed Facility is a satellite treatment facility treating WRP Title 22 water with microfiltration and reverse osmosis.
 - Nitrified water, produced at the satellite plants, is supplied to ChevronTexaco, Exxon-Mobil and BP-Arco.
 - The Millender-McDonald Carson Regional Water Recycling Plant produces recycled water for cooling tower makeup. Similar to the Mobil facility, its treatment process includes microfiltration of WRP Title 22 water, followed by reverse osmosis.
 - The C. Marvin Brewer Desalter is a groundwater desalination facility which has the capacity to produce up to 1.3 mgd of potable water.

The WBMWD's treatment facilities are operated by United Water with the exception of the C. Marvin Brewer Desalter, which is operated by Cal Water Service Company.

<u>Facility</u>	<u>Membrane</u>	<u>Capacity (mgd)</u>
WRP Barrier Plant – RO	Hydranautics ESPA2	5.0
WRP Phase 2 - MF	US Filter CMF	2.9
WRP Phase 2 - RO	Koch TFC-HR	2.5
WRP Phase 3 - MF	US Filter CMF	5.4
WRP Phase 3 (1 st pass RO)	Hydranautics ESPA2	4.6
WRP Phase 3 (2 nd pass RO)	Hydranautics ESPA2	2.6
Mobil Boiler Feed Facility (MF)	US Filter CMF	3.8
Mobil Boiler Feed Facility (RO)	Koch TFC-HR	3.2
Millender-McDonald Carson Regional Water Recycling Plant (MF)	US Filter CMF	5.9
Millender-McDonald Carson Regional Water Recycling Plant (RO)	Hydranautics ESPA2	5.0
C. Marvin Brewer Desalter	Dow BW30	1.3

III. SCOPE OF SERVICES

TASK 1 – Operations Support Services for WBMWD Recycled Water Facilities

The professional services firm shall perform the following services related to West Basin's recycled water facilities:

A. Performance Monitoring

Perform a weekly review of operating data for the microfiltration and reverse osmosis systems and calculated performance parameters for each District facility. Review the water quality data monthly and calculate and plot the relevant performance parameters for each system. Deviations from expected performance will be reported immediately to the operating staff and District management. A quarterly report will be provided for each facility, describing current status, observed trends, and any recommended action. The feedback is a valuable resource not only to the operations staff but also to District Management in that it provides an independent assessment of system performance and membrane condition.

B. Technical Assistance to Operations

Provide technical assistance to the operating staff regarding operation and maintenance of the microfiltration and reverse osmosis systems. Typical activities include:

- Troubleshooting deviations from expected performance In the case of deterioration of membrane condition or performance investigate the cause and make recommendations for corrective action.
- Respond to questions from operating staff and District Management regarding general technology issues or specific operating scenarios (e.g. impacts of changing operating set points)
- Develop new operating and maintenance procedures as new conditions arise including projections of expected membrane life and the impacts of membrane replacement.
- Advise the District on membrane replacement
- Provide guidance on the development of improved membrane cleaning procedures.

C. Periodic Process Evaluation

Every six months, review feedwater quality to each facility relative to the operation of the RO system. The results of that review, including any recommendations for changes to operating practices, will be forwarded to the operating staff and the District in a written report.

D. Training

Provide training to the operating staff as requested. The training will be tailored to provide introductory instruction for new personnel or continuing instruction for experienced personnel. Topics may include principles of membrane technology, maintenance and performance monitoring for both microfiltration and reverse osmosis.

TASK 2 – Engineering Support Services

The professional services firm shall perform the following specialized services:

- A. Perform feasibility studies for new and/or alternative treatment systems and facilities, including preliminary design, determination of process requirements to meet specific water quality objectives, estimation of capital and O&M costs.
- B. Provide technical assistance to the District staff in development of markets for recycled water. This assistance will include development of technical and economic information required by the District and the potential users of recycled water. Also, assist the District in new process development, facilities improvements, and expansion of existing facilities to meet new recycled water applications.
- C. Prepare technical specification documents for procurement of replacement membrane modules (MF and RO) and prepare technical specification documents for competitive procurement of RO antiscalant.

IV. OTHER INFORMATION

The following budget has been designated for the corresponding task as found in the Scope of Services above:

- Task 1 – \$200,000
- Task 2 – \$50,000

Potentially each task will be broken up individually and awarded to different consultants. However, both tasks may be awarded to the same consultant. WBMWD staff will evaluate the level of effort and staff expertise proposed for each individual task.

In the proposal, submit a resource matrix indicating what level of effort can be provided within the specified budget. Information in the resource matrix at a minimum shall include the names of personnel assigned to the task, their related experience and expertise, their number of hours assigned to the task, and their hourly billing rate.

The term of the new contract(s) is expected to begin in Fall 2003 pending Board approval and contract execution. The ending period of the contract is estimated to be 18 months after the execution of the agreement.

V. SUBMITTAL REQUIREMENTS

A. General Qualifications

The successful engineering firm must have an extensive knowledge of current membrane technology.

B. Acceptance of Submittals

WBMWD will accept the Proposal until **(time and date)**. The Proposal shall be submitted to:

Van M. Jew, P. E.
Senior Water Resources Engineer
West Basin Municipal Water District
17140 S. Avalon Blvd., Suite 210
Carson, California 90746-1296

Submit four (4) copies of your firm's proposal. Proposals received after the date and time listed above will not be accepted or considered for this Project.

C. Information to be Submitted

The Proposal must be concise, well organized and demonstrate your firm's team's qualifications and experience related to the proposed Project. The Proposal may not exceed 20 one-side 8½ × 11 pages including preprinted material, past experiences, resumes, graphics, forms, pictures, etc.

The Proposal shall include, as a minimum, the following information:

1. Identity of firm: form of business (corporation, partnership, or other), location and address, telephone and fax number and contact for response.
2. A statement as to the firm's history as an established entity.
3. A statement demonstrating understanding of the Project. Include identification of key issues and potential obstacles. Describe applied methodology to overcome those obstacles.
4. Previous experience of the firm / team in performing work similar to that proposed. Include your specific role on the project(s), the construction contract value and the term of your engagement on the project(s).
5. Office from which the Project will be administered.
6. A list of proposed sub-consultants and their role in the design effort.
7. A project-specific organizational chart identifying key project personnel by name and title.
8. Qualifications and resumes of all key personnel listed on the Organizational Chart:
 - a. Pertinent experience, including title or duties on similar projects.
 - b. Statement of California Professional Engineering registration
 - c. Academic Credentials.
 - d. Membership in and certification by professional societies or other organizations.
9. Comprehensive description of services to be provided.
10. Names, telephone numbers and addresses of a minimum of three (3) existing or former clients on similar projects, who may be contacted as references.
11. Project Cost: Provide a list of complete project costs including working hours for each team member and appropriate hourly rates.

VI. INTERVIEW

WBMWD may elect to conduct interviews with proposed key personnel (up to four) to discuss their qualifications.

VII. SELECTION PROCESS

A selection committee composed of WBMWD staff will review the Proposals and consider the following factors to select the most qualified firm:

1. Completeness of Proposal.
2. Project approach and understanding.
3. Extent of the team's experience.
4. Professional qualifications of key personnel.
5. Quality of previous work performed.
6. Ability to manage community-sensitive schedule-driven projects.

7. Timeliness for performance or work, and adherence to budget.
8. Cost of services provided.

After evaluation of the Proposal and Interview, WBMWD will select the most qualified firm to negotiate an Engineering Services Agreement.

VIII. INSURANCE REQUIREMENTS

In addition to Worker's Compensation, General Liability, and Automobile Liability Insurance, the proposing Consultant must provide Professional Liability Insurance coverage (Errors and Omissions) in accordance with the WBMWD Professional Services Agreement.

IX. SPECIAL CONDITIONS

WBMWD, as a matter of policy, encourages the participation of qualified Minority, Disadvantaged, and Women-owned Business Enterprises (MBE, DBE, WBE) and Emerging Businesses in response to this invitation. WBMWD does not discriminate on the basis of race, color, national origin, religion, age, ancestry, medical condition, disability or sex in consideration for an award of contract.

WBMWD reserves the right to cancel, in part or entirely, the Request For Proposals, including but not limited to, selection schedule, submittal date, and submittal requirements. This RFP does not commit WBMWD to award a contract, to defray any costs incurred in the preparation of the Proposal pursuant to this RFP, or to procure or contract for work.

All proposals submitted in response to this RFP become the property of WBMWD's public records and, as such, are subject to public view. WBMWD reserves the right to request additional information or clarification during evaluation process.

X. QUESTIONS

Questions regarding this Request for Proposals can be directed to Mr. Van Jew at (310) 660-6234.