ENGINEERING AND OPERATIONS COMMITTEE MEETING
Tuesday, May 16, 2017 at 3:30 p.m.

CALL TO ORDER

PLEDGE OF ALLEGIANCE

PUBLIC COMMENTS

Non-Agendized Matters: Members of the public are invited to address the Board on matters which are not on the Agenda. Each speaker is limited to three (3) minutes. The Board will set aside thirty (30) minutes for public comments.

Agendized Matters: Members of the public may comment on Agenda items before action is taken, or after the Board has discussed the item. Each speaker is limited to five (5) minutes.

CONSENT CALENDAR ITEMS:
Approve all matters under the Consent Calendar by one motion unless a Board member, staff, or a member of the public requests a separate action.

1. Developer Project Status Report
2. Mesa Water® and Other Agency Projects Status Report
3. Water Quality Call Report
4. Committee Policy & Resolution Review or Development
5. Water Operations Status Report

PRESENTATION AND DISCUSSION ITEMS:
Items recommended for approval at this meeting may be agendized for approval at a future Board meeting.
None

ACTION ITEMS:

6. MWRF Performance Support Services
7. SCADA System Maintenance and Support Services
8. Environmental Health and Safety Support Services
9. Landscape Maintenance Services
10. Well 8 Demolition Project Construction

REPORTS:

12. Directors' Reports and Comments

INFORMATION ITEMS:

None
<table>
<thead>
<tr>
<th>FILE NO.</th>
<th>PROJECT ADDRESS</th>
<th>PROJECT DESCRIPTION</th>
<th>PROJECT NOTES/STATUS</th>
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<tbody>
<tr>
<td>FILE NO.</td>
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<tr>
<td>MC 2215</td>
<td>119 Cecil Pl</td>
<td>3 Single Family Homes</td>
<td>Plans received and plan check fees paid on 10/5/15. First submittal returned on 10/26/15. Fees paid on 12/15/15. Final mylars and payment received and permit issued on 1/29/16. Attended pre-con meeting on 9/1/16. 3 - 1 inch meters and meter boxes installed on 9/29/16. Site visit on 2/6/17, homes in construction. (5/12/17)</td>
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<tr>
<td>MC2232</td>
<td>189-191 Merrill Place</td>
<td>2 Single Family Homes</td>
<td>Plans received and plan check fees paid on 2/1/16. Plan check completed on 2/12/16 and picked up on 2/29/16. Second plan check received on 3/10/16. Fees paid and permit issued on 5/8/17. (5/12/17)</td>
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<tr>
<td>C003-16-01</td>
<td>788 Center Street</td>
<td>2 Single Family Homes</td>
<td>Plans received and plan check fees paid on 6/28/16. Plans returned on 7/14/16. Fees paid and permit issued on 1/6/17. (5/12/17)</td>
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<tr>
<td>C0006-17-01</td>
<td>155 Flower Street</td>
<td>2 Single Family Homes</td>
<td>Plans received and plan check fees paid on 8/1/16. Plans returned on 8/11/16. Fees paid and permit issued on 9/22/16. On site construction has begun, contractor notified to notify Mesa Water for water utility inspection. (5/12/17)</td>
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<tr>
<td>C0006-17-02</td>
<td>163 Flower Street</td>
<td>2 Single Family Homes</td>
<td>Plans received and plan check fees paid on 8/1/16. Plans returned on 8/11/16. Fees paid and permit issued on 9/22/16. On site construction has begun, contractor notified to notify Mesa Water for water utility inspection. (5/12/17)</td>
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<tr>
<td>C0007-17-01</td>
<td>1620 Orange</td>
<td>2 Single Family Homes</td>
<td>Plans received and plan check fees paid on 8/10/16. Fees paid and permit issued on 2/16/17. Service and meter placement on 3/27/17. (5/12/17)</td>
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<tr>
<td>C0008-17-01</td>
<td>410 Walnut Place</td>
<td>4 Single Family Homes</td>
<td>Plans received and plan check fees paid on 8/10/16. Plans returned on 8/24/16. Awaiting resubmittal. Fees paid and permit issued on 4/7/17. (5/12/17)</td>
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<tr>
<td>C0011-17-01</td>
<td>527 Anton</td>
<td>Fire Line Backflow Relocation</td>
<td>Plans received and plan check fees paid on 9/8/16. Fees paid and permit issued on 4/10/17. (5/12/17)</td>
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<tr>
<td>C0014-17-01</td>
<td>Segerstrom Center for the Arts</td>
<td>Water Main Relocation</td>
<td>Plans received and plan check fees paid on 10/19/16. Plans picked up on 11/5/16. Fees paid and permit issued on 2/16/17. Mainline placement on 4/7/17. Mainline tie-in on 4/19/17. (5/12/17)</td>
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<tr>
<td>C0015-17-01</td>
<td>548 Victoria Street</td>
<td>5 Single Family Homes</td>
<td>Plans received and plan check fees paid on 10/26/16. Plans returned on 11/9/16. Awaiting final fee payment. (5/12/17)</td>
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<tr>
<td>C0016-17-01</td>
<td>3101 Redhill</td>
<td>Commercial Building</td>
<td>Plans received and plan check fees paid on 11/22/16. Plans returned on 11/29/16. Meeting held with owner on 1/5/17. Fees paid and permit issued on 4/21/17. (5/12/17)</td>
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<tr>
<td>C0017-17-01</td>
<td>166 Rochester</td>
<td>2 Single Family Homes</td>
<td>Plans received and plan check fees paid on 12/7/16. Plans returned on 12/15/16 and resubmitted on 1/5/17. Fees paid and permit issued on 5/5/17. (5/12/17)</td>
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<tr>
<td>C0018-17-01</td>
<td>1951 Tustin</td>
<td>2 Single Family Homes</td>
<td>Plans received and plan check fees paid on 12/6/16. Plans returned on 12/7/16. Fees paid and permit issued on 4/13/17. (5/12/17)</td>
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<tr>
<td>C0020-17-01</td>
<td>2136 Thurin</td>
<td>4 Single Family Homes</td>
<td>Plans received and plan check fees paid on 1/13/17. Fees paid and permit issued on 2/28/17. Meters installed on 4/7/17. (5/12/17)</td>
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<tr>
<td>C0021-17-01</td>
<td>2068 Maple Ave</td>
<td>4 Single Family Homes</td>
<td>Plans received and plan check fees paid on 1/13/17. Fees paid and permit issued on 4/21/17. (5/12/17)</td>
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<tr>
<td>C0022-17-01</td>
<td>330 E 17th Street</td>
<td>Bar/Lounge</td>
<td>Plans received and plan check fees paid on 3/22/17. Awaiting final fee payment. (5/12/17)</td>
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<tr>
<td>C0024-17-01</td>
<td>1989 Orange</td>
<td>Meter Upgrade</td>
<td>Plans received and plan check fees paid on 3/27/17. Fees paid and permit issued on 4/25/17. (5/12/17)</td>
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<tr>
<td>C0025-17-01</td>
<td>2053 Tustin</td>
<td>2 Single Family Homes</td>
<td>Plans received and plan check fees paid on 3/22/17. Awaiting final fee payment. (5/12/17)</td>
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<tr>
<td>C0026-17-01</td>
<td>326 E 16th Street</td>
<td>2 Single Family Homes</td>
<td>Plans received and plan check fees paid on 3/20/17. Awaiting final fee payment. (5/12/17)</td>
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<tr>
<td>C0027-17-01</td>
<td>231 Flower Street</td>
<td>Meter Upgrade</td>
<td>Plans received and plan check fees paid on 3/23/17. Fees paid and permit issued on 4/21/17. (5/12/17)</td>
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</tbody>
</table>
Project Title: OC-44 Replacement and Rehabilitation Evaluation and Cathodic Protection Study

File No.: M 2034

Description: Evaluate potential repair and replacement options

Status: Contract awarded to RBF Consulting 2/12/13. Kick-off meeting held on 2/21/13. TM 1, 2 and 3 reviewed by Mesa Water® and City of Huntington Beach. Revised TM 1 and 3 submitted 6/12/13. Final study report due 7/31/13. Staff requested RBF to perform hydraulic modeling and habitat assessment to supplement original SOW. A meeting with MWDOC, MET and RBF to analyze possible new service connections on the OC Feeder held on 6/25/13. Workshop to discuss TM’s held on 7/2/13. Meeting to discuss PDR, permitting, work plan and design concerns held on 7/16/13. Draft PDR and final design scope proposal received 8/6/13. Hydraulic studies “Evaluation of MWD Water Supply Facilities” and “Analysis of Emergency Supply from OC-44 and OCF” received 8/8/13. Staff reviewed the PDR and Hydraulic Study reports and submitted comments to RBF 9/12/13. Received proposal for design of OC-44 Pipeline Rehabilitation Project 9/24/13. Proposal approved by E&O Committee 11/19/13 and by Board on 12/12/13. Staff prepared change order to RBF. Kick-off meeting held on 01/22/14. Project on progress. Outreach coordination meetings with project stakeholders took place on 2/14/2014. RBF is working with City of Newport Beach, County of Orange, and Irvine Company on receiving permits for surveying and geotechnical boring work. Orange County Health Care Permit issued 3/24/2014. Geotechnical boring conducted on 3/28/14. The county of Orange permit was issued April 7, 2014. Biological and Topographic Survey started in mid-April and will continue through the end of July. Scour analysis completed on May 29, 2014. Jurisdictional Delineation completed on 6/30/2014. Project progress meeting with RBF and City of Huntington Beach held on 7/2/14 to review environmental assessment and predesign requirements. The design of the pipeline rehabilitation started on 7/8/2014. 60% plans and specifications submitted for review 9/8/2014. Staff is coordinating with City of Huntington Beach and finalizing review of the design package. Initial Study and Mitigated Negative Declaration submitted 11/2/14. Staff is reviewing the submittal (11/6/14). 60% review meeting with City of Huntington Beach and RBF held on 12/1/14. 90% design submittal received on 2/5/15. Notice of Intent (NOI) posted at County Clerk and State Clearinghouse on 1/29/15. Initial Study/Mitigated Negative Declaration (IS/MND) posted on Mesa Water® website and distributed to agencies/parties identified on distribution list on 1/29/15. Permit applications submitted to the regulatory agencies, legal notice posted in the Daily Pilot, and hard copy of IS/MND posted at front counter on 1/29/15 for public review. The review period concluded 2/27/15. Three comment letters received. Prepared written responses to the comments and held public hearing at the Board Meeting on 4/9/15. 90% design submittal comments sent back to RBF on 3/26/15. Additional questions from RBF analyzed in coordination with the City of Huntington Beach and comments provided to RBF on 6/1/15. Progress meeting with RBF and City of Huntington Beach
RBF is working with the regulatory agencies on obtaining encroachment permits and/or certifications. On 7/16/15 the consultant is scheduled to meet with the US Army Corps of Engineers (USACE) to discuss initial comments and obtain additional directions. Due to USACE staff shortage the permit is anticipated to be issued in March 2016. RBF is working with Regional Water Quality Control Board (RWQCB) on drafting the 401 Water Quality Certification for the project. The 401 Water Quality Certification was issued on 9/29/15. Comments to the California Department of Fish and Wildlife (CDFW) draft agreement were sent by RBF on 7/17/15. The CDFW permit is predicted to be issued in late October, 2015. In mid-June, 2015 RBF provided response to the California Coastal Commission’s (CCC) comments. The comments from CCC were received in the late July, 2015 and the permit is expected to be issued in mid-November, 2015. Permit from Caltrans obtained on August 17, 2015. 100% design package submitted on 7/21/15. Scour protection evaluation and recommendations submitted on 11/5/15. The CDFW should be issued by 12/18/15. The USACE has indicated that their permit should be issued in mid-January 2016. The Habitat Mitigation and Monitoring Plan (HMMP) has been updated by Michael Baker (former RBF) to reflect the USACE’s process and submitted to Mesa Water® for review on 1/8/16. Once the HMMP is revised and approved (1/19/16) it will be forward to all agencies, including Coastal Commission. Draft 1602 Streambed Permit obtained on 12/18/15. Final 1602 Streambed Permit pending CDFW will be issued while HMMP is accepted. U.S. Army Corps of Engineers' 404 permit received on 2/10/16. Revised HMMP sent to CCC for review and approval. Project is pending CCC’s approval at an upcoming hearing. On 2/29/16 a meeting with Fletcher Jones Motorcars, City of Newport Beach, MBI (former RBF), and City of Huntington Beach was held to discuss issues associated with proposed construction activities. Traffic Plan prepared and submitted to the City of Newport Beach for approval on 6/29/16. Per request of CCC a dewatering plan was prepared and submitted for approval. Mesa Water® staff, MBI and CCC met on 10/6/16 and discussed mitigation conditions. Project approved at CCC Public Hearing on 12/7/16. MBI is working on finalizing the HMMP and construction plans and will submit them to CCC. Staff met with MBI on 5/1/17 and discussed comments after reviewing the draft final HMMP. Coastal Development Permit for Construction is anticipated in June, 2017. Project in progress.

**Project Title:** Well Automation and Rehabilitation

**File No.:** MC 2101

**Description:** Rehabilitate all clear water wells and add remote control SCADA capabilities

**Status:** Design: RFP for Design Services released on 7/1/2014. Pre-proposal meeting held on 7/9/2014. 6 proposals received on 7/28/2014; interviewed 3 shortlisted firms on 8/6/2014. Recommendation to award contract to Carollo Engineers approved by E&O on 8/19/2014; Board approval requested on 9/11/2014. Project kickoff meeting held on 10/1/2014. Draft Permit plan received for review on 11/3/14. Well Standardization workshop held on 11/21/14 to align on site layouts, chemical tank sizing, and...

Construction Management (CM) Services: Released and RFP for CM services on December 30, 2014 Preproposal meeting held on January 12, 2015. Four (4) proposals were received on January 26, 2015. Three proposers were interviewed on February 4, 2015, and the recommended Contract with RBF was approved by the Board on March 12, 2015.

60% design received on April 13, 2015. General 60% Design Review workshop held on April 27, 2015 and electrical/instrumentation review workshop held on May 11, 2015. Working on optimizing construction sequence. Electrical design workshop scheduled for June 25, 2015. 90% design submittal received on July 15, 2015. Engineer’s Estimate of probable cost at 90% is approximately $10.1. Workshop to review and address 90% comments held on July 29, 2015. Contractor prequalification package sent to eight (8) General Contractors on July 18, 2015. Four prequalification applications were received on August 17, 2015. 100% Design received on September 16, 2015. Notice Inviting Sealed Bids was released to four prequalified contractors on October 5, 2015. Job Walks were conducted on October 13, 2015 for prequalified Prime Contractors and on November 3, 2015. Addenda and clarifications in response to bidder’s questions have been issued. Bid opening was extended to January 7, 2016 to allow for recent changes for new Well 9 layout. Four bids were received on January 7, 2016. An action item to award a contract to the lowest bidder was approved by the Engineering and Operations Committee on January 16, 2016 and by the full Board on February 11, 2016. Notice to proceed was sent on April 4, 2016. Preconstruction meeting held on April 12, 2016. The project is in the pre-construction submittal phase with several Requests for Information and equipment submittals received from the Contractor by the Construction Manager, and reviewed and responded to by the Design Engineer. Construction activities began at Well 5 on October 3, 2016 with demolition and well rehabilitation beginning in the first week. Video of Well 5 showed scale on the louvers, and potential failure of an unused sounding tube and a small area of the louvers potentially requiring swage patches. Repair completed on November 29, 2016. Well 5 rehabilitation resumed on December 3, 2016. Well 5 chemical facility pad has been constructed and is awaiting a weather forecast of 8 days with no predicted rain to apply the chemical-resistant coatings to the concrete. Well 5 pumping development began on January 4, 2017, and produced fine sand at pumping rates above 1100 gpm. Repairs were made to Well 5, and test pumping performed in February showed acceptable well production over 2500 gpm with manageable sand. Construction continues at the well 5 site, with the chemical tanks set and the chemical facility roof nearly complete. A start up planning meeting was held on March 29, 2017, with Well 5 startup expected in May 2017. Construction of the Well 7 chemical facility is also in progress.
Project Title: Two New Wells

File No.: MC 2158

Description: New wells and real estate services to identify and acquire property

Status: Change Order to Well Rehabilitation and Automation approved at January 20, 2015 E&O to retain Carollo and subconsultant Geotechnical Consultants Inc. (GTC) to provide typical well site layout and hydrogeological investigation to identify promising locations for two new 2,000-gpm clear wells. Met with Real Estate Professionals on February 2, 2015, to discuss scope of work for well site property identification and acquisition. Met with OCWD Chief Hydrogeologist on March 24, 2015, to identify study area for new well sites. Gave Notice to Proceed to Real Estate company on May 4, 2015, and provided consultant report on preferred well site property characteristics. Real Estate consultant developed an advertisement postcard to describe the type of property needed, and sent it to over 1,000 commercial and industrial property owners in the study area. Three sites have been presented for evaluation. Also met with the Laguna Beach County Water District (LBCWD) Manager of Engineering and Operations on October 13, 2015, to discuss development of a jointly-owned well on property in Fountain Valley owned by LBCWD. An offer to purchase one site was presented to the property owner on November 16, 2016. The owner has not responded, and the offer time frame has expired. An offer for a different property was prepared and presented on January 6, 2016. Owner has decided to lease the property rather than selling. A third property is being evaluated by staff and OCWD for potential interference from the OCWD mid-basin injection. Travel time analysis results from OCWD showed that the property is inside the six month travel time window. A meeting was held on February 22, 2016, with OCWD and DDW to discuss the travel time analysis, and DDW determined that it would not issue a permit for a drinking water well at the site. A meeting with the City of Santa Ana Water Department was held to discuss the possibility of a jointly-owned well on a City of Santa Ana-owned site. An offer to purchase was presented to a property owner for an underutilized portion of a property on May 4, 2016. The offer was rejected. A revised offer was submitted on June 7, 2016. The owner has decided not to sell the property. Staff is working with Voit Real Estate to identify and evaluate underutilized sites in the vicinity of the study area. One underutilized site on Sunflower Boulevard was considered but rejected for being only 200 feet from the current Well 9B site, which would add significantly to pumping costs at both sites. Another site near Bristol and St. Gertrude was considered, but rejected due to the cost of the property, its location adjacent to a residential area, and the cost of construction of two miles of pipeline to Mesa Water’s service area. A purchase agreement for an industrial site in Santa Ana is being negotiated. The purchase agreement includes a 45 day contingency period, escrow close date of March 31, 2017, and 18 month leaseback to the seller. The Phase 1 Environmental Site Assessment and Property Condition Assessment were received on February 23, 2017, and showed the site and property to be in good condition. The lease was executed on March 27, 2017, and escrow closed on April 5, 2017. The real estate consultant is continuing to
look for an additional property for a second new well site.

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<th>MWRF Parking Project</th>
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<tr>
<td>File No.:</td>
<td>M 2052</td>
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<tr>
<td>Description:</td>
<td>Conduct parking layout design</td>
</tr>
<tr>
<td>Status:</td>
<td>Parking study prepared by Onward Engineering in November 2013. The Board approved alternative # 3 Parking Along the MWRF Frontage on Gisler Ave. on 3/15/2014. RFP for the parking design in consultants’ review (11/6/14). RFP sent out to consultants 11/25/14. Proposals due 12/19/14. Interview with three consultants held on 1/7/15. Recommendation brought to January E and O for consideration of approval and will be brought to the Board on 2/12/15 for approval. Project approved 2/12/15. Kick-off meeting held on 2/19/15. Design in progress. 30% design submittal submitted 3/23/15. Staff met with C.J. Segerstrom and discussed concept and details of the proposed parking layout. Segerstrom verbally approved the project. City of Costa Mesa approved the concept and currently consultant is evaluating the landscape requirements with the City of Costa Mesa. E and O Committee accepted the conceptual design and provided comments on 5/19/15. The condition approval from Segerstrom received on 6/29/15. Staff is working with the designer (CivilSource), Mesa Water’s attorney, and City of Costa Mesa on addressing Segerstrom’s comments. Staff is reviewing the Initial Study/Summary of Findings Report received on 8/3/15. Staff has addressed all Segerstrom’s requests included in their 6/29/15 letter and prepared a response letter. Approved construction plans were received from the City of Costa Mesa on 12/29/15. The final bid package completed 3/15/16. Encroachment Permit Application submitted to the City on 3/6/16. Hold Harmless Agreement for the Installation of Off-Site Parking Improvements within Public Right-of-Way received on 5/4/16. Staff reviewed the Agreement and sent comments to the City of Costa Mesa on 5/27/16. City approved all revisions as proposed by Mesa Water® and sent the agreement for signature on 6/24/16. The Engineering and Operations Committee reviewed the Agreement at July 19, 2016 meeting and recommended Board approval. Board approval obtained on August 11, 2016. Agreement sent to the City for execution and recording on 9/7/16. Recorded Agreement received from the City on 10/19/16.</td>
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<th>Pipeline Testing Program</th>
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<tr>
<td>File No.:</td>
<td>MC 2112</td>
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<tr>
<td>Description:</td>
<td>Implement Resolution No. 1442 Replacement of Assets to annually perform non-destructive testing of 1% of the distribution system, and destructive testing of segments that are shown to have less than 70% of original wall thickness by non-destructive testing.</td>
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<td>Status:</td>
<td>Identifying segments for FY 2015 non-destructive testing and arranging for excavation and removal of segments that tested below 70% remaining wall thickness in FY2014 non-destructive testing. Released a Request for Proposal for a consultant to</td>
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administer the program and develop standard operating processes on February 6, 2015. Three proposals were received on February 26, 2015, and interviews conducted on March 4, 2015. A contract with RBF was approved by the Board on April 9, 2015. Kickoff meeting held on April 21, 2015. Project status meeting held on June 8, 2015. Draft deliverable of prioritization of asbestos concrete pipe (ACP) for non-destructive testing received on June 26, 2015; updated draft received on August 7, 2015. Draft deliverable with recommendations for non-destructive testing technologies for metallic pipe received on August 7, 2015. Draft evaluation of destructive testing laboratories and tests received on August 21, 2015; final report received on September 16, 2015. Echologics performed non-destructive testing of 3 miles of ACP from July 13-17, 2015. Draft report received on August 14, 2015; final report received on September 1, 2015. Based on the Echologics reports from 2013 and 2015, ten ACP segments were selected for sampling and destructive testing. Three ferrous material pipelines with a history of repairs were also selected for field sampling and destructive testing. Draft bid documents for field sampling received on October 16, 2015. Final bid documents were released to three on-call contractors on November 23, 2015, for bids. Pre-bid meeting was held on December 7, 2015 and attended by all three of the bidders. Three bids were received on December 16, 2015. All bids exceeded the budget and the General Manager’s signing authority. An action item to approve a contract with the low bidder was approved by the Engineering and Operations Committee on January 19, 2016, and by the Board on February 11, 2016. Notice to Proceed with field sampling was given on March 7, 2016. An encroachment permit from the City of Costa Mesa was received on April 25, 2016. Field sampling began on May 16, 2016 and completed on June 28, 2016. Samples were shipped to MEIC Lab in Portland, Oregon, for destructive testing on July 7, 2016. Samples were received at MEIC on July 11, 2016. Lab results, including estimates of remaining useful life, were received on October 24, 2016. Non-destructive testing of the next 3 miles of ACP was completed on September 16, 2016, and the draft report was received October 1, 2016. All of the ACP and Cast Iron Pipe (CIP) showed less than 70% remaining wall thickness compared to its assumed original thickness. Extraction of six sections of ACP and two sections of CIP are in process for 2017 destructive testing. ACP samples were sent to WSP Canada for destructive testing. CIP samples will be sent to McWane Ductile’s lab in Ohio for destructive testing. Destructive testing results are expected in June 2017. A Request for Qualifications for consulting services for the Pipeline Integrity Program will be developed and released in May 2017.

Project Title: MWRF Outreach Center

File No.: MC 2147

Description: Report on the feasibility of reconfiguring and potentially expanding the functional uses of the MWRF Operations and Administration Building to include a multi-purpose room and educational forum.

Status: Mesa Water® is coordinating with IBI Group (designer) on the feasibility of implementing an education and outreach center at the MWRF. Kick-off meeting was
Program Requirement Questionnaire meetings were held on 6/9/2015 and 6/17/15. Program Report delivered to Mesa Water® for review on 7/7/2015. 60% design concepts are scheduled for submittal on 08/14/15. 100% concept design received on 09/29/15. Virtual rendering received on 10/6/15. Concept designs presented at the October Board Workshop. A follow-up planning session was held at the November Engineering and Operations Committee Meeting to capture the Board’s input on evaluating reduced cost options and to revisit the existing Boardroom improvements. Board directed staff to develop a scope of work to evaluate scaled down layouts of the MWRF Outreach Center and revisit expanded layouts of the main Boardroom. Engineering and Operations Committee approved a contract amendment with IBI Group to reflect the revised scope of work. Item was approved by the Board February 11, 2016. IBI Group performed an inspection of the existing Boardroom on February 25, 2016 and are in the process of developing conceptual layouts. Staff review and meeting occurred on April 11, 2016. Conceptual layout work has been completed.

Project Title: Mesa Water® Main Office HVAC Study

File No.: MC 2171

Description: Evaluate the existing HVAC system and provide recommendations for improved efficiency and operations of the system.

Status: Mesa Water® has contracted with Goss Engineering Inc. to perform this study. Kick off meeting was held January 13, 2016. Goss Engineering performed a field survey of both main campus buildings over the course of three days. Draft report with results and recommendations was reviewed by staff. The final report was delivered on June 30, 2016 and was reviewed by staff for completeness. Staff presented the findings and recommendation to the Board of Directors at the July E&O Committee Meeting. Board approved contract to move forward with the design of a complete Variable Refrigerant Flow system. Contract has been executed and returned to Goss Engineering. Project kick-off and notice to proceed was issued on November 30, 2016. 50% drawings have been delivered for review and comments returned. Stakeholder meeting was held on February 2, 2017 to provide comments for the new VRF system 50% design. 90% design drawings and specifications were submitted for Mesa Water® review on March 10, 2017. Bid package is currently being developed by the consultant.

Project Title: Reservoirs 1 & 2 Pumps, Controls, and Chemical System Assessment Project

File No.: MC 2173

Description: Evaluate the existing Pumps, Controls, and Chemical Systems at Reservoirs 1 & 2. The project includes lab testing of pump efficiency, physical assessment of pumps and pipework, assessment of the existing control system, and preliminary design of a chemical dosing system. Recommendations for improved
efficiency and operations of the system will be included in a final report.

**Status:** Mesa Water® has contracted with Hazen & Sawyer to perform this study. Kick off meeting was held September 30, 2015. The consultant performed a field survey of both Reservoirs 1 & 2 over two days. A preliminary outline of technical memo 1 was provided on December 11, 2015. Initial data requests were responded to by December 7, 2015, with follow up responses provided on January 7, 2016 (SCADA Data) and February 9, 2016 (Jockey Pump Data). Pump testing scope of work has been reviewed by Mesa Water® and returned to the Consultant for revision. TM-1 has been reviewed by staff and returned to the consultant. Pump extraction plan and bid documents are currently being reviewed by staff. The Consultant has begun the preliminary design of a chemical dosing system. Request for bids for the pump extraction will be released in August 2016. Bids for the pump extraction were submitted and reviewed. The item was presented to the Engineering and Operations Committee at the September 20, 2016 meeting. Contract has been executed. Field assessment was completed on October 19, 2016. Factory pump testing scheduled in early January 2017. Further field tests conducted on December 2, 2016. Pump 2 from Reservoir 1 was removed and sent to the factory test facility on January 3, 2017. Factory testing was completed on February 27, 2017 with results aligning with the results obtained in the field. The pump has undergone a physical assessment and a refurbishment scope of work developed. The pump will be installed and operational on May 9, 2017. TM-2 is scheduled for delivery on May 15, 2017. Chemical management PDR is scheduled for delivery on May 18, 2017.

**Project Title:** Other Agency Project Coordination

**File No.:**

**Description:** Median construction in Placentia Ave. between Wilson St. and Adams Ave.

**Status:** Mesa Water® 16” main runs 5’ East of the street center line. Mesa Water® is coordinating with designer and City on design of necessary protection and root barrier for the water main. 85% design plans received on (12/22/14). Plan review in progress 1/8/15. Plan review comments sent to the City 2/6/15. Mesa Water® provided update comments to landscaping plans on 6/17/15. Mesa Water® continuing to coordinate with the City, Stivers and Associates, Inc., and City Designer on layout of project. Revised final plans submitted for Mesa Water® review on 11/19/15. Staff reviewed the submittal in cooperation with Mesa Water® landscape consultant (Stivers Associates) and submitted comments to the City Designer on 12/28/15. The comments have been accepted by the Designer and Final Plans were submitted on 2/9/16. New comments sent to the designer on 2/18/16. The revised final plans received on 3/21/16 and approved by Mesa Water® on 3/31/16. City of Costa Mesa awaiting state funding for the project.
### Project Title: Other Agency Project Coordination

**File No.:** M 2106  
**Description:** Water main relocation in New Hampshire Dr. due to Greenville-Banning Channel Improvements by County of Orange.

**Status:** Relocation of 12” water main is required due to enlarged box culvert on Greenville-Banning Channel. Task Order No. RBF-2 issued to RBF Consulting on June 24, 2014 for design of the relocation. Mesa Water® is coordinating with County of Orange and RBF. Design in progress. Hydraulic analysis received from RBF 9/12/14 indicated that taking the New Hampshire pipeline out of service during construction of the Greenville-Banning Channel will have no adverse impacts on the distribution system (8/9/14). Mesa Water® is working with OCFCD on finalizing the cooperative agreement. E&O Committee approved the agreement 11/18/14. Pipeline relocation design package submitted to Mesa Water® on 1/31/15. Mesa Water® is coordinating with OCFCD and consultant to address final comments. Plans and specifications for the pipeline relocation completed 3/3/15 and forwarded to OCFCD on 3/5/15. Project was delayed until Spring of 2016. Attended the pre-construction meeting on 7/21/15. Construction meeting with OCFCD’s contractor Sukut Construction (Sukut) held on 4/7/16. Staff is coordinating with OCFCD and Sukut on project schedule. Two new 12-inch valves installed by Mesa Water® on New Hampshire Dr. at Idaho Ave. on 7/7/16 and air-vac valve relocated on 7/18/16. Approx. 110 ft. long section of existing 12” water main removed and existing box culvert demolished on 7/25/16. Construction of the new box culvert and water main replacement were completed in September, 2016. Completion of the Channel Improvements Project is scheduled for mid-February, 2017. Final project walk through was held on 2/23/17. Project is completed. Awaiting invoice for the water main replacement.

### Project Title: Well 8 Demolishing Project

**File No.:** M 2219  
**Description:** Prepare Well 8 demolishing plans and remove above-ground portions of the well and onsite facilities at the well facility to the scope and extent acceptable to the land owner Interinsurance Exchange of the Automobile Club of Southern California (the “Exchange”) to return the site to its near original condition.

**Status:** The Consultant has performed the required site Investigation and final design Services. The Consultant provided a 90% design which is being reviewed by Mesa Water. On February 6, 2017, Mesa Water® staff met with the Exchange personnel and discussed the 90% plan review comments. The comments will be incorporated into the
100% design. In November 2016, the property owner assigned a project manager to work with Mesa Water® to move the project forward. Well 8 demolition is scheduled for early June and should take approximately 60 calendar days to complete. Received 100% construction plans on 4/19/17. Project sent out to bid (13 contractors) on 4/20/17. The pre-bid job walk held on 4/26/16. One bid received on 5/4/17. Staff recommended that the Board of Directors award a contract to RC Foster Corporation.
Water Quality Call Report
April 2017

Date: 4/11/2017
Source: Phone
Address: 
Description: Customer called stating that the water from the Mesa Water® water vending machine did not taste good and may have given her husband a stomach ache.

Outcome: Explained to customer that weekly bacteriological samples have been negative. Followed up with customer next day and she was satisfied with the water she received from vending machine.

Date: 4/18/2017
Source: Phone
Address: 2719 Albatross
Description: Customer reported sand/gravel from hot water heater and also noticed it in the washing machine.

Outcome: Customer was asked to flush front hose bib and observe water for sand or gravel. Customer did not notice any gravel or sand from hose bib and water was clear. It appears to be an internal issue with the water heater and customer said that she will contact a plumber.

Date: 4/18/2017
Source: Phone/Visit
Address: 1170 Baker H1
Description: Customer noticed water became cloudy after recent building remodel.

Outcome: During site visit, water was tested for pH, chlorine residual, and temperature and all were within normal range. Recommended customer to remove aerators at faucets and flush throughout the house. Water heater located in the attic has not been flushed after construction. Cloudy water cleared up after flushing.
Date: 4/21/2017
Source: Phone/Visit
Address: 311 Ogle
Description: Customer stated that water from kitchen sink tastes like soap.
Outcome: Water samples from kitchen faucet and outside hose bib had no soapy taste or odor at the time of field visit. Customer agreed and was satisfied.
## Policy Assignments for 2017

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<th>Date Adopted</th>
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MEMORANDUM

TO: Engineering and Operations Committee
FROM: Tracy E. Manning, Water Operations Manager
DATE: May 16, 2017
SUBJECT: MWRF Performance Support Services

RECOMMENDATION

Recommend that the Board of Directors award a contract for a period of five years with two one-year renewable options with an average annual amount of $79,063 to Separation Processes, Inc. to provide performance support of the Mesa Water Reliability Facility and to authorize execution of the contract.

STRATEGIC PLAN

Goal #1: Provide a safe, abundant, and reliable water supply.
Goal #2: Practice perpetual infrastructure renewal and improvement.

PRIOR BOARD ACTION/DISCUSSION

At its April 18, 2017 meeting, the Engineering and Operations Committee was presented this topic as an information item.

BACKGROUND

The Mesa Water Reliability Facility (MWRF) uses highly advanced membrane treatment technology to remove organic color from high-quality ground water. The MWRF is a critical part of Mesa Water’s supply portfolio and enables the District to supply 100 percent of its water from local groundwater sources. Mesa Water District (Mesa Water®) has solicited proposals from qualified firms to provide professional consulting support. The selected consultant shall assist with monitoring membrane and overall MWRF performance, staff training and standard operating procedure development, and troubleshooting activities.

Utilizing a professional membrane monitoring and support firm provides Mesa Water® with the benefit of decades of experience with hundreds of treatment facilities, allowing Mesa Water, in conjunction with the consulting firm, to identify in advance when membranes require cleaning, cartridge filters require replacement, and instrumentation begins to reach the end of its useful life. This allows Mesa Water to plan work well in advance to ensure the MWRF remains online and available during peak supply demands while extending the life of the 1484 individual membrane elements that make up the nanofiltration system. These elements have a replacement value of approximately $1.5 million.

The scope of work provided under the MWRF Performance Support Services contract is summarized as follows:

- Membrane system performance monitoring and reporting;
- Identification of conditions that may impact system performance such as feed water quality changes, scaling potential, membrane performance changes, or other trends;
- Troubleshoot deviations from expected performance and make recommendations for corrective actions;

TO:
FROM: Tracy E. Manning, Water Operations Manager
DATE: May 16, 2017
SUBJECT: MWRF Performance Support Services

Page 1 of 3
• Develop new operations and maintenance procedures for new equipment and processes; update existing procedures when changes are necessary;
• Advise staff regarding membrane replacement needs and schedule;
• Provide on-site guidance and staff training on the application or development of membrane cleaning procedures; and
• Prepare technical specification documents for procurement of replacement membranes or equipment and prepare specifications for procurement of specialized maintenance activities.

DISCUSSION

On March 20, 2017, Mesa Water solicited proposals from seven qualified professional engineering firms to provide the requested scope of work. Proposals were received from the following three firms: Black and Veatch, Carollo Engineers, and Separation Processes, Inc. (SPI). The three proposals were reviewed and evaluated by a selection panel comprised of Mesa Water staff and a City of Huntington Beach representative. Evaluation and scoring criteria was based on qualifications, experience, and project understanding. The top two firms were invited to interview and provide a presentation on their approach to the required scope of work.

The results of the selection process and proposal costs are as follows:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Proposer</th>
<th>Proposal Score</th>
<th>%</th>
<th>Average Annual Cost (inc 120 as-needed hours)</th>
<th>5-Year Contract Cost</th>
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<tr>
<td>1</td>
<td>SPI</td>
<td>4.4</td>
<td>88%</td>
<td>$79,063</td>
<td>$395,318</td>
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<td>2</td>
<td>Carollo Engineers</td>
<td>4.3</td>
<td>86%</td>
<td>$93,242</td>
<td>$466,210</td>
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</table>

Both firms are well qualified to perform the work effort and have extensive knowledge of the MWRF facility. Each firm provided a unique and solid approach to the required scope of work. Based on qualifications and experience, the selection panel determined that SPI has the most experience with the required scope, as they provide similar monitoring and support for 26 other membrane treatment facility operators, including Irvine Ranch Water District, Orange County Water District, Water Replenishment District, and Chino Basin Desalter Authority. SPI specializes in performance monitoring and provides a good value to ensure the MWRF facility operates optimally and remains available to ensure a safe and reliable local water supply.

Staff recommends the Board consider awarding a contract to SPI for a not-to-exceed amount of $395,318. The cost breakdown per year is shown in the table below:
<table>
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<tr>
<th>Year</th>
<th>Annual Base Monitoring Hours</th>
<th>Annual As-Needed Hours</th>
<th>Annual Cost</th>
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<td>1</td>
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5-Year Total: $395,318

Attachment A is SPI’s proposal; additional proposals are available for review upon request.

FINANCIAL IMPACT

In Fiscal Year 2018, $74,460 will be budgeted for MWRF Performance Support Services.

ATTACHMENTS

Attachment A: Separation Processes, Inc. Proposal
Proposal for

MESA WATER RELIABILITY FACILITY
(Nanofiltration Potable Water Plant)

PERFORMANCE SUPPORT SERVICES

April 17, 2017
# Table of Contents

Cover Page........................................................................................................... Page 1
Addendum I Signed and Accepted................................................................. Page 2
Addendum II Signed and Accepted............................................................... Page 3
Certificate of Insurance .................................................................................. Page 4
A. Firm Qualifications and Experience ......................................................... Page 5
B. Staff Experience and Availability ............................................................. Page 11
C. Scope of Work............................................................................................ Page 15
Appendix A – Resumes of Key Staff ............................................................... Page 21
Appendix B – Professional Services Agreement Acceptance Form.............. Page 30
SPI is pleased to present the following proposal to Mesa Water® District for the Mesa Water® Reliability Facility Membrane and Plant Performance Support Services RFP. This project is ideally suited to our capabilities, experience and interest. We trust this proposal will convey this in further detail and look forward to the opportunity to discuss it should you have questions.

Information required by the RFP is provide below:

- **Name of Business:** Separation Processes, Inc.
- **Business Address:** 3156 Lionshead Ave., Suite 2
  Carlsbad, CA 92010
- **Business Telephone:** 760-400-3660
- **Business Fax:** 760-400-3661
- **E-mail address:** jperlman@spi-engineering.com
- **Web Site Address**
  www.spi-engineering.com
- **Federal Tax ID:** 95-3550186
- **Type of Business:** S Corporation
- **Years in Business:** 37 years, Incorporated in 1980
- **Authorized to represent SPI:**
  Manager Membrane Support Services
  John Perlman
  Telephone: 760-400-3660
- **Authorized to sign contracts for SPI:**
  Gerry Filteau
  President
  Telephone: 760-400-3660
- **E-mail address:** gfilteau@spi-engineering.com

We appreciate the opportunity to present this proposal to Mesa Water® District and look forward to working with the District in the future.

Sincerely,

Gerry Filteau
President
ADDENDUM NO. #1 to the RFP For
Mesa Water® Reliability Facility (MWRF) Performance Support Services

TO ALL RFP HOLDERS: Effective this date, March 24, 2017
The following changes, additions and/or deletions as shown in strikeouts or underlined italics are hereby made a part of the RFP Project for Mesa Water District, Costa Mesa, California, as fully and completely as if the same were fully set forth therein:

1. Add the following to the end of the RFP Section I.B. Project Overview

   The contract duration is for a period of three (3) years with an option to renew the contract for two (2) years.

2. Amend Section II. General Information, Part B: Proposal Schedule:

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<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>Release of RFP</td>
<td>03/20/2017</td>
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<td>Pre-Proposal Meeting</td>
<td>04/03/2017</td>
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<td>Interviews</td>
<td>04/27/2017</td>
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<td>06/08/2017</td>
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3. Amend Section II. General Information, Part C: Pre-Proposal Meeting: A pre-proposal meeting shall take place on April 3, 2017 at 2PM 1 PM at the Mesa Water District headquarters located at 1965 Placentia Avenue, Costa Mesa, CA, 92627 Mesa Water® Reliability Facility located at 1350 Gisler Avenue, Costa Mesa, CA 92626.

4. Add the following to Appendix C Scope of Work end of first paragraph.

   The time period for the hours listed is for one (1) year. The Contract duration is for a period of three (3) years with an option to renew the contract for two (2) years.

A COPY OF THIS ADDENDUM SIGNED BY THE BIDDER SHALL BE ENCLOSED WITH THE PROPOSAL.

By MESA WATER DISTRICT

By Gerry Filteau
President

Name and Title
ADDENDUM NO. #2 to the RFP For
Mesa Water® Reliability Facility (MWRF) Performance Support Services

TO ALL RFP HOLDERS: Effective this date, April 10, 2017
The following changes, additions and/or deletions as shown in strikeouts or underlined italics
are hereby made a part of the RFP Project for Mesa Water District, Costa Mesa, California, as
fully and completely as if the same were fully set forth therein:

1. Amend the following to the end of the RFP Section I.B. Project Overview

   The contract duration is for a period of three (3) five (5) years with an option to renew the
   contract for two (2) years.

2. Amend the following to Appendix C Scope of Work end of first paragraph.

   The Contract duration is for a period of three (3) five (5) years with an option to renew the
   contract for two (2) years.

A COPY OF THIS ADDENDUM SIGNED BY THE BIDDER SHALL BE ENCLOSED WITH THE
PROPOSAL.

Bidder

By Gerry Filter, President
Name and Title

By MESA WATER DISTRICT

Sohla Vazirnia, Operations Coordinator
**CERTIFICATE OF LIABILITY INSURANCE**

**PROOF OF INSURANCE**

**SEPARATION PROCESSES, INC.**
3156 Lionshead Avenue, Suite 2
Carlsbad, CA 92010

---

**COVERAGES**

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**CERTIFICATE HOLDER**

**CANCELLATION**

Should any of the above described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

**AUTHORIZED REPRESENTATIVE**

[Signature]

---

**PRODUCER**

License # DE67768

**INSURED**

Separation Processes, Inc.
3156 Lionshead Avenue, Suite 2
Carlsbad, CA 92010

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**ACORD CERTIFICATE HOLDER CANCELLATION**

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Page 4

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Section A: FIRM QUALIFICATIONS & EXPERIENCE

FIRM INTRODUCTION

Separation Processes Inc. (SPI) is an independent consulting engineering firm focused on the application of membrane technology for municipal water treatment. Founded in 1980, SPI has been in the forefront of applying membrane processes to water and wastewater treatment for over three decades. SPI does not sell equipment or products, nor do we represent any manufacturer. We are truly independent consultants focused on helping our clients maintain and optimize the performance of their facilities. SPI is located in Carlsbad, CA.

SPI is ideally suited to provide Membrane and Plant Performance Support Services to Mesa Water® District not only because of our long history and intimate knowledge of Mesa Water’s® membrane operations, but because we currently provide similar services to more than a dozen municipal clients using membrane technologies. SPI has assembled a Dedicated Team with an outstanding Depth of Knowledge and an unparalleled Breadth of Experience to support the Mesa Water® in any endeavor related to its membrane facility operations. SPI's project team has an understanding of Mesa Water®'s goals of minimizing operating costs while maintaining stable and reliable membrane performance. SPI's project team will continue to add superior value to Mesa Water®'s operations team.

STRENGTH AND STABILITY OF FIRM

SPI offers more than thirty five (35) years of knowledge in membrane technologies. Not only do our clients have this experience at their disposal, but they will also have access to the real-world experience gained at all of SPI’s client facilities. This ensures that SPI’s review of plant performance is always current, and based on a sound understanding of the technology and its application within the treatment plant. SPI is currently supporting several municipal agencies within Southern California that are using spiral-wound membrane technologies for the treatment of groundwater or surface water, including:

- **Irvine Ranch Water District**, DATS, CTS, Potable Treatment Plant (2007 - present).
- **Western MWD (SAWPA)**, Arlington Desalter (1990 - present).
- **Chino Basin Desalter Authority**, Chino 1 and 2 Desalters (2000 - present, 2006- present).
SPI’s breadth of understanding for nanofiltration and reverse osmosis treatment technologies has also benefited from the experience gained from our clients treating a variety of source waters, such as:

- **Yucaipa Valley Water District**, Henry N. Wochholz Regional WRF.
- **West Basin MWD**, El Segundo, CA.
- **Orange County Water District**, GWR System.
- **East Bay MUD**, Richmond, CA RARE.
- **City of Scottsdale, AZ**, Water Campus.
- **Western Corridor Recycled Water Project, Australia**, Bundamba, Gibson Island, Luggage Point AWTPs.

SPI is currently supporting more than 200 mgd of spiral wound RO/NF treatment plants, including membrane product models from Hydranautics, Toray America, and Dow/FilmTec. A detailed listing of SPI’s current clients and services, with contact information, is available upon request.

**OVERVIEW OF FIRM’S CAPABILITIES IN PROJECT SCOPE**

SPI understands Mesa Water District’s expectations and goals for the Membrane and Plant Performance Support Services contract as we have been providing these support services to the Mesa Water® MWRF over the last five years. Additionally, we understand the perspectives and viewpoints of municipal agencies operating spiral-wound membrane technologies as we’ve been providing similar services within the municipal environment for more than three decades. But, we also understand that each client has different philosophies and needs, so we tailor our support services to meet the specific demands of each and every client.

SPI is very knowledgeable of membrane performance expectations when treating source waters with high total organic carbon (TOC) through supporting clients like Mesa Water®, Irvine Ranch Water District, Yucaipa Valley Water District, and more than half a dozen other local Southern California agencies using nanofiltration (NF) or reverse osmosis (RO). But we also know that a facility’s success is not limited to the membrane process alone. Through our years of supporting municipal agencies, we recognize and appreciate how each piece of the overall treatment facility functions as a whole. Individual treatment processes are interconnected. A problem with one can affect the performance of others. Well issues, chemical pretreatment problems, post-treatment air-stripping and stabilization upsets, and even relatively routine transmission issues, can be just as damaging to the long-term stability of the overall treatment facility as is membrane train performance. SPI not only brings an unparalleled understanding of spiral-wound membrane technologies, but our experience has shown us that membrane performance is only one part of successful operation for a facility.

The sections below include examples of clients where SPI has provided support very similar to the support desired by Mesa Water®. In most cases, these are clients that SPI is currently supporting, and has been supporting continuously for many years.
SIMILAR WORK EXPERIENCE

SPI has been supporting both the Irvine Ranch Water District, the Yucaipa Valley Water District and the Chino Basin Desalter Authority(CDA) (Chino 1 & 2) in various capacities for more than 7 years each. The first two use nanofiltration membranes for organics removal. The CDA uses low pressure RO. SPI has provided plant-wide operational support services to these clients for many years.

IRVINE RANCH WATER DISTRICT

Client: Irvine Ranch Water District  
Facilities: Deep Aquifer Treatment System (DATS), Concentrate Treatment System (CATS), Potable Treatment Plant. (PTP)  
Location: Irvine, CA  
Capacity: 7.8 mgd DATS/CATS, 2.6 mgd PTP

The Irvine Ranch Water District (IRWD) provides treated potable water, sewage collection and treated recycled water to its customers. IRWD has quickly established itself as one of the most diverse membrane operators in the region, with facilities ranging from membrane bioreactors for wastewater reclamation, NF for groundwater color removal, RO for groundwater desalting, and the future usage of microfiltration and ultrafiltration for surface water treatment.

Starting in 2007, SPI has provided plant performance assessments and made recommendations for optimization of IRWD’s DATS and CATS NF facilities, as well as their PTP RO plant. In brief, SPI has performed the following activities:

1) SPI has assisted with identifying and optimizing appropriate cleaning procedures for each facility.
2) SPI has worked with IRWD staff to develop and implement a pretreatment chemical procurement process incorporating antiscalant cost and consumption, sulfuric acid consumption, and system recovery.
3) SPI has assisted IRWD with a variety of issues including manganese fouling and silica scaling in the RO facility.
4) SPI has assisted in investigating organic fouling and permeate-side calcium carbonate scaling in the NF membrane.
5) SPI assisted the district with adjusting their post-treatment process (bypass/degasifier effluent blending, caustic addition) in order to achieve the final product water total dissolved solids (TDS), pH and Langelier Saturation Index (LSI) goals and prevent calcium carbonate scale formation within the product water storage tank of the PTP.
**YUCAIPA VALLEY WATER DISTRICT**

**Client:** Yucaipa Valley Water District  
**Facilities:** Yucaipa Valley Regional Water Filtration Facility, Henry N. Wochholz Regional WRF  
**Location:** Yucaipa, CA  
**Capacity:** 12 mgd potable, 6.7 mgd reclamation

Since startup, SPI has provided continuous data review and monitoring of the plant operations. SPI was initially retained by the Yucaipa Valley Water District (YVWD) to assist in the procurement, design and construction of the District’s Regional Water Filtration Facility. SPI developed the overall facility design which includes microfiltration, nanofiltration and dissolved air flotation (DAF) for treatment of MF backwash water. SPI assisted the District with the selection of equipment suppliers. SPI designed the pilot test protocol and the evaluation of membrane treatment alternatives. SPI assisted the District with the review of shop drawings prepared by the equipment supplier and provided the majority of the facility design. SPI was the lead in commissioning and startup of the facility. SPI also authored the O&M Manual and performed operator training for the facility, which began operation in July 2007.

The project uses NF for organics and disinfection byproduct (DBP) precursor removals with minimal salinity rejection. Since the plant began operation, SPI has assisted YVWD with several investigations into membrane and non-membrane performance issues. These include the following:

1) SPI extensively modified the normalization calculations typically associated with NF/RO membranes to account for differences in NF membrane removal characteristics not captured in traditional calculations.
2) SPI performed various NF membrane pilot tests and cleaning studies.
3) SPI instigated the use of periodically dosed chlorine to disinfect the NF membrane system.
4) SPI performed the tabulation and calculation of the system wide highest locational running annual averages (LRAAs) for compliance with the Stage 2 Disinfection and Disinfection Byproducts Rule (DBPR).
5) SPI routinely monitors Total Trihalomethanes (TTHM) and Five Haloacetic Acids (HAA5) within the YVWD distribution system for regulatory compliance.
6) SPI has monitored the DAF performance and performed troubleshooting investigations into various mechanical issues with that treatment process.
7) SPI has assisted YVWD with determination of corrosion inhibitor dosage and requirements based on calculations of LSI within the treated water supply.
8) SPI has performed an annual characterization of organic matter in the raw water and filtered water supplies to determine if NF operational issues are related to the organic content.
CHINO BASIN DESALTER AUTHORITY - CHINO 1 AND CHINO 2

**Client:** Chino Basin Desalter Authority  
**Facilities:** Chino 1, Chino 2  
**Location:** Chino, CA; Jurupa, CA  
**Capacity:** 7.1 mgd potable, 6.0 mgd potable

SPI has provided support services for both the Chino I and Chino II Desalters since the startup of each system amounting to more than 10 years of experience. As the design engineers for the Chino I Desalter, SPI has extensive knowledge of the plant’s design and history. SPI has assisted each plant in the collection, normalization, and monitoring of data to ensure stable operation since start up. In addition, SPI has conducted multiple training sessions over the years for operators covering topics ranging from reverse osmosis basics to data normalization. Since the plants began operation, SPI has assisted the Chino Desalters with several investigations into membrane and non-membrane performance issues. These include the following:

1) SPI routinely monitors and normalizes operating data for both the Chino 1 and 2 Desalters providing performance reports on a quarterly basis.

2) SPI has assisted both Chino Desalters in identifying and optimizing appropriate cleaning chemicals and procedures for each facility.

3) SPI has worked with the Chino Desalter staff to evaluate antiscalant performance and evaluate new products.

4) SPI has written Standard Operating Procedures (SOP) tailored specifically to the Chino 1 Desalter design.

5) SPI performed various membrane pilot tests and cleaning studies.

6) SPI has performed vessel probing at the Chino 1 Desalter.

7) SPI assisted the Chino 1 Desalter in an investigation into the scaling of the brine disposal line (IEBL) and dosing of antiscalant to minimize scale formation.

8) SPI has performed autopsies and foulant analysis on membranes.

9) SPI has assisted the Chino Desalters with a variety of issues including calcium carbonate and silica scaling.
SPI'S ADVANTAGE TO MESA WATER DISTRICT

SPI earnestly believes we offer a better value to our clients than our competitors can. Through three decades of working with municipal clients on their facility operations, SPI has developed a very straightforward method for monitoring and reviewing performance of an owner’s specific system. Our combination of knowledge, efficiency, and billing rates ensures that we offer Mesa Water® both a cost-effective and superior product. SPI brings a wealth of experience that goes beyond the typical engineering firm. Mesa Water® will not only have access to SPI’s expertise in water treatment and membrane technologies, but they will also have access to the past, present and future experiences of more than a dozen Southern California agencies using spiral-wound membrane technologies.

Additionally, SPI has direct experience with Mesa Water®’s facility. We have been providing Membrane Plant and Equipment Support Services to Mesa Water since the MRWF was brought into service. We know how many hours it takes to perform the required tasks and the amount of as needed services that have been utilized in the last four plus years. We are very familiar with the entire process and equipment at the MWRF. We have participated in many chemical cleanings and have knowledge of what works and what has not worked as well. We have also been able to identify and help solve problems with equipment and process measurements. No other firm has a similar level of direct experience with the MWRF facility, especially the membranes at the heart of the process.

SPI offers a truly independent and objective review of the facility performance, as we are not beholden to the membrane manufacturer, chemical vendors, equipment suppliers, plant designers or contractor. This ensures that our assessments of facility performance will only and always represent the best interests of Mesa Water®.
Section B: STAFF EXPERIENCE & AVAILABILITY

ORGANIZATIONAL CHART

PROJECT TEAM

SPI offers a team of individuals dedicated to Membrane Support Services. The daily activities of these individuals are focused on plant performance and operations, and they are specifically responsible for SPI’s operational support services. SPI also offers a deep bench of individuals that bring a variety of knowledge and experience from the design, construction, startup and commissioning side of our business. Because SPI is flexible and efficient, we have the ability to draw upon the unique expertise of any individual to meet our client’s needs. SPI’s organizational chart below demonstrates the breadth of experience that will be available to Mesa Water®.

The resources available through SPI’s team provide Mesa Water® with a combination of unparalleled knowledge and real-world experience with full-scale, municipal water treatment systems. Our project team organization, and brief descriptions of key SPI personnel are presented below. Detailed resumes are available within an appendix of this document.

SPI’s entire project team is located in Southern California, ensuring Mesa Water® will have access to key resources immediately, each and every time they are needed.

SPI Organization Chart
**KEY PERSONNEL**

**John Perlman** manages SPI’s Membrane Support Services and will be Project Manager for this work. John brings over 35 years of worldwide RO and UF membrane system experience to the team. Working almost exclusively with the application of membrane technology throughout his career, he brings an extraordinary background of membrane system operation, data analysis and project management experience. In addition to managing the Mesa Water contract since 2014, John currently manages membrane system data normalization projects for several other large municipal UF and RO systems in Southern California including West Basin Municipal Water District, Irvine Ranch Water District, Chino 1 and 2, and Oceanside Mission Basin Desalter. In addition to his extensive experience in the field of membrane based water treatment equipment, John was selected to manage this project based on his experience managing this and similar contracts at SPI over the last several years.

**Mike Dummer**, P.E. is a California registered professional civil engineer. He has been involved in a range of civil/environmental engineering projects located throughout the region. As part of the Membrane Support Services team at SPI, he provides engineering and technical support for a wide range of microfiltration and reverse osmosis applications including process monitoring, troubleshooting assistance, and system optimization. He has experience with pilot testing, water and wastewater treatment facilities, pipelines, and hydraulic analysis and modeling. Mike has worked closely with Mesa Water® during the most recent contract period. Mike has direct experience cleaning the NF systems at Mesa Water®. His past experience includes 3 years as a consulting engineering with Black and Veatch, and a 3 year internship at OCSD and OCWD. Mike was selected to provide field engineering services for this project based on his direct experience assisting with the cleaning the MWRF membranes and his knowledge of the MWRF equipment gained through working on the asset management task for the MWRF.

**Gabriela Handley** is a Project Engineer with SPI. Gabriela has a B.S. in Environmental Engineering from San Diego State University. Gabriela has worked exclusively in the field of membrane system technology focusing on data analysis and reporting since 2013. She is very familiar with groundwater membrane facilities through her support of the Chino 1 and 2 systems. Gabriela is responsible for data normalization and dashboard production for West Basin MWD, Chino 1 and 2 along with other SPI clients in Southern California. Gabriela was selected to perform the data monitoring, normalization and reporting for this contract because of her extensive experience in membrane system data handling for the majority of SPIs clients.
Alex Wesner, P.E. is a Senior Project Manager and chemical engineer with extensive experience in the planning, design and construction of municipal membrane water treatment projects. Mr. Wesner has participated in the development of some of the largest full-scale microfiltration and reverse osmosis systems treating potable and reclaimed water supplies for municipal clients. His responsibilities include process design, equipment selection, equipment procurement, detailed piping and instrumentation diagrams, construction, startup and ongoing operations assistance.

Alex was selected for the role of Principal on this contract due to his senior position at SPI and the direct experience he has gained working with the MWRF since 2012 in various capacities including trouble shooting and training.

Other personnel available to Mesa Water® within this contract include Gerry Filteau and Charlie Cruz, both officers of SPI.

CURRENT WORK LOAD & AVAILABILITY

SPI currently has resources allocated to the existing Mesa Water® District Support contract. These will continue to be available should SPI be awarded a new contract with Mesa Water District. The key personnel responsible for supporting Mesa Water® on a routine basis will continue to be John Perlman, Gabriela Handley, Mike Dummer and Alex Wesner.

John Perlman’s role for Mesa Water® is estimated at only 5% of his total availability. He has sufficient time available to support this project. This scope of work will require 6% of Gabriel Handley’s availability. Her current workload will accommodate the Mesa Water® project needs sufficiently. Mike Dummer and Alex Wesner both have availability for the projected as needed hours. As specific needs are identified for the tasks that are yet to be determined, supplemental assistance can be drawn from the large pool of resources available within the project team to ensure complete coverage for Mesa Water®. SPI is available to support Mesa Water® on this project by the projected contract start date of July 1, 2017, or sooner if Mesa Water® requires.
# Mesa Water District
## Membrane Support Professional Services

**Yearly Work Breakdown Schedule**

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<td>Mike</td>
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SECTION C – SCOPE OF WORK
UNDERSTANDING AND SCHEDULE

KEY CHALLENGES

There have been several Key Challenges we have seen in executing the previous contract. In general the Mesa Water® equipment has operated without major issues. However, problems do arise from time to time. To properly monitor the plant performance it is important that the operating data be accurate and available when needed. There have been a few legacy control system programming items left over from the original plant control scheme that cause the system to be controlled differently than intended. Certain types of investigations into membrane performance loss or cleaning effectiveness require greater availability of spare membranes.

SPI’S APPROACH

PROJECT UNDERSTANDING

SPI understands the District’s expectations and goals for Membrane Technology Support Services because we’ve been providing these services to the District since 2012 and are familiar with past and existing issues associated with their facilities. Our approach to the District’s support services is simple – focus the resources of this contract to maintain the current high level of performance that is being achieved at the MWRF to maintain production and ensure sustainable capacity and product quality for the District’s customers. While doing so, we will also maintain a spotlight on opportunities for minimizing operational costs associated with chemical, energy, and membrane replacement.

In order to meet the key challenges listed above, SPI will continue to communicate closely with the District Operating staff at the Manager level and directly with the Supervisors and operators when special attention is called for. Of course, Management will be kept in the loop when there is direct communication with the plant. In the SPI review of the operating data, we will identify data inconsistencies that are indicative of instrument error rather than process or operating issues. This notification will help the District to identify instruments requiring recalibration or other maintenance and in some cases, can bring to light the need for procedural improvements. Undesired control actions are identified and evaluated so that the District’s control contractor can update the controls where needed or provide the operators with procedures that allow proper control within the existing programming. Since the equipment has operated with few problems, it is sometimes difficult to justify the expense of membrane examination. However, SPI knows that the information gained from certain destructive membrane testing will help avoid unforeseen failures of the membranes. Additionally, the availability of spare membranes allows non-destructive cleaning test to be performed which can help optimize CIP processes and allow the District to be prepared for the next biofouling event should it occur.

To that end our approach is to closely monitor the performance of the MWRF, provide rapid feedback where needed and report longer term trends and operational issues in a timely manner. SPI is uniquely qualified to offer concise technical solutions to process upsets and equipment issues. By monitoring the plant performance data and routinely visiting the plant we know how the equipment should be performing and when there are deviations from the expected performance. Our strong equipment and control system design skills also allow us to help develop and then integrate any new processes into the existing plant equipment and
operation. Ultimately this approach will enable the MWRF to be available when needed, meet the highest level of production and operate at the lowest possible cost.

The SPI staff has deep knowledge of individual treatment technologies in use at the MWRF, and understands that the various pieces of equipment are part of an integrated treatment system. Our goal is to help the District realize opportunities for improving efficiencies during process operations associated with chemicals, energy, and water production. Our holistic approach will ultimately benefit the District in ensuring production and minimizing unit water costs, while ensuring that the final product water quality and discharge goals are met.

In the day-to-day operations of running treatment facilities, we understand that it is vital to have direct communication lines and short response times when a question arises or on-site assistance is needed. Our staff members are local, and familiar with treatment technologies at the District’s facility. Our Project Manager is an industry expert in membrane and related water treatment technology, supported by a multi-disciplinary local team to aid in this effort.

From our extensive experience with the District, we know strong operational support consists of focused attention to the following target areas:

- Be available at all times to communicate with the District staff, on site when needed
- Monitor operations to maintain production and identify out of range events
- Identify upgrades for equipment and controls to improve performance and reduce cost
- Maintain a high level of plant availability through proper maintenance management
- Integrate new treatment processes with overall system operations.

**ACTIVITY PRIORITIES DEFINED**

*Essential Activities are those activities that have been prescribed by the District or are otherwise critical to supporting the daily operations of the District’s facilities.* During the next five year contract period, there will be many activities performed by SPI at the direction of the District. Several of the activities have already been predetermined and described by the District within the Request for Proposals. These are considered to be Essential Activities. All of the activities in Task 1 fall into this category of Essential Activities.

*Anticipated Activities are those activities which the District should expect, and will likely be required to support the operations of the facilities.* Having worked with the District and other municipalities for many years, SPI knows that there will be many activities performed during the execution of this contract that are anticipated, but not yet clearly defined. The Anticipated Activities that have been identified will eventually be required, such as trouble shooting deviations from expected performance, operator training, preparing technical specifications for membrane replacements or providing input on pilot-scale trials.

*Supplemental Activities are any “As-Needed” or “As-Requested” services that the District may authorize during the contract period.* Lastly, there are activities that could enhance or benefit the District’s overall operations, but are not necessarily critical to the day to day operations of the District’s membrane facilities. The District may choose to investigate these tasks further under this scope. These Supplemental Activities are even less defined than the Anticipated Activities, and could include additional input to the District’s asset management program, the performance of feasibility studies or providing assistance with testing to qualify alternate NF membrane products.
Based on our previous work with the District, SPI has a clear understanding of existing and potential future tasks, assignments, and projects. We’ve itemized several examples into the categories noted above, but recognize that ultimately it is the District’s prerogative to determine which Anticipated and Supplemental Activities are actually prioritized.

The District’s Request for Proposals scope is itemized into three tasks:

1. Performance Monitoring
2. Training
3. Technical Assistance

The following section elaborates on our approach within these scope items using selected examples of how we will support the District in its operations.

**Task 1 – Performance Monitoring**

All of the items assigned under this Task are considered *Essential Activities* because the District recognized their importance and has mandated that they be performed as part of this scope.

SPI will perform a monthly review of operating parameters for both the Primary and Secondary NF systems at the MWRF. Performance review parameters will include feedwater qualities, NF membrane permeability, NF normalized differential pressure, and NF rejection characteristics. Assessment of the membrane performances will be carried out monthly, any deviations from expected performance will be reported to the District and their operator immediately.

It is anticipated that SPI will still be provided operating and analytical data monthly and will perform the review and prepare the report monthly. Should a situation arises that requires fast action or a rapid response, SPI will review the data as soon as it is received. So, while routine data review will be performed monthly, SPI will be prepared to support the District’s needs at a moment’s notice.

SPI will document the membrane system performance in a technical memorandum (tech memo). The tech memo will be provided prior to a monthly meeting between the District operations staff and SPI. The focus of these meetings will be to discuss current membrane performance and the status of any ongoing activities. The tech memo will include normalized data trends, discussion of the data and recommended action items.

SPI can complete these tasks efficiently and thoroughly because we already have the systems in place that allow these activities to be performed. Quality deliverables are assured as performance monitoring is the primary responsibility of the staff of the SPI Membrane Support Services group with few distractions from other work within SPI. All work is reviewed by the manager of this group who will also be the project manager for this contract.

Additionally, because we perform these exact services for the District and several other facilities, we have a realistic understanding of the amount of effort required to achieve the District’s goals. A total of 160 hours has been allocated for Performance Monitoring. The table at the end of Section 2 includes a breakdown of the hours estimated for each sub-task within Task 1 on a yearly basis. This is expected to remain constant during the five year contract period. The table includes an itemization of the hours assigned to specific personnel.
Task 2 – Operator Training
While the specific training content and dates are not specified in the RFP, the Task 2 operator training is considered an \textbf{Essential Activity}. It is clear that the District with input from SPI will determine what training topics will best suit the needs of the staff during each contract year. SPI has a large number of standard training sessions that can be easily customized to meet the specific needs of Mesa Water®’s staff. These include classroom presentation on topics such as Basic Principles of MF, RO and NF, and Advanced Engineer / Supervisor Level training for MF/RO/NF. The training sessions can include a thorough discussion of the equipment and processes currently installed at Mesa Water®. A total of 30 hours per year has been allocated for Training.

Task 3 - Technical Assistance (As-needed)
The services provided under Task 3 of the RFP are less defined than those listed in Task 1, and are very much understood to be “as-needed” at the sole discretion of the District. Based on our over four years of experience working with the MWRF equipment, we are proposing more than the minimum 160 hours suggested in the RFP. A review of the historic data shows a range of over 500 hours early in the project to a low of 150 hours in 2014/2015. In the previous 12 months to date, 285 hours have been spent on Field Troubleshooting and Engineering Support services. SPI has allocated 280 hours for the District to draw from for activities related to \textbf{Technical Assistance}, which includes field trouble shooting and other as-needed engineering services.

SPI has identified several activities that will likely fall within Task 3 during the contract period. These have been classified as \textbf{Essential Activities}, \textbf{Anticipated Activities}, or \textbf{Supplemental Activities}, and are included below to give a realistic understanding of how resources might be applied over the contract period.

\textbf{Essential Activities}
SPI’s experience has shown that certain assignments will emerge simply due to everyday operation of the membrane facilities. This includes troubleshooting deviations from expected performance or investigating specific issues identified by the District Operations and Engineering staff, or SPI. It can also include responding to questions posed by District staff.

\textbf{Anticipated Activities}
Anticipated Activities identified in Task 3 include the development or updating of Standard Operating Procedures, providing on-site guidance on membrane cleaning procedures and assisting in the identification of instruments and equipment in need of service. These are activities that are routinely requested, and should be accounted for when budgeting the resources of this project.

Additionally, thru SPI’s knowledge of the District’s Operations, it is likely that there will be membrane replacements that will occur within this five-year contract period. The District may want to carry out testing of advancements in available NF membranes. When this occurs, the
effort to perform testing, competitive membrane procurements and post-procurement performance testing will be performed within Task 3.

**Supplemental Activities**
These subtasks can include providing engineering support for improving the scrubber operation, identification of control system improvements including data collection and distribution, procurement support for scale inhibitor or other items as requested by the District. Several items performed within the 2015-2017 contract may carry forward and require additional support, such as the ongoing activities associated with the degasifier upgrades including procedures and related asset management activities. Other supplemental tasks as identified in the RFP include: Coordinate OEM support where needed for specialty training, provide additional training to the operating staff as requested and prepare specifications for procurement of specialized maintenance activities. Additionally, the District may wish to perform a competitive antiscalant procurement and demonstration.

We look forward to supporting Mesa Water® District through this 5-year Membrane and Plant Performance Support Services contract and focus on the cost effective operation resulting in the highest availability and performance of the plant production at the lowest possible cost.

**DELIVERABLES**
The deliverables for this contract are very straight forward. The Task 1 deliverable is the monthly report and site presentation. SPI will prepare the report including a review of the feedwater and plant operating data using normalization equations especially suited for the special case of nanofiltration membranes. In Task 2, SPI will prepare and perform two training sessions per year on topics selected by the District staff. Task 3 deliverables will be provided on an as-needed basis at the direction of the District. These will include, but are not limited to, field troubleshooting, on-site assistance with CIP, development of procedures, engineering of additions or corrections to the equipment and generally being available to assist the District in the operation of the MWRF. These items are shown on the schedule in the next section. The as needed items are not scheduled, but rather the effort is shown spread evenly throughout a typical contract year.
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Appendix A - Resumes of Key Staff
Mr. Perlman is a Project Manager and chemical engineer with extensive experience in membrane process engineering, equipment design and construction of municipal and industrial membrane water treatment projects. Mr. Perlman has participated in the design and fabrication of over two dozen large-scale membrane filtration and reverse osmosis systems. John manages the Membrane Support Services of SPI. These activities involve providing support services for full-scale MF, UF, NF, RO, and integrated membrane systems treating potable and reclaimed water supplies for municipal clients. While managing a team of engineers, Mr. Perlman’s responsibilities have included continuous performance monitoring, periodic performance audits, process and equipment troubleshooting and optimization, and operator training for a variety of membrane facilities.

He has served as RO process consultant to RO energy recovery equipment and RO membrane manufacturers bringing his extensive experience with seawater RO design and process control to the proper application of energy recovery and membrane technology.

EXPERIENCE

Membrane Support Services

Activities under this heading include equipment installation inspection, overall MF, NF and RO performance reviews, recommendations regarding system optimizations, membrane cleaning, membrane replacement, troubleshooting, maintenance, and SOP development. Clients include:

- CITY OF OCEANSIDE – Mission Basin Desalter, Oceanside, CA, Project Manager (RO)
- MESA WATER DISTRICT – Mesa Water Reliability Facility, Costa Mesa, CA Project Manager
- CITY OF OXNARD – GREAT Project Pre-commissioning Inspection of MF & RO equipment installation, Oxnard, CA Project Manager
- WEST BASIN MUNICIPAL WATER DISTRICT – Edward C. Little WRF & Satellite Facilities, Carson, CA Project Manager (MF/RO)
- IRVINE RANCH WATER DISTRICT – PTP, DATS, CATS Membrane Facilities, Irvine, CA Project Manager (NF/RO)
- ORANGE COUNTY WATER DISTRICT – Groundwater Replenishment System, Fountain Valley, CA Project Manager (MF/RO)
- WESTERN MUNICIPAL WATER DISTRICT – Arlington Desalter, Riverside, CA, Project Manager (RO)
- CHINO BASIN DESALTER AUTHORITY - Chino Basin Desalters I & II, Chino,CA, Project Manager (RO)
- WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA – Vander Lans Reclamation Facility, Long Beach, CA Project Manager (MF/RO)

Membrane Procurement Specifications

Duties for the services listed within this section include preparation of technical specifications for RO membrane, bid submittal review, and assessment of compliance with performance specification. We may also represent the client in dealings with the membrane manufacturers over warranty issues.
Antiscalant Procurement and Pretreatment Assessment

Duties for the services listed within this section include preparation of technical specifications for antiscalant chemicals or other pretreatment strategies, bid submittal review, preparation of demonstration test protocols, coordinating pilot equipment installation and evaluation of performance test results.

Training

Operator and Engineer level trainings seminars have recently been performed for the following agencies, either as part of startup services or continuing education for staff.

- WEST BASIN MUNICIPAL WATER DISTRICT
- INLAND EMPIRE UTILITIES DISTRICT
- ORANGE COUNTY WATER DISTRICT
- CITY OF OXNARD

Prior Experience

FLUOR/INTERNATIONAL MINING COMPANY
UF/RO Waste Water Purification Project
Project Manager – The project was a 5mgd waste water purification plant for discharge to the environment at 14,000 ft elevation site in the Peruvian Andes. John provided process design, equipment and instrumentation design and procurement, control system as well as electrical design and preparation of operating manuals.

MAJOR OIL COMPANY
Bakersfield, Kuwait – 2012
Project Manager – John developed a pilot system for high temperature UF/RO processes for produced water reuse.

TATWEER PETROLEUM
Bahrain – 2012
Start-up Field Engineer – John designed a trailer mounted RO system to desalt high brackish well water for use in enhanced oil recovery.

CONFIDENTIAL CLIENT
Uranium Mining Process Water Recovery, Wyoming - 2013
Engineer – John designed a multi train RO system with field modifications to treat high salinity brine. During start-up, the equipment was needed for a different process requiring rapid field process and equipment modifications.

MAJOR RO MEMBRANE MANUFACTURER
El Segundo, CA (2011 - 2014)
Consultant - RO Process consultant to high flux seawater RO membrane manufacturer - Development of process designs utilizing very high flux seawater membranes. Design and training for pilot test systems including PX type energy recovery equipment.

MAJOR ENERGY RECOVERY DEVICE OEM
San Leandro, CA (2004 - 2010)
RO Process Consultant - RO process technology consultant to major Energy Recovery Equipment manufacturer on application of PX type energy recovery devices to large seawater reverse osmosis projects. Participated in the design of equipment, piping configuration and control system design for client and its customers on major international SWRO projects in Spain, Israel and Australia.

SALINE WATER CONVERSION CORP (SWCC), KSA
Umm Lujj, City, State (1982 - 1986)
Project Engineer/Site Technical Manager - Major seawater desalination facility on the Red Sea in the Kingdom of Saudi Arabia SWRO facility. Project Engineer for the design, procurement and installation of one of the first large scale SWRO projects. Spent two years in Saudi Arabia as the site technical manager during construction, start-up and operation.
Gabriela Handley is an Engineer for SPI with a Bachelor of Science in Environmental Engineering. As part of the Membrane Support Services team at SPI, she provides engineering and technical support for a wide range of membrane applications. These support services include processing and monitoring data, reporting overall performance, providing troubleshooting assistance, and recommending actions for system optimization.

**EXPERIENCE**

**WEST BASIN MUNICIPAL WATER DISTRICT**
Main Plant and Satellite Facilities, Carson, CA (2013 – Present)

*Engineer* - Assess performance of a 27 mgd advanced water treatment facility. Provide management and operations staff with monthly dashboard reports including overall system performance and recommendations for improvement in membrane operations and performance based on evaluation of the data. Prepare procurement documents for RO and MF system membrane replacements. Prepare test protocol as well as normalize and review data for antiscalant procurement pilot testing.

**CHINO DESALTING AUTHORITY**
Chino Basin Desalter I and II, Chino, CA (2013 – Present)

*Engineer* - Assess performance of the Chino I (4 RO Trains, 6.7 total permeate capacity) and Chino II (3 RO Trains, 6.0 total permeate capacity) groundwater RO plants. Provide CDA management and operations staff with quarterly monitoring report including overall system performance and recommendations for improvement in membrane operations and performance based on evaluation of the data. Revised and expanded clean in place standard operating procedures for Chino I. Assisted in the preparation of a cost analysis for Chino I membrane replacement.

**CITY OF OCEANSIDE**
Mission Basin Desalination Facility, Oceanside, CA (2015-Present)

*Engineer* – Process monitoring and optimization of a 3 mgd groundwater desalter. Duties include; analyzing plant data, optimizing performance and plant flows, assessing cleaning effectiveness, and other as needed support services.

**EASTERN MUNICIPAL WATER DISTRICT**
Perris I and Menifee Desalters, Menifee, CA (2016-Present)

*Engineer* – Data normalization and preparation of specification documents for membrane procurement. Responsible for data monitoring during sixty performance testing. Assisted EMWD with a competitive bid for antiscalant including preparation of a technical specification, bid evaluation memo, demonstration test protocol, and data monitoring and support during the demonstration test period.

**SWEETWATER AUTHORITY**
Reynolds Desalination Facility, National City, CA (2014-Present)

*Engineer* – Process monitoring and optimization of a 4 mgd groundwater desalter. Duties include; analyzing plant data, optimizing performance and plant flows, assessing cleaning effectiveness, and recommendations for cleaning frequency.
WEST BASIN MUNICIPAL WATER DISTRICT
Universal MF/UF Pilot Unit, El Segundo, CA (2015 – Present)
**Engineer** – Developed and reviewed pilot testing protocol along with operator data logs. Developed normalization spreadsheets tailored to each of the six modules being piloted. Responsible for a weekly data download and report of normalized operating data as well as preparation of summary reports for each phase of testing.

IRVINE RANCH WATER DISTRICT
Wells 21/22 Desalter, PTP, DATS, and CATS, Irvine, CA (2016-Present)
**Engineer** – Assisted IRWD with a competitive bid for antiscalant including preparation of a technical specification, bid evaluation memo, demonstration test protocol, and data monitoring and support during the demonstration test period.

WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA
Robert W. Goldsworthy Desalter, Torrance, CA (2016)
**Engineer** – Normalized performance data of 2.75 MGD MF/RO desalting facility and investigated performance issues. Assisted in the unloading/loading of membranes and reconfiguration of vessel array.

SAN PATRICIO MUNICIPAL WATER DISTRICT
Treatment Plant C Pilot Testing, Ingleside, TX (2015-2016)
**Engineer** – Reviewed pilot testing protocol and ensured its compliance with the Texas Commission on Environmental Quality. Created operator data log sheets for pilot testing based on water quality parameters outlined by the Texas Commission on Environmental Quality. Normalized and reviewed pilot operating data and compiled data into a final pilot test report.

WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA
Leo J. Vander Lans Expansion, Long Beach, CA (2015)
**Engineer** – Developed normalization spreadsheets and accompanying graphs for review of operational data. Operational data for five RO trains added as part of the 5 mgd expansion was compiled and normalized for performance review.

CITY OF SCOTTSDALE
**Engineer** – Normalized and reviewed operating data for a period of 2 years for a 20 mgd facility. Investigated the cause of a decline in performance and prepared a final report detailing fouling and cleaning events observed with recommendations for restoring performance.

CITY OF ABILENE
Hamby Wastewater Treatment Plant, Abilene, TX (2015)
**Engineer** – Developed normalization spreadsheets with accompanying graphs for review of operational data. Operational data for the 4 mgd Hamby wastewater treatment plant was compiled and normalized for performance review.

**Publications and Presentations**
Gabriela Handley, Don Zylstra, and James Vickers, April 2017 AMTA Spring Newsletter: “West Basin’s Universal Membrane System – Pressurized PVDF Performance Pilot Results”


Gabriela Handley, October 2015 CA-NV AWWA Annual Fall Conference: “Is Your Facility Performing?”

Mr. Dummer has been involved in a range of civil/environmental engineering projects located throughout the region displaying ingenuity, reliability, and safety. As part of the Membrane Support Services team at SPI, he provides engineering and technical support for a wide range of microfiltration and reverse osmosis applications including process monitoring, troubleshooting assistance, and system optimization. He has experience with pilot testing, water and wastewater treatment facilities, pipelines, and hydraulic analysis and modeling. His past experience includes a 3 year internship at OCSD and OCWD, providing him an intimate knowledge of each plant’s processes. His graduate work focused on process design of water and wastewater treatment facilities.

**OPERATIONS EXPERIENCE**

**ORANGE COUNTY WATER DISTRICT**
Groundwater Replenishment System, Fountain Valley, CA
*Project Engineer* – Provides engineering and technical support including process monitoring, troubleshooting assistance, and system optimization for a 70 mgd Microfiltration and Reverse Osmosis advanced water treatment facility.

**IRVINE RANCH WATER DISTRICT**
PTP, Wells 21/22, DATS, CATS Membrane Facilities, Irvine, CA
*Project Engineer* – Provides troubleshooting and performance review for three distinct membrane facilities totaling over 7.4 mgd of water production. The facilities include IRWD’s Deep Aquifer Treatment System (NF) and Concentrate Treatment System (NF). Provides recommendations for process optimizations, membrane cleaning, and on-site support for product testing as well as troubleshooting performance issues related to abnormal operation.

**MESA WATER DISTRICT**
Mesa Water Reliability Facility (MWRF), Costa Mesa, CA
*Project Engineer* – Mike provides the district and operations staff with periodic monitoring reports including overall system performance and recommendations regarding system operating conditions, membrane cleaning, troubleshooting and maintenance. He has also assisted in the creation of a new asset management system at the MWRF.

**YUCAIPA VALLEY WATER DISTRICT**
Process Monitoring and Optimization Services, Yucaipa, CA
*Project Engineer* – Mike provides the district and operations staff with periodic monitoring reports including overall system performance and recommendations regarding system operating conditions, membrane cleaning, troubleshooting and maintenance. Participated in membrane replacements and startup.

**TESORO REFINERY**
Process Monitoring and Optimization Services, Los Angeles, CA
*Project Engineer* – Mike provides the refinery and operations staff with periodic monitoring reports including overall system performance and recommendations regarding system operating conditions, membrane cleaning, troubleshooting and maintenance.
CITY OF OXNARD
GREAT Reverse Osmosis Desalting Facility, Oxnard, CA
*Project Engineer* – Performed an Electrical Conductivity (EC) Profile and performed probing on high EC vessels. Analyzed the data and wrote report describing the problem and recommended steps to solve the issues facing the desalter. A cost analysis was also done to determine if cleaning or replacement of fouled elements was appropriate.

IRVINE RANCH WATER DISTRICT
Potable Treatment Plant, Irvine, CA
*Project Engineer* – Calculated and predicted pH, Calcium Carbonate Precipitation Potential, and LSI for a comprehensive array of blend scenarios. Analyzed water quality from several wells and made recommendations to optimize the bypass blend ratios and the pH setpoints in the Final Product Water (FPW) while considering Langelier Saturation Index (LSI) and Total Dissolved Solids (TDS) requirements as well as the potential for scaling in the FPW. Wrote a report describing the findings.

DESIGN EXPERIENCE
MESA WATER DISTRICT
Mesa Water Reliability Facility (MWRF), Costa Mesa, CA
*Project Engineer* – Analyzed plant equipment and updated Asset Management program. Generated a comprehensive summary sheet of maintenance items to assist in the planning and tracking of required maintenance. Created Preventative Maintenance documents for equipment.

SAN ANTONIO WATER SYTEM
Brackish Groundwater Desalter, San Antonio, TX
*Project Engineer* – Startup of a 10 MGD Brackish groundwater desalter. This system included groundwater production wells, primary reverse osmosis, concentrator reverse osmosis, calcite remineralization, degasifiers, Chlorine contactors, CO2 system, concentrate injection wells, and associated chemical systems. Work included developing a Functional Startup & Testing Plan, System and component checkout forms, startup, and troubleshooting.

MONTEREY REGIONAL WATER POLLUTION CONTROL AGENCY
Groundwater Replenishment System, Monterey, CA
*Project Engineer* – Startup of an Ozone, UF, RO, UV/AOP, and calcite remineralization demonstration scale treatment plant. This included testing, trouble shooting, water quality analysis, instrument calibration, and data normalization.

CITY OF FORT WORTH, TEXAS
Westside Water Treatment Plant, Fort Worth, TX
*Project Engineer* – Evaluated and analyzed four different styles microfiltration/ultrafiltration modules. Performed an autopsy to determine the overall condition of the membrane module. Analyzed samples with a Scanning Electron Microscopy (SEM) and Energy Dispersive X-Ray (EDX) to determine membrane structure/integrity and foulant characteristics. Wrote a report describing the findings.

LOS ANGELES COUNTY SANITATION DISTRICT
Valencia Advanced Water Treatment Plant, Valencia, CA
*Project Engineer* – Modeled plant hydraulics for UF, RO, Closed Circuit Desalination (CCD), and degasifiers. This included creating a hydraulic model of the system and producing hydraulic profiles.
Mr. Wesner is a Senior Project Manager and chemical engineer with extensive experience in the planning, design and construction of municipal membrane water treatment projects. Mr. Wesner has participated in the development of some of the largest full-scale microfiltration and reverse osmosis systems treating potable and reclaimed water supplies for municipal clients. His responsibilities include process design, equipment selection, equipment procurement, detailed piping and instrumentation diagrams, construction, startup and ongoing operations assistance.

Mr. Wesner also has extensive experience with various project delivery methods, including conventional design-bid-build and design-build. He has prepared design-build RFP packages for numerous large scale microfiltration and reverse osmosis systems.

Mr. Wesner is responsible for developing SPI standards and quality control of the designs. He has direct responsibility for ensuring all designs meet the highest standards established for SPI designs.

**EXPERIENCE**

**FALLBROOK PUBLIC UTILITIES DISTRICT**  
Santa Margarita Conjunctive Use Project, Fallbrook, CA (2015)  
*Project Manager* — Alex is providing process engineering support for this groundwater desalination project. SPI is preparing design documents for the reverse osmosis system capable of 3 mgd treatment capacity.

**SAN ANTONIO WATER AUTHORITY**  
Brackish Groundwater Desalination Program, San Antonio, TX (2013 – Present)  
*Membrane Specialist* — This project is a 10 mgd groundwater RO system fed by up to 13 groundwater production wells. Alex is a member of the Construction Manager At Risk (CMAR) construction team to provide design reviews, value engineering, constructability reviews, procurement assistance, submittal reviews, commissioning, testing, startup and initial operations support. He will also train system operators and participate in the preparation of a comprehensive operations and maintenance manual for the project.

**MESA WATER DISTRICT**  
Colored Water Treatment Facility, Costa Mesa, CA (2013)  
*Project Manager* — This facility produces 8.6 mgd of product from an NF system treating highly colored groundwater. Alex provided an audit of the facility startup and assisted with overall final plant commissioning. He led a multidisciplinary team in assessing outstanding issues and developing solutions.

**CHINO BASIN DESALTER AUTHORITY**  
Chino I Desalter Direct Osmosis Cleaning System, Riverside, CA (2010 –2011)  
*Project Manager* — Alex completed the design and preparation of bidding documents for a novel high salinity, direct osmosis membrane cleaning demonstration project. He provided construction management services as well as startup and commissioning assistance.
IRVINE RANCH WATER DISTRICT
Irvine Desalter Project, Irvine, CA (2002 –2007)
Project Manager – This 5.0 mgd plant incorporates RO as the primary treatment process for nitrate and TDS reduction in local groundwater supplies for potable augmentation. Alex was responsible for preparation of the preliminary design report, drawings and specifications for the RO treatment system. He also prepared the facility Operations Manual and conducted training of plant operating personnel.

IRVINE RANCH WATER DISTRICT
Concentrate Treatment System Project, Irvine, CA (2005 –2007)
Project Manager – This 0.65 mgd system incorporates NF as the primary treatment process, treating concentrate from a primary NF treatment system. Alex was responsible for preparation of the preliminary design report, drawings and specifications for the NF treatment system. He also updated the facility Operations Manual.

SOUTH COAST WATER DISTRICT
Groundwater Recovery Facility Desalter, Dana Point, CA (2004 –2007)
Project Manager – This 1.0 mgd facility treats local groundwater using RO and iron and manganese removal processes to augment potable water supplies. Alex was responsible for preliminary and final design of the RO treatment processes, including detailed plans and specifications. He also prepared the facility Operations Manual and trained plant operations personnel.

WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA
Project Manager – The project treats local groundwater supplies high in TDS using RO to produce 2.5 mgd for integration into the City of Torrance potable distribution system. He was responsible for the preliminary and final design of the RO treatment process and related subsystems, including preparation of technical specifications and detailed construction drawings. He assisted with the facility startup including preparation of the Operations Manual and training of plant operations personnel.

SANTA ANA WATERSHED PROJECT AUTHORITY
Chino I Desalter, Riverside, CA (1999 –2002)
Project Engineer – This 10 mgd facility treats local groundwater supplies for potable water augmentation. The main treatment process at inception was RO. Alex was responsible for the detailed mechanical design of the RO trains and specification of the RO system equipment. He also contributed information on the RO system to the plant Operations and Maintenance Manual.

CHINO BASIN DESALTER AUTHORITY
Chino II Desalter, Riverside, CA (2002)
Project Engineer – Alex assisted with the development of a 10 mgd treatment facility incorporating RO and ion exchange for TDS and nitrate reduction in local groundwater. He participated in the development of the preliminary design and report documentation for the RO system. He also acted as a quality assurance reviewer on the detailed system design and construction documents.

CITY OF CORONA
Temescal Desalter Project, Corona, CA (1999 –2002)
Project Manager – The project was a 10 mgd groundwater desalter incorporating RO for reduction of TDS and nitrate, with the product water augmenting local potable supplies. Alex was responsible for the detailed process design, P&ID development, and specification of the RO system. Work products were included in a set of procurement documents for solicitation of design-build contractors.

Publications
Appendix B - Professional Services Agreement Acceptance Form

Firm Name: Separation Processes, Inc.

Address: 3156 Lionshead Ave., Suite 2

City Carlsbad State CA Zip Code 92010

Telephone: 760-400-3660 Fax: 760-400-3661

I have reviewed the RFP and Professional Services Agreement in their entirety. Our firm will execute the Professional Services Agreement with no exceptions.

Name of Authorized Representative: Gerry Filteau

Signature of Authorized Representative: 

Date: 4/12/17
MEMORANDUM

TO: Engineering and Operations Committee
FROM: Tracy E. Manning, Water Operations Manager
DATE: May 16, 2017
SUBJECT: SCADA System Maintenance and Support Services

RECOMMENDATION

Recommend that the Board of Directors award a contract for a period of five years with two one-year renewable options with an average annual amount of $92,775 to Prime Systems Industrial Automation, Inc. to provide maintenance and support of the Supervisory Control and Data Acquisition System and to authorize execution of the contract.

STRATEGIC PLAN

Goal #1: Provide a safe, abundant, and reliable water supply.
Goal #2: Practice perpetual infrastructure renewal and improvement.

PRIOR BOARD ACTION/DISCUSSION

At its April 18, 2017 meeting, the Engineering and Operations Committee was presented this topic as an information item.

BACKGROUND

Mesa Water District’s (Mesa Water®) Supervisory Control and Data Acquisition (SCADA) system is a powerful tool utilized by Water Operations to manage the water production and distribution systems. There are 22 distinct sites providing monitoring data from approximately 10,000 individual “tags” or data points. The SCADA system currently functions with high reliability and efficiency, allowing the Mesa Water Facilities to operate as unstaffed facilities and provides real-time automated monitoring that provides alarms to staff when operational set points vary from standard protocols. The SCADA system also allows operators to monitor all water production and distribution facilities remotely with the ability to view and control the MWRF, reservoirs, and imported water connections using laptop computers and tablets. This ability allows for quick response time when adjustments are required, improved water quality via real-time operations data, enhanced operational functionality, and efficient work flow processes.

Critical work performed under this contract includes programming adjustments to the programmable logic controllers (PLC) that ensure that process controls and system interlocks function properly. Changes in water quality, software upgrades, replacement of aging equipment, and systematic changes to distribution system operational protocols require modifications to the PLC coding to ensure smooth monitoring, alarming, and functional action of Mesa Water’s 10,000 system data and control points.

The scope of work also includes the following specific tasks:

- Performing routine SCADA software upgrades (software costs excluded) and reconfiguring set point protocols as necessary;
- Identifying a schedule of obsolescence for critical components and recommending appropriate replacement components;
• Providing two training and testing sessions per year to operators to ensure a complete and continued understanding of the system;
• Performing preventative maintenance of PLC panel cabinets and servers, including UPS battery replacements per manufacturers recommendations; and
• One year of additional as-needed programming and support to the well automation project.

DISCUSSION

On March 28, 2017, Mesa Water® solicited proposals from eight qualified firms to provide the requested scope of work. Proposals were received from the following four firms: Aspect Engineering, Enterprise Automation, Prime Systems Industrial Automation, and Vertech. Three proposals were reviewed and evaluated by a selection panel comprised of Mesa Water® staff and an Orange County Sanitation District representative. One proposal did not meet the proposal criteria and was not rated. Evaluation and scoring criteria was based on qualifications, experience, and project understanding.

The results of the selection process and proposal costs are as follows:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Proposer</th>
<th>Score</th>
<th>%</th>
<th>Average Annual Cost</th>
<th>5-Year Contract Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Prime Systems Industrial Automation</td>
<td>4.7</td>
<td>96%</td>
<td>$92,775</td>
<td>$463,875</td>
</tr>
<tr>
<td>2</td>
<td>Vertech</td>
<td>4.4</td>
<td>88%</td>
<td>$80,515</td>
<td>$402,575</td>
</tr>
<tr>
<td>3</td>
<td>Enterprise Automation</td>
<td>4.1</td>
<td>82%</td>
<td>$223,578</td>
<td>$1,117,890</td>
</tr>
</tbody>
</table>

The three firms are well qualified to perform the work effort, although the level of experience with Mesa Water’s specific components varies widely. Based on qualifications and experience, the selection panel determined that Prime Systems Industrial Automation, Inc.’s (Prime Systems) could provide the most consistent maintenance, programming support, and on-call response. Prime Systems is extremely knowledgeable on Mesa Water’s hardware and software applications and has been able to respond quickly to ensure that Water Production facilities remain online and functioning as designed to help ensure a safe and reliable water supply.

Therefore, it is recommended the Board consider awarding a contract to Prime Systems for a not-to-exceed amount of $463,875. The cost breakdown per year is shown in the table below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Maintenance and Support</th>
<th>Parts/ Materials</th>
<th>Well Automation Support</th>
<th>Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$84,000</td>
<td>$1,700</td>
<td>$16,875</td>
<td>$102,575</td>
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<tr>
<td>2</td>
<td>$85,500</td>
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<td>$1,700</td>
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<td>$89,200</td>
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<tr>
<td>4</td>
<td>$89,500</td>
<td>$1,700</td>
<td>$0</td>
<td>$91,200</td>
</tr>
<tr>
<td>5</td>
<td>$92,000</td>
<td>$1,700</td>
<td>$0</td>
<td>$93,700</td>
</tr>
</tbody>
</table>

5-Year Total: $463,875
Attachment A is Prime Systems Industrial Automation, Inc.’s proposal; additional proposals are available upon request.

FINANCIAL IMPACT

In Fiscal Year 2018, $102,575 will be budgeted for SCADA Maintenance and Support Services.

ATTACHMENTS

Attachment A: Prime Systems Industrial Automation, Inc.’s Proposal
April 20, 2017

Subject: Mesa Water District Professional Services Proposal
SCADA Integration Services

Reference: Mesa Water District Professional Services Request for Proposal
Supervisory Control and Data Acquisition (SCADA) System
Maintenance & Support dated March 28, 2017

Thank you for this opportunity for Prime Systems Industrial Automation, Inc. to present
the following proposal for the Mesa Water District Professional Services, Supervisory
Control and Data Acquisition (SCADA) System Maintenance & Support contract.

Company Information

Prime Systems Industrial Automation, Inc.
6236 River Crest Drive, Suite B
Riverside, CA 92507
Phone: 951-656-7139
FAX: 951-656-8139
Website: www.psia.biz
Federal Tax ID: 20-4208685
Business Type: C Corporation
Years in Business: 19 Years
Authorized Officer: Marc Smith, President
951-237-7916

Sincerely,

Marc Smith
President
Prime Systems Industrial Automation, Inc.
Prime Systems Industrial Automation, Inc.  
Certificate of Liability Insurance

<table>
<thead>
<tr>
<th>TYPE OF INSURANCE</th>
<th>INSURER</th>
<th>POLICY NUMBER</th>
<th>POLICY EXP</th>
<th>LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMERCIAL GENERAL LIABILITY</td>
<td>X</td>
<td>72SBAKT94177</td>
<td>01/05/2017</td>
<td>1,000,000</td>
</tr>
<tr>
<td>X Technology 3vs</td>
<td></td>
<td></td>
<td>01/05/2017</td>
<td>2,000,000</td>
</tr>
<tr>
<td>X Included</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUTO OCCUR</td>
<td>CLAIMS MADE</td>
<td>04/13/2017</td>
<td>1,000,000</td>
<td></td>
</tr>
<tr>
<td>72UECZ9520</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UMBRELLA EXCESS</td>
<td>OCCUR</td>
<td>CLAIMS MADE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WORKERS' COMPENSATION</td>
<td>Y/N</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 161, Additional Remarks Schedule, may be attached if more space is required)

30 day notice of cancellation except 10 day notice for non-payment of premium. Electrical Work, Inc. is named as additional insured as respects to General Liability per $50000000 when required by written contract.

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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ACORD 25 (2014/01)  
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# Table of Contents

Qualifications and Experience ................................................................. 4

1. Introduction ......................................................................................... 4
2. Firm Stability ....................................................................................... 5
3. Firm Capabilities ................................................................................ 5
4. Best Choice ....................................................................................... 10

Staff Experience and Availability ......................................................... 11

1. Organizational Chart ........................................................................ 11
2. Biographical Sketches ....................................................................... 12
3. Current Work Load ........................................................................... 14
4. Work Breakdown Structure .............................................................. 14

Scope of Work Understanding and Schedule ....................................... 15

1. Introduction ....................................................................................... 15
2. SCADA Maintenance ....................................................................... 15
3. SCADA Upgrades ........................................................................... 17
4. SCADA Additions ........................................................................... 18
5. SCADA Improvements ................................................................... 18
6. SCADA Training ............................................................................. 19
7. SCADA Operations ......................................................................... 20
8. Proposed Schedule .......................................................................... 21

Exceptions and Deviations ................................................................. 22

Appendix A – Resumes ....................................................................... 23
Appendix B – Professional Services Agreement Acceptance Form ....... 29
Appendix C – Proposed Schedule ....................................................... 31
Qualifications and Experience

1. Introduction

Prime Systems Industrial Automation, Inc. is a Riverside, CA based Systems Integration firm founded in 1998 with a proven track record for customer centric Industrial Automation and Controls services and support. Prime Systems Industrial Automation, Inc. offers Engineering services for system design, development, implementation, PLC control panel design and fabrication, field services, support, and training for Supervisory Control and Data Acquisition (SCADA) systems. With nineteen (19) years of Water, Wastewater, and manufacturing experience, we provide our customers with service and support that comes from extensive knowledge relating not only to SCADA Systems but all aspects of Automation and Control. Our customer centric approach to Systems Integration Services provides our customers with the confidence and security of knowing their SCADA System is managed by the premiere team of system’s integrators dedicated to professionally handling all their SCADA System needs.

Prime Systems Industrial Automation, Inc. maintains full time employees with the proven experience, skills, and expertise to support our customer’s SCADA System requirements. These services include multiple PLC manufacturer support, including all Allen Bradley and Modicon PLCs and PLC languages, SCADA System Software support, including Wonderware, and Radio Systems, including MDS as well as a wide range of field electrical, installation, and troubleshooting services.
2. Firm Stability

*Prime Systems Industrial Automation, Inc.* was founded as “Prime Systems” in 1998 and incorporated as a “C” Corporation under the full name, “Prime Systems Industrial Automation, Inc.”, in January 2006. In January 2009, the corporation purchased the 2540 sq. ft. commercial office suite located at:

6236 River Crest Drive, Suite B
Riverside, CA 92507

This commercial location is the primary office and shop location for all *Prime Systems Industrial Automation, Inc.* work. The corporation currently employs five (5) full time employees with intermittent part time, support, and University internship employees as required.

Over the nineteen (19) year history of *Prime Systems Industrial Automation, Inc.*, the company has continued to grow and expand its customer base at a very manageable pace. The company has been financially stable from its inception and has never had any bankruptcies, litigation, financial claims, and/or loans. The company is privately owned and there are no plans for any changes to the ownership and/or management. The financial stability of the corporation is paramount to its owner, management, officers, and employees.

*Prime Systems Industrial Automation, Inc.* has never failed to complete a project, has never been removed from a project, has never defaulted on a project, and has never failed to complete its commitments on a project. *Prime Systems Industrial Automation, Inc.*, primary goal is the completion of all tasks to the satisfaction of the customer.

3. Firm Capabilities

The Mesa Water District SCADA System core components are Allen Bradley CompactLogix PLCs, Modicon Quantum PLCs programmed in Concept, and Wonderware System Platform SCADA Software. *Prime Systems Industrial Automation, Inc.* Engineers are trained and well versed in design, maintenance, programming, and support of all Allen Bradley and Modicon PLC hardware included in the Mesa Water SCADA System. Additionally, all Engineers are trained and well versed in Wonderware software development, programming, and maintenance. *Prime Systems Industrial Automation, Inc.* maintains active status and enrollment in Systems Integrator Programs including all software licensing and technical support for all Engineers for both Allen Bradley and Modicon hardware and software (among other PLC manufacturers) as well as Wonderware Software licensing. All Engineers are issued their own laptops, software, software licensing, cables, and all equipment necessary to communicate with all Allen Bradley and Modicon hardware. *Prime Systems Industrial Automation, Inc.* in its routine course of business, manages, programs, and supports all the equipment currently used as part of the Mesa Water District SCADA System. There is no equipment and/or software listed in the Request for Proposal Appendix C that the professional staff at *Prime Systems Industrial Automation, Inc.* have not used, managed, configured, setup, and programmed as part of our normal regular course of business.
Related Experience

*Prime Systems Industrial Automation, Inc.* customer base is primarily Water & Wastewater but the company has supported approximately 400 different customers across the following vertical markets:

- Water & Wastewater
- Foods
- Oil and Gas Production
- Transportation
- Mining
- Pharmaceutical
- Plastics
- Entertainment
- Material Conveyance
- Consumer Manufacturing

In addition to the extensive variety of companies and corporations supported by *Prime Systems Industrial Automation, Inc.*, the company has provided, and continues to provide, technical programming and support services to other California based Systems Integrators and Electrical Contractors for advanced Automation and Control services. Due to our extensive knowledge and wide variety of expertise in practical Control Systems implementation, we routinely are employed by other Systems Integrators and Electrical Contractors to help complete their more advanced Control System applications, programming, and functional testing.

Similar Work

*Prime Systems Industrial Automation, Inc.*, has been the primary Systems Integrator for multiple projects that are similar to the scope of work and requirements as detailed in the referenced Mesa Water District RFP. Several of the agencies currently supported are as follows:

- Mesa Water District (MWD), Costa Mesa, CA
- Three Valleys Municipal Water District (TVMWD), Claremont, CA
- Rancho California Water District (RCWD), Temecula, CA
- Adelanto Public Utility Authority (APUA), Adelanto, CA

As a result of our extensive Water and Wastewater SCADA projects and support services, we are uniquely qualified to provide these services to the Mesa Water District.
References

*Mesa Water District (MWD)*
1965 Placentia Avenue, Costa Mesa, CA 92627

Contact: Phil Lauri, Assistant General Manager
(949) 207-5449
phill@mesawater.org

Project Description: SCADA System Upgrade, Maintenance and Support
1999 - Current

Mesa Water District SCADA System provides status and control for twenty-two (22) Distribution sites which includes five (5) clear water wells and one (1) Mesa Water Reliability Facility (MWRF) which includes two (2) additional wells. *Prime Systems Industrial Automation, Inc.*, began working with the Mesa Water District in 1999 by developing the PLC and SCADA applications for the original Colored Water Treatment Facility (CWTF). Since then, *Prime Systems Industrial Automation, Inc.* has supported the Mesa Water District SCADA System through multiple SCADA Upgrades, Treatment Plant Upgrades, Distribution Site Upgrades, and Communication System Upgrades. *Prime Systems Industrial Automation, Inc.* has provided Allen Bradley CompactLogix PLC programming services, Modicon Quantum Concept PLC programming services, Wonderware System Platform programming services, emergency/after-hours/weekend service support, electrical troubleshooting, and instrumentation support. With the help of Mesa Water District, *Prime Systems Industrial Automation, Inc.* has been able to fix problems caused by other System Integrators and make the Mesa Water District SCADA System functional with high reliability and efficiency.
Three Valleys Municipal Water District (TVMWD)
1021 E. Miramar Avenue, Claremont, CA 91711

Contact: Mario Garcia, Assistant General Manager, Engineering & Operations
(909) 621-5568
mgarcia@tvmwd.com

Project Description: SCADA System Upgrade, Maintenance and Support
2001 - Current

Three Valleys Municipal Water District maintains a water treatment facility and approximately thirty (30) remote sites. Prime Systems Industrial Automation, Inc., has serviced and supported TVMWD since 2001, initially replacing the Systems Integrator that installed the first computer based SCADA System at TVMWD. Over the years, Prime Systems Industrial Automation, Inc., has provided TVMWD with our full suite of Systems Integration support which includes SCADA System evaluation, redesign, implementation, site upgrades, PLC programming, OIT programming, MDS Radio Upgrades, project support, instrumentation support, electrical support, panel design, panel fabrication, instrumentation calibration, etc.

Three Valleys Municipal Water District SCADA System is based on Modicon Quantum PLC providing data concentrator tasks for all the remote sites. The Treatment Plant consists of a Modbus TCP Ethernet network connecting the six (6) local PLCs to the SCADA System. The main Quantum PLC is an upgrade from an undersized and improperly sized Modicon Compact PLC that was installed during the original installation. Prime Systems Industrial Automation, Inc., designed, fabricated, programmed and installed the new Modicon Quantum PLC along with the new Wonderware InTouch SCADA Software during a one (1) week annual scheduled downtime. The installation was completed on schedule with no impact to plant operations.
Adelanto Public Utility Authority (APUA)
19101 Jonathan Street, Adelanto, CA 92301

Contact: Dave Kachelski, Operations Manager, PERC Water Corporation
(760) 246-1149
dkachelski@percwater.com

Project Description: Wastewater Treatment Plant Improvement
2012 – 2013

PERC Water completed the Rehabilitation and Upgrade Project for the City of Adelanto’s sole wastewater treatment plant. PERC Water contracted with Prime Systems Industrial Automation, Inc., to complete the design, installation and commissioning of instrumentation and control systems on wastewater treatment facility upgrade. This included detailed design development, fabrication and supply of instruments and control panels, configuration and programming and commissioning services.

The existing plant control system consisted of two completely separate PLC systems with two separate SCADA systems. The original control system consists of two (2) GE Fanuc 90/30 PLCs (in a hot backup configuration) which are connected to seven (7) GE Field Control I/O points over a GE Genius Bus network. The system provides control and monitoring for the plant influent headworks, influent pump station, existing Biolac secondary treatment system and the existing circular clarifiers and associated RAS/WAS pump station. The second control system was supplied with an upgrade of the facility in 2008 and consist of fifteen (15) Innotech Maxim III micro-PLC controllers networked together using Innotech’s proprietary Net Comms RS485 communication protocol. This network of controllers provides control and monitoring of the filter feed pump station, tertiary filters, chemical feed systems, chlorine disinfection system and the plant effluent reuse pump station. Additionally, a controller is installed within the same cabinet as the older GE hardware at the influent lift station control panel to transmit influent monitoring data to the Innotech system.

Prime Systems Industrial Automation, Inc., provided PLC Control Panel design and fabrication, Allen Bradley CompactLogix PLCs, Instrumentation, Control System Integration support for OEM Equipment, and a new Wonderware SCADA System to unify all three control systems to a single new SCADA System located at the treatment plant operations building.
Rancho California Water District (RCWD)
42135 Winchester Road, Temecula, CA 92590

Contact: Matt Michaels, Electrical Services Supervisor, Operations & Maintenance Division
(951) 296-6900
michaelsm@ranchowater.com

Project Description: SCADA System Upgrade, Maintenance and Support 2012 - Current

Rancho California Water District is in the process of upgrading all their approximately 175 remote sites along with their SCADA System. These upgrades consist of complete PLC Control Panel replacements including upgraded all Modicon PLCs and PLC Control Logic using the new District programming standards. Additionally, RCWD has upgraded their Rockwell Software RSView32 SCADA Software to Citect SCADA Software. Prime Systems Industrial Automation, Inc., is supporting Rancho California Water District in the Systems Integration of all sites, new projects, and SCADA upgrades. Upgraded sites include Wells, Booster Stations, Reservoirs, Turn Outs, and Spreading Grounds. With close scheduling and coordination, Prime Systems Industrial Automation, Inc., works directly with the District and/or Electrical Contractor’s with the system installation, I/O Checkout, PLC programming, OIT programming, SCADA Programming, software installation, and system functional testing. In addition to the PLC Control Panel Upgrades, Prime Systems Industrial Automation, Inc., supports the District with capital projects.

4. Best Choice

Prime Systems Industrial Automation, Inc. is the best choice for providing the SCADA System Maintenance and Support Services to the Mesa Water District. There is no firm that is more familiar with the Mesa Water District SCADA System. There is no firm that can provide the level of service and support for the Mesa Water District SCADA System. Prime Systems Industrial Automation, Inc. Engineers are all exceptionally versed in, not only the Mesa Water District SCADA architecture, but all components of the system. Prime Systems Industrial Automation, Inc., has always provided 24x7 on-call support services to our customers. This service is one of the aspects that sets us aside from the multitude of other systems integrators. Prime Systems Industrial Automation, Inc., provides a single point of contact as well as backup contacts for service support request round the clock. Our proven track record of reliability and exceptional service makes Prime Systems Industrial Automation, Inc., the best choice to provide SCADA Support Services to the Mesa Water District.
Staff Experience and Availability

1. Organizational Chart
2. Biographical Sketches

Marc Smith, Principal Engineer

Marc Smith moved out to Riverside in 1986. He worked full time at an aerospace company in the 1980s while he studied Electrical Engineering at California State University Fullerton. In 1992, he received his Bachelor of Science in Electrical Engineering (BSEE) with an emphasis in Control Systems. He immediately returned to CSUR to complete his post graduate work towards his Masters in Science in Computer Engineering (MSEE). During his Master’s Program, he began working as a Control Systems Engineering developing PLC and SCADA system applications. In 1998, he started Prime Systems Industrial Automation, Inc. Marc continues to work as the Principal Engineer for Prime Systems Industrial Automation, Inc.

Marc Smith will be the Project Manager for all work at Mesa Water District. Marc’s long history with the Mesa Water District and extensive knowledge of the Mesa Water District SCADA System gives him a unique incite for all current and upcoming projects. Marc also provides the senior level support and dedication that the Mesa Water District deserves.

Marc Smith’s resume is attached in Appendix A.

Robert Canter, Senior Engineer

Robert Canter went to Georgia Institute of Technology where he studied Chemical Engineering. He graduated in 1997 with his Bachelor’s degree in Chemical Engineering. His first Engineering job was working for an Air Pollution control company as an application Engineer for Scrubber Systems. He then moved on to teaching Chemistry to Monrovia, CA High School students. After teaching, Rob took a Project Engineering position for a Building Materials corporation doing control systems design. After 4 years Rob took a Project Management position at Prime Systems Industrial Automation, Inc. and has excelled in all areas of Systems Integration. Rob Engineering excellence and attention to detail has made him an invaluable asset to Prime Systems Industrial Automation, Inc. and all their customers.

Rob Canter will be Assistant Project Manager for all work at Mesa Water District. Rob’s PLC and SCADA expertise will prove invaluable to any and all work at Mesa Water District. Rob is fluent in all Modicon PLC programming software packages (ProWorx, Concept, and Unity) as well as Allen Bradley Logix Programming.

Rob Canter’s resume is attached in Appendix A.
Justin Smith, Project Engineer

Justin Smith grew up in Riverside, CA. Justin studied Computer Engineering at California Polytechnic State University, San Luis Obispo. Graduating in 2002 he immediately took on a full-time Engineering position at Prime Systems Industrial Automation, Inc. Over the past 5 years, Justin has excelled in SCADA application development with both PLC and SCADA Software. His experience with Modicon Concept, Modicon Unity, Allen Bradley Logix, and Wonderware Software have helped him complete multiple Water and Wastewater projects. Justin’s primary SCADA Software focus has been Wonderware System Platform.

Justin Smith will be the primary Project Engineer for all work at the Mesa Water District. Justin’s extensive knowledge on the Mesa Water District SCADA System and Wonderware System Platform makes him the idea candidate for SCADA System work at Mesa Water.

Justin Smith’s resume is attached in Appendix A.

Michael Crawford, Senior Field Technician

Michael Crawford grew up in Wisconsin. He graduated from Chicago Institute of Technology in 1977 and the Michigan Technical University in 1979. Mike worked as Maintenance Manager and Service Technicians for many years. In 2001, he started working as a Project Manager at Graphic Tech Electric, Inc. in South El Monte, CA. After 15 years of electrical and control system service, support, and maintenance, Mike started working at Prime Systems Industrial Automation, Inc. Mike’s experience in all things electrical and mechanical have made him a valuable asset to the Prime Systems Industrial Automation, Inc. team. In his free time, Mike enjoys managing and coaching Youth Baseball and Soccer. For 19 years, Mike has donated his time as a White Suiter for the Pasadena Tournament of Roses.

Michael Crawford will be the primary Field Service Technician for all electrical and panel control work. This will include all PLC Control Panel maintenance, cleaning, and servicing. Mike’s extensive electrical and electrical service background make him the ideal candidate for supporting Mesa Water District with their PLC Control Systems.

Michael Crawford’s resume is attached in Appendix A.
3. Current Work Load

*Prime Systems Industrial Automation, Inc.*, is currently servicing Mesa Water District with all their SCADA System needs. Due to this, portions of the Project Team’s work schedules are already allocated with Mesa Water District SCADA Maintenance and Support tasks. *Prime Systems Industrial Automation, Inc.*, does not need to adjust or reallocate resources in order to free up the project team work schedules since much of the time is already allocated to Mesa Water District SCADA Maintenance and Support tasks. *Prime Systems Industrial Automation, Inc.* has allocated resources to Mesa Water District for almost 18 years. The Project Team is dedicated to supporting Mesa Water District with 100% commitment.

4. Work Breakdown Structure

The following Work Breakdown Structure is based on tasks as detailed in the RFP Appendix C:

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
<th>Project Manager</th>
<th>Senior Engineer</th>
<th>Project Engineer</th>
<th>Senior Field Technician</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Identify a schedule of obsolescence for critical components and recommending replacement components</td>
<td>40</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Work with staff to identify tools and formats for recording and analyzing SCADA data to meet operational goals</td>
<td>20</td>
<td></td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Assist when requested with the preparation of written documents for the functions of existing programming so that operating procedures and instructions can be developed or updated</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Work with staff and other consultants as needed on special projects to export data, create reports, forms and provide technical service</td>
<td></td>
<td></td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Customize improvements to SCADA</td>
<td>20</td>
<td>160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>SOP Training and Testing</td>
<td>12</td>
<td>8</td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td>Perform routine UPS Battery changes in PLC Panels and Servers</td>
<td></td>
<td></td>
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<tr>
<td>8</td>
<td>Perform routine cleaning of PLC cabinets and servers per the manufacturers recommendations</td>
<td></td>
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<tr>
<td></td>
<td>Total (500 Hours/Year)</td>
<td>122</td>
<td>20</td>
<td>228</td>
<td>120</td>
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</tbody>
</table>
Scope of Work Understanding and Schedule

1. Introduction

The Mesa Water District SCADA System RFP Scope of Work outlines the need for a knowledgeable, stable, competent, customer oriented Systems Integrator to manage the Mesa Water District SCADA Systems. There is no company better suited for this task then Prime Systems Industrial Automation, Inc. Our in-depth knowledge of Mesa Water District and the SCADA System inception, design, migration, updates, and current operation gives us the unique position to provide Mesa Water with continuity, experience, and unapparelled expertise required to provide the best service and support for Mesa Water District and the Mesa Water District SCADA System.

The Mesa Water District SCADA System, like any SCADA System, requires continuous maintenance, upgrades, additions, improvements, and training. Any SCADA System not provided the proper attention will cause production errors, production delays, and potential catastrophic operational, historical data, and production/quality events.

2. SCADA Maintenance

SCADA Maintenance is a general umbrella that covers the day-to-day maintenance of the SCADA System. This include Operations support for minor issues to major problems. Prime Systems Industrial Automation, Inc. maintains full time staff available 24x7 for Emergency Maintenance and Service. This service has been a staple in the company from its inception and continues to be available to our customers. Prime Systems Industrial Automation, Inc. scheduling insures there is always someone to answer the phone and respond at a moment’s notice. We understand the necessity, security, and reassurance the District gets from knowing Prime Systems Industrial Automation, Inc. has always been available to them 24x7. SCADA Maintenance also includes the general support phone calls on a day-to-day basis to support the Mesa Water Operations Staff for minor questions, queries, and requests. Prime Systems Industrial Automation, Inc. has provided office phone numbers, mobile phone numbers, and e-mail addresses for Prime Systems Industrial Automation, Inc. team members for immediate contact and response by Mesa Water District Operations Staff and Management.

In addition to the day-to-day operational support and the unplanned or emergency support, are the planned scheduled maintenance tasks that the Mesa Water District SCADA System requires to continue operating with reliability. These tasks include the following:

- Uninterruptable Power Supply (UPS) Battery Replacements at each of the twenty-two (22) Distribution Sites listed in Appendix C. These are the UPS that back-up the Allen Bradley PLCs and PLC Panels at the Distribution Sites.
• Uninterruptable Power Supply (UPS) Battery Replacements at each of the four (4) PLC Panels at the Treatment Plant (MWRF). These are the UPS that back-up the Modicon Quantum PLCs and PLC Panels at the MWRF.

• Uninterruptable Power Supply (UPS) Battery Replacements at each of the two (2) Server Racks located at the EOC and MWRF.

• PLC Panel Cleaning at each of the twenty-two (22) Distribution Sites listed in Appendix C. This task needs to include electrical maintenance of each site to verify equipment is functioning properly, wires are terminated properly, and visual inspection of the enclosure, panel, antenna mast, antenna, electrical covers, etc.

• PLC Panel Cleaning at each of the four (4) PLC Panels at the Treatment Plant (MWRF). This task needs to include electrical maintenance of each panel to verify equipment is functioning properly, wires are terminated properly, and visual inspection of the enclosure, panel, electrical components, etc.

• Server cleaning and inspection at each of the two (2) Server Racks located at the EOC and MWRF.

• Maintain an off-site archive of all current Allen Bradley and Modicon Quantum PLC programs, HMI/OIT programs, and SCADA programs.

• Verify SCADA Historical Data logs are backup. Verify backed-up Historical Data is validated, readable, and usable in the case of primary Historian failure. Verification and validation must apply to Historians at both EOC and MWRF.

• Participate in scheduled on-site meetings and visits to insure SCADA operations are working properly.

• Add, update, and modify SCADA System security credentials.

• Insure Operations Staff remote access laptops and iPads are functioning properly.

• Update SCADA System for new computer peripheral equipment (i.e. printers) as required.

• Insure AQMD reports are updated, compliant, and printing correctly based on the Districts requirements.

• Insure Operational reports are updated, compliant, and printing correctly based on the Districts requirements.

• Provide programming modifications for Magelis HMI/OIT at the MWRF as required by the Operations Staff.

• Provide ongoing Electrical, PLC Programming, and SCADA Programming tasks as required to maintain the functionality of the entire SCADA System.

Each of these tasks must be coordinated and scheduled with Mesa Water District Operations Staff. Additionally, many of these tasks require specific steps, program backups, data backups, etc. to insure the systems come back on-line properly.
3. SCADA Upgrades

The Mesa Water District SCADA System is currently operating with high reliability and functionality. Much of this is due to Mesa Water District’s commitment to maintaining and upgrading the SCADA System. Some of the major components, especially at the MWRF, have been in operation for over 15 years. Schneider Electric has issued “End of Commercialization” notices for all the Modicon Quantum PLCs programmed with Concept. All but one of the PLCs at the MWRF fall under these “End of Commercialization” notices. The “End of Commercialization” for all Modicon Quantum PLC is December 1, 2018 and the “End of Commercialization” for all Modicon Quantum I/O is scheduled for December 1, 2021.

Due to the large quantity of Modicon Quantum hardware at the MWRF, replacing all the hardware at one time may be financially undesirable as well as require additional MWRF downtime all at once. Mesa Water District needs a Systems Integrator that understands the PLC equipment, the condition of the equipment, and the commercialization state of the equipment and is prepared to put together a strategic plan to upgrade the MWRF equipment with minimal impact to the MWRF Plant operations. Prime Systems Industrial Automation, Inc. has already begun this process and we believe we are the right firm to complete this process as well as the implementation of these upgrades.

In 2008, the Fortinet Fortigate Firewalls were purchased for both the MWRF and EOC SCADA Systems. These firewalls are the first line of defense for the prevention of unwanted intrusion into the Mesa Water District SCADA System. These firewalls have been effective and, to date, we have had no unwanted incursions to the SCADA System. During the 4th quarter of 2016, Apple, as part of their iPad iOS update (V10) removed the PPTP Security Protocol which is being used by the Mesa Water District iPads to connect to the SCADA System via the VPN connection. Prime Systems Industrial Automation, Inc. updated the Fortinet Fortigate Firewall firmware to the latest possible version for the older hardware and reconfigured the firewalls and all the Mesa Water District iPads to connect using a different, more secure, protocol. Although this was a good interim solution, the Fortinet Fortigate Firewall hardware and software is old and should be updated to provide Mesa Water District SCADA System with a more secure cyber security solution.

In 2015, Prime Systems Industrial Automation, Inc. replaced the six (6) HP SCADA Servers at both the EOC and MWRF and replaced them with one (1) more powerful Dell Server and updated Wonderware System Platform Software at each site. This upgrade, both hardware and software, was a major contributing factor to the reliability of the SCADA System. The improvements implemented during this upgrade significantly decrease the emergency SCADA trouble calls, restarts, and operational problems. Due to the critical nature of these servers, Prime Systems Industrial Automation, Inc. recommends planning the next round of server hardware and software upgrades during this contract. We would expect server hardware and software upgrade planning should begin when the servers are 5 years old with replacement no later than 7 years old. These upgrades should also include upgrading the Wonderware System Platform.
software and application to the latest stable software version. This will provide the best compatibility between the Wonderware System Platform software, the Server hardware, and the Server software.

4. SCADA Additions

SCADA System Maintenance is focused on maintaining the equipment that currently exists in the system. This equipment includes the SCADA hardware, SCADA software, PLCs, PLC I/O, PLC panels, PLC panel components, field instruments, etc. Mesa Water District occasionally adds new equipment and instruments to their systems that need to be integrated into the SCADA System. As part of this, equipment and instruments may also be removed and/or replaced. The SCADA System Maintenance and Support RFP solution must include all tasks associated with adding, deleting, and replacing equipment and instrumentation from the existing SCADA System. This includes all PLC and SCADA programming as well as potential electrical panel and component modifications to the existing system. These tasks require experienced Systems Integrators to design and implement these modifications. **Prime Systems Industrial Automation, Inc.** has repeatedly proven our capability to analyze, design, implement and provide a well thought out solution to these issues.

5. SCADA Improvements

The SCADA System software industry is an ever-changing world. Companies spend millions of dollars annually to continuously improve their software to compete in the global marketplace. New SCADA Software packages with new features and functions drive existing SCADA systems to continuously improve their software. All of this benefits the end user as long as the appropriate software, features, and functions are properly implemented in the end users SCADA System. This requires the System Integrators to continuously evaluate their customer’s installations and to understand how these new software and software features can be implemented to help their end users.

The first step in these SCADA improvements is to understand all the hardware and software components in the Mesa Water District SCADA System. The list of SCADA hardware and software in Appendix C is extensive, varying, and somewhat unique. Understanding the software, hardware, versions and how these are all tied together into a cohesive functioning SCADA System is required to start the improvement evaluation. **Prime Systems Industrial Automation, Inc.** has this knowledge and has recommendations for SCADA System improvements to enhance the functionality of the SCADA System. Several of these enhancements include:

- Server UPS Failure Alarms
- Additional Thin Client installations in Supervisor Office(s)
- Upgrade Win-911 Scripting to create fully redundant Remote Alarm Annunciation
- Cloud based Server and Historical backups
- Modify Reservoir 2 Communications
- Install 120 Vac Transfer Switches to both Server Racks

This is an ongoing process as new hardware, software, features, and functions are released on an on-going basis.

6. SCADA Training

Mesa Water District is committed to on-going training and SCADA training is no different. Prime Systems Industrial Automation, Inc. has performed formalized SCADA training in several forms for the Mesa Water District staff.

Project based SCADA training has been provided as part of all capital improvement projects. Mesa Water District specification always include SCADA training among the required training deliverables as part of all projects. This SCADA training is generally localized to the specific project. Prime Systems Industrial Automation, Inc. has provided this type of project based training on multiple occasions.

Prime Systems Industrial Automation, Inc. has provided overall SCADA training for the Mesa Water District in February 2015. This training consisted of the following topics:

1. SCADA System Architecture
2. SCADA System Remote Access
3. SCADA System Navigation
4. SCADA System Security
5. SCADA System Alarms
6. SCADA System Screens
7. SCADA System Communications (Distribution System)
8. SCADA System Historical Data/Trending

This training was provided to give a detailed understanding of not only the day-to-day SCADA operations but to give an overall understanding of how the Mesa Water District SCADA System is designed, implemented, and functioning. As part of this overall SCADA training, Prime Systems Industrial Automation, Inc. developed SCADA tests to document the Mesa Water District staffs understanding of the SCADA System and the SCADA System training. The SCADA training was very interactive and the staff did well on the SCADA testing. Prime Systems Industrial Automation, Inc. understands the need for reoccurring SCADA training and testing. Since the February 2015 SCADA training, there have been significant modifications, additions, and improvements to the Mesa Water District SCADA System. Additionally, there are new employees that did
not participate in the February 2015 training. *Prime Systems Industrial Automation, Inc.* is prepared to update the SCADA training documents provided during the February 2015 training and provide the updated training and testing as part of the upcoming contract.

*Prime Systems Industrial Automation, Inc.* has eighteen (18) years of PLC and SCADA Programming knowledge for the Mesa Water District SCADA System. Some of the original PLC code programmed by *Prime Systems Industrial Automation, Inc.* in 1999 from the CWTF still exists at the MWRF. Additionally, *Prime Systems Industrial Automation, Inc.* has been involved in all PLC and SCADA programming tasks for the upgrade of the Distribution System PLCs, MWRF PLCs, and the associated SCADA System for both the Distribution System and the MWRF. Following the application development and implementation of these PLC and SCADA programs, *Prime Systems Industrial Automation, Inc.* has continued to maintain, support, modify, and upgrade these systems. This knowledge is invaluable in the preparation of written documentation to develop Standard Operating Procedures (SOP) and/or Operating Instructions.

7. SCADA Operations

District Water Operations is the primary goal of the Mesa Water District SCADA System. *Prime Systems Industrial Automation, Inc.* understands that all though SCADA Maintenance and Support is critical, District Water Operations is the primary reason the SCADA System exists. To this end, *Prime Systems Industrial Automation, Inc.* has supported, and continues to support, Mesa Water District staff in identifying tools and formats for recording and analyzing SCADA data to meet operational goals. We have modified, updated, implemented and refined the SCADA System to provide information in various forms including:

- SQL Server Historical Data Collection
- Historical Trend Clients
- Historical Trending Graphs
- Historical Query Tool
- Daily AQMD Report
- Daily Distribution System Report
- Monthly Distribution System Report
- Monthly MWRF Report
- Export Historical Data to USB Drives for analysis on other computers
- Export Trends to USB Drives for analysis on other computers
- Added Dream Reports Software for report formatting
Remote Access to SCADA System via Laptops and iPads

Prime Systems Industrial Automation, Inc. is committed to continuous improvement of the Mesa Water District SCADA System. Our mission is to support Mesa Water District staff in all aspects of the SCADA System. We are prepared to evaluate any request to enhance the SCADA System functionality and provide options and solutions towards this goal. We will continue to add functionality to the SCADA System to give Mesa Water District staff all the functionality possible to make the SCADA System a better operational tool.

Prime Systems Industrial Automation, Inc. knows the Mesa Water District SCADA System better than any other firm. We know the Wonderware Historian, Historical Data collection, analysis tools, Historical backup and reporting functionality better than any other firm. We have implemented redundant Historians and redundant Historical backups as part of the Mesa Water District SCADA System to insure the Historical data is secure, backed up, and available in the event of a catastrophic Server failure. Prime Systems Industrial Automation, Inc. has on multiple occasions, provided services to export Historical data, generate custom one time reports, generate custom daily/monthly reports, and provide formatted data as required to support Mesa Water Operations Staff with all data and reporting requirements. Prime Systems Industrial Automation, Inc. is very familiar with the Wonderware Historian and the Historical Data. We can provide the Historical data in almost any format request by the District. In addition to inherent knowledge of the Mesa Water District SCADA and Historical Data Systems, we are well versed in Microsoft SQL Databases, Sequential Query Language (SQL), and SQL Reporting. Prime Systems Industrial Automation, Inc. has been providing SQL Database installation, programming and support since its formation in 1998. We have used this experience and knowledge to support Mesa Water District in all aspects of the Historical Data, data exporting, and reporting.

8. Proposed Schedule

Appendix C of this proposal contains the proposed annual schedule for completion of each proposed maintenance task and subtask.
Exceptions and Deviations

*Prime Systems Industrial Automation, Inc.*, does not take any exceptions and/or deviations to the RFP and/or RFP Addendums.
Appendix A – Resumes

Prime Systems Industrial Automation, Inc.

Staff Resumes
Marc Smith, Principal Engineer

**Education:**
Bachelor of Science, Electrical Engineering (BSEE), Cal State Fullerton, 1992
Master of Science, Computer Engineering (MSCE), Cal State Fullerton, 1995
Numerous Programming Certificates (Basic, Visual Basic, C, SQL, Intellution Fix32, Wonderware)

**Level of Experience:**
Over twenty-four (24) years of engineering design, development, implementation, and support of industrial control systems. Control systems services include electrical, instrumentation, programming, PLC, SCADA, database, radio, communication networks for commercial and municipal water/wastewater systems. Principal Engineer, owner, and President of *Prime Systems Industrial Automation, Inc.* a Riverside based Systems Integration firm for 19 years.

**Relevant Experience:**
- Complete SCADA System upgrade for Modicon Compact PLC to Modicon Quantum PLC with upgrade of Lookout SCADA Software to Wonderware SCADA Software. Upgrade and expand system capability and functionality. Custom control panel design, fabrication, and installation. Field installation and testing completed during scheduled one week annual Treatment Plant downtime.
- Complete SCADA System upgrade and expansion for Waste Water Treatment Facility. SCADA System upgrade included consolidation of GE Cimplicity and Innotech SCADA Systems into new Wonderware SCADA System with radio communication network.
- Complete SCADA System radio network upgrade to comply with new FCC Narrow banding requirements. Radio network upgrade consisted of twenty (20) remote sites.
- Complete SCADA System design, programming, installation and testing for Municipal Water District potable water system. SCADA System design included electrical panel design, AutoCAD, hardware specification, Allen Bradley PLC Programming, RSView32 Programming, Allen Bradley PanelView programming, RSView Messenger, Data Collection, Daily and Shift Reporting. The SCADA System Data Collection PLC was an Allen Bradley 64K SLC 5/05 communicating to RSView32. Rockwell Software RAD Server and Clients provided Water District Management personnel with remote monitoring capabilities of district wide system status. The SCADA System consisted of 43 remote monitoring and control sites with point-to-point radio communications.
- SCADA, PLC, Radio, Controls and Automation projects at more than fifty (50) Water and Wastewater facilities.

**Professional Affiliations and Certificates:**
- Instrumentation Society of America, Senior Member
- Wonderware Certified, Application Developer, InTouch
- Wonderware Certified, Application Developer, SCADAAlarm
- Intellution, Advanced FIX SCADA Software
Rob Canter, Senior Engineer

Education:
Bachelor of Science, Chemical Engineering (BSCE), Georgia Institute of Technology, 1997

Level of Experience:
Over seventeen (17) years of control systems engineering design, programming, and support services across multiple disciplines. Project experience includes project management, design, procurement, fabrication, implementation, programming, installation, and testing.

Relevant Experience:
- Implemented site specific security system into existing Water District SCADA System. Project included mechanical and electrical installation of security hardware, integration of security hardware into remote site PLCs, and SCADA System programming and alarming.
- Completed water treatment facility filter system Allen Bradley CompactLogix programming and Operator Interface program development. Project included PLC control panel design, AutoCAD, panel fabrication/wiring, field electrical terminations, I/O checkout, Allen Bradley CompactLogix program development and testing, Allen Bradley PanelView + program development and testing.
- Water Treatment and Distribution System ongoing support contract for Municipal Water District SCADA System. Project tasks include Modicon Quantum PLC, Modicon M340 PLC, Modicon Magelis OIT, Wonderware SCADA, Computer Systems, network systems, MDS Radio programming, instrumentation, electrical troubleshooting and support.
- Ongoing remote site control upgrades for Municipal Water District. Project includes complete control panel replacement, Modicon Compact PLC upgrade to Modicon M340 PLCs, Modicon Magelis OIT programming, RSView32 SCADA programming, software installation and testing for 175 remote sites.
- Provided complete take-over service and support for Wastewater Treatment facility Fuel Cell system following removal of previous Systems Integrator. Tasked to compete punch list items and ongoing continued support for new system. Project support consisted of Allen Bradley ControlLogix, CompactLogix, PanelView Plus, RSView32 SCADA System, Electrical and Controls service and support.
- Control System design, development, installation, and testing for numerous projects across multiple disciplines including Water/Wastewater, Mining, Foods, Packaging, Conveying Systems, Batching Systems.

Professional Affiliations and Certificates:
- Wonderware Certified, Application Developer, InTouch
- Rockwell Automation, Fundamentals of Programmable Controllers using RSLogix5/RSLogix500
- Rockwell Automation, RSLogix5000 Training
- Rockwell Automation, PLC5 Programming
• Rockwell Automation, PLC5 Advanced Programming

**Areas of Expertise:**
• SCADA System Design, Programming, Implementation, Testing, and Support
• Allen Bradley Programming for PLCs, PACs, OIT, VFDs, DeviceNet, ControlNet, Ethernet
• Modicon PLC Programming utilizing ProWorx, Concept, and Unity
• Modicon Magelis Operator Interface Program Design and Implementation
• Radio Systems design, programming, installation, integration and troubleshooting
• Control Panel Design, AutoCAD, Fabrication, Installation and Testing
• Electrical and Controls Testing and Troubleshooting
• Water/Wastewater Industry Process Automation and Controls
• Process Instrumentation Calibration
Justin Smith, Project Engineer

**Education:**
Bachelor of Science, Computer Engineering (BSCE), Cal Poly San Luis Obispo, 2012

**Level of Experience:**
Eight (8) years of continuous part time work followed by five (5) years of full time Project Engineering work following graduation from Cal Poly San Luis Obispo with BSCE. Work experience includes Allen Bradley PLC programming, Modicon ProWorx, Modicon Concept, Modicon Unity, SCADA System programming and support, radio system installation, programming and support.

**Relevant Experience:**
- Complete SCADA System radio network upgrade to comply with new FCC Narrow banding requirements. Radio network upgrade consisted of twenty (20) remote sites.
- Completed advanced SCADA System upgrade for Wonderware System Platform applications. Project included extended programming and service support consisting of Wonderware InTouch, Wonderware Historian, Reporting, Allen Bradley CompactLogix PLC programming, and MDS Radio support.
- Completed SCADA System development for Wastewater Treatment Facility expansion. Project consisted of complete SCADA system design, development, installation, testing, and training.
- Provided Ethernet network design, implementation, and testing to bridge multiple networks into one cross connected network for radio system communication across the Water District SCADA System.

**Professional Affiliations and Certificates:**
- Wonderware Certified, Application Developer, InTouch

**Areas of Expertise:**
- SCADA System Programming, Implementation, Testing, and Support
- Wonderware System Platform SCADA System Programming
- Allen Bradley Programming for PLCs, PACs, Operator Interfaces
- Radio Systems programming, installation, implementation, integration and troubleshooting
- Control Panel Fabrication, Installation and Testing
- Electrical and Controls Testing and Troubleshooting
- Water/Wastewater Industry Process Automation and Controls
- Process Instrumentation Calibration
- Ethernet Network Systems
- Historical Database (SQL) Programming and Implementation
Michael Crawford, Senior Field Technician

Education:
- Michigan Tech University, Houghton, MI  1978 - 1979
- Chicago Institute of Technology/DeVry. Chicago, IL  1975 – 1977

Level of Experience:
Over 40 years’ experience with installation, design and troubleshooting of industrial and automation controls for operation of equipment. Works well independently and as a member of a construction team.

Computer Skills: Microsoft Office and AutoCAD experience
PLC Skills: Allen Bradley, Siemens, Fuji, Mitsubishi, Omron, Texas Instruments, and Direct Logic

Relevant Experience:
- Electrical Controls Installation, maintenance and troubleshooting
- PLC Control Panel Design and Fabrication.
- AutoCAD drawing and Schematic Design and Development.
- Variable Frequency Drive installation, maintenance, and troubleshooting
- Allen Bradley PLC Programming, testing, and troubleshooting

Professional Affiliations and Certificates:
- OSHA 10 for General Industry Safety
- Aerial and Scissor Lift Operation
- Sit Down Forklift Operation
- NFPA 70E Electrical Safety in the Workplace
- Siemens Basics of PLC
- Allen Bradley RSLogix 500, PanelBuilder32, Factory Talk View Studio

Areas of Expertise:
- Electrical Maintenance, Service and Support
- Electrical and Mechanical Instantiation
- Allen Bradley Programming for PLCs, PACs, Operator Interfaces
- MDS Radio programming, installation, and troubleshooting
- Fiber Optic Cable Installation, Terminations, and Testing
- Electrical and Controls Testing and Troubleshooting
- Process Instrumentation Calibration
- Ethernet Network Systems
Appendix B: Professional Services Agreement Acceptance Form

Firm Name: Prime Systems Industrial Automation, Inc.

Address: 6236 River Crest Drive, Suite B

City Riverside State CA Zip Code 92507

Telephone: 951-656-7139 Fax: 951-656-8139

I have reviewed the RFP and Professional Services Agreement in their entirety. Our firm will execute the Professional Services Agreement with no exceptions.

Name of Authorized Representative: Marc Smith

Signature of Authorized Representative:

Date: April 20, 2017
Appendix C – Proposed Schedule

Prime Systems Industrial Automation, Inc.

Proposed Annual Schedule
MEMORANDUM

TO: Engineering and Operations Committee
FROM: Tracy E. Manning, Water Operations Manager
DATE: May 16, 2017
SUBJECT: Environmental Health and Safety Support Services

RECOMMENDATION

1. Renew the Environmental Health and Safety Support Services contract for one year for $174,000 with the British Standards Institution Group; or

2. Direct staff to develop Requests for Proposals for Environmental Health and Safety Support Services.

STRATEGIC PLAN

Goal #1: Provide a safe, abundant, and reliable water supply.
Goal #3: Be financially responsible and transparent.
Goal #5: Attract and retain skilled employees.

PRIOR BOARD ACTION/DISCUSSION

On October 9, 2012, Mesa Water District (Mesa Water®) contracted with Environmental & Occupational Risk Management, Inc. (EORM), now British Standards Institution Group (BSI), to review the existing Environmental, Health, and Safety Program (EHS) and to provide a gap analysis report. Based on that report, a scope of work was developed to enhance Mesa Water’s EHS policies and programs.

BSI was awarded a contract for environmental health and safety support services and compliance monitoring which began January 1, 2014.

On July 9, 2015, the Board approved a change order for a two-year contract extension to BSI in the amount of $170,000 per year ($340,000 total) for environmental health and safety support services and compliance monitoring, emergency operations training and preparedness, and the EHS annual audit in Fiscal Years 2016 and 2017. This contract expires June 30, 2017.

DISCUSSION

The environmental health and safety (EHS) function has been filled on a part-time basis by an on-site representative of a professional EHS company since 2013. Utilizing a professional EHS company provides Mesa Water staff with a team of professionals with expertise in all areas of environmental health and safety, as well as emergency preparedness. Mesa Water maintains a robust safety program and has developed and implemented new training on emergency operations. The scope of work provided under the EHS Support Services contract is summarized as follows:

1. **Training**: Training has been developed and provided for 24 core EHS programs and emergency operations. New-hire and annual refresher trainings are provided, as required. Weekly tailgate meetings are provided to field staff.
2. **Evaluation:** Monthly on-site inspections are conducted to ensure staff are following training and guidelines and are using proper techniques and personal protective equipment. Quarterly site inspections are conducted to identify and mitigate potential safety issues and ensure compliance with site-specific environmental regulations. Investigations are performed for accidents and close-calls and reviewed with the Safety Ambassador Committee.

3. **Regulatory Review:** New and changing safety and environmental regulations are identified early to ensure Mesa Water maintains compliance. Safety procedures and policies are created or updated when needed.

4. **Testing:** Periodic table-top exercises are conducted in the Mesa Water Emergency Operations Center to ensure staff is prepared to provide continuous service to Mesa Water customers in the event of an emergency and are able to restore the water system to normal operations as quickly as possible.

5. **Safety Program Audit:** Environmental, Health, and Safety (EHS) Audits were completed in 2014, 2015, and 2016 to measure the strength and progress of Mesa Water’s EHS program. The intent is to perform a similar review annually to allow for long-term monitoring of success and identification of challenges related to Mesa Water’s EHS Program. Mesa Water’s overall EHS Program score for FY 2016 is 89 percent - up two percentage points from last year and fifty percentage points from the 2012 baseline. The results of the 2017 EHS Audit will be presented at the June 8, 2017 Board Meeting.

Mesa Water selected the BSI Group through a competitive bidding process to provide professional services in support of EHS activities. The BSI Group has provided excellent support and tremendous value to Mesa Water, including the development of the annual Safety Audit Report. Mesa Water’s objectives are to ensure a cost competitive and transparent bidding process while balancing prudent use of internal resources to conduct competitive solicitation processes. In consideration of the outstanding value recognized by Mesa Water from the existing support service contract provider, the BSI Group, versus the costs to competitively rebid this work, staff recommends that the Engineering & Operations Committee consider extending this contract one year through June 30, 2018 for $174,000. Alternatively, the Engineering & Operations Committee may desire to direct staff to competitively solicit proposals for this contract.

**FINANCIAL IMPACT**

In Fiscal Year 2018, $174,00 will be budgeted for Environmental Health and Safety Support Services.
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<td>Requested Funding (FY 2018)</td>
<td>$174,000</td>
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<td>Revised Contract</td>
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Actual spent to date
Revised Project Estimate $514,000

ATTACHMENTS
Attachment A: BSI Proposal Letter
May 2, 2017

Ms. Tracy Manning
Operations Manager
Mesa Water District
1965 Placentia Ave.
Costa Mesa, CA 92627

Re: BSI Environmental Health and Safety and Emergency Operations Support for FY18 and FY 19 – BSI Project No. 17-0002

Dear Ms. Manning:

Since 2012 BSI EHS Services and Solutions (BSI) has been providing support to Mesa Water District (Mesa Water) to manage their Environmental, Health and Safety (EHS) and Emergency Operations functions. BSI staff has knowledge of all Mesa Water facilities including the district offices, well and reservoir sites and the Mesa Water Reliability Facility (MWRF). Not only is BSI intimately familiar with the facilities, we have established trusted relationships with Mesa Water staff required to effectively manage these program areas. In addition to providing weekly onsite support, BSI has provided as needed support from technical experts and conducts annual audits of the required programs.

BSI Senior Consultant Ms. Jessica Smith Penhall, Manager, manages the day-to-day EHS functions and Mesa Water EHS Programs.

Scope of Services for EHS Support

Tasks include, but are not limited to:

- Creating weekly tailgate talks
- Performing required EHS training and developing new training as necessary
- Maintaining accurate records of training including scheduling or coordinating all outside EHS training for staff
- Maintaining Personal Protective Equipment (PPE) and supplies
- Conducting accident and incident investigations and root cause analysis and tracking
- Leading monthly safety committee meetings including summarizing meeting minutes and developing agendas
- Preparation and submittal of annual hazardous materials business plans as required by Orange County Health Care Agency and Costa Mesa Fire Department
- Managing hazardous materials and hazardous wastes, including coordination of disposal and all required state reporting
- Conducting monthly job site inspections and quarterly facility inspections
- Coordinating fire/life safety inspections and recordkeeping requirements
- Review and revise EHS programs and policies as needed
- Creation and management of equipment specific lockout/tagout procedures
- Creation and management of confined space entry procedures and inventory
- Program maintenance and record retention for crane and sling inspections, respiratory protection program and hearing conservation program including coordinating required vendors for audiometric testing, medical clearances, and fit tests
- Maintaining the Cal/ARP Program Elements
- Conducting Process Hazard Analysis for Well Automation and creation of Risk Management Plans during Well Automation Process

Ms. Smith Penhall is present as the onsite resource 2 days per week to complete the above functions as well as respond to as needed EHS questions or concerns, and acts as the liaison for other technical BSI staff needs such as ergonomics experts, electrical safety experts, and risk management plan experts.

Annually, BSI subject matter experts, who are not otherwise involved in the day-to-day management or operations at Mesa Water, conduct an EHS audit of required programs to determine the level of compliance, implementation, and program effectiveness. The annual audit will include an executive summary of findings and EHS scorecard to be presented to the board.

**Scope of Services for Emergency Operations Support**

Tasks include, but are not limited to:

- Training staff
- Acting as WEROC liaison for Mesa Water
- Updating and revising the Emergency Operations Plan as required
- Maintaining emergency operations supplies and equipment
- Creating and leading emergency operations functional drills
- Conducting WEROC radio and WebEOC checks
- Managing staff AlertOC database for emergency use

BSI Associate Consultant Ms. Nisha Parikh has taken the lead for the Emergency Operations efforts at Mesa Water.

**Cost Estimate**

The cost estimates for the above listed tasks are shown in the table below. The rates offered to Mesa Water represent a continuation of the discounted rates extended to Mesa Water, which are a 15% discount from full BSI rate.
Cost Estimate for EHS and EOP Support

<table>
<thead>
<tr>
<th>Role</th>
<th>Team Member</th>
<th>Anticipated hours per week</th>
<th>Total Contract Hours per year</th>
<th>Billing Rate ($/hr)</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>EHS Staff Support</td>
<td>Jessica Smith</td>
<td>16</td>
<td>768</td>
<td>$189</td>
<td>$145,152</td>
</tr>
<tr>
<td>EOC Support</td>
<td>Nisha Parikh</td>
<td>8</td>
<td>44</td>
<td>$144</td>
<td>$6,336</td>
</tr>
<tr>
<td>Principal or Managing</td>
<td>Lindsay Polic, CSP or Susan Mazzarella</td>
<td>1</td>
<td>40</td>
<td>$221 - $297</td>
<td>$8,840</td>
</tr>
<tr>
<td>Principal Support</td>
<td>Lindsay Polic</td>
<td>40</td>
<td></td>
<td>$221</td>
<td>$8,840</td>
</tr>
<tr>
<td></td>
<td>Susan Mazzarella</td>
<td></td>
<td></td>
<td>$297</td>
<td>$2,376</td>
</tr>
</tbody>
</table>

The estimated cost per year for EHS and EOP Support is $160,000.

Cost Estimate for Annual Audit

<table>
<thead>
<tr>
<th>Role</th>
<th>Team Member</th>
<th>Anticipated hours</th>
<th>Billing Rate ($/hr)</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>EH&amp;S Auditor</td>
<td>Principal or Senior Consultant TBD</td>
<td>40</td>
<td>$221 - $189</td>
<td>$8,840</td>
</tr>
<tr>
<td>Document Production</td>
<td></td>
<td>8</td>
<td>$77</td>
<td>$616</td>
</tr>
<tr>
<td>Board Presentation</td>
<td>Danielle Reilly Managing Principal</td>
<td>8</td>
<td>$297</td>
<td>$2,376</td>
</tr>
<tr>
<td>Travel Costs</td>
<td></td>
<td></td>
<td></td>
<td>$1,700</td>
</tr>
</tbody>
</table>

The estimated cost per year for the annual audit is $14,000.

BSI looks forward to continuing our relationship and providing support to Mesa Water District so they can achieve their strategic goal to provide a safe, abundant and reliable water supply.

Regards,

Jessica Smith Penhall

Christy Foster

Jessica Smith Penhall

Christy Foster, HEM, MPA

Senior Consultant

Managing Principal
RECOMMENDATION

Recommend that the Board of Directors award a contract in the amount of $24,360.00 to Vista Del Verde Landscaping for landscape maintenance services, and authorize the General Manager to execute the contract.

STRATEGIC PLAN

Goal #4: Increase public awareness about Mesa Water® and about water.
Goal #6: Provide outstanding customer service.

PRIOR BOARD ACTION/DISCUSSION

None.

DISCUSSION

Mesa Water District (Mesa Water®) has a total of 11 facilities in which landscape facilities are maintained. These landscapes range from high-profile water-wise demonstration gardens to corporate style frontage landscapes to unimproved parcels. The sites contain a variety of California native and non-native drought tolerant vegetation, water conserving irrigation systems, and storm water quality enhancing features. The sites are visible to the public and are expected to be kept in top condition at all times. The purpose behind the demonstration gardens at the Mesa Water Headquarters facility and the Mesa Water Reliability Facility is to educate customers about water efficient landscape and irrigation best practices. As such, the skill and experience required to maintain these facilities is not as common as those required for a standard landscape.

A Request for Proposals for landscape maintenance and management services was developed and sent to approximately 20 licensed landscape contractors. Of those contractors, eight attended the job walk and four submitted proposals. A panel of three Mesa Water staff and one subject matter expert reviewed the four proposals and interviewed the top firms.

Staff recommends that the Board consider approval of a contract in the amount of $24,360.00 to Vista Del Verde Landscaping (Vista Del Verde) for landscape maintenance services, and authorize the General Manager to execute the contract. Vista Del Verde earned the second highest score based on the rated proposals and had the most competitive fees.
### Bidder Summary

<table>
<thead>
<tr>
<th>Bidder</th>
<th>Proposed Yearly Fees</th>
<th>Score</th>
<th>Lic C-27</th>
<th>Reference Check?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mariposa</td>
<td>$62,400.00</td>
<td>12.7</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>O’Connell</td>
<td>$35,318.64</td>
<td>14.2</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>S.C. Yamamoto</td>
<td>$35,280.00</td>
<td>11.0</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Vista Del Verde</td>
<td>$24,360.00</td>
<td>13.8</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### FINANCIAL IMPACT

In Fiscal Year 2017, $40,000 is budgeted for landscaping services, inclusive of maintenance, repairs, and incidentals; $33,586.90 has been spent to date.

### ATTACHMENTS

Attachment A: Request for Proposals – Landscape Maintenance and Management Services  
Attachment B: Vista Del Verde Landscaping Proposal
Maintenance Services
Request for Proposal

Landscape Maintenance and Management Services

March 28, 2017
# Table of Contents

I. Background and Purpose  
A. Mesa Water® Overview 1  
B. Project Overview 1  
C. Project Schedule 2  
D. Key Project Elements 2  

II. General Information 1  
A. Proposal Submittal 1  
B. Proposal Schedule 2  
C. Pre-Proposal Meeting 2  
D. Project Inquiries 2  
E. Contract and Terms 2  
F. Sample Agreement 3  
G. Use of Subcontractors 3  

III. Proposal Requirements 4  
A. General 4  
B. Proposal Presentation 4  
C. Proposal Format 5  
D. Fee Proposal - Separate Sealed Envelope 8  

IV. Evaluation Criteria and Selection Process 9  

## Attachments

- Appendix A: Maintenance Services Agreement  
- Appendix B: Maintenance Services Agreement Acceptance Forms  
- Appendix C. Scope of Work, Demonstration Garden Maintenance Manual & Location Maps  
- Appendix D. Fee Proposal – Separate Sealed Envelope
I. Background and Purpose

Mesa Water District (Mesa Water®) is requesting proposals from experienced firms to provide maintenance services for the Landscape Maintenance and Management Services. The total annual budgeted amount for landscape management and maintenance services contract is $35,000. This Request for Proposal (RFP) provides information to enable firms to submit a proposal to provide professional services for the scope of work as detailed in Appendix C.

A. Mesa Water® Overview

Mesa Water®, a special district, was formed on January 1, 1960 as a result of the merger of four water agencies. Mesa Water® employs approximately 50 employees and is governed by a five-member Board of Directors elected by the constituents of five divisions within the service area.

Mesa Water’s primary purpose is to manage and deliver water and water-related services to customers within its service area. Mesa Water® distributes a combination of imported water and local groundwater to approximately 24,000 retail accounts (population of over 110,000) in an 18 square mile area, which includes the city of Costa Mesa, parts of Newport Beach, and unincorporated areas of Orange County, including the John Wayne Airport.

Mesa Water® predominately uses local groundwater, recycled water, and conservation to meet 100% of its demands. Mesa Water® operates clear water wells in the northern part of its service area, and treats amber-tinted water from the deep aquifer from two additional wells at the Mesa Water® Reliability Facility (MWRF).

B. Project Overview

Mesa Water District (Mesa Water) has a total of eleven facilities in which landscape facilities are to be maintained. These landscapes range from high-profile water-wise demonstration gardens, to corporate style frontage landscapes. The sites contain a mixture of California native and non-native drought tolerant vegetation; water conserving irrigation systems; and storm water quality enhancing features. The sites are comprised of water storage and production facilities which are visible to the public, and are expected to be kept in top condition at all times.

The landscape at the Mesa Water Reliability Facility (MWRF) is a collection of five demonstrative and interpretive gardens. The gardens have been divided into five native habitats composed of Redwood Forest, Coastal Sage Scrub, Riparian Woodland, Coastal Grasslands, and Coastal Succulents. The highlight of the five
gardens is the redwood forest, which represents the history behind the water source of that facility.

The demonstration garden at the Mesa Water headquarters (MWHQ) is a mixture of California native and non-native drought tolerant vegetation. The landscape has undergone some recent renovation, and future renovations are planned. This high-profile site serves as a demonstration garden for educating customers about low-water use plants, efficient irrigation systems, and weather-based irrigation controllers.

The objective of the landscapes at these sites is to maximize performance and benefits, and to maintain vegetation in healthy conditions. Healthy vegetation provides numerous environmental benefits, enhances aesthetic experiences of visitors, and communicates stewardship.

The maintenance manual is intended to provide guidelines for maintaining and caring for Mesa Water’s demonstration gardens and other facilities’ landscapes. This guide will cover the basic maintenance practices that are necessary to promote a healthy and aesthetically pleasing landscape.

The maintenance contractor shall familiarize themselves with any as-built drawings and specifications, if available, to fully understand the needs and requirements of the site’s maintenance requirements. The staff utilized to perform landscape work upon Mesa Water premises must be competent in maintenance techniques of drought tolerant and native landscapes. The landscape contractor shall furnish all labor, equipment, tools, maintenance services, and special skills required to perform maintenance duties as specified. The landscape contractor will provide a sufficient quantity of tools needed to equip the work force. Mesa Water will not be able to loan tools to the landscape contractor. Mesa Water will not provide tool storage; therefore the contractor must remove all tools and equipment at the end of the workday unless otherwise approved by the project manager. Tools and equipment will be operated in a safe and responsible manner, and maintained according to manufacturer specifications, to ensure worker safety and the safety of the public and Mesa Water personnel. Mesa Water may describe other related duties as they arise.

C. Project Schedule

Notice to Proceed (NTP) to the selected firm is expected June 30, 2017.

D. Key Project Elements

The detailed scope of work for the project is found in Appendix C.

End of Section
II. General Information

This RFP information packet contains instructions governing the proposals to be submitted and the material to be included therein; a description of the project and specific services to be provided; general evaluation criteria; and other pertinent information. The submission of this proposal shall be considered evidence that the proposer has and is in acceptance with this RFP.

Any modifications or changes made in this RFP will be made in writing in the form of an addendum issued by Mesa Water®. All proposers will receive written notice of any changes or modifications, which may be made by Mesa Water®. Oral communications from Mesa Water® personnel or others concerning this RFP shall not be binding on Mesa Water® and shall not in any way be considered as a commitment by Mesa Water®.

A. Proposal Submittal

Submit 4 hardcopies and one electronic copy of the proposal to the address listed below no later than Tuesday, April 25, 2017 @ 4:30PM-PST. After this date and time proposals will not be accepted and will remain unopened. Faxed proposals will not be accepted. Postmarks will not be accepted in lieu of actual receipt.

The proposed Fee Schedule is to be submitted to the same address, separately from the proposals, in a sealed envelope. Only one copy of the proposed cost is required.

Hard copies (4) of Proposals are to be submitted to:

Mesa Water District  
Attn: Justin Finch  
1965 Placentia Avenue  
Costa Mesa, CA  92627

Electronic copy (1) is to be included on either a CD, DVD, flash-drive, or may be submitted to:

JustinF@MesaWater.org

Please note that all materials submitted in accordance with this Request for Proposal (RFP) become the property of Mesa Water® and will not be returned. The material may become public record subject to the disclosure provisions of the Public Records Act (Government Code Section 6250 et seq.).
B. Proposal Schedule

The following proposal timeframe is listed below:

<table>
<thead>
<tr>
<th>Event</th>
<th>Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Release of RFP</td>
<td>Tuesday, March 28, 2017</td>
</tr>
<tr>
<td>Mandatory Pre-Proposal Meeting/Job Walk</td>
<td>Wednesday, April 12, 2017 @ 9:00AM-PST</td>
</tr>
<tr>
<td>Deadline for Project Inquiries</td>
<td>Friday, April 14, 2017 @ 5:00PM-PST</td>
</tr>
<tr>
<td>Response to Project Inquiries</td>
<td>Tuesday, April 18, 2017</td>
</tr>
<tr>
<td>Proposals Due Date</td>
<td>Tuesday, April 25, 2017 @ 4:30PM-PST</td>
</tr>
<tr>
<td>Announce Shortlist</td>
<td>Tuesday, May 2, 2017</td>
</tr>
<tr>
<td>Interviews</td>
<td>Monday, May 8, 2017 @ TBD</td>
</tr>
<tr>
<td>Tentative Date for Award</td>
<td>Thursday, June 8, 2017</td>
</tr>
<tr>
<td>Notice to Proceed (NTP) Effective</td>
<td>Monday, July 3, 2017</td>
</tr>
</tbody>
</table>

C. Pre-Proposal Meeting

A mandatory pre-proposal meeting and job walk shall take place on Wednesday, April 12, 2017 @ 9:00AM-PST at the Mesa Water District headquarters located at 1965 Placentia Avenue, Costa Mesa, CA, 92627. The purpose of the meeting is to provide a project overview, perform a job walk, review the request for proposal, and answer any questions from potential proposers.

D. Project Inquiries

Questions and clarifications regarding this RFP must be requested in writing via email to:

Justin Finch, Water Use Efficiency Analyst
JustinF@MesaWater.org.

The deadline for inquiries is Friday, April 14, 2017 @ 5:00PM-PST.

E. Contract and Terms

Prior to the commencement of services, the selected Consultant awarded the contract will be required to execute a Maintenance Services Agreement (Sample Agreement: Appendix A) between itself and Mesa Water®. The contract shall incorporate the scope of work defined herein and all RFP terms and conditions. Portions of the Consultant’s proposal may be considered for inclusion into the scope of work at Mesa Water’s discretion.

The selected Consultant will not be permitted to levy any service or other charges against Mesa Water®, other than those listed in Appendix C Scope of Work, without being previously negotiated with Mesa Water®.
F. **Sample Agreement**

A Sample Agreement has been attached for review in Appendix A. This agreement is representative of the agreement that will be executed upon award to the successful Proposer. Mesa Water does not make changes to agreement terms and conditions. Submission of your proposal in response to this RFP constitutes your acceptance of all Terms & Conditions set forth in this Sample Agreement.

**Please indicate that the Sample Professional Services Agreement has been reviewed and will execute it with no exceptions if selected by signing and dating the Professional Services Agreement Acceptance Form (Appendix B).**

G. **Use of Subcontractors**

The proposer may utilize subcontractors in an effort to perform all tasks listed in the Appendix C Scope of Work. The proposer must indicate which tasks are performed by the subcontractor and submit the resumes of the proposed subcontracting staff assigned to this project as described in Section III- *Proposal Requirements.*

**End of Section**
III. Proposal Requirements

A. General

1. All interested and qualified offerors are invited to submit a proposal for consideration. Submission of a proposal indicates that you have read and understand the entire RFP, to including all appendices, schedules, and addendums (as applicable), and that all concerns regarding the RFP have been satisfied.

2. Proposals must be submitted in the format described below. Proposals are to be prepared in such a way as to provide a straightforward, concise description of the capabilities to satisfy the requirements of this RFP.

3. Expensive bindings, colored displays, promotional materials, etc., are neither necessary nor desired. Emphasis should be concentrated on conformance to the RFP instructions, responsiveness to the RFP requirements, and on completeness and clarity of content.

4. Proposals must be completed in all respects as required in this section. A proposal may not be considered if it is conditional or incomplete.

5. All proposals and materials submitted become property of Mesa Water® and may be subject to the California Public Records Act.

6. Responses are to be clear and complete. Be as specific as possible and include explanations where necessary.

B. Proposal Presentation

1. All proposals must be submitted on 8 ½” x 11” sheets of paper, neatly typed, double-sided (preferred), with standard (1 inch) margins and single-spaced with headings, sections, and sub-sections identified appropriately. Font must be at least 11 pt. Each page, including attachments, must be clearly and consecutively numbered at the bottom center of each page.

2. The technical proposal must be divided into five (5) sections with references to parts of this RFP done on a section number and sub-section basis. The sections shall be clearly identified matching the outline in Section III-C.

3. One (1) separate and sealed fee proposal as outlined in Section 2.1 Proposal Submittal, and one (1) original and three (3) copies for a total of four (4) printed proposals, and one electronic version (PDF or MS Word format on a CD, DVD, or USB Flash Drive) of the complete proposal must be received by the deadline specified in Section II.B - Proposal Schedule.
4. The original, all copies of the proposal, and the separate and sealed cost sheet must be in a sealed envelope, container, or package stating the following on the outside:
   - Business/Company Name
   - Address
   - Telephone Number
   - Project Title
   - Proposal Deadline

5. Hand carried proposals may be delivered to the address documented in Section II-A during normal business hours, Monday through Friday, excluding holidays observed by Mesa Water®. Offerors are responsible for informing any commercial delivery service, if used, of all delivery requirements, and for ensuring that the address information appears on the outer envelope, container, or package used by such service.

C. Proposal Format

Offerors must provide this information in the following format:

Proposal Cover Page

The outline below is to be used as the cover page for the proposal. These items must be fully completed and signed by an authorized officer of the business entity.

- Name of Business/Company:
- Business/Company Address:
- Telephone Number(s):
- E-mail Address:
- Website Address:
- Federal Tax ID Number:
- Type of Business (Sole Proprietorship; Partnership; Corporation; or Other (Explain)):
- California Landscaping Contractor (C-27) License Number
- Number of Years in Business:
- Name, title, telephone number and, if different, address of person(s) authorized to represent business entity:
- Name, title, telephone number and, if different, address of person(s) authorized to sign contracts for the business entity:
- Certificate of Insurance showing a minimum of $1 M in Professional Liability (not included in page count).
Proposal Table of Contents

All pages of the proposal, including the enclosures, must be clearly and consecutively numbered and correspond to the Table of Contents as outlined below:

Section 1. Firm Qualifications and Experience (3 pages maximum)

This section should establish the firm’s ability to perform the required work to the expectations of Mesa Water®. Narrative should include the consulting firm’s background, including main business focus, length of time in business, number of employees, location that will primarily support the project. Any subcontractors utilized on this project must be identified in this section. Areas to focus on include:

- Introduction to the firm
- Strength and stability of firm
- Overview of the firm’s capabilities in project scope
- Provide a description of three projects similar to this scope of work that have been completed for public agencies, water districts, federal government, non-profit organizations, or private companies. Include the name of the organization, and the address, name, email, and telephone number for the owner’s point of contact. Note the relevance of each project to the objectives of this project. Brief descriptions of additional projects that demonstrate the firm’s track record to perform the required services may be included in tabular format.
- Provide reasoning why the prospective firm would be the best choice for providing services as described in the RFP for Mesa Water®.

Section 2. Staff Experience and Availability (10 pages maximum)

This section should introduce the key staff that the firm shall commit to the project. The section shall include:

- An Organizational Chart that shows the Project Manager, Task Leaders, subconsultants, and other key team members. If the Project Manager is not an Officer of the firm, include a Project Director that is authorized to sign contracts for the firm.
- Biographical sketches of each staff member that consultant expects to lead each task, reason(s) why the staff member was selected to lead the task, and a statement that the proposed staff members are available during the proposed schedule for the task. Include resumes in an appendix, which will not be included in the page
count. Include the biographical sketches and resumes of any subcontractors that have key roles on the project.

- Current work load for the proposed team members as it relates to the ability to perform this work to the planned project schedule.
- Work Breakdown Structure (WBS) with summary of hours by task and by labor class for the project team members. This should be provided in a table format. Tasks shall align with those set forth in Appendix C Scope of Work. Do not include rates or total cost in the technical proposal.

Section 3. Scope of Work Understanding (20 pages maximum)

The firm should clearly state its understanding of the project objectives, scope of work, and anticipated deliverables. There are specific tasks to complete for this project with anticipated deliverables clearly outlined. The selected consultant must complete all tasks; proposals to complete only a portion of the tasks will be deemed nonresponsive and will not be evaluated. Do not simply repeat the scope of work provided in Appendix C. Instead, address the following areas in the proposal:

- Describe the key challenges associated with the project and the firm’s approach to overcoming these challenges.
- Describe your firm’s approach to the work and how it will benefit Mesa Water®.
- Outline processes or steps that the consultant will take to ensure quality deliverables. The process shall include a monthly work status summary report where the project status and schedule adherence shall be reported and challenges identified.
- The contract for this project shall incorporate the scope of work defined in Appendix C. The firm may wish to include options and enhancements to the scope of work for Mesa Water’s consideration. Portions of the firm’s proposal may be considered for inclusion into the contract Scope of Work at Mesa Water’s discretion. The firm shall not be permitted to levy any service or other charges against Mesa Water®, other than those listed in Scope of Work, without being previously negotiated with Mesa Water®.

Section 4. Resumes of Key Staff

Include resumes of key staff, including key subconsultants staff. Limit each resume to two (2) pages. Resumes are not included in overall page count.
Section 5. Professional Services Agreement Acceptance Form

Include the signed Professional Services Agreement form from Appendix B of this RFP. Appendix B is not included in the overall page count.

D. Fee Proposal (Pricing Sheet) - Separate Sealed Envelope (No page maximum)

The fee proposal submitted by the Consultant will be used to negotiate a contract.

Please Note: The Fee Proposal must be submitted in the provided format (Appendix D), but may include additional information and attachments. The Fee Proposal is to be kept separate from the proposal document and one (1) printed copy shall be submitted separately in a sealed envelope. The costs will be reviewed after the contents of the proposals are reviewed and rankings are determined.

The Fee Proposal, using Appendix D, for all items listed in this Request For Proposal (RFP) shall include all of the applicable recurring and incidental costs including but not limited to:

- Monthly maintenance costs per site.
- General fertilizer costs.
- Tree trimming labor for large trees.
- Irrigation system repair labor.
- Unit prices for standard plant materials including 1 gallon, 5 gallon, 15 gallon, 24” box, and flats.
- Other relevant items as listed in the scope of work.
- Other items the Proposer may wish to include for Mesa Water's consideration.

Please show a total time and materials, not-to-exceed fee to deliver the scope of work. If your proposal includes enhancements above the scope of work, please show the cost of these enhancements below the fees.

End of Section
IV. Evaluation Criteria and Selection Process

A Selection Team established by the Project Manager will review, evaluate, and score the proposals. The scoring system will be based on a scale of 1 to 5 with 5 being the most favorable score. The Evaluation Team shall evaluate the proposals based upon the following weighted criteria:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm and Staff Qualifications &amp; Experience</td>
<td>30%</td>
</tr>
<tr>
<td>Company/Staff Availability</td>
<td>20%</td>
</tr>
<tr>
<td>Understanding of Scope of Work to be Performed</td>
<td>40%</td>
</tr>
<tr>
<td>Proposal Quality</td>
<td>10%</td>
</tr>
</tbody>
</table>

The Selection Team may select the proposal that clearly exceeds the others in all mandatory specifications of the RFP or they may select finalist proposals that meet specifications and whose score on evaluation factors is sufficiently high to merit further consideration by the Selection Team.

The Selection Team may conduct interviews with the most qualified and responsive firms. The consulting firms asked to participate in the interview process may be required to submit other information or clarification on submitted proposals.

Each firm will be expected to respond to a series of questions posed by the Selection Team during a maximum 60 minute period.

The Selection Team may ask for further clarification of the submitted cost prior to completing the selection rankings.

Mesa Water® reserves the right to reject any and all proposals for any reason. Mesa Water® may not proceed, for any reason, with the selection process of a proposer if Mesa Water® deems it is in the best interest of the organization. Mesa Water® shall not be responsible to any of the submitters for the cost to prepare their proposal in response to this RFP.

Proposals must include the entire scope of work as outlined in this RFP.

End of Section
Appendix A: Maintenance Services Contract
MAINTENANCE SERVICES AGREEMENT

THIS AGREEMENT (Agreement) is entered into on ___________ ____, 20__, by and between Mesa Water District, hereinafter called “Mesa Water,” a county water district organized and operated pursuant to California law, and ___________________________, a _________________, hereinafter called “Contractor.”

WHEREAS, Mesa Water desires certain services hereinafter described and Contractor is capable of providing and Contractor desires to provide such service.

NOW, THEREFORE, Mesa Water and Contractor for the consideration and upon the terms and conditions hereinafter specified agree as follows:

SECTION I

SCOPE OF SERVICES

1.1 The services to be performed under this Agreement are as described in Appendix C hereunto attached and by this reference made a part hereof. In the event that a conflict or contradiction is discovered between the appendices and this Agreement, the Agreement shall prevail. Such service shall be performed by individuals as employees of Contractor, as independent contractors, and not by or as employees of Mesa Water, and shall otherwise be performed in accordance with the Contract Documents therefor, as defined herein.

SECTION II

CONTRACT TIME

2.1 Contractor shall commence performance on work as described herein beginning on ___________ ____, 20___, and shall complete such work no later than ___________ ____, 20__.

SECTION III

PAYMENTS

3.1 Monthly periodic payments and final payment will be made in accordance with the General Terms and Conditions.
SECTION IV

COMPONENT PARTS OF CONTRACT

4.1 This Agreement includes not only this Agreement, but further all of the contract documents ("Contract Documents") set forth herein, to wit:

- General Terms and Conditions
- Appendix C: Scope of Work

SECTION V

COMPLIANCE WITH PUBLIC CONTRACTING LAWS

5.1 Mesa Water is a public agency in the State of California and is subject to provisions of law relating to public contracts. It is agreed that all applicable provisions of law relating to public contracts are part of this Agreement, to the same extent as though set forth herein and will be complied with by Contractor.

SECTION VI

MISCELLANEOUS

6.1 Notices. Any notice, request, demand, consent, or approval or other communication required or permitted hereunder by law, shall be validly given and made only if in writing and delivered in person to an officer or duly authorized representative of the party, or deposited in the United States mail, first class postage prepaid, and addressed to the party for whom intended as follows:

Mesa Water District  
Attn: Justin Finch  
1965 Placentia Avenue  
Costa Mesa, CA 92627

Contractor  
Attn: ____________________  
_______________________  
_______________________

6.2 Severability. If any term, provision, condition or covenant of the Agreement, shall, to any extent, be held invalid or unenforceable, the remainder of the Agreement, or the application of such term, provision, covenant or condition to persons or circumstances other than those to whom of which it is held invalid or unenforceable, shall not be affected thereby, and each term and provision of this Agreement shall be valid and enforceable to the fullest extent provided by law.
6.2 The signatories hereto do warrant that they are appropriately authorized to execute this Agreement on behalf of the party for which they signed.

IN WITNESS WHEREOF, the parties have executed this Agreement the day first hereinabove written.

_______________________________
CONTRACTOR

By: ____________________________ By: ____________________________
   Authorized Representative, Title   Paul E. Shoenberger, PE
   ______________________________________
   General Manager

Printed Name
APPENDIX C

SCOPE OF WORK

SEE SCOPE FROM REQUEST FOR PROPOSALS
GENERAL TERMS AND CONDITIONS

Maintenance Contract

(Public Works Maintenance Contracts in Excess of $1,000)

PART A. CONTRACTOR’S PERFORMANCE.

1. **Independent Contractor Status.** The Contractor shall, for all purposes of this Contract, be deemed to be an independent contractor.

2. **Standard of Performance.** The Contractor, on behalf of itself and its employees, warrants that they have the professional skill, knowledge and experience necessary to perform and complete the Work within the time required pursuant to this Contract.

3. **Licenses.** The Contractor warrants that it currently has, and that it shall maintain until completion and acceptance of the Project, all licenses, permits, qualifications and approvals of whatever nature as are legally required to permit the Contractor to perform the Work required pursuant to this Contract and to complete the Project.

4. **Conflict of Interest.** The Contractor warrants that, for the term of this Contract, it shall not accept, encourage or solicit from any board member, officer or employee of the District any funds or act(s) that may result in a direct financial interest in this Contract or any present or anticipated material benefit arising from this Contract.

5. **Contractor Records.** The Contractor shall maintain all books, documents, papers, accounting records, computer files, and other information related to performance of this Contract, including, but not limited to, the costs of administering this Contract ("Contractor Records"). The Contractor Records shall be available for inspection by the District and any State or federal agency with jurisdiction over the Work or Project funding. The Contractor shall make the Contractor Records available at its offices at all reasonable times during the performance of the Work and for four (4) years from the date of final completion or filing of a Notice of Completion for the Project, whichever is later. However, if any audit is commenced within such four (4) year period, the Contractor shall make the Contractor Records available at all reasonable times until proceedings related to such audit are complete and all statutes of limitation related thereto have expired. In the event the District notifies the Contractor that federal funds have been used in connection with the Project, the Contractor shall retain and make available the Contractor Records for such longer period as may be required by federal law.

PART B. EMPLOYEES AND SUBCONTRACTORS.

1. **Contractor’s Employees.** The employees of the Contractor shall at times be under the Contractor’s exclusive direction and control on the Project. The Contractor shall pay all wages, salaries, and other amounts due to such personnel in connection with their performance of the Work, as required by law. The Contractor shall immediately remove from the Project and job site any employee, who is determined by the District to be uncooperative, incompetent, or a threat to the safety of persons or the Work, or who fails or refuses to perform the Work in a manner acceptable to the District. The Contractor shall not thereafter re-employ any such person on the Project.

2. **Labor Code Requirements.** The Project is a "public work" as defined in Section 1720 of the California Labor Code ("Labor Code"), to which Part 7, Chapter 1, of the Labor Code is applicable. A contractor or subcontractor that has been debarred in accordance with the Labor Code, including Sections 1777.1 or 1777.7, is not eligible to bid on, perform, or contract to perform any portion of the Work. Wage rates for the Work shall be in accordance with the "General Wage Determination Made by the Director of Industrial Relations Pursuant to California Labor Code, Part 7, Chapter 1, Article 2, Sections 1770, 1773 and 1773.1" for the location of the Work. Wage rates shall conform to those on file at the District’s principal office and posted at the Work site. The following Labor Code sections are by this reference incorporated into and are a fully operative part of this Contract, and Contractor shall be solely responsible for compliance therewith:

   (i) Section 1735: Anti-Discrimination Requirements;

   (ii) Section 1771 and 1774; Requirement to Pay Prevailing Wages;

   (iii) Section 1775: Penalty for Prevailing Wage Rate Violations;
(iv) Section 1776: Payroll Records;
(v) Section 1777.5 and 1777.6: Apprenticeship Requirements;
(vi) Sections 1810 and 1811: Working Hour Restrictions;
(vii) Section 1813: Penalty for Failure to Pay Overtime; and
(viii) Section 1815: Overtime Pay.

For public works project greater than $1000, the Contractor shall pay the general prevailing rate of per diem wages to all workers employed on contracted projects as established by the California Department of Industrial Relations ("DIR"). Contractor and any subcontractor performing work under this Contract shall be registered with DIR and qualified to perform work pursuant to Labor Code Sections 1725.5 and 1771.1. Contractor shall be responsible for providing proof of current registration for both Contractor and any subcontractor prior to performing any work, and contracts with unregistered contractors shall be subject to cancellation by the District. Contractor acknowledges that this Contract is subject to compliance monitoring and enforcement by DIR.

PART C. WORK AND SITE CONDITIONS.

1. **Work Permits and Licenses**. The Contractor shall obtain, at its own expense, all permits and licenses of a temporary nature necessary for the performance of the Work, including, but not limited to, any required business licenses, Construction permit(s) and/or Storm Water permit(s) if applicable. The Contractor shall procure and pay for all licenses required in its trade classification by any city, county, or the State, except for those specified in Section 2 below.

2. **Building Permits and Utility Connections**. Notwithstanding Section 1 of this Part C, to the extent required, the District shall procure and pay for all building permits required by local building officials and for connection to public utilities, to the extent required by law or obtained by the District in its discretion.

3. **Extension of Time**. The District shall extend the time for completion of the Work, by such number of days determined by the District in its reasonable discretion, in the event Contractor's progress on the Work is delayed as a result of: (i) an unreasonable act or omission of the District, or an act or omission of the District not contemplated by the District and the Contractor; (ii) an act or omission of any other prime contractor on the Project; (iii) required changes in the Work; (iv) strike or lockout not instigated by the Contractor or an affected subcontractor; (v) unusual and severe interruption in interstate or intrastate, but not local or regional, transportation; (vi) earthquake, flood or other unavoidable casualty that is not the fault of Contractor or a result of Contractor's actions or work; or (vii) any other cause determined by the District to justify an extension of time. No such extension of time shall be granted for a delay occurring more than seven (7) days prior to a claim therefor is made in writing to the District. In the case of a continuing cause of delay, only one claim shall be necessary. No claim for extension of time shall be made or approved for failure of the District to provide Plans and Specifications to the Contractor unless the Contract Documents specify a particular date upon which the Plans and Specifications shall be provided to Contractor. If the Contract Documents so specify, the Contractor shall have no right to claim an extension of time therefor sooner than two weeks after Contractor demands Plans and Specifications from the District.

4. **Workmanship and Materials**. The Contractor shall employ nothing less than good quality workmanship in performing the Work. All materials, equipment and other items incorporated into the Work shall be of good quality and, unless specified otherwise, shall be new.

5. **Substitutions of Materials and Equipment**. The Contractor shall use and/or incorporate into the Work on the Project all materials and equipment as are specified in the Contract Documents, except upon written approval by the District Representative or Architect of the substitution of "equal" materials or equipment.

6. **Contractor's Title to Materials**. Neither the Contractor nor any subcontractor on the Project shall purchase materials, equipment, supplies or other items for use on, or incorporation into, the Work subject to any chattel mortgage or under a conditional sale or other agreement pursuant to which an interest is retained by the seller. The Contractor warrants that it shall have good, free and clear title to all materials, equipment, supplies or other items for which the Contractor accepts any payment from the District.

7. **Inspection of Work**. Special testing or approval of portions or elements of the Work, or of materials, equipment or other items to be incorporated into the Work, may be required pursuant the District's inspector's...
8. **Protection of Work and Site.** The Contractor shall protect the Work and any portions of the Project affected thereby from harm and is responsible under all circumstances for the conditions thereof until final acceptance of the Project by the District. The Contractor shall protect adjacent property, including, but not limited to, all structures, walkways, pipelines, utilities, trees, shrubbery, and furniture, from injury or damage arising out of Contractor's performance of the Work on the Project or the Project site, and shall repair or pay the cost of repairing any such damage or injury that occurs.

9. **Cleanup and Storage.** The Contractor shall ensure that the area of the Project site in which the Work occurs is at all times, including nights and weekends, free of loose or accessible waste, materials, tools and equipment, and maintained in a manner that will cause the least inconvenience to the general public and District staff, as applicable. The Contractor shall comply with all instructions from the District Representative with respect to conditions at the site and to remove all rubbish and debris generated by, and any unnecessary materials, tools, equipment or temporary structures owned or used by, the Contractor or its subcontractors.

10. **Safety.** Contractor shall perform and maintain the Work so as to avoid injury or damage to any person, including District employees, visitors and the general public, or property. Contractor shall be responsible in the event of any such injury or damage resulted from any unsafe or unprotected condition on the Project. The Contractor shall conduct such clean-ups of the area of the Work, including grounds and sidewalks, as are necessary to maintain the safety of the area of the Work, but in any event not less than once daily.

13. **Asbestos or Other Hazardous Materials.** In the event the Contractor encounters on the Project site material that Contractor reasonably believes to be asbestos, polychlorinated biphenyl (PCB), any material listed by the federal or State EPA or federal or State health agencies as a hazardous material, or any other material defined as being hazardous under federal or State laws, rules or regulations ("Hazardous Material") that has not been rendered harmless, Contractor shall immediately stop Work in the area affected and report the condition to the District in writing. The Contractor shall resume the Work only if it is determined that no Hazardous Material is present or that such Hazardous Material has been rendered harmless. The District shall not require the Contractor to perform any Work relating to Hazardous Material without the Contractor's consent.

14. **Non-Asbestos Containing Materials Certification.** Prior to commencing work on the Project, the Contractor shall execute and submit to the District the Non-Asbestos Containing Materials Certification Form included within the Contract Documents for the Project.

16. **Inspection of Completed Work.** The Inspector may require inspection of any portion of the Work already completed as to which there is a reasonable question as to whether it was completed in accordance with the requirements of the Contract Documents. In such event, the Contractor shall remove or un-do all portions of the Work as are necessary to facilitate inspection of the questioned portion of the Work. If the questioned portion of the Work is found not to conform with the Contract Documents, the Contractor shall pay all costs of the re-examination and correction of the Work, including repair or replacement of previously completed Work that was removed or un-done to inspect. If the questioned Work is found to conform to the Contract Documents, the District shall pay the cost of the re-examination and any repair or replacement of previously completed Work that was removed or un-done for inspection.

17. **Correction of Work Before Final Payment.** The Contractor shall promptly remove from the Project and the Project site all materials, equipment or other items that, as determined by the Inspector, fail to conform to the requirements of the Contract Documents, regardless of whether such materials have already been incorporated into the Work. The Contractor shall, at its own expense, promptly replace any such materials, equipment or items with conforming materials, equipment or items, and shall thereafter repair the Work and/or execute the remaining Work in conformance with the Contract Documents. In addition, the Contractor shall bear all costs and expenses of replacing or repairing the work of other contractors or subcontractor(s) that is destroyed or damaged in the course of removing or replacing any non-conforming materials, equipment or other
items that were incorporated into the Work. The District shall have no obligation to make the Final Payment pursuant to the Contract unless and until the Contractor satisfies the requirements of this Section.

18. **Guarantee.** In addition to any manufacturer or other guarantees required elsewhere, as applicable to the extent Contractor’s work involves installation of new equipment and/or parts, the Contractor hereby guarantees that all Work performed pursuant to the Contract shall be of good quality and conform to all requirements of the Contract Documents, and that the Work shall be free from defective, faulty or non-conforming workmanship, materials, equipment and other items. Contractor agrees that it shall repair, replace or correct any such defective, faulty or non-conforming Work that appears or is discovered during the one (1) year period after the date of final acceptance of the Project by the District (or the period of time specified elsewhere in the Contract Documents or in any guarantee or warranty provided by any manufacturer or supplier of equipment or materials incorporated into the Work, whichever is later). The provisions of this Section shall not be construed to limit the guarantee on items for which a longer guarantee is specified or on items for which the manufacturer provides a longer guarantee period. All warranties and guarantees of subcontractors, suppliers and manufacturers with respect to any portion of the Work, whether express or implied, are deemed to be obtained by Contractor for the benefit of the District, regardless of whether or not such warranties and guarantees have been transferred or assigned to the District by separate agreement and Contractor agrees to enforce such warranties and guarantees, if necessary, on behalf of the District.

**PART D. CHANGES IN THE WORK.**

1. **District Instructions.** In giving instructions related to performance of the Work, the Contractor shall comply with instructions of the District Representative related to minor changes in the Work not involving extra cost and not inconsistent with the purpose of the Work, and there shall be no additional compensation to the Contractor therefor.

2. **District Authority.** The District shall have the right to require, without invalidating the Contract, any significant alteration, deviation, or change in the scope, method of performance, nature of materials or price of the Work or the Project, or any other matter materially affecting the performance or nature of the Work or the Project (“Change in the Work”).

3. **Change Orders.** Any request for a Change in the Work that involves an adjustment of the Total Contract Price shall be set forth in writing to the District (“Change Order”). Except in the event of an emergency, no Change Order shall become effective, and the District shall have no liability related thereto for payment or otherwise, unless and until approved and signed by the District and the Contractor and approved by the District’s Board of Directors (“District Board”) or an authorized delegate. All work pursuant to a Change Order shall be performed in accordance with the terms and conditions of the Contract, except that any claim for extension of time caused thereby shall be determined at the time of ordering such Change in the Work. In the event of an emergency endangering life or property, notwithstanding the foregoing, the Contractor may rely on the District’s oral requests for additional work, which if affecting the Total Contract Price will be adjusted accordingly by the District.

4. **Valuation of Change Orders.** The Parties shall determine the fair and reasonable value of any such Change in the Work, which will be added to or deducted from the amount of the Total Contract Price.

**PART E. CONTRACTOR COMPENSATION.**

1. **Periodic Payments.** The District shall make periodic payments within 30 days after receipt of an undisputed and properly submitted payment request from the Contractor. Late payments shall be subject to interest at the legal rate set forth in subdivision (a) of Section 685.010 of the Code of Civil Procedure. Upon receipt of a payment request, the District shall: (a) review as soon as practicable after receipt for the purpose of determining that the payment request is a proper payment request; and (b) for payment requests determined not to be a proper payment request suitable for payment, return said payment request as soon as practicable, but not later than seven days, after receipt, along with an explanation in writing detailing the reasons why the payment request is not proper. The number of days available to the District to make a payment in connection with a re-submitted progress payment request, without incurring interest, shall be reduced by the number of days by which the District exceeds the seven-day return requirement for the original (or any subsequent resubmitted) request, as set forth in this Section.
PART F. INSURANCE AND INDEMNIFICATION.

1. **Liability Insurance.** The Contractor shall obtain, and shall maintain until completion and final acceptance of the Project, a policy of commercial general liability insurance ("Policy"), written on an "occurrence" basis, covering claims for bodily injury, including death, property damage, and consequential damages that may arise out of or result from Contractor's performance of the Contract or from actions taken in connection with the Work, whether such actions are taken by Contractor, by any subcontractor of Contractor, or any person directly or indirectly employed by any of them, on the Project Site or on the Contractor's premises.

The Policy shall provide coverage for both the ongoing and completed operations of the Contractor. The Policy shall provide coverage only for the Work; the Policy shall not provide coverage for any other construction or work by the Contractor. The Policy shall provide coverage for the indemnification obligation assumed by the Contractor pursuant to the Contract Documents. The Policy shall be primary and non-contributing insurance coverage with respect to any insurance or self-insurance maintained by the District. Policy exclusions are subject to review and approval by the District.

The Policy shall name the District as an additional insured and shall be in an amount not less than $2,000,000 per occurrence and $4,000,000 aggregate. The Policy shall include a cross-liability endorsement and a waiver of the insurer's rights of subrogation. Prior to commencing the Work, Contractor shall provide to the District a certificate issued by the insurer ("Certificate of Insurance") evidencing that Contractor has obtained the Policy. The Certificate of Insurance shall name the District as an additional insured under the Policy and shall provide that the Policy is primary and non-contributing with respect to any insurance or self-insurance maintained by the District. The Certificate of Insurance shall require that the insurer give written notice to the District no later than thirty (30) days prior to cancellation, termination, expiration without renewal, or reduction in coverage of the Policy.

The Contractor hereby waives any and all rights it may have against the District pursuant to this Agreement to the extent claims or damages are covered by insurance required pursuant to this Section. The Contractor must keep the Policy in full force and effect for at least one year after the date of Final Payment to the Contractor to ensure that coverage for products-completed operations remains in effect for at least such one-year period. The District in its discretion may waive the requirement for some or all of the tail coverage with respect to any Subcontractor whose services relate solely to temporary work.

2. **Automobile Insurance.** Contractor shall provide Automobile liability coverage, written on ISO Form CA 00 01, or equivalent, covering any auto, or, if no owned automobiles, hired and non-owned, in an amount of not less than $2,000,000 combined single limit.

3. **Workers' Compensation and Employer's Liability.** Worker's Compensation insurance is required and shall be provided in an amount and form to meet all applicable requirements of the Labor Code of the State of California, including Employers Liability with $1,000,000 per bodily injury per accident, bodily injury by disease, and bodily injury by disease for each employee, covering all persons providing labor or services on behalf of Contractor and all risks to such persons under this Contract.

4. **Deductibles.** The District shall have the right to review and approve any deductibles applicable to the Policy or to any Subcontractor Policy. The Contractor hereby agrees that it shall, upon reasonable request of the District, either: (i) reduce or eliminate any such deductible; or (ii) obtain and provide to the District a bond or bonds guaranteeing payment of losses and related investigations, claims, administrative and legal costs and expenses, including the deductible, if any.

5. **Indemnification.** The Contractor shall indemnify, defend, and hold harmless the District against and from any and all claims, demands and liability for damage, loss or expense attributable to the injury or death of any person(s) or the damage to any property resulting from, arising out of, or in any way connected with the performance of the Contract or of the Work by Contractor or its officers, agents, employees or subcontractors. The Contractor shall reimburse the District for all damages, expenses and losses incurred by the District as a consequence of any claim, demand, or cause of action that may be brought against the District resulting from, arising out of, or in any way connected with the performance of the Work by Contractor or its officers, agents, employees or subcontractors, including disputes between Contractor and its subcontractor(s). This indemnity shall be in addition to any other indemnification provisions contained in the Contract Documents and shall
survive termination of the Contract. Nothing in the Contract Documents shall be construed or deemed to impose on the Contractor, or to relieve the District from, liability for the District’s sole or active negligence or willful misconduct.

PART G. SUSPENSION OR TERMINATION

1. **Suspension of Work by District.** The District, in its sole discretion, may at any time suspend performance of the Work and/or Project by giving written notice to Contractor, and the suspension shall be effective ten (10) calendar days after the effective date of such notice. The District, consistent with the provisions of the Contract, shall pay the Contractor for all Work adequately performed up to the effective date of such suspension. Contractor shall resume its Work on the Project within thirty (30) calendar days following written notice from the District to further proceed with Work on the Project.

2. **Termination for Convenience.** The District, in its sole discretion, may at any time terminate this Contract, or any portion thereof, by giving written notice to Contractor, and such termination shall be effective ten (10) calendar days after the effective date of such notice. Upon receipt of such notice, the Contractor shall immediately commence the process of terminating the Work, making safe any work in progress but otherwise taking reasonable steps to cease further progress on the Project. The District, consistent with the provisions of the Contract, shall pay Contractor for all Work adequately performed up to the effective date of the termination for convenience. In the event of a termination for convenience, the Contractor shall not be entitled to any profits, overhead or general conditions costs for any portion of the Work that was not performed prior to termination or to compensation for costs related to discontinuing the Work.

3. **Termination for Cause.** In the event of any of the following: (i) Contractor is adjudged bankrupt, makes a general assignment for the benefit of creditors, or a receiver is appointed on account of Contractor’s insolvency; (ii) as reasonably determined by the District, the Contractor refuses or fails to provide a sufficient number properly skilled workmen or the proper materials or supplies as are necessary for timely and/or proper completion of the Work; (iii) Contractor fails to promptly pay subcontractors for material or labor; (iv) Contractor in more than one instance, or knowingly in any instance, fails to comply with any laws, ordinances, or instructions of the District; (v) Contractor or its subcontractors otherwise fail to comply with any material provision of the Contract; the District may serve notice on the Contractor and its surety(ies) describing the unsatisfactory condition or violation (“Notice of Default”). Unless, within forty-eight (48) hours after service of any such Notice of Default, the unsatisfactory condition or violation shall cease and arrangements satisfactory to the District are made for correction thereof, the District may, at its option, (i) take such action as, in the District's opinion, is necessary to correct the unsatisfactory condition or violation and deduct the cost thereof from any amounts due or to become due to Contractor pursuant to this Contract, or (ii) proceed to terminate this Contract, or any portion thereof. In the event the District elects to terminate this Contract or any portion thereof, the District shall hold a hearing not sooner than forty-eight (48) hours after delivery of the Notice of Default. The Contractor shall be permitted at such hearing to present evidence to support a determination by the District that it should not terminate the Contract. The hearing shall be conducted by the District Board, who shall render a final decision. Unless specified otherwise, a decision by the Board shall be effective immediately. Notwithstanding a termination pursuant to this Section, the Contractor and its surety shall continue to be responsible and liable, in accordance with the Contract documents and applicable law for any and all defects in quality, damage to property, injury to any person, and other matters arising from the Work performed prior to the termination.

4. **Effect of Termination for Cause.** In the event of any termination for cause pursuant to Section 3, above, the District shall be entitled to withhold and retain from any payment due to the Contractor all amounts necessary to offset any expenses, losses or damages incurred by the District as a result of the termination for cause. If the remaining amounts potentially payable to the Contractor pursuant to this Contract are insufficient to offset such expenses, losses and damages, the Contractor shall reimburse the District for the uncompensated balance of such expenses, losses or damages, including any uncompensated costs to complete the Work. The District’s rights pursuant to this Contract are in addition to, and not in lieu of, any other rights or remedies available to the District in the event of a termination for cause. In addition, the following provisions shall also apply in the event of any termination for cause pursuant to Section 3, above:

(a) The Contractor shall not be entitled to further compensation until satisfactory completion and acceptance by the District of all of the Work.
(b) In the event the District takes over the Work, the District may, without liability for doing so: (i) take possession of the Work and the Project site; (ii) take possession of all materials, tools, equipment and appliances located at the Project site which are necessary to complete the Project; (iii) procure, upon such terms and in such manner as it may determine appropriate, services required to complete the Work; (iv) require Contractor to provide all finished or unfinished documents, data, diagrams, drawings, materials or other matter prepared or built by Contractor in connection with its performance of this Contract; and (v) complete the affected portion(s) of the Project by whatever method the District may deem to be in its best interests, including, but not limited to, calling upon Contractor's surety to complete the Work or issue payment(s) to the District or its replacement contractor(s).

(c) In the event the District takes over and satisfactorily completes the Work, if the unpaid balance of the Total Contract Amount exceeds the cost to the District of satisfactorily completing the Work, including compensation for any additional architectural, managerial or administrative services, such excess shall be paid to the Contractor after satisfactory completion and acceptance of the Work by the District less any obligation(s) incurred by any stop notices. If the cost to the District of satisfactorily completing the Work is greater than the unpaid balance of the Total Contract Amount, the Contractor shall pay the difference to the District under the same time periods called for in the Contract Documents. In addition, the District may pursue any other recourse or remedies against the Contractor, which are available pursuant to law or the Contract.

PART H. LAWS AND OTHER REQUIREMENTS.

1. **Liability for Non-Compliance with Laws.** The Contractor at all times during the execution of the Work shall be and remain fully informed of all local, State and federal laws, ordinances, rules, regulations or other requirements that may in any manner affect those engaged or employed to perform any of the Work or the materials used in performing the Work, or that may in any way affect the performance of the Work. If the Contractor observes that the drawings and specifications are at a variance with any applicable law, ordinance, rule, regulation or other requirement, Contractor shall promptly notify the District Representative in writing. The Contractor shall bear all liability and costs, including any fines, arising from performance of any of the Work knowing it to be contrary to any applicable law, ordinance, rule, regulation or other requirement and having failed to notify the District Representative of the same.

2. **Provisions Deemed Inserted.** Each and every provision or clause required by law to be inserted in the Contract are hereby be deemed inserted, and this Contract shall be read and enforced as though it were expressly included. If through mistake or otherwise, any required provision is not inserted or is not correctly inserted, then upon application of either the District or the Contractor, the Contract shall be amended to make the insertion or correction. All references in the Contract to laws, ordinances, rules, regulations or other requirements shall include all amendments, replacements and enactments on the subject that are in effect as of the date of this Contract, as well as any later amendments thereto that do not materially or substantially alter the rights or obligations of the Parties.

3. **Tobacco-Free Facility.** All properties and facilities owned, leased or operated by the District, including the Project, are tobacco-free work places. It is strictly forbidden while on or in any District-controlled property or facility, including the Project, to smoke, chew or otherwise use tobacco products. Any employee of the Contractor or its subcontractors found in violation of these requirements will be required to permanently leave District premises and the Contractor shall not thereafter re-employ such person on the Project or permit such person on the Project site. The Contractor shall include this provision in all contracts with subcontractors and others performing any of the Work or providing labor, materials or services related to the Work, and each shall provide a copy of this provision to its employees on the Project.

4. **Drug-Free Facility.** All properties and facilities owned, leased or operated by the District, including the Project, are drug-free work places. It is strictly forbidden while on or in any District-controlled property or facility to: (i) engage in the unlawful manufacture, dispensation, possession or use, including being under the influence, of any controlled substance, (ii) possess or use any alcoholic beverage, or (iii) use any illegal substance which may cause serious impairment of normal abilities. Any employee of the Contractor or its subcontractors found in violation of these requirements will be required to permanently leave District premises and the Contractor shall not thereafter re-employ such person on the Project or permit such person on the Project site. The Contractor shall include this provision in all contracts with subcontractors and others performing any of the Work or
providing labor, materials or services related to the Work, and each, as well as the Contractor, shall provide a copy of this provision to its employees on the Project.

6.  **Workers’ Compensation Certification.** In accordance with Labor Code Section 1861, concurrent with execution and delivery of the Contract, the Contractor shall execute and deliver to the District the certification form included within the Contract Documents whereby the Contractor acknowledges its responsibility to secure workers’ compensation insurance in conformity with the requirements of Labor Code Section 3700, et seq.

**PART I. DISPUTE RESOLUTION.**

1.  **Governing Law and Venue.** The Contract and all rights and obligations arising out of it shall be construed in accordance with the laws of the State. Any arbitration, litigation or other proceeding arising out of the Contract shall be commenced and conducted only in the County of Orange, California.

2.  **Mediation and Arbitration.** The provisions of Part 3, Chapter 1, Article 1.5 (commencing with Section 20104) of the Public Contract Code ("Dispute Resolution Provisions") shall apply to all public works claims of $375,000 or less arising or resulting from the Contract. The Dispute Resolution Provisions are incorporated herein by this reference. The Dispute Resolution Provisions require that any such claim be in writing and supported by adequate documentation of the basis for the claim. The District shall respond to any such claim as required pursuant to the Dispute Resolution Provisions, and the Parties may be required to mediate and arbitrate the claim(s).
Appendix B: Maintenance Services Agreement Acceptance Form

Firm Name: ________________________________________________________

Address: ___________________________________________________________________________

City ________________________     State ________ Zip Code ______________

Telephone: __________________________     Fax: ________________________

I have reviewed the RFP, Professional Services Agreement, and Fee Proposal, in their entirety. Our firm will execute the Professional Services Agreement with no exceptions.

Name of Authorized Representative: _____________________________________

Signature of Authorized Representative: ____________________________

Date: ____________________________
Appendix C: Scope of Work
TABLE OF CONTENTS

MAINTENANCE SECTIONS             PAGES
Section 1  Introduction.................................................................................................. 2
Section 2  Maintenance Summary.................................................................................... 3
Section 3  Maintenance Sites and Levels of Service.................................................. 4
Section 4  Vegetation Management................................................................................ 5-9
Section 5  Plant Replacements..................................................................................... 10
Section 6  Mulch............................................................................................................. 10
Section 7  Fertilization and Soil Amendments.............................................................. 11
Section 8  Weeding.......................................................................................................... 11-12
Section 9  Wildlife and Pest Management..................................................................... 13-15
Section 10 Waste Management.................................................................................... 16
Section 11 Hardscape, Signage, and Lighting................................................................. 16
Section 12 Irrigation System and Controller Maintenance........................................... 17-18
Section 13 Stormwater Management............................................................................ 19

TABLES             PAGES
Table 1  Landscape Maintenance Summary................................................................. 3
Table 2  Maintenance Sites and Levels of Service......................................................... 4
Table 3  Vegetation List with Specific Maintenance Actions................................. 6
Table 4  Common Weeds................................................................................................. 12
Table 5  Common Pests and Diseases of Native Plants............................................... 14-15

REFERENCES
A  Maintenance Location Maps.................................................................................... A1
SECTION 1  INTRODUCTION

Mesa Water District (Mesa Water) has a total of twelve facilities in which landscape facilities are to be maintained. These landscapes range from high-profile water-wise demonstration gardens, to corporate style frontage landscapes. The sites contain a mixture of California native and non-native drought tolerant vegetation; water conserving irrigation systems; and storm water quality enhancing features. The sites are comprised of water storage and production facilities which are visible to the public, and are expected to be kept in top condition at all times.

The landscape at the Mesa Water Reliability Facility (MWRF) is a collection of five demonstrative and interpretive gardens. The gardens have been divided into five native habitats composed of Redwood Forest, Coastal Sage Scrub, Riparian Woodland, Coastal Grasslands, and Coastal Succulents. The highlight of the five gardens is the redwood forest, which represents the history behind the water source of that facility.

The demonstration garden at the Mesa Water headquarters (MWHQ) is a mixture of California native and non-native drought tolerant vegetation. The landscape has undergone some recent renovation, and future renovations are planned. This high-profile site serves as a demonstration garden for educating customers about low-water use plants, efficient irrigation systems, and weather-based irrigation controllers.

The objective of the landscapes at these sites is to maximize performance and benefits, and to maintain vegetation in healthy conditions. Healthy vegetation provides numerous environmental benefits, enhances aesthetic experiences of visitors, and communicates stewardship.

This manual is intended to provide guidelines for maintaining and caring for Mesa Water’s demonstration gardens and other facilities’ landscapes. This guide will cover the basic maintenance practices that are necessary to promote a healthy and aesthetically pleasing landscape.

The maintenance contractor shall familiarize themselves with any as-built drawings and specifications, if available, to fully understand the needs and requirements of the site’s maintenance requirements. The staff utilized to perform landscape work upon Mesa Water premises must be competent in maintenance techniques of drought tolerant and native landscapes. The landscape contractor shall furnish all labor, equipment, tools, maintenance services, and special skills required to perform maintenance duties as specified. The landscape contractor will provide a sufficient quantity of tools needed to equip the work force. Mesa Water will not be able to loan tools to the landscape contractor. Mesa Water will not provide tool storage; therefore the contractor must remove all tools and equipment at the end of the workday unless otherwise approved by the Project Manager. Tools and equipment will be operated in a safe and responsible manner, and maintained according to manufacturer specifications, to ensure worker safety and the safety of the public and Mesa Water personnel. Mesa Water may describe other related duties as they arise.
SECTION 2 MAINTENANCE SUMMARY

The following table is provided as a summary to help in scheduling a time frame for routine maintenance of the landscape. Thorough and specific descriptions are to follow.

Table 1: Landscape Maintenance Summary

<table>
<thead>
<tr>
<th>Maintenance Item</th>
<th>Weekly</th>
<th>Monthly</th>
<th>2-4x / Year</th>
<th>Annually</th>
<th>As-Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vegetation Management</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deadhead Flowering Shrubs</td>
<td></td>
<td></td>
<td></td>
<td>May &amp; Oct</td>
<td></td>
</tr>
<tr>
<td>Prune Shrubs</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shear Groundcover/Shrubs to a natural form</td>
<td></td>
<td></td>
<td></td>
<td>May &amp; Oct</td>
<td></td>
</tr>
<tr>
<td>Trim Grasses to Base</td>
<td></td>
<td></td>
<td></td>
<td>May</td>
<td></td>
</tr>
<tr>
<td>Divide Clumping Plants / Remove pups</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Remove Dead/Damaged Leaves</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Replace Dead/Diseased Plants</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Trim Trees</td>
<td></td>
<td></td>
<td></td>
<td>Winter</td>
<td>X</td>
</tr>
<tr>
<td><strong>Mulch</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replace/Add Mulch</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Spring</td>
</tr>
<tr>
<td><strong>Fertilization &amp; Soil Amendments</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fertilize</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Weeding</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weed Removal</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Wildlife and Pest Management</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pest Eradication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><strong>Waste Management / Cleanup</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debris and Waste Removal</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Hardscape, Signage, and Lighting</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardscape Cleaning</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposed granite walkway</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Tables &amp; Benches</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signage cleaning</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Lighting cleaning</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Irrigation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspect Irrigation System</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Repair Irrigation System</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Adjust Irrigation Schedule</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><strong>Stormwater Management</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catch Basin, Bioswale, Dry Well cleanup</td>
<td></td>
<td></td>
<td></td>
<td>Apr &amp; Nov</td>
<td></td>
</tr>
</tbody>
</table>
SECTION 3 MAINTENANCE SITES AND LEVELS OF SERVICE

Levels of Service. Each site will have varying levels of service, based on whether an irrigated landscape is present. Should levels of service change, the Project Manager will work with the landscape contractor in adjusting the maintenance contract accordingly.

3.A.: Full Service. For sites requiring “Full” level of service, Sections 4-13 apply and are generally required.

3.B.: Debris Removal. For sites requiring “Debris Removal” level of service, Sections 8, 10, and 11 apply and are generally required.

Table 2 Maintenance Sites and Levels of Service

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Location</th>
<th>Address</th>
<th>Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mesa Water Headquarters</td>
<td>1965 Placentia Ave, Costa Mesa</td>
<td>Full Service</td>
</tr>
<tr>
<td>2</td>
<td>Mesa Water Reliability Facility (MWRF)</td>
<td>1350 Gisler Ave, Costa Mesa</td>
<td>Full Service</td>
</tr>
<tr>
<td>3</td>
<td>Kemp Reservoir</td>
<td>2340 Orange Ave, Costa Mesa</td>
<td>Full Service</td>
</tr>
<tr>
<td>4</td>
<td>Well 1</td>
<td>1150 Sunflower Ave, Costa Mesa</td>
<td>Full Service</td>
</tr>
<tr>
<td>5</td>
<td>Well 2</td>
<td>1001 Sunflower Ave, Costa Mesa</td>
<td>Full Service</td>
</tr>
<tr>
<td>6</td>
<td>Well 3</td>
<td>3581 Harbor Blvd, Costa Mesa</td>
<td>Debris Removal</td>
</tr>
<tr>
<td>7</td>
<td>Well 5</td>
<td>3596 Cadillac Ave, Costa Mesa</td>
<td>Debris Removal</td>
</tr>
<tr>
<td>8</td>
<td>Well 7</td>
<td>3325 Harbor Blvd, Costa Mesa</td>
<td>Debris Removal</td>
</tr>
<tr>
<td>9</td>
<td>Well 9</td>
<td>1301 Sunflower Ave, Costa Mesa</td>
<td>Full Service</td>
</tr>
<tr>
<td>10</td>
<td>Santa Ana Pump Station</td>
<td>20071 Santa Ana Ave, Costa Mesa</td>
<td>Debris Removal</td>
</tr>
<tr>
<td>11</td>
<td>Campus &amp; Bristol Pump Station</td>
<td>2121 SE Bristol St., Newport Beach</td>
<td>Debris Removal</td>
</tr>
</tbody>
</table>

For a list of maintenance locations, maps, and access requirements, see REFERENCE A: MAINTENANCE LOCATION MAPS.
SECTION 4  VEGETATION MANAGEMENT

The plants at these facilities have been spaced at the mature size of the plants in both height and spread to allow for the natural form of the plant. Regular scheduled maintenance is required to promote a healthy structure and to control the growth of the plants. The intent of this style of pruning is to maintain the natural plant appearance. Shrubs are intended to fill planting spaces as much as possible.

All landscape areas shall be inspected weekly and excess debris removed. Beds must be free of weeds, grass, and other unwanted items during the course of the service contract. Gardening debris generated from maintenance activities shall be removed from paved and concrete areas.

For a more in-depth list of vegetation and specific maintenance actions, see Table 3: VEGETATION LIST WITH SPECIFIC MAINTENANCE ACTIONS.

Pruning Specifications for Shrubs and Trees:

- Pruning shall be done per ANSI A300 (Part 1) – 2001 Pruning, for Tree Care Operations – Tree, Shrub, and Other Woody Plant, Maintenance – Standard Practices.
- Remove no more than 10% to 25% of the live foliage at any one time.
- All cuts shall be clean with no tears or rough edges.

4.A.: Groundcovers

Groundcover areas shall be uniformly kept free of weeds and grasses. Trim ground cover as needed to keep within bounds and away from obstacles. Sparse groundcover areas will be checked for soil moisture levels, irrigation coverage, and soil compaction to help determine potential growth problems.

4.B.: Shrubs

Keep vegetation off so sidewalks, clear of signs, and heights reduced to maintain vehicular safety. Pruning and trimming standards include:

- Shrubs shall be pruned as necessary to maintain the natural form of the plant, to maintain growth within space limitations, and to eliminate damage or diseased wood.
- Dead-heading (removing dead flowers) – dead head by punching or use shears to cut off the flower stem below the spent flower and just above the first full set of leaves. Trim or lightly cut back any shoots that extend beyond the natural form of the plant.
- Pruning/hedging – remove the terminal portion of a branch to promote new growth and control the shape and form of the plant. Trim or lightly cut back any shoots that extend beyond the natural form of the plant using shears.

4.C.: Grasses

Ornamental grasses are to be trimmed back to allow for new, fresh growth. Smaller grasses less than 3’ tall shall be cut back to a height of 6”, whereas larger grasses
shall be cut back to a height of 12”.

Workers should take care to not cut and damage the crown. Cut back grass in May (after going to seed).

4.D.: Succulents & Cacti

Succulents and cacti should have additional plant growth at the base of the plant removed to control the size and form of the plant.

4.E.: Vines

Vines shall be trimmed frequently to keep the growth within bounds. Vines should be sheared to prevent formation of mature stems which will be more labor intensive to trim back. Vines must be trimmed back to avoid growing on wood or painted surfaces, as aerial roots and their adhesive damages these surfaces.

4.F.: Trees

Trees shall be inspected for structural integrity, broken branches, crossing branches, and general health conditions. Stakes on newly planted trees shall be removed after one year. Young trees shall be pruned for good structure. Never ‘top’ a tree. Trees may need supplemental deep watering to encourage deep roots and discourage surface root damages. Soil moisture shall be checked using a soil probe.

- Small and medium trees below 15’ may be trimmed by the maintenance contractor, utilizing an International Society of Arboriculture (ISA) Certified Tree Worker®.
- Large trees above 15’ must be trimmed by a qualified tree maintenance service company, which may be the same as or contracted through the maintenance contractor, and must be International Society of Arboriculture (ISA) Certified Tree Worker®.

Table 3: VEGETATION LIST WITH SPECIFIC MAINTENANCE ACTIONS

The following list represents the vast majority of groundcovers, shrubs, grasses, succulents, vines, and trees that are present at the 12 sites to be maintained.

The specific best management practices listed below represents generally accepted maintenance techniques and actions, though additional maintenance requirements may arise based on the landscape needs throughout the year.

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Maintenance Schedule and Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Fragaria chiloensis</em></td>
<td>Ornamental Strawberry</td>
<td>Cut back or mow in early spring to encourage new growth.</td>
</tr>
<tr>
<td><em>Dymondia margaretae</em></td>
<td>Silver Carpet</td>
<td>Cut back from walkway edges.</td>
</tr>
<tr>
<td>Botanical Name</td>
<td>Common Name</td>
<td>Maintenance Schedule and Notes</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Anigozanthos flavidus</td>
<td>Kangaroo Paw</td>
<td>Cut spent flowers down to base.</td>
</tr>
<tr>
<td>Arctostaphylos species</td>
<td>Manzanita</td>
<td>Second year, pinched or lightly headed back in March or April (while new growth is still tender) to promote a dense growth habit. Do not prune manzanitas during cool, wet, winter months.</td>
</tr>
<tr>
<td>Artemisia californica</td>
<td>California Sagescrub</td>
<td>Prune plants after they flower in November or early December, and before they start actively growing. Do not cut back into old wood- if may not re-sprout.</td>
</tr>
<tr>
<td>Ceanothus species</td>
<td>California Lilac</td>
<td>Second year of growth, pinch and lightly prune in spring after they have flowered and as they are actively producing new vegetative growth.</td>
</tr>
<tr>
<td>Cercocarpus minutiflorus</td>
<td>Mountain Mahogany</td>
<td>Second year of growth, in May thin out growth to reveal interior bark. Prune base of any water sprouts.</td>
</tr>
<tr>
<td>Eriogonum fasciculatum</td>
<td>Buckwheat</td>
<td>Dead-head flowers six weeks after turning brown.</td>
</tr>
<tr>
<td>Heteromeles arbutifolia</td>
<td>Toyon</td>
<td>Second year, prune lightly in early winter.</td>
</tr>
<tr>
<td>Heuchera hybrid</td>
<td>Coral Bells</td>
<td>Dead-head spent flowers</td>
</tr>
<tr>
<td>Iris douglasiana</td>
<td>Douglas Iris</td>
<td>Summer dormant needing very little summer watering. Shear off dead iris leaves.</td>
</tr>
<tr>
<td>Mahonia repens</td>
<td>Creeping Mahonia</td>
<td>Shall not be pruned or edged the first three years of growth.</td>
</tr>
<tr>
<td>Mimulas aurantiacus</td>
<td>Monkeyflower</td>
<td>For a second season of flowers, from mid-May to mid-June, cut off all existing flower stalks. Water the plants to keep them actively growing. In mid-July to early August another round of flower will follow.</td>
</tr>
<tr>
<td>Myrica californica</td>
<td>Pacific Wax Myrtle</td>
<td>Second year, pinch tips of stems to promote a dense growth habit.</td>
</tr>
<tr>
<td>Phormium hybrids</td>
<td>Dwarf Flax</td>
<td>Cut dead fronds at the base</td>
</tr>
<tr>
<td>Pittosporum tobira</td>
<td>Mock Orange</td>
<td>From April to October, lightly shear shrubs once a month</td>
</tr>
<tr>
<td>Rhamnus californica</td>
<td>California Coffeeberry</td>
<td>Second year, March - May lightly pinch or prune.</td>
</tr>
<tr>
<td>Rhamnus crocea</td>
<td>Redberry</td>
<td>Second year, March – May lightly pinch or prune.</td>
</tr>
<tr>
<td>Rhaphiolepis indica</td>
<td>Indian Hawthorn</td>
<td>After spring flowering light shearing once a month until October</td>
</tr>
<tr>
<td>Botanical Name</td>
<td>Common Name</td>
<td>Maintenance Schedule and Notes</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Salvia clevelandi</strong></td>
<td>Cleveland Sage</td>
<td>Young plants should be regularly pinched to lightly headed back to promote dense branching habits. Avoid cutting into older wood. Prune in late fall or early winter, before, or as the new growth begins to expand.</td>
</tr>
<tr>
<td><strong>Salvia greggi ‘Furman’s Red’</strong></td>
<td>Firecracker Sage</td>
<td>First Year, pinch dead flower stems weekly. In January-February prune dead wood and reduce foliage by 25% to promote new spring growth.</td>
</tr>
<tr>
<td><strong>Salvia spathacea</strong></td>
<td>Hummingbird sage</td>
<td>Remove spent flower stalks and cleanup the colony after summer flowering.</td>
</tr>
<tr>
<td><strong>Schefflera arboricola</strong></td>
<td>Dwarf Umbrella Tree</td>
<td>Prune after flowering, keep 5’ elevation.</td>
</tr>
<tr>
<td><strong>Zauschneria species</strong></td>
<td>California fuchsia</td>
<td>First two years pinch back stems after flowering to encourage secondary flower growth. After two years, prune heavily in December to 4” stubs, plant will regenerate uniformly with profession of flowers.</td>
</tr>
</tbody>
</table>

**Grasses**

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Maintenance Schedule and Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Carex tumulicola</strong></td>
<td>Berkeley Sedge</td>
<td>Shear flowers as soon as they begin to brown in June.</td>
</tr>
<tr>
<td><strong>Juncus patens</strong></td>
<td>California gray rush</td>
<td>Use a coarse, heavy rake to groom the plants and remove dead leaves from other plants that collect in the rush’s stems.</td>
</tr>
<tr>
<td><strong>Muhlenbergia rigens</strong></td>
<td>Deer Grass</td>
<td>Shear the grass to 6”-8” clumps in May or June.</td>
</tr>
</tbody>
</table>

**Succulents and Cacti**

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Maintenance Schedule and Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agave species:</strong></td>
<td>Agave</td>
<td>Remove flowering stems as needed. The rosette that flowered dies, but produces offspring (pumps) that will continue the planting.</td>
</tr>
<tr>
<td><strong>Dudleya species</strong></td>
<td>Dudleya</td>
<td>One month after flowering remove stems by cutting.</td>
</tr>
<tr>
<td><strong>Hesperaloe parviflora</strong></td>
<td>Red Yucca</td>
<td>Remove spent flowers early summer.</td>
</tr>
</tbody>
</table>

**Vines**

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Maintenance Schedule and Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Distictus buccinatoria</strong></td>
<td>Trumpet Vine</td>
<td>Trim quarterly to ensure growth is checked.</td>
</tr>
<tr>
<td><strong>Ficus pumila</strong></td>
<td>Creeping Fig</td>
<td>Trim quarterly to ensure growth is checked.</td>
</tr>
<tr>
<td>Botanical Name</td>
<td>Common Name</td>
<td>Maintenance Schedule and Notes</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------</td>
<td>-------------------------------------------------------------------</td>
</tr>
<tr>
<td>Agonis flexuosa</td>
<td>Peppermint Willow</td>
<td>First year, early spring, thin-out interior twigs, small branches (1/4”-1/2” dia.) and foliage. Do not remove more than 10%.</td>
</tr>
<tr>
<td>Cercis occidentalis</td>
<td>Western Redbud</td>
<td>Maintain as multi-trunk tree, do not remove basal stems. To increase bird foraging do not prune flowers.</td>
</tr>
<tr>
<td>Liquidambar styraciflua</td>
<td>Liquidambar Tree</td>
<td>Remove dead and damaged limbs and branches in late fall or early winter.</td>
</tr>
<tr>
<td>Lyonothamnus floribundus</td>
<td>Catalina Ironwood</td>
<td>Maintain as multi-trunk tree, do not remove basal stems. To increase bird foraging do not prune flowers.</td>
</tr>
<tr>
<td>Aspleniifolius</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnolieae</td>
<td>Magnolia Tree</td>
<td>Trees under power lines to be pruned by utility arborist (SC Edison).</td>
</tr>
<tr>
<td>Pinus halepensis</td>
<td>Aleppo Pine</td>
<td>Trees under power lines shall be pruned by utility arborist (SC Edison)</td>
</tr>
<tr>
<td>Platanus racemosa</td>
<td>California Sycamore</td>
<td>Fallen dead leaves need to be cleaned up on a weekly basis to avoid smothering understory plants.</td>
</tr>
<tr>
<td>Quercus agrifolia</td>
<td>Coast Live Oak</td>
<td>Summer prune only. First year remove dead branches and small limbs. Do not remove leaf drop (duff).</td>
</tr>
<tr>
<td>Sequoia sempervirens</td>
<td>Coast Redwood</td>
<td>Do not prune during two-year transition period.</td>
</tr>
<tr>
<td>Stenocarpus sinuatus</td>
<td>Firewheel Tree</td>
<td>Late spring prune lightly interior of tree. Remove dead wood.</td>
</tr>
</tbody>
</table>
SECTION 5  PLANT REPLACEMENTS

Proper maintenance will help reduce plant expiration, however should plants need replacement, they should be replaced as soon as possible. This will avoid disease and infections from spreading to other plant material. It is recommended to plant in the cooler seasons to reduce plant shock.

5.A.: Plant Stock

- Dieback shall be replaced with the same species plant, unless otherwise specified by Mesa Water.
- Plants should be sized and located appropriately to blend in with the existing landscape, or per the Project Manager’s plans and specifications.
- Root bound plants shall not be used.
- All replacement plants shall be in good health and have vigorous growth.

5.B.: Installation Specifications

- Plants shall be replaced in the same location, and within range of existing irrigation emitters.
- Pits shall be 2x the width of the rootball.
- Shrub root crowns (where roots merge into the trunks) shall be planted several inches above finish grade and level with mulch. This will allow the plant to settle without sinking below grade.
  - 1-5 gallon size containers plants: Locate root crowns 2” above the finish grade.
  - 15 gallon size container plants and 24” box trees: Install 3” above finish grade.
- Flood the root zone after planting to remove air and settle soil.

SECTION 6  MULCH

Mulch helps to reduce soil moisture loss and reduce weed growth.

- *Mulch is specified to be only “Forest Floor” ½ - 1 ½” by Aguinaga Green.*
- Mulch shall be applied in planters annually in the spring, except where there are spreading groundcovers.
- Mulch shall be applied at an average depth of 3”, ensuring that all bare soil is covered.
- Mulch shall be maintained 6” away from the root crown of all plants.
- Power blowers shall be used at a minimum in mulched areas so as to prevent disturbance and bare spots.
SECTION 7  FERTILIZATION & SOIL AMMENDMENTS

Plants need a steady supply of nutrients when they are actively growing. Most of those nutrients are readily available in the soil, water, and air. All of the plants in the landscapes are native to California or similar climates, and do not need much, if any, supplemental nutrients from fertilizers. Fertilizers shall be applied according to the following schedule:

- General purpose fertilizer shall be applied once per year, in the spring, according to the manufacturer’s specifications.
- Redwood forest at MWRF shall have the following fertilizers and soil supplements applied, in addition to any general purpose fertilizers:
  - Gypsum applied at 10 pounds per 1,000 square feet, monthly.
  - Calcium Ammonia Nitrate (27-0-0) Yara or Simplot applied at 4 pounds per 1,000 square feet, quarterly.
- Other fertilizers may need to be applied on an as-needed basis to correct various issues as they arise.
- Fertilizers type and application rates shall be pre-approved by Project Manager.

SECTION 8  WEEDING

The best practice in preventing weeds is to always be aware of any unwanted plant material in the landscape whenever a maintenance crew is onsite.

8.A. Inspection. All landscape areas shall be inspected weekly and excess debris removed. Beds must be free of weeds, grass, and other unwanted items during the course of the service contract.

8.B. Removal Specifications. Weeds should be removed while they are still young and before they set seed or produce rhizomes or tubers. Small patches should be removed before they become large. The entire weed should be removed, including the root.

8.C. Physical Control.
- Hand Tools. Hand tools should be preferred in removing weeds due to their accuracy and minimal impact to the environment.
- Weed whackers. To help prevent accidental damage to beneficial shrubs and the irrigation system, weed whackers or mechanic equipment may only be used in large open areas where the use of manual tools would not be practical.

8.D. Chemical Control. All chemicals will be used and applied in accordance with Federal, State, County, and local laws and ordinances governing use of herbicides, as well as in accordance with the manufacturer’s instructions. Chemical control and herbicides are limited to non-selective herbicides and chemicals.
All Safety Data Sheets (SDS) for chemical herbicides must be provided to the Project Manager prior to application.

Allowable chemical controls include the following:

- Natural herbicides:
  - Pre-emergent: corn gluten meal
  - Post-emergent: vinegar
- Synthetic herbicides:
  - Pre-emergent: oryzalin, such as Surflan®
  - Post-emergent: glyphosate, such as Roundup®

8.E. **Post Weed Removal.** Large infestations should have bare soils covered with 3” of mulch, and/or revegetated per the Project Manager’s direction.

### Table 4: Common Weeds

<table>
<thead>
<tr>
<th>Common Weeds</th>
<th>Cool Season Growers</th>
<th>Warm Season Growers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Blugrass</td>
<td><em>Poa annua</em></td>
<td>Crabgrass</td>
</tr>
<tr>
<td>Bermuda Buttercup</td>
<td><em>Oxalis pes-capre</em></td>
<td>Bermuda Grass</td>
</tr>
<tr>
<td>Yellow Star Thistle</td>
<td><em>Centaurea solstitialis</em></td>
<td>Kikuyugrass</td>
</tr>
<tr>
<td>Mustard</td>
<td><em>Brassica spp.</em></td>
<td>Creeping Woodssorrel</td>
</tr>
<tr>
<td>Bittercress, Pop Weed</td>
<td><em>Cardamin oligosperma</em></td>
<td>Bermuda Buttercup</td>
</tr>
<tr>
<td>Clovers</td>
<td><em>Trifolium, Medicargo, Melilotus</em></td>
<td>Spotted Spurge</td>
</tr>
<tr>
<td>Bindweed</td>
<td><em>Convolvulus arvensis</em></td>
<td>Nutsedge</td>
</tr>
</tbody>
</table>
SECTION 9  WILDLIFE AND PEST MANAGEMENT

Wildlife is a natural occurrence and an indicator of a healthy environment. Wildlife, especially birds and insects, changes with the seasons, educates the public, brings a “sense of place” to a landscape, and enriches our lives.

Utilizing Integrated Pest Management (IPM) in the landscape recognizes that landscape pests are organisms that interfere with the management regime of the landscape, and that the health of the landscape requires the use of both proactive and reactive methods.

*For a more in-depth description of pests and diseases, see Table 5: COMMON NATIVE PLANT PESTS AND DISEASES.*

9.A. **Insects:** all insects shall be considered a food source for birds. If the contractor finds venomous insects or insects damaging plants and/or structures, notify the Project Manager immediately for corrective action by a licensed pest exterminator.

9.B. **Birds:** if nests are observed, all pruning or dead-heading shall be delayed until after nesting period has concluded, generally after April.

9.C. **Integrated Pest Management**

  - **Monitoring:**
    - Monitor the plants health continuously to determine if harm is being caused by plant pests. If so, corrective action must be taken.
  
  - **Intervention:**
    - Controlling pests by use of chemical products is considered as a last resort. Contractor shall consult with Project Manager for property low impact pest control.
    - Evaluate whether the chosen method is working after two weeks. If not, alternative methods should be used.

  - **Natural Enemies:**
    - Natural enemies are organisms that kill, decrease the reproductive potential of, or otherwise reduce the numbers of another organism. Natural enemies that limit pests are key components of integrated pest management programs. Monitor whether the “natural enemies” of those pests are present and in sufficient numbers. If so, no additional control methods may be necessary.
### Table 5. Common Pests and Diseases of Native Plants

<table>
<thead>
<tr>
<th>Plant Name</th>
<th>Invertebrates</th>
<th>Diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arctostaphylos</strong> species (Manzanita)</td>
<td>Aphids, Flatheaded Borer, Foliage Miners, Foliage-feeding Caterpillars Mealybugs, Scales</td>
<td>Canker, leaf Gall Crown Rot (<em>Phytophthora cinmonii</em>)</td>
</tr>
<tr>
<td><strong>Artemisia californica</strong> (Sagebrush)</td>
<td>Aphids, Foliage Miner, Gall Mite</td>
<td>Rots (<em>Phytophthora spp</em>) Rust (<em>Puccinia spp</em>)</td>
</tr>
<tr>
<td><strong>Ceanothus</strong> species</td>
<td>Aphids, Flatheaded Borers Foliage-feeding Caterpillars Gall Markers, Psyllids, Scales True Bugs</td>
<td>Canker: <em>Botryosphaeria spp</em> Cytospora canker Leaf Spot: <em>Cerospora ceanothi Phloeospora ceanothi Phyllosticta spp.</em> Powdery Mildew Rots, <em>Dematophora</em></td>
</tr>
<tr>
<td><strong>Cercis occidentalis</strong> (Western Redbud):</td>
<td>Foliage-feeding Caterpillars Scales Whiteflies</td>
<td>Leaf Spot <em>Mycosphaerella cercidicola</em> Cytospora canker Rots <em>Phytophthora cinmonii</em></td>
</tr>
<tr>
<td><strong>Cercocarpus minutiflorus</strong> (Mountain Mahogany):</td>
<td>Aphids, Flatheaded Borers</td>
<td>Leaf Spot, Canker, Mildew, Rots Wood Decay</td>
</tr>
<tr>
<td><strong>Eriogonum fasciculatum</strong> (Buckwheat):</td>
<td>Aphids, Beetles, Foliage – feeding Caterpillars</td>
<td>Blight and Branch Dieback, <em>Erwinia amylovora</em> Leaf Spot <em>Endomosporium</em> Rots <em>Phytophora spp</em> Scab <em>Venturia spp</em></td>
</tr>
<tr>
<td><strong>Heteromeles arbutifolia</strong> (Toyon):</td>
<td>Beetles, Flatheaded Borers, Scales Thrips, True Bugs, Whiteflies</td>
<td>Scales</td>
</tr>
<tr>
<td><strong>Lyonothamnus floribundus ssp. Aspleniifoliu</strong> (Catalina Ironwood):</td>
<td>Foliage-feeding Caterpillars Mealybugs, Scales, Thrips Whiteflies</td>
<td>Rusts <em>Cumminsiella mirabilissima</em></td>
</tr>
<tr>
<td><strong>Mahonia repens</strong> (Creeping Mahonia)</td>
<td>Gall Makers, Mealybugs Thrios, True Bugs</td>
<td>Leaf Spot, <em>Ramularia mimuli</em> Powdery Mildew Rots, <em>Puccinia spp</em></td>
</tr>
<tr>
<td>Plant Name</td>
<td>Invertebrates</td>
<td>Diseases</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>----------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td><em>Salvia greggi</em> ‘Furman’s Red’ (autumn sage)</td>
<td>Aphids, Thrips</td>
<td>Leaf spot, Mildew, Rusts</td>
</tr>
<tr>
<td><em>Sequoia sempervirens</em> (coast redwood)</td>
<td>Beetles, Galls, Blister Mites, Scales</td>
<td>Blight and Branch dieback, Canker, Rots, Sudden Oak Death</td>
</tr>
</tbody>
</table>
SECTION 10  WASTE MANAGEMENT

It is Mesa Water District’s goal to reduce green waste through recognized best management practices.

10.A. Green Waste: On-site composting facilities, if available, shall be used to retain nutrients. If on-site composting facilities are not available, then all green waste shall be taken to a green waste composting facility.

10.B. Trash and Debris: All planting areas and hardscape areas are to be kept clean of trash and debris. Trash shall be removed to a legal disposal site.

SECTION 11  HARDSCAPE, SIGNAGE, AND LIGHTING

11.A. Concrete paving, Trex walkways, and Asphalt. On a weekly basis, paving, sidewalk, driveways, and parking stalls shall be kept clear of debris, trash, and litter.

11.B. Decorative rock and gravel. Remove vegetative debris, trash, and litter from all surfaces. Compost vegetation waste and dispose of trash and litter.

11.C. Decomposed granite walkways and driveways. On a monthly basis, all decomposed granite walkways, driveways, and paths shall be raked to be kept tidy.

11.D. Tables and Benches. On a weekly basis, sweep/blow any debris, leaves, or spider webs off tables and benches that are within the demonstration gardens.

11.D. Signage. On a quarterly basis, all signage shall be cleaned using a light broom and a moist cloth or a hose with a shut-off nozzle.

11.E. Lighting. On a quarterly basis, all landscape light fixtures shall be cleaned using a moist cloth with mild soap solution.
SECTION 12 IRRIGATION SYSTEMS AND CONTROLLER MAINTENANCE

The performance of the irrigation system is critical to the growth and overall sustainability of the landscape. Each site may have multiple types of irrigation equipment, based on plant material and age of the facility. All landscape sites are at water production, storage, and/or treatment facilities, therefore all sites utilize potable water for irrigation purposes.

12.A. Backflow prevention: Backflow prevention devices are present for each system, and are maintained and tested by Mesa Water District staff. Any maintenance issues should be directed to the Project Manager.

12.B. Irrigation Scheduling: Scheduling is performed by Mesa Water District staff. However, should the contractor observe dryer/wetter than optimal conditions, the contractor should notify and recommend corrective actions to the Project Manager. Additionally, should landscape maintenance schedules necessitate a change in irrigation scheduling then the contractor shall notify the Project Manager.

12.C. Irrigation System Inspections: Inspections shall be performed monthly, and all components shall be maintained in proper working order, as per the manufacturer’s specifications.

- **Fogger System**: The redwood tree garden at the Mesa Water Reliability Facility utilizes a fogger system, manufactured by FogCo, to add supplemental water to the trees. The fogging machine and system scheduled maintenance is conducted by the Project Manager. Major repairs may be conducted by the contractor as approved and supervised by the Project Manager.

- **Irrigation Controllers**:
  - Review each station/valve to ensure effective operation, to be completed monthly.

- **Irrigation Valves**: All irrigation valves are automatic.
  - **Conventional Valves**:
    - Check each valve for leaks, defective solenoids, and broken wires, to be completed monthly.
  - **Drip Irrigation Valves**:
    - Check each valve for leaks, defective solenoids, and broken wires, to be completed monthly.
    - Clean out filter by removing filter body, exposing the screen, and rinsing, to be completed annually.

- **Sprinklers and Rotors**:
  - **Distribution Uniformity**: activate each station and observe sprays. Adjust spray heads accordingly, to be completed monthly.

- **Drip systems and AquaStem systems**:
  - **Emitters**:
- Activate system, inspect emitters and drain lines, to be completed monthly.
  - **Flushing:**
    - Completed annually, in spring.
    - Completed as needed when breaks occur, before adding replacement tubing.
  - **Flush and Air Valves:**
    - During flushing of system, identify defective flush and air valves and replace as needed.
  - **Main and Lateral Irrigation Lines:** While system is activated, observe for broken mains and lateral lines, and repair as needed.
  - **Irrigation System Pressure:** While system is activated, observe and inspect pressure, as needed, at the point of connection and at the last heads on the longest line.

**12.D. Replacement Parts:** All irrigation replacement parts shall be as original installation or as approved by Project Manager.
Section 13  STORMWATER MANAGEMENT

The demonstration projects are designed to retain storm water for vegetation use, in order to reduce stormwater runoff, and improve water quality. Stormwater is captured in bioswales and infiltration basins.

13.A. Catch Basins: At the Mesa Water Reliability Facility (MWRF) De-silt and clean out debris to all concrete catch basins, inlets, and outlets, annually in October.

- The catch basin that receives roof runoff shall be cleaned annually, in October.
  - Clean opening to two- 8” diameter drain inlets, and one- 4” drain outlet.
  - Replace filter fabric over the 4” diameter outlet drain pipe with plant fabric.
  - De-silt bottom of the catch basin, and dispose of waste to landfill.

13.B. Bioswales: At the MWRF, there are bioswales in the riparian woodland garden and the redwood garden, which allow stormwater to settle onsite.

- The bioswales shall have leaves raked out from the *Juncus patens* (California Rush) plants.

13.C. Dry Wells: At Mesa Water Headquarters there are two systems of dry wells installed, that collects, retains, and discharges stormwater on-site.

- At MWHQ, inspect roof top that drains to the dry wells (Flo-Well and CUDO Water Storage System), annually in October.
- Clean inlets of any debris, annually in October.
- In the alcove that fronts Placentia Avenue, access clean-outs to roof drain pipes to dry well detention basin, and clean it of debris.
- Access the manhole in the planter that fronts the street. Clean the detention basin’s overflow outlet pipe that enters the manhole.
- Access the dry wells, desilt, and clean out debris.
LANDSCAPE MAINTENANCE AND MANAGEMENT SERVICES

MAINTENANCE LOCATION MAPS
## Maintenance Locations

<table>
<thead>
<tr>
<th>Site Number</th>
<th>Location</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Mesa Water Headquarters</td>
<td>1965 Placentia Ave, Costa Mesa</td>
</tr>
<tr>
<td>2.</td>
<td>Mesa Water Reliability Facility (MWRF)</td>
<td>1350 Gisler Ave, Costa Mesa</td>
</tr>
<tr>
<td>3.</td>
<td>Kemp Reservoir</td>
<td>2340 Orange Ave, Costa Mesa</td>
</tr>
<tr>
<td>4.</td>
<td>Well 1</td>
<td>1150 Sunflower Ave, Costa Mesa</td>
</tr>
<tr>
<td>5.</td>
<td>Well 2</td>
<td>1001 Sunflower Ave, Costa Mesa</td>
</tr>
<tr>
<td>6.</td>
<td>Well 3</td>
<td>3581 Harbor Blvd, Costa Mesa</td>
</tr>
<tr>
<td>7.</td>
<td>Well 5</td>
<td>3596 Cadillac Ave, Costa Mesa</td>
</tr>
<tr>
<td>8.</td>
<td>Well 7</td>
<td>3325 Harbor Blvd, Costa Mesa</td>
</tr>
<tr>
<td>9.</td>
<td>Well 9</td>
<td>1301 Sunflower Ave, Costa Mesa</td>
</tr>
<tr>
<td>10.</td>
<td>Santa Ana Pump Station</td>
<td>20071 Santa Ana Ave, Costa Mesa</td>
</tr>
<tr>
<td>11.</td>
<td>Campus &amp; Bristol Pump Station</td>
<td>2121 SE Bristol St., Newport Beach</td>
</tr>
<tr>
<td>#</td>
<td>Location</td>
<td>Address</td>
</tr>
<tr>
<td>----</td>
<td>-----------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Mesa Water Headquarters</td>
<td>1965 Placentia Ave, Costa Mesa</td>
</tr>
<tr>
<td></td>
<td>Entrance: Alley on 19th Street</td>
<td>Access: n/a</td>
</tr>
</tbody>
</table>

Frontage Picture

Map
<table>
<thead>
<tr>
<th>#</th>
<th>Location</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Mesa Water Reliability Facility (MWRF)</td>
<td>1350 Gisler Ave, Costa Mesa</td>
</tr>
<tr>
<td></td>
<td>Entrance: 3rd Driveway</td>
<td>Access: Code (___)</td>
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</table>

Frontage Picture

Map
<table>
<thead>
<tr>
<th>#</th>
<th>Location</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Kemp Reservoir</td>
<td>2340 Orange Ave, Costa Mesa</td>
</tr>
</tbody>
</table>

**Entrance:** On Orange  
**Access:** Key

Frontage Picture

Map
<table>
<thead>
<tr>
<th>#</th>
<th>Location</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Well 1</td>
<td>1150 Sunflower Ave, Costa Mesa</td>
</tr>
</tbody>
</table>

Entrance: Driveway
Access: Key

Frontage Picture

Map
<table>
<thead>
<tr>
<th>#</th>
<th>Location</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Well 2</td>
<td>1001 Sunflower Ave, Costa Mesa</td>
</tr>
</tbody>
</table>

**Entrance:** Driveway  
**Access:** Key

**Frontage Picture**

**Map**
<table>
<thead>
<tr>
<th>#</th>
<th>Location</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Well 3</td>
<td>3581 Harbor Blvd, Costa Mesa</td>
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</table>

**Entrance:** Driveway  
**Access:** Key

Frontage Picture

Map
<table>
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<th>#</th>
<th>Location</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Well 5</td>
<td>3596 Cadillac Ave, Costa Mesa</td>
</tr>
</tbody>
</table>

**Entrance:** Gate  
**Access:** Key

**Frontage Picture**

![Frontage Picture](image)

**Map**

![Map](image)
<table>
<thead>
<tr>
<th>#</th>
<th>Location</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Well 7</td>
<td>3325 Harbor Blvd, Costa Mesa</td>
</tr>
</tbody>
</table>

**Entrance:** Driveway off Sunflower Ave or Law Ct  
**Access:** Code ( ) & Key

Frontage Picture

![Frontage Picture](image)

Map

![Map](image)
<table>
<thead>
<tr>
<th>#</th>
<th>Location</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Well 9</td>
<td>1301 Sunflower Ave, Costa Mesa</td>
</tr>
</tbody>
</table>

Entrance: Driveway  
Access: Key

Frontage Picture

Map
<table>
<thead>
<tr>
<th>#</th>
<th>Location</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Santa Ana Pump Station</td>
<td>20071 Santa Ana Ave, Costa Mesa</td>
</tr>
<tr>
<td></td>
<td>Entrance: Driveway (West of station)</td>
<td>Access: n/a</td>
</tr>
</tbody>
</table>

Frontage Picture

Map
<table>
<thead>
<tr>
<th>#</th>
<th>Location</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Campus &amp; Bristol Pump Station</td>
<td>2120 SE Bristol St., Costa Mesa</td>
</tr>
</tbody>
</table>

**Entrance:** Driveway (East of station)  
**Access:** Key

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Frontage Picture

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Map
Appendix D: Fee Proposal (Pricing Sheet)

This item must be submitted in a separate sealed envelope with the Proposal.

Project Name: Landscape Maintenance and Management Services
RFP Issue Date: April 3, 2017

Contractor (insert full legal name): ___________________________________
Class: C-27; License #: ___________________________________

The undersigned, by way of execution and submission of this form to Mesa Water District ("Mesa Water"), hereby certifies, subject to penalty for perjury pursuant to the laws of the State of California, that the following is true and correct:

A. To the extent required for the work to be performed, the Proposer is a duly licensed contractor by the Contractors’ State License Board of the State of California ("CSLB"), and such license(s) are in full force and effect as of the date the Proposer has submitted this proposal to the District, and the classification(s) of such license(s) is(are) appropriate to allow the Proposer to perform all of the work required to be completed as part of the Project ("Work") in accordance with California law. The classification(s) and number(s) of the license(s) issued to the Proposer by the CSLB is(are):

B. The Proposer is familiar with the Contract Documents, and the requirements contained therein, and represents and warrants that it has sufficient financial and other resources, to perform and complete the Work in strict accordance with the Contract Documents.

C. The Proposer hereby proposes to (and, if awarded the Contract, the Proposer shall) furnish at its own cost and expense any and all labor, materials, tools, equipment, facilities, transportation, services and other things required for completion of the Work in strict conformity with the Contract Documents, in exchange for payment from the District of whichever of the following total, all-inclusive amounts (i.e., base proposal and/or alternate proposals) is applicable (each a “Proposal Amount”):

D. The Proposer acknowledges that the Proposal Amount(s) shall constitute all-inclusive compensation for full and satisfactory completion of all of the Work, including, without limitation, compensation for any and all sales taxes, supervision, general conditions, fees, field-office and home-office overhead, and profit.
E. The Proposer hereby represents and warrants that it was responsible for preparing this proposal and that it has carefully checked and confirmed the Proposal Amount(s) and all other information set forth in this Proposal Form.

F. The Proposer acknowledges and agrees that Mesa Water, and the Mesa Water Board of Directors, may rely on such information, and in no event shall Mesa Water, or its Board, officers, officials, employees, or agents be responsible for any errors or omissions in this proposal. The Proposer is aware and acknowledges that the District Board has the right to waive any minor irregularity in this proposal or any other proposal for the Project.

G. If awarded the Contract for the Work, the Proposer shall execute the Contract by causing its duly-authorized representative to sign, and thereby bind the Proposer to, the Contract. The Proposer shall complete, to the extent required, all documents required to be executed by the Contract, including, but not limited to: (i) the Contract; (ii) the Payment Bond; (iii) the Performance Bond; (iv) the Certification of Asbestos-Free Materials; (v) the Certification of Drug-Free Workplace; (vi) the Certification of Tobacco-Free Workplace; and (vii) the Certification Regarding Workers Compensation. The Proposer further acknowledges that it shall forfeit the whole amount of its proposal security in the event Proposer fails to complete as applicable, execute, and submit any such documents to the District within 7 calendar days following receipt by the Proposer of the Notice of Award.

H. The contact information set forth below is the current address and telephone number for the Proposer. The Proposer acknowledges that, if the District attempts to contact the Proposer for any purpose relating to this proposal (including, without limitation, to request additional information or to provide a Notice of Award), but the information set forth below is to any extent not correct, then the District may reject this proposal and, in such event, the District shall have no liability to the Proposer whatsoever.
### Fee Proposal Worksheet – Mandatory Items

<table>
<thead>
<tr>
<th>Proposal Items (Monthly Recurring Items)</th>
<th>Unit Cost Proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly Maintenance Costs: Site 1</td>
<td></td>
</tr>
<tr>
<td>Monthly Maintenance Costs: Site 2</td>
<td></td>
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<td>Monthly Maintenance Costs: Site 3</td>
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<td>Monthly Maintenance Costs: Site 4</td>
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<td>Monthly Maintenance Costs: Site 5</td>
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<td>Monthly Maintenance Costs: Site 9</td>
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<td>Monthly Maintenance Costs: Site 10</td>
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<tr>
<td>Monthly Maintenance Costs: Site 11</td>
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<tr>
<td><strong>TOTAL MONTHLY MAINTENANCE TIME AND MATERIALS</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Proposal Items (Incidental)</th>
<th>Unit Cost Proposal</th>
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<tbody>
<tr>
<td>General Fertilizer Costs</td>
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<tr>
<td>Tree Trimming Labor (large trees only)</td>
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</tr>
<tr>
<td>Irrigation System Repair Labor</td>
<td></td>
</tr>
<tr>
<td>Standard Plant Material Costs (1-gallon)</td>
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</tr>
<tr>
<td>Standard Plant Material Costs (5-gallon)</td>
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<tr>
<td>Standard Plant Material Costs (15-gallon)</td>
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<td>Standard Plant Material Costs (flats)</td>
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Fee Proposal Worksheet – *Additional Items for Mesa Water’s Consideration*

*Proposer may attach multiple copies of this worksheet if necessary.*

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Proposal for Landscape Maintenance and Management Services
For Mesa Water District
By Vista Del Verde Landscape, Inc.

The following is the information requested for our proposal for landscape maintenance and management services dated March 28, 2017.

Main Yard Location:
250 Fischer Ave.
Costa Mesa, Ca 92626
Office Line 24/7 - 949-713-5800

Mailing Address:
22431 Antonio Parkway #B160-492
Rancho Santa Margarita, CA 92688

Telephone Numbers:
Office phone - 949-713-5800
Fax Number: 949-713-5801
Cell - 949-842-8537 (Rob Johnson, President)

Email Address -
President - Rob Johnson - rob@vdvlandscape.com

Website Address: www.vdvlandscape.com

Federal Tax ID - #84-1672361 - Corporation
C-27 #850282
Established 1971 - serving Orange County for over 46 years.

Robert S. Johnson, President is authorized to sign contracts for Vista Del Verde Landscape, Inc. Phone - 949/842-8537

Our Insurance Broker is Landscape Contractors Insurance Services. See attached certificates of Insurance

Sincerely,

[Signature]

Robert S. Johnson
President
Vista Del Verde Landscape, Inc.
**CERTIFICATE OF LIABILITY INSURANCE**

**DATE (MM/DD/YYYY):** 7/21/2016

**PRODUCER**
Landscape Contractors (Lic#0755906)  
Insurance Services, Inc.  
1835 N. Fine Avenue  
Fresno CA 93727

**INSURED**
Vista del Verde Landscape, Inc.  
22431 Antonio Parkway Ste. B160-492  
Rancho Santa CA 92688

**INSURER(S) AFFORDING COVERAGE**
Atlantic Specialty Insurance  
NAIC #: 27154

**COVERAGES**

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**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY**

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**DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES**

---

**CERTIFICATE HOLDER**

**CANCELLATION**

**CERTIFICATE HOLDER**

---

**AUTHORISED REPRESENTATIVE**

D Cerkueira/HRODE

© 1988-2014 ACORD CORPORATION. All rights reserved.
CERTIFICATE OF LIABILITY INSURANCE

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. IF SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Landscape Contractors (Lic#0755906)
Insurance Services, Inc.
1835 N. Fine Avenue
Fresno CA 93727

Contact Name: Debbie Cerkueira
Phone: (559) 650-3555
Fax: (559) 650-3558
Email: dcerkueira@loisinc.com

INSPERSE INSURANCE COMPANY NAIC #
Cypress Insurance Company 10855

INSURED
Vista del Verde Landscape, Inc.
22431 Antonio Parkway Ste. B160-492

Insurer A

Insurer B:

Insurer C:

Insurer D:

Insurer E:

Insurer F:

Rancho Santa CA 92688

COVERAGE CERTIFICATE NUMBER: 16/17 MC REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

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DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

RE: All landscape operations performed by or on behalf of the named insured.

**********Bid Certificate Only**********

**********Upon Acceptance of Bid Please Submit Insurance Requirements**********

CERTIFICATE HOLDER CANCELLATION

**********Bid Certificate Only**********

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

ACORD 25 (2010/05) © 1988-2010 ACORD CORPORATION. All rights reserved.

The ACORD name and logo are registered marks of ACORD
Section 1

Vista Del Verde Landscape, Inc. Qualifications of Service

Vista Del Verde Landscape is a full service commercial landscape service company that first established roots in Orange County in 1971. We have our main yard in Costa Mesa and provide service to Public Facilities, Schools, Museums, Industrial and Office Parks, Apartments and Homeowner Associations. For over 46 years we have had a strong track record of providing quality work based on sound horticultural practices. We work safe for our employees and our customers and will also provide a safe landscape for the Mesa Water District. Our experience has lead us to provide service to several public agencies projects that have included the City of Santa Ana, the City of San Clemente, the Santa Ana Zoo and Bowers Museum. We also have work with the Irvine Company Community Apartments and Mater Dei High School which have high public use.

Our staff has strong horticultural knowledge and certifications. As you will see in our key staff section that follows, we continue to be certified in water management, pest control and landscape practices. We believe continuing education is very important to keep abreast with the latest technology and ways to protect the environment.

The following are some of the projects similar to the scope and use type of the Mesa Water District Landscape:

SAN CLEMENTE-DANA POINT ANIMAL SHELTER
221 Avenida Fabricante
San Clemente, CA, 92672
Kim Cholodenko – 949.492.1617

- We provide landscape maintenance services for the San Clemente-Dana Point animal shelter. We maintain their drought tolerant California native garden areas as well as the non-native vegetation landscape.
- Contract dates: August 2007-Current
- Contract Manager: Robert Johnson

BOWERS MUSEUM of CULTURAL ART
2002 N. Main St.
Santa Ana, CA 92706
Thuy Nguyen – 714.567.3618
- We provide landscape maintenance services for Bowers Museum of Cultural Art. We care for this municipal facility which is used by the public for several events throughout the year. We have enjoyed providing landscape service to the Museum for over 12 years.
  - Contract dates: August 2005 - Current
  - Contract Manager: Raul Lopez

**Mater Dei High School**
1202 W. Edinger Ave.
Santa Ana, CA 92707
Dave Taylor - 714.850.9503

- We provide landscape maintenance service for the high school grounds and athletic field areas. This is a high use facility and we have been providing landscape services for over 11 years at Mater Dei.
  - Contract dates: 2006 - Current
  - Contract Manager: Raul Lopez

**City of Santa Ana**
220 S. Daisy
Santa Ana, CA 92703
Mike Lopez – 714.647.3324

- We provided landscape maintenance services for the City of Santa Ana at their Parks and the Zoo. This work included many public high use facilities and challenges at the Zoo with low water use plantings. This project stopped due to the usual bidding process.
  - Contract dates: September, 2006-2014
  - Contract Manager: Robert Johnson

Vista Del Verde Landscape has the team that can provide the level of quality and service that the Mesa Water District is looking for. We understand the requirements your landscape needs and what you are wanting to achieve for the customers of the water district and to have the right image to the public that the facilities are maintained in a thoughtful way that not only looks good but is also efficient. We are ardent environmentalists and are conscientious participants in recycling and water management. These are key areas of emphasis for every jobsite we maintain. We work with green recycling centers and are enrolled in water management programs to help reduce your landscape water usage. We feel that Vista Del Verde Landscape will provide the landscape service that the Mesa Water District is looking for because we have the experience, staff, horticultural knowledge and systems to provide the level of landscape quality you require.
Section 2

Key Staff Qualifications for This Contract

The following are the key team members that will be assigned to help us provide the service for your project.

**Robert S. Johnson – President and Owner**
- Designated Project Manager
  - B.S., Ornamental Horticulture, California Polytechnic State University, San Luis Obispo
  - Pest Control Advisor License
  - Qualified Applicator’s License
  - C-27 State Contractor’s License
  - 33 years experience in the landscape industry
  - Certified Landscape Professional with National Association of Landscape Professionals

**Raul Lopez – Operations Manager and Owner**
- Oversee operations quality and training of team members.
  - Certified Landscape Technician, National Association of Landscape Professionals
  - Qualified Applicator’s License
  - 25 years experience in the landscape industry

**Brian Clyde - Account Manager**
- Assists with customer communication and quality control.
  - B.S. Environmental Science with minor in Economics, University of Redlands
  - Presently studying to take the CLCA Water Manager Certification Test.
  - Brian joined our team in 2015 after graduating from College.
  - Landscape Safety Certified

**Pedro Chaves – Irrigation Manager**
- CLCA Certified Water Manager
- Certified Water Auditor by the Irrigation Association
- 30 years in the landscape industry
- Landscape Safety Certified
Simone Fermin – Crew Supervisor

- 20 years of experience in the landscape industry
- Irrigation Tech 1
- Landscape Safety Certified

Marilyn Johnson – Office Manager

- B.A., University of Southern California
- 20 years in Office Administration and Marketing

The work breakdown structure we anticipate for this project will require a maintenance crew to perform weekly service to all sites that includes the normal regular landscape clean up and gardening will take approximately 17 hours on average. At times during the year additional effort may need to be added to the crew for seasonal demands such
as pruning. In addition, we will have an irrigation technician inspect the irrigation system to ensure the system is functioning properly on a monthly cycle to observe the sprinklers running. We anticipate this taking 8 hours per month. This is not to take away from the weekly service crew from observing the system for breaks when visiting the sites. In addition, we have staff that can perform special services for landscape improvements and weed or insecticide spray work as needed.

Section 3

Scope Of Work

Our proposal is based on following the contract specifications given to us dated March 28, 2017. Our team execution is based on providing a proactive service that protects and enhances your landscape investment as well as providing opportunities for our employees to develop and grow with our company. We will begin your landscape management service with our foundation program. It is called the New Job Start-Up Program. It establishes a routine maintenance schedule that will make a noticeable difference in your landscape and make our regular maintenance operations run smoothly. This will provide a consistent quality service that we both expect for your facilities. The following is a brief overview of activities that we will implement on your landscape after we begin our service:

- **Landscape Safety Evaluation** - to ensure that there are no hazards in the landscape for pedestrians, employees and the public. This is important to minimize your liability for the property.

- **Irrigation Inspection** - to confirm that all watering stations are working properly and to adjust sprinkler heads to ensure that they are watering the landscape and not the hardscape.

- **Develop A Landscape Improvement Plan** – to enhance the landscape of your project.

- **Job Activities** - to establish the landscape for routine maintenance:

  - **Trees**
    - Raise all tree limbs (safety prune) so they are above head level.
- Detail turf around tree trunks to protect the tree from mower damage. (if turfgrass is on site)
- Inspect tree stakes and adjust as needed.
- Remove unnecessary tree stakes.
- Review of tree plant health.

- **Shrubs**
  - Prune and hedge shrubs as needed.
  - Remove dead shrubs.
  - Mulch bare areas.

- **Ground Cover**
  - Remove weeds from ground cover beds.
  - Detail ground cover away from objects in the beds.

- **Seasonal Color Beds**
  - Detail and clean out dead flower heads.
  - Remove weeds.
  - Check for pests.

- **General Duties**
  - Remove trash in the landscape areas.
  - Spray out weeds in parking lot cracks.
  - Apply pre-emergent herbicide to prevent weeds as needed.

After we complete our start-up program we will then be on a proactive maintenance cycle based on the specifications outlined in the bid proposal. One way we use to ensure that our crews are performing to our quality standards as well as our customers expectations is by our Quarterly Quality Program where we inspect the project based on set criteria of landscape quality standards. We will take our team members and do an inspection of the site using our criteria standards as a training guide as well as a motivational tool as they can earn extra money if they meet certain quality standards. Through this program we are able to train our team to keep our quality high, motivating our employees as well as keeping our customers happy with our work.

The following is an example of this form:
JOB NAME:  
CREW LEADER:  

IRRIGATION/WATER MANAGEMENT  
10 No signs of improper management or repair clock mapped, logical problem.  
9 Satisfactory to Client but not as above  
8 Program questionable, slight over or under watering, corrected  
7 Stress visible not corrected  
6 Degree of mismanagement or poor repair, etc.  

POINTS REMOVED FOR EACH DEFECT  
-5 No legend or map in clock, (job over 30 days old)  
-1 Leaking valve (each)  
-2 Improper repairs (each)  
-1 Sloppy clean-up in trenched or other repair area  
-1 Valve cover ajar  

TOTAL POINTS ___

TURF  
Looking for pattern mowing, uniform good color, no stress, uniform growth, no weeds, excellent detail.  

TURF COLOR  
5 Perfect, as green as it can possibly be  
4 Slightly off  
3 Needs fertilizer  
2 Streaked from poor fertilizer application  
0 Unacceptable  

TURF DETAIL  
5 Perfect, tree basins proper size and mulched  
4 A few basins weedy (small weeds) – 90% detailed, looks fine on drive-through  
3 Detail fair or noticeably over detailed, out of control on drive-through when you look close many areas need touch up  
2 Too late – immediate catch up needed  
0 Unacceptable and or string trimmer damage  

WEED CONTROL  
5 Perfect, uniform, no weedgrass or broadleaves  
4 Minor broadleaf, minor weedgrass if look close  
3 Minor weed problem, 1 or 2 weeds per 1,000 # most of job  
2 Needs spraying  
0 Unacceptable  

MOWING  
5 Excellent appearance, good mow patterns, detail crisp overall  
4 No pattern mowing, otherwise crisp, minor scalping  
3 Clippings visible, runs, dull blades  
0 Unacceptable. Mower damage to trees or fixtures  

OVERALL APPEARANCE  
10 Perfect, lush color, excellent patterns, crisp detail  
9 Good color, minor weeds, details OK  
8 Slightly off color, minor weeds, detail marginal  
7 Over watering, off color, stress in key areas  
6 Needs fertilizer (streaked or overdue), weeds, detail weak  
5 Lots of stress  
0 Unacceptable  

TOTAL POINTS ___

QUALITY INSPECTION ASSESSMENT  

VISTA DEL VERDE  
LANDSCAPE, INC.  

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POSSIBLE POINTS 140

TOTAL POINTS ___

% OF TOTAL POINTS ___

TREES  
Looking for good color & new growth. No low hanging branches. No dead wood. Stakes off as soon as possible  

PRUNING  
10 Pruning up to date, no fertility problems  
9 Minor touch up pruning needed, no signs of improper pruning  
6 to & Ears level branches, suckers, stubs (degrees)  
5 or less Poor pruning, dead trees  

STAKING  
5 Perfect, only trees that need stakes have them. Ties are on correctly, stakes cut at proper height  
4 Only trees that need stakes have them, stakes too high  
3 A few broken stakes or ties, some improper staking or tying, stakes winding branches  
2 Many stakes could be removed, winding branches, ties too tight, girdling evident  
0 Unacceptable  

TOTAL POINTS ___

NOTES  

__________________________________________  
__________________________________________  
__________________________________________  
__________________________________________  

8
SHRUBS
Looking for natural pruning, no improper use of hedge shears, uniform size and shape within species. Healthy, good color, new and uniform growth. No dead plants.

PRUNING
20 Perfect. All pruning to scale, etc. Everything healthy
18 Acceptable. Basically uniform, minor touch up only.
16 Pruning needed, obvious attempt to keep uniform. A few weak shrubs.
14 Pruning not uniform, catch up work needed
12 Improper use of hedge shears, poor pruning practices
10 or less Pruning way behind. Dead plants

TOTAL POINTS ________

GROUNDCOVER
Looking for good, even growth, filled in, no stress areas, no weeds, detailed property. Includes areas maintained as mulched beds.

WEEDS
10 Perfect. No weeds. Excellent pre-emergence plan
9 Occasional small weed not noticeable from drive-through. Weeds not in key areas. Acceptable to client.
8 Minor weed problem on walk through, weeds small, under 2” growth. No weeds in key areas
7 A few large weeds, isolated problem areas
6 Many large weeds, many problem areas

BED DETAIL
10 Excellent, including detail around plants, PGR program
9 Edges excellent, otherwise acceptable to client
8 Touch up in one visit
6 or less Detail behind

TOTAL POINTS ________

SEASONAL FLOWERS
The single most important part of a job.

10 Excellent appearance, great design, healthy, no dead heads
9 Very minor problems, filled in, key beds look good
8 Minor dead-heading, uneven growth, wrong color flower planted (minor)
7 Insect or disease damage
6 Some missing plants, minor weeds, tags left
4 Weeds, old flowers that should have been replaced
3 Water stress plus some of above or too wet
2 Major dead-heading needed
0 Major dead-heading needed, dead plants, weeds

TOTAL POINTS ________

HOUSEKEEPING

LITTER
5 Perfect
4 Entries and key areas excellent, minor problems in out of sight areas
3 Minor litter problems, relatively new, some in key areas, sloppy clean up of our work
2 Visible signs of litter older than 1 week
0 Unacceptable

WEEDS IN HARDSCAPE
Includes weeds in sidewalks, curbs, asphalt, drains, etc.

10 Perfect – none
9 A few small ones, but all sprayed
8 A few small ones, not sprayed yet
7 or less Some big ones

TOTAL POINTS ________

OVERALL APPEARANCE
How does the job look compared to adjacent properties?
What is the Client’s perception?

10 Excellent curb appeal – crisp, stands out above competing jobs
9 Excellent curb appeal – nothing wrong in Client’s eyes
8 Curb appeal good – not crisp, but no major defects
6 Average. Might force closer look by Client
4 Below average. Would cause Client to look closer or become dissatisfied
0 Below average compared to other properties

TOTAL POINTS ________

IF THE CREW VEHICLE IS ON-SITE
1 Vehicle is parked in appropriate area
1 Vehicle and trailer are properly coned
1 Vehicle is locked
1 Equipment is properly locked
1 Chemicals are stored in locked area inaccessible to the public
2 All crew members are wearing safety glasses
1 All crew members are in proper uniform
1 Truck and trailer are clean and organized

Note: Points can be weighted more heavily depending on the severity of the situation.

TOTAL POINTS ________

Bonus Points – PRO-ACTIVE MANAGEMENT
5 Crew leader has a written punch list for the job

Note: Bonus Points can be reduced depending on the quality of the punch list

TOTAL POINTS ________

NOTES

__________________________
__________________________
__________________________
__________________________
Communications is an important function of our work so we will be available to meet with the Water District's representative on a regular basis to review the sites. In addition, all reports will be given to the representative during our meetings and reviewed with them to answer questions or make adjustments as necessary.

Safety is a very important factor for not only the public but for our employees too. We place high importance to following all OSHA regulations as well as the Agricultural Commissioners pesticide safety procedures. We conduct weekly safety tailgate meetings and spot check our crews to ensure that safety rules and regulations are being followed. All Material Safety and Data Sheets for materials and chemicals used on the landscape are kept with our crews and in our office as all times. In addition, we will make sure that the City has this information before any materials or chemicals are used on City sites.

Waste recycling is an important function for us as we strive to be good stewards for the environment. We utilize green waste disposal sites and try to use recycle mowers as much as possible to reduce green waste materials. We also use recycling sites where they can process the green waste into mulch where we can apply it back into the landscape.

The overall landscape specifications are straight forward and comprehensive. By following the landscape maintenance summary in section 2 of the specifications, the landscape will continue to develop and grow into a pleasing look for the community. We do see that the main challenge will be in the Redwood Demonstration Garden at the Mesa Water Reliability Facility as we are trying to grow plant material that is not native to Orange County. This will require special monitoring and care. We do believe that Justin Finch with the Mesa Water District has a passion and understanding for these trees that will be enjoyable to work with so we look forward to this opportunity.

Another observation challenge we observed in the Demonstration projects is the catch basins filtering to keep debris from causing problems would be improved by using filter cloth on the grates to keep debris from entering the catch basin. This would aid in keeping leaf and debris from clogging the drain pipes. It is better to keep the debris from entering the catch basins than having to clean out the pipes as a result of the should debris.
Section 4

Resumes of Key Staff

See attached sheets following this page.

Section 5

Professional Service Agreement Acceptance Form

Attached please find the signed form from Appendix B of the RFP.
EXPERIENCE

VISTA DEL VERDE LANDSCAPE, INC.  2004 to present
President, Owner

VALLEYCREST LANDSCAPE MAINTENANCE, INC.  1978 to 2004

Vice President/Regional Manager
Started in the field as a working Foreman and moved up through various positions with the organization. During this tenure acquired the skills to run a successful landscape maintenance operation. These include:

- P&L Management
- Customer Service
- Operations Management
- Sales and Marketing
- Administrative Management
- Strategic Planning
- Competitive Strategies
- People Development
- Safety Management
- Cost Management

The type of maintenance projects included Office and Industrial Parks, Retail Centers, Homeowner Associations, Hotels, Government and Municipal contracts. The work included exterior maintenance, interior maintenance, tree care, enhancement extra work and water management services. Annual sales volume range was $14 million.

EDUCATION

B.S., Ornamental Horticulture, California Polytechnic State University, San Luis Obispo

SUMMARY OF QUALIFICATIONS

- Pest Control Advisor License
- Qualified Applicator’s License
- C-27 State Contractor’s License
- Certified Landscape Professional with National Association of Landscape Professionals
Raul Lopez
Raul@vdvlandscape.com
949/355-6482

Professional Profile

Vista Del Verde Landscape, Inc.
- Operations Manager / Owner

Certified Landscape Technician, National Association of Landscape Professionals
- To be certified must have 25 hours of continuous education training every two years which I have done for over 15 years.

Qualified Applicator’s License
- Have maintained this license for over 20 years.

Work History

2005 to present, Operations Manager, Vista Del Verde Landscape, Inc., Costa Mesa, CA
1980 to 2004, Account Manager, ValleyCrest Landscape, Santa Ana, CA

Education

1974 to 1978 Tuxpan Nay High School, Tuxpan Nay, Mexico
- High School Diploma

References

References are available on request.
BRIAN CLYDE
2 Hermosa • Irvine, CA 92620 • (714) 371-7547 • bclyde13@gmail.com

EDUCATION

University of Redlands, Redlands, CA
Bachelors of Science, Environmental Science with minor in Economics. GPA 3.0.

RELEVANT EXPERIENCE

Vista Del Verde Landscape
Landscape maintenance company that provides commercial services. Hire in their management training program.
Responsibilities include customer service, field management and irrigation maintenance and water management.

USFS Columbine Ranger District
Agency’s mission is to sustain the health, diversity, and productivity of the nation’s forests and grasslands to meet the needs of present and future generations.

Volunteer (40-50 hours per week): Assisted in reforestation project. Fieldwork included extensive hours of collecting data and planting saplings.

Clean Tech OC
CleanTech OC is a non-profit trade association that promotes the clean technology industry in Orange County, CA.

Intern: Summarized proposed state legislation on biosynthetic oil lubricants. Updated business contact list.

KHS&S Contractors
KHS&S is an international design-assist specialty building company that creates interiors, exteriors, and specialty finishes for some of the most recognized projects in the world.


Families Forward
Families Forward is a Non-profit organization that provides supported housing programs for families in crisis.

Summer Intern: Worked at front desk, assisting clients, answering phones, and filing. Collected donations of furniture and clothing. Worked with team on a pick up/delivery truck. Supported food pantry, moving and sorting donations.

Mercy House and Salvation Army
Mercy House is a non-profit serving the homeless and housing insecure. Salvation Army operates an emergency shelter.

Volunteer (30 hours per year): Set up sleeping and food area at shelter. Cleaned mats, serve food, and cleaned up.

OTHER EXPERIENCE / ACTIVITIES

Alpha Gamma Nu Fraternity
Elected President. Publicized concert to support cancer victim unable to pay medical bills. Organized ticket and t-shirt sales as well as contacted and negotiated with band to play concert.

Omicron Delta Epsilon
Member of the Upsilon Chapter. Recognition of outstanding achievement and scholastic attainment in economics.
SKILLS & INTERESTS

Proficient in Microsoft Word and PowerPoint
Intermediate Spanish Speaker: completed 6th semester of college level Spanish
Personal Interests: playing and watching a variety of sports; snowboarding; backpacking/camping; hiking; fishing
Appendix B: Maintenance Services Agreement Acceptance Form

Firm Name: Vista Del Verde Landscape, Inc.

Address: 22431 Antonio Parkway

City Rancho Santa Margarita State CA Zip Code 92688

Telephone: 949/842-0537 Fax: 949/713-5801

I have reviewed the RFP, Professional Services Agreement, and Fee Proposal, in their entirety. Our firm will execute the Professional Services Agreement with no exceptions.

Name of Authorized Representative: Robert S. Johnson

Signature of Authorized Representative: [Signature]

Date: 4/25/17
MEMORANDUM

TO: Engineering and Operations Committee
FROM: Phil Lauri, P.E., Assistant General Manager
DATE: May 16, 2017
SUBJECT: Well 8 Demolition Project Construction

RECOMMENDATION

Recommend that the Board of Directors award a contract to R C Foster Corporation for $226,150 and a 10 percent contingency for a not-to-exceed amount of $248,765 to perform the Well 8 Demolition and authorize execution of the contract.

STRATEGIC PLAN

Goal #2: Practice perpetual infrastructure renewal and improvement.

PRIOR BOARD ACTION/DISCUSSION

At the April 21, 2015 Engineering and Operations Committee Meeting, Well 8 Demolition was presented to the Board as an information item.

At its Board of Directors meeting on June 11, 2015, the Board approved awarding a contract to Dudek & Associates for providing Well 8 Demolition Project Design Services.

At the February 21, 2017 Engineering and Operations Committee Meeting, the Board was briefed about completion of the 90 percent design and requesting the land owner to provide comments and suggestions.

BACKGROUND

In 1990, Well 8 was drilled on a small piece of land owned by the Interinsurance Exchange of the Automobile Club of Southern California (the Exchange). The land is located on a triangular-shaped parcel along the north side of South Coast Drive, approximately 2,000 feet east of Harbor Boulevard in the City of Costa Mesa. Mesa Water District (Mesa Water®) and the Exchange created a lease agreement to utilize the land. Well 8 has experienced several water quality challenges (i.e., high color, high iron and manganese levels, increasing total dissolved solids, sanding, etc.) and performance issues (i.e. sanding, etc.) over the past several years. After extensive repair and rehabilitation efforts, it was determined the well was no longer a viable producing well. Thus, the Board approved the concept of demolishing Well 8 as part of the recent adoption of the Master Plan Update.

Well 8 has been permanently taken out of service. The scope of this project includes the demolition of the well, on-site monitoring wells (owned by OCWD), the removal of the above-ground portions of the well and onsite facilities to the extent required by the Exchange.

DISCUSSION

On February 6, 2017, Mesa Water staff met with the Exchange personnel and discussed the 90 percent plan review comments. The Exchange expressed willingness to repurpose the site to
gated parking for their equipment. The Exchange requested that the existing pavement, perimeter walls, gate, and driveway be protected in place and only other structures - aboveground and underground piping, wells (production and monitoring), sheds, electrical and telephone connections, etc. - be removed and the pavement restored. The aforementioned request was incorporated into the 100 percent design.

The design and specifications for the Well 8 Demolition Project were completed and put out to bid in April 2017. Thirteen prospective contractors (Best Drilling and Pump, Inc., J.A. Salazar Construction, J.R. Filanc Construction Company, Mike Bubalo Construction, Pacific Hydrotech Corp., Pascal & Ludwig Constructors, Paulus Engineering, South West Pump & Drilling, Inc., Stephen Doreck Equipment, S.S. Mechanical, Inc., R C Foster Corporation, Weber Water, Resources CA, LLC, and Yellow Jacket Drilling Services) were contacted for a site visit (April 26, 2017) and requested to submit a bid for the project.

Eight contractors (Best Drilling and Pump, Inc., J.A. Salazar Construction, J.R. Filanc Construction Company, Pacific Hydrotech Corp., Pascal & Ludwig Constructors, Paulus Engineering, R C Foster Corporation, and Yellow Jacket Drilling Services) attended the site visit. On May 4, 2017, a bid was received from R C Foster Corporation in the amount of $226,150. Contractors were contacted to determine why they did not submit bids and several of them indicated that there are several other larger projects they are pursuing and did not have sufficient resources to accommodate to multiple projects.

The proposed project bid has been evaluated by Mesa Water’s Legal Counsel and found to be compliant with all bid requirements. The proposed bid of $226,150 is approximately 6.3 percent lower than the engineering project estimate of $241,400. Construction is scheduled to last 60 calendar days from notice-to-proceed.

Staff recommends that the Board consider awarding a construction contract to R C Foster Corporation for $226,150 plus a 10 percent contingency for a not-to-exceed amount of $248,765 to perform the Well 8 Demolition Project.

FINANCIAL IMPACT

In Fiscal Year 2017, no funds were budgeted; the requested funding will come from Cash on Hand.

ATTACHMENTS

Attachment A: R C Foster Corporation Bid Proposal Form
BID PROPOSAL FORM

PROPOSAL TO

MESA WATER DISTRICT

FOR THE CONSTRUCTION OF THE

Project Name: Mesa Water Well No. 8 Demolition
File No. M 2219

Name of Bidder: R.C. Foster Corporation

Business Address: P.O. Box 77055

City of Corona: State of CA
Zip 92877-0101

County of Riverside: Phone (951) 738-8211

TO THE BOARD OF DIRECTORS
OF THE MESA WATER DISTRICT

A. Pursuant to and in compliance with the Notice Inviting Sealed Proposals (Bids) and the other documents relating thereto, the undersigned Bidder, having become familiarized with the terms of the Contract Documents (as defined), local conditions affecting the performance of the Contract, and the cost of the Work at the place where the Work is to be done, hereby proposes and agrees to perform within the time stipulated in the Contract, including all of its component parts and everything required to be performed, and to provide and furnish any and all of the labor, material, tools, expendable equipment, and all utility and transportation services necessary to perform the Contract and complete all of the work required in connection with the construction and other Contract Documents, including Addenda (listed below), for the prices set forth herein.

The undersigned, as Bidder, declares that the only persons or parties interested in this proposal as principals are those named herein; that this proposal is made without collusion with any person, firm, or corporation; and Bidder agrees, if the proposal is accepted, that Bidder will execute a Contract with the Owner in the form set forth in the Contract Documents and that Bidder will accept in full payment thereof the following prices, to wi
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Bid Item Description</th>
<th>Unit</th>
<th>Qty.</th>
<th>Unit Price</th>
<th>Total Price</th>
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<tr>
<td>1</td>
<td>Mobilization, Demobilization and Cleanup (3% Max of Total for Items 2 - 25)</td>
<td>LS</td>
<td>1</td>
<td>5,000.00</td>
<td>5,000.00</td>
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<td>2</td>
<td>Acquisition of Permits</td>
<td>LS</td>
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<td>7,500.00</td>
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<td>3</td>
<td>SWPPP</td>
<td>LS</td>
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<td>1,500.00</td>
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<td>4</td>
<td>Trench Shoring and Safety Measures</td>
<td>LS</td>
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<td>2,000.00</td>
<td>2,000.00</td>
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<tr>
<td>5</td>
<td>Traffic Control Plan and Measures</td>
<td>LS</td>
<td>1</td>
<td>4,200.00</td>
<td>4,200.00</td>
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<tr>
<td>6</td>
<td>Coordinate with AT&amp;T and SCE</td>
<td>LS</td>
<td>1</td>
<td>500.00</td>
<td>500.00</td>
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<td>7</td>
<td>Remove Water Sampling Station, Meter Boxes, BFP, and Concrete Pad</td>
<td>LS</td>
<td>1</td>
<td>2,800.00</td>
<td>2,800.00</td>
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<tr>
<td>8</td>
<td>Remove 12-inch Valve and Waterline and Install Blind Flange</td>
<td>LS</td>
<td>1</td>
<td>8,000.00</td>
<td>8,000.00</td>
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<tr>
<td>9</td>
<td>Abandon 12-inch Piping and Fill with sand-cement slurry</td>
<td>LS</td>
<td>1</td>
<td>2,000.00</td>
<td>2,000.00</td>
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<tr>
<td>10</td>
<td>Remove 12-inch Piping and Vaults</td>
<td>LF</td>
<td>120</td>
<td>19,200.00</td>
<td>19,200.00</td>
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<td>11</td>
<td>Remove Above Grade Well Piping, Valves, Etc.</td>
<td>LS</td>
<td>1</td>
<td>6,000.00</td>
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<td>12</td>
<td>Remove Pump, Column pipe, Motor, Etc</td>
<td>LS</td>
<td>1</td>
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<td>Perforate Well Casing and Fill with sand-cement slurry</td>
<td>LS</td>
<td>1</td>
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<td>14</td>
<td>Remove Well Casing to 11-ft below grade and Cap Well</td>
<td>LS</td>
<td>1</td>
<td>5,000.00</td>
<td>5,000.00</td>
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<tr>
<td>15</td>
<td>Demolish/Abandon Nested Monitoring Wells, Remove to 11-ft below grade, and Cap Wells</td>
<td>LS</td>
<td>1</td>
<td>24,000.00</td>
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<td>16</td>
<td>Remove CMU Building Equipment</td>
<td>LS</td>
<td>1</td>
<td>2,000.00</td>
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<tr>
<td>17</td>
<td>Remove and legally dispose of asbestos within CMU building roof</td>
<td>LS</td>
<td>1</td>
<td>13,000.00</td>
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<td>18</td>
<td>Demolish CMU Building</td>
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<td>1</td>
<td>4,500.00</td>
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<td>19</td>
<td>Demolish Wooden Sheds</td>
<td>LS</td>
<td>1</td>
<td>4,500.00</td>
<td>4,500.00</td>
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<tr>
<td>20</td>
<td>Remove Wiring from Conduits</td>
<td>LS</td>
<td>1</td>
<td>14,000.00</td>
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<td>Total Price</td>
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<tr>
<td>21</td>
<td>Abandon Underground Piping and Conduits</td>
<td>LS</td>
<td>1</td>
<td>$1,000.00</td>
<td>$1,000.00</td>
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<td>22</td>
<td>Replace 4-inch Drain Body</td>
<td>LS</td>
<td>1</td>
<td>$3,000.00</td>
<td>$3,000.00</td>
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<td>23</td>
<td>Construct Chain Link Fencing</td>
<td>LS</td>
<td>1</td>
<td>$4,000.00</td>
<td>$4,000.00</td>
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<td>24</td>
<td>Refurbish, Rehabilitate, Reinstall Landscaping</td>
<td>LS</td>
<td>1</td>
<td>$5,500.00</td>
<td>$5,500.00</td>
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<td>25</td>
<td>Miscellaneous Site Work</td>
<td>LS</td>
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<td>$11,000.00</td>
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</tbody>
</table>

**Bid Total $226,150.00**

Bid Total Amount (in words): *Two Hundred Twenty Six Thousand One Hundred Fifty Dollars and Zero Cents*

B. The undersigned intends to furnish materials supplied by the following manufacturers: (Contractor to list one manufacturer only for each item.)

<table>
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<tr>
<th>ITEM</th>
<th>MANUFACTURER</th>
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</thead>
<tbody>
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<td>N/A</td>
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</tbody>
</table>

C. Owner reserves the right to award the Contract to the lowest bidder based on any single schedule or combination of schedules of bid items deemed by Owner, in its sole discretion, to be in Owner’s best interest.

D. Except as hereinabove provided, Bidder acknowledges and agrees that Bidder will perform all required work in accordance with Section 4106 of the Public Contracts Code.

E. Person who inspected site of the proposed work for your firm:
Andrew Fulkerson  
Name  
April 26, 2017  
Date of Inspection

It is agreed that, if requested by the Owner, the Bidder shall furnish a notarized financial statement, references, and other information, sufficiently comprehensive to permit an appraisal of the Bidder’s current financial condition.

F. The undersigned shall furnish the following information. Failure to comply with this requirement will render the Proposal informal and may cause its rejection. Additional sheets may be attached if necessary.

(1) Street Address: 264 Corporate Terrace, Corona, CA 92879

(2) Type of Firm:  
   ___Individual  
   ___Partnership  
   ✓ Corporation

(3) Telephone:  (951) 738-8211

(4) Contractor’s License:  
   Primary Class A  License No. 569693  
   Supplemental classifications held, if any:  B, HAZ

(5) Number of years as a Contractor in construction work of this type:  27 years

(6) Three projects of this type and complexity recently constructed by Bidder:

<table>
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<tr>
<th>Contract Amount</th>
<th>Type of Project</th>
<th>Date Completed</th>
<th>Contract Owner’s Name &amp; Address</th>
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</thead>
<tbody>
<tr>
<td>See attached Project Related Experience.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Accompanying this proposal is Bidder’s Bond  
Insert one of the following: Cash, Bidder’s Bond or Certified Check in the amount equal to at least ten percent (10%) of the total amount of the Bid, payable to Mesa Water District.

The undersigned deposits the above-named security as a proposal guarantee and agrees that it shall be forfeited to the Owner as liquidated damages in case this Proposal is accepted by the Owner, and the undersigned fails to execute a Contract with the Owner as specified in the Contract Documents accompanied by the required payment and faithful
performance bonds with sureties satisfactory to the Owner, and accompanied by the required certificates of insurance coverage. Should the Owner be required to engage the services of an attorney in connection with the enforcement of this Bid, Bidder promises to pay Owner’s reasonable attorney’s fees incurred with or without suit.

PROPOSED SUBCONTRACTORS: The required list of proposed subcontractors is attached hereto.

NON-COLLUSION AFFIDAVIT: The required notarized Non-collision Affidavit is attached hereto.

ASSIGNMENT OF RIGHTS, TITLE, AND INTEREST IN CAUSES OF ACTION: Pursuant to Section 4552 of the Government Code, in submitting a bid to Owner, the Bidder offers and agrees that if the Bid is accepted, it will assign to Owner all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, materials, or services by the Bidder for sale to Owner pursuant to the Bid. Such assignment shall be made and become effective at the time Owner tenders final payment to the Bidder.

LIQUIDATED DAMAGES: The undersigned hereby warrants that all work shall be completed within 60 consecutive calendar days from the date specified on the Notice to Proceed issued by the Owner. Time is of the essence. The undersigned agrees that failure to complete the Work within the time set forth herein will result in the imposition of liquidated damages for each consecutive calendar day of delay in the amount of $1000.00.

CHANGE ORDER REQUESTS: It is understood and agreed that all change order requests must be submitted in the form set forth in the Contract Documents. The amount of allowable charges submitted pursuant to a change order shall be limited to the charges allowed by the General Conditions. Indirect, consequential and incidental costs, project management costs, extended home office and field office overhead, administrative costs and profit and other charges not specifically authorized under the General Conditions will not be allowed.

The full names and residences of all persons and parties interested in the foregoing Proposal as principals are as follows:

NOTE: Give the first and last names in full; in case of corporation, give names of president, secretary, treasurer, and manager; and in case of partnerships and joint ventures, give names and mailing address of all individual members.

Robert C. Foster - President, Secretary, Treasurer, and Manager thereof.
ADDENDA

The undersigned has thoroughly examined any and all Addenda (if any) issued during the Bid period and is thoroughly familiar with all contents thereof and acknowledges receipt of the following Addenda: (Bidder to list addenda)

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Respectfully submitted,
R C Foster Corporation
Contractor or Representative
By
Robert C. Foster, President
P.O. Box 77058, Corona, CA 92877-0101
Complete Business Address

(951) 738-8211
Telephone Number
569693
Contractor's License Number

Dated: April 27, 2017

NOTE: If bidder is a corporation, the legal name of the corporation shall be set forth above, together with the signature of the officers authorized to sign Contracts on behalf of the corporation and corporate seal; if Bidder is a co-partnership, the true name of the firm shall be set forth above, together with the signature of the partner or partners authorized to sign Contracts on behalf of the co-partnership; and if the Bidder is an individual, the signature shall be placed above; if a special partnership, the names of the general partners and special partners.
ATTACHMENTS TO BID FORM TO BE COMPLETED AND RETURNED BY BIDDER:

**Check**

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<tr>
<td>✓</td>
<td>1. Bid Proposal Form.</td>
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<td>2. Bid Bond.</td>
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<td>3. Proposed Subcontractor Listing.</td>
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<td>4. Statement by Bidders (Manufacturing Information).</td>
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<td>✓</td>
<td>5. Non-Collusion Affidavit.</td>
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<td>7. Performance Bond.</td>
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<td>8. Payment Bond.</td>
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REPORTS:

11. REPORT OF THE GENERAL MANAGER:
REPORTS:

12. DIRECTORS' REPORTS AND COMMENTS: