AGENDA
MESA WATER DISTRICT
BOARD OF DIRECTORS
Tuesday, April 17, 2018
1965 Placentia Avenue, Costa Mesa, CA 92627
3:30 p.m. Special Board Meeting

ENGINEERING AND OPERATIONS COMMITTEE MEETING
Tuesday, April 17, 2018 at 3:30 p.m.

CALL TO ORDER

PLEDGE OF ALLEGIANCE

PUBLIC COMMENTS

**Items Not on the Agenda:** Members of the public are invited to address the Board on items which are not on the agenda. Each speaker is limited to three minutes. The Board will set aside 30 minutes for public comments.

**Items on the Agenda:** 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 three minutes. The Board will set aside 60 minutes for public comments.

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

ACTION ITEMS:


PRESENTATION AND DISCUSSION ITEMS:
Items recommended for approval at this meeting may be agendized for approval at a future Board meeting.

None

REPORTS:

7. Report of the General Manager
8. Directors’ Reports and Comments
INFORMATION ITEMS:

9. Chandler and Croddy Properties Leasing  
10. Environmental Health and Safety Support Services

**ADJOURNMENT**
<table>
<thead>
<tr>
<th>FILE NO.</th>
<th>PROJECT ADDRESS</th>
<th>PROJECT DESCRIPTION</th>
<th>PROJECT NOTES/STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FILE NO.</td>
<td>PROJECT ADDRESS</td>
<td>PROJECT DESCRIPTION</td>
<td>PROJECT NOTES/STATUS</td>
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<tr>
<td>C003-16-01</td>
<td>788 Center Street</td>
<td>2 Single Family Homes</td>
<td>Plans received and plan check fees paid on 6/28/16. Plans returned on 7/14/16. Fees paid and permit issued on 1/6/17. Pre-con held on 1/16/18. Service installed on 3/8/18. (4/9/18)</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. Site visit on 10/30/17, and again on 1/9/18; homes currently under construction. (4/9/18)</td>
</tr>
<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. Site visit on 10/30/17, and again on 1/9/18; no progress to report. (4/9/18)</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. Fees paid and permit issued on 9/21/17. Meters installed on 10/20/17. Site visit on 1/9/18; Awaiting call for backflow testing to complete project. (4/9/18)</td>
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<tr>
<td>FILE NO.</td>
<td>ADDRESS</td>
<td>DESCRIPTION</td>
<td>PROJECT NOTES/STATUS</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. Awaiting final fee payment. (4/9/18)</td>
</tr>
<tr>
<td>C0042-18-01</td>
<td>335 &amp; 337 16th Place</td>
<td>2 Single Family Homes</td>
<td>Plans received and plan check fees paid on 10/26/17. Awaiting final fee payment. (4/9/18)</td>
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<tr>
<td>C0044-18-01</td>
<td>276 E 19th Street</td>
<td>Meter Upgrade</td>
<td>Plans received and plan check fees paid on 1/21/18. Awaiting final fee payment. (4/9/18)</td>
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<tr>
<td>C0047-18-01</td>
<td>3505 Cadillac Ave</td>
<td>Commercial Building</td>
<td>Plans received and plan check fees paid on 1/22/18. Awaiting final fee payment. (4/9/18)</td>
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<tr>
<td>C0048-18-01</td>
<td>235 Baker</td>
<td>Commercial Building</td>
<td>Plans received and plan check fees paid on 2/15/18. Awaiting final fee payment. (4/9/18)</td>
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<td>C0049-18-01</td>
<td>428 E 17th</td>
<td>Restaurant</td>
<td>Plans received and plan check fees paid on 1/26/18. Comments returned on 3/12/18. Revised submittal received on 3/29/18 and currently under review. (4/9/18)</td>
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<tr>
<td>C0051-18-01</td>
<td>1650 Monrovia</td>
<td>Senior Living Complex</td>
<td>Plans received and plan check fees paid on 2/15/18. Comments returned on 3/12/18. (4/9/18)</td>
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<tr>
<td>C0052-18-01</td>
<td>302 Cabrillo</td>
<td>2 Single Family Homes</td>
<td>Plans received and plan check fees paid on 2/26/18. Awaiting final fee payment. (4/9/18)</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:** 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 Motorcarts, 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 December, 2017. The project re-start meeting was held on 9/7/17. On 10/30/17 met with City of Newport Beach and City of HB to discuss permit requirements and project access. Met w/Fletcher Jones, Skender Construction, City of HB, MBI to discuss access to the site and scheduling on November 21, 2017. Reviewing the 100% Design Plans & Specs (received on 11/28/17) along with the Pipeline Design Schedule, Construction Monitoring Treatment Plan (CMTP), and proposal for Natural Resources/Regulatory Services during construction activities. Bid solicitation is scheduled for late January 2018. Project sent out to bid on January 30, 2018. Pre-bid meeting held on 2/15/18. Construction bid solicitation was cancelled due to ongoing coordination issues for the final Coastal Development permit. Project will be deferred to FY20.

### Project Title: Well Automation and Rehabilitation

### File No.: MC 2101

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

**Status:** Construction activities began at Well 5 on October 3, 2016 with demolition and well rehabilitation beginning in the first week. Video of Well 5 showed scale on the
louvers, and potential failure of an unused sounding tube and a small area of the louvers potentially requiring swage patches. Repair completed on November 29, 2016. Well 5 rehabilitation resumed on December 3, 2016. Well 5 chemical facility pad has been constructed and is awaiting a weather forecast of 8 days with no predicted rain to apply the chemical-resistant coatings to the concrete. Well 5 pumping development began on January 4, 2017, and produced fine sand at pumping rates above 1100 gpm. Repairs were made to Well 5, and test pumping performed in February showed acceptable well production over 2500 gpm with manageable sand. Construction is substantially complete at the Well 5 site. A start up planning meeting was held on March 29, 2017. Well 5 is running as needed and producing good quality water. Well 7 rehabilitation is complete. The Well 7 pump was installed the week of August 28, 2017, and Well 7 is operational and good quality water. Construction of the Well 3 chemical facilities was begun in July 2017. The concrete for the Well 3 chemical facilities is cured and coated, and the chemical tanks and canopy are currently being installed. Well 3 rehabilitation is complete and test pumping achieved over 1600 gpm. Construction at Well 9 began in October with relocation of the backup generator and chemical facilities construction. Coating of the Well 9 chemical facilities was completed in December, and the chemical tanks and canopy are installed. Witness testing for the new pumps for Wells 3 and 9 was completed January 2018. Underground electrical work is in process at Wells 3 and 9. Variable Frequency Drive (VFD) deliveries are expected in May 2018. Work at Wells 3 and 9 is expected to be completed in June 2018.

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 3/15/2014. RFP for the parking design in consultants’ review (11/6/14). RFP sent out to consultants 11/25/14. Proposals due 12/19/14. Interview with three consultants held on 1/7/15. Recommendation brought to January E and O for consideration of approval and will be brought to the Board on 2/12/15 for approval. Project approved 2/12/15. Kick-off meeting held on 2/19/15. Design in progress. 30% design submittal submitted 3/23/15. Staff met with C.J. Segerstrom and discussed concept and details of the proposed parking layout. Segerstrom verbally approved the project. City of Costa Mesa approved the concept and currently consultant is evaluating the landscape requirements with the City of Costa Mesa. E and O Committee accepted the conceptual design and provided comments on 5/19/15. The condition approval from Segerstrom received on 6/29/15. Staff is working with the designer (CivilSource), Mesa Water’s attorney, and City of Costa Mesa on addressing Segerstrom’s comments. Staff is reviewing the Initial Study/Summary of Findings Report received on 8/3/15. Staff has addressed all Segerstrom’s requests included in their 6/29/15 letter and
prepared a response letter. Approved construction plans were received from the City of Costa Mesa on 12/29/15. The final bid package completed 3/15/16. Encroachment Permit Application submitted to the City on 3/6/16. Hold Harmless Agreement for the Installation of Off-Site Parking Improvements within Public Right-of-Way received on 5/4/16. Staff reviewed the Agreement and sent comments to the City of Costa Mesa on 5/27/16. City approved all revisions as proposed by Mesa Water and sent the agreement for signature on 6/24/16. The Engineering and Operations Committee reviewed the Agreement at July 19, 2016 meeting and recommended Board approval. Board approval obtained on August 11, 2016. Agreement sent to the City for execution and recording on 9/7/16. Recorded Agreement received from the City on 10/19/16.

Project Title: Pipeline Testing Program
File No.: MC 2141
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: 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 to HDR was approved by the Committee on July 20, 2017. ACP test results were received on July 31, 2017. Results have been analyzed, and were presented at the November Committee meeting. Average ACP total useful life is expected to be approximately 142 years. A process for determining when a pipeline has reached the end of its useful life and how much of the pipeline to replace was implemented. One 8” ACP line in Harbor Boulevard from Wilson to 19th Street was recommended for replacement. Cathodic protection station testing is being planned. Kickoff meeting for a close interval survey of the 12” Cast Iron Pipe in 19th Street was held on December 28, 2017, and the Consultant has completed the field work. The report is expected in April 2018. Operations staff has collected four ACP pipe samples during valve replacement projects, and one during an AC mainline repair. The samples have been sent to a laboratory for remaining wall thickness measurements, and the reports show that while they have lost structural thickness, the remaining useful life is still 35 - 53 years. The mainline break sample showed the smallest remaining useful life and shortest total useful life of any AC sample. Additional AC pipe samples from valve replacements are being collected. Echologics performed three miles of non-destructive wall thickness measurements during the week of February 12, 2018. A report of the results was received in March 2018, and shows that 23 of the 34 segments tested have less than 40% remaining wall thickness compared to the
assumed original thickness. Two of these segments coincided with ACP samples from the valve replacements, and the e-Pulse wall thickness measurement and the laboratory measured wall thickness were within 10%.

**Project Title:** MWRF Outreach Center  
**File No.:** MC 2147  
**Description:** Report on the feasibility of reconfiguring and potentially expanding the functional uses of the MWRF Operations and Administration Building to include a multi-purpose room and educational forum.

**Status:** Mesa Water is coordinating with IBI Group (designer) on the feasibility of implementing an education and outreach center at the MWRF. Kick-off meeting was 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. Revised MWRF Outreach Center Layouts and Conceptual Boardroom Layouts will be presented at a future Engineering and Operations Committee meeting.

**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. Mesa Water managers met with the Consultant to discuss construction phasing. Roof design is currently being reviewed by Mesa Water and the prime consultant. Bid set documents are complete.

**Project Title:** Mesa Water Valve Replacements Project  
**File No.:** M18-104  
**Description:** Replacement of water main and hydrant valves in various locations in the City of Costa Mesa.  
**Status:** The Request for Proposals (RFP) for the Mesa Water District Valve Replacements Project was completed and put out to bid in September 2017. The RFP consisted of the Base bid that included replacement of 17 valves and two Alternative bids consisting of replacement additional 3 and 5 valves, respectively. Three bids were received on October 4, 2017. Staff has recommended that the construction contract be awarded to Paulus Engineering, Inc., as the lowest responsive bidder. Board approved awarding contract to Paulus Engineering on November 2, 2017. The contract was finalized (11/7/17) and signed on 11/17/17. Working w/City of CM, MWH, and Paulus Eng. on the project schedule. Start of construction in mid-January, 2018. Notice to Proceed issued on January 16, 2018. Valve replacement has been completed at 7 locations. Paulus Engineering is currently replacing the valves at the intersection of Bristol and Baker St.

**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 started on October 11, 2017. Mesa Water inspected the root barrier installations and planting of the trees. Project completed on 3/31/18. (4/9/18)

<table>
<thead>
<tr>
<th>Project Title: Chandler and Croddy Wells and Pipeline Project</th>
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<tbody>
<tr>
<td>File No.: M18-113</td>
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<tr>
<td>Description: Design, documentation, and permitting for two new wells located on Chandler Avenue and Croddy Way in the City of Santa Ana and the distribution pipeline connecting the wells to Mesa Water’s supply system.</td>
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<tr>
<td>Status: Tetra Tech has been contracted to complete the design, documentation, and permitting for the Chandler and Croddy Wells and Pipeline Project. Initial data request sent to Tetra Tech on September 7, 2017. Met with Division of Drinking Water regarding well locations on September 20, 2017. Preliminary hydrological evaluation received on September 29, 2017. Board approved demolition of existing structures and dedicated well facility with option to evaluate long-term lease potential as market conditions dictate at both sites at November 2017 E&amp;O. Butier Engineering has been contracted to provide Construction Management Services. Preliminary Design Report for the distribution pipeline was reviewed and returned on March 6, 2018. Well site layouts are currently under review.</td>
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<table>
<thead>
<tr>
<th>Project Title: Santa Ana Pressure Reducing Station Refurbishment Project</th>
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</thead>
<tbody>
<tr>
<td>File No.: M17-002A</td>
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<tr>
<td>Description: The work will involve replacement of three (3) butterfly valves, one (1) existing pressure relief valve, the precast concrete discharge structure, reconfiguring four (4) Cla-Val control valves, general refurbishments to the vault interior, and site work.</td>
</tr>
<tr>
<td>Status: Mesa Water has contracted with Michael Baker International to perform the design of the project. The design was completed on in late January 2018 and the bid package was sent out to bid on February 8, 2018. Pre-bid meetings and site walk were held on 2/20/18 and 3/6/18, respectively. Three bids were received on March 13, 2018. Staff has recommended that the construction contract be awarded to J.R. Filanc, Inc., as the lowest bidder. E&amp;O Committee approved awarding contract to Paulus Engineering on March 20, 2018 and recommended Board approval. (4/9/18)</td>
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Water Quality Call Report
March 2018

Date: 3/2/2018
Source: Phone
Address: Not Provided
Description: Customer inquired about what type of water softener Mesa Water® recommends.

Outcome: Explained to customer that the water meets all state and federal drinking water standards and Mesa Water does not make recommendations on water softeners. Provided customer with the state’s website on residential home treatment devices.

Date: 3/8/2018
Source: Phone
Address: 903 W 17th St
Description: Customer wants to know if we test the water for TCE and PCE, information on spills near her home, map of aquifers & aquifer WQ data, etc.

Outcome: Explained to customer about Mesa Water’s extensive WQ testing program and assure that TCE and PCE are not detected in the drinking water. A list of local state certified laboratories was sent to customer per her request. Customer was also referred to the Santa Ana Regional Water Quality Control Board and Orange County Water District for her inquiries on land spills/contamination/aquifer information.

Date: 3/9/2018
Source: Phone/Visit
Address: 611 Knowell Pl
Description: Customer reported seeing charcoal coming from the faucet (hot side).

Outcome: Collected samples from outside hose bib and kitchen faucets and both samples were clear and no sediment was observed. Customer stated that sediment seem to be coming from hot water. Recommended that customer have the water heater inspected or maintained per manufacturer’s instructions.

Date: 3/14/2018
Source: Phone
Address: Not Provided
Description: Customer called to check if water softeners are allowed in Costa Mesa.

Outcome: Told customers that water softeners are allowed in Costa Mesa and is up to the customer’s preference to have one installed.
Date: 3/20/2018  
Source: Phone  
Address: 1985 Kornat Dr  
Description: Customer wanted to know the hardness levels for residential water treatment system.  
Outcome: Provided customer with range and average level of hardness in both mg/L and grains/gal units.

Date: 3/21/2018  
Source: Phone  
Address: 174 Broadway  
Description: Customer had questions regarding hardness levels, the Annual Water Quality Report, and home treatment devices.  
Outcome: Customer stated that “Home Depot was testing customer's water for hardness and offered to sell a water treatment device”. Explained to customer that the water meets state and federal drinking water standards and Mesa Water does not make recommendations on residential treatment devices. It is the homeowner's decision to put in residential treatment device and maintain it.

Date: 3/27/2018  
Source: Phone  
Address: 991 Azalea Dr  
Description: Customer wanted to know the hardness levels for residential water treatment system.  
Outcome: Provided customer with range and average level of hardness in both mg/L and grains/gal units.

Date: 3/28/2018  
Source: Phone  
Address: 2818 Loreto Ave.  
Description: Customer concerned about the water tasting bad even after home filter system. She wants to get the water tested.  
Outcome: Explained to customer about the water quality testing program and that the water meets all state and federal drinking water standards. Taste concerns after the water has gone through home treatment devices should be addressed with the treatment device manufacturer. Customer was sent a list of state certified drinking water laboratories per her request.
Date: 3/28/2018
Source: Phone
Address: 429 Magnolia St
Description: Customer inquired about pH in the water.
Outcome: Provided pH average and range to the customer. Also guided customer through the Annual Water Quality Report available online and showed her where to find the pH data.
### MESA WATER DISTRICT
**COMMITTEE POLICY & RESOLUTION REVIEW OR DEVELOPMENT**

**ENGINEERING & OPERATIONS COMMITTEE**

**Policy Assignments for 2018**

<table>
<thead>
<tr>
<th>Policy Name</th>
<th>Resolution</th>
<th>Date Adopted</th>
<th>Revision Schedule</th>
<th>Last Reviewed</th>
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<tbody>
<tr>
<td>Standard Specifications and Standard Drawings</td>
<td></td>
<td>1/12/17</td>
<td>Review and update as needed</td>
<td>1/12/17</td>
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<td>*Scheduled for the 4/17/18 meeting</td>
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<tr>
<td>Rules and Regulations for Water Services</td>
<td>Resolution No. 1470</td>
<td>2/09/16</td>
<td>Review and update as needed</td>
<td>2/9/16</td>
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<tr>
<td>Urban Water Management Plan</td>
<td>Resolution No. 1477</td>
<td>6/09/16</td>
<td>Review and update as required every 5 years</td>
<td>6/09/16</td>
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## Water Operations Status Report
July 1, 2017 - March 31, 2018

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<th>Plan Days</th>
<th>Act Days</th>
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<th>Act Qty</th>
<th>Plan Cost</th>
<th>Actual Cost</th>
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<td><strong>01 - HYDRANTS</strong></td>
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<td>WD-0101 - HYDRANT MAINTENANCE</td>
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<td><strong>02 - VALVES</strong></td>
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<td>WD-0201 - DISTRIBUTION VALVE MAINTENANCE</td>
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<td><strong>Program 02 TOTAL</strong></td>
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<td>WD-0301 - NEW METER INSTALLATION</td>
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<td>24</td>
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<td>INV/REP</td>
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<td>31</td>
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<td><strong>VACANT POSITIONS</strong></td>
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Dedicated to
Satisfying our Community’s
Water Needs

MEMORANDUM

TO: Engineering and Operations Committee
FROM: Phil Lauri, P.E., Assistant General Manager
DATE: April 17, 2018
SUBJECT: Standard Specifications and Standard Drawings

RECOMMENDATION

Recommend that the Board of Directors approve the update to Mesa Water’s Standard Specifications and Standard Drawings.

STRATEGIC PLAN

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

PRIOR BOARD ACTION/DISCUSSION

At its January 12, 2017 meeting, the Board of Directors (Board) approved updated sections to Mesa Water District’s Standard Specifications and Standard Drawings.

At its August 14, 2014 meeting, the Board approved the updated Mesa Water District’s Standard Specifications and Standard Drawings.

BACKGROUND

The recent drought throughout California put a high emphasis on water conservation and the process of accountability by retail agencies for lost and stolen water. The State Water Resources Control Board (SWRCB) adopted the American Water Works Association (AWWA) M36 Water Audits and Loss Control Programs Manual as the standard in which all agencies are responsible for water loss reporting and compliance. While the M36 Manual is fairly comprehensive in its auditing process, areas of evaluation continue to be less specific and open to interpretation. As such, the industry trend and guidance provided in the area of water theft monitoring encouraged the adoption of a metered fireline standard to maximize the water loss audit score and M36 compliance.

DISCUSSION

In August 2014, Mesa Water adopted a fully metered fireline Standard Drawing 22A in an effort to comply with the M36 Manual. Recent discussions with SWRCB representatives conducting the water loss audits have indicated that firelines with a tattle-tale meter would be sufficient to qualify as a metered connection within the M36 Manual. Reverting back to the original tattle-tale/backflow approach reduces cost for Mesa Water rate payers, continues to provide a mechanism to monitor for stolen water, and complies with the M36 Manual. Thus, it is recommended to remove Drawing 22A and restore the previously approved backflow standard drawings.

This project provides an update to Mesa Water’s Standard Specifications and Standard Drawings. Mesa Water’s last update was in January 2017.
Mesa Water’s Standard Specifications and Standard Drawings is divided into four main sections as follows:

I. Procedural Guide and Design Requirements
II. General Conditions for Construction of Water Facilities
III. Technical Specifications for Construction of Water Facilities
IV. Standard Drawings

No changes are proposed to Sections I, II, and III. The following are proposed changes to Section IV:

Standard Drawings (Refer to Attachment A for suggested changes)

- Drawing 16 – With the proposed deletion of Drawing 22A, the 2014 Drawing 16 is applicable again. Staff proposes to reinstitute Drawing 16.
- Drawing 16N – With the proposed deletion of Drawing 22A, the 2014 Drawing 16N is applicable again. Staff proposes to reinstitute Drawing 16N.
- Drawing 17 – With the proposed deletion of Drawing 22A, the 2014 Drawing 17 is applicable again. Staff proposes to reinstitute Drawing 17.
- Drawing 17N – With the proposed deletion of Drawing 22A, the 2014 Drawing 17N is applicable again. Staff proposes to reinstitute Drawing 17N.
- Drawing 21 – With the proposed deletion of Drawing 22A, the 2014 Drawing 21 is applicable again. Staff proposes to reinstitute Drawing 21.
- Drawing 21N – With the proposed deletion of Drawing 22A, the 2014 Drawing 21N is applicable again. Staff proposes to reinstitute Drawing 21N.
- Drawing 22A – Through meetings with the City of Costa Mesa and the Water Loss Audit Consultant, it has been determined that a tattle-tale meter qualifies as a metered connection for firelines. The large meter assembly is not required to achieve a high score in the Water Loss Audit and staff proposes to delete the standard.

FINANCIAL IMPACT

None.

ATTACHMENTS

Attachment A: Proposed Changes to Standard Drawings 16, 16N, 17, 17N, 21, 21N
**GENERAL NOTES:**

1. PRESSURE TEST AND CHLORINATE TO LIMITS SHOWN ABOVE
2. CONTACT MESA WATER FOR LATEST LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES.
3. BACKFLOW ASSEMBLY SHALL BE A MINIMUM OF 36" FROM ANY STRUCTURE, CURB OR SIDEWALK.
4. BACKFLOW ASSEMBLY MUST BE EASILY ACCESSIBLE TO FACILITATE TESTING AND SERVICING.

"FOR DOMESTIC USE ONLY"

**HEALTH HAZARD (CONTAMINANT) BACKFLOW PREVENTION DEVICE**

---

**MESA WATER DISTRICT**

**REDUCED PRESSURE PRINCIPLE ASSEMBLY (3" OR LARGER)**
APPROVED "N-STYLE" REDUCED PRESSURE PRINCIPLE BACKFLOW DEVICE

RIGHT OF WAY

LIMIT OF PRESSURE TEST AND CHLORINATION
MIN. (TYP.)

12"

6"

12" MIN.

20 MAX

2" MIN.

5' MIN. SETBACK

D.I. SPOOL (FLG X FLG)

D.I. VALVE SETTER (FROM DEVICE MANUFACTURER), OR 2 D.I. 90° BENDS (FLG X PO) WITH THRUST BLOCK PER STD DWG NO. 12

CUSTOMER SPECIFIED AND MAINTAINED PIPING

AWWA C-900, DR-14 PVC PIPE

CONCRETE PAD REINFORCED W/ W.W.F. (1.6 X 1.6)

LIMIT OF MESA WATER INSPECTION

FRONT ELEVATION VIEW

GENERAL NOTES:
1. PRESSURE TEST AND CHLORINATE TO LIMITS SHOWN ABOVE.
2. CONTACT MESA WATER FOR LATEST LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES.
3. BACKFLOW ASSEMBLY SHALL BE A MINIMUM OF 36” FROM ANY STRUCTURE, CURB OR SIDEWALK.
4. BACKFLOW ASSEMBLY MUST BE EASILY ACCESSIBLE TO FACILITATE TESTING AND SERVICING.
PLN (PAD ONLY)

CONCRETE PAD
(REINFORCED WITH W.W.F.
1.6 X 1.6)

APPROVED BACKFLOW
PREVENTION ASSEMBLY

OS&Y—RESILIENT—SEATED
VALVE W/HAND WHEEL
(TYP 2)

LIMIT OF PRESSURE
TEST AND CHLORINATION
FLANGED D.I. 90°
BEND (TYP 2)

LIMIT OF MESA WATER
INSPECTION
CUSTOMER SPECIFIED
AND MAINTAINED PIPING

ADJUSTABLE
PIPE SUPPORT

CONCRETE PAD ON
3" DEVICE OR LARGER

6" D.I. 90° BEND
(P0 X FLG) OR
(P0 X MJ RESTRAINED)

GENERAL NOTES:
1. PRESSURE TEST AND CHLORINATE TO LIMITS SHOWN ABOVE
2. CONTACT MESA WATER FOR LATEST LIST OF APPROVED BACKFLOW
PREVENTION ASSEMBLIES.
3. BY—PASS DETECTOR METER IN CUBIC FEET
4. BACKFLOW ASSEMBLY SHALL BE A MINIMUM OF 36” FROM ANY
STRUCTURE, CURB OR SIDEWALK.
5. BACKFLOW ASSEMBLY MUST BE EASILY ACCESSIBLE TO FACILITATE
TESTING AND SERVICING.

"FOR FIRE USE ONLY"

NON—HEALTH HAZARD (POLLUTANT) BACKFLOW PREVENTION DEVICE

MESA WATER
DISTRICT

DOUBLE CHECK
DETECTOR ASSEMBLY

DRAWN BY:
RJW
DATE:
APR 2018
GENERAL NOTES:

1. PRESSURE TEST AND CHLORINATE TO LIMITS SHOWN ABOVE.
2. CONTACT MESA WATER FOR LATEST LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES.
3. BACKFLOW ASSEMBLY SHALL BE A MINIMUM OF 36" FROM ANY STRUCTURE, CURB OR SIDEWALK.
4. BACKFLOW ASSEMBLY MUST BE EASILY ACCESSIBLE TO FACILITATE TESTING AND SERVICING.
GENERAL NOTES:
1. PRESSURE TEST AND CHLORINATE TO LIMITS SHOWN ABOVE
2. CONTACT MESA WATER FOR LATEST LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES.
3. BACKFLOW ASSEMBLY SHALL BE A MINIMUM OF 36" FROM ANY STRUCTURE, CURB OR SIDEWALK.
4. BACKFLOW ASSEMBLY MUST BE EASILY ACCESSIBLE TO FACILITATE TESTING AND SERVICING.

"FOR DOMESTIC USE ONLY"

HEALTH HAZARD (CONTAMINANT) BACKFLOW PREVENTION DEVICE
GENERAL NOTES:
1. PRESSURE TEST AND CHLORINATE TO LIMITS SHOWN ABOVE.
2. CONTACT MESA WATER FOR LATEST LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES.
3. BACKFLOW ASSEMBLY SHALL BE A MINIMUM OF 36" FROM ANY STRUCTURE, CURB OR SIDEWALK.
4. BACKFLOW ASSEMBLY MUST BE EASILY ACCESSIBLE TO FACILITATE TESTING AND SERVICING.
REPORTS:

7. REPORT OF THE GENERAL MANAGER:
REPORTS:

8. DIRECTORS' REPORTS AND COMMENTS:
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 March 26, 2018 workshop, the Board of Directors (Board) directed staff to evaluate the potential of short-term leasing of the Chandler Avenue and Croddy Way properties.

BACKGROUND

Mesa Water recently purchased properties at 4011 W. Chandler Avenue and 3120 S. Croddy Way in the City of Santa Ana. These properties were purchased with the intent to design and construct new well production facilities and pipeline to enhance Mesa Water’s supply reliability.

Both properties were purchased with lease-back conditions allowing the original owners time to relocate their businesses. The tenant at 4011 W. Chandler Avenue has provided notice that they will be vacating the property on or before July 31, 2018. The tenant at 3120 S. Croddy Way has provided notice that they will be vacating the property on or before June 30, 2018.

DISCUSSION

The design and permitting for the new well facilities and associated pipeline is in process and is scheduled to be complete in mid-2019. Construction is scheduled to start in January 2020. Mesa Water has evaluated the potential to place short-term tenants in both facilities through the end of 2019 and believe this to be viable based on guidance received from Mesa Water’s property consultants. Short-term tenancy of both properties will allow Mesa Water to generate revenue from these properties until the start of construction of the new well facilities to offset Mesa Water operating expenses.

Mesa Water will be working with its tenant leasing consultant on a commission basis to find suitable tenants for the aforementioned duration.

FINANCIAL IMPACT

None.
ATTACHMENTS

None.
MEMORANDUM

TO: Engineering and Operations Committee
FROM: Tracy E. Manning, Water Operations Manager
DATE: April 17, 2018
SUBJECT: Environmental Health and Safety Support Services

RECOMMENDATION

This item is provided for information only.

STRATEGIC PLAN

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

PRIOR BOARD ACTION/DISCUSSION

None.

BACKGROUND

Since 2013, the environmental health and safety (EHS) function has been filled on a part-time basis by an on-site representative of a professional EHS company. Utilizing a professional EHS company provides Mesa Water staff with a team of professionals with expertise in all areas of environmental health and safety, as well as emergency preparedness. Mesa Water maintains a robust safety program and has developed and implemented comprehensive training on emergency operations. The contract with the current consultant expires June 30, 2018.

DISCUSSION

Mesa Water is requesting proposals from qualified full-service professional Environmental Health and Safety firms to provide part-time on-site support and as-needed services.

The scope of work provided under the EHS Support Services Request for Proposals is summarized as follows:

1. Training: Training has been developed and provided for 24 core EHS programs and emergency operations. New-hire and annual refresher trainings are provided, as required. Weekly tailgate meetings are provided to field staff.

2. Evaluation: Monthly on-site inspections are conducted to ensure staff are following training and guidelines and are using proper techniques and personal protective equipment. Quarterly site inspections are conducted to identify and mitigate potential safety issues and ensure compliance with site-specific environmental regulations. Investigations are performed for accidents and close-calls and reviewed with the Safety Ambassador Committee.
3. **Regulatory Review:** New and changing safety and environmental regulations are identified early to ensure Mesa Water maintains compliance. Safety procedures and policies are created or updated when needed.

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

A request for proposals was issued on March 1, 2018. Proposals are scheduled for receipt on April 2, 2018. Results of the selection process and recommendation will be brought to a future Engineering and Operations Committee meeting.

**FINANCIAL IMPACT**

Funds will be budgeted in Fiscal Year 2019 for Environmental Health and Safety Support Services.

**ATTACHMENTS**

None.