



*Dedicated to
Satisfying our Community's
Water Needs*

**AGENDA
MESA WATER DISTRICT
BOARD OF DIRECTORS
Tuesday, December 17, 2019
1965 Placentia Avenue, Costa Mesa, CA 92627
3:30 p.m. Special Board Meeting**

**ENGINEERING AND OPERATIONS COMMITTEE MEETING
Tuesday, December 17, 2019 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
5. Water Operations Status Report

ACTION ITEMS:

Items recommended for approval at this meeting may be agendized for approval at a future Board meeting.

6. OC-44 Pipeline Rehabilitation Project
7. America's Water Infrastructure Act Compliance Support Services

PRESENTATION AND DISCUSSION ITEMS:

8. Polyfluoroalkyl Substances



REPORTS:

- 9. Report of the General Manager
- 10. Directors' Reports and Comments

INFORMATION ITEMS:

None

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

DEVELOPER PROJECT STATUS REPORT

PROJECT STATUS - DEVELOPER PROJECTS			
FILE NO.	PROJECT ADDRESS	PROJECT DESCRIPTION	PROJECT NOTES/STATUS
MC 2235	671 W 17th Street	177 Condos	Plans received and plan check fees paid on 1/21/16. Hydraulic model initiated 2/24/16. 2nd plan check submitted on 3/24/16 and picked up 4/17/16. Mylar drawings and fee payment received on 7/5/16. Permit issued on 7/11/16. Demolition of existing services on 8/16/16. Mainline installation on 12/6/16. Service laterals installed on 1/9/17. Pressure test on 2/6/17. Bac-t test on 2/15/17. Bedding and service line placement on 4/3/17. Meter box placement on 5/8/17. Follow-up site visit on 5/17/17. Service abandonment on 8/30/17. Valve cans raised on 9/22/17. Meter box placement on 10/19/17. Gravel base on 12/5/17. Meter box placement on 2/14/18. Meters installed and locked off on 6/1/18, 7/17/18, on 8/1/18, and again on 9/7/18. Backflow tested on 9/11/18. Meters installed and locked off on 9/18/18, 9/25/18, and again on 10/5/18. Backflows tested on 10/9/18, 2/27/19, 11/18/19 and again on 11/21/19. Meters installed and locked off on 11/27/18, 12/5/18, 12/18/18, 1/10/19, 2/8/19, 2/21/19, 3/4/19, 3/12/19, 4/26/19, 7/15, 7/16/19, and again on 10/15/19. Phase 2 construction still on-going.
C0056-18-01	2033 Republic Avenue	Single Family Home Service & Meter Upgrade	Plans received and plan check fees paid on 6/19/18. Comments returned for 2nd plan check review on 6/28/18. 2nd plan check submitted 7/26/18, and redlines picked up on 8/20/18. 3rd plan check submitted on 12/13/18, and redlines picked up on 1/15/19. Fourth and final plan check submitted on 1/24/19, and redlines picked up on 1/29/19. Final approval by District Engineer on 4/18/19. Final permit fees paid on 4/18/19. Permit issued on 4/30/19. Revised drawings issued 7/1/19 and returned 7/1/19. Precon held on 9/4/19. Hot tapping completed on 10/28/19.
C0058-19-01	585 & 595 Anton Boulevard (P2)	Apartment Complex	Plans received and plan check fees paid on 2/5/19. Customer picked up redlines on 2/8/19. 2nd plan check submitted 3/11/19, and redlines picked up on 3/25/19. Hydraulic Analysis received on 4/5/19. Received Water Service Agreement on 4/30; Final permit fees paid on 5/8/19. Permit issued on 5/8/19. Precon meeting held on 5/16/19. Waiting for revised Easements and Quit Claims regarding legal entities. Services installed 6/28/19. Pressure tests done on 7/2/19, Bac-T tests done on 7/8/19. Fireline charged on 9/12/19. Mesa Water staff removed two fire hydrants from jobsite on 9/18/19. Pipeline installed on 11/19/19.

DEVELOPER PROJECT STATUS REPORT

PROJECT STATUS - DEVELOPER PROJECTS			
FILE NO.	PROJECT ADDRESS	PROJECT DESCRIPTION	PROJECT NOTES/STATUS
C0062-19-01	1591 & 1593 Riverside	Two Single Family Homes	Plans received and plan check fees paid on 12/14/18. Final fees paid on 2/6/19. Permit issued on 2/13/19. Precon held on 2/28/19. Services installed on 3/4/19. Waiting for meter installation and flow thru testing to be scheduled.
C0063-19-01	1375 Sunflower	Commercial Building	Plans received and plan check fees paid on 12/14/18. Customer picked up redlines on 12/31/18. 2nd plan check submitted on 1/11/19, and redlines picked up on 1/29/19. 3rd plan check submitted on 1/31/19. Final permit fees paid on 6/20/19 and permit issued on 6/25/19. Developer still on hold for construction as of 11/29/19.
C0071-19-01	2277 Harbor Boulevard	Commercial Building	Plans received and plan check fees paid on 1/7/19. Customer picked up redlines on 1/25/19. 2nd plan check submitted on 1/28/19, and redlines picked up on 1/31/19. Final permit fees paid on 5/28/19. Permit issued on 5/30/19. Precon held on 11/13/19 and two 4-inch services abandoned on 11/15/19.
C0072-19-01	168 & 170 Cabrillo	Two Single Family Homes	Plans received and plan check fees paid on 1/14/19. Customer picked up redlines on 1/24/19. Customer submitted 2nd plan check on 5/9/19. 2nd plan check submitted on 5/13/19 and redlines picked up on 5/20/19. Final permit fees paid on 9/26/19. Permit issued on 10/3/19. Developer still on hold for construction as of 11/29/19.
C0073-19-02	55 Fair Drive	Vanguard University East Annex Science Modular	Plans received and meter replacement fees paid on 3/14/19. 1st plan check completed on 5/9/19 and redlines mailed on 5/14/19. 2nd plan check submitted 7/3/19. Precon held on 7/3/19. Services installed on 8/8/19, Backflow prevention devices tested on 8/20/19.
C0074-19-01	2538 Oxford Lane	Single Family Home	Plans received and plan check fees paid on 11/14/18. Customer picked up redlines on 1/31/19. 2nd plan check submitted on 2/1/19, and redlines picked up on 2/5/19. Waiting for 3rd plan check submittal. Received fire department approval on 5/31/19.
C0077-19-01	1922 Pomona	Commercial Building	Plans received and plan check fees paid on 1/28/19. Customer picked up redlines on 2/1/19. 2nd plan check submitted on 2/5/19, and redlines picked up again on 2/12/19. Final fees paid on 2/27/19. Permit issued on 3/11/19. Precon meeting held on 3/19/19. Meter installed 3/28/19.

DEVELOPER PROJECT STATUS REPORT

PROJECT STATUS - DEVELOPER PROJECTS			
FILE NO.	PROJECT ADDRESS	PROJECT DESCRIPTION	PROJECT NOTES/STATUS
C0079-19-01	1957 Newport Boulevard	Meter Upgrade	Plans received and plan check fees paid on 2/5/19. Customer picked up redlines on 2/27/19. Meeting on 3/5/19 with customer to discuss easement. 2nd plan check was submitted on 4/23/19 and redlines to be picked up on 5/6/19. 3rd plan check submitted on 5/16/19. Permit approved on 8/23/19. Precon held on 9/3/19. Shutdown to tie in tee & valve service line placement and pipeline installation completed on 9/11/19. Services installed on 10/2/19 and 10/2/19. Pressure test performed on 10/9/19. Hot tapping completed on 10/14/19. Shutdown to tie-in valves on 10/24/19.
C0082-19-01	3323 Hyland Avenue	Pipeline relocation	Plans received and plan check fees paid on 2/20/19. Customer picked up redlines on 3/4/19. 2nd plan check submitted 3/26/19, and redlines picked up on 4/2/19. 2nd plan check submitted 6/11/19, and redlines picked up on 6/18/19. Final permit fees paid on 7/23/19 and permit issued on 8/6/19. Pre-con held on 12/5/19.
C0084-19-01	410 E 17th Street	Commercial Business	Plans received and plan check fees paid on 2/20/19. Customer picked up redlines on 3/4/19. 2nd plan check submitted on 9/4/19 and redlines picked up on 9/10/19. 3rd Plan check submitted on 9/26/19. Precon held on 11/20/19.
C0086-19-01	285 22nd Street	Residential Care Facility	Plans received and plan check fees paid on 3/11/19. Customer picked up redlines on 3/19/19. 2nd plan check submitted on 5/9/19. Customer to pick up 2nd plan check redlines on 5/6/19. 3rd plan check submitted on 5/14/19 and picked up on 5/30/19. Precon held on 8/30/19. Service connection on 9/3/19. Abandonments completed on 9/6/19. Meter installed on 9/12/19.
C0089-19-01	3160 Airport Way	John Wayne Airport Taxilot	Plans received and plan check fees paid on 4/8/19. 1st Plan Check submitted on 4/9/19. 2nd plan check submitted 04/19/19 and redlines picked up on 4/25/19. Final permit fees paid on 6/18/19. Developer still on hold for construction as of 11/29/19.
C0090-19-01	2831 Bristol Street	Parking Lot	Plans received and plan check fees paid on 4/9/19. 1st Plan Check submitted on 4/11/19. Customer picked up redlines on 4/16/19. 2nd plan check submitted 04/19/19 and redlines picked up on 4/25/19. Final permit fees paid on 5/2/19 and permit issued on 6/6/19. Precon held on 9/5/19. Backflow device tested on 4/25/19. Two abandonments occurred on 11/22/19.

DEVELOPER PROJECT STATUS REPORT

PROJECT STATUS - DEVELOPER PROJECTS			
FILE NO.	PROJECT ADDRESS	PROJECT DESCRIPTION	PROJECT NOTES/STATUS
C0091-19-01	368 Magnolia	Single Family Home	Plans received and meter replacement fees paid on 4/15/19. 1st plan check submitted on 4/18/19 and redlines picked up on 4/23/19. Final permit fees paid on 5/20/19 and permit issued on 5/20/19. Precon held on 8/8/19. Service laterals installed and approved on 8/27/19.
C0092-19-01	Harbor and Hamilton	29 New Townhomes	Plans received and plan check fees paid on 4/23/19. 1st plan check submitted 4/23/19 and redlines to be picked up on 5/6/19. 2nd plan check submitted on 6/11/19 and redlines picked up on 6/18/19. 3rd Plan Check submitted on 11/25/19 and redlines submitted on 11/26/19.
C0093-19-01	163 Broadway	Single Family Home	Plans received and meter replacement fees paid on 4/24/19. 1st Plan check submitted on 4/24/19 and redlines picked up on 5/6/19. 2nd plan check submitted on 5/13/19 and redlines picked up on 5/24/19. Final Permit fees paid on 7/3/19 and permit issued on 7/3/19. Precon with General Contractor held on 7/9/19. 2nd Precon with Water Contractor to be held on 12/5.
C0095-19-01	272 Esther Street	Single Family Home	Plans received and plan check fees paid on 4/30/19. 1st Plan check submitted 4/30/19 and redlines to be picked up on 5/7/19. 2nd Plan check submitted 6/4/19 and redlines to be picked up on 6/11/19. Final permit fees paid on 8/27/19. Precon held on 10/30. Meter installed 11/18/19.
C0096-19-01	333 E. 17th Street, Suite 22	Commercial	Plans received and plan check fees paid on 4/30/19. 1st Plan check submitted 4/23/19 and redlines picked up on 5/9/19. Permit issued 9/6/19. Precon held on 9/12/19. Backflow tested on 11/25/19.
C0097-19-01	3505 Cadillac, Suite L-3	Commercial	Plans received and plan check fees paid on 4/30/19. 1st Plan check submitted 4/30/19 and redlines to be picked up on 5/9/19. 2nd plan check submitted on 6/4/19 and redlines picked up on 6/11/19. Final permit fees paid on 8/6/19 and permit picked up on 8/6/19. Precon conducted on 8/13/19. Hot-tapping, service line placement and thrust block placement completed on 8/29/19. Chlorination flush, pressure test and Bac-T sample on 9/3/19. Bac-T sample and backfill completed on 9/4/19. Backflow placement and test, and fire line charged on 9/11/19.

DEVELOPER PROJECT STATUS REPORT

PROJECT STATUS - DEVELOPER PROJECTS			
FILE NO.	PROJECT ADDRESS	PROJECT DESCRIPTION	PROJECT NOTES/STATUS
C0099-19-01	3505 Cadillac, Suite E	Commercial	Plans received and plan check fees paid on 6/3/19. 1st Plan check submitted 6/3/19 and redlines picked up on 6/6/19. 2nd Plan check submitted on 6/10/19 and redlines picked up on 6/13/19. Final permit fees and permit picked up on 8/15/19. Precon conducted on 8/22/19, Bac-T samples taken on 8/27/19. Hot-tapping, service line placement and thrust block placement completed on 8/23/19. Backflow test and mainline turned on 9/5/19. Backflow preventers certified on 9/11/19. Fireline charged on 9/30/19.
C0101-19-01	1275 Bristol Avenue	Car Dealership	Plans received and plan check fees paid on 6/11/19. 1st Plan check submitted 6/11/19 and redlines picked up on 6/18/19. 2nd Plan check submitted on 8/13/19 and picked up on 8/20/19. 3rd Plan check submitted 9/3/19 and returned on 9/10/19. Permit approved and final fees paid on 10/24/19. Existing services turned off.
C0102-19-01	3560 Cadillac Avenue	Commercial	Plans received and plan check fees paid on 6/18/19. 1st Plan check submitted 6/18/19 and redlines to be picked up on 7/2/19. 2nd Plan check submitted on 7/9/19 and picked up on 7/16/19. Final permit fees paid and permit issued on 8/6/19.
C0103-19-01	150 Paularino	Commercial	Plans received and plan check fees paid on 6/18/19. 1st Plan check submitted 6/18/19 and redlines to be picked up on 7/3/19. 2nd Plan check submitted on 7/19/19 and picked up on 7/23/19. 3rd Plan check submitted on 8/20/19 and picked up on 8/28/19. 4th Plan check submitted on 9/3/19 and returned on 9/3/19. Permit fees paid on 9/11/19 and permit issued on 9/26/19. Precon held on 9/30/19. Services installed on 10/2/19. Backflow preventer tested on 10/28/19.
C0104-19-01	413 E. 20th Street	Single Family Home	Plans received and plan check fees paid on 7/1/19. 1st Plan check submitted 7/1/19 and redlines picked up on 7/1/19.
C0105-20-01	3333 Avenue of the Arts	Commercial	Plans received and plan check fees paid on 7/24/19. 1st Plan check submitted 7/26/19 and redlines to be picked up on 7/26/19. 2nd Plan check submitted on 8/30/19 and resubmitted on 9/11/19. 3rd plan check resubmitted on 10/8/19. Permit approved and final fees paid on 10/24/19. Precon held on 11/24/19. Temporary RW pipeline inspected and approved on 11/27/19 and report sent to DDW on 12/4/19.

DEVELOPER PROJECT STATUS REPORT

PROJECT STATUS - DEVELOPER PROJECTS			
FILE NO.	PROJECT ADDRESS	PROJECT DESCRIPTION	PROJECT NOTES/STATUS
C0106-20-01	224 Flower	Single Family Home	Plans received and plan check fees paid on 7/24/19. 1st Plan check submitted 7/26/19 and redlines picked up on 7/26/19. 2nd plan check submitted on 9/10/19 and picked up on 9/24/19. 3rd plan check resubmitted on 10/3/19. Permit approved and final fees paid on 10/24/19.
C0107-20-01	1835 Newport Blvd, Suite F	Commercial	Plans received and plan check fees paid on 7/15/19. 1st Plan check submitted 7/26/19 and redlines to be picked up on 7/26/19. 2nd plan check submitted on 7/30/19 and picked up on 8/6/19. Permit approved and final fees paid on 8/15/19. Precon held on 9/5/19 and again on 9/20/19. New 6-inch valve installed to assist with shutdowns on 9/30/19. Service line placement for 10/3/19. Pressure test completed on 10/4/19. Backflow preventers tested on 11/5/19.
C0110-20-01	861 Governor Street	Single Family Home	Plans received and plan check fees paid on 7/15/19. 1st Plan check submitted 7/26/19 and redlines picked up on 7/26/19. Developer still on hold for construction as of 11/29/19.
C0112-20-01	1626 Ohms Way	Commercial	Plans received and plan check fees paid on 7/16/19. 1st Plan check submitted 7/29/19 and redlines picked up on 7/29/19. 2nd Plan check submitted 8/7/19 and picked up on 8/20/19. 3rd Plan check submitted on 8/22/19 and picked up on 8/29/19. Pre-con occurred on 10/30/19. Backflow device tested on 11/22/19.
C0113-20-01	1588 South Coast Drive (Vans Headquarters)	Commercial	Plans received and plan check fees paid on 8/13/19. 1st Plan check submitted 8/13/19 and redlines picked up on 8/20/19. 2nd plan check submitted 9/12/19 and picked up on 10/1/19. 3rd plan check submitted 10/21/19 and redlines picked up on 11/5/19.
C0115-20-01	2179 Miner Street	Single Family Home	Plans received and plan check fees paid on 8/20/19. 1st Plan check submitted 8/27/19 and redlines picked up on 8/27/19.
C0116-20-01	418 E. 18th Street	Single Family Home	Plans received and plan check fees paid on 10/7/19. 1st Plan check submitted 10/7/19 and redlines picked up on 10/16/19. Precon held on 11/27/19 and meter installed on 12/2/19.
C0117-20-01	192 Flower Street	Single Family Home	Plans received and plan check fees paid on 10/7/19. 1st Plan check submitted 10/7/19 and redlines picked up on 10/16/19. 2nd Plan check submitted on 10/29/19. Precon held on 11/26/19 and meter installed on 12/2/19.
C0118-20-01	487 Abbie Way	Single Family Home	Plans received and plan check fees paid on 10/14/19. 1st Plan check submitted 10/21/19 and redlines picked up on 10/21/19. Permit approved and final fees paid on 10/22/19.

DEVELOPER PROJECT STATUS REPORT

PROJECT STATUS - DEVELOPER PROJECTS			
FILE NO.	PROJECT ADDRESS	PROJECT DESCRIPTION	PROJECT NOTES/STATUS
C0119-20-01	1555 Adams Avenue, Suite 102	Commercial	Plans received and plan check fees paid on 10/14/19. 1st Plan check submitted 10/21/19 and redlines picked up on 10/21/19. Permit approved and final fees paid on 10/22/19. Precon held on 11/20/19 and meter and RPPD installed on 12/3/19.
C0120-20-01	934 Congress Street	Single Family Home	Plans received and plan check fees paid on 10/28/19. 1st Plan check submitted 10/28/19 and redlines picked up on 11/5/19.
C0121-20-01	372 Bucknell Road	Single Family Home	Plans received and plan check fees paid on 10/28/19. 1st Plan check submitted 10/28/19 and redlines picked up on 10/29/19.
C0122-20-01	925 W 18th Street	Commercial	Plans received and plan check fees paid on 10/28/19. 1st Plan check submitted 10/28/19 and redlines picked up on 10/29/19. 2nd plan check submitted 12/4/19.
C0123-20-01	449 W Bay Street	Commercial	Plans received and plan check fees paid on 11/18/19. 1st Plan check submitted 11/18/19 and redlines picked up on 11/22/19.
C0124-20-01	2209 Fairview Road	Commercial	Plans received and plan check fees paid on 11/18/19. 1st Plan check submitted 11/18/19 and redlines picked up on 11/22/19.
C0125-20-01	3080 Airway Avenue	Commercial	Plans received and plan check fees paid on 11/18/19. 1st Plan check submitted 11/18/19 and redlines picked up on 11/22/19.
C0126-20-01	1646 Santa Ana Avenue	Single Family Home	Plans received and plan check fees paid on 11/18/19. 1st Plan check submitted 11/18/19 and redlines picked up on 11/26/19.
C0128-20-01	901 B South Coast Drive	Commercial	Plans received and plan check fees paid on 11/25/19. 1st Plan check submitted 11/25/19 and redlines picked up on 12/3/19.
C0129-20-01	3590 Cadillac Avenue, Suite B	Commercial	Plans received and plan check fees paid on 11/25/19. 1st Plan check submitted 11/25/19 and redlines picked up on 12/4/19.
C0102-20-01	3560 Cadillac Avenue	Commercial	Plans received and plan check fees paid on 11/25/19. 1st Plan check submitted 11/25/19 and redlines picked up on 12/4/19.
C0102-20-02	3550 Cadillac Avenue	Commercial	Plans received and plan check fees paid on 11/25/19. 1st Plan check submitted 11/25/19 and redlines picked up on 12/4/19.
C0130-20-01	2940 College Avenue	Commercial	Plans received and plan check fees paid on 11/25/19. 1st Plan check submitted 11/25/19 and redlines picked up on 12/3/19.

DEVELOPER PROJECT STATUS REPORT

PROJECT STATUS - DEVELOPER PROJECTS			
FILE NO.	PROJECT ADDRESS	PROJECT DESCRIPTION	PROJECT NOTES/STATUS
C0131-20-01	1975 Wallace Avenue	6 Unit Apartments	Plans received and plan check fees paid on 11/18/19. 1st Plan check submitted 11/18/19 and redlines picked up on 11/22/19.

MESA WATER AND OTHER AGENCY PROJECTS STATUS REPORT

December 2019

Project Title: OC-44 Replacement and Rehabilitation Evaluation and Cathodic Protection Study

File No.: M 2034

Description: Evaluate potential repair and replacement options.

Status: Request for Bids sent out to contractors on February 6, 2019. Six bids received on 3/6/19. E&O Committee recommended award of the contract to lowest bidder (E.J. Meyer Company) on 3/19/19. Kick-off meeting held on 4/25/2019. Staff is working on reviewing submittals. Met with SARWQB on 5/24/19 and discussed water discharge permit requirements w/Susan Beeson. On 5/30/19 met with OCSD and went over requirements for the Special Purpose Discharge Permit (SPDP). Held Project Progress meeting on 6/6/19 and coordination meeting with Metropolitan Water District on 6/20/19. Held Permit Status Meeting on 7/11/2019, Traffic Coordination Meeting with Fletcher Jones Mercedes Dealership on 7/23/2019 and Project Progress Meeting on 7/23/2019. Submitted Application Package to OCSD for SPDP on 7/31/2019. Received Special Purpose Discharge Permit from OCSD on September 1, 2019. Coordination meeting with Fletcher Jones and Project Progress Meeting was held on 9/11/19. Contractor mobilized on 9/15/19 and started dewatering efforts. Approximately 50% of the pipeline has been installed with project completion scheduled for early March 2020. (12/6/19)

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: Three miles of AC pipe constructed in 1956 were selected for non-destructive wall thickness measurement, which occurred during the week of January 14, 2019. The report was received on February 8, 2019. Five AC pipe samples are planned to be collected and sent for wall thickness measurements as part of routine valve replacements in April 2019. Samples were sent to the testing lab in May 2019, and the wall thickness measurement report was received on June 24, 2019. With more data collected from AC pipe samples, a proposed update the Res. 1442 Replacement of Assets was presented to the E&O Committee in September 2019. Staff developed a process for classifying pipeline breaks, and provided a class to the Distribution crews on November 21, 2019. Staff is planning for nondestructive testing of 5 miles of CMLC steel distribution pipelines. (12/6/19)

Project Title: Mesa Water Administration Building Improvements & HVAC Replacement/Operation Building Repair Projects

File No.: MC 2171

Description: Evaluate the existing HVAC system, provide recommendations for improved efficiency and operations of the system, provide design, construction

MESA WATER AND OTHER AGENCY PROJECTS STATUS REPORT

December 2019

management, and construction.

Status: On 2/11/19 Snyder completed painting, carpeting and concrete floor polishing, installation of interior portion of the HVAC system, ceiling tiles and baseboards, rehabilitation of the upstairs and downstairs restrooms, overall cleaning. Also the furniture in supervisors and water quality office were reassembled. The contractor continued working on the roof of the Ops Building on installation of ducts and preparing for the upcoming rain. Starting from February 15 the contractor worked on the HVAC replacement on the second floor of the Administration building and EOC. The work included demolishing of old ducted HVAC piping, blocking for HVAC units, installation of HVAC units, installation of refrigerant and condensate piping, electrical work, painting, installation of the ceiling and carpet tiles, new water fountains and partial demolition of roofing for HVAC platform installation. The work on the second floor was completed on 4/24/2019 and the contractor started working on the first floor on 4/30/2019. The work included installation of HVAC units, installation of refrigerant and condensate piping, electrical work, and plumbing. Work on the first floor of the Administration Building including installation of skylight completed on 6/8/19. Project was completed on 9/20/19. The "Punch List" items will be addressed by 12/31/19. (12/6/19)

Project Title: Chandler & Croddy Wells and Pipeline Project

File No.: M18-113

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.

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&O. Butier Engineering has been contracted to provide Construction Management Services. Preliminary Design Report (PDR) for the distribution pipeline was reviewed and returned on March 6, 2018. Well site layouts were presented to the Board in May. DDW waiver for 50-foot control zone is currently being drafted. The revised PDR for the pipeline and the well sites was received in June 2018. A workshop to discuss review comments was held on August 14, 2018. 50% design for the Croddy Pipeline was received and the design review workshop occurred on November 26, 2018. 50% design for the wells is scheduled for submittal in February 2019. The draft CEQA Mitigated Negative Declaration was received on January 22, 2019, and filed for 30-day public comment on February 20, 2019 and completed on March 22, 2019. Four agencies submitted minor comments. A public meeting to adopt the Mitigated Negative Declaration has been noticed for the April 11, 2019 Board of Directors meeting. The revised Preliminary Design Report for the Chandler and Croddy Wells was received on March 5, 2019. 50% design documents for the existing building demolitions and well drilling were received on April 16, 2019. 50% design documents for well equipping were received on September 9, 2019 and reviewed by staff. The design team met on October 7, 2019, to review design options for the Croddy Pipeline.

MESA WATER AND OTHER AGENCY PROJECTS STATUS REPORT

December 2019

(12/6/19).

Project Title: Meter Technology Evaluation

File No.: MC 2248

Description: The lifespan of a water meter is approximately 15 years. As a meter ages, the accuracy drops off due to wear. In preparation for its annual water meter replacement, staff has been reviewing water meter technology determining what water meter and reading solutions would be the best fit for Mesa Water's aging register technology. With today's technology, there are several types of meters and meter reading solutions available. The most common are as follows: Fixed Network, Automatic Meter Reading (AMR) System, Handheld or Touch Technology, and Advanced Metering Analytics - Cellular Endpoint.

Status: Mesa Water prepared a Technical Memo with information of the existing aging metering technology in comparison with proposed new meter reading solutions. The Technical memo was presented to the April E&O Committee and approved by the Board at the May 2019 Board meeting. Recommendations approved by the Board for early implementation include ensuring competitive pricing from the standardized meter supplier, making cellular endpoint meters available to customers who wish to have access to real-time water use data, and working with the meter reading software vendor to configure a software upgrade. Staff has compiled the total installed cost of the cellular endpoint meters and presented an implementation plan to the Engineering and Operations Committee on August 20, 2019. Staff also negotiated a contract with National Meter and Automation for preferred customer pricing and limiting annual price escalation, and presented the contract to the Engineering and Operations Committee on August 20, 2019. Staff is working with Badger Meter and Cogsdale to add cellular endpoints to large customer meters to automate meter reading and billing. Staff evaluated each Route 600 meter and vault for meter, register, and end point replacement. Staff is also analyzing usage data to identify large users in terms of addresses, accounts, and meters. (12/6/2019)

Project Title: Reservoirs 1 & 2 Chemical Systems Design

File No.: M18-117

Description: Improve disinfection and mixing in both reservoirs to improve water quality and minimize nitrification.

Status: Final Design Contract awarded to Hazen & Sawyer on February 14, 2018. 50% design report received on July 17, 2018. Design review workshop took place in September 2018. A site visit to Laguna Beach County's El Morro reservoirs occurred on November 8, 2018, to evaluate the Vortex mixing system. Staff met with the designer on December 5, 2018, to incorporate design-for-reliability and design-for-maintainability principals into the mixing system design. The consultant provided a Technical Memo summarizing the options for maintainability and reliability of the Vortex mixer system on April 4, 2019. The 90% design deliverable was received on June 4, 2019, and is being reviewed by staff. Per the E&O Committee's request, the Preliminary Design Report describing the basis of this project was included in the October E&O Committee package. The consultant is working with the reservoir management system supplier to

MESA WATER AND OTHER AGENCY PROJECTS STATUS REPORT
December 2019

utilize the Hach analytical equipment used District-wide to maintain disinfectant residual in the reservoirs.(12/6/2019)

Water Quality Call Report

November 2019

Date: 11/21/2019

Source: Phone

Address: 357 W. Wilson Street

Description: Customer concerned about the cloudy appearance of the water after a recent mainline leak.

Outcome: Assured customer that the water is fine and the cloudy appearance is likely due to air in the line and is not harmful. Explained to customer that he can confirm that it's air by collecting a sample in a glass and let it sit for a minute or so. Customer will call back if he has further questions.

Date: 11/25/2019

Source: Phone/Visit

Address: 357 W. Wilson Street, #E

Description: Customer reported milky water after a recent mainline leak.

Outcome: Water was clear at the hose bib outside as well as the water from the kitchen faucet. Customer no longer has any concerns regarding the water. He will call if he has any further questions or concerns.



COMMITTEE POLICY & RESOLUTION REVIEW

ENGINEERING and OPERATIONS COMMITTEE

Policy Assignments for 2019

Policy Name	Resolution No.	Date Adopted	Revision Schedule	Last Reviewed
Replacement of Assets Including Pipeline and Well Rehabilitation	1525	10/10/19	Review and update every 5 years	10/10/19
Rules and Regulations for Water Service	1527	11/25/19	Review and update as needed	11/25/19
Standard Specifications and Standard Drawings		05/03/18	Review and update as needed	05/03/18
Urban Water Management Plan	1477	06/09/16	Review and update as required every 5 years	06/09/16

Water Operations Status Report
July 1, 2019 - November 30, 2019

Operations Department Status Report	Wk Unit	Plan Days	Act Days	Plan Qty	Act Qty	Plan Cost	Actual Cost
01 - HYDRANTS							
WD-0101 - HYDRANT MAINTENANCE	HYDRANTS	71	56	1421	1097	\$28,191	\$23,269
WD-0102 - HYDRANT PAINTING	HYDRANTS	6	14	178	402	\$2,106	\$5,000
WD-0103 - HYDRANT REPAIR	HYDRANTS	22	22	25	37	\$7,190	\$10,164
Program 01 TOTAL		99	92			\$37,487	\$38,433
02 - VALVES							
WD-0201 - DISTRIBUTION VALVE MAINTENANCE	VALVES	51	34	1010	717	\$21,873	\$15,055
WD-0202 - NIGHT VALVE MAINTENANCE	VALVES	6	0	82	0	\$2,786	\$0
Program 02 TOTAL		57	34			\$24,659	\$15,055
03 - METERS							
WD-0305 - ANGLE STOP/BALL VALVE REPLACE	REPLACE	11	13	22	25	\$6,917	\$4,607
Program 03 TOTAL		11	13			\$6,917	\$4,607
04 - MAIN LINES							
WD-0401 - MAIN LINE REPAIR	REPAIRS	51	41	8	6	\$25,393	\$20,436
WD-0402 - AIR VAC MAINTENANCE/REPAIR	REPAIRS	11	7	67	27	\$4,116	\$2,451
Program 04 TOTAL		62	48			\$29,509	\$22,887
05 - SERVICE LINES							
WD-0501 - SERVICE LINE REPAIR	REPAIRS	24	48	9	18	\$10,057	\$22,608
Program 05 TOTAL		24	48			\$10,057	\$22,608
06 - CAPITAL							
CAP AV - CAPITAL AIR VACUUM REPLACE	AIR VACS	0	5	0	1	\$0	\$1,808
CAP BI - CAPITAL BYPASS & METER INSTALL	REPLACE	0	0	0	0	\$0	\$0
CAP FH - CAPITAL HYDRANT UPGRADE	HYDRANTS	100	41	15	6	\$77,084	\$34,490
CAP MV - CAPITAL MAINLINE VALVE REPLACE	VALVES	83	61	15	7	\$55,886	\$32,124
CAP SL - CAPITAL SERVICE LINE REPLACE	SERVICES	16	20	4	5	\$8,622	\$10,282
CAP SS - CAPITAL SAMPLE STATION REPLACE	STATIONS	0	1	0	1	\$0	\$184
Program 06 TOTAL		199	128			\$141,592	\$78,888
VACANT POSITIONS	2		209				
TOTAL						\$250,221	\$182,478



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Satisfying our Community's
Water Needs*

MEMORANDUM

TO: Engineering and Operations Committee
FROM: Phil Lauri, P.E., Assistant General Manager
DATE: December 17, 2019
SUBJECT: OC-44 Pipeline Rehabilitation Project

RECOMMENDATION

Recommend that the Board of Directors approve a change order to Michael Baker International's contract to provide Construction Monitoring Services for the OC-44 Pipeline Rehabilitation Project in the amount of \$145,323 (\$85,159 Mesa Water District's share, \$60,164 City of Huntington Beach share) for a contract amount not to exceed \$886,126.

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) awarded a contract to RBF Consulting for the OC-44 Pipeline Rehabilitation/Replacement Evaluation.

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 Board was updated on the design and permitting requirements associated with the OC-44 Pipeline Rehabilitation.

At its September 19, 2017 meeting, the Board was updated on the mitigation requirements, permitting status and anticipated project schedule.

At its March 8, 2018 meeting, the Board awarded a contract to Dudek Engineering to provide Construction Management Services for the OC-44 Pipeline Rehabilitation Project in the amount of \$253,720 and a 10% contingency for an amount not to exceed \$279,092, and authorized execution of the contract.

At its January 15, 2019 meeting, the Engineering and Operations (E&O) Committee received information on the OC-44 Pipeline Rehabilitation Project and that staff would be soliciting construction bids to allow for timely procurement of long lead-time materials and equipment.

At its April 11, 2019 meeting, the Board awarded a contract to E.J. Meyer Company to provide Construction Services for the OC-44 Pipeline Rehabilitation Project for \$3,133,333 and a 10% contingency for an amount not to exceed \$3,446,666, and authorized execution of the contract.



At its November 19, 2019 meeting, the E&O Committee received a presentation on the status of construction on the OC-44 Pipeline Rehabilitation Project.

BACKGROUND

The OC-44 Pipeline is jointly owned and operated by Mesa Water District (Mesa Water®) and the City of Huntington Beach. The pipeline, which was originally constructed in the early 1960's, conveys water a distance of approximately 8.4 miles from Metropolitan Water District of Southern California's OC-44 Turnout on the East Orange County Feeder No. 2 in Irvine to its termination near the Costa Mesa/Huntington Beach city boundary. Mesa Water and the City of Huntington Beach jointly own the OC-44 Pipeline with an ownership portion of 58.6% and 41.4%, respectively. The section of the OC-44 Pipeline in the vicinity of the San Diego Creek has a history of failures and emergency repairs, and environmental constraints in this area make future repairs increasingly challenging and expensive. This project includes slip lining approximately 1,800 linear feet of 30" diameter ductal iron pipe inside the existing 42" pipeline where it crosses the San Diego Creek and Bonita Creek. The construction phase started on September 15, 2019 and is scheduled to be completed by late February 2020, with native plant re-vegetation occurring in March and April 2020.

DISCUSSION

The location where the OC-44 Pipeline crosses the San Diego Creek is in an environmentally sensitive area and is subject to the jurisdiction of four regulatory agencies: the U.S. Army Corps of Engineers (Corps); the California Department of Fish and Wildlife (CDFW); the Regional Water Quality Control Board (RWQCB); and the California Coastal Commission (CCC). Each of the regulatory permits brings extensive Native American and environmental monitoring requirements. The following is a summary of the various monitoring required for the project:

- Southwestern Pond Turtle Focused Survey;
- Sensitive Plant Species Survey;
- Nesting Bird Clearance Surveys;
- Construction Monitoring for Permit Compliance;
- Mitigation Implementation Monitoring;
- Non-Native Species Monitoring;
- New Plant Establishment Period Monitoring;
- Archeological Monitoring; and
- Native American Monitoring.

Michael Baker International's (MBI) original proposal for performing the aforementioned environmental monitoring and cultural monitoring services was for a total amount of \$116,565 and was based on a tentative construction schedule with completion by early December 2019. Due to the extensive dewatering system setup, jacking and receiving pit construction, and site access implementation, the construction schedule has been extended to late February 2020. Thus, additional full-time environmental and Native American monitoring and associated project management and reporting time is required.



Staff recommends that the Board consider approving a change order to Michael Baker International's contract to provide Construction Monitoring Services for the OC-44 Pipeline Rehabilitation Project in the amount of \$145,323 (\$85,159 Mesa Water District's share, \$60,164 City of Huntington Beach share) for a contract amount not to exceed \$886,126.

FINANCIAL IMPACT

\$740,803 was budgeted for providing Preliminary and Final Design Services for OC-44 Pipeline Rehabilitation Project; \$733,187 has been spent to date. Requested funding will come from Cash on Hand.

	Project Estimate <u>Amounts</u>	Project Cost <u>Amounts</u>
Initial Project Estimate (FY 2014)	\$ 198,827	
Original Contracts		\$ 198,827
Change Order #1		541,976
Requested Funding (Change Order #2)		<u>145,323</u>
Revised Contracts		<u>\$ 886,126</u>
Actual Spent to Date		\$ 733,187
Revised Project Estimate	\$ 886,126	

ATTACHMENTS

Attachment A: Michael Baker International's OC-44 Pipeline Rehabilitation Project – Construction Monitoring

To: John Harris
From: Lauren Mack
Date: August 20, 2019
Subject: REVISED Internal Proposal Request
Project: OC-44 Pipeline Rehabilitation Project - Construction Monitoring

PROPOSED SCOPE OF WORK

TASK 1: Southwestern Pond Turtle Focused Survey \$16,500

Michael Baker shall coordinate with ECORP Consulting on the required surveys for southwestern pond turtle within the project vicinity per the California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement (SAA) Reporting Measure 2.12.

Project Coordination

Prior to conducting surveys, ECORP shall coordinate with the Michael Baker to discuss contract responsibilities, survey boundaries, site access, any field restrictions, scheduled deliverables, and other project-related items. Following the surveys, ECORP shall provide the Michael Baker, Mesa Water District, and CDFW with the survey results and any communication with regarding the review of the habitat assessment or survey protocols. Coordination shall be conducted via phone or other convenient method, as mutually agreed upon by the participants.

ECORP shall work closely with Michael Baker to ensure they are well-informed regarding the timing of each survey, the results, and any communication with the CDFW.

Western Pond Turtle (WPT) Habitat Assessment and Focused Surveys

ECORP shall conduct a literature review for WPT within the survey area prior to commencement of the surveys. The literature review shall include referencing online resources, the California Natural Diversity Database (CNDDDB) Records, museum records, and information that may be available from USGS and CDFW staff that manage or have worked on the site. A total of four surveys shall be conducted by qualified ECORP biologists familiar with the identification, life history, and behaviors of WPT. Each survey shall be conducted on a separate day and shall be conducted when weather conditions are suitable for detecting the species. All aquatic and adjacent upland habitats (within 500 feet) shall be evaluated and surveyed visually. In general, visual encounter techniques shall follow accepted methodologies for WPT by Holland (1991, 1994)¹² and the USGS (2006)³. Surveys shall focus on searching all potential habitats (i.e., basking sites, aquatic refugia, streamside refugia, and upland nesting habitat) using binoculars and/or spotting scopes, as well searching under ledges or pools. All suitable habitat features shall be mapped, including potential basking or haul-out sites. ECORP shall assess and characterize the suitability and quality of the habitat within the project site, including a one-mile radius.

¹ Holland, D. C. 1991. A synopsis of the ecology and status of the western pond turtle (*Clemmys marmorata*) in 1991. Prepared for the U.S. Fish and Wildlife Service, National Ecology Research Center, San Simeon, CA.

² Holland, D. C. 1994. The western pond turtle: Habitat and history. Prepared for: U.S. Dept. of Energy, Bonneville Power Administration. Portland, OR. 303 pp.

³ United States Geological Survey. 2006. DRAFT Western Pond Turtle Visual Survey Protocol for the Southcoast Ecoregion. Western Ecological Research Center, US Department of Interior, Sacramento, CA. 60 pp.

All species detected during the surveys shall be documented, including the presence of aquatic predators (e.g., American bullfrogs and Centrarchid fishes). Any WPTs detected during the surveys shall be recorded with a handheld global positioning system (GPS) unit and photographed, when possible. The number of individuals, sex, age/size class, and any distinguishing features shall also be recorded for each sighting. All observations of protected species shall be submitted to the CDFW's California Natural Diversity Database (CNDDDB). Weather conditions and water quality data shall be recorded at the start and end of each surveys. All field equipment shall be free of weeds and when entering aquatic habitats shall go through the CDFW Aquatic Invasive Species Disinfection/Decontamination Protocols.

WPT Reporting

Following the completion of the surveys, ECORP shall prepare a biological report documenting the findings. The report shall contain descriptions of the methods used to conduct the surveys, the existing site conditions, habitat quality/suitability, and discussions regarding the presence and population status of WPT onsite. The report shall also contain copies of field notes, survey maps, representative photographs of the site, and CNDDDB forms for any protected species detected during the surveys.

ECORP shall provide a draft report, electronically submitted in a convenient format (e.g., .doc, .pdf), to Michael Baker for review and comment. ECORP shall incorporate one round of Mesa Water District comments within 14 days of receiving them into the final version of the report. The final report shall be submitted electronically to Michael Baker and Mesa Water District. The final report shall be accompanied by all GPS data, photographs, copies of forms submitted to the CNDDDB, or any other pertinent information collected in the field as part of this contract.

Deliverable: Focused Survey Report (PDF)

TASK 2: Sensitive Plant Species Survey \$5,000

Michael Baker's qualified botanist shall conduct a focused survey within the project area to document the presence/absence of sensitive plant species for which the project site provides suitable habitat (SAA Reporting Measure 2.11). The survey shall be floristic in nature, meaning that all species encountered shall be identified to the taxonomic level necessary to determine rarity and listing status. Survey transects shall be spaced between 10 to 30 feet apart to allow for 100 percent visual coverage necessary to inventory all plant species on-site.

Once the survey is complete, Michael Baker shall prepare a letter report to document the methods, site conditions, and results of the survey. The letter report shall also identify any additional surveys, mitigation measures, and/or agency approvals that may be required prior to implementation of the proposed project. Site photographs taken during the field survey, and a GIS figure shall also be included to further enhance written text and depict the location of sensitive plant species, if found.

TASK 3: Nesting Bird Clearance Surveys \$14,000

If construction or vegetation removal occurs between March 1 to September 15, Michael Baker shall conduct three (3) weekly focused surveys for nesting birds, as well as one (1) final survey conducted within three (3) days of initiating project activities. The entire project site shall be surveyed by walking transects in suitable habitat and in areas within 150 meters (500 feet) of the project site boundary (survey area). The surveys, as applicable based on topography and site

conditions, shall be conducted by walking straight-line transects spaced between 10 to 30 feet apart (15 feet on average).

Methods to detect the presence of nesting birds shall include direct observation, aural detection, and signs of presence (i.e., scat, pellets, white-wash, feathers, tracks, and prey remains). All trees, shrubs, and ground dwellings shall be searched for the possible presence of active bird nests. Michael Baker shall also record all bird species observed during the clearance survey and document behaviors that suggest breeding activity. Binoculars shall be used to observe distant birds and their activity around potential nesting habitat. The location of any active nests or breeding behaviors shall be recorded using a hand-held GPS unit, if found.

Following completion of the final nesting bird clearance survey, a letter report shall be prepared that includes a summary of the methods, site conditions, results, and identify any measures that should be implemented to avoid impacts to nesting birds (SAA Reporting Measure 2.13; CDP Special Condition 2). Site photographs taken during the field survey and a GIS figure shall also be included to further enhance written text and depict the location of any burrowing owls or active burrows/nests, if found.

Exclusions: This task excludes biological monitoring efforts that may be required if an active bird nest is found on or within 500 feet of the project site. If biological monitoring is required or if project activities have not been initiated within three (3) days of the final clearance survey, Michael Baker shall provide an additional Scope and Fee and work would continue under an approved contract modification.

Deliverable: Nesting Bird Clearance Survey Letter Report (PDF and hard copies to CDFW and California Coastal Commission)

TASK 4: Construction Monitoring for Permit Compliance \$29,350

In accordance with Avoidance and Minimization Measure 2.3 and 2.4 of the SAA, a Michael Baker biologist shall conduct daily monitoring visits to document and verify compliance of all project activities addressed in the regulatory approvals, including, but not limited to: determining and delineating appropriate avoidance and “no-disturbance” buffer areas, maintaining delineated access routes and work areas, documenting the effectiveness of best management practices, and monitoring for the presence of, and potential impacts to, sensitive biological resources. The biological monitor will: (a) document all activities pertaining to biological resources; (b) provide regular updates to Permittee; (c) notify Permittee immediately if unauthorized impacts to biological resources occur; and (d) advise the contractors, as needed, to ensure effective and appropriate implementation of biological mitigation measures for specific site conditions.

Following monitoring visits, Michael Baker will submit a weekly e-mail to the client, along with site photographs, summarizing all monitoring efforts performed during the week and any corrective measures that were implemented to maintain compliance with all regulatory permits, agreements, and authorizations. Michael Baker’s Senior Biologist will also provide as-needed biological technical support throughout the duration of the biological monitoring efforts, including phone calls, emails, and meetings with the client, construction contractors, and regulatory agencies staff to discuss project status and maintain compliance with all regulatory permits, agreements, and authorizations.

Assumptions: Based on the construction schedule provided, we assume that construction will occur from September 16 to December 12, 2019 (a total of 13 weeks). This task establishes a

not-to-exceed time and materials budget of \$29,400 and assumes up to ten (10) daily monitoring visits (8 hours/day) during vegetation clearing and excavation activities, and then reducing to 3 hours/day of monitoring for the remainder of the construction period (55 days). Weekly summary reports (up to 13 total) would be completed by a Michael Baker biologist between September 16 to December 12, 2019. This task also includes an additional four (4) hours/month for Michael Baker's Senior Biologist to provide as-needed biological technical support throughout the duration of the biological monitoring efforts. Should additional monitoring visits or support be necessary, the client will be notified, and work would continue under an approved contract augmentation.

Deliverables: Michael Baker will submit a summary report of weekly monitoring efforts (via e-mail) at the end of each week to the client for file.

TASK 5: Mitigation Implementation Monitoring \$8,340

Michael Baker Restoration Ecologists shall oversee the mitigation site implementation activities on a weekly basis. This task includes time for Michael Baker to be onsite during non-natives removal, herbicide application, willow cutting installation, and seeding and container plant installation within the Coastal Sage Scrub restoration areas. This task includes time for coordination with the Restoration Contractor and Mesa Water District during the implementation. Implementation activities shall also be photodocumented and a weekly project summary shall be provided to Mesa Water District for the project file.

Deliverable: Weekly summary emails

TASK 6: Mitigation Installation Report \$4,650

Approximately 45 days after finalizing the replanting effort, Michael Baker shall submit a report to CDFW acknowledging the completion of the replanting site and documenting its as-built status (SAA Reporting Measure 4.3). The report shall describe the installation and to what degree the project was consistent with the Habitat Mitigation and Monitoring Plan. The report shall be submitted with electronic geographic information system (GIS) shapefiles (along with the appropriate metadata) of the project area and mitigation area.

Deliverable: Mitigation Installation Report (PDF and hard copy to CDFW)

TASK 7: Non-Native Species Report \$3,790

Per SAA Reporting Measure 4.4, approximately 45 days following construction completion Michael Baker shall submit a report of non-native invasive species (aquatic, terrestrial, and herbaceous plants and animals) observed in the project area before and throughout the project to CDFW. The report shall include at a minimum: (a) species identification; (b) specific location(s) observed within project area; and, (c) quantification or absolute cover of each species observed.

Deliverable: Non-Native Species Report (PDF and hard copy to CDFW)

TASK 8: Plant Establishment Period (PEP) Monitoring \$11,235

Michael Baker staff shall monitor the site to record the survival rates of the cuttings and container plants during the establishment period. Observations shall be documented once a week for the first 120 days following installation. The data and photographs collected shall also serve as the baseline to be referenced in the first-year annual mitigation monitoring report. Michael Baker shall

work in conjunction with the Restoration Contractor to relay any stressed or dying plantings, so that they may be replaced where needed. Michael Baker staff shall provide Mesa Water District with a memo summarizing the findings at the end of the establishment period.

Deliverable: Summary memo (PDF)

TASK 9: Construction Area Demarcation \$2,400

Prior to construction, Michael Baker biologists will mark the authorized construction area in accordance with Measure 2.2 of the SAA, Special Condition 5 of the LOP, and Special Condition 3 of the CDP. No vegetation shall be removed outside of this marked area and no construction debris, equipment, or soils shall be placed outside of the marked area. The construction area will be demarcated by staking that clearly identifies the boundaries.

TASK 10: Workers Environmental Awareness Program \$1,800

Prior to the initiation of project activities, Michael Baker will prepare a Workers Environmental Awareness Program (WEAP) to educate on-site workers about sensitive environmental issues and biological resources associated with the Project in accordance with Measure 2.1 of the SAA. The WEAP will be presented by a Michael Baker Biologist to all on-site construction personnel, including contractors, and sub-contractors prior to the employees commencing work on the project site. The WEAP will consist of a general overview of the sensitive biological resources known to occur within and adjacent to the project site. In addition, the WEAP will summarize specific avoidance and minimization measures required to be implemented throughout the duration of the project as specified in the regulatory approvals and environmental documentation.

Deliverables: Michael Baker will submit an electronic copy (PDF) of the Workers Environmental Awareness Program to the client for review and file prior to presenting to all on-site construction personnel, contractors, and sub-contractors.

TASK 11: Archaeological and Native American Monitoring \$17,500

Michael Baker has obtained Cogstone as a subconsultant for Archaeological and Native American Monitoring services. Based on our understanding of the Project and the regulatory requirements of the California Environmental Quality Act (CEQA) as well as in compliance with the California Coastal Commission (CCC), Cogstone will provide archaeological and Native American monitoring during all ground disturbance for the Project. All work will be conducted in compliance with the Archaeological Construction Monitoring Treatment Plan (CMTP).

This task includes a total of 10, 8-hour days of monitoring for an archaeological monitor and a Native American monitor, for a total of 160 monitoring hours. Should additional monitoring be required it will be billed as time and materials. We assume no archaeological sites will require recording or updating on Department of Parks and Recreation (DPR) 523 forms.

If previously unidentified resources are encountered during monitoring, the monitor will have the authority to stop work within 100 feet of the discovery per the requirements of the CMTP and in compliance with the CCC's conditional permit. Any human remains identified will be treated in accordance with the relevant Public Resources Code and in compliance with the CMTP and requirements of the CCC's conditional permit. If cultural resources are identified during monitoring work, all notifications, documentation, and recommendations will require additional time and materials.

Notes and Assumptions: For purposes of this proposal it is assumed that Cogstone will not be required to attend meetings, the cultural resources monitoring will occur during daytime hours, and no archaeological sites will require recording and evaluation on DPR 523 series forms. Subsurface testing and evaluation is not included in this scope. If any of these items are needed it will require a change order if. The scope also assumes two rounds of comments on the technical report.

Deliverables:

- *Cogstone's key staff will prepare a cultural resources monitoring report. The report will summarize the construction work completed, monitoring procedures, site protection efforts, all cultural resource findings, provide recommendations as applicable, and name archaeological staff.*
- *Cogstone will respond to two rounds of comments, one from the CCC and one from Mesa Water District and produce the final technical report.*
- *The final report and shapefiles will be sent to the South Central Coastal Information Center (SCCIC).*

OTHER DIRECT COSTS

\$1,500

Other Direct Costs for this work program include travel site visit expenses, field equipment, reproduction expenses, and messenger/mailing services.

Total Fee: \$116,065

Extended Monitoring Services - prepared by John Harris, November 19, 2019

Construction of the access pits took longer than originally planned and our environmental monitors have exceeded the allotted budget in our scope of services outlined in Tasks 4 and 11. Outlined below are the additional amounts needed to cover the access pit excavations and extended construction time from December 13, 2019 through January 13, 2020 as noted on the current construction schedule. Note: this is subject to change as well if construction is further delayed or expedited.

Task 4. Construction Monitoring for Permit Compliance

This task includes:

- Ten (10) additional days of monitoring (8 hours/day) during continued vegetation clearing and excavation activities
- Four (4) additional weeks of daily monitoring activities (+/- 2 hours/day) during construction
- An additional twenty (20) hours of task management and reporting
- Two hundred (200) additional miles of mileage reimbursement

Labor: \$19,250

ODC: \$120

Task 11. Archaeological and Native American Monitoring

This task includes:

- Sixty (64) additional hours of Cultural Resources monitoring
- Forty eight (48) additional hours of Native American monitoring
- Ten (10) additional hours of Supervision time (6 for Co-Principal Investigator and 4 for Task Manager)
- Two (2) additional hours for Task Management and Communication (Task Manager)
- Five hundred (500) additional miles of mileage reimbursement

Sub - Labor: \$9,188

ODC: \$200

Total Monitoring Services Proposal

Base Proposal: \$116,565

Extended Monitoring Services:

Task 4 - Construction Monitoring - \$19,370

Task 11 - Archaeological and Native American Monitoring - \$9,388

Total: \$145,323



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Satisfying our Community's
Water Needs*

MEMORANDUM

TO: Engineering and Operations Committee
FROM: Tracy E. Manning, Water Operations Manager
DATE: December 17, 2019
SUBJECT: America's Water Infrastructure Act Compliance Support Services

RECOMMENDATION

Award a contract to Water Systems Consulting in the amount of \$84,960 with a 10% contingency for a contract amount not to exceed \$93,456 to provide America's Water Infrastructure Act Compliance Support Services.

STRATEGIC PLAN

Goal #1: Provide a safe, abundant, and reliable water supply.

Goal #2: Practice perpetual infrastructure renewal and improvement.

BACKGROUND

On October 23, 2018, America's Water Infrastructure Act (AWIA) was signed into law. The law requires drinking water systems serving more than 3,300 people to develop or update risk and resilience assessments (RRAs) and emergency response plans (ERPs). This risk assessment goes into greater depth than the Vulnerability Assessment previously completed in compliance with the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 ("Bioterrorism Act"), which primarily assessed the security of physical assets. AWIA specified components that the RRAs and ERPs must address and established deadlines by which water systems must certify completion of the RRA and ERP to the Environmental Protection Agency (EPA). Mesa Water District's (Mesa Water®) 2002 Vulnerability Assessment will act as the cornerstone for the new assessment and will be updated to include changes to risks faced by the water system due to malevolent acts and natural hazards.

Additional requirements of the risk and resilience assessment include:

- resilience of the pipes and constructed conveyances, physical barriers, source water, treatment, storage and distribution facilities;
- resilience of electronic, computer, and other automated systems such as SCADA (including the security of such systems);
- monitoring practices;
- financial and billing systems;
- chemical storage and handling; and
- operations and maintenance.

An ERP describes strategies, resources, plans, and procedures utilities can use to prepare for and respond to an incident, natural or man-made, that threatens life, property, or the environment. Incidents can range from small main breaks or localized flooding to large scale earthquakes, storms, or system contamination. Mesa Water's existing ERP will be updated to include strategies and resources to improve the resilience of the system, including the physical security and cybersecurity of the system, based on the findings of the RRA.



Requirements of the ERP include:

- plans and procedures that can be implemented, and identification of equipment that can be utilized, in the event of a malevolent act or natural hazard that threatens the ability of the community water system to deliver safe drinking water;
- actions, procedures and equipment which can obviate or significantly lessen the impact of a malevolent act or natural hazard on the public health and the safety and supply of drinking water provided to communities and individuals, including the development of alternative source water options, relocation of water intakes and construction of flood protection barriers; and
- strategies that can be used to aid in the detection of malevolent acts or natural hazards that threaten the security or resilience of the system.

AWIA also requires that water systems coordinate with local emergency planning committees during this process.

Deadlines for completion of the RRA and ERP are based on water system size. Mesa Water’s RRA deadline is March 31, 2020 and ERP deadline is six months after the RRA submission, but no later than September 30, 2020.

The law also requires that agencies review and update their RRA and ERP every five years.

DISCUSSION

Mesa Water solicited proposals from five qualified firms to provide America’s Water Infrastructure Act Compliance Support Services. All five of the firms submitted proposals. The proposals were reviewed by a Selection Panel comprised of Mesa Water staff. Each firm was evaluated based on qualifications, experience, staff availability, project understanding, scope of work approach, and proposal quality. The results are as follows:

Rank	Firm	Final Score	Total Cost
1	Water Systems Consulting	4.14	\$84,960
2	John Robinson Consulting	4.02	\$78,640
3	Carollo Engineering	4.01	\$157,944
4	Brown & Caldwell	3.99	\$109,552
5	Risk Management Professionals	2.37	Not Considered

The top four ranked firms were very close in final score, presenting excellent approaches and highly qualified staff. Water Systems Consulting was ranked overall as the highest for their carefully selected, skilled team members to complete the project and meet the deadlines for AWIA. Water Systems Consulting has experience with resiliency assessments and emergency planning, which are key elements for AWIA compliance. While Water Systems Consulting was not the lowest bid, it was very competitive with the top ranked firms, with their costs being 8% above the second highest ranked proposal. Water Systems Consulting’s proposal is included as Attachment A. Other proposals are available upon request.

Staff recommends that the Board award a contract to Water Systems Consulting in the amount of



\$84,960 with a 10% contingency for a contract amount not to exceed \$93,456 to provide AWIA Compliance Support Services.

FINANCIAL IMPACT

In Fiscal Year 2020, \$1,009,200 is budgeted for Operations Department Outside Services; \$347,250 has been spent to date. No funds were budgeted for this effort; requested funding will come from Cash on Hand.

ATTACHMENTS

Attachment A: Water Systems Consulting's AWIA Compliance Support Services Proposal



Proposal for America's Water Infrastructure Act (AWIA)

RISK AND RESILIENCE ASSESSMENT & EMERGENCY RESPONSE PLAN

NOVEMBER 27, 2019





November 27, 2019
Mary Chambers, Buyer
Mesa Water District
1965 Placentia Avenue
Costa Mesa, CA 92627

SUBJECT: PROPOSAL TO PERFORM AN AMERICA'S WATER INFRASTRUCTURE ACT RISK AND RESILIENCE ASSESSMENT AND EMERGENCY RESPONSE PLAN

Dear Ms. Chambers,

Water Systems Consulting, Inc. (WSC) is pleased to present this proposal to perform an America's Water Infrastructure Act (AWIA) Risk and Resilience Assessment (RRA) and Emergency Response Plan (ERP) for Mesa Water District (Mesa Water). We are excited for the opportunity to work alongside Mesa Water as you deliver long-term solutions, value, and leadership to the community that you serve. We hope that our proposal demonstrates the commitment to quality that we will bring to your team.

Through close coordination with Mesa Water, WSC will perform a detailed analysis of your infrastructure to perform an RRA and develop the ERP utilizing existing documentation when possible to minimize cost and improve flexibility. WSC will use a proven quality assurance/quality control (QA/QC) program to make sure deliverables meet our high standards and your expectations.

We hope this proposal demonstrates our interest and commitment to Mesa Water. If you have any questions on any aspect of this proposal, please feel free to contact WSC's proposed Project Manager, Kirsten Plonka, at (858) 397-2617, ext. 304 or kplonka@wsc-inc.com, or Principal in Charge, Joshua Reynolds, at (805) 457-8833, ext. 107 or jreynolds@wsc-inc.com. Joshua is authorized to represent WSC in negotiations, and sign contracts and agreements. Thank you again for your consideration, and we look forward to your response.

About WSC

Federal Tax ID Number:
26-1507694

Type of Business:
S-Corporation

Number of Years in Business:
12

Sincerely,
Water Systems Consulting, Inc.

**Kirsten Plonka, PE
Project Manager**

9815 Carroll Canyon Road, Suite 205
San Diego CA 92131

**Joshua Reynolds, PE, MS
Principal in Charge/Vice President**

805 Aerovista Place, Suite 201
San Luis Obispo, CA 93401



ADDITIONAL REMARKS SCHEDULE

AGENCY IOA Insurance Services		License # 0E67768	NAMED INSURED Water Systems Consulting, Inc. P.O. Box 4255 San Luis Obispo, CA 93403
POLICY NUMBER SEE PAGE 1			
CARRIER SEE PAGE 1	NAIC CODE SEE P 1	EFFECTIVE DATE: SEE PAGE 1	

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance

Description of Operations/Locations/Vehicles:
required by written contract.
Contractors Pollution Liability is included under Professional Liability Policy.
30-Day Notice of Cancellation is included per policy provisions.

AM Best Ratings:
RLI Insurance Company- A+ XI
Tokio Marine Specialty Ins. Co.- A++ XV
Arch Insurance Company- A+ XV

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FIRM QUALIFICATIONS AND EXPERIENCE

WSC IS YOUR PREMIER WATER ENGINEERING CONSULTING FIRM



Our expert staff provides high-quality engineering services to our clients. Since our founding in 2007, we have served special districts, counties, cities, investor-owned utilities, and regulatory agencies from our eight offices in California and Oregon, including our local office in Laguna Hills.

Water Systems Consulting, Inc. (WSC) is a full-service engineering consulting firm that specializes in **innovative and sustainable solutions, relationship building, and bringing value** to our clients. We thrive and grow from the philosophy that people come first and that all water has value.

Our team is versatile and committed to providing the appropriate staff resources to meet the project schedule and be responsive to Mesa Water’s needs. We will work alongside your staff to efficiently familiarize ourselves with your water conveyance, storage, and treatment system assets. WSC’s team will incorporate your staff’s institutional knowledge to evaluate and assess the risks to water resources and infrastructure that improves Mesa Water’s ability to take the appropriate countermeasures to protect your water resources and system, perform future RRAs, and develop ERPs.

We understand the need for resilient, sustainably managed water systems that are built for the future and can be maintained by a utility with minimized risk from potential hazards.

At WSC, we only succeed if you do and we are focused on delivering value and will work tirelessly on your behalf to achieve the results you expect and deserve.



WSC expertly prepared our Master Plans. I have been extremely impressed with their high level of competency and ability to work effectively and interactively with staff. WSC’s assessment and modeling of our systems has been exemplary. I really enjoy working with staff at WSC, I know I will always get a prompt, insightful, and trustworthy response.”

Ms. Teresa McClish, Community Development Director, City of Arroyo Grande

CAREFULLY SELECTED, SKILLED TEAM MEMBERS



WSC is a full-service water systems engineering firm with an experienced team that specializes in providing One Water planning and engineering services to public water agencies. Our diverse team of engineers and planning professionals have **developed more than 200** water, wastewater, and recycled water planning documents, including risk assessments, supply analyses, and emergency response and resiliency planning.

WSC has been able to double in size in the past three years by consistently delivering valuable engineering services to our clients and recruiting skilled professionals who understand the importance of building personal connections. Our strength and stability come from our dedication to meeting our clients where they are and understanding their unique needs.

By selecting WSC for this project, the District will get a team that is committed to being a responsive partner, is qualified to develop a compliant document that adds value, and will work efficiently to deliver a right-sized work plan. While WSC as a firm has not worked for Mesa Water, several members of our team have for previous employers.

A Responsive Partner that Prioritizes You

WSC understands the importance for the District to partner with a firm that can commit the available time needed to complete this project effectively and efficiently.

A Defensible Document Designed for Resiliency

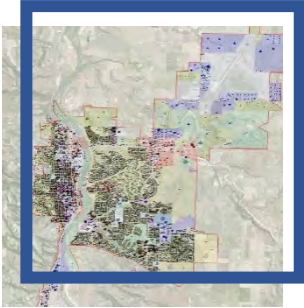
WSC understands the need for a document that holistically analyzes risk and evaluates infrastructure in order to create a defensible document with an actionable ERP from a reliable and thorough RRA.

An Affordable Option that Delivers High-Quality Value

WSC will deliver a cost-effective document that provides long-term sustainable value and reliability for the District's water systems.

REPRESENTATIVE PROJECTS THAT ALIGN WITH YOUR GOALS

Emergency Alternatives Modeling | City of Paso Robles



WSC provided emergency modeling support to assess the capacity of the West Main Zone after a water main broke beneath a railroad crossing. WSC used the hydraulic model to evaluate fire flow and system capacity with the broken segment out of service, and to evaluate system improvements to reduce the probability of another main break. WSC then evaluated the affected pressure zone for extended operations with the City's only storage reservoir out of service.

Relevance: Evaluated potential system improvements to reduce possibility of future failure.

Contact: Christopher Alakel, PE | Water Resources Manager | calakel@PRCity.com | (805) 227-7200, ext. 7715 | 1000 Spring Street Paso Robles, CA 93446

Ojai Water System Master Plan | Casitas Municipal Water District



WSC developed a condition-based assessment and Master Plan for the water supply and distribution system that delivers water to approximately 60,000 residential, commercial, and agricultural customers. WSC analyzed risk for aging assets within the water system with digital tools and onsite visits to provide recommendations for necessary improvements in order to maintain safe and reliable levels of service.

Relevance: Conducted a condition-based assessment to identify vulnerable elements within the water system.

Contact: Julia Aranda, PE | Engineering Manager | jaranda@casitaswater.com | (805) 649-2251 | 1055 Ventura Avenue, Oak View, CA 93022

Regional Infrastructure Resiliency Plan | San Luis Obispo County Flood Control and Water Conservation District



As part of the regional infrastructure resiliency plan, WSC held workshops to establish methodologies for prioritization and evaluating system vulnerabilities. Analysis included evaluating supply risks due to drought and emergencies, as well as demand risk analyses to inform necessary supply reliability reserves. The project received grant funding from the California Governor's Office of Emergency Services.

Relevance: Evaluated supply risks from drought, emergencies, and demand risk analysis to determine supply reliability reserves

Contact: Courtney Howard, PE | Water Resources Division Manager | choward@co.slo.ca.us | (805) 781-1013 | 1055 Monterey Street, San Luis Obispo, CA 93408

ADDITIONAL REPRESENTATIVE PROJECTS

<p>NORTH PLEASANT VALLEY DESALTER CITY OF CAMARILLO</p>	<p>WSC is serving as the Program Manager for a desalter project that will use reverse osmosis to treat brackish groundwater pumped from nearby wells. WSC evaluated the risks of incorporating a new source of supply into the City's system and coordinated with multiple agencies for an Environmental Impact Report, a connection to an existing brine outfall, and other permits.</p>
<p>GENERAL PLAN UPDATE CITY OF CARLSBAD</p>	<p>Prior to joining WSC, our proposed Project Manager, Kirsten Plonka, coordinated an update of the City's General Plan for water, recycled water, and wastewater systems. She verified water supply and collection system availability, operational and emergency storage requirements, and vulnerabilities. She partnered with multiple City departments, including Fire, Public Works, Planning, and Economic Development to create a plan that met the community's needs while providing reliable, safe water.</p>
<p>WATER MASTER PLAN & UWMP CITY OF VICTORVILLE</p>	<p>WSC prepared the 2015 Urban Water Management Plan (UWMP) which included evaluating supply reliability, demand management measures, and a water shortage contingency plan. WSC also developed a Water and Recycled Water System Master Plan which included using SCADA data to evaluate peaking factors to account for fluctuations in demands on a seasonal, daily, or hourly basis.</p>
<p>LOW RESERVOIR RESPONSE PLAN CITY OF SAN LUIS OBISPO</p>	<p>WSC developed a plan to limit downstream releases and diversions from Lopez Reservoir during periods of low reservoir storage to preserve water within the reservoir for a minimum of 3 to 4 years. The project included developing a model to evaluate possible drought scenarios and their potential impact on reservoir storage.</p>
<p>DOMINGUEZ 232 BOOSTER PUMP STATION CALIFORNIA WATER SERVICE COMPANY</p>	<p>WSC identified low pressure areas and determined how to incorporate a new supply into the existing system as part of a booster pump station replacement project. WSC prepared the alternatives analysis and a preliminary design report prior to completing the final design. The facility was designed to give the company flexibility to respond to an emergency.</p>
<p>WATER MASTER PLAN & UWMP CITY OF PISMO BEACH</p>	<p>WSC prepared a WMP Update with a focus on developing a strong CIP to support adaptive management. The update included creating a hydraulic model consistent with the current GIS mapping to improve confidence in system changes and expected fire flows. WSC also prepared the 2015 UWMP which included an AWWA Water Audit.</p>
<p>REGIONAL UWMP SAN BERNARDINO VALLEY WATER DISTRICT</p>	<p>WSC led a group of nine retail suppliers and the San Bernardino Valley Municipal Water District to develop a Regional UWMP as well as tailored Water Shortage Contingency plans. WSC developed a database to consolidate water demands and supplies for each agency that created simulations of future changes in the regional water balance. The project included a series of stakeholder workshops to discuss alternatives for enhancing supply reliability.</p>

A CERTIFIED TEAM FOCUSED ON PARTNERSHIP

It is becoming increasingly important for water agencies to possess defensible, well thought out, and adaptable resiliency and emergency preparedness documents. WSC has assembled a highly qualified team with directly relevant experience. We will go above and beyond to develop a defensible RRA that serves as a road map toward developing a successful ERP.

The RRA and ERP documents will need to be updated on a regular basis to meet AWIA requirements. This means the work done now will impact how efficiently future updates can be completed. Our team and our approach are crafted with that in mind. We value our relationship with the District and envision a lasting partnership that is built on shared success, trust, and value.



WSC’s team includes multiple AWIA certified professionals who have been trained to develop documents that comply with AWIA requirements. WSC’s deliverables will:

AWIA CERTIFIED
UTILITY RISK AND RESILIENCE CERTIFICATE PROGRAM

Facilitate Compliance with America’s Water Infrastructure Act of 2018. WSC will lead a project that meets AWIA’s requirements for community water systems and introduces the standards and resources designed to improve resiliency and manage risks for all hazards.

Identify Security Practices for Operations and Management. WSC will deliver a project that demonstrates understanding of the elements of a risk and resilience management strategy that are based on the AWWA G430 standard and how to apply these elements in an organization.

Improve Risk and Resilience for Water and Wastewater Systems. WSC understands the AWWA J100 Standard and how it can be used to improve resilience at any utility, as well as support the statutory mandate for community water systems described in AWIA of 2018.

Support Emergency Planning. WSC will provide an overview of emergency preparedness, response planning, ANSI/AWWA G440 Emergency Preparedness Practices, AWWA M19 Emergency Planning for Water and Wastewater Utilities, and best practices to developing an ERP.

Inform Cybersecurity in the Water Sector. WSC will use the Water Sector Cybersecurity Risk Management Guidance and Tool which includes evaluating a utility’s implementation and use of process control system and enterprise system environments.

STAFF EXPERIENCE AND AVAILABILITY

OUR TEAM IS DESIGNED TO MEET YOUR PROJECT GOALS

WSC's team is functionally organized to take advantage of the **strengths** of our expert staff within a **streamlined** structure to provide the highest level of responsiveness and quality. Each proposed staff member will be available during the proposed schedule for their respective tasks.

WSC's proposed Project Manager, Kirsten Plonka, will serve as the primary point of contact to Mesa Water District. Kirsten will leverage a highly-qualified team and more than 17 years of experience working on water resource and infrastructure projects to successfully deliver the RRA and ERP Project.

Kirsten will be supported by WSC's Principal in Charge and Vice President, Joshua Reynolds, who has managed complex planning and compliance-driven projects for over 20 years. QA/QC will be provided by WSC's senior engineer, Justin Pickard, who brings over 17 years of experience, including serving as Construction Manager for Mesa Water's Mesa Water Reliability Facility Project.



PRINCIPAL IN CHARGE
Joshua Reynolds, PE, MS, AWIA*



PROJECT MANAGER
Kirsten Plonka, PE, AWIA*



QA/QC
Justin Pickard, PE, LEED AP BD+C



PROJECT TEAM

RISK & RESILIENCE ASSESSMENT
Susan Schlangen, PE, M. Eng., AWIA

PROJECT ENGINEER
Haley Lehman, CSST, AWIA

DOCUMENTATION SUPPORT
Aaron Moreland

PRESENTATION SUPPORT
Sarah Walker

*AWIA certification in progress, will be completed prior to project kickoff

WITH WSC, EXPECT AN EXPERIENCED TEAM

Kirsten Plonka
PE, AWIA*



Availability: 75 %

PROJECT MANAGER

Ms. Plonka brings more than 17 years of experience in the planning, design, and management of water, wastewater, and recycled water systems. She specializes in project management, feasibility studies, infrastructure and water resource planning studies, and master planning including Capital Improvement Plans and budgeting. She is well versed in funding alternatives, regulatory compliance, and public policy development. She has completed Vulnerability Assessments for multiple clients and has provided critical coordination of infrastructure projects with other city departments and neighboring agencies.

RELEVANT PROJECT EXPERIENCE

Utilities Department Emergency Response Plan Update, City of Carlsbad. Project Engineer. Reviewed and worked on updating procedures with the Operations and Fire Departments. Emergency Operations Center training was a part of the update, which included interagency coordination and a day-long drill to simulate an emergency.

Urban Water Management Plan, Rainbow Municipal Water District. District Engineer. Analysis included evaluating supply risks due to drought and emergencies, as well as demand risk analyses to inform necessary supply reliability reserves.

General Plan Update, City of Carlsbad. Project Manager. Verified water supply and collection system availability and operational and emergency storage requirements and vulnerabilities. Partnered with multiple City departments, including Fire, Public Works, Planning, and Economic Development.

Josh Reynolds
PE, MS, AWIA*



Availability: 25 %

PRINCIPAL IN CHARGE

Mr. Reynolds has over 20 years of experience in water master planning, water infrastructure evaluation, and alternatives analyses of water resource infrastructure. He has diverse water planning, design, and construction experience that enables him to analyze risks and assess water supply and distribution system conditions to maximize system longevity and resiliency. He is in the process of completing his AWIA certification.

RELEVANT PROJECT EXPERIENCE

- Water System Master Plan, City of Pismo Beach. Project Manager.
- Water System Master Plan, City of Paso Robles. Project Manager.
- Utilities Capacity Study, City of Santa Maria. Project Manager.

Haley Lehman
CCST, AWIA



Availability: 60 %

PROJECT ENGINEER

Ms. Lehman is a Level 1 Certified Control System Technician with five years of experience developing and maintaining complex digital solutions for water and wastewater treatment, storage, and delivery systems. She is the lead researcher in WSC for AWIA Section 2013 and was selected for the role of Project Engineer based on her knowledge of control systems coupled with her AWIA Certification.

RELEVANT PROJECT EXPERIENCE

- SCADA System Evaluation, City of San Luis Obispo. Control System Expert and Project Manager.
- Water Distribution System SCADA Upgrade, City of San Luis Obispo. Control System Technician.
- SCADA Upgrade, Big Bear Area Regional Wastewater Agency. Control System Expert and Project Manager.

Justin Pickard
PE, LEED AP BD+C



Availability: 5 %

QA/QC

Mr. Pickard has over 17 years of experience as a supervising engineer, project manager, and construction manager on a wide range of civil engineering projects. He has worked both as a consultant for public agencies and as a supervising engineer for the sixth largest municipal water district in California. As the former Construction Manager for the Mesa Water Reliability Facility, he is knowledgeable about the District's infrastructure, standards, and staff.

RELEVANT PROJECT EXPERIENCE

- Mesa Water Reliability Facility, Mesa Water District. Construction Manager.
- North Pleasant Valley Desalter Project, City of Camarillo. Construction Manager.
- Water Quality Integration Study, West Basin Municipal Water District, Project Manager.

Susan Schlangen
PE, M. Eng., AWIA



Availability: 50 %

RISK AND RESILIENCE ASSESSMENT

Ms. Schlangen is a Professional Engineer with six years of environmental engineering experience which includes using GIS and CMMS to prioritize the repair and replacement of water distribution infrastructure at risk of failure. She has performed analysis and implementation of regulatory programs in more than 25 states and has completed her AWIA certification.

RELEVANT PROJECT EXPERIENCE

- Pump Station System Plan, City of Portland Bureau of Environmental Services. Project Engineer.
- Spill Prevention Control and Countermeasures Plans, Echols Oil. Project Engineer.
- Stormwater Management and Pollution Prevention Plans, Multiple Agencies. Project Engineer.

Aaron Morland, EIT



Availability: 50 %

DOCUMENTATION SUPPORT

Mr. Morland is an Engineer-in-Training with environmental engineering experience focused on funding support, treatment systems, hydraulic analysis, and planning. He is experienced providing document support such as USDA Water Disposal Loans, auditing Sewer System Management Plans for compliance, and developing preliminary design reports.

RELEVANT PROJECT EXPERIENCE

- Sewer System Management Plan Audit Workshop, Big Bear Area Regional Wastewater Agency. Staff Engineer.
- Sewer System Management Plan Audit, Cayucos Sanitary District. Staff Engineer.
- 2018 USDA Preliminary Engineering Report, Big Bear Lake Department of Water and Power. Staff Engineer.

Sarah Walker



Availability: 30 %

PRESENTATION SUPPORT

Ms. Walker has 15 years of strategic planning experience specializing in visual communications. Her experience includes promoting the value of effective communication as it relates to clear branding and messaging for clean water programs, projects, and initiatives. She is experienced preparing presentations and assisting agencies to execute their vision and effectively message their projects to the public.

RELEVANT PROJECT EXPERIENCE

- Chino Basin Program, Inland Empire Utilities Agency. Strategic Visual Communications Support.
- Annual Groundwater Assessment Report. City of Riverside Public Utilities Department. Strategic Visual Communications Support.
- Blueprint for One Water, Water Research Foundation. Strategic Visual Communications Support.

WORK BREAKDOWN STRUCTURE

Task Description	Principal In Charge	Project Manager	QA/QC	Presentation Support	AWIA Compliance	Project Engineer	Documentation Support	Admin	WSC Labor Hours	
	Joshua Reynolds	Kirsten Plonka	Justin Pickard	Sarah Walker	Susan Schlagen	Haley Lehman	Aaron Morland	Kay Merrill		
TASK 1.0										
1.1	Project Kickoff	-	8	-	-	-	8	-	-	16
1.2	Monthly Invoices & Reports	-	12	-	-	-	12	-	14	38
1.3	Board Presentation	-	10	-	16	-	20	-	-	46
SUBTOTAL		0	30	0	16	0	40	0	14	100
TASK 2.0										
2.1	Data Collection	-	-	-	-	-	10	-	-	10
2.2	Gap Analysis	-	20	-	-	4	40	10	-	74
2.3	RRA Asset and Threat Characterization	-	15	-	-	4	30	10	-	59
2.4	RRA Consequence Analysis	-	16	-	-	4	30	10	-	60
2.5	RRA Draft and Final Reports	2	9	8	-	4	30	10	-	63
SUBTOTAL		2	60	8	0	16	140	40	0	266
TASK 3.0										
3.1	ERP Gap Analysis	-	12	-	-	5	20	10	-	47
3.2	ERP Coordination Requirements and Plans	-	16	-	-	5	30	10	-	61
3.3	ERP Draft and Final Plans	2	12	8	-	5	50	10	-	87
SUBTOTAL		2	40	8	0	15	100	30	0	195
TOTALS		4	130	16	16	31	280	70	14	561

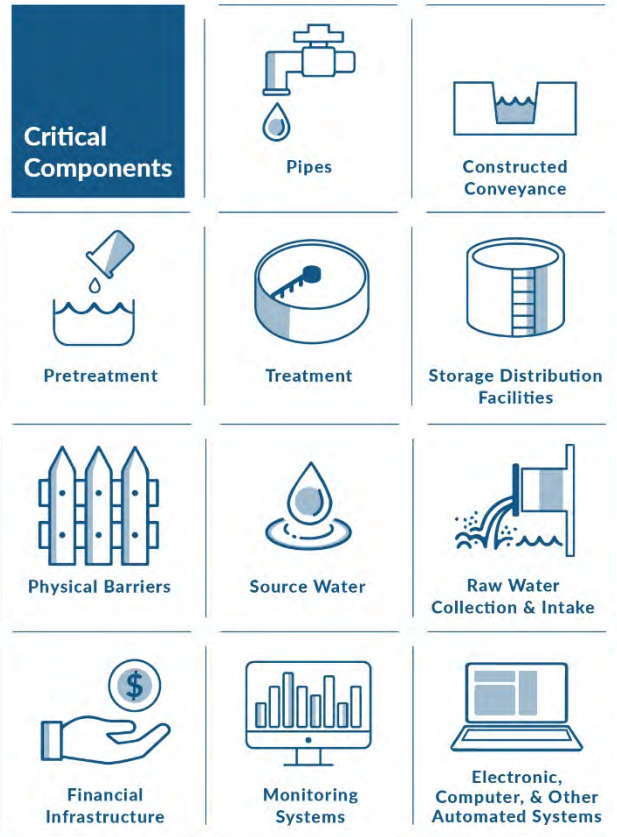
SCOPE OF WORK UNDERSTANDING AND SCHEDULE

UNDERSTANDING OF PROJECT REQUIREMENTS

On October 23, 2018, America's Water Infrastructure Act (AWIA) was signed into law. AWIA Section 2013 requires community (drinking) water systems serving more than 3,300 people to develop or update risk and resilience assessments (RRA) and emergency response plans (ERP). The law specifies the components that the RRAs and ERPs must address and establishes deadlines by which water systems must certify completion of the RRA and ERP to the U.S. Environmental Protection Agency (USEPA).

Upon completion of the RRA, the utility is to submit self-certification to USEPA indicating that the RRA has been completed in compliance with AWIA. Within six months of submitting the RRA certification letter, the utility must submit a self-certification to USEPA confirming that an ERP has been prepared in accordance with AWIA requirements.

Because Mesa Water serves a population greater than 100,000, the RRA deadline is **March 31, 2020**, and the ERP deadline is six months after RRA submission, but no later than **September 30, 2020**.



There are consequences if a utility does not certify that they have complied. EPA can initiate enforcement action and assess a penalty of up to \$25,000 per day for non-compliance.

The District's ability to meet these milestones will depend largely on the responsiveness and capability of the selected consultant team. WSC's proposed team consists of an experienced project manager with over 17 years of experience in the planning and management of water infrastructure. Our project manager is supported by

skilled engineers and planners, including an AWWA certified Utility Risk and Resilience engineer, whose training enables her to work efficiently with Mesa Water staff to develop compliant RRA and ERP documents by the required deadlines.

PROJECT SUCCESS IS DRIVEN BY EFFECTIVE PROJECT MANAGEMENT

The best way to meet schedule and budget requirements is to clearly define expectations, continuously monitor performance, and carefully build the project team with experienced and capable professionals. There is no substitute for experience when it comes to efficient execution and we make sure the staff we assign to your project have the capacity to see it through.

WSC's Project Management system, Ajera, provides an up-to-the-minute graphical status for every project. Our Project Managers can quickly evaluate project progress and earned value, allowing potential budget and/or schedule issues to be identified early, when they can best be mitigated.

Through Disciplined Effort, WSC Reduces Cost and Stays within Budget

WSC understands the importance of reducing overall cost and staying within the allocated budget. We have built our staffing plan around an experienced project manager supported by AWIA-certified project engineers who can most cost effectively prepare the RRA and ERP document content. In addition, we have combined workshops where possible to make the most efficient use of District and WSC resources and reduce the overall project cost.

TASK 1.0 PROJECT MANAGEMENT

1.1 Project Kickoff

- Plan, organize, and conduct one (1) Kickoff Meeting to discuss the scope and requirements of the Project.

1.2 Monthly Invoices and Reports

- Provide project administration and management, including invoicing and preparation of monthly progress reports.
- Prepare a detailed work plan and project schedule to be updated as needed to reflect changes and Mesa Water's direction.
- Coordinate with Mesa Water throughout the duration of the project via email, phone, and conference call. The purpose of these discussions will be to provide regular updates on work performed to date, discuss potential concerns for future work, review outstanding needs, and discuss action items. WSC will provide an overall timeline as well as a rolling three (3) week look ahead schedule in advance of each coordination call.

DELIVERABLES: Work Plan, Project Schedule, Monthly Progress Reports

1.3 Board Presentation

- Prepare one (1) presentation summarizing the results of the RRA and ERP to the Board of Directors.

DELIVERABLES: Board Presentation

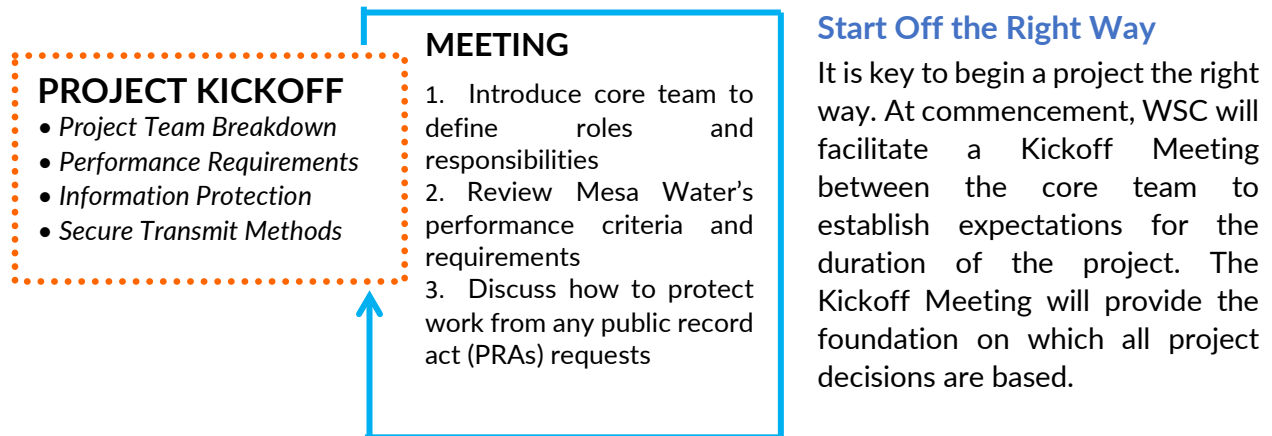
MEETINGS: One (1) Kickoff Meeting to be combined with the Gap Analysis Workshop to reduce cost.

Our Commitment to You

We understand Mesa Water expects us to be available, accountable, and reliable, and we hold ourselves to that same standard. Throughout the project, WSC will closely manage the communication, coordination, schedule, and quality to provide a high level of service consistent with our core values.

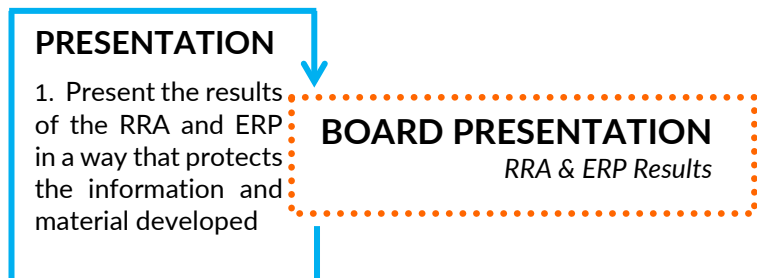
We promise to:

- ✓ Track project decisions, data requests and review comments
- ✓ Keep project documents and records organized and accessible to the project team
- ✓ Review the schedule and workload of each team member weekly and adjust accordingly
- ✓ Notify Mesa Water immediately of potential out-of-scope items that may impact budget
- ✓ Assign staff with appropriate experience and availability
- ✓ Conduct and document thorough quality reviews on submittals prior to submission
- ✓ Schedule meetings, workshops, and draft review periods early on



It Is Not Only How You Start, But How You Finish

We believe that the way we share information is just as important as the way we create it. WSC will engage staff from our Strategic Communications Group to help develop effective presentation materials that clearly demonstrate results of the project.



LEVERAGE ASSET MANAGEMENT PRINCIPLES AND STANDARDS TO OPTIMIZE RISK REDUCTION

Gap Analysis

WSC has reviewed the list of resources to be provided by Mesa Water and we are familiar with the existing documentation. We will build upon this knowledge to perform the gap analysis. This process involves analysis of Mesa Water’s existing documentation for completeness, accuracy, and applicability to current AWIA standards. We will use this documentation to determine what compliance gaps exist prior to completing the RRA and ERP.

GAP ANALYSIS

- AWIA Requirements
- Compliance Gap Analysis

WORKSHOP

1. Review the results of the gap analysis
2. Recommend tools for the RRA assessment
3. Introduce the strategy to be utilized during the risk assessment phase

TASK 2.0 RISK & RESILIENCE ASSESSMENT

2.1 Data Collection and Gap Analysis

- Coordinate with Mesa Water to obtain relevant project information, data, and supporting documents.
- Review Mesa Water’s existing documentation.
- Identify compliance gaps, if any, and prepare documentation.

DELIVERABLES: Compliance Gap Documentation.

WORKSHOP: One (1) Gap Analysis Workshop to be combined with Kickoff Meeting to reduce cost.

Standards Lay the Foundation

WSC will incorporate the AWWA M19 manual, ANSI/AWWA J100-10, ANSI/AWWA G300, ANSI/AWWA G440-17, and ANSI/AWWA G430-14 standards as appropriate. These standards are intended to represent a consensus of the water sector to promote a risk and resilience management strategy that includes the protection of employee safety, public health, public safety, and public confidence. Proper use of these standards will provide Mesa Water with a sound basis for demonstrating due diligence as well as maintain eligibility for liability protection under the SAFETY (Support Anti-terrorism by Fostering Effective Technologies) Act. The following page walks through the use of these standards,

WSC WILL APPLY J100 METHODOLOGY

illustrated throughout the assessment process

WSC reviews client project information and data, identifying any gaps



WSC incorporates client data and guidance documents that guarantee liability protections



WSC's documents are eligible for liability protections from FEMA



OPTIONAL TASK: RISK & RESILIENCE MANAGEMENT

Incorporate Discoveries to Assess Risk

Upon completion of the Analysis, WSC will prepare Mesa Water’s risk and resilience assessment. The RRA will incorporate discoveries made by the compliance gap analysis.

WSC will catalogue water system infrastructure and assets to determine criticality and infrastructure resilience during the RRA. The RRA will assess potential hazards to determine the risk and resilience of the drinking water physical, operational, and cyber assets owned, utilized, or operated by Mesa Water. The RRA will identify and address the gaps identified previously.

2.2 Analysis Tools and Reference Selection

- WSC will recommend analysis tools and standards for preparation of the RRA, including future updates by Mesa staff.

2.3 RRA Asset and Threat Characterization

- Perform asset and threat characterization in order to develop a list of critical assets and threats.

2.4 RRA Consequence Analysis

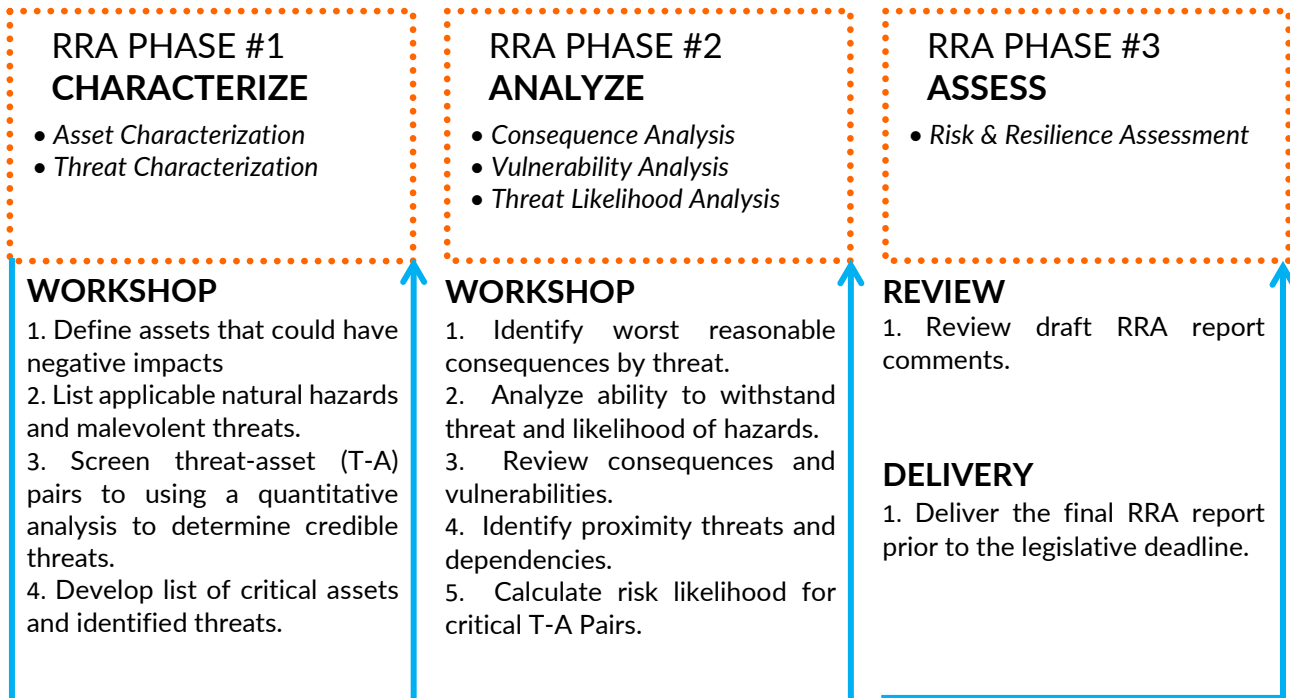
- Perform consequences, vulnerabilities, and threat-likelihood analysis to prepare for risk calculation.

2.5 RRA Draft and Final Assessments

- Calculate risk based upon the previous two (2) subtasks.
- Upon completion of the risk calculation, WSC will prepare draft and final RRA reports for Mesa’s review.

DELIVERABLES: Draft and Final RRA Reports

WORKSHOPS: Two (2) Workshops.



EVOLUTION OF A ROBUST EMERGENCY RESPONSE TOOL FOR ONGOING EVALUATION AND PROCESS IMPROVEMENT

Upon completion of the RRA, WSC will prepare the emergency response plan (ERP) in accordance with AWIA requirements. Development of the ERP will be tailored to Mesa Water’s needs, but also aligned with local and state partners’ existing plans.

WSC will document the compliance gaps, if any. The effort spent here by WSC will provide a valuable tool for ongoing emergency planning. WSC will develop a living document that can be maintained and updated by Mesa Water.

All ERP update efforts will include development of an AWIA Requirements chapter that explains how the RRA, ERP, and other relevant documents meet statutory and regulatory requirements.

TASK 3.0 EMERGENCY RESPONSE PLAN

3.1 ERP Gap Analysis

- Review discoveries made by the RRA and Gap Analysis to prepare ERP document.

3.2 ERP Coordination Requirements and Plans

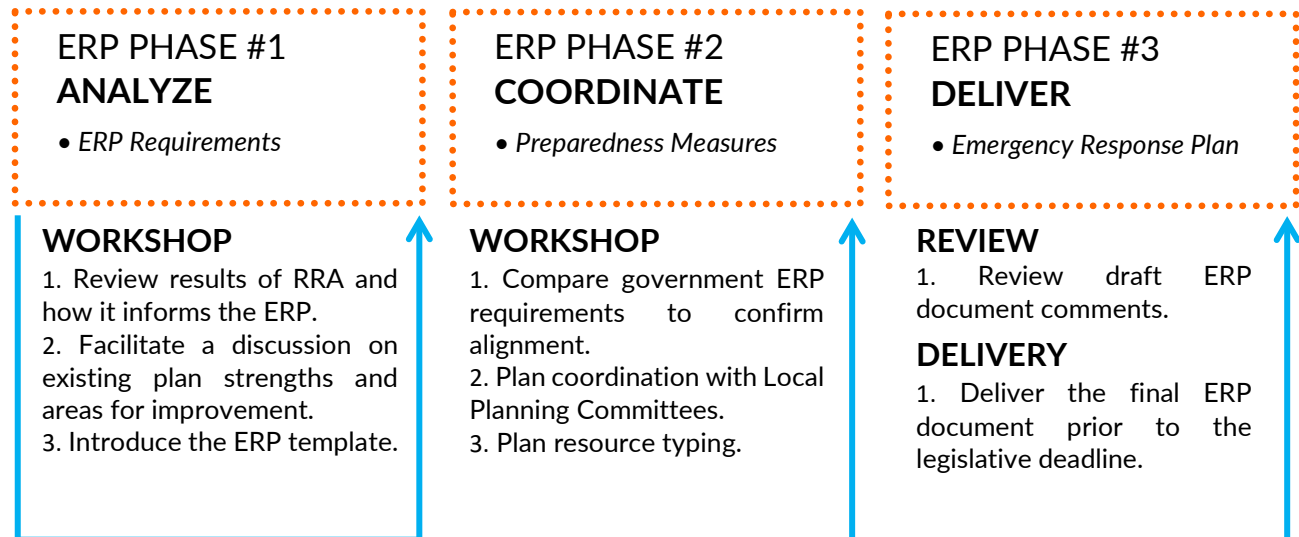
- Confirm alignment with AWIA Requirements.

3.3 ERP Draft and Final Plans

- WSC will prepare a draft and final ERP document.

DELIVERABLES: Draft and Final ERP Document

WORKSHOPS: Two (2) workshops to be combined to reduce costs.



STRATEGIC IMPLEMENTATION OF A LONG-TERM SOLUTION

WSC believes in finding ways to provide additional value to our clients. We have evaluated this proposal and identified two tasks that we believe would provide Mesa Water with the long-term value you are seeking.

Optional Appendix

WSC will use the information developed during this project to build an approach to addressing system risks. WSC will leverage the results of the risk assessment task as the basis for discussions with Mesa Water regarding acceptable risk and for the development of recommendations to further improve the effectiveness of Mesa Water’s risk preparedness. WSC will prepare planning-level cost estimates for recommendations and will work with Mesa Water on the phasing and sequencing of proposed improvements.

OPTIONAL APPENDIX

- *Improve Effectiveness*
- *Planning-Level Cost Estimates*

WORKSHOP

1. Discuss an approach to closing gaps.
2. Define acceptable risk.

ADDITIONAL OPTIONAL TASKS

O1.1 Optional Appendix

- WSC will develop one or more risk-specific operating procedure document(s) that address an identified planning gap from Task 3.1. Budget to be developed based on number of procedures required.
- Plan, organize, and conduct one (1) Risk Mitigation Workshop to discuss the acceptable risk.
- Assumes maximum of 20 risks addressed.

DELIVERABLES: Risk Mitigation Document

WORKSHOPS: One (1) workshop.

O1.2 Training Session

- Host a group training session to train Mesa Water on how to update the RRA and ERP during a two-hour workshop to be held at Mesa Water’s facility.

DELIVERABLES: Training Documentation

WORKSHOPS: One (1) two-part workshop.

Training Session

WSC knows that Mesa Water would like to update and maintain these documents itself to meet the AWIA five-year update requirement. To assist with this, WSC will conduct a two-part training session to be held at Mesa Water’s facility. The first part of the training session will be focused on using the RRA tool. The second part of the training session will be focused on how to update and maintain the ERP.

WORKSHOP

1. Train Mesa Water on how to update the RRA and ERP going forward to continue to meet the five (5) year update requirement.

TRAINING SESSIONS

- *Future RRA and ERP Updates*

We help you champion your project.



WSC will help you with Stakeholder Engagement. WSC approaches workshops with a goal of creating new connections, refining shared goals, and building an inspiring and functional plan. WSC is an expert in advanced facilitation techniques and has helped numerous water agencies plan, and facilitate workshops with renewed energy and optimism.



Identified Meetings & Workshops

MEETING & WORKSHOP DETAILS	
Meetings:	Workshops:
Time: 2 hours	Time: 4 hours
Method: Conference call	Method: Hosted at Mesa's Facility
Team: Core Team	Team: Core Team + Critical Stakeholders*
Deliverable: Agenda/Minutes	Deliverable: Agenda/Minutes
Role: Mesa Water will coordinate attendance	Role: Mesa Water will coordinate attendance

* WSC will help you determine which critical stakeholders to invite prior to the workshop.

Project Kickoff Meeting
 *Hosted at Mesa Water
 *Mesa Water will provide breakdown of team

Risk & Resilience Gap Analysis Workshop
 *Only Core Team
 *Mesa Water will provide data to inform decision

Hold on the same day as the RRA Asset & Threat Characterization Workshop

RRA Asset & Threat Characterization Workshop

RRA Consequence Analysis Workshop

RRA Draft & Final Assessments Meeting

ERP Gap Analysis Workshop

ERP Coordination Requirements & Plan Workshop
Hold on the same day as the RRA Draft & Final Assessments Meeting

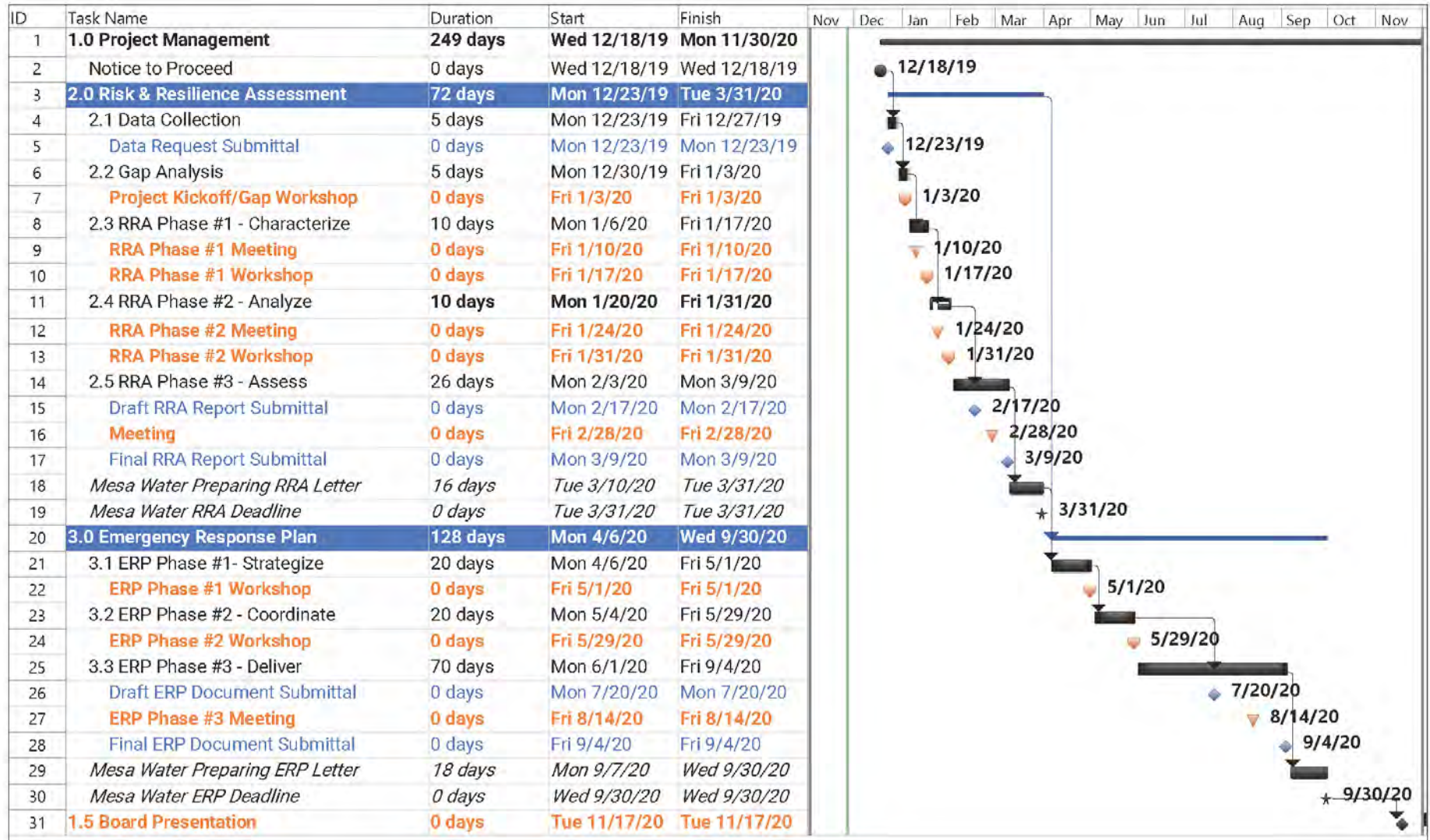
ERP Draft & Final Plan Meeting

Board Presentation Meeting

Optional Training Workshop

PROJECT SCHEDULE

Project schedule assuming a Notice to Proceed date of 12/18/2019 and includes an allowance for Mesa Water's review of deliverables.



APPENDIX A

KEY STAFF RESUMES

Kirsten L. Plonka, PE

Education

BS, Civil Engineering, California Polytechnic State University, San Luis Obispo

MS, Management, Colorado State University, Global Campus (in-process)

MS, Organizational Leadership, Colorado State University, Global Campus (in-process)

Professional Registrations

Professional Engineer – Civil, California, No. C70746

Professional Affiliations / Certifications

American Society of Engineers

American Public Works Association

Engineers Without Borders (former Southern California State Representative)

Potable Reuse Advisory Committee, San Diego County Water Authority

Advanced Water & Wastewater Modeling Certified by Innovyze & Bentley

Publications

"Health Effects Study on Potable Water Reuse", A&WMA

Industry Recognition

2013 Outstanding Water Project of the Year from Region 9 ASCE, Award of merit for San Diego Section ASCE for Pala Mesa Tank

Professional Experience

Ms. Plonka brings more than 17 years of experience in the planning, design, and management of water, wastewater and recycled water systems. She specializes in water utility management, master planning, and hydraulic modeling. She is well versed in funding alternatives, regulatory compliance, and public policy development. She has completed Vulnerability Assessments for multiple clients in Southern California. Her experience includes coordinating with police departments, fire departments, and neighboring agencies for infrastructure projects with important risk and resilience components. Her role managing public utility engineering departments gives her in-depth knowledge of day-to-day issues, SCADA, and asset management. Her extensive experience in the public sector allows her to approach projects from an owner's perspective. She is in the process of completing her America's Water Infrastructure Act (AWIA) certification

Professional Project Experience

City of Carlsbad, Utilities Department Emergency Response Plan Update, Carlsbad, CA. Project Engineer. Reviewed and worked on updating procedures with the Operations and Fire Departments. Emergency Operations Center training was a part of the update, which included interagency coordination and a day-long drill to simulate an emergency.

Rainbow Municipal Water District, 2010 Urban Water Management Plan, Fallbrook, CA. District Engineer. Prepared the 2010 UWMP to fulfill the requirements of the Urban Water Management Planning Act. Developed 20-year per capita water use projections by census block within the Division's boundary in accordance with California Senate Bill x 7-7. Evaluated supply, supply reliability, demand, supply and demand comparison, and developed a water shortage contingency plan.

City of Carlsbad, General Plan Update, Carlsbad, CA. Project Manager. Verified water supply and collection system availability, operational and emergency storage requirements and vulnerabilities. Partnered with multiple City departments, including Fire, Public Works, Planning, and Economic Development.

Casitas Municipal Water District, Water Master Plan and Capital Improvement Plan, Ojai, CA. Project Manager. Conducted a condition-based assessment and developed a Water Master Plan for the new owner of the Ojai water system. Tasks include developing opinions of probable cost for recommended projects, evaluating production and consumption data to develop projections, and recommending improvements necessary to maintain a safe and reliable level of service. Developed, calibrated, and used a hydraulic model of the system in conjunction with GIS datasets to improve system operations and develop a CIP. Evaluating the capacity of the existing water system and identifying improvements to meet demands, including fire flow, of the current and future population.

Oak Lodge Water Services District, Water Master Plan Update, Oak Grove, OR. Project Engineer. Preparing a Master Plan Update which considers future water service commitments and build-out, including both area-specific water quality needs and system operations and maintenance priorities. During the project, it was identified that the District faced significant risk to its water supply because it was entirely depended on one water source. The master plan includes an evaluation of a potential interconnection with a nearby agency that gets its water from a different source. The master plan also includes a seismic resiliency analysis of the water system. The update includes development of an asset database to capture and track condition data for individual assets within the water system.

Otay Water District, As-Needed Hydraulic Modeling Services, Spring Valley, CA. Project Engineer. Provides as-needed services for computerized hydraulic models to manage the District's potable water distribution, recycled water distribution, and wastewater collection pipe networks. She provides modeling services to optimize current operations, evaluate potential improvement projects, and allow for planning of future developments.

Big Bear City Community Services District, 2017 Water Master Plan Update, Big Bear City, CA. Project Manager. Conducted site visits and leveraged operator knowledge to document and address the maintenance and replacement needs of the current water system. Prepared detailed analysis of the District's infrastructure and conveyance system, as well as considered age and useful life. A comprehensive CIP was developed that will be used to set annual budgets, establish rates and fees, prioritize improvements, and address risk.

Lake Arrowhead Community Services District, Water and Sewer Master Plan Updates, Lake Arrowhead, CA. Project Engineer. Prepared comprehensive water and sewer master plans. Project included hydraulic modeling of the water and sewer systems using H2OMap and H2OMap Sewer, geographical information system update of the entire system, and development of a capital improvement program.

Eastern Municipal Water District, Water and Sewer Master Plan Updates, Perris, CA. Staff Engineer. Responsible for conversion of existing H2OMAP hydraulic model to InfoWater software, field testing and calibration of hydraulic model, evaluation of pipeline capacity to deliver current and future demands and Capital Improvement Program prioritization.

Golden State Water Company, Water and Sewer Master Plan Updates, Multiple Locations, CA. Staff Engineer. Responsible for coordinating with stakeholders, preparing and conducting a hydrant flow testing plan for model calibration purposes, updating and calibrating the hydraulic model in H2OMap, identifying system deficiencies, creating Capital Improvement Programs, and writing of comprehensive master plan.

Rainbow Municipal Water District, Hydraulic Water, Sewer Modeling and Asset Management Plan, Fallbrook, CA. District Engineer. Providing services for hydraulic water and sewer modeling. Converting the District's existing hydraulic models to GIS based InfoWater. Performed continuous model updates and calibrated a previously uncalibrated sewer model including performing a flow monitoring study. Provided modeling analysis of the existing system to help the District make informed decisions regarding potential changes to the system. Review of Feasibility Studies and Water Supply Assessments as needed to support the District. Staff review of GIS based asset management program for water and wastewater infrastructure based on materials and age.

On Call As-Needed Services, San Lorenzo Valley Municipal Water District, Boulder Creek, CA. Extension-of-Staff Project Manager. Work in the District office weekly to lead multiple projects as the Owner's Project Manager. In this role, Ms. Plonka has managed the following projects: Bear Creek Estates Wastewater Treatment Facility Rehabilitation, Bear Creek Road Water Pipeline, Highway 9 Viaduct Water Pipeline, Trout Farm Inn Fire Service, Lompico Pressure Reducing Valves Replacement Project, Lyon Tank Road Landslide Repair Project, Fall Creek Fish Ladder Restoration Project.

Water Utility of Greater Buckeye, Global Water Due Diligence Facilities Report, Buckeye, AZ, Project Engineer. Responsible for site layout evaluations, inventories, and condition assessments of water source infrastructure. Creating hydraulic models and performing hydraulic analysis for four distinct distribution systems.

Joshua H. Reynolds, PE, MS

Education

MS, Civil and Environmental
Engineering, California
Polytechnic University, San Luis
Obispo, CA

BS, Civil Engineering, California
Polytechnic University, San Luis
Obispo, CA

Professional Registrations

Professional Engineer - Civil,
California, No. C65400

Professional Engineer - Civil,
Oregon, No. 92927

Professional Engineer - Civil,
Washington, No. 57917

Professional Affiliations

American Society of Civil
Engineers, Member

Professional Experience

Mr. Reynolds has 20 years of experience in water system analysis, master planning, design, and construction management. He was selected as proposed principal in charge for his diverse water planning, design, and construction experience that enables him to analyze risks and assess water supply and distribution system conditions to maximize system longevity. He will apply his diverse array of water resource and infrastructure knowledge toward developing strategies and resources to improve the resilience of the District's system. He is in the process of completing the America's Water Infrastructure Act (AWIA) certification.

Representative Projects

City of Pismo Beach, 2019 Water Master Plan Update, Pismo Beach, CA. Project Manager. Performed an update of the City of Pismo Beach 2004 Water Master Plan. Created and calibrated an all-pipes, spatially allocated demand hydraulic model of the City's water distribution system using Bentley's WaterGEMS software. Used the hydraulic model to evaluate capacity limitations for current and future buildout scenarios and opportunities to optimize operations. Developed condition based-replacement plans for aging infrastructure and an updated CIP project list to prepare the City for budget planning.

City of Paso Robles, 2015 Water Master Plan, Paso Robles, CA. Project Manager. Update included a survey of capacity limitations to anticipate expected growth along the outskirts of the existing infrastructure. Analysis of the aging pipeline detailed needs for replacement or rehabilitation of the distribution system to avoid failure in the future. A Capital Improvement Plan was created and needs identified in the system analysis for the City to act upon.

Victorville Water District, Water District Master Plan Update 2016, Victorville, CA. QA/QC. Reviewed an update to the District's drinking water production and distribution system master plan. Work includes minor updates to existing water InfoWater hydraulic model, identifying and evaluating system improvements, performing a water quality evaluation, developing a capacity-driven Capital Improvement Plan, and developing a Rehabilitation and Replacement Plan. Work also includes preparing a recycled water master plan for the SCLA area located within the District's boundary and a SCADA master plan.

City of Santa Maria, 2012 Utility Master Plan Update, Santa Maria, CA. Project Manager. Prepared a Master Plan Update to assess the capacity of the City's water and wastewater collection system, and developed a prioritized, risk-based capital improvement plan for the utilities. The plan update includes development of a new water model in InfoWater and a sewer collection system model in SewerGEMS. The models were loaded using actual spatially allocated water consumption data.

City of Camarillo, North Pleasant Valley Desalter Project, Camarillo, CA. Program Manager. Providing Program Management services for a new Desalter Facility that will treat 4,500 AFY of brackish groundwater and yield up to 3,800 AFY of potable water using Reverse Osmosis technology. The project will allow the City to more than double its local water supply. Brine from the RO treatment will be disposed of through an existing brine pipeline and ocean outfall. Tasks include supporting property purchase, annexation, CEQA preparation, design coordination and review, grant application development and more. The facility is expected to be operational in Spring 2020.

Apple Valley Ranchos Water Company, North Apple Valley Water System Improvement Plan, Town of Apple Valley, CA. QA/QC Engineer. Evaluated the capability and reliability of the Bell Mountain and Stoddard Pressure Zones in north Apple Valley, which had low customer demands and high fire flow requirements. Spatially allocated demands, performed hydraulic analysis of the system using the hydraulic model in InfoWater, evaluated multiple system level alternatives for each pressure zone, including changing the HGL; and developed a CIP to improve the existing system. Recommended revised pressure zone boundaries and performed a preliminary parcel screening.

City of Arroyo Grande, Water System Master Plan, Arroyo Grande, CA. Project Manager. Developed a master plan for the City's drinking water production and distribution system. Work includes development of an updated hydraulic model using WaterGEMS software, and application of GIS datasets to conduct a risk-based condition assessment of the water distribution system to recommend prioritized improvements.

Water Distribution System and Wastewater Treatment Facility Operations Evaluation, Camp Roberts, CA. Project Manager. Conducted an infrastructure and compliance evaluation of Camp Roberts military facilities' existing wastewater treatment and water distribution facilities that included on-site inspections and condition assessments of wastewater equipment, process controls, and infrastructure. The evaluation of the Main Garrison treatment facility was conducted in conjunction with an upgrade to achieve compliance with new wastewater discharge permit requirements.

City of Guadalupe, Water Master Plan, City of Guadalupe, CA. Project Engineer. Prepared a comprehensive water master plan for the City of Guadalupe, including water modeling of the distribution system. The plan included detailed recommendations for water storage and distribution system capital improvements, and a capital improvements program to serve current and 20-year build-out needs.

City of Paso Robles, Main West Tank, Paso Robles, CA. Project Manager. Prepared the design for a new 4 MG partially buried pre-stressed concrete tank on the site of an existing 4 MG reservoir which has reached the end of its useful life. The project has been a long-planned and essential component of the City's efforts to advance the overall performance, reliability, and usefulness of its water system. Once complete, the project will allow the City to address aging infrastructure, improve water system hydraulics, and enhance the seismic safety of the water distribution system. The site drainage will be designed to handle an emergency tank overflow scenario and reduce attenuated runoff and minimize offsite flow.

California Water Service, Dominguez 232 Pump Station Upgrade, Torrance, CA. Technical Advisor/Principal in Charge. Provided QA/QC support for the WSC team that prepared design plans and specifications for the replacement of the Zone 1 booster station. The Project included the replacement of aging and capacity deficient infrastructure with four 2,500 gpm vertical turbine pumps and new site piping. The Project was designed to keep the existing booster station operational during construction.

San Miguel Community Services District, Water and Wastewater Master Plans, San Miguel, CA. Project Engineer. Prepared a comprehensive water master plan for the community of San Miguel, including water modeling of the distribution system. The plan included detailed recommendations for water storage and distribution system capital improvements, and a capital improvements program to serve current and 20-year build-out.

Descanso Community Water District, Comprehensive Planning Study. Project Manager. Performed an analysis of the District's water system. Investigated and evaluated integrated treatment systems for the removal of iron, manganese and radon at the District's two production wells. Reviewed demand projections, supply availability, water quality data, and production records to develop a 20 year CIP plan for the District.

Haley Lehman, CCST, AWIA

Education

BS, Mechanical Engineering,
University of California, Merced

Graduate Certificate, Project
Management, Pennsylvania
State – In Progress

Certifications

Level 1 ISA Certified Control
System Technician

America's Water Infrastructure
Act: EL265 - Utility Risk and
Resilience Certificate Program

Affiliations

Project Management Institute,
Member

International Society of
Automation, Member

Institute of Electrical and
Electronics Engineers, Member

Women in Technology
International, Member

California Water Environment
Association, Member

Professional Experience

Ms. Lehman is a Level 1 Certified Control System Technician with five years of experience developing and maintaining complex digital solutions for water and wastewater treatment, storage, and delivery systems. She is the lead researcher in WSC for America's Water Infrastructure Act (AWIA) Section 2013 and has completed the AWIA EL265 – Utility Risk and Resilience Certificate Program. The certification provides a foundation for supporting water utilities' development of an all-hazards approach to risk and resilience management. The Program included courses on Facilitating Compliance with America's Water Infrastructure Act of 2018, Security Practices for Operations and Management, Risk and Resilience of Water and Wastewater Systems, Emergency Planning, and Cybersecurity in the Water Sector.

Representative Projects

City of San Luis Obispo, SCADA System Evaluation, San Luis Obispo, CA. Control System Expert and Project Manager. Evaluated several SCADA System Platforms across several criteria established by the City of San Luis Obispo. Held vendor interviews and participated in product demonstrations.

City of San Luis Obispo, Water Distribution SCADA Upgrade, San Luis Obispo, CA. Control System Technician. Constructed a reliable, robust, and efficient SCADA system capable of future expansion of the Whale Rock Reservoir delivery system and the City's Water Distribution System. Upgrade work included replacing or repairing pump stations, tanks, pressure reducing valves, control valves, and flow, pressure, and power meters.

Big Bear Area Regional Wastewater Agency, SCADA Upgrade, Big Bear, CA. Control System Expert and Project Manager. Developed project specifications and supporting documentation for the Big Bear Area Regional Wastewater Agency (BBARWA) Facility SCADA System Upgrade. Upgrade included PLC Components, SCADA System HMI Upgrades, integration of new Belt Press Filter equipment, and other integration including: process meters, flow meters, and existing generator equipment.

City of San Luis Obispo, Water Resource Recovery Facility Upgrade, San Luis Obispo, CA. Control System Technician. Assisted in delivering a water resource recovery facility that provides economic, social and environmental value to the community. Increased capacity to meet flows and loads under dry and wet weather conditions. Replaced aging infrastructure, modified process facilities, and met new discharge permit requirements.

City of San Luis Obispo, Wastewater Collections Lift Station SCADA Upgrade, San Luis Obispo, CA. Control System Technician. Provided programmable logic controller, power, and cabling upgrades to four of the City's wastewater collection sites: the Airport Lift Station; Silver City Lift Station; Prefumo Lift Station, and Poly Flowmeter. PLC upgrade involved making communication system with compatible with other Allen Bradley SCADA systems.

Southern California Edison, Distributed Control System Upgrade, Big Creek, CA. Control System Engineer. Upgraded existing Distributed Control System (DCS) to a redundant platform for increased reliability, security, and enhanced control to 11 sites consisting of 9 hydroelectric power plants and 2 control centers. Provided custom training to each site's operation staff. Systems had to remain online throughout project's duration.

Justin Pickard, PE, LEED AP BD+C

Education

BS, Civil Engineering, University of Texas at Austin, Austin, TX

Professional Registrations

Professional Engineer - Civil, California, No. 71816

LEED AP BD+C, No. 10183662

Professional Experience

Mr. Pickard has over 17 years of experience as a supervising engineer, project manager and construction manager on a wide range of civil engineering projects. He has worked both as a consultant for public agencies and as a supervising engineer for the sixth largest municipal water district in California. As the former Construction Manager for the Mesa Water Reliability Facility, he is knowledgeable of the District's infrastructure, standards, and staff.

Representative Projects

Mesa Water, Mesa Water Reliability Facility, Costa Mesa, CA. Construction Manager. Served as the construction manager for the Colored Water Treatment Facility Technology Replacement and Expansion Project; a 9 MGD nanofiltration groundwater treatment facility. The project included demolition of existing ozone facilities, construction of a new reinforced concrete and CMU process building, installation of sand separators and cartridge filters, installation of nanofiltration membrane skids, construction of miscellaneous yard piping, installation of a new low-voltage electrical service, installation of vertical turbine pumps, installation of chemical feed systems and construction of decarbonation systems. Mr. Pickard supervised a staff of resident engineers, inspectors, and third party materials testing firms and provided construction management services including constructability reviews, facilitation of project meetings, field inspection, resolution of constructability issues, schedule reviews, change management, review of progress payment requests and claims mitigation. The project cost was approximately \$17,000,000.

North Pleasant Valley Desalter Project, City of Camarillo, CA. Project Engineer. Providing program management support for the development and implementation of a \$30 million reverse osmosis groundwater desalter facility. The new desalter facility will treat 4,500 AFY of brackish groundwater and yield up to 3,800 AFY of potable water, allowing the City to more than double its local water supply. Brine from the RO treatment will be disposed of through an existing brine pipeline and ocean outfall. Tasks include contractor prequalification, review of design plans, and bid phase support.

West Basin Municipal Water District, Water Quality Integration Study, Carson, CA. Project Manager. Served as the project manager for the Water Quality Integration Study which analyzed the impacts of introducing desalinated ocean water into existing potable water distribution systems from both a corrosion and disinfection byproduct (DBP) formation perspective. Blends of desalinated ocean water, groundwater and treated surface water were circulated through pipe loops made from piping materials commonly found in potable water distribution systems. Samples of water were taken after a period of circulation and tested for corrosion products. The water blends were also tested on a bench-scale in the laboratory to determine if the blending resulted in the increased formation of DBPs. The project cost was approximately \$800,000.

Water Resource Recovery Facility Upgrade, City of San Luis Obispo, CA. Program Manager. Providing program management support for a \$140 million WRRF upgrade that will meet new National Pollutant Discharge Elimination System permit requirements. Responsibilities include management of scope, schedule, and quality of the program; contract management for multiple contracts; contractor prequalification; coordination with other City departments; and general program administration.

West Basin Municipal Water District, Ocean Water Desalination Demonstration Facility Project, Redondo Beach, CA. Resident Engineer. Served as the resident engineer for the Ocean Water Desalination Demonstration Facility Project. The project included demolition of existing facilities, hazardous materials abatement, construction of a reinforced concrete raft foundation in liquefiable soils, construction of a structural steel canopy to house process equipment, installation of a 2,000-foot long bundle of high-density polyethylene (HDPE) piping within an existing submerged 10-foot diameter cooling water intake tunnel, installation of submersible and vertical turbine pumps, installation of new low-voltage motor control centers (MCC), installation of ultrafiltration membrane skids, installation of reverse osmosis skids, installation of chemical feed systems and complex systems integration and process commissioning. Mr. Pickard supervised a staff of resident engineers, inspectors and third party materials testing firms and provided construction management services including facilitation of project meetings, field inspection, resolution of constructability issues, schedule reviews, change management, review of progress payment requests and claims mitigation. The project cost was approximately \$10,000,000.

West Basin Municipal Water District, Hyperion Pump Station Improvements Project, Carson, CA. Project Manager. Served as the project manager for the Hyperion Pump Station Improvements Project, which includes the design and construction of a 40 million gallon per day (MGD) pump station to supply secondary effluent to West Basin's water recycling facility in El Segundo, CA. The project includes coordination with numerous project stakeholders, installation of new 800 horsepower (hp) vertical turbine pumps, installation of new medium-voltage (4160 V) electrical distribution equipment and variable frequency drives (VFDs), installation of a new 3 megawatt (MW) emergency diesel generator and complex construction of new reinforced concrete wet wells including sheet pile installation and deep excavation in sandy soils with shallow groundwater. The project cost was approximately \$16,000,000.

West Basin Municipal Water District, Title 22 Recycled Water Alkalinity Improvements Project, Carson, CA. Project Manager. Served as the project manager for the Title 22 Recycled Water Alkalinity Improvements Project, which includes the design and construction of chemical feed systems to supplement the alkalinity of West Basin's tertiary treated recycled water to facilitate downstream nitrification for ammonia removal. The project includes the installation of sodium hydroxide and carbon dioxide chemical feed systems, installation of centrifugal pumps and modifications to existing low-voltage electrical systems. The project cost was approximately \$2,000,000.

West Basin Municipal Water District, Inglewood Disinfection Station, Carson, CA. Project Manager. Served as the project manager for the Inglewood Disinfection Station Project which includes the design and construction of a chlorination facility to boost the chlorine residual in West Basin's tertiary treated recycled water distribution system for downstream users. The project includes the installation of a sodium hypochlorite feed system, construction of a metering vault with a magnetic flow meter and chemical injection system, construction of a concrete masonry unit (CMU) building and the installation of a new remote terminal unit (RTU) to facilitate remote monitoring and control of the facility.

West Basin Municipal Water District, Hollywood Park Recycled Water Project, Carson, CA. Project Manager. Served as the project manager for the Hollywood Park Recycled Water Project which includes the construction of approximately 22,000 linear feet of recycled water pipeline to serve a mixed-use redevelopment project including the future home of the Los Angeles Rams. Mr. Pickard is responsible for developing an inspection plan and providing quality control/quality assurance for the recycled water improvements that are to be constructed by a third-party developer and subsequently transferred to West Basin. The project cost was \$1,600,000.

Susan Schlangen, M.Eng., PE, AWIA

Education

M.Eng., Environmental Engineering, Portland State University, Portland, OR

BS, Civil Engineering, University of Minnesota, Minneapolis, MN

Professional Registrations

Professional Engineer - Civil, Oregon, No. 93692

America's Water Infrastructure Act: EL265 - Utility Risk and Resilience Certificate Program

OSHA 40 Hour HAZWOPER Certification

Professional Affiliations

Women In Environment, Member

Society of Women Engineers, PSU Section Media Coordinator (Sept. 2016 to March 2018)

American Society of Civil Engineers, PSU Section Environmental Competition Team (Spring 2017)

Professional Experience

Susan Schlangen is a Professional Engineer with six years environmental engineering experience focused on environmental regulatory compliance. Her experience includes using GIS and CMMS to prioritize water infrastructure at risk of failure and in need of repair. She has performed analysis and implementation of regulatory programs in over 25 states and is familiar with providing risk and resilience assessment support for water infrastructure evaluation and alternative analysis projects. She has completed the AWIA EL265 – Utility Risk and Resilience Certificate Program.

Representative Projects

Pump Station System Plan, Bureau of Environmental Services, Portland, OR. Staff Engineer. Assisted with the development of a condition-based rehabilitation prioritization program for pumping stations. Desktop evaluations using existing data from the CMMS, GIS databases, and other sources were used to prioritize pumping stations for detailed field assessments based on risk. Digital forms were utilized to collect field data and establish condition and performance ratings for individual pump station components. An aggregate risk cost was developed for each station based on remaining useful life calculations, and time-based consequences of failure. Results were summarized and georeferenced in standard operating procedures that will be used by City staff for assessments.

Spill Prevention Control and Countermeasures Plans, Echols Oil. Project Engineer. Prepared Spill Prevention Control and Countermeasures Plans for two bulk petroleum facilities under the same ownership located in central Texas, including all required elements according to 40 CFR 112 site layouts and facility location maps as well as implementation plan consisting of numerous structural improvements necessary to meet the standard and advanced soil testing. Performed project management work consisting of identifying service contractors suitable for the projects identified and requesting pricing structures and quotes to support the corrective action plan.

Wastewater System Master Plan, City of Milwaukie, OR. Staff Engineer. Updating the City of Milwaukie's Wastewater System Master Plan. This project includes mapping the City's wastewater systems and modeling for six different growth scenarios, including climate change and seismic resiliency considerations.

Storm Water Management and Pollution Prevention Plans. Project Engineer. Susan has assisted multiple industries in applying for coverage under state-issued permits for Storm Water Discharges under the EPA's National Pollutant Discharge Elimination System (NPDES). She has prepared and implemented NPDES Storm Water Pollution Prevention Plans (SWPPP) for industrial facilities in several states. Sectors served include Timber Products, Primary Metals Facilities, Waste Recycling Facilities, Miscellaneous Plastic Products, and Fabricated Metal Products Manufacturing. These plans have identified pollutant sources, control measures, and provided recommendations for control of point source and non-point source discharges. She has also been involved with no exposure and non-applicability determination and notification.

Auburn Ravine Force Main Analysis and Design, Placer County, CA. Staff Engineer. Helped develop, evaluate, and recommend a replacement alternative for 6,300-LF of 12-inch asbestos cement force main. The project included developing cost estimates and feasibility assessments of three bypassing scenarios. Supporting the full design of the project.

Aaron Morland, EIT

Education

BS, Environmental Engineering,
California Polytechnic University,
San Luis Obispo, CA (In
Progress, expected June 2019)

Professional Registrations

Engineer-in-Training -
Environmental, California,
No. 166372

Professional Experience

Aaron Morland is an Engineer-in-Training with environmental engineering experience focused on funding support, treatment systems, and hydraulic analysis and planning. He is experienced providing document support, including USDA Water Disposal Loans, auditing sewer system management plans for compliance, and Preliminary Design Reports.

Representative Projects

Big Bear Area Regional Wastewater Agency, Sewer System Management Plan Audit Workshop, Big Bear City, CA. Staff Engineer. Auditing the Big Bear Area Regional Wastewater Agency Sewer System Management Plan for compliance with State and Regional Water Board Waste Discharge Requirements. Preparing and presenting an interactive SSMP audit workshop to the Agency to identify deficiencies in the existing SSMP and efficiently gather operations information for the update. Leveraging our time with the Agency's through the workshop to determine the most cost and time-efficient process to update the SSMP as a team.

Cayucos Sanitary District, 2017 Sewer System Management Plan Audit, Cayucos, CA. Staff Engineer. Audited the Cayucos Sanitary District Sewer System Management Plan (SSMP) for compliance with State and Regional Water Board Waste Discharge Requirements. Identified additional areas of the SSMP to update due to construction of a new Water Reclamation Facility. Drafted a Technical Memorandum to summarize the audit and provide guidelines for the District to update their SSMP.

Big Bear Lake Department of Water and Power, 2018 USDA Preliminary Engineering Report, City of Big Bear Lake, CA. Staff Engineer. Secured \$15 Million in grant and low-interest loan funding through the USDA Water and Waste Disposal Loan and Grant Program for a 13-mile city-wide water distribution piping upgrade project. Lead author for the preliminary engineering report (PER) that provided the background, justification, cost opinions, and implementation schedule for the projects. Coordinated with City staff, USDA representatives, and environmental consultants to deliver the PER and submit the funding application within seven (7) weeks from the project Kick-Off Meeting.

Multiple Clients, Ongoing SSMP Support, CA. Assistant Engineer. Providing evaluations, informal audits, and advising services to multiple clients to bring their SSMPs into compliance with State and Regional Water Board Waste Discharge Requirements.

Big Bear City Community Services District, Sewer Service Feasibility Study, Big Bear City, CA. Staff Engineer. Evaluated the feasibility of connecting additional services to the District's sewer collection system using an existing SewerGEMS® hydraulic model. Evaluation included analysis of the hydraulic impact of the connection on downstream pipes, depth-to-diameter ratio design criteria for various pipe sizes, and conceptual design and cost opinion of accommodations for the service. Created a process for evaluating feasibility of future sewer service connections that were not considered or anticipated in the District's Sewer Master Plan. Drafted a Technical Memorandum to summarize feasibility study findings and process for executing future studies.

San Lorenzo Valley Water District, Funding and Financing Support, Boulder Creek, CA. Staff Engineer. Secured \$9.4 million in low-interest loan funding through the USDA Water and Waste Disposal Loan and Grant Program for water supply improvement projects.

Sarah Walker

Education

BFA, Herron School of Art & Design, Indiana University

Professional Experience

Ms. Walker has 15 years of strategic planning experience in visual communications. Her experience includes promoting the value of effective communication as it relates to clear branding and messaging for clean water programs, projects, and initiatives. She is extensively experienced preparing presentations and assisting agencies and cities execute their vision and effectively message their projects to the public.

Representative Projects

Chino Basin Program, Inland Empire Utilities Agency. Ontario, CA. Strategic Visual Communications Support. Providing strategic communications support to the innovative Chino Basin Project addressing regional capacity and water quality needs with a network of recycled water treatment, distribution and storage investments. Our work includes assessment and review of technical details and coordination with multiple internal departments, meeting facilitation, and development of infographics, Board workshop presentations, brand concepts, and a strategic communications plan.

Annual Groundwater Assessment Report. City of Riverside Public Utilities Department, Riverside, CA. Strategic Visual Communications Support. Providing strategic communications support to the Annual Groundwater Assessment Report. Work includes assessment and review of technical details and coordination with multiple internal departments, meeting facilitation, and development of infographics.

Blueprint for One Water, Water Research Foundation. Communications Development. Sarah helped develop this user-friendly blueprint for the practical application of One Water planning, created to help utilities successfully develop an integrated water management plan. Sarah's efforts included assisting in the development of the document's overall concept and messaging strategy, layout and graphics development, and working within a multi-stage review process. The document is posted on Water Research Foundation's website and continues to serve as a resource for utilities across multiple water resource sectors.

LUSO, San Diego, CA. Branding and Marketing Lead. Responsible for creating the LUSO brand from a start-up to the most recognized car-sharing host in the U.S. Created and designed all brand strategy and core messaging. Managed LUSO's brand image, experience, and promise. Internally promoted design as a competency while overseeing marketing, advertising, design, public relations, social media, and customer service initiatives. Managed all website updates and inquiries. Developed and organized CarShare Con—the first ever, national, host-centric, car-sharing conference targeting host of the car-sharing economy interested in growing and learning more.

APPENDIX B

PROFESSIONAL SERVICES AGREEMENT ACCEPTANCE FORM

Appendix B: Professional Services Agreement Acceptance Form

Firm Name: Water Systems Consulting, Inc.

Address: 23232 Peralta Drive, Suite 215

City Laguna Hills State CA Zip Code 92653

Telephone: (949) 528-0960 Fax: (909) 354-3482

I have reviewed the RFP and Professional Services Agreement in their entirety. Our firm is in substantial agreement with the Professional Services Agreement and are confident we can come to mutually agreed upon terms quickly and efficiently once selected.

Name of Authorized Representative: Joshua Reynolds (Vice President / Principal in Charge)

Signature of Authorized Representative:



Date: 11/1/2019



Water Systems Consulting
23232 Peralta Drive, Suite 215
Laguna Hills, CA 92653

(949) 528-0960
expectwsc.com



*Dedicated to
Satisfying our Community's
Water Needs*

MEMORANDUM

TO: Engineering and Operations Committee
FROM: Phil Lauri, P.E., Assistant General Manager
DATE: December 17, 2019
SUBJECT: Polyfluoroalkyl Substances

RECOMMENDATION

Receive the presentation.

STRATEGIC PLAN

Goal #1: Provide a safe, abundant, and reliable water supply.

Goal #2: Practice perpetual infrastructure renewal and improvement.

BACKGROUND

Polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that includes PFOA, PFOS, GenX, and many other chemicals. PFAS have been manufactured and used in a variety of industries around the globe, including in the United States since the 1940s. PFOA and PFOS have been the most extensively produced and studied of these chemicals. Both chemicals are very persistent in the environment and in the human body and are known not to break down and they can accumulate over time. Exposure to PFAS in the long term has the potential to lead to human health effects.

Extensive investigation has determined that PFAS substances have been found within the northern portion of the Orange County Groundwater Basin (Basin) in the area of Yorba Linda and Anaheim. While there is no direct impact to Mesa Water District's (Mesa Water®) groundwater source, Mesa Water works collaboratively with all the Orange County Producers and the Orange County Water District (OCWD) to ensure the Basin remains a reliable and safe source of drinking water for the region.

DISCUSSION

A representative from OCWD will provide an update on the PFAS regulatory issues and provide a modeling presentation on the impacts to the Orange County Groundwater Basin.

FINANCIAL IMPACT

None.

ATTACHMENTS

None.

REPORTS:

9. REPORT OF THE GENERAL MANAGER

REPORTS:

10. DIRECTORS' REPORTS AND COMMENTS