ENGINEERING AND OPERATIONS COMMITTEE MEETING
Tuesday, September 19, 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.

6. Well Automation and Rehabilitation Project Update
7. OC-44 Pipeline Rehabilitation Mitigation Requirements
8. Well 8 Demolition Update

ACTION ITEMS:

9. I-405 Widening Project

REPORTS:

11. Directors’ Reports and Comments
INFORMATION ITEMS:

12. West Chandler Avenue & South Croddy Way Wells and Pipeline Construction
Management Services

In compliance with California law and the Americans with Disabilities Act, if you need disability-related modifications or accommodations, including auxiliary aids or services in order to participate in the meeting, or if you need the agenda provided in an alternative format, please contact the District Secretary at (949) 631-1206. Notification 48 hours prior to the meeting will enable Mesa Water District (Mesa Water) to make reasonable arrangements to accommodate your requests.

Members of the public desiring to make verbal comments utilizing a translator to present their comments into English shall be provided reasonable time accommodations that are consistent with California law.

Agenda materials that are public records, which have been distributed to a majority of the Mesa Water Board of Directors (Board), will be available for public inspection at the District Boardroom, 1965 Placentia Avenue, Costa Mesa, CA and on Mesa Water’s website at www.MesaWater.org. If materials are distributed to the Board less than 72 hours prior or during the meeting, the materials will be available at the time of the meeting.

ADJOURNMENT
<table>
<thead>
<tr>
<th>FILE NO.</th>
<th>PROJECT ADDRESS</th>
<th>PROJECT DESCRIPTION</th>
<th>PROJECT NOTES/STATUS</th>
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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. Owner contact on 5/25/17, construction to begin in July 2017. (9/11/17)</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.  (9/11/17)</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.  (9/11/17)</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.  (9/11/17)</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.  (9/11/17)</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.  (9/11/17)</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.  (9/11/17)</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.  (9/11/17)</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.  (9/11/17)</td>
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<tr>
<td>C0029-17-01</td>
<td>127 23rd St.</td>
<td>4 Single Family Homes</td>
<td>Plans received and plan check fees paid on 5/12/17. Fees paid and permit issued on 8/3/17.  (9/11/17)</td>
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<tr>
<td>C0030-17-01</td>
<td>208 Camella Lane</td>
<td>New Home</td>
<td>Plans received and plan check fees paid on 5/12/17. Fees paid and permit issued on 5/25/17.  (9/11/17)</td>
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## PROJECT STATUS - DEVELOPER PROJECTS

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<thead>
<tr>
<th>FILE NO.</th>
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<td>C0032-17-01</td>
<td>328 Cabrillo</td>
<td>Meter Upgrade</td>
<td>Plans received and plan check fees paid on 6/15/17. Fees paid and permit issued on 9/8/17. (9/11/17)</td>
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<tr>
<td>C0033-17-01</td>
<td>353 E 18th Street</td>
<td>4 Single Family Homes</td>
<td>Plans received and plan check fees paid on 7/5/17. Fees paid and permit issued on 7/27/17. (9/11/17)</td>
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<td>C0034-17-01</td>
<td>350 E 17th Street</td>
<td>Commercial Building</td>
<td>Plans received and plan check fees paid on 7/18/17. Plans returned on 7/27/17. Awaiting resubmittal. (9/11/17)</td>
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<tr>
<td>C0035-18-01</td>
<td>146 18th Street</td>
<td>2 Single Family Homes</td>
<td>Plans received and plan check fees paid on 8/8/17. Awaiting final fee payment. (9/11/17)</td>
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<tr>
<td>C0036-18-01</td>
<td>196 E. 17th Street</td>
<td>Restaurant</td>
<td>Plans received and plan check fees paid on 8/10/17. Awaiting final fee payment. (9/11/17)</td>
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<tr>
<td>C0037-18-01</td>
<td>2850 Mesa Verde Drive East</td>
<td>11 Single Family Homes</td>
<td>Plans received and plan check fees paid on 8/17/17. Plans returned on 8/30/17. Awaiting resubmittal. (9/11/17)</td>
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<tr>
<td>C0038-18-01</td>
<td>2050 Charle Street</td>
<td>Food Prep</td>
<td>Plans received and plan check fees paid on 8/17/17. Fees paid and permit issued on 8/24/17. (9/11/17)</td>
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<tr>
<td>C0039-18-01</td>
<td>172/174 Costa Mesa Street</td>
<td>2 Single Family Homes</td>
<td>Plans received and plan check fees paid on 8/22/17. Fees paid and permit issued on 8/29/17. (9/11/17)</td>
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<tr>
<td>C0040-18-01</td>
<td>365 Costa Mesa Street</td>
<td>Meter Upgrade</td>
<td>Plans received and plan check fees paid on 8/22/17. Fees paid and permit issued on 8/24/17. (9/11/17)</td>
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</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. 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. 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
held 7/1/15. 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 USACE 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. New proposed mitigation criteria received from CCC on 7/5/17 reducing mitigation requirements from 1.6 acres to 0.66 acres. Coastal Development Permit for Construction is anticipated in September, 2017. The project re-start meeting held on 7/7/17. Project in progress.

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<tr>
<th>Project Title:</th>
<th>Well Automation and Rehabilitation</th>
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<tr>
<td>File No.:</td>
<td>MC 2101</td>
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<tr>
<td>Description:</td>
<td>Rehabilitate all clear water wells and add remote control SCADA capabilities</td>
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<tr>
<td>Status:</td>
<td>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</td>
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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 is substantially complete at the Well 5 site. A start up planning meeting was held on March 29, 2017. Well 5 is running and producing good quality water. Well 7 rehabilitation is complete, and test pumping shows production of 1,450 gpm. Construction at Well 7 is nearing completion. The Well 7 pump was installed the week of August 28, 2017, with startup underway. Construction of the Well 3 chemical facilities was begun in July 2017 and is progressing.

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<tr>
<th>Project Title:</th>
<th>Two New Wells</th>
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<tr>
<td>File No.:</td>
<td>MC 2158</td>
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<tr>
<td>Description:</td>
<td>New wells and real estate services to identify and acquire property</td>
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**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 at 4011 W. Chandler Avenue in Santa Ana was negotiated in January 2017. 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. A request for proposal for design services for the new well and pipeline was released in May 2017. An offer for a second new well site at 3120 S. Croddy, which would utilize the same water transmission pipeline as planned for the W. Chandler well site. A contract for purchase of 3120 S. Croddy was signed on July 6, 2017, and escrow opened on July 7, 2017 with a 45 day contingency period for property assessment. The Phase 1 Environmental Site Assessment and Property Condition Assessment were received and showed the site and property to be in good condition. Escrow is projected to close on September 27, 2017.

Project Title: MWRF Parking Project
File No.: M 2052
Description: Conduct parking layout design

Status: Parking study prepared by Onward Engineering in November 2013. The Board approved alternative # 3 Parking Along the MWRF Frontage on Gisler Ave. on 3/15/14. 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.

Project Title: Pipeline Testing Program
File No.: MC 2112
Description: 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.

Status: 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 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. Results were received on August 1, 2017. CIP samples will be sent to McWane Ductile’s lab in Ohio for destructive testing. Results were received on June 30, 2017. A Request for Qualifications for consulting services for the Pipeline Integrity Testing Program was released in May 2017. Four Statements of Qualifications were received and a recommendation for contract award was approved by the Committee on July 20, 2017. ACP test results were received on July 31, 2017. Results are being analyzed, and will be presented at a future Committee meeting.

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 multipurpose 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 held on 6/1/2015. 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. Proposals for roof design are currently being solicited.

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.
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, TM-3, and PDR are being revised by consultant to address Mesa Water® comments.

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. On May 24, 2017 the City Designer notified Mesa Water® that the City was planning to advertise the project in the first half of June, 2017. City received bids at the end of June, 2017 and is taking the project to the City Council for approval on 7/18/17. The project kicked off on 7/28/17 and construction is scheduled to start on September 18, 2017 (9/7/17)

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. In November 2016, the property owner assigned a project manager to work
with Mesa Water® to move the project forward. The Consultant provided a 90% design which was reviewed by Mesa Water®. On February 6, 2017, Mesa Water® staff met with the Exchange personnel and discussed the 90% plan review comments. The Exchange decided to use the facility as a gated parking for their equipment and thus requested that all underground and aboveground structures be removed and wells properly destructed. The comments were incorporated into the 100% design. Well 8 demolition was 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. Board of Directors awarded a contract to RC Foster Corporation on May 16, 2017. The kick-off meeting took place on 6/15/17 and construction started on 6/20/17. The scope of project includes removal of the transformer with concrete pad and electrical system, CMU Control Building, two wooden sheds, 120 feet of 14” piping, two chemical injection vaults, Well 8 pump, 11 feet of Well casings (well 8 and two monitoring wells), filling the wells with concrete, backfilling and repaving. To date the contractor has demolished the aboveground structures, two underground vaults; removed 80 feet of 12” pipeline, transformer, well pump, 12” R/W valve in South Coast Drive, destroyed Well 8 and two monitoring wells 8A and 8B by filling them with cement-sand slurry and sodium bentonite, and restored pavement. Project is completed (9/7/17).
Water Quality Call Report
August 2017

Date: 8/1/2017
Source: Phone/Visit
Address: 937 Coronado
Description: Customer called to report dirty/rusty water in toilet tank.
Outcome: Upon arrival at site, customer was already flushing her pipes out and the water was clear. Sampled at front hose bib and all parameters were in normal range for total chlorine, pH and temperature. Customer was satisfied.

Date: 8/16/2017
Source: Phone
Address: 272 Hanover Dr.
Description: Customer reported the water tasted metallic. He acknowledged that he may be sensitive to taste since his family doesn't notice it. He's interested in getting the water tested.
Outcome: Assured customer that water meets state and federal drinking water regulations. Per customer’s request, a list of local state certified laboratories was sent to him along with the link to the Annual Water Quality Report.

Date: 8/21/2017
Source: Phone/Visit
Address: 778 Hudson
Description: Customer reported the water having “recycled water” odor.
Outcome: Water sample was taken from front hose bib and no odor was detected. Field analyses for chlorine residual, pH, and temperature were within normal range. Customer was asked to call back if odor returns.
Date: 8/23/2017
Source: Phone/Visit
Address: 471 East 19th
Description: Customer reported the water coming from bathroom sink smelled like "sewage".

Outcome: Customer was not home during site visit. The water from the outside hose bib was clear, had no odor, and had normal chlorine residual. Called customer few hours later and he had disinfected the sink drain with bleach and the odor went away. He acknowledged the odor was from the drain and not the water. Customer was satisfied with outcome.

Date: 8/31/2017
Source: Phone
Address: 2922 Java Road
Description: Customer inquired about hardness level and grains per gallon for his new water softener.

Outcome: Provided customer the information requested and customer was satisfied.
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MEMORANDUM

TO: Engineering and Operations Committee
FROM: Phil Lauri, P.E., Assistant General Manager
DATE: September 19, 2017
SUBJECT: Well Automation and Rehabilitation Project Update

RECOMMENDATION

Recommend that the Board of Directors approve a change order to Pacific Hydrotech, Inc.’s contract for construction of the Well Automation and Rehabilitation Project for a not-to-exceed amount of $800,000 to furnish, install, and integrate Variable Frequency Drives at Wells 1, 3, 7, and 9, and authorize execution of the change order.

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 March 15, 2014 meeting, the Board of Directors (Board) adopted Resolution No. 1442 Replacement of Assets, which calls for rehabilitation of groundwater production wells if and when well production drops by more than 20% for a given well and 10% for overall clear water well production.

At its March 18, 2014 meeting, the Engineering & Operations (E&O) Committee received an information item describing the scope of the Well Automation and Rehabilitation Project.

At its September 11, 2014 meeting, the Board approved a contract with Carollo Engineers, Inc. in the amount of $749,995 with a 10% contingency for a not-to-exceed amount of $824,995 to provide professional design services for the Well Automation and Rehabilitation Project.

At its March 12, 2015 meeting, the Board approved a contract with RBF Consulting, a Michael Baker International Company, in the amount of $778,270 with a 10% contingency for a not-to-exceed amount of $856,097 for professional Construction Management Services of the Well Automation and Rehabilitation Project.

At its May 19, 2015 meeting, the E&O Committee received an information item on the planned appearance of the well sites, including the new chemical facility aesthetics.

At its October 20, 2015 meeting, the E&O Committee received an update and overview of the Well Automation and Rehabilitation Project, and approved the project as well as the Notice of Categorical Exemption from the California Environmental Quality Act (CEQA) for the project.

At its February 11, 2016 meeting, the Board approved a contract with Pacific Hydrotech Corporation for construction of the Well Automation and Rehabilitation Project for $10,488,500 plus a 5% contingency for a not-to-exceed amount of $11,012,925.
At its August 16, 2016 meeting, the E&O Committee received an information item update on the Well Automation and Rehabilitation Project.

At its July 13, 2017 meeting, the Board received an update on the Well Automation and Rehabilitation Project and approved a change order to Carollo Engineers, Inc. in the amount of $195,960 to continue providing engineering services for the Well Automation and Rehabilitation Project.

BACKGROUND

The Well Automation and Rehabilitation Project was recommended as part of the 2014 Master Plan Update and included in the adopted Capital Improvement Program. The project provides the necessary improvements to Mesa Water’s clear well sites and includes the following key objectives:
1. Rehabilitation of clear wells 1, 3, 5, and 7 that were shown to have lost more than 20% of production as a result of the condition assessment performed in October 2013;
2. Design of well automation functionality for all clear wells, including remote well start/stop capabilities and chemical addition system based on real-time system chemical demands;
3. Standardization of clear well operations across all well sites;
4. Reducing the frequency of chemical deliveries by increasing the size of the storage tanks;
5. Reducing the energy and labor costs of well operations;
6. Replacement of equipment that has exceeded its useful life, including well pumps, motors, and electrical switchgear;
7. Back-up power for all wells to maintain operation when grid power is not available; and
8. Installation of well site security system infrastructure.

A construction contract was awarded to Pacific Hydrotech for $10,488,500 for the construction of the Well Automation and Rehabilitation Project. The construction cost is spread over three fiscal years (FY 2016 - FY 2018).

DISCUSSION

The Well Automation & Rehabilitation Project Notice to Proceed with construction was given on April 9, 2016. Pacific Hydrotech spent several months preparing the project submittals and procuring equipment. The following is a brief update of the progress at each well site:

Well 5: Construction on the Well Automation and Rehabilitation Project began at Well 5 in October 2016. Well 5 was returned to service in June 2017, after rehabilitation and repairs of the well, replacement of all the electrical and mechanical equipment, and construction of new chemical handling facilities with automated water disinfection. The Well 5 casing required extensive repair work (i.e., swaging, slurry fill, etc.) to allow continued use of the well. Because the well was constructed of carbon steel, it is estimated that Well 5 has an approximate remaining useful life of five to eight years. Well 5 has been producing approximately 2,300 gallons per minute (gpm) of high quality drinking water throughout the summer. The Contractor is completing punch list items.

Well 7: Construction is nearing completion at Well 7. Work completed at Well 7 includes demolition of the end of useful life equipment, and installation of the new pump, motor, and
electrical equipment, and chemical handling facilities. After a conservative rehabilitation program, test pumping showed that Well 7 can produce 1,450 gpm. Similar to Well 5, Well 7 was constructed with a carbon steel casing and has experienced some corrosion at various casing intervals. Well 7 had previous mitigation work performed in prior years due to corrosion, which resulted in moderate sanding. Thus, production is being limited to minimize sanding and extend the remaining useful life of the well. It is estimated that Well 7 has an approximate remaining useful life of five to eight years. Startup of Well 7 is in process.

**Well 3:** Construction is also underway at Well 3, starting with site work and formwork for concrete placement of the chemical handling facilities. Well assessment and rehabilitation is also in process. Completion of Well 3 work is expected in February 2018.

**Wells 1 & 9:** In October 2017, project work will start at Well 9. Since new Well 9B was recently completed, work at Well 9B will involve construction of new chemical handling facilities, electrical equipment replacement, and relocation of the existing onsite back-up generator. Work at Well 9B is expected to be completed in February 2018. Once Well 3 and Well 7 are back in service, work at Well 1 will commence. Work at Well 1 is expected to be completed by July 2018.

**Variable Frequency Drive (VFD) Analysis:** As seasonal variation of the groundwater levels have become more extreme, VFDs are being considered as a means to more effectively manage operating costs. Adding VFDs offers the following advantages:

- Allows the electric pumps to operate at the best efficiency design point regardless of basin level;
- Allows for pumping at higher than design flow rates overnight when electricity rates are much lower to facilitate filling the reservoirs more quickly;
- Flexibility for producing water supply to meet demands; and
- Commonality with the new wells at the West Chandler Avenue and South Croddy Way sites, where VFDs are planned.

The additional cost of VFDs and new inverter-duty motors is being negotiated, including the credits for the reduced voltage soft starts and the non-inverter duty motors in the bid specifications. Mesa Water’s design engineer, Carollo Engineers, Inc., has evaluated the operational energy cost savings and provided the required design amendments to allow Pacific Hydrotech to provide change order pricing. The direct savings on energy are expected to be approximately $90,000 to $100,000 per year. The VFDs are expected to have a payback of 8 to 10 years to realize the savings. Mesa Water’s Construction Management team, Michael Baker International (MBI), has worked closely with Pacific Hydrotech to streamline construction costs and provide an overall not-to-exceed amount of $800,000 for the VFDs and inverter-duty motors installation. It is therefore recommended that the Board of Directors consider approving a change order to Pacific Hydrotech, Inc.’s contract for construction of the Well Automation and Rehabilitation Project, for a not-to-exceed amount of $800,000 to furnish, install, and integrate Variable Frequency Drives at Wells 1, 3, 7, and 9, and authorize execution of the change order.

**Construction Management Contract Amendment:** The Well Automation and Rehabilitation Construction Management contract was competitively bid and awarded to MBI in April 2015. The scope of construction management included a full-time resident engineer and part-time inspection services for a 600-day construction schedule. The original Well Automation & Rehabilitation
construction schedule was envisioned to take 600 calendar days. After hiring MBI for construction management and to perform a constructability review of the 50% design in 2015, it was determined, after receiving feedback from multiple contractors, that the project sequencing would take more than the previously allotted 600 calendar days. The construction contract with Pacific Hydrotech, signed in March 2016, has a completion duration of 780 calendar days. Also, additional construction management time will be necessary beyond the 780 calendar days due to the unforeseen time delays as a result of the mitigation work required at Wells 5 and 7. Therefore, an additional 270 days of construction management services are expected. MBI’s construction management team is doing an excellent job managing Pacific Hydrotech. A contract amendment for additional time and fees for construction management services is being negotiated and will be brought to a future Engineering and Operations Committee meeting for consideration.

FINANCIAL IMPACT

$3,700,000 is budgeted in Fiscal Year 2018 and the requested additional funding will come from Cash on Hand.

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Actual spent to date: $5,973,163
Revised Project Estimate: $13,116,315

ATTACHMENTS

None.
TO: Engineering and Operations Committee
FROM: Phil Lauri, P.E., Assistant General Manager
DATE: September 19, 2017
SUBJECT: OC-44 Pipeline Rehabilitation Mitigation Requirements

RECOMMENDATION

This item is provided for information only.

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 February 12, 2013 meeting, the Board of Directors (Board) approved award of a contract to RBF Consulting for the OC-44 Pipeline Rehabilitation/Replacement Evaluation and Cathodic Study in the amount of $198,827.

At its December 16, 2013 meeting, the Board authorized execution of a contract change order to RBF Consulting for the design of the OC-44 Pipeline Rehabilitation.

At its April 9, 2015 meeting, the Board reviewed and discussed the Initial Study/Mitigated Negative Declaration (IS/MND), conducted a public hearing, and adopted the IS/MND.

At its March 16, 2016 meeting, the Engineering & Operations Committee was presented an information item updating them on the design and permitting requirements associated with the OC-44 Pipeline Rehabilitation.

BACKGROUND

The OC-44 pipeline was constructed in 1963. The section of the pipe that crosses San Diego Creek was originally constructed with flexible double gasketed epoxy-coated joints with the concept that it would be temporary until the State of California finalized the alignment for State Route 73, thus, allowing a more permanent installation to be integrated as part of the overpass superstructure. However, due to seismic considerations and the large diameter of OC-44, the flexible joints were replaced with welded steel joints to convert the temporary line to a permanent installation independent of State Route 73 overpass. The cover over and around the OC-44 pipeline has been progressively decreasing (i.e., loss of pipeline cover, erosion around the line, etc.) due to increasing storm events, tidal fluctuations, and invasive native plant growth. The OC-44 pipeline is now situated within the coastal zone and is regulated by the California Coastal Commission, making repairs and maintenance more challenging and costly.

Since 2002, Mesa Water has had to mitigate three pipeline failures (2002, 2006, and 2011) where the pipeline crosses San Diego Creek. Investigations during these repairs indicated that the pipeline is showing signs of deteriorating support due to scouring from the flow in the creek and that the pipeline is subject to adverse corrosion due to the loss of cover over the pipe within the
Repair activities indicate the OC-44, where it crosses the San Diego Creek, would benefit from replacement or rehabilitation and installation of a long-term cathodic protection system.

In December 2012, Mesa Water issued a request for proposal (RFP) to study the alternatives for the OC-44 Pipeline Rehabilitation and Replacement Evaluation of the OC-44 pipeline within the environmentally sensitive San Diego Creek crossing. Michael Baker International, Inc. (MBI – formerly RBF) was competitively selected for the project. The following is a summary of the scope of work requirements:

- Evaluation of OC-44 long-term needs
- Pipeline Rehabilitation Alternatives Analysis
- Pipeline Replacement Alternatives Analysis
- Cathodic Protection Assessment (for the entire 8.6 miles of pipeline)
- Preliminary Design Report

Findings and recommendations from the OC-44 Pipeline Rehabilitation and Replacement Evaluation were provided as immediate (Phase 1) and longer-term (Phase 2), as follows:

**Phase 1**
- Pipeline Rehabilitation of 1,800 linear feet of the OC-44 pipeline segment where it crosses the San Diego Creek with a 30” ductile iron pipe was the most feasible and cost effective approach and should proceed immediately
- Pipeline Rehabilitation provides a streamlined approach to the environmental permitting process due to the biological and hydrologic sensitivity within San Diego Creek
- A cathodic protection system was identified as a benefit to extend the remaining useful life of the OC-44

**Phase 2**
- Implementation of a cathodic protection system would provide longevity to the OC-44 remaining useful life and reliability to Mesa Water’s service area demands
- Scour protection of the OC-44 pipeline segment where it crosses the San Diego Creek is necessary due to long-term erosion and scour

On November 19, 2013, the Board of Directors adopted the findings and recommendations of the OC-44 Pipeline Rehabilitation and Replacement Evaluation and approved a change order for the design portion of the pipeline rehabilitation.

The proposed project will rehabilitate approximately 1,800 linear feet of the existing OC-44 Pipeline by inserting a new pipeline inside the existing pipeline. Due to the biological and hydrologic sensitivity associated with San Diego Creek and Bonita Creek, it is impractical to utilize conventional open trench excavations (disrupting the surface conditions) to replace the existing OC-44 Pipeline. Thus, the project proposes a trenchless rehabilitation technique - termed, slip lining. Through this process, a new pipe is installed inside the existing deteriorating pipe. Rather than conducting open trench improvements in the project area, the project proposes to slip line the existing 42-inch pipeline with a new 30-inch Ductile Iron Pipe (DIP).
In order to accommodate these improvements, a pipe jacking operation will be conducted. Pipe jacking would involve the excavation of fill materials at designated access pits. A hydraulic jack would then be placed in the excavation pit and using hydraulic pressure, successive 20-foot long pipe sections would be pushed and pulled into place within the existing pipe. As part of the proposed project, three access pits would be required (see Attachment A). Implementation of the proposed project will also require temporary access roads for personnel and equipment to access the proposed pit locations. Upon completion of construction, the project site would be re-contoured to pre-construction grades and then would be re-vegetated with a native plant mix.

A jurisdictional delineation was performed on the Project site in September 2014, which identified a total of 1.46 acres of Corps non-wetland Waters of US (WoUS), 5.36 acres of Corps wetlands, and 10.97 acres of CDFW jurisdictional streambed within the project study area. The entire project is located within the California Coastal Zone and therefore under the jurisdiction of the California Coastal Commission.

DISCUSSION

Due to work within jurisdictional areas, permits from the US Army Corps of Engineers (ACOE), California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB), and California Coastal Commission (CCC) are required.

As of August 2017, permits have been obtained from each of the following agencies:

- CDFW SAA File No. 1600-2015-0014-R5; Operation by Law letter received, indicating no formal approval required due to the ACOE not completing the permitting process within their allotted timeframe;
- RWQCB Certification File No. 813691; 401 Certification issued September 29, 2015; and
- CCC Coastal Development Permit (CDP) File No. 5-15-0123; Notice of Intent received December 19, 2016.

Required Mitigation

Because the project traverses highly sensitive ecological areas, mitigation of native vegetation and removal of non-native species are required as part of the CDP. The portion of the project site with the majority of impacts includes willow riparian forest (native vegetation) north of San Diego Creek. Originally, the CCC requested that all impacts be mitigated at a 5:1 ratio for riparian and wetland impacts and 3:1 ratio for coastal sage scrub, which resulted in high level of mitigation to be enhanced (1.7 acres of riparian habitat to be enhanced and 0.21 acre of coastal sage scrub habitat to be restored within the project site). Mitigation generally includes initial planting and then weeding for a 5-year period. After additional review of the project site and the requirements for mitigation mandated by the CCC, Mesa Water questioned the stringent CDP requirements and the types of species mitigation in the areas to be impacted as it maybe consists of invasive species rather than native riparian habitat. CCC accepted to re-evaluate their original CDP requirements and determined that the mitigation requirement for riparian habitat and coastal sage shrub should be revised as follows:
OC-44 Mitigation Requirements

<table>
<thead>
<tr>
<th>Type of Mitigation</th>
<th>Ratio</th>
<th>Original Mitigation</th>
<th>Original Total Mitigation</th>
<th>Revised Mitigation</th>
<th>Revised Total Mitigation</th>
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</thead>
<tbody>
<tr>
<td>Invasive Removal</td>
<td>5:1</td>
<td>0.34 Ac of Riparian Habitat</td>
<td>1.7 Ac</td>
<td>0.12 Ac of Riparian Habitat</td>
<td>0.60 AC</td>
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<td>Restoration</td>
<td>3:1</td>
<td>0.07 Ac of Coastal Sage Scrub Habitat</td>
<td>0.21 Ac</td>
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<td>$299,000</td>
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<td>$170,000</td>
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Mesa Water will solicit bids for mitigation monitoring to competitively reduce costs even further as part of the contract process.

Next Steps

- Release the Bid Package – February 2018
- Bid opening – April 24, 2018
- Presentation to the Engineering and Operations Committee – May 10, 2018
- Mesa Water Board approval – June 14, 2018
- Kick-off meeting with Contractor – June 19, 2018
- Submittal of shop drawings – July 1, 2018
- Biological survey and pipe delivery – September 1, 2018
- Construction start, Mobilization, and vegetation clearing – September 15, 2018
- Shaft construction – October 1, 2018
- Installation of pits for 30” pipeline insertion – November 1, 2018
- 30” pipeline installation and project completion – February 15, 2019
- Site restoration and mitigation – February 2023
FINANCIAL IMPACT

$429,500 was budgeted for Fiscal Year 2016.

<table>
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<td>Original Contract</td>
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<td>Revised Contract</td>
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<th>Actual spent to date</th>
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<td>$486,452</td>
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ATTACHMENTS

Attachment A: OC-44 Pipeline Layout
Attachment B: Habitat Mitigation and Monitoring Plan
HABITAT MITIGATION AND MONITORING PLAN

OC-44 Pipeline Rehabilitation and Replacement Project

City of Newport Beach, California

Corps LOP File No. SPL-2015-00186-GS
CDFW SAA File No. 1600-2015-0014-R5
RWQCB Certification File No. 813691
CCC CDP File No. 5-15-0123

Prepared For:

Mesa Water District
1965 Placentia Avenue
Costa Mesa, CA 92627
Contact: Phil Lauri, P.E.
(949) 631-1200

Prepared By:

Michael Baker International
5 Hutton Centre Drive, Suite 500
Santa Ana, CA 92707
Contact: Richard Beck, PWS
(949) 855-3687

August 2017
JN 134205
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Section 1  Introduction

This Revegetation and Monitoring Plan/Habitat Mitigation and Monitoring Plan (Plan) has been prepared in accordance with the U.S. Army Corps of Engineers (Corps) Letter of Permission File No. SPL-2015-00186-GS, California Department of Fish and Wildlife (CDFW) Lake and Streambed Alteration Agreement Number 1600-2015-0014-R5, Regional Water Quality Control Board (RWQCB) Water Quality Certification Number 813691, and the California Coastal Commission (CCC) Coastal Development Permit File Number 5-15-0123, in order to offset unavoidable temporary impacts associated with the OC-44 Pipeline Rehabilitation and Replacement Project. This Plan contains the methods to be used during implementation of the revegetation and monitoring.

1.1  Responsible Parties

Applicant Name:  
Mesa Water District  
1965 Placentia Ave  
Costa Mesa, CA 92627  
Contact: Phil Lauri  
Phone: (949) 207-5449  
Email: phil@mesawater.org

Agent Name:  
Michael Baker International  
5 Hutton Centre Drive, Suite 500  
Santa Ana, CA 92707  
Contact: Richard Beck, PWS  
Phone: (949) 855-3687  
Email: rbeck@mbakerintl.com

1.2  Project Location

The project is generally located north of State Route (SR) 1 (Pacific Coast Highway), south of John Wayne Airport, east of SR 55, and west of SR 73, in the northern portion of the City of Newport Beach, County of Orange, State of California (refer to Exhibit 1, Regional Vicinity). The project site is depicted on the Tustin, California United States Geological Survey (USGS) 7.5-minute quadrangle within Sections 51 and 57, Township 6 South, Range 9 West. Specifically, the project site includes portions of San Diego Creek and Bonita Creek, upstream of Upper Newport Bay, between Jamboree Road and SR 73 (refer to Exhibit 2, Subject Site).
OC-44 PIPELINE REHABILITATION/REPLACEMENT PROJECT
HABITAT MITIGATION AND MONITORING PLAN
Regional Vicinity

Exhibit 1
1.3 Project Description

The proposed project would rehabilitate approximately 1,700 linear feet of the existing OC-44 Pipeline by inserting a new pipeline inside the existing pipeline. Due to the biological and hydrologic sensitivity associated with San Diego Creek and Bonita Creek, it is impractical to utilize conventional open trench excavations (disrupting the surface conditions) to replace the existing OC-44 Pipeline. Thus, the project proposes a trenchless rehabilitation technique, termed, sliplining. Through this process, a new pipe is installed inside the existing deteriorating pipe. Rather than conducting open trench improvements in the project area, the project proposes to slipline the existing 42-inch pipeline with a new 30-inch Ductile Iron Pipe (DIP).

In order to accommodate these improvements, a pipe jacking operation would be conducted. Pipe jacking would involve the excavation of fill materials at designated access pits (one on each end of the pipe). A hydraulic jack would then be placed in the excavation pit and using hydraulic pressure, successive 20-foot long pipe sections would be pushed and pulled into place within the existing pipe. As part of the proposed project, three access pits would be required. The access pits include the north access pit (Pit 1) and south access pit (Pit 3) as well as a third access pit at the location where the pipeline deflects horizontally at an angle of seven degrees (Pit 2).

Installation of the new 30-inch pipeline would be accomplished by the jacking of two segments, first between Pit 3 and Pit 2, then between Pit 1 and Pit 2. Implementation of the proposed project would also require temporary access roads for personnel and equipment to access the proposed pit locations. Upon completion of construction, the project site would be re-contoured to pre-construction grades and then would be re-vegetated with a native plant mix.

1.4 Summary of Impacted Areas

Temporary impacts will occur within Bonita Creek and an unnamed tributary to San Diego Creek. Temporary impacts resulting from the construction activities described above consist of 0.12 acre of Corps and Regional Board jurisdiction, 0.12 acre of CDFW jurisdiction, and 0.12 acre of CCC jurisdiction (refer to Table 1, Summary of Project Impacts and Exhibits 3a/3b, Jurisdictional Map). An additional 0.02 of non-jurisdictional upland habitat will be temporarily impacted as well.

The portion of the project site with the majority of impacts, the willow riparian forest north of San Diego Creek, burned in April 2014 and is struggling to recover. Prior to the fire, the area consisted of willow riparian forest and mixed riparian scrub habitats, similar to what is seen on the southern side of San Diego Creek. Some of the native species still present include
arroyo willow (*Salix lasiolepis*), black willow (*Salix gooddingii*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), mulefat (*Baccharis salicifolia*), bulrush (*Schoenoplectus californicus*), coyote brush (*Baccharis pilularis*), goldenbush (*Isocoma menziesii*), California brittlebush (*Encelia californica*), saltbush (*Atriplex* sp.), willow herb (*Epilobium ciliatum*), and wild cucumber (*Marah macrocarpa*).

While the proposed project is within jurisdictional areas, the highest areas of temporary impact are comprised of non-native, invasive vegetation which sprouted post-fire. Non-native species include giant reed (*Arundo donax*), annual yellow sweetclover (*Melilotus indicus*), fennel (*Foeniculum vulgare*), prickly sow thistle (*Sonchus asper*), black mustard (*Brassica nigra*), castor bean (*Ricinus communis*), ripgut brome (*Bromus diandrus*), Mexican fan palm (*Washingtonia robusta*), common celery (*Apium graveolens*), and poison hemlock (*Conium maculatum*).

### Table 1: Summary of Project Impacts (Temporary)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Corps/Regional Board</th>
<th>CDFW</th>
<th>CCC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wetland (acres/linear feet)</td>
<td>Non-Wetland (acres/linear feet)</td>
<td>Vegetated Streambed (acres/linear feet)</td>
</tr>
<tr>
<td>Bonita Creek</td>
<td>0.02 / 45</td>
<td>0.003 / 11</td>
<td>0.06 / 56</td>
</tr>
<tr>
<td>Unnamed Creek</td>
<td>0.10 / 201</td>
<td>0.02 / 10</td>
<td>0.06 / 212</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>0.12 / 246</strong></td>
<td><strong>0.023 / 21</strong></td>
<td><strong>0.12 / 268</strong></td>
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</tbody>
</table>

### 1.5 Proposed Compensatory Mitigation

The Applicant proposes to offset jurisdictional impacts through the mitigation approach defined in Table 2, below.

#### Table 2: Summary of Compensatory Mitigation

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Type of Mitigation</th>
<th>Ratio</th>
<th>Total Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.12 Ac of Riparian Habitat</td>
<td>Invasive Removal (Enhancement)</td>
<td>5:1</td>
<td>0.60</td>
</tr>
<tr>
<td>0.02 Ac of Coastal Sage Scrub Habitat</td>
<td>Restoration</td>
<td>3:1</td>
<td>0.06</td>
</tr>
</tbody>
</table>
Section 2 Mitigation Goals

The purpose of this Plan is to define the approach to compensate for temporary impacts to jurisdictional areas resulting from the project. This section discusses the goals of the project’s revegetation program.

2.1 Type(s) and Area(s) to be Established, Restored, Enhanced and/or Preserved

Mitigation will occur at 5:1 for riparian and wetland impacts and 3:1 for coastal sage scrub impacts; therefore, for project temporary impacts, 0.60 acres of riparian habitat will be enhanced and 0.06 acre of coastal sage scrub habitat will be restored within the project site. The goal of the mitigation program is to remove invasive species from the project site area to reduce competition of resources for the native vegetation naturally found within the area. In addition, plantings will be installed in areas identified for coastal sage scrub restoration. Though coastal sage scrub species within the habitat are found within the area, the increase of invasive species have decreased their population.

2.2 Functions and Values of Habitat Type(s) to be Established

By establishing native plant species within the Project site, benefits such as wildlife habitat would be created and the potential for soil erosion protection, sediment trapping, and soil saturation would increase.

2.3 Time Lapse Between Jurisdictional Impacts and Expected Mitigation Success

The mitigation will be implemented directly after the completion of project construction. Seeding would be done upon post-construction and cuttings would be installed during the first fall/winter season after post-construction. There is no noteworthy time lapse for this mitigation project.

2.4 Estimated Total Cost of Mitigation

The estimated cost of installation, maintenance, and monitoring of the mitigation site is $170,000¹, which includes the following assumptions:

- Implementation (Planting): $60,000
- 5 Years of Maintenance: $60,000

¹ Not a formal estimate. Costs will vary by restoration contractor.
• 5 Years of Mitigation Monitoring: $50,000 (includes qualitative and quantitative monitoring)

2.5 Special Aquatic Habitats, Other Waters of the U.S., and Non-Jurisdictional Areas Proposed as Mitigation

No Special Aquatic Habitats or other waters of the U.S. are proposed as mitigation. Non-jurisdictional areas, such as adjoining slopes and upland areas, will be planted with native species. The mitigation site acts as a buffer for adjoining riparian areas.

2.6 Overall Watershed Improvements to be Gained

The mitigation site and adjoining areas are dominated by exotic species. The implementation of native habitat has several benefits within the watershed, such as providing habitat for avian and terrestrial wildlife, including wildlife movement; providing shade, aquatic temperature regulation, stability and organic matter to streams; protecting against erosion; buffering from adjacent land uses; controlling non-point source pollution; and reducing water velocity to aid in sediment trapping.
Section 3  Description of Proposed Mitigation Site

This section describes the existing conditions of the mitigation site.

3.1  Site Selection Process

The final selection of the proposed mitigation site was based on the location of mitigation sites within temporary impact areas. The proposed mitigation site will further enhance the function and value of existing willow-riparian forest and freshwater marsh in the adjacent riparian area.

3.2  Location and Size of Mitigation Site

As noted above, the proposed mitigation sites are located within the project site impact temporary areas. The location of the mitigation site, both along San Diego Creek and Bonita Creek, is shown on Exhibit 4, Mitigation Approach. The total mitigation site area is 0.60 acre of riparian enhancement and 0.06 acre of coastal sage scrub restoration.

3.3  Ownership Status

The mitigation site is split between several parcels under different ownership, including Fletcher Jones Motorcars (442-071-20), the City of Newport Beach (442-071-21 and 442-061-12), The Irvine Company (442-061-17), and the State of California (442-061-06). Mesa Water District has an easement within these parcels to conduct the work.

3.4  Existing Functions and Values of the Mitigation Site

It should be noted that on April 30, 2014, a fire burned 5.3 acres north of San Diego Creek between Jamboree Road and State Route 73. The burned area encompasses the proposed locations of the north access pits, east of Bayview Way and south of the Fletcher Jones Motorcars property. As a result, this area of the mitigation site has become susceptible to significant non-native plant establishment. Photographs of the existing mitigation sites are provided in Exhibit 5.

The area to the south of San Diego Creek supports a willow riparian forest with a significant amount of non-native species, specifically Arundo donax. This plant community is primarily composed of dense, multi-storied riparian plant species.
3.5 Jurisdictional Delineation Summary

Michael Baker performed a jurisdictional delineation on the Project site in September 2014, which identified a total of 1.46 acres of Corps non-wetland WoUS, 5.36 acres of Corps wetlands, and 10.97 acres of CDFW jurisdictional streambed within the project study area.
Photograph 1 – Looking west at burned area along the northern bank of San Diego Creek.

Photograph 2 – Looking south at burned area on the northern portion of the project site.

Photograph 3 – Emergent vegetation within burned area on the northern portion of the project site.

Photograph 4 – Looking south at Bonita Creek on the central portion of the project site.
The mitigation sites are located within the waters of the U.S. and State limits identified during the jurisdictional delineations.

3.6 Present and Proposed Uses of the Mitigation Site and All Adjacent Areas

The mitigation sites are located within open space surrounded by developed parcels. Roads, parking lots, sports facilities, recreational trails, and commercial businesses are located immediately adjacent to the mitigation site. Additionally, Bonita Creek and an unnamed drainage are located within the boundaries of the mitigation site.

3.7 Reference Site(s)

The plant palette consists of native plant species typical of the project site and surrounding areas. Prior to disturbance, the project site consisted of willow riparian forest, mixed riparian scrub, and adjacent disturbed coastal sage scrub. The project site will be revegetated to mimic that habitat type.
Section 4 Mitigation Site Implementation Plan

The following discussion describes the procedures and techniques for implementing the mitigation area on the project site.

4.1 Basis for Success

The mitigation program is expected to be successful because: (1) the plant palette consists of riparian forest and mixed riparian scrub species typical of the pre-project condition and surrounding areas and (2) an adaptive management approach will be used during a five-year maintenance and five-year monitoring program to identify appropriate adjustments to maintenance and monitoring activities and to facilitate successful plant establishment.

4.2 Responsible Parties

Mitigation program implementation will be the responsibility of the Applicant, Mesa Water District.

4.3 Financial Assurances

All costs associated with this mitigation program are the responsibility of the Applicant, Mesa Water District, not to exceed five (5) years. Upon completion of the mitigation and monitoring program, the Applicant’s financial responsibilities will be fulfilled.

4.4 Implementation Schedule

Site preparation, irrigation installation, and mitigation plantings will begin no later than fall 2018. The project biologist will supervise and provide biological monitoring during site preparation, installation of plant materials, and maintenance.

4.5 Contracting Requirements

Restoration requires the contracting and coordination of several entities early in the planning phase of restoration, as follows:

1. Retain project biologist.
2. Contract with a native seed and plant supplier prior to planting to determine availability of stock.
3. Retain a qualified restoration contractor with experience in habitat restoration projects for installation.
Planting at the mitigation site should occur after the first rains between October 1 and March 1 to take advantage of the winter rainy season, dormancy of foliage, and rooting period to ensure optimum survival of plantings.

4.6 Site Construction and Preparation

Site preparation activities consist of: (1) site clearing; and, (2) invasive tree and shrub removal. Irrigation is not proposed.

4.6.1 Site Clearing

Initial site clearing includes herbicide treatments of all non-native species present on the site, hand weeding in areas where herbicide will affect native species, and hauling weeds and debris to the local landfill. Removal of non-native vegetation and invasive species will be conducted under direction of the project biologist, in accordance with existing project controls and regulatory requirements.

Application of herbicides is necessary for the removal of non-native species known to be present on site. Some of these species include:

- Giant Reed (*Arundo donax*),
- Annual Yellow Sweetclover (*Melilotus indicus*),
- Fennel (*Foeniculum vulgare*)
- Prickly Sow Thistle (*Sonchus asper*)
- Black Mustard (*Brassica nigra*)
- Castor Bean (*Ricinus communis*)
- Ripgut Brome (*Bromus diandrus*)
- Mexican Fan Palm (*Washingtonia robusta*)
- Common Celery (*Apium graveolens*)
- Poison Hemlock (*Conium maculatum*)
- Brazilian Pepper Trees (*Schinus terebinthifolius*)
- Common iceplant (*Mesembryanthemum crystallinum*)
In order to apply an unrestricted herbicide (e.g., Roundup Custom), the Restoration Contractor must have a Pest Control Business License, which requires that at least one individual employed by the Restoration Contractor be in possession of a Qualified Applicator’s License (QAL). If a QAL is not present during treatment, all applicators must have undergone documented herbicide application training. All licenses must be issued by the State of California, be registered in Orange County, and be of current status. In aquatic situations, only a United States Environmental Protection Agency (EPA) approved, glyphosate-based systemic herbicide approved for aquatic use may be applied. No preemergent herbicides may be used.

Spraying shall be conducted only when weather conditions are conducive to effective uptake of the herbicide by the targeted species (i.e., sunny, dry, and when plants are actively growing) and when wind conditions are such that herbicide drift is nonexistent. During herbicide application, protection or avoidance of native species is required. Any native species lost within the mitigation areas due to intentional or unintentional application of herbicide shall be replaced during the following planting season at the direction of the project biologist.

4.6.2 Invasive Tree and Shrub Removal

Invasive tree and shrub removal includes felling, bucking, chipping and disposal of invasive species from within the project boundaries. Removal of invasive tree and shrub species will be conducted under direction of the project biologist, in accordance with existing project controls and regulatory requirements. City landscape trees bordering University Drive will not be included within the removal.

Mexican Fan Palm over 5 feet tall will be drilled and filled with herbicide in place. Palms under 5 feet in height will be cut down with the stumps treated. Pampas grass seed heads will be removed, with the remainder of the plant treated with herbicide. The shrub will naturally degenerate within a year of application.

4.7 Planting Plan

Native vegetation types typical of the project area will be established within the coastal sage scrub mitigation areas.

4.7.1 Plant and Seed Pallets

Planting includes seeds to be harvested from the local watershed (if available) or coastal sources within Orange, Los Angeles, or San Diego counties. Water in the area is abundant as San Diego Creek and Bonita Creek are perennial. Seeding includes 0.06 acre of seed to be purchased and raked in. Table 3 below summarize the types and quantities of plants to be seeded on site.
Table 3: Coastal Sage Scrub Plant Palette (0.06 acre)

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Lbs./Acre</th>
<th>Number of Live Seeds/Sq Ft</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Artemisia californica</em></td>
<td>California sagebrush</td>
<td>0.2</td>
<td>25</td>
</tr>
<tr>
<td><em>Atriplex lantiformis</em></td>
<td>Saltbush</td>
<td>4.0</td>
<td>21</td>
</tr>
<tr>
<td><em>Baccharis salicifolia</em></td>
<td>Mulefat</td>
<td>3.5</td>
<td>20</td>
</tr>
<tr>
<td><em>Encelia californica</em></td>
<td>California bush sunflower</td>
<td>3.0</td>
<td>21</td>
</tr>
<tr>
<td><em>Isocoma menziesii</em></td>
<td>Coast goldenbush</td>
<td>1.0</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>11.7</strong></td>
<td><strong>87</strong></td>
</tr>
</tbody>
</table>

4.7.2 Planting of Container Plants

The monitoring biologist must be on-site to identify planting locations and ensure that plantings are installed in a natural pattern (i.e., not in rows). No added fertilizer shall be used.

4.7.3 Planting of Cuttings

The monitoring biologist must be on-site to identify planting locations and ensure that plantings are installed in a natural pattern (i.e., not in rows). All cuttings stock must be soaked the day before planting.

4.7.4 Seed Mix Application

Appropriate native seed mixes will be applied to the mitigation site to provide suitable shrub and herbaceous species cover. Application methods will consist of hand broadcasting where there is bare ground in between the planted species. Seeding will be performed between October and January during those periods when weather and soil conditions are suitable for plant establishment and seasonal rains can facilitate successful germination. Timing of seed mix application will be approved in advance by Mesa Water District and the Biological Monitor.

All seeds will be clearly labeled showing type of seed, test date, supplier name, and percentage of the following: pure seed, crop seed, inert matter, weed seed, noxious weeds, and total germination content. All material will be delivered to the site in original, unopened containers bearing the manufacturer’s guaranteed analysis. All seed mixes will be stored in a dark, cool place and not be allowed to become damp.

Soil surfaces will be disked or raked prior to application to provide roughened, loose soils suitable for seed mix germination and establishment. Watering via water truck will be performed prior to and following seed application to facilitate germination.
4.8  Irrigation Plan

No supplemented irrigation is proposed.

4.9  Signage

Appropriate signage must be placed at regular intervals around the perimeter of the mitigation site to restrict access, using temporary poles or animal migration-friendly fencing. The sign shall say something similar to:

HABITAT RESTORATION AREA
PLEASE KEEP OUT

4.10 As-Built Conditions

Once mitigation implementation is complete, the monitoring biologist will submit a report to the resource agencies within 30 days of completion of the 90-day plant establishment period for the mitigation plans. The report will include the as-built locations of the irrigation and plantings, if significantly different from the original construction plants. The report will also be inclusive of the Year 0 baseline data.
Section 5 Maintenance Activities During the Monitoring Period

The maintenance activities described in this section will be performed within the mitigation site throughout the five-year maintenance period. Biological resources will be protected at all times during all maintenance activities. The project biologist will monitor all aspects of the mitigation plan in an effort to detect any problems at an early stage. Potential problems could arise from unforeseen changes in hydrology, erosion, vandalism, competition from weeds and invasive species, or unacceptable levels of disease and pests.

5.1 Maintenance Activities

Maintenance activities will be performed within the mitigation site for five years. The intent of the maintenance program is to facilitate the establishment of self-sustainable native plant species. The Biological Monitor will coordinate with Mesa Water District and the Landscape Contractor to develop any needed modification to the specified schedule and methodologies as part of an adaptive management approach to site management and maintenance. When the Biological Monitor determines poor, unhealthy condition of plant materials, inadequate control of weed species and/or non-compliance with success criteria, contingency measures or suitable mitigation alternatives will be developed as described in Section 8.0. The following maintenance activities will be conducted during the monitoring period:

5.1.1 Plant Inspection

After installation, the project biologist and restoration contractor will conduct monthly qualitative monitoring of the mitigation site for the first year. The project biologist will maintain a written record of each site visit, which can be provided to the Applicant by request. Documented observations will include plant health, and issues such as vandalism, weeding, irrigation scheduling, debris removal, etc. Should any remedial action be necessary, the project biologist will notify the Applicant and coordinate implementation with the restoration contractor.

5.1.2 Removal of Exotic Plant Species

During the five-year maintenance period, the mitigation site will be maintained by the restoration contractor to minimize weed cover during the monitoring period. Removal methods other than manual weeding must be approved by the project biologist. Only U.S. Environmental Protection Agency-approved herbicides will be used within the mitigation site. Throughout the mitigation site, areas must be maintained free of perennial exotic plant species, including but not limited to pampas grass, giant reed, tamarisk, sweet fennel, tree tobacco, castor bean, and pepper tree. Weed eradication is imperative to suppress competition that could prevent establishment of the mitigation plantings. The restoration
contractor must be prepared to respond to weed control needs rapidly, and the project biologist must provide adequate supervision for maintenance personnel that may not be skilled at identifying and discriminating between weeds and native species. Weed debris should be removed from the project area and disposed of as permitted by law. Pulled weeds should be placed on a tarp to prevent the seeds from touching the ground.

5.1.3 Management of Non-Native, Invasive Species

With the spread of polyphagous shot hole borer beetles throughout Southern California, and more specifically within Orange County, the plants will be monitored by the project biologist for symptoms of infestation. Preventative measures will be taken by following best management practices (BMPs) during maintenance activities:

- Ensure cuttings for the project are from areas cleared of shot hole-borer beetles and their corresponding fungi.
- Cleaning of tools/machinery between each use. Boots should also be cleaned when entering and exiting the site. The cleaning solution can be comprised of diluted bleach or undiluted isopropyl alcohol.
- Continued monitoring for symptoms, particularly towards the final years of mitigation when the tree species have grown to a desired diameter for the beetles.
- Work in clean areas first prior to moving into suspected, infected areas.
- Rake away and dispose of pathogen infested plant parts that have dropped from suspected, infected trees.
- Proper treatment or disposal of infested materials (if any).

In the occurrence where symptoms are found within the mitigation site, the project biologist will submit a sample of the trees to either the Eskalen Lab at University of California Riverside or the UC Cooperative Extension to verify the presence of the beetle and its corresponding fungus. Once the species is identified, the containment and treatment plan can be discussed with the Applicant and project biologist.

5.1.4 Replacement of Native Plant Species

During the required maintenance period, plant failure below the required survival rates and coverage criteria and/or poor health within the mitigation site will be compensated for by reseeding and/or replanting using approved species. Plant replacement will occur between October and January, and during those periods when weather and soil conditions are suitable for plant germination and establishment. The Biological Monitor will make regular
inspections of the work to assess the condition of all plants and to determine any remedial measures necessary to provide adequate coverage.

5.1.5 Trash and Debris Removal

During routine maintenance, the restoration contractor must remove litter, trash, and debris from the mitigation site and dispose of it off-site as permitted by law. The restoration contractor is responsible for avoiding impacts to plantings during trash removal activities.

5.1.6 Irrigation Frequency

Supplemental irrigation is not proposed for this mitigation site due to the wet and perennial conditions. The native seed mix placed along slopes will rely on existing hydrology and natural rainfall, where required.

5.2 Responsible Parties

Maintenance activities will be the responsibility of the Applicant, Mesa Water District.

5.3 Maintenance Schedule

Long-term site maintenance will take place for five years within the mitigation site and will be initiated upon completion of initial installation activities and after submittal of an installation completion notice.
Section 6  Monitoring Plan and Documentation

Monitoring will be performed by the project biologist to facilitate compliance with the success criteria set forth in this section.

6.1  Performance Standards, Target Dates, and Success Criteria

Success criteria within the coastal sage scrub mitigation consists of achieving at minimum 80 percent cover of native species after five years (at the end of the monitoring and maintenance period). Non-native species shall comprise less than 10 percent of cover after five years, and zero percent invasive species cover. The goal of the mitigation program is to provide self-sustaining native vegetation with minimal non-native species establishment. The Biological Monitor is responsible for evaluating compliance with specified success criteria.

Per mitigation requirements, the riparian habitat will only be removed of invasive species. Based on the species present prior to the fire, the habitat should have an adequate seedbank and restore itself once natives are no longer competing for resources.

6.2  Target Functions and Values

The mitigation site is expected to provide wildlife habitat opportunities and benefits that are greater than the vegetation that will be impacted through project construction. Specifically, this includes habitat for avian and wildlife species; moderate sediment trapping and erosion control; and shading and temperature control within adjacent low flows.

6.3  Target Hydrological Regime

The mitigation site includes areas that are identified as waters of the U.S. and wetlands within a perennial creek system. No changes to the hydrological flow regime is proposed. These conditions are expected to prevail on an ongoing basis.

6.4  Target Jurisdictional and Non-Jurisdictional Acreages to be Established, Restored, Enhanced and/or Preserved

The mitigation site includes areas that are identified as waters of the U.S. These conditions are expected to prevail on an ongoing basis.

6.5  Monitoring Methods

6.5.1  Monitoring Installation

Meetings between the Landscape Contractor, Mesa Water District, the Biological Monitor, and any other appropriate entities will be conducted as necessary prior to and during initial
installation activities to identify and clarify specified methodologies and to resolve any issues that arise during mitigation installation. Deviations from specified methodology will require prior approval from Mesa Water District. Site inspections will be performed on an as-needed basis during site preparation, seed mix application, container plant installation, and cutting salvage and placement. These inspections will include:

- Photo-documenting pre-existing site conditions and installation procedures;
- Identifying non-native plant species;
- Monitoring soil-preparation and weed-eradication activities;
- Identifying the location and layout of seed mixes and mule fat cuttings;
- Conducting field inspections during seed mix application, container plant installation, and cutting salvage/placement activities; and
- Coordinating (verbal and written) with the Landscape Contractor and Mesa Water District.

6.5.2 Five Year Monitoring Program

The Biological Monitor will be responsible for inspecting and documenting the condition of the 0.60 acres of riparian mitigation and 0.06 acre of upland mitigation throughout the five-year program and will use the cover criteria listed in Section 6.1 to evaluate performance on the mitigation site.

Monitoring will consist of both qualitative and quantitative monitoring of site conditions. Monitoring of the restoration site must utilize a quantitative functional-based assessment to establish baseline conditions, set success criteria, and assess restoration site progress. The California Rapid Assessment Method (CRAM) will be utilized on years 1, 3, and 5, with findings included in the annual monitoring report. Qualitative surveys will be performed by the Project biologist and will consist of a general site-walk. General observations, such as fitness and health of the planted species, pest problems (identification of symptoms of polyphagous shot hole borer or other species), weed establishment, mortality, and drought stress, will be noted in each site visit. The Project biologist will also note observations on wildlife use and native plant recruitment for the purpose of later discussion in the annual reports. Records will be kept of mortality and other problems such as insect damage, weed infestation, and soil loss. The Project biologist will determine remedial measures necessary to facilitate compliance with performance standards. All remedial measures undertaken will be referenced in the annual monitoring report to the regulatory agencies.

Quantitative surveys will be conducted annually and will include measuring both native and non-native plant cover using the point-intercept method of vegetative assessment. One or more point-intercept transects will be used at the end of the year following implementation to more precisely measure native species' growth performance. Native and non-native species coverage, bare ground, leaf litter, and detritus coverage will be recorded along each
transect. This information will be used to more precisely determine native and non-native species percent coverage. These transect measurements will also allow for the determination of compliance/non-compliance with percent coverage success criteria listed in Section 6.1.

A minimum of 10 photo-documentation stations will be permanently marked within the site. These stations will be used to provide visual documentation of progress at the site at the completion of all implementation activities and during each annual quantitative survey.

Mesa Water District and the Biological Monitor will meet with the Landscape Contractor, as necessary, during regularly scheduled site visits to discuss site conditions and to recommend remedial measures. Recommended remedial measures will be based on site observations and survey results.

6.6 Monitoring Schedule

Qualitative monitoring will be conducted monthly during the first year of the monitoring program and will begin immediately after installation of the mitigation, or as recommended by the project biologist. After the first year, qualitative surveys will be completed on a quarterly basis. Quantitative surveys will be conducted annually every late spring/early summer, as described above, to measure native and non-native species coverage and to determine compliance with site success criteria.

6.7 Annual Monitoring Reports

The project biologist will prepare and submit annual reports that summarize site conditions to the resource agencies at the end of the year following initial implementation. The first monitoring report is due by December 31st of the year following the first spring season after planting; additional reports will occur within the same timeframe each year to follow. The annual monitoring report will assess both attainment of yearly target success criteria and progress toward final success criteria, and must include documentation of the survival and/or replacement of tree and shrub container stock, and percent cover of native vegetation. The monitoring reports shall also include, but are not limited to, the following information:

- Title pages identifying the regulatory agency file numbers and the period for which the monitoring report is applicable;
- A list of names, titles, qualifications, and companies of all persons who prepared the content of the annual report and participated in monitoring activities;
- Date of initiation of mitigation installation and date mitigation installation was completed;
- Dates of any recent corrective or maintenance activities conducted since the
previous report submission;

- Specific recommendations for any additional corrective or remedial actions;
- Monitoring requirements and performance standards;
- A description of the restoration activities conducted during the previous year, including: site preparation, plant installation and overview of the planting effort, the number by species of plants replaced or naturally recruited, and when the activities were conducted, as appropriate;
- Current site conditions, including: percent cover, and the methods used to assess these parameters;
- Information regarding non-native plant removal, including: the methods used for removal, the amount removed and/or treated, the frequency and timing of removal and treatment, disposal specifics, and a summary of the general successes and failures;
- Wildlife species observed at the creation site during monitoring surveys including sensitive species and/or listed species; and,
- Photographs from designated reference points.

6.8 Preservation Mechanism

The proposed project/mitigation site is located on parcels owned by others, generally utilized as open space/flood control. The project proposes solely temporary vegetation impacts; no formal preservation mechanism is proposed.
Section 7  Completion of Compensatory Mitigation

7.1  Notification of Completion

The Applicant will notify all appropriate regulatory agencies in writing when the five-year monitoring period is complete and/or the success criteria have been met.

If the mitigation site meets all of the performance criteria prior to the end of the fifth-year monitoring period, the regulatory agencies may terminate the monitoring effort in writing and release. At that time, the Applicant will be released from further maintenance and monitoring requirements of the mitigation area.

7.2  Agency Confirmation

Following receipt of the final annual monitoring report, the Applicant will contact the appropriate regulatory agencies to schedule a site visit, if needed, to confirm the completion of the compensatory mitigation effort.
Section 8  Contingency Measures

8.1  Initiating Procedures

If the final report indicates that the restoration project has been unsuccessful, in part, or in whole, based on the approved performance standards, the applicant shall submit within 90 days a revised or supplemental restoration program to compensate for those portions of the original program which did not meet the approved performance standards. The revised restoration program, if necessary, shall be processed as an amendment to this coastal development permit.

Contingency measures will be based on an adaptive management approach and will include: reseeding and replanting with quantities of appropriate species, additional weed control, and/or implementation of erosion control and stabilization measures. If within the one year of monitoring, the slope should significantly erode (i.e., due to fire or flooding) then the soil and associated vegetation would be replaced at a 1:1 ratio. If the mitigation site has not met one or more of the performance criteria, the responsible party’s maintenance and monitoring obligations shall continue one year at a time until the appropriate resource agency(ies) give final approval that the mitigation obligations have been satisfied.

8.2  Alternative Locations for Contingency Compensatory Mitigation

Sufficient area and appropriate rationale is provided for implementation on-site; therefore, alternative locations should be unnecessary. If, at any time during the maintenance and monitoring program, the Biological Monitor determines that the proposed mitigation site is unable to support the specified native plant species necessary to successfully mitigate project impacts, the Biological Monitor shall identify appropriate mitigation alternatives in consultation with Mesa Water District and the resource agencies.

8.3  Funding Mechanism

The Applicant, Mesa Water District, will fund planning, implementation, maintenance, and monitoring of any contingency measures that may be required to achieve mitigation goals.
RECOMMENDATION

Receive the presentation.

STRATEGIC PLAN

Goal #2: Practice perpetual infrastructure renewal and improvement.

PRIOR BOARD ACTION/DISCUSSION

At its April 21, 2015 meeting, the Engineering and Operations (E&O) Committee was presented an information item regarding the Well 8 Demolition.

At its June 11, 2015 meeting the Board of Directors (Board) approved award of a contract to Dudek & Associates for professional engineering services for an amount not to exceed $74,510.

At its February 21, 2017 meeting, the E&O Committee was presented an information item regarding completion of the Well 8 demolition design.

At its May 16, 2017 meeting, the E&O Committee approved award of a contract to R C Foster Corporation for $226,150 and a 10% contingency for a not-to-exceed amount of $248,765 to perform the Well 8 Demolition.

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 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 included the demolition of the well, on-site monitoring wells, and the removal of the above-ground portions of the well and onsite facilities to the extent required by the Exchange.

On February 6, 2017, Mesa Water staff met with the Exchange personnel and discussed the 90% 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 requests were incorporated into the 100% design.

DISCUSSION

After completing the submittal approval process and preparing all necessary equipment, the contractor mobilized on site on June 15, 2017. Construction started with de-energizing the site and demolishing the Concrete Masonry Unit control building and continued with removal of the following improvements:

- Two wooden sheds used for chemicals storage
- Two chemical injection vaults
- 120 feet of 12" pipeline
- 12" valve in South Coast Drive
- Well 8 pump including column and motor
- Destruction of Well 8 and two monitoring wells 8A and 8B by removing casings to 11 feet below ground level and filling with sand/cement slurry
- Backfilling and restoring of pavement
- Constructing chain link fence
- Reinstalling landscape

Construction was substantially completed on September 4, 2017. A presentation of the project construction will be provided at the September 19, 2017 Engineering & Operations Committee Meeting.

FINANCIAL IMPACT

No funds were budgeted and the requested funding will come from Cash on Hand. $68,020 has been spent to date. This project has been completed.

ATTACHMENTS

None.
RECOMMENDATION

Recommend the Board of Directors approve the execution of the Utility Agreement with the Orange County Transportation Authority (OCTA) for the I-405 Crossing at the Santa Ana River Pipeline Relocation Project.

STRATEGIC PLAN

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

PRIOR BOARD ACTION

At its July 19, 2016 Engineering and Operations Committee (E&O) meeting, the Board received a verbal update on the scope of the I-405 Widening Project and impacts to the Fairview Road crossing relocation.

At its October 13, 2016 Board meeting, the Board approved execution of the Preliminary Engineering Agreement with OCTA and directed staff to proceed with the OCTA led approach for the Fairview Road Water Main Relocation.

BACKGROUND

OCTA, in cooperation with The California Department of Transportation (Caltrans), is widening the San Diego Freeway (I-405) between State Route 73 (SR-73) and Interstate 605 (I-605). This $1.9 billion project includes adding one regular lane in each direction from Euclid Street to I-605 and two toll lanes in each direction from SR-73 to I-605. The general purpose lane portion of the project is a Measure M (Orange County’s half-cent transportation sales tax) project and will be funded by a combination of local, state, and federal funds, with the express lanes portion of the project financed and primarily paid for by those who choose to pay a toll and use the 405 Express Lanes. On April 27, 2015, the OCTA Board of Directors voted to utilize Measure M funds and maintain local control of the project. OCTA is the responsible agency and the project sponsor with Caltrans assuming ownership at project completion. As OCTA is acting on the behalf of Caltrans, all agreements and forms are Caltrans standards. The I-405 Widening Project will use a design-build process.

OCTA awarded the design-build contract to OC 405 Partners in November 2016.

The Santa Ana River crossing is a 24 inch concrete mortar lined and coated pipe spanning from Suburbia Park northeast across I-405, parallel to the Santa Ana River, and was installed in 1977.
DISCUSSION

I-405 Crossing at the Santa Ana River: OCTA is proposing that Mesa Water enter into a Utility Agreement that will allow the selected contractor to include the I-405 Crossing at the Santa Ana River Water Main Relocation as part of the I-405 Widening project. Mesa Water provided proof of prior rights and will not be responsible for the cost of the relocation but will play an active role in design review and inspection. This option will require the execution of a Utility Agreement (UA) between OCTA and Mesa Water. The UA does provide for the following control provisions by Mesa Water:

- Approval of Scope of Work
- Plan Review
- Plan Deviation Review
- Inspection of Utilities
- Final Acceptance of Assets

The UA has undergone extensive review and revision by Mesa Water’s Legal Counsel.

Staff recommends that the Board approve execution of the Utility Agreement for the I-405 Crossing at the Santa Ana River Pipeline Relocation Project.

FINANCIAL IMPACT

None.

ATTACHMENTS

Attachment A: Utility Agreement with the Orange County Transportation Authority (OCTA) for the I-405 Crossing at the Santa Ana River Pipeline Relocation Project
The Orange County Transportation Authority (OCTA) in cooperation with the California Department of Transportation ("Caltrans") is proposing to improve Interstate 405 between State Route 73 and Interstate 605. OCTA and Caltrans have entered into Cooperative Agreement Number 12-697 relating to the Project under which Caltrans will provide Project oversight and upon completion of the Project, Caltrans will continue to own and maintain the Interstate 405.

Mesa Water District

Hereinafter referred to as “OWNER”, owns and maintains the following (the “Utility Facilities”):

- 24-inch cement mortar lined and coated steel pipe in 36-inch steel casing east of Santa Ana River crossing I-405

within the limits of the OCTA Project which requires extending encasement
to accommodate OCTA’s Project.

It is hereby mutually agreed between OCTA and OWNER as follows:

I. WORK TO BE PERFORMED

In accordance with Notice to Owner No. UK064629 dated 08/01/2017, OCTA shall relocate OWNER’s Utility Facilities as shown on OCTA’s contract plans for the improvement of Interstate 405, EA 12-OH1000 which by this reference are made a part hereof. OWNER hereby acknowledges review of OCTA’s plans for work and agrees to the construction in the manner proposed. Deviations from the plan described above initiated by either OCTA or the OWNER, shall be agreed upon by both parties hereto under a Revised Notice to Owner. Such Revised Notices to Owner, approved by OCTA and agreed to/acknowledged by the OWNER, will constitute an approved revision of the plan described above and are hereby made a part hereof. No work under said deviation shall commence prior to written execution by the OWNER of the Revised Notice to Owner. Changes in the scope of the work will require an amendment to this Agreement in addition to the revised Notice to Owner. OWNER shall have the right to inspect the work during construction. Upon completion of the work by OCTA,
OWNER agrees to accept ownership and maintenance of the constructed facilities and relinquishes to OCTA ownership of the replaced facilities, except in the case of liability determined pursuant to Water Code 7034 or 7035.

II. LIABILITY FOR WORK

Existing facilities are located in their present position pursuant to rights superior to those of OCTA and will be relocated at OCTA expense.

III. PERFORMANCE OF WORK

OWNER shall have access to all phases of the relocation work to be performed by OCTA, as described in Section I above, for the purpose of inspection to ensure that the work is in accordance with the specifications contained in the OCTA Contract; however, all questions regarding the work being performed will be directed to OCTA’s Resident Engineer for their evaluation and final disposition.

Use of out-of-state personnel (or personnel requiring lodging and meal “per diem” expenses) will not be allowed without prior written authorization by OCTA’s representative. Requests for such authorization must be contained in OWNER’s estimate of actual and necessary relocation costs. Accounting Form FA-1301 is to be completed and submitted for all non-State personnel travel per diem. OWNER shall include an explanation why local employee or contract labor is not considered adequate for the relocation work proposed. Per diem expenses shall not exceed the per diem expense amounts allowed under the State’s California Department of Human Resources (CalHR) travel expense guidelines.

Work performed directly by OWNER’s employees falls within the exception of Labor Code Section 1720(a)(1) and does not constitute a public work under Section 1720(a)(2) and is not subject to prevailing wages. OWNER shall verify compliance with this requirement in the administration of its contracts referenced above.

IV. PAYMENT FOR WORK

OCTA shall pay its share of the actual and necessary cost of the herein described work within 45 days after receipt of OWNER’s itemized bill, signed by a responsible official of OWNER’s organization and prepared on OWNER’s letterhead, compiled on the basis of the actual and necessary cost and expense incurred and charged or allocated to said work in accordance with the uniform system of accounts prescribed for OWNER by the California Public Utilities Commission, Federal Energy Regulatory Commission or Federal Communications Commission, whichever is applicable.
It is understood and agreed that OCTA will not pay for any betterment or increase in capacity of OWNER’s facilities in the new location and that OWNER shall give credit to OCTA for the accrued depreciation of the replaced facilities and for the salvage value of any material or parts salvaged and retained or sold by OWNER.

Not more frequently than once a month, but at least quarterly, OWNER will prepare and submit itemized progress bills for costs incurred, not to exceed OWNER’s recorded costs as of the billing date less estimated credits applicable to completed work. Payment of progress bills, not to exceed the amount of this Agreement, may be made under the terms of this Agreement. Payment of progress bills which exceed the amount of this Agreement may be made after receipt and approval by OCTA of documentation supporting the cost increase and after an amendment to this Agreement has been executed by the parties to this Agreement.

The OWNER shall submit a final bill to OCTA within 360 days after the completion of the work described in Section I above. If OCTA has not received a final bill within 360 days after notification of completion of OWNER’s work described in Section I of this Agreement, and OCTA has delivered to OWNER fully executed easement deeds, Consents to Common Use or Joint Use Agreements for OWNER’s facilities (if required), OCTA will provide written notification to OWNER of its intent to close its file within 30 days. OWNER hereby acknowledges, to the extent allowed by law, that all remaining costs will be deemed to have been abandoned. If OCTA processes a final bill for payment more than 360 days after notification of completion of OWNER’s work, payment of the late bill may be subject to allocation and/or approval by OCTA.

The final billing shall be in the form of an itemized statement of the total costs charged to the project, less the credits provided for in this Agreement, and less any amounts covered by progress billings. However, OCTA shall not pay final bills which exceed the estimated cost of this Agreement without documentation of the reason for the increase of said cost from the OWNER and approval of documentation by OCTA. Except, if the final bill exceeds the OWNER’s estimated costs solely as the result of a revised Notice to Owner as provided for in Section I, a copy of said revised Notice to Owner shall suffice as documentation. In either case, payment of the amount over the estimated cost of this Agreement may be subject to allocation and/or approval by OCTA.

In any event if the final bill exceeds 125% of the estimated cost of this Agreement, an Amended Agreement shall be executed by the parties to this Agreement prior to the payment of the OWNER’S final bill. Any and all increases in costs that are the direct result of deviations from the work described in Section I of this Agreement shall have the prior concurrence of OCTA.

Detailed records from which the billing is compiled shall be retained by owner for a period of three years from the date of final payment and will be available for audit by State and/or Federal auditors. In performing work under this Agreement, owner agrees to comply with the Uniform System of Accounts for Public Utilities found at 18 CFR Part 101, 201, et al., and, to the extent they are applicable to owner doing work on the project that is the subject
of this agreement, the contract cost principles and procedures as set forth in 48 CFR, Chapter 1, Part 31, et seq., 23 CFR, Chapter 1, Part 645, and 2 CFR Part 200 et al. If a subsequent OCTA, State and/or Federal audit determines payments to be unallowable, OWNER agrees to reimburse agency upon receipt of agency billing. If OWNER is subject to repayment due to failure by OCTA to comply with applicable laws, regulations, and ordinances then OCTA will ensure that OWNER is compensated for actual cost in performing work under this agreement.

V. GENERAL CONDITIONS

All costs accrued by OWNER as a result of OCTA’s request of March 10, 2015 to review, study and/or prepare relocation plans and estimates for the project associated with this Agreement may be billed pursuant to the terms and conditions of this Agreement.

If OCTA’s project which precipitated this Agreement is canceled or modified so as to eliminate the necessity of work by OWNER, OCTA will notify OWNER in writing and OCTA reserves the right to terminate this Agreement by Amendment. The Amendment shall provide mutually acceptable terms and conditions for terminating the Agreement. Such terms will include OCTA’s agreement to pay all costs incurred by Owner in its performance of preliminary engineering and study work upon the submissions of invoices.

OWNER shall submit a Notice of Completion of inspection to OCTA within 30 days of the completion of the work described herein.

It is understood that said highway is a Federal aid highway and accordingly, 23 CFR, Chapter 1, Part 645 is hereby incorporated into this Agreement.

In addition, the provisions of 23 CFR 635.410, Buy America, are also incorporated into this Agreement. The Buy America requirements are further specified in Moving Ahead for Progress in the 21st Century (MAP-21), section 1518; 23 CFR 635.410 requires that all manufacturing processes have occurred in the United States for steel and iron products (including the application of coatings) installed on a project receiving funding from the FHWA.

If, in connection with OWNER’s performance of the Work hereunder, OCTA provides to OWNER any materials that are subject to the Buy America Rule, OCTA acknowledges and agrees that OCTA shall be solely responsible for satisfying any and all requirements relative to the Buy America Rule concerning the materials thus provided (including, but not limited to, ensuring and certifying that said materials comply with the requirements of the Buy America Rule).

OCTA further acknowledges that OWNER, in complying with the Buy America Rule, is expressly relying upon the instructions and guidance (collectively, “Guidance”) issued by Caltrans and its representatives concerning the Buy America Rule requirements for utility
relocations within the State of California. Notwithstanding any provision herein to the contrary, OWNER shall not be deemed in breach of this Agreement for any violations of the Buy America Rule if OWNER’s actions are in compliance with the Guidance.

OCTA will indemnify, defend and hold harmless OWNER from and against any and all claims arising out of construction of the Utility Facilities, excepting those claims arising out of OWNER’s own active negligence or willful misconduct.

It is expressly understood by the Parties that Owner is not, in executing this Agreement, abandoning any pre-existing right, title or interest it may have in any land or facilities, all such rights, title and interest being expressly reserved.

The terms of this Agreement shall be binding and inure to the benefits of the Parties hereto.

THE ESTIMATED COSTS TO OCTA FOR ITS SHARE OF THE ABOVE DESCRIBED WORK IS $XX, XXX.

Signatures on Following Page
SIGNATURE PAGE
TO
UTILITY AGREEMENT NO.
UK064629

IN WITNESS WHEREOF, the above parties have executed this Agreement on the dates below.

Owner: MESA WATER DISTRICT

ORANGE COUNTY TRANSPORTATION AUTHORITY, a public entity

APPROVED

By: ________________________________
Title: ______________________________
Date: ______________________________

APPROVED

By: ________________________________
Title: Executive Director, Capital Programs
Date: ______________________________

APPROVED AS TO FORM:

By: ________________________________
Title: ______________________________
Date: ______________________________

By: ________________________________
Title: General Counsel
Date: ______________________________
REPORTS:

10. REPORT OF THE GENERAL MANAGER:
REPORTS:

11. DIRECTORS’ REPORTS AND COMMENTS:
MEMORANDUM

TO: Engineering and Operations Committee
FROM: Phil Lauri, P.E., Assistant General Manager
DATE: September 19, 2017
SUBJECT: West Chandler Avenue & South Croddy Way Wells and Pipeline Construction Management Services

RECOMMENDATION

This item is provided for information only.

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 August 10, 2017 meeting, the Board of Directors (Board) approved award of a contract to Tetra Tech, Inc. for $920,000 plus a 10% contingency for a not-to-exceed amount of $1,012,000 to provide professional engineering design and permitting services for the West Chandler Avenue Well, the South Croddy Way Well, and the Pipeline Project.

BACKGROUND

As part of the 2014 Master Plan, the Board of Directors adopted a policy for Mesa Water's local water supply reliability to be at least 115% of water demand. This requirement will provide Mesa Water with the additional assurance to meet its demands with local groundwater supplies during peak demand periods and when water production facilities are undergoing routine maintenance.

In 2017, Mesa Water purchased two properties to accommodate the development of two new wells. These properties are located on West Chandler Avenue and on South Croddy Way. Both properties are located in the City of Santa Ana. The furthest property is located approximately 0.6 miles outside of Mesa Water’s service area. The pipeline alignment will be located within the City of Santa Ana, connecting to the Mesa Water distribution system at the City of Costa Mesa border along MacArthur Boulevard.

DISCUSSION

Mesa Water is requesting proposals from experienced construction management firms to provide professional construction management services for the West Chandler Avenue and South Croddy Way Wells and Pipeline Project. The scope of work will require the Consultant to perform a constructability review of the design drawings, specifications and bid documents, and to provide construction management and inspection support services during construction for the Mesa Water West Chandler Avenue and South Croddy Way Wells and Pipeline Project. Qualified firms will be solicited to submit proposals. Selection recommendations will be brought to a future Engineering and Operations Committee meeting.
FINANCIAL IMPACT

The budgeted financial impact will be provided upon completion of the scope of work for Construction Management Services.

ATTACHMENTS

None.