Yucaipa Valley Water District

Notice and Agenda of a Board Workshop

Tuesday, January 31, 2017 at 4:00 p.m.

MEETING LOCATION:	District Administration Building 12770 Second Street, Yucaipa
MEMBERS OF THE BOARD:	Director Chris Mann, Division 1 Director Bruce Granlund, Division 2 Director Jay Bogh, Division 3 Director Lonni Granlund, Division 4 Director Tom Shalhoub, Division 5

I. Call to Order

II. Public Comments At this time, members of the public may address the Board of Directors on matters within its jurisdiction; however, no action or significant discussion may take place on any item not on the meeting agenda.

III. Staff Report

IV. Presentations

A. Overview of the California Drought and Yucaipa Valley Water District's Action Plan Related to the State Water Resources Control Board Water Conservation Restrictions [Workshop Memorandum No. 17-009 - Page 5 of 68]

V. Operational Updates

A. Overview of the Recent Winter Storm Events [Workshop Memorandum No. 17-010 - Page 18 of 68]

VI. Capital Improvement Projects

A. Authorization of the Implementation of Phase II of the Automated Meter Infrastructure Project [Workshop Memorandum No. 17-011 - Page 20 of 68]

B. Notice of Completion for the Contract with Gateway Pacific Contractors for the Construction of a 6.0 Million Gallon R-12.4 Reservoir [Workshop Memorandum No. 17-012 - Page 30 of 68]

C. Award of a Construction Contract for the Construction of Site Improvements for NB-12.2 Recycled Water Booster Station [Workshop Memorandum No. 17-013 - Page 33 of 68]

Any person who requires accommodation to participate in this meeting should contact the District office at (909) 797-5117, at least 48 hours prior to the meeting to request a disability-related modification or accommodation.

Materials that are provided to the Board of Directors after the meeting packet is compiled and distributed will be made available for public review during normal business hours at the District office located at 12770 Second Street, Yucaipa. Meeting materials are also available on the District's website at www.yvwd.dst.ca.us

VII. Policy Issues

A. Discussion Regarding Construction Meters, Agriculture Meters, and Residential Hydrant Meters [Workshop Memorandum No. 17-014 - Page 38 of 68]

VIII. Administrative Issues

A. Overview of Rating Agency Redetermination of the Yucaipa Valley Water District Related to the 2015A Refunding Revenue Bonds [Workshop Memorandum No. 17-015 - Page 55 of 68]

IX. Director Comments

X. Closed Session

A. Conference with Real Property Negotiator(s)
Property: Assessor's Parcel Number(s): 0321-261-15 and 0321-261-17
Agency Negotiator: Joseph Zoba, General Manager
Negotiating Parties: Dawn Campbell
Under Negotiation: Terms of Payment and Price

B. Conference with Real Property Negotiator(s)
Property: Assessor's Parcel Numbers: 301-201-20, 27 and 28
Agency Negotiator: Joseph Zoba, General Manager
Negotiating Parties: Abraham and Nabil Issa
Under Negotiation: Terms of Payment and Price

C. Conference with Legal Counsel
Anticipated Litigation--One Potential Case Against The District (Government Code, Section 54956.9(d))

XI. Adjournment

Staff Report

Yucaipa Valley Water District

Presentations

Yucaipa Valley Water District

Yucaipa Valley Water District

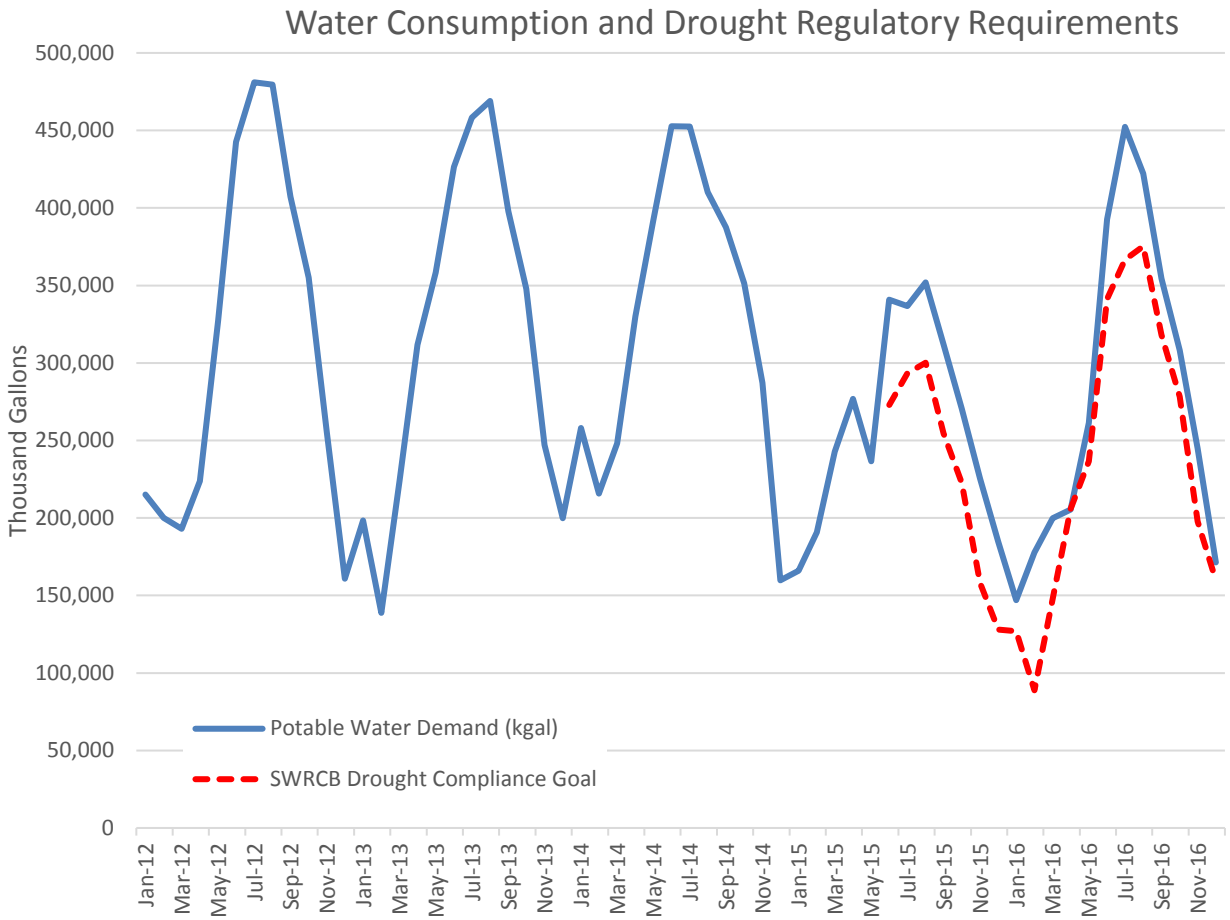
Workshop Memorandum 17-009

Date: January 31, 2017

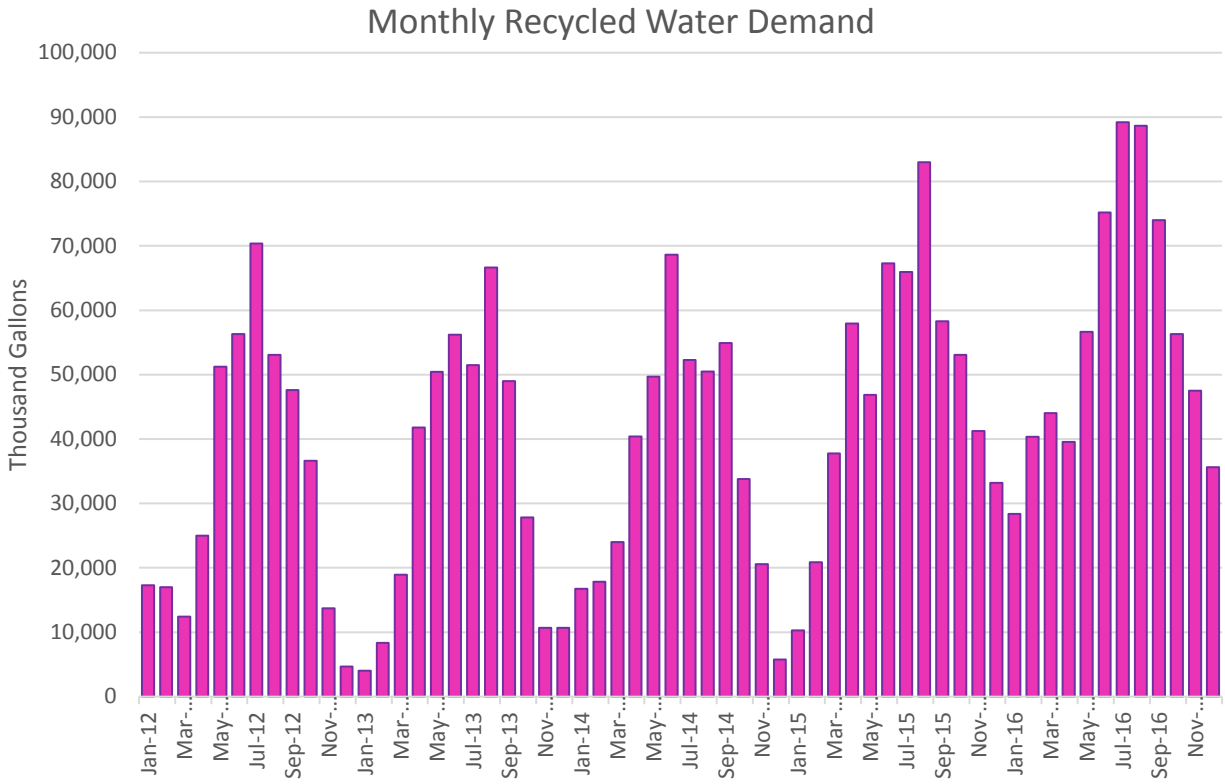
From: Joseph Zoba, General Manager

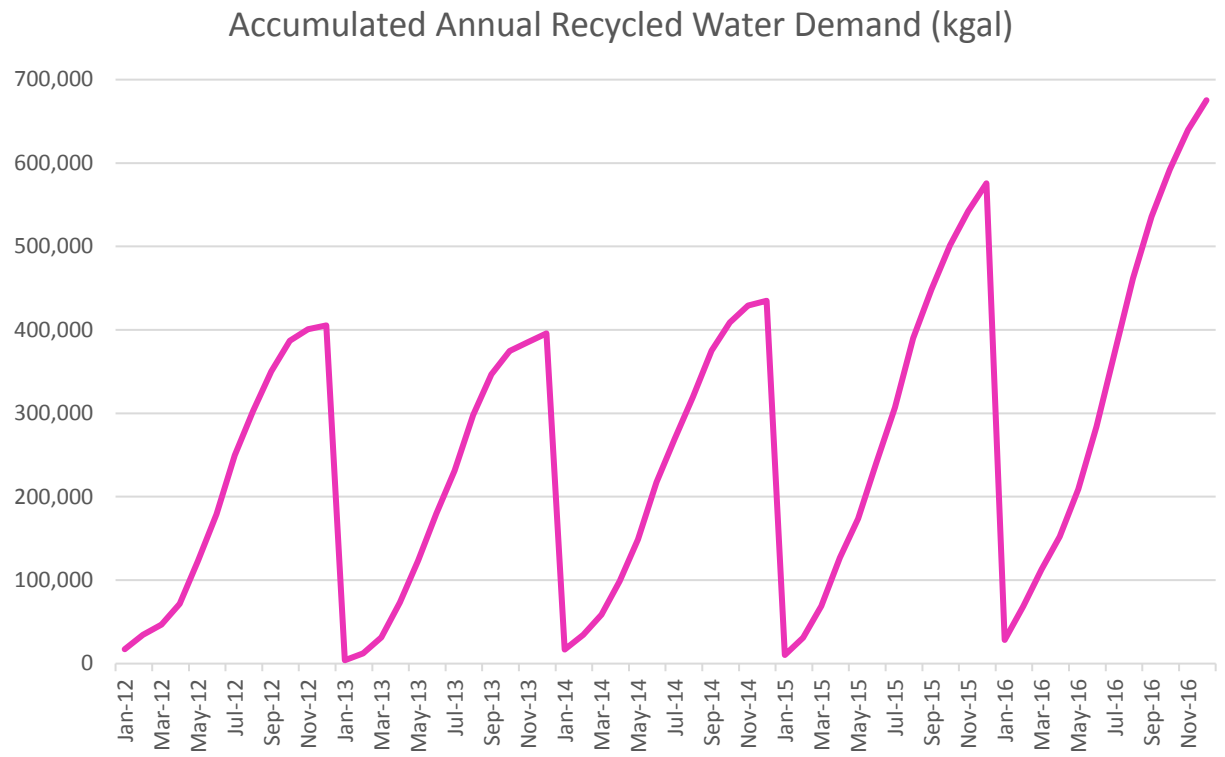
Subject: Overview of the California Drought and Yucaipa Valley Water District's Action Plan Related to the State Water Resources Control Board Water Conservation Restrictions

On May 5, 2015, the State Water Resources Control Board ("SWRCB") adopted emergency regulations to achieve a 25% statewide reduction in potable urban water use. These stringent water use regulations required the Yucaipa Valley Water District to achieve a 36% reduction from the amount of drinking water produced in 2013. In March 2016, the SWRCB modified the emergency water conservation requirements for Yucaipa Valley Water District to a 34% reduction from the amount of drinking water produced in 2013. In June 2016, the District self-certified a water conservation reduction of 20%. Each level of regulated water conservation requirement is illustrated in the chart below as the red-dashed line.

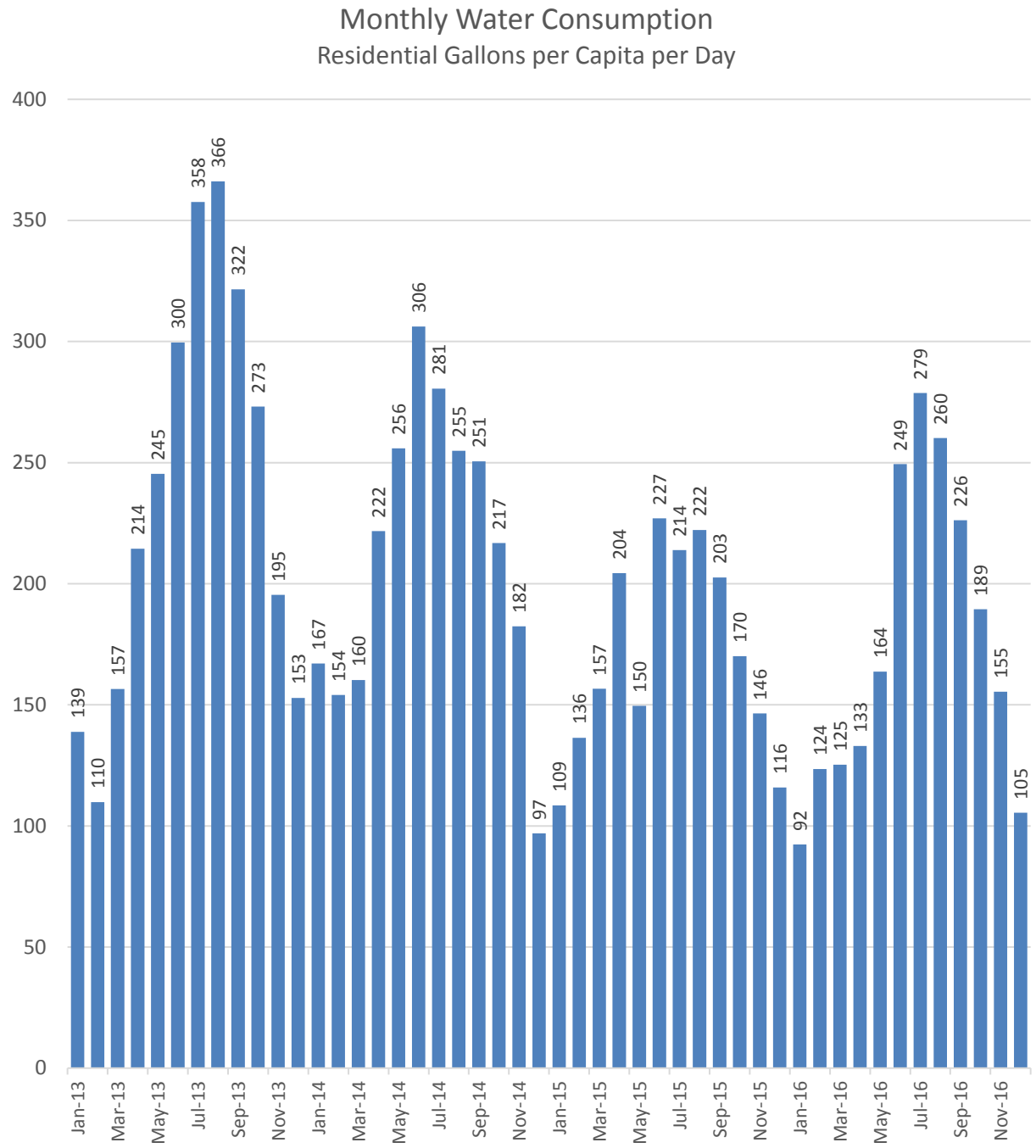


During the current drought, the Yucaipa Valley Water District has been able to increase the amount of recycled water delivered throughout our service area. The chart below shows the monthly delivery quantity to District customers.





The customers of the Yucaipa Valley Water District responded accordingly and significantly reduced the amount of drinking water consumed per person. As shown below, the per capita drinking water consumption dropped significantly from 153 R-GPCD[1] in December 2013 to 105 R-GPCD in December 2016, representing a decrease of 31%.



[1] R-GPCD - Residential gallons per capita per day.

Yucaipa Valley Water District

Self-Certification of Supply Reliability for Three Additional Years of Drought Pursuant to Section 864.5 of Title 23 of the California Code of Regulations for the Yucaipa Valley Water District

Supporting Analysis and Calculations

June 20, 2016

Background

On April 1, 2015, Governor Brown issued Executive Order B-29-15 that directed the State Water Resources Control Board to impose water supplier restrictions to achieve a statewide 25 percent reduction in potable urban usage through February 2016. As a result of this Executive Order, the Yucaipa Valley Water District was required to achieve an emergency water conservation standard of 36% based on a reported Residential Gallons per Capita per Day (R-GPCD) of 265.0 for the period of July 2014 to September 2014. The regulations were approved by the State of California, Office of Administrative Law on May 18, 2015 and required compliance with the emergency water conservation standard through February 2016.

On November 13, 2015, Governor Brown issued Executive Order B-36-15 that directed the State Water Resources Control Board to extend water conservation restrictions until October 31, 2016 if drought conditions persist through January 2016. The State of California, Office of Administrative Law subsequently approved regulations that provided more flexibility to urban water suppliers by considering specific factors that influence water use throughout California. The regulations changed the emergency water conservation standard for the Yucaipa Valley Water District from a 36% conservation standard to a 34% conservation standard based on monthly water use during the same month in Calendar Year 2013.

On May 9, 2016, Governor Brown issued Executive Order B-37-16 that directed the State Water Resources Control Board to extend water conservation restrictions through January 2017 and make adjustments in recognition of the differing water supply conditions throughout California. This Executive Order is based on the likelihood that drought conditions will likely continue for the foreseeable future and additional action by both the State Water Resources Control Board and local water suppliers will be necessary to prevent waste and the unreasonable use of water. Based on the recently released regulations, Urban Water Retail Suppliers are required to develop a localized "stress test" approach to ensure at least a three year supply of water is available to customers under the ongoing drought conditions.

The Yucaipa Valley Water District recognizes the importance of the newly enacted regulations and has based the data sources and calculations on the following requirements and assumptions:

- The current conditions to use in the self-certification calculations are as of October 1, 2016.
- The precipitation in Water Year 2017 mirrors that of Water Year 2013, precipitation in Water Year 2018 mirrors that of Water Year 2014, precipitation in Water Year 2019 mirrors that of Water Year 2015. (Section 864.5(b)(1)). Only precipitation data from the California Data Exchange Center (e.g., http://cdec.water.ca.gov/cgi-progs/prevprecip/PRECIPOUT), or CIMIS station data or an equivalent source may be used. **Do not average precipitation**.

- There are no temporary change orders that increase the availability of water to any urban water supplier are issued by the State Water Resources Control Board in the next three years.
- Potable water supply only includes sources of supply available to the supplier that could realistically be used for potable drinking water purposes during the time period identified in the regulation.
- If a water source is not of sufficient quality to be realistically treated and use as potable water by the water retailer, it shall not be included as a water supply.
- Consider requirements and assumptions that are used that impact supply reliability, for example, in the case of groundwater, if your water agency has its own requirement not to lower the water level of an aquifer below a certain amount, provide an explanation in the "Notes and comments".
- Groundwater: use the quantity of groundwater that is accessible, **without** addition of new wells or completion of treatment projects that would fall outside the three-year projection period (2016-17 through 2018-19).
- If new diversions or treatment equipment or facilities will come on-line between now until the end of Water Year 2019, sufficient evidence must be provided to indicate is it going to be implemented (e.g., funds have been allocated, contract with a builder has been approved).
- If a water supply is dedicated for another purpose (e.g., agriculture) and is therefore committed for another use, it is not available and shall be **subtracted** for the subtotal of water supplies.
- Identify all sources of data used (e.g., "our water product information is from Supervisor Control and Data Acquisition (SCADA)" and include a link to the source and identify a pinpoint citation to the pertinent information).
- Provide supporting documentation the covers each water source. For example, when the amount of water obtained from one river is summed in one number and there are multiple diversion or treatment points, then the supporting documentation shall describe each diversion and/or treatment point and the amount of water from each that are summed together and equal the amount on the worksheet.
- Recycled water for purple pipe systems is not a potable supply and is not included as a supply on Worksheet 1. You may use the "Notes and Comments" section in this section to describe non-potable recycled water

Given the requirements and assumptions above, the Yucaipa Valley Water District decided to take a conservative approach by adding additional stress to the anticipated water sources of supply thereby implementing a proactive water conservation strategy for our community. Without the certainty of knowing what the future holds for our water resources, it is prudent and reasonable to increase the probability of severe/extreme drought conditions in California.

Determine the Annual Total Potable Water Demand

Available Water Supplies – Wholesaler Supplied

The Yucaipa Valley Water District relied upon water production data generated monthly by the Water Resources Department to tabulate the amount of potable water production in calendar year 2013 and calendar year 2014. The total amount of potable water produced by the Yucaipa Valley Water District is provided below.

	Potable Water Production for Calendar Year 2013	Potable Water Production for Calendar Year 2014	**Calculated Annual Potable Water Demand**
Potable Water Production (acre feet)	12,040	12,011	**12,026**

Estimate the Annual Total Potable Water Supply

The Yucaipa Valley Water District receives imported water from two State Water Contractors: San Bernardino Valley Municipal Water District and San Gorgonio Pass Water Agency.

www.sbvmwd.com

www.sgpwa.com

Both State Water Contractors have provided the Yucaipa Valley Water District with anticipated water deliveries for Water Years 2017, 2018, and 2019 as shown below:

	San Bernardino Valley Municipal Water District	San Gorgonio Pass Water Agency	Total Wholesale Supply by Water Year
Water Year 2017 (acre feet)	7,763	500	8,263
Water Year 2018 (acre feet)	4,324	500	4,824
Water Year 2019 (acre feet)	4,997	500	5,497
Total Anticipated Supply (acre feet)	**17,084**	**1,500**	**18,584**

Internet reference for San Bernardino Valley Municipal Water District: http://www.sbvmwd.com/home/showdocument?id=4188
Internet reference for San Gorgonio Pass Water Agency: http://www.sgpwa.com/wp-content/uploads/2016/06/SWRCB-Emergency-Conservation-Regs-Three-Year-Projection-June-2016.pdf

In order to perform the "stress test" of the water supply sources based on the SWRCB criteria outlined above, the Yucaipa Valley Water District reduced the anticipated quantity of imported supply included in SWRCB *Worksheet 1: Total Available Water Supply for Individual Water Supplier* to represent an average of the lowest two years of imported water projected to be delivered to Yucaipa Valley Water District by the San Bernardino Valley Municipal Water District [7,763 + 4,324 + 4,997 = 17,084 / 3 = 4,661 acre feet per year]. This conservative approach will directly reduce the calculated imported water supply from the San Bernardino Valley Municipal Water District by 3,101 acre feet over the next three years [17,084 – 13,983 = 3,101].

	San Bernardino Valley Municipal Water District	San Gorgonio Pass Water Agency	Total Wholesale Supply by Water Year
Water Year 2017 (acre feet)	~~7,763~~ 4,661	500	~~8,263~~ 5,161
Water Year 2018 (acre feet)	~~4,324~~ 4,661	500	~~4,824~~ 5,161
Water Year 2019 (acre feet)	~~4,997~~ 4,661	500	~~5,497~~ 5,161
Total Anticipated Supply (acre feet)	~~**17,084**~~ **13,983**	**1,500**	~~**18,584**~~ **15,483**

The calculated reduction in imported water does not mean the water supply will not be used by the Yucaipa Valley Water District. Rather, by de-obligating the dependency of 3,101 acre feet of imported water supply, the Yucaipa Valley Water District will purchase this water supply and recharge the local groundwater supply to hedge against unexpected water supply issues during the next three years, or to reduce the impacts of future drought conditions beyond Water Year 2019.

Available Water Supplies – Surface Water Sources

The Yucaipa Valley Water District receives potable water from the Oak Glen Surface Water Filtration Facility. Based on the SWRCB criteria outlined above, the quantity of potable water for the "Stress test" will be less than the anticipated quantity of potable water received from these surface water sources of supply.

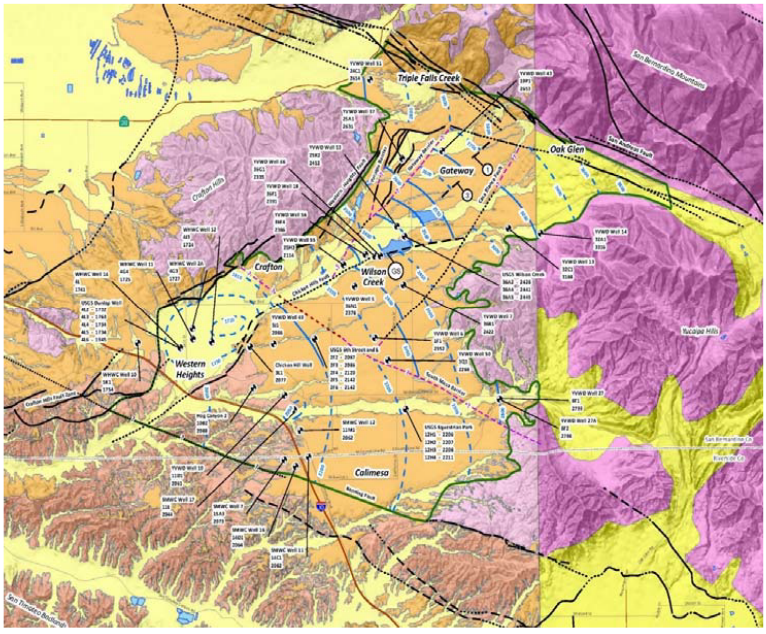
	Anticipated Quantity of Potable Water from the Oak Glen Surface Water Filtration Facility	"Stress Test" Quantity of Potable Water from the Oak Glen Surface Water Filtration Facility
Water Year 2017 (acre feet)	240	220
Water Year 2018 (acre feet)	229	220
Water Year 2019 (acre feet)	234	220
Total Anticipated Supply (acre feet)	**703**	**660**

The Yucaipa Valley Water District believes that based on the criteria required for the self-certification, the quantity of water provided by the Oak Glen Surface Water Filtration Facility will be consistent at 220 acre feet per year for the next three water years. The difference between the anticipated quantity of potable water from surface water sources of 43 acre feet [703 acre feet – 660 acre feet = 43 acre feet] will provide additional surface water supplies that can be recharged into the local groundwater supply for future use.

Available Water Supplies – Local Groundwater Water Sources

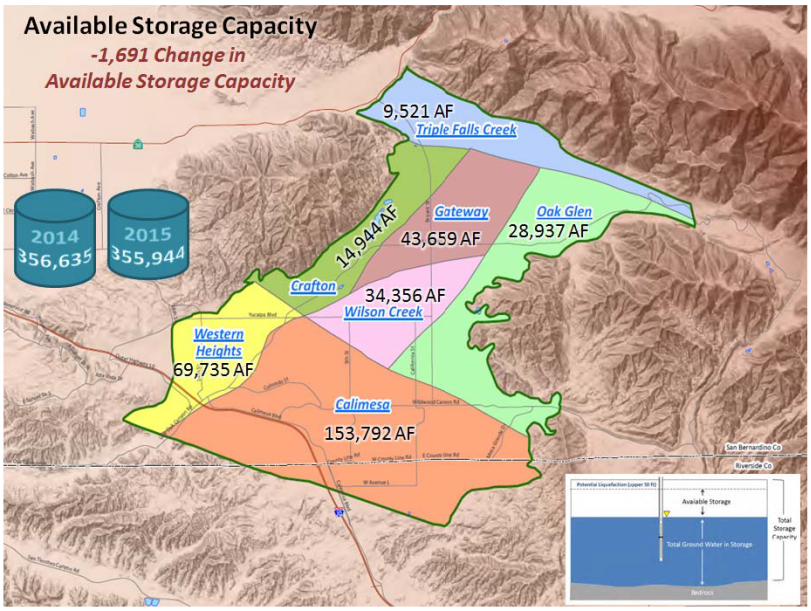
The Yucaipa Valley Water District produces groundwater from local groundwater basins. In recent years, the following quantity of local groundwater was produced by the Yucaipa Valley Water District:

- Calendar Year 2013:
  - 7,243 acre feet
- Calendar Year 2014:
  - 9,027 acre feet
- Calendar Year 2015:
  - 4,905 acre feet



Based on the SWRCB criteria outlined above, the quantity of potable water for the "Stress test" from groundwater sources will be based on the least amount of water received from groundwater sources of supply over the past three years, or 4,905 acre feet per year. By reducing the reliance on local groundwater supplies for the next three years, the Yucaipa Valley Water District estimates that approximately 1,500 acre feet to 2,000 acre feet of groundwater can be saved each year for future use. The specific quantity depends on the amount of groundwater produced by other water producers that have access to the Yucaipa Groundwater Basins.

	"Stress Test" Quantity of Treated Water from local groundwater sources
Water Year 2017 (acre feet)	4,905
Water Year 2018 (acre feet)	4,905
Water Year 2019 (acre feet)	4,905
Total Anticipated Supply (acre feet)	**14,715**



The Yucaipa Valley Water District believes that based on the criteria required for the self-certification, the 4,905 acre feet of groundwater produced per year will result in sustainable groundwater levels and a possibility that groundwater levels may increase throughout the Yucaipa basin area.

The reduction in groundwater production over the past two years has resulted in more groundwater in storage. For example, from calendar year 2014 to calendar year 2015, the change in storage space above the groundwater table decreased from 356,635 acre feet to 355,944 acre feet. This is a good indicator that an additional 1,691 acre feet of groundwater was saved in the local groundwater basin. Additional information about the Yucaipa Basin area and the reports prepared by the Yucaipa Valley Water District can be downloaded from the following link:

http://documents.yvwd.dst.ca.us/government/california/self-certification/140417_yucaipa_sy_full_report_geoscience.pdf

On June 15, 2016, the Yucaipa Valley Water District Board of Directors authorized the continuation and refinement of the original study. Information about the future anticipated scope of work can be downloaded from the following link:

http://documents.yvwd.dst.ca.us/government/california/self-certification/160615_16-058_geoscience.pdf

These reports provide important groundwater monitoring data that will be available to monitor the conditions of the groundwater basins in the future.

CALIFORNIA Water Boards

Edmund G. Brown Jr. GOVERNOR

Matthew Rodriquez SECRETARY FOR ENVIRONMENTAL PROTECTION

State Water Resources Control Board

NOTICE OF PUBLIC WORKSHOP

Urban Water Conservation

Wednesday January 18, 2017
(will not begin before 10:00 a.m.)

Joe Serna Jr. - CalEPA Headquarters Building
Coastal Hearing Room
1001 I Street, Second Floor
Sacramento, CA 95814

NOTICE IS HEREBY GIVEN that the State Water Resources Control Board (State Water Board or Board) will hold a public workshop to receive input on extension and potential modification of the current Emergency Regulation for Statewide Urban Water Conservation. This will be an informational workshop only and the State Water Board will take no formal action.

BACKGROUND
On April 1, 2015, Governor Brown issued the fourth in a series of executive orders on actions necessary to address California's severe drought conditions. On May 5, 2015, the State Water Board adopted an Emergency Regulation to address specific provisions of the April 1 Executive Order, including the mandatory 25 percent statewide reduction in potable urban water use between June 2015 and February 2016. On November 13, 2015, Governor Brown issued Executive Order B-36-15, which directed the State Water Board to extend the May 2015 Emergency Regulation, if drought conditions persisted. Drought conditions continued and the emergency regulation was extended in February 2016 for another 270 days.

The State Water Board adjusted the Emergency Regulation in May 2016, in response to improved hydrologic conditions through April 2016. The May 2016 Emergency Regulation allowed urban water suppliers to self-certify information upon which a new, supply reliability-based conservation standard was imposed, based on the amount of potable water that would be available following three additional years of drought. Suppliers whose supply analysis showed a supply shortfall at the end of three additional years of drought were issued a mandatory conservation standard equal to that supply shortfall. The self-certification was voluntary; some suppliers chose to retain their mandatory conservation standard from the February 2016 emergency regulation. The Office of Administrative Law approved the extended Emergency Regulation on May 31, 2016. The Emergency Regulation is scheduled to expire on February 28, 2017 if the Board does not act to extend it. A copy of the adopted and approved regulation is located on the Water Conservation Portal - Emergency Conservation Regulation webpage.

Additionally, on May 9, 2016, Governor Brown issued Executive Order B-37-16. The Executive Order notes that while California has suffered through a severe multi-year drought, and that Californians have responded to the drought by conserving at unprecedented levels, severe drought conditions persist in many areas of the state. Issues of limited drinking water supplies, diminished water for agricultural production and environmental habitat, and severely-depleted groundwater basins have persisted, despite better precipitation during the 2015-16 water year. The Executive Order calls out four directives to help the state transition to permanent, long-term improvements in water use, including: using water more wisely, eliminating water waste, strengthening local drought resilience, and improving agricultural water use efficiency and drought planning.

Executive Order B-37-16 called on the State Water Board to adjust emergency water conservation regulations through the end of January 2017 in recognition of differing water supply conditions across the state. The State Water Board responded to this directive by updating the Emergency Regulation in May 2016 to include the self-certification process described above that recognizes supplier-specific supply conditions and drought levels.

Executive Order B-37-16 also calls on the State Water Board to develop, by January 2017, a proposal to achieve a mandatory reduction in potable urban water usage that builds off of the mandatory 25% reduction called for in earlier executive orders and lessons learned through 2016. The workshop will provide an opportunity to receive stakeholder input regarding extension and potential modification of the Emergency Regulation.

From June 2015 through November 2016, customers of the state's 411 urban water suppliers have saved 2.35 million acre-feet of water, which equates to a 18-month cumulative savings of 22.6 percent relative to the 2013 baseline. Compliance and water savings with the May 2016 Emergency Regulation remains positive. The supply reliability-based regulation that went into effect in June 2016 resulted in many suppliers having a zero percent conservation mandate, and nearly all of those suppliers are in compliance by having water production levels below 2013 levels (the baseline year for the emergency regulation). Thirty eight percent of suppliers reporting in October 2016 achieved water savings between 10 and 20 percent compared to the same month in 2013; these suppliers serve almost 18 million people. Fifty percent of suppliers, serving more than 14 million Californians, reported water savings of 20 percent or more.

WORKSHOP OVERVIEW

With California still experiencing severe drought in large portions of the state, the State Water Board is proposing to extend the May 2016 Emergency Regulation. Although precipitation levels from October through December have been promising in Norther California, southern California has remained dry. Severe drought conditions over multiple years have decreased water levels in many of California's reservoirs and groundwater basins, and reduced flows in the state's rivers. Rains in parts of California this water year are encouraging so far and above normal for this date. In some regions, however, the drought continues to present challenges including water shortages, over-drafted groundwater basins and land subsidence, dying trees and increased wildfire activity, diminished water for agricultural production, degraded habitat for many fish and wildlife species, and an increased threat of saltwater intrusion. Hydrologic conditions for the water year are not yet known, making it prudent to prepare for continued drought conditions and consider adjustments when hydrologic conditions are better known.

A readopted Emergency Regulation would extend through October 2017. The State Water Board is interested specifically in public comment on the following questions at this workshop:

1. What elements of the existing May 2016 Emergency Regulation, if any, should be modified? Should the State Water Board wait until the hydrology for the current water year is known (April or later) before proposing adjustments to the current method for calculating conservation standards? And, should the State Water Board allow suppliers to update or modify their conservation standard calculations (and if so, how)?
2. Should the State Water Board account for regional differences in snowpack, precipitation, and lingering drought impacts differently than under the current emergency regulation, and if so, how?
3. Executive Order B-37-16 requires the Board to develop a proposal to achieve a mandatory reduction in potable water use that builds off the mandatory 25 percent reduction in previous Executive Orders and lessons learned through 2016. The Board, however, is not required to act on this proposal. Should the Board act now, or later if conditions warrant, to a conservation standard structure like the one the Board adopted in February 2016 to achieve a mandatory reduction in water use? Should the Board set a conservation floor, individually or cumulatively?

If the Board extends the Emergency Regulation essentially unchanged, each urban water supplier (serving more than 3,000 connections or more than 3,000 acre-feet of water annually) would continue to either 1) be assigned a conservation standard between 8 percent and 36 percent, based on their residential gallons per capita per day (R-GPCD) for the months of July through September 2014, with some adjustment factors, or; 2) self-certify a conservation standard based on the supplier's water supply reliability assessment that demonstrates the degree sufficient supplies are available to meet demand should drought conditions persist through 2019. Additional information on the Emergency Regulation and conservation standards is available at the Water Conservation Portal referenced above

The purpose of this workshop is to solicit input on potential adjustments to the May 2016 Emergency Regulation in response to precipitation levels and other drought indicators across the state since May 2016, for consideration and possible action by the State Water Board in February 2017. The workshop will include a staff presentation and information on water supply conditions followed by public comments and Board Member discussion.

PROCEDURAL MATTERS

The workshop will be informational only. While a quorum of the State Water Board may be present, the Board will not take formal action at the workshop. There will be no sworn testimony or cross-examination of participants, but the State Water Board and its staff may ask clarifying questions. The workshop is an opportunity for interested persons to provide input to the State Water Board. To ensure a productive and efficient workshop, oral comments may be limited to three (3) minutes or otherwise limited at the discretion of the Board Chair or any Board member present. So that all commenters have an opportunity to participate, presentations and questions may be time-limited.

SUBMISSION OF WRITTEN COMMENTS

Interested persons must submit written comments by **12 noon on Thursday, January 12, 2017**.

Written comment letters must be submitted to the attention of:

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th floor
Sacramento, CA 95814

Comment letters may be submitted to the Clerk of the Board via email at: commentletters@waterboards.ca.gov (15 megabytes, or less, in size) or by fax at (916) 341-5620.

ADDITIONAL INFORMATION
Please indicate in the subject line **"Comment Letter – Urban Water Conservation Workshop."**

Comments may also be hand delivered. Couriers delivering comment letters must check in with lobby security personnel on the first floor of the CalEPA Building at the above address. Questions on comment submittals may be directed to Ms. Townsend, at (916) 341-5600.

More information on the State Water Board's Emergency Water Conservation Regulation can be found here:
http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/emergency_regulation.shtml

For directions to CalEPA, visit: http://www.calepa.ca.gov/EPABldg/location.htm

Notices and submittals are available electronically at:
http://www.waterboards.ca.gov/board_info/calendar/index.shtml

All visitors must check-in upon arrival to CalEPA and then proceed to the meeting room. Individuals who require special accommodations are requested to contact the Clerk to the Board at (916) 341-5600.

Please direct other questions about this notice to Kathy Frevert at (916) 322-5274 or kathy.frevert@waterboards.ca.gov.

January 6, 2017
Date

Jeanine Townsend
Clerk to the Board

Operational Updates

Yucaipa Valley Water District

Yucaipa Valley Water District

Workshop Memorandum 17-010

Date: January 31, 2017

From: John Wrobel, Regulatory & Environmental Control Manager

Subject: Overview of the Recent Winter Storm Events

During January, a few winter storms went through our area leaving us with a decent amount of rainfall.

The District staff wanted to share information on how these storms impacted District facilities and to determine if additional improvements are needed to further protect our infrastructure.

Capital Improvement Projects

Yucaipa Valley Water District

Yucaipa Valley Water District

Workshop Memorandum 17-011

Date: January 31, 2017

From: Matthew Porras, Management Analyst
Kathryn Hallberg, Management Analyst
Joseph Zoba, General Manager

Subject: Authorization of the Implementation of Phase II of the Automated Meter Infrastructure Project

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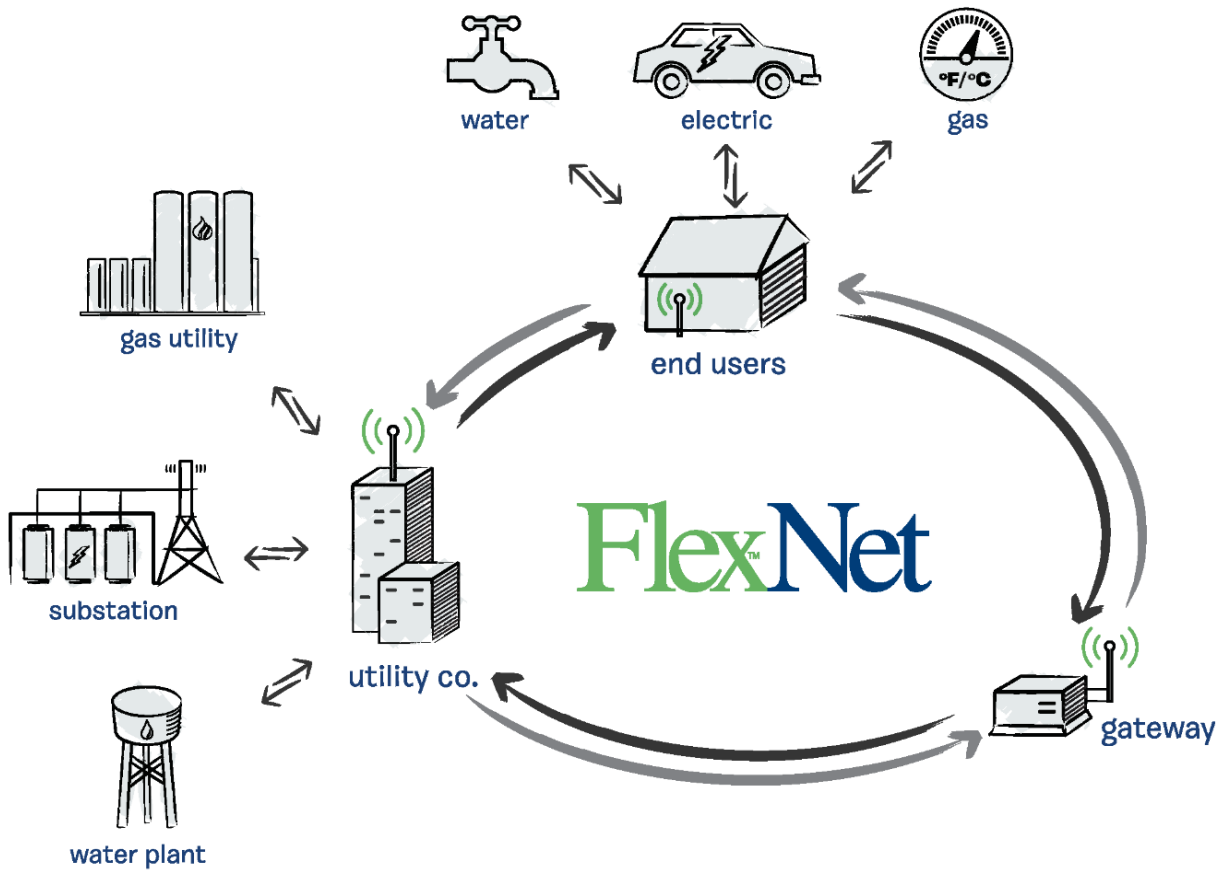
There are several types of water meters used throughout the United States, some that are capable of being read remotely using Automated Meter Infrastructure (AMI). The Automated Meter Infrastructure network described herein is the Sensus FlexNet along with the Sensus Endpoints. The proposed AMI project costs provided are the products and services offered by the local Sensus dealer, Aqua Metrics Sales Company.



Technical Project Description

Yucaipa Valley Water District (District) is proposing a district wide Automated Meter Infrastructure (AMI) system. The major components of an Automated Meter Infrastructure include the smart meter with transceiver (Smart Point), the tower gateway base stations (TGB), and the regional network interface (RNI). Utilizing these components, water meter data is conveyed via radio frequency and cellular communication back to the database (RNI) where the information is used for billing and consumption reports. The advantages of transmitting the customer meter data with an Automated Meter Infrastructure are far reaching and include hourly meter reads, detailed water consumption analysis, leak detection and backflow alarms, as well as the elimination of manual meter reading. The practice of manually reading each meter in a water distribution system is a daunting task and requires staff to locate and open the meter box, read the meter register and then transfer the information into a handheld recording device.

The District has completed the installation of 5,065 smart water meters that are AMI capable. This represents about 40% of the District's total 12,637 water meters in the system. Although 40% of total meters in the system have the capability to be read remotely, District staff continues to manually read these meters as the District lacks the infrastructure to gather this data remotely.

Implementation of the Automated Meter Infrastructure Project

District staff has completed an application for a grant opportunity offered from The Bureau of Reclamation in the effort to gain funding for the implementation of the proposed Automated Meter Infrastructure project. As a part of the guidelines of the grant, a project timeline of three (3) years is required. If the grant does not materialize, District staff recommends a four (4) year project timeline. The two project timelines are outlined below.

Project Timeline of AMI without Grant Funding – Phase I through IV

Phase I of the Automated Meter Infrastructure Project

Install 5,065 AMI capable meters throughout the District. [Complete]

Phase II of the Automated Meter Infrastructure Project

Install three tower gateway base stations, required transceivers and establish the regional network interface thus activating the 5,065 meters installed in Phase I. The three TGBs will be located at existing water reservoir tanks and are responsible for gathering data from the smart meters via a licensed radio frequency, then back load the compiled data to the RNI via a cellular network. Additionally, the existing 5,065 AMI capable meters currently installed will each be outfitted with a transceiver that will be mounted into an upgraded meter box lid. Then, the regional network interface will be established to integrate the incoming meter data and the existing customer billing system.

Phase III of the Automated Meter Infrastructure Project

Phase III will replace the remaining 7,572 meters in the system with smart meters and transceivers bringing the total number of smart points to 12,637 which includes every meter in our distribution system. The total conversion to AMI by replacing the existing water meters will be distributed over three years, completing approximately 2,500 meter upgrades each year. The completion of this Phase will result in full Automated Meter Infrastructure functionality district wide.

Phase IV of the Automated Meter Infrastructure Project

Consider expansion of our smart grid system to include Smart Lighting, System Control and Data Acquisition [SCADA] telemetry to take advantage of the Districts Fixed Base Infrastructure.

Project Timeline of AMI with Grant Funding – Phase I through IV

Phase I of the Automated Meter Infrastructure Project

Install 5,065 AMI capable meters throughout the District. [Complete]

Phase II of the Automated Meter Infrastructure Project (Year 1)

Install three tower gateway base stations, required transceivers and establish the regional network interface thus activating the 5,065 meters installed in Phase I. The three TGBs will be located at existing water reservoir tanks and are responsible for gathering data from the smart meters via a licensed radio frequency, then back load the compiled data to the RNI via a cellular network. Additionally, the existing 5,065 AMI capable meters currently installed will each be outfitted with a transceiver that will be mounted into an upgraded meter box lid. Then, the regional network interface will be established to integrate the incoming meter data and the existing customer billing system.

Phase III of the Automated Meter Infrastructure Project (Years 2-3)

Phase III will replace the remaining 7,572 meters in the system with smart meters and transceivers bringing the total number of smart points to 12,637 which includes every meter in our distribution system. The total conversion to AMI by replacing the existing water meters will be distributed over two years, completing approximately 3,750 meter upgrades each year. The completion of this Phase will result in full Automated Meter Infrastructure functionality district wide.

Phase IV of the Automated Meter Infrastructure Project (Undetermined)

Consider expansion of our smart grid system to include Smart Lighting, System Control and Data Acquisition [SCADA] telemetry to take advantage of the District's Fixed Base Infrastructure.

Cost Outline for Sensus AMI

Phase 2 (2017)

Item/Service	Quantity	Price	Discount	Total
M-400 Base Station	3	$35,000.00	$21,000.00	84,000.00
520-M SmartPoint	5,065	$133.75		677,443.75
Saas Set Up Fee	1	$7,725.00		7,725.00
Analytic Set Up Fee	1	$5,625.00		5,625.00
Training	1	$6,000.00		6,000.00
Software Annual Fee	1	$18,825.00		18,825.00
SmartPoint Install	5,065	$30.00		151,950.00
SmartPoint Lid	5,065	$30.00		151,950.00
Internet Modem	3	$775.00		2,325.00
			Total Phase 2	**1,105,843.75**

Phase 3 (2018-20)

1" iPearl Meter	602	$172.20		103,664.40
3/4" iPearl Meter	6,970	$118.20		823,854.00
520-M SmartPoint	7,572	$133.75		1,012,755.00
Software Annual Fee	3	$26,225.00		78,675.00
SmartPoint Install	7,572	$30.00		227,160.00
SmartPoint Lid	7,572	$30.00		227,160.00
Base Station Maint. Fee	3	$3,000.00		9,000.00
Internet Modem*	3	$2,160.00		6,480.00
			Total Phase 3	**2,488,748.40**
Per Year Total Over 3yr				829,582.80
Per Year Total Over 2yr				1,244,374.40

Annual Cost (After Phase 3)

Software Annual Fee	1	$26,225.00		26,225.00
Base Station Maint. Fee	3	$3,000.00		9,000.00
Internet Modem	3	$720.00		2,160.00
			Total Annual w/o 3% Increase	**37,385.00**

Total for Phase 2 and 3	**3,594,592.15**

*** Internet Modem Fee based on 3 towers at $20/month over 3 years**

The proposal outlined herein mentions a possible 3% annual increase for services provided. The ongoing services required would amount to $26,225 (Software Annual Fee) + $9,000 (Base Station Maintenance Fee) =$35,225 x 3% = $1,056.75. District staff recommends negotiating an alternative fee structure. The below are options that are available with the Flex Net system.

Customer Portal Option				
Customer Portal Core Users Fee (Annual)	1	$6,250.00		6,250.00
Customer Portal Overage Fee (Annual)	0	$2.40 Per User		0
Customer Portal System Integration Fee	1	$12,500.00		12,500.00
Customer Portal System Setup	1	$6,250.00		6,250
			Total Portal Option with 1,260 Users	**25,000**

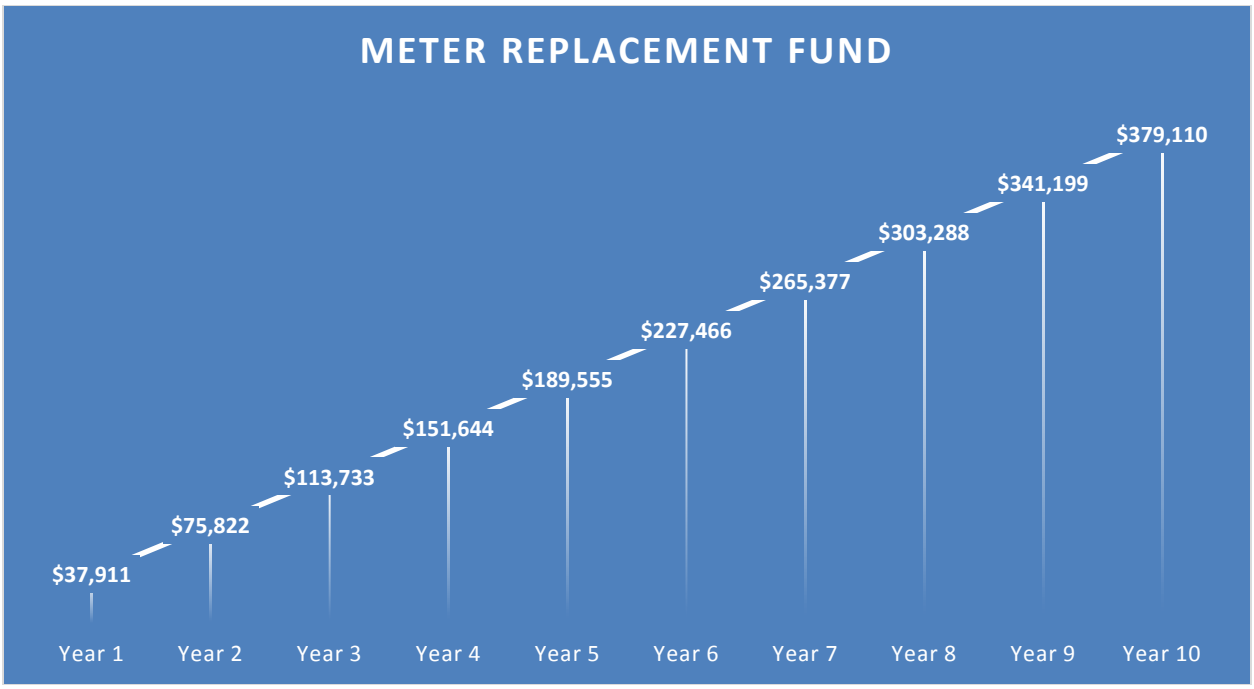
Hand-Held Programming Device Option				
Trimble T41-XGS	1	$2,899.00		2,899.00
Trimble Cable	1	$45.00		45.00
Sensus Command Link	1	$496.00		496.00
			Total Portal Option with 1,260 Users	**3,440.35**

Funding Options

- Water Depreciation Reserves GL #02-10310 with a current balance of $1,182,696
- Water Infrastructure Reserves GL #02-10311 with a current balance of $3,379,625
- Possible grant funding from the Bureau of Reclamation up to $1,000,000

Future Planning

A meter replacement program will assure funding for the future as we continue to rely on the data that is gathered by our system. A monthly flat fee of $0.25 per meter is proposed to cover the replacement cost of 10% of the Endpoints in the system after ten years. The graph below shows the growth of the meter replacement fund over ten years from $37,911 in year one, to $379,110 in year ten. The formula used to gather the figures below is as follows: 12,637 meters x $0.25 x 12 months = $37,911 per year. It is important to make sure this program is sustainable for the future.



District Staff Recommendations

Therefore, the District staff suggests that the Board of Directors consider the following recommendations:

1. Authorize the District staff to initiate the implementation of Phase II of the AMI Project funded from water depreciation reserves and select a manufacture of equipment and service.

2. Consider the adoption of a resolution setting and automatically adjusting the cost as a time and material expense related to the installation of fully integrated AMI water meters for all new installations.

3. Authorize the District staff to plan for Capital Improvement Project budget funding each year and implementation of a meter replacement program.

4. Authorize the District staff to plan for Capital Improvement Project budget funding each year and implementation of a meter replacement program.

The following pages include the proposed Sensus FlexNet system with associated costs.

Aqua Metric Sales Company 4050 Flat Rock Dr., Riverside CA 92505 • Phone: (951) 637-1400 Fax: (951) 637-1500

November 3, 2016

Aqua-Metric Sales Company is pleased to propose the Sensus Flex-Net AMI system to the Yucaipa Valley Water District. Aqua Metric and Sensus understand the intent of the District to deploy a proven, reliable, feature-rich AMI network that will provide the following;

- Enhanced customer service
- Increased revenue through more accurate metering
- Reduction of employee injuries
- Increased efficiency and reduced costs

Sensus Flex-Net is the industry's only solution for utilities that demand unmatched customer service and pinpoint-accurate reads. Only Flex-Net delivers Primary-Use licensing by the FCC, which guarantees an uncluttered, crystal clear path for transmissions. And that paves the way for an industry-leading two watts of power, making the Flex-Net system the only mass-deployed utility system with the highest level of protection, power and productivity in North America.

Flex-Net Advanced Metering Infrastructure (AMI) solution is offered exclusively from Sensus. It empowers water utilities with a proven means to increase meter reading efficiency, reduce overhead costs and enhance customer service simply, reliably, and with unlimited flexibility.

Sensus Flex-Net is composed of three main components the Flex-Net BaseStation, Sensus 520M SmartPoints, and Sensus MDM software as a service.

Sensus Flex-Net BaseStation (M400) is a long-range radio transceiver that communicates with SmartPoints deployed throughout the water utility. With the BaseStation broadcasting on a primary licensed frequency at 8 watts, makes Sensus Flex-Net the most powerful and most reliable 2-way AMI network on the market.

The Flex-Net SmartPoint is a radio transceiver that provides water utilities inbound and outbound access to water measurement and ancillary device diagnostics via radio signal. The SmartPoint 520M is designed for submersible, pit-set environments. The SmartPoint broadcasts hourly meter data 6 times a day with 7 days of hourly historical data so no data will be lost on missed transmissions. Available in a 2-port option that allows the utility to connect two meters to a single SmartPoint.

The Sensus Analytic software is a user-friendly interface that allows the utility to use numerous reports that can be automatically distributed to staff through e-mail. Analytics offers easy to read graphs and reports on hourly usage for each individual meter throughout the system. Sensus Analytic Customer Portal is also available as an option with Sensus Flex-Net.

Aqua Metric Sales Company 4050 Flat Rock Dr., Riverside CA 92505 • Phone: (951) 637-1400 Fax: (951) 637-1500

Sensus AMI Cost Breakdown

Unit Description	Unit Cost
Sensus M-400 AMI BaseStation 2-way (Includes Installation)	$35,000.00*
520-M SmartPoint Single Port	$133.75
520-M SmartPoint Dual Port	$148.75
BaseStation Maintenance Fee (Starting Year 2)	$3,000.00

*If all 3 BaseStation are purchased at one time, a $7,000.00 discount will be applied per BaseStation

Sensus AMI Software Cost Breakdown

Sensus Analytic Essential Package:

SmartPoints Installed	1 > 5,000	5,000 > 10,000	10,000 > 14,000
Yearly Cost	$12,500.00	$18,825.00	$26,225.00

Software as a Service One time fees	Unit Cost
SaaS RNI System Set-Up Fee	$7,725.00
Sensus Analytic Set-Up and Integration Fee	$5,625.00
Analytic and RNI Training (Onsite)	$6,000.00

SaaS includes software support and:

- Daily backup
- Data replication to a Disaster Recovery site
- Anti-Virus and Malware subscription and scanning
- Operating System support, troubleshooting, security patching and upgrades
- Linux Red Hat, Microsoft Windows Server, Microsoft SQL Server and Oracle licenses and ongoing maintenance
- Hardware maintenance or refresh
- Tier IV SSAE 16 Data Center facility

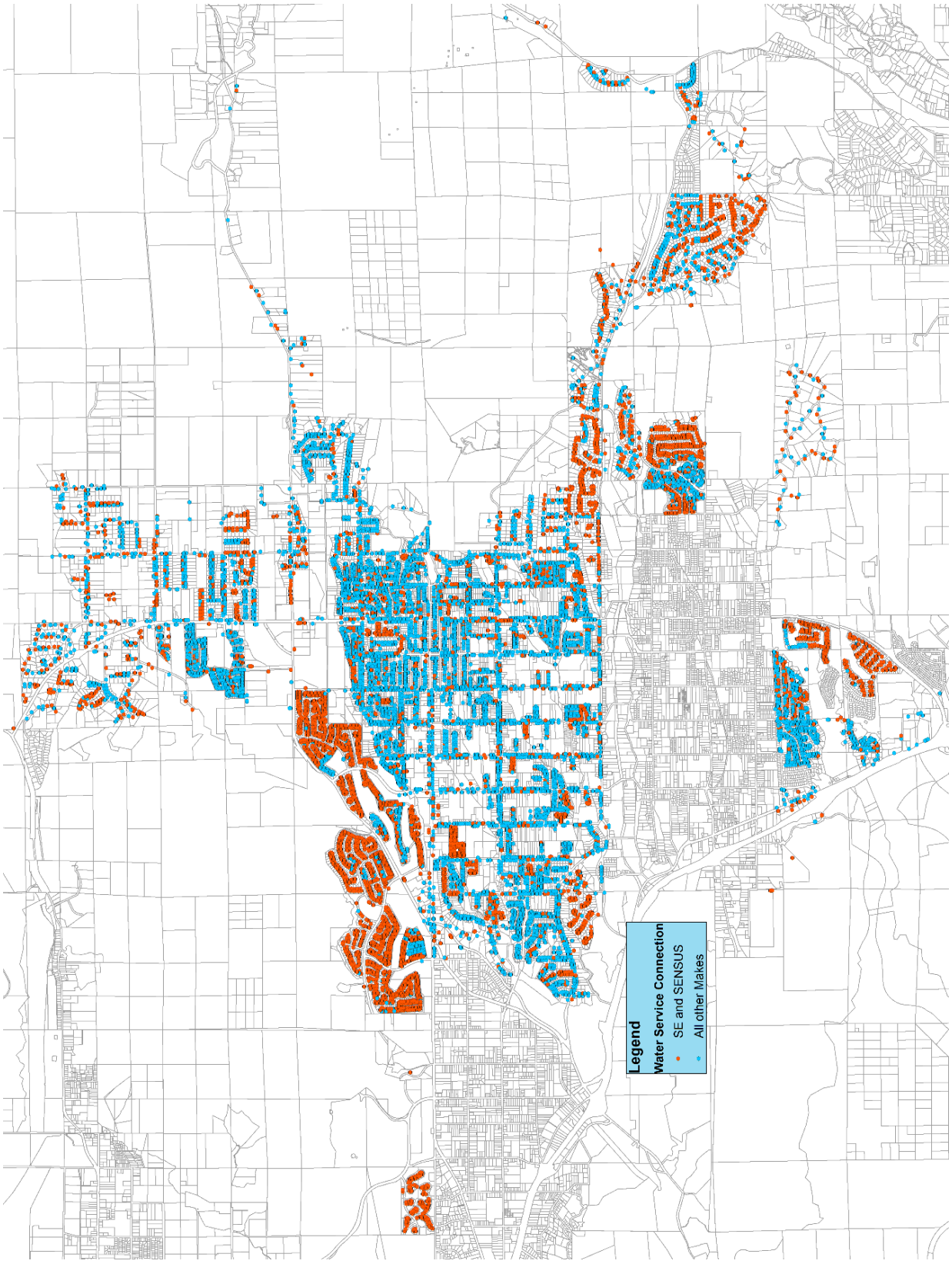
Aqua Metric Sales Company 4050 Flat Rock Dr., Riverside CA 92505 • Phone: (951) 637-1400 Fax: (951) 637-1500

All products, software, and services are subject to a 3% yearly cost increase.

Further information on all products and services proposed can be found at www.sensus.com. We would like to thank you again for your interest in Sensus Flex-Net and your ongoing business with Aqua Metric Sales Co.

Sincerely,
Steve Kamiyama
Aqua Metric Sales Company
Account Manager
Steve.kamiyama@aqua-metric.com

Location of AMI Capable Meters in the System



Yucaipa Valley Water District

Workshop Memorandum 17-012

Date: January 31, 2017

From: Brent Anton, Engineering Manager

Subject: Notice of Completion for the Contract with Gateway Pacific Contractors for the Construction of a 6.0 Million Gallon R-12.4 Reservoir

On November 19, 2014, the Board of Directors awarded a contract for the construction of the 6.0 million gallon R-12.4 drinking water reservoir to Gateway Pacific Contractors for a sum not to exceed $7,520,080.00 [Director Memorandum No. 14-091].

The project is now complete and the District staff recommends that the Board authorize the filing of the Notice of Completion and release of the retention amount of $376,004.00 thirty-five days after the recorded date.

KRIEGER & STEWART
Engineering Consultants

January 24, 2017

818-24.1 F/C

Brent Anton
Yucaipa Valley Water District
P.O. Box 730
Yucaipa, CA 92399

Subject: 6.0 MG Reservoir R-12.4
Recommendation of Acceptance of Contract Work

Dear Mr. Anton:

All work required to be performed by Gateway Pacific Contractors, Inc for the 6.0 MG R-12.4 Reservoir Project is essentially complete and the final Contract Amount for same is set forth as follows:

Original Contract Amount:	$7,520,080.00
Contract Change Orders:	$0.00
Final Contract Amount:	$7,520,080.00

Since the Contract Work has been essentially completed in accordance with the Contract Documents, we recommend the District accept said Work. Subsequent to Board acceptance, a Notice of Completion should be filed and thereafter, following the lien period, the District should make final payment (i.e. release retained amount), provided no Stop Notices have been filed.

If you have any questions, please call.

Sincerely,

KRIEGER & STEWART

Patrick M. Watson

Patrick M. Watson

PMW/
818-24-RECACCEPT

cc: Jeremy Costello, Yucaipa Valley Water District

3602 University Avenue, Riverside, California 92501-3331
Tel: (951) 684-6900 • Fax: (951) 684-6986 • www.kriegerandstewart.com

Record Without Fee
Per Govt. Code 6103

Recording Requested By:
Yucaipa Valley Water District

And When Recorded Mail To:
Yucaipa Valley Water District
P.O. Box 730
Yucaipa, CA 92399

SPACE ABOVE THIS LINE FOR RECORDERS USE

NOTICE OF COMPLETION

Project Number/CMMS Number: P-02-279
Director Memorandum Number for Authorization: DM 14-091
Director Memorandum Number for Notice of Completion: DM 17-XXX

Notice pursuant to Civil Code Section 3093, must be filed within 10 days after completion.
Notice is hereby given that:

1. The undersigned is owner or corporate officer of the owner of the interest in the property hereinafter described:
2. The full name of the owner is Yucaipa Valley Water District
3. The full address of the owner is 12770 Second Street, Yucaipa, CA 92399
4. The Nature of the Interest or Estate of the Undersigned is: In Fee
5. A work performed hereinafter described was completed on January 31, 2017. The work done was: 6 Million Gallon R 12.4 Reservoir
6. The name of the contractor for such work was: Gateway Pacific Contractors, Inc.
   November 20, 2014
   (Date of Contract)
7. The property on which said work was complete in the City of Calimesa
   County of Riverside, State of CA, and is described as APN: 413-240-013
8. The street address of said property is 1471 Singleton Road
   (if no street address has been assigned, insert "none")

Dated February 7, 2017

Brent Anton, Engineering Manager
Yucaipa Valley Water District

Verification

I, the undersigned, say: I am the General Manager of the Declarant of the foregoing Notice of Completion; I have read said Notice of Completion and know the comments thereof; the same is true to my knowledge. I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 7, 2017 at Yucaipa, CA.

Joseph B. Zoba, General Manager
Yucaipa Valley Water District

Yucaipa Valley Water District

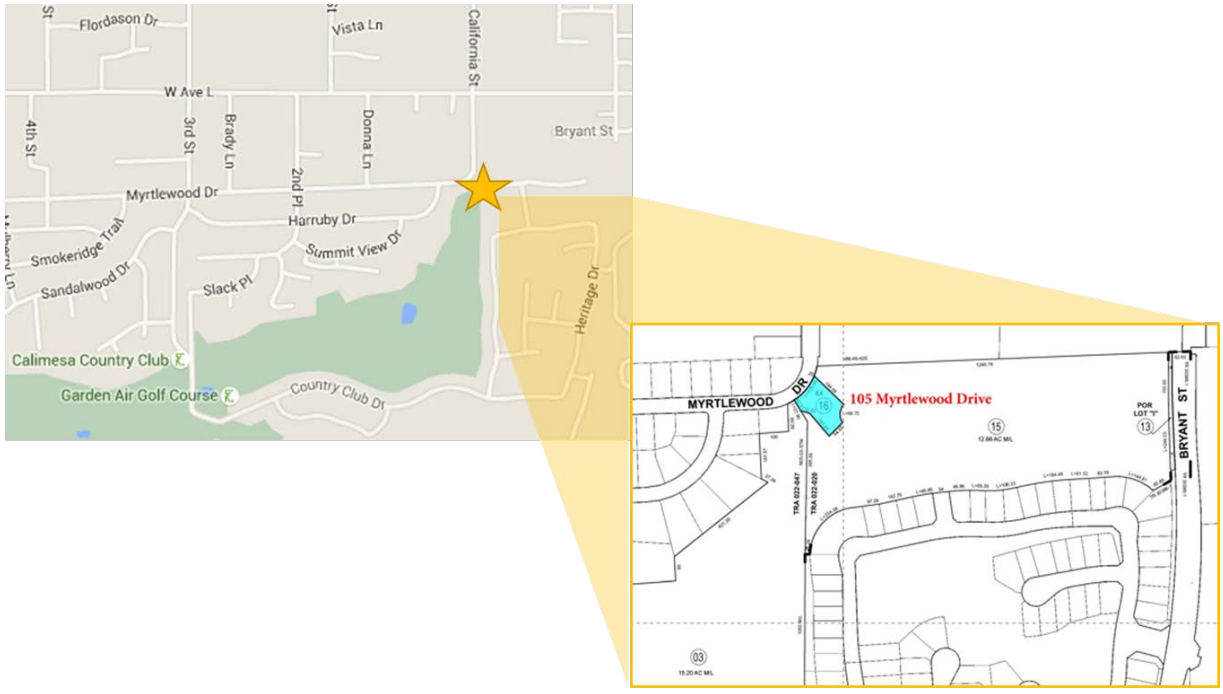
Workshop Memorandum 17-013

Date: January 31, 2017

From: Brent Anton, Engineering Manager

Subject: Award of a Construction Contract for the Construction of Site Improvements for RWB-12.2 Recycled Water Booster Station

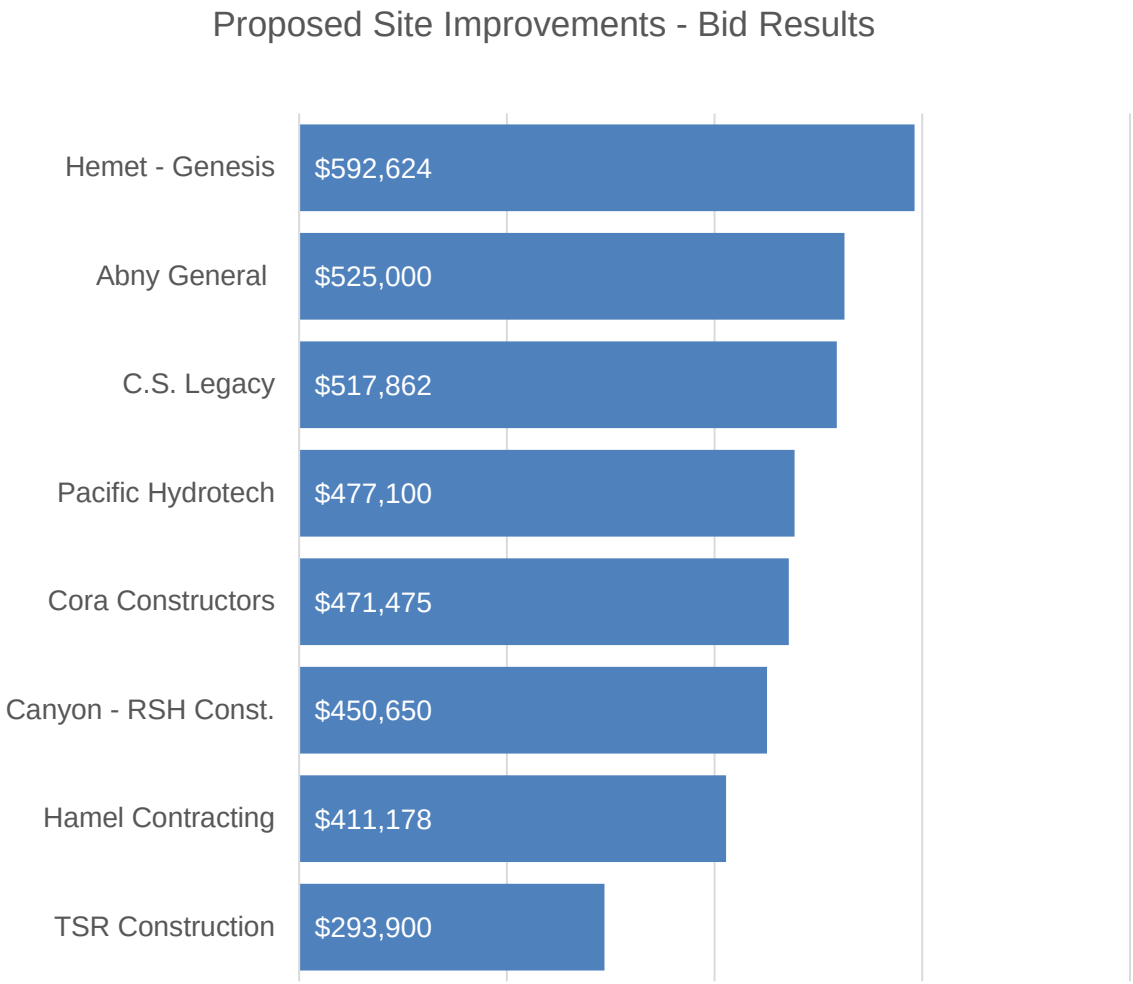
On November 15, 2016, the Board of Directors authorized the District staff to solicit bids for the construction of site improvements for the RWB-12.2 Recycled Booster Station at the intersection of Myrtlewood Drive and California Street. The project includes the construction of 315± linear feet of 8-foot 8-inch to 12-foot high masonry walls with masonry pillars, 200± linear feet of 8-foot high steel tubular fencing with access gates, site grading and furnishing and installing Class 2 base material and site landscaping.



On January 4, 2017, the District received 8 bids for the site improvements project. TSR Construction and Inspection was the low bidder in the amount of $293,900.00.

Financial Considerations:

Funding for this project will be from recycled water depreciation reserves.


Proposed Site Improvements - Bid Results
Hemet - Genesis
$592,624
Abny General
$525,000
C.S. Legacy
$517,862
Pacific Hydrotech
$477,100
Cora Constructors
$471,475
Canyon - RSH Const.
$450,650
Hamel Contracting
$411,178
TSR Construction
$293,900

KRIEGER & STEWART
Engineering Consultants

January 23, 2017 818-92.5 F/C

Brent Anton, Engineering Manager
Yucaipa Valley Water District
12770 Second Street
Yucaipa, CA 92399

Subject: Site Improvements for NB-12.2 Recycled Water Booster Station
Bid Results and Award Recommendation

Dear Mr. Anton:

On January 4, 2017, the Yucaipa Valley Water District (District) received 8 bids for subject project; the results are as follows (a breakdown by bid item is shown in the attached Bid Results table):

Contractor	Bid Amount
TSR Construction and Inspection	$293,900.00
Hamel Contracting, Inc.	$411,178.00
Canyon Springs Enterprises, dba RSH Construction Services	$450,650.00
Cora Constructors, Inc.	$471,475.00
Pacific Hydrotech Corporation	$477,100.00
C.S. Legacy Construction, Inc.	$517,862.00
Abny General Engineering, Inc.	$525,000.00
Hemet Manufacturing Company, Inc. dba Genesis Construction	$592,624.00

The low bidder is TSR Construction and Inspection (TSR) in the amount of $293,900.00. TSR's bid documents were complete and met the requirements of the Contract Documents.

Since neither the District, nor Krieger & Stewart, has had a working relationship with TSR in the past, we researched their performance by calling their references. All of the references indicated that their workmanship was above average and that they completed the projects on schedule. All references indicated they would use TSR again for future projects.

Since TSR is an experienced, capable contractor with a current Class A Contractor's License (No. 881123), we recommend award of subject work to TSR Construction and Inspection in the amount of $293,900.00.

If you have any questions, please call.

Sincerely,

KRIEGER & STEWART

Patrick M. Watson

PMW/lge
818-92-RECAWARD

Attachment: Bid Results

3602 University Avenue, Riverside, California 92501-3331
Tel: (951) 684-6900 • Fax: (951) 684-6986 • www.kriegerandstewart.com

YUCAIPA VALLEY WATER DISTRICT

SITE IMPROVEMENTS FOR NB-12.2 RECYCLED WATER BOOSTER STATION

BID SUMMARY SHEET
BID OPENING: JANUARY 4, 2017 AT 2:00 PM

ITEM NO.	DESCRIPTION	QTY	UNIT	TSR CONSTRUCTION AND INSPECTION		HAMEL CONTRACTING, INC.		CANYON SPRINGS ENTERPRISES, DBA RSH CONSTRUCTION SERVICES		CORA CONSTRUCTORS, INC.		PACIFIC HYDROTECH CORP		C.S. LEGACY CONSTRUCTION, INC.		ABNY GENERAL ENGINEERING, INC.		HEMET MANUFACTURING COMPANY, INC. DBA GENESIS CONSTRUCTION	
				UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL
101	Contract bonds, insurance and permits not to exceed 3% of bid amount.	1	L.S.	$5,800.00	$5,800.00	$10,381.00	$10,381.00	$13,800.00	$13,800.00	$8,775.00	$8,775.00	$13,800.00	$13,800.00	$10,000.00	$10,000.00	$12,000.00	$12,000.00	$14,500.00	$14,500.00
102	Mobilization of equipment, materials, and labor (not to exceed 3% of bid amount).	1	L.S.	$4,700.00	$4,700.00	$5,000.00	$5,000.00	$8,450.00	$8,450.00	$13,500.00	$13,500.00	$13,800.00	$13,800.00	$14,000.00	$14,000.00	$12,000.00	$12,000.00	$14,500.00	$14,500.00
103	Construct site grading including overexcavation, recompaction, fine grading, and all related work.	1	L.S.	$27,000.00	$27,000.00	$25,000.00	$25,000.00	$16,000.00	$16,000.00	$20,200.00	$20,200.00	$46,900.00	$46,900.00	$81,701.00	$81,701.00	$60,000.00	$60,000.00	$55,000.00	$55,000.00
104	Furnish and install Class 2 base, and all related work (approximately 10,800 S.F.).	1	L.S.	$12,000.00	$12,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$15,500.00	$15,500.00	$19,900.00	$19,900.00	$17,607.00	$17,607.00	$40,000.00	$40,000.00	$15,000.00	$15,000.00
105	Construct two concrete driveway approaches and all other miscellaneous concrete work (curbs, V-swales, etc.).	1	L.S.	$18,000.00	$18,000.00	$28,199.00	$28,199.00	$8,000.00	$8,000.00	$57,700.00	$57,700.00	$17,200.00	$17,200.00	$17,016.00	$17,016.00	$15,000.00	$15,000.00	$35,000.00	$35,000.00
106	Furnish and install two (2) 16' double swing gates at site entrance, and all related work.	1	L.S.	$33,000.00	$33,000.00	$32,500.00	$32,500.00	$39,000.00	$39,000.00	$26,100.00	$26,100.00	$35,700.00	$35,700.00	$27,892.00	$27,892.00	$20,000.00	$20,000.00	$38,000.00	$38,000.00
107	Furnish and install perimeter masonry wall (approximately 315 L.F.) and masonry pillars (14 total), and all related work.	1	L.S.	$73,300.00	$73,300.00	$146,570.00	$146,570.00	$192,500.00	$192,500.00	$173,300.00	$173,300.00	$200,400.00	$200,400.00	$165,190.00	$165,190.00	$189,000.00	$189,000.00	$199,000.00	$199,000.00
108	Furnish and install steel tubular fencing (approximately 182 L.F.), and all related work.	1	L.S.	$25,000.00	$25,000.00	$16,985.00	$16,985.00	$32,000.00	$32,000.00	$42,600.00	$42,600.00	$18,600.00	$18,600.00	$45,480.00	$45,480.00	$70,000.00	$70,000.00	$65,000.00	$65,000.00
109	Furnish and install 1" irrigation service per Standard Drawing R-6, and all related work.	1	L.S.	$14,000.00	$14,000.00	$10,000.00	$10,000.00	$6,900.00	$6,900.00	$9,800.00	$9,800.00	$10,800.00	$10,800.00	$11,446.00	$11,446.00	$15,000.00	$15,000.00	$4,000.00	$4,000.00
110	Furnish and install irrigation piping, landscape materials, irrigation controller, and all related work.	1	L.S.	$45,000.00	$45,000.00	$35,000.00	$35,000.00	$49,000.00	$49,000.00	$40,350.00	$40,350.00	$41,900.00	$41,900.00	$53,961.00	$53,961.00	$30,000.00	$30,000.00	$55,000.00	$55,000.00
111	Furnish and install electrical panel, electrical conduit, conductors, pull boxes, grounding systems, site lighting, and appurtenances, and all related work.	1	L.S.	$22,000.00	$22,000.00	$38,225.00	$38,225.00	$62,000.00	$62,000.00	$50,950.00	$50,950.00	$31,100.00	$31,100.00	$41,514.00	$41,514.00	$35,000.00	$35,000.00	$46,000.00	$46,000.00
112	Demobilize and clean-up.	1	L.S.	$3,100.00	$3,100.00	$5,000.00	$5,000.00	$3,000.00	$3,000.00	$1,600.00	$1,600.00	$3,000.00	$3,000.00	$9,436.00	$9,436.00	$15,000.00	$15,000.00	$5,000.00	$5,000.00
113	All other items of work not included in the above bid items required for a complete and functional project in compliance with the Contract Documents.	1	L.S.	$1,000.00	$1,000.00	$33,868.00	$33,868.00	$1.00	$1.00	$1,100.00	$1,100.00	$14,000.00	$14,000.00	$12,619.00	$12,619.00	$2,000.00	$2,000.00	$36,624.00	$36,624.00
114	Owner-directed field orders preauthorized by District.	1	L.S.	Set Amount	$10,000.00	Set Amount	$10,000.00	Set Amount	$10,000.00	Set Amount	$10,000.00	Set Amount	$10,000.00	Set Amount	$10,000.00	Set Amount	$10,000.00	Set Amount	$10,000.00
	Subtotal				**$293,900.00**		**$416,728.00**		**$460,651.00**		**$471,475.00**		**$477,100.00**		**$517,862.00**		**$525,000.00**		**$592,624.00**
	Last Minute Adjustment				$0.00		($5,550.00)		($10,001.00)		$0.00		$0.00		$0.00		$0.00		$0.00
	Total				**$293,900.00**		**$411,178.00**		**$450,650.00**		**$471,475.00**		**$477,100.00**		**$517,862.00**		**$525,000.00**		**$592,624.00**

/lge
818-92.xlsx (1/23/2017)

Policy Issues

Yucaipa Valley Water District

Yucaipa Valley Water District

Workshop Memorandum 17-014

Date: January 10, 2017

From: Matthew Porras, Management Analyst
Kathryn Hallberg, Management Analyst
Joseph Zoba, General Manager

Subject: Discussion Regarding Construction Meters, Agriculture Meters, and Residential Hydrant Meters

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On October 4, 2016, the District staff received a request from Mr. Al Ineichen requesting a waiver in monthly fees and construction meter deposit for his water hauled to 36610 Singleton Road, Calimesa. Since the District staff does not have the authority to waive the monthly construction meter fees or the deposit for the construction meter, the item was scheduled for a discussion at the board workshop on October 25, 2016 [Workshop Memorandum No. 16-161].

On October 25, 2016, the board members, District staff, and Mr. Ineichen discussed the practice of hauling drinking water from the District's drinking water system to property owned by Mr. Ineichen.

On December 14`, 2016 District staff met with Mr. Al Ineichen at his property to discuss the issues and resolutions that could be presented to the Board for consideration. At this meeting, Mr. Ineichen stated that he does not haul any potable water, he only hauls non-potable water for irrigation purposes. Mr. Al Ineichen questioned the purpose of the construction meter deposit of $1,500, considering the meter is placed and locked on a District hydrant and maintained by the District staff.

On January 10th, 2017, the board members, District staff, and Mr. Ineichen discussed the policy regarding construction meter costs, depreciation, installation cost, facility capacity charges, and water usage of current construction meter customers. With input from the Board and Mr. Ineichen; District staff determined the Daily Demand Charge needed further review and evaluation.

Review of the current Daily Demand Charge of $2.30 per calendar day led to the determination that the depreciation cost of the equipment over a 5-year period, and meter reading cost would comprise the new Daily Demand Charge.

Current Construction Meter Deposit, Demand Charge, and Consumption Charge.

- Construction Meter Deposit. A construction meter deposit of $1,500 per meter shall be paid prior to the District installing the temporary construction meter at a fire hydrant as determined by the District.

- Daily Demand Charge. A service charge of $2.30 per calendar day shall be charged for the rental and fixed cost associated with this service.

- Recycled Construction Water Consumption Charge. Recycled water used for construction purposes is more reliable and less subject to interruptions. This water shall be charged at a rate per thousand gallons equal to 1.2 times the highest tier of recycled water charged to District customers.

Proposed Construction Meter Installation Charge, Demand Charge and Consumption Charge.

Construction meters will be used for the sole purpose of construction activities and will be required to use only recycled water, unless approved by the Board of Directors. A construction meter will always be required to record water consumption for all water provided by the District. All other typical and fixed meter charges shall apply as set forth by the Board of Directors. The Board of Directors reserves the right to make exceptions to the possible resolution in regards to using potable water for construction purposes in extenuating circumstances. In this instance, considerations of cross contamination will be applied and may require additional equipment.

- Construction Meter Installation Charge. A construction meter installation charge shall be paid prior to the District installing the temporary construction meter at a recycled water fire hydrant as determined by the District. A one-time charge of $72.72 will be collected to cover the cost of the installation and removal of the construction meter. Each request for relocation will require the payment of half the amount provided above.

- Daily Demand Charge. A fixed service charge of $1.051 shall be charged per calendar day. This charge includes $0.919 for the depreciation cost of the construction meter and meter locks plus a daily fee of $0.132 for meter reading and utility billing.

- Recycled Construction Water Consumption Charge. Recycled water used for construction purposes is a reliable source of water and less subject to interruptions. This water shall be charged at a rate of $2.765 per kgal. This rate includes the charge of recycled water at the current rate of $1.71 per kgal and a facility capacity charge of $1.055 per kgal.

Proposed Agriculture Meter Installation Charge, Demand Charge and Consumption Charge.

The District's agriculture meters will be used for the sole purpose of agriculture activities with only recycled water. An agriculture meter will always be required to record water consumption for all water provided by the District. The Board of Directors reserves the right to make exceptions to the possible resolution in regards to using potable water for agriculture purposes in extenuating circumstances. In this instance, considerations of cross contamination will be applied and may require additional equipment. Title 22 of the California Code of Regulations specifies that recycled water can be used to water trees, gardens, vegetables, and lawns.

- Agriculture Meter Installation Charge. An agriculture meter installation charge shall be paid prior to the District installing the agriculture meter at a recycled water fire hydrant as determined by the District. The installation charge will be $72.72 for installation, this charge includes the removal of the agriculture meter when the service is discontinued. Each request for relocation will require the payment of half the amount provided above.

- Daily Demand Charge. A fixed service charge of $1.051 shall be charged per calendar day. This charge includes $0.919 for the depreciation cost of the construction meter and meter locks plus a daily fee of $0.132 for meter reading and utility billing.

- Recycled Agricultural Water Consumption Charge. Recycled water used for construction purposes is a reliable source of water and less subject to interruptions. This water shall be charged at a rate of $2.765 per kgal. This rate includes the charge of recycled water at the current rate of $1.71 per kgal and the facility capacity charge of $1.055 per kgal.

Proposed Residential Hydrant Meter Installation Charge, Demand Charge, Consumption Charge and Water Hauler's License.

The District's residential hydrant meters will be used for the sole purpose of residential activities with only potable water. A residential hydrant meter will always be required to record water consumption for all water provided by the District. An example of use may be a property within our service area that is not close to a service connection and/or has a failed well and desires to haul their own water.

- Residential Hydrant Meter Installation Charge. A residential hydrant meter installation charge shall be paid prior to the District installing the meter at a potable water fire hydrant as determined by the District. The installation charge will be $72.72 will be collected for the installation and removal of the construction meter when the service is discontinued. Each request for relocation will require the payment of half the amount provided above.

- Daily Demand Charge. A fixed service charge of $1.051 shall be charged per calendar day. This charge includes $0.919 for the depreciation cost of the construction meter and meter locks plus a daily fee of $0.132 for meter reading and utility billing.

- Potable Water Consumption Charge. This water shall be charged at a rate of $3.97 per kgal. This rate includes the charge of potable water with the current rate of $2.915 per kgal and the facility capacity charge of $1.055 per kgal.

- Water Hauler's License. The State of California requires a Water Hauler's License to haul drinking water in bulk (250 gallons capacity or greater). The hauling of potable water from a potable water fire hydrant must be metered at all times. The hauling of potable water in a 250-gallon tank or more must be hauled by a water hauler licensed through the State of California, Department of Public Health, Food and Drug Branch. This license is needed anytime water is transported for drinking, culinary or other purposes involving a likelihood of water being ingested by humans.

Water Hauler's License (State of California)

Pursuant to California Health and Safety Code, Section 111120, the State of California requires a Water Hauler's License to haul drinking water in bulk (250 gallons capacity or greater). This license is needed anytime water is transported for drinking, culinary or other purposes involving a likelihood of water being ingested by humans.

Water hauling vehicles are defined as self-propelled or towed vehicles having an attached water tank, with or without pumps, hoses and accessory equipment for filling or distribution of water.

The tank must be 250 gallons' capacity or higher and comply with all applicable State and Federal laws and regulations. Use of convertible trucks, dump trucks or flat-bed trucks with detachable tanks is allowed if the tanks are securely attached. Vehicles without a tank or detached tanks cannot be licensed.

Since the Yucaipa Valley Water District could be subject to enforcement procedures and violations pursuant to California Health and Safety Code, Section 111120(f), the District staff will require the Water Hauler's License to be obtained as the first step in the procedure. Therefore, the customer(s) need to pursue the required license to transport potable water and secure a residential hydrant meter from the District.

The application process for the customer to obtain the permit will typically require the following steps:

- Applicant must obtain a Water Hauler's License application (CDPH 8605) from the Department of Public Health, Food and Drug Branch (FDB).
- Applicant must conduct water quality testing from the hauling vehicle by a laboratory certified by the California Environmental Laboratory Accreditation Program (ELAP), or the United States Environmental Protection Agency (US EPA) as follows:
    - Bacteriological analyses (total coliform) and *E. coli; and*
    - Separate coliform tests are required for each water hauler. Copies of the results need to be provided for review upon request from FDB.
- Once licensed the FDB will conduct periodic, unannounced inspections of the water hauler to ensure that the Licensee is operating in compliance with all applicable state and federal laws and regulations:
    - Inspections include a review of required water testing, equipment maintenances, sanitation, and record keeping; and
    - Guidelines regarding equipment compliance are required pursuant to 21 CFR 129.40.
- The hauler shall keep a log of activities on board the vehicle:
    - Dates of cleaning and sanitation procedures;
    - Water sources used;
    - Delivery points, including dates and volumes delivered;
    - Copies of agreements, contracts, licenses; and
    - Test results of bacterial (coliform and *E. coli*) testing.
- Water Hauler's License in non-transferable.
- The Water Hauler's License must be renewed and the license fee/renewal fee is due annually with the State of California. See most current State requirements for fees.

This is a condensed version of the California Health and Safety Code requirements for the Water Hauler's License, and should be used for reference only. A complete detailed description of the requirements should be obtained from the California Health and Safety Code (H&SC) Section 111120.

Locking Option for Hydrant Meters.

The District will provide a lock and key to allow only the authorized customer to use the construction meter, agriculture meter or residential hydrant meter at the customer's request. In regards to fire protection and a locked hydrant meter; the meters are to only be placed on fire hydrants with multiple operational valves, therefore not blocking fire hydrant access by fire services.

Fee Calculations.

Facility Capacity Charges:

$$\frac{700\ gal}{day}\ x\frac{365\ days}{year}\ x\frac{50\ years}{1} = 12{,}775\ kgal$$

$$\frac{\$13{,}478}{12{,}775\ kgal} = \$1.055\ kgal$$

Depreciation Cost.

Meter deprecation cost over 5 years:

$$5\ years\ x\ 365\ days = 1825\ days$$

Removable Hydrant Meter Cost: $1458.00

$$\frac{\$1458}{1825\ days} = \$0.80\ per\ day$$

Fire Hydrant Meter Lock: $113.08

$$\frac{\$113.08}{1825\ days} = \$0.062\ per\ day$$

Gate Valve Lock: $103.38

$$\frac{\$103.38}{1825\ days} = \$0.057\ per\ day$$

Reading and billing services = $48 per year

Unauthorized Use of Water.

Any unauthorized use of water, including water taken from the District without the use of a water meter, shall be immediately assessed by the District. The fine is $750.00 or $65.00 per day, whichever is greater.

District staff recommends the approval of a resolution implementing the above guidelines and cost for a Construction Meter, Agriculture Meter, and a Residential Hydrant Meter.

water meter or load sheet

Al Ineichen
Today, 9:03 PM
jzoba@yvwd.dst

Reply

Sent Items

Show all 2 attachments (161 KB) Download all Save all to OneDrive - Personal

Evernote Wunderlist

October 3,2016

Attn: Joe Zoba

My name is Al Ineichen I live at 36610 Singleton Rd. Calimesa. I have a small ranch in Calimesa. I have been hauling water for approximately 27 years with the permission of YVWD using a load sheet all this time with no problems or incidence. It just recently changed requesting me to have a meter . I do not see the need to have a meter, if required I do not fill I should have to pay $80.00 a month plus $1,500 deposit, which I have done,This is a construction meter and I'm not using the meter for construction. Since I now have a meter I'm responsible for the meter and the water that runs through it according to district rules. This meter has been attached to the hydrant for only a short time and already thee are other people using it, which I have no control over [see attached]. It would be more functional if I had control of the meter or went back on the load sheet at which I could report in more often if necessary .

I would like to request no monthly fee of $80.00 and a refund of my $1,500.00 deposit. Thank you for your attention in this matter as I would like to resume using the load sheet. Please take a look at my account, which can help you determine my usage.

I look forward to your response.Thanks very much

yours truly; Al Ineichen 951 809 4818

WATER HAULER
LICENSE PROCEDURE

California Health and Safety Code (H&SC) Section 111120 requires water haulers operating in California to obtain a Water Hauler's License issued by the Department of Public Health, Food and Drug Branch (FDB). The Water Hauler's License is required to haul **potable water** in bulk by any means of transportation for drinking, culinary, or other purposes involving a likelihood of the water being ingested by humans. "In bulk" means containers having capacities of 250 gallons or greater.

Water hauling vehicles are defined as self-propelled or towed vehicles having an attached water tank, with or without pumps, hoses and accessory equipment for filling or distribution of water. The tank must exceed 250 gallons capacity and comply with all applicable State and Federal laws and regulations. Use of convertible trucks, dump trucks or flat-bed trucks with detachable tanks is allowed if the tanks are securely attached. Vehicle without a tank or detached tanks cannot be licensed. The Water Hauler's License must be renewed annually.

There are two water hauler designations.

- Category B haulers may haul potable water or any food product including wine, syrup, fruit concentrates and soft drink concentrates. Category B haulers **cannot** haul non-food products.
- Category X haulers may **only haul potable water**. No other materials may be hauled by Category X haulers.

How to apply for a Water Hauler's License

- Obtain a Water Hauler's License application (CDPH 8605) by calling the FDB Water program desk at (916) 324-2170, or by downloading the form at http://www.cdph.ca.gov/pubsforms/forms/CtrldForms/cdph8605.pdf
- Complete the application in type or legible print and sign the form. Make sure each section is completed fully. **Incomplete applications will be returned to the applicant.**
- Make arrangements with a certified laboratory to conduct water quality testing on your water, as follows:
  - Bacteriological analyses (total coliforms)
- Make sure you include a valid telephone number on the application. FDB staff may contact you at the provided number to ask questions or request additional information regarding your water hauler.
- You must list all water haulers on the Water Hauler's License application. Each water hauler will receive a unique FDB water hauler decal.

- You must include the License plate number and Vehicle Identification Number (VIN) for each water hauler.
- Submit your completed application, the non-refundable license fee (check or money order), and water quality test results to CDPH (see the Water Hauler's License application for the mailing instructions).
- If you have a valid Water Bottling Plant License issued by FDB and the water hauler and water bottling plant are based, and operating at the same location, you may request a fee exemption from the Water Hauler's License.
- After your application is processed you will be contacted by FDB, at the telephone number provided on your application, to schedule a pre-licensing inspection.
- If your water hauler is found to be in substantial compliance with all applicable laws and regulations, your license will be issued shortly thereafter.
- The Water Hauler's License is valid for one calendar year. It is your responsibility to renew the license prior to the expiration date printed on the license.
- Your Water Hauler's License is non-transferable. If you transfer or sell your water hauler, the new owner will be required to apply for a new Water Hauler's License.

Renewal of a Water Hauler's License

- Once licensed, you will receive a Renewal notice and partially completed Water Hauler's License application 60 days prior to the expiration date of your license.
  - If you do not receive your renewal notice, please contact the FDB Water program desk at (916) 324-2170, or you may download a blank application at http://www.cdph.ca.gov/pubsforms/forms/CtrldForms/cdph8605.pdf
  - Sections 1-5 will be pre-filled on the Water Hauler's License application. Verify the information, make any corrections, and complete the remaining sections. Make sure each section is completed fully. **Incomplete applications will be returned to the applicant.**
- Submit copies of the required bacteriological test results for water sampled from your water hauler, as follows:
  - Current bacteriological analyses (total coliforms) test results for analyses conducted by a certified laboratory within the last 30 days.
  - A separate coliform test is required for each water hauler. Make sure the laboratory analytical report indicates the water hauler's license plate number or VIN.
- If you have added or changed water hauler vehicles you must provide the license plate number and Vehicle Identification Number (VIN) for each water hauler.
- Submit your renewal application, non-refundable license fee (check or money order), and water quality test results and records to CDPH (see the Water Hauler's License application for the mailing instructions).
- FDB will conduct periodic, unannounced inspections of your water hauler to ensure that you are operating in compliance with all applicable state and federal laws and regulations.

Tips for completing the Water Hauler's License application

- Do not skip any sections of the application. Each section must be completed fully. Incomplete sections will delay processing of your application. Refer to the instruction page included with the application.
- For renewal licenses, write your current license number above the "☒ RENEWAL APPLICANT" selection on the top of the form.
- The "Facility Address" must be that of the physical location where your water hauler is stored.
- The "Mailing Address" should be that where you wish to receive correspondence from FDB, such as your license and license renewal notice.
- Provide valid phone numbers. FDB staff will contact you at the given numbers. Wrong, disconnected, or unmonitored phone numbers will delay the processing of your application and may significantly delay the scheduling of your pre-licensing inspection.
- Write the phrase "PCA Code 76204" on the front of your check or money order.
- Submit legible copies of the requested water quality test results and/or monitoring records. Keep the original test results in your water hauler and available for review by FDB upon request.
- **Water Hauler's Licenses are non-transferrable to new owners.** A change of ownership will require a new Water Hauler's License.

Additional information

- Once licensed, periodic on-site inspections are conducted to assess compliance with applicable State and federal laws and regulations. Inspections will include a review of required water testing, equipment maintenance and sanitation, and record-keeping. Please review the Water Hauler's Inspection Procedure document, located at the link below, for information to help you prepare for your inspection.
  http://www.cdph.ca.gov/pubsforms/Documents/fdbBVWgde17.pdf

- Water quality testing must be conducted by a laboratory certified by the California Environmental Laboratory Accreditation Program (ELAP) or the United States Environmental Protection Agency (USEPA). For a list of ELAP-certified drinking water laboratories, please visit the agency website links below:

  State Water Resources Control Board, Division of Drinking Water/ELAP
  http://www.waterboards.ca.gov/drinking_water/certlic/labs/index.shtml

  ELAP certified drinking water labs, List
  http://www.waterboards.ca.gov/drinking_water/certlic/labs/documents/elap_certified_drinking%20_water_labs.pdf

WATER HAULER

INSPECTION PROCEDURE AND OPERATING REQUIREMENTS

California Health and Safety Code (H&SC) Section 111120 requires water haulers operating in California to obtain a Water Hauler's License issued by the Department of Public Health, Food and Drug Branch (FDB). A Water hauler is defined as any person who hauls water in bulk (250 gallons or more) by any means of transportation if the water is to be used for drinking, culinary, or other purposes involving a likelihood of the water being ingested by humans. The Water Hauler's License must be renewed annually.

Once licensed, periodic water hauler inspections are conducted to assess compliance with applicable State and Federal laws and regulations. Inspections will include a review of required water testing results and records, an inspection to determine equipment suitability, equipment maintenance, and an evaluation of operating and sanitation procedures.

General Requirements

Pursuant to 21 CFR 129.40, all water contact equipment shall be suitable for its intended use, including tanks, surfaces, hoses, pumps, valves, fittings and lubricants. All such equipment shall be constructed of non-toxic, non-absorbent material which can be adequately cleaned and sanitized. All equipment shall be constructed so as to allow inspection and adequate sanitation of water contact surfaces.

The following Guidelines regarding equipment will assist you to ensure compliance with CFR Part 129.40.

1. Water hauler tank
   - (i) Tank materials
     - a) The prior use of a tank must be known. If the tank was used for non-food purposes, FDB will require testing by an approved laboratory to ensure safety.
     - b) Examples of Acceptable Tank Materials
       - stainless steel;
       - food grade plastics;
       - food grade epoxy coated tanks;
       - glass and glass coated tanks;
       - aluminum (smooth finished);
       - copper;
       - ceramic.
     - c) Examples of Unacceptable Tank Materials:
       - non-coated steel or galvanized steel;

- rusted or cracked surfaces;
- tar, bituminous, or asbestos coatings;
- coatings that are not documented as food grade

d) Existing equipment with galvanized steel will not be allowed unless a food grade coating has been properly applied to all water contact surfaces.

(ii) Tank construction

a) Openings:

- Hatches and other openings, except fittings for water entry or discharge, shall be completely covered and sealed with tightly fitted coverings, permanently mounted food grade gaskets, or screw or clamp fastenings. The only exception is for Category B haulers which are equipped with security locks.
- Water fittings shall be equipped with clamp or screw-type caps, tethered to the fittings with chain or cable. These caps shall be in position on the fittings whenever they are not used for water transfer.

b) Vents:

- The tank shall be vented by a downward facing, or otherwise protected vent opening of a sufficient size to allow air to replace water as it is discarded.
- The opening shall be protected by an adequately supported air filter material capable of removing fine dust particles from the air.

c) Drain:

- A bottom drain shall be provided to facilitate complete discharge of water during sanitation procedures.

(iii) Tank Filling Mechanisms:

a) Tanks shall be filled using a system that prevents backflow of water from the vehicle tank to the source. Either of the following methods may be used:

- Acceptable double check valves on the direct filling connection to the tank. Two consecutively connected single check valves may be used in place of a double check valve.
- Overhead filling through a hatch opening at the top of the tank. The filling spout must not be allowed to intrude into the tank further than two diameters of the filling pipe above the highest water level that is possible when the tank is filled. If an overhead filler pipe is mounted on a vehicle, this pipe shall be capped at each end with threaded or clamped caps when the filler pipe is not in use. The caps need to be tethered to the fittings at the ends of the filler pipe.

b) Filling must be accomplished using acceptable source water under pressure.

c) Drafting of surface waters is not allowed under any circumstances.
d) Power take-off pumps will be allowed if they are properly sealed and isolated from the vehicle transmission.

2. Water pump
   (i) Only water transfer pumps which can be readily disassembled to demonstrate the condition of the impeller and impeller chamber shall be used.
   (ii) Acceptable Pumps:
      a) food grade pumps constructed from stainless steel, plastic, smooth-finish aluminum or other food grade materials.
      b) All water contact surfaces, including seals, bearings and lubricants must be constructed from food grade materials and must be smooth, non-porous and corrosion resistant. Acceptable food grade lubricants are usually white or pastel colored.
   (iii) Unacceptable Pumps:
      a) Any pump using non-food grade lubricant, seals, or bearings; porous, pitted or corroded impellers or impeller chamber surfaces; cast iron pumps; petroleum lubricated pumps; and pumps installed within the water tank.
   (iv) When discharge or transfer pumps are used, an effective check valve shall be provided on the pump or tank discharge line, as near to the pump or tank as possible. No connections shall be located between the tank and the check valve. The check valve may be in-line or within the pump itself.

3. Hoses
   (i) The ends of all hoses shall be fitted with threaded or clamped caps. Such caps shall be in place when hoses are not in use. A tight, clean storage compartment can substitute for hose caps if the hoses are stored within the compartment at all times except during use for transfer of water.
   (ii) Acceptable:
      a) Hoses shall have approved food grade water contact surfaces prepared from plastic, synthetic rubber, metal or other smooth non-porous material.
   (iii) Unacceptable:
      a) Rubber hoses, garden hoses, canvas fire hoses, radiator or engine cooling system hoses, surface water drafting hoses.

4. Other equipment
   (i) Piping:
      a) Food grade plastic or acceptable metal (brass, aluminum, stainless steel, copper) may be used. No corroded steel, galvanized steel or black pipe.
   (ii) Canteen filling equipment
      a) Must have effective backflow prevention (check valves) and dispensing spouts or hose bibs.

(iii) Miscellaneous Equipment:
a) Potable water heaters, pressure tanks and other equipment for operation of shower and kitchen units are allowed.
(iv) Spray Bays
a) Are **not allowed unless** equipped with an acceptable backflow prevention device.
(v) Fire hoses/nozzles and surface water drafting equipment
a) Are **not allowed**.

5. Labeling Requirements
(i) The following statements must be permanently attached to or painted onto the vehicle and must be fully visible and legible at all times:
a) The name and address of the licensee must appear on both sides of the tank or on both truck cab doors in letters at least 2 inches in height. If the tank is covered or located inside a vehicle, this information must be on each truck cab door or on each side of the container.
b) The words "drinking water" or "potable water" must appear on both sides of the tank in letters of at least 4 inches in height. If the tank is covered or located inside the vehicle, this information must be on each truck cab door or on each side of the container.
c) The capacity (gallonage) of the tank must appear on both sides of the tank or on both cab doors in letters of at least 2 inches in height. If the tank is covered or located inside the vehicle, this information must be on each truck cab door or on each side of the container.
d) A sticker provided by FDB shall be affixed to the upper left quarter of the rear of the tank and shall be visible at all times. If the tank is covered or located inside the vehicle, the sticker must be affixed to the upper left quarter of the rear of the VEHICLE. The sticker indicates that the vehicle has been inspected and found to be in compliance with applicable requirements.

6. Inspection and Sanitizing
(i) All equipment surfaces intended for potable water contact, including source fill point equipment, containers, caps, tanks, hoses, valves, filters and fittings shall be inspected, washed, rinsed, sanitized and replaced as often as necessary to maintain sanitation of such surfaces. Procedures to be used are contained in 21 CFR Part 129.80.
(ii) If household chlorine bleach (containing 5% chlorine) is to be used as a sanitizer, use one gallon of chlorine bleach in 1,000 gallons of water. Agitate the chlorine solution thoroughly and allow contact with tank hoses for at least 30 minutes. Run chlorine solution to waste through delivery hoses. The tank must then be thoroughly rinsed with potable water before filling. Do not use scented chlorine bleach for this process.

(iii) Adequate cleaning and sanitizing procedures as described in subsection (a) above shall be used on hauling vehicles and associated equipment at the following times:

a) When equipment is first placed into service; when it has been unused and stored in a sealed condition for a period of 4 weeks or more; or when it was used to haul any food products other than potable water.

For Category B Vehicles: When any food product has been hauled, the tank, hoses and other equipment must be thoroughly cleaned, sanitized and rinsed. **Water samples must be collected for coliform analysis.** Licensees may haul water only if the test data shows that the water contains coliform bacteria at less than 2.2 MPM/100 ml (or "absence" if the presence/absence test is used).

b) Whenever the filled or empty tank has been exposed by open or unsealed cover caps or fittings to any condition of possible contamination of the tank or contents. This includes potential contamination from dust, smoke, rain, or chemical substances.

c) When any fault or defect becomes apparent in the seals, vents, hatch doors, welds, valves, pipes, pumps, hoses, or other equipment which may allow the water to become contaminated.

d) When bacterial analysis of the water indicates presence of *E. coli*.

7. Bacteriological testing

(i) Hauled water samples shall be submitted to an approved water laboratory for coliform testing at the following times:

a) The first water load following any of the required sanitation procedures described in (6) above.

b) At least one sample of hauled water every 30 days during months when water hauling is performed.

c) Whenever such analysis is requested by state or local health authorities.

(ii) All testing must be conducted by a laboratory certified by the California Environmental Laboratory Accreditation Program (ELAP) or the United States Environmental Protection Agency (USEPA). For a list of ELAP-certified drinking water laboratories, please visit the agency website links below:

State Water Resources Control Board, Division of Drinking Water/ELAP
http://www.waterboards.ca.gov/drinking_water/certlic/labs/index.shtml

ELAP certified drinking water labs, List
http://www.waterboards.ca.gov/drinking_water/certlic/labs/documents/elap_certified_drinking%20_water_labs.pdf

(iii) Take four samples and send all four samples to the testing laboratory. The laboratory will randomly select one of the four samples to test for coliforms.

(iv) The laboratory may use the presence/absence (P&A) test for the coliform analysis. Only negative (absence) test data are acceptable. **If a sample tests positive (presence) for coliforms, you must further test the water for *E. coli*. If *E. coli* is detected, you must immediately stop distributing the water; notify the FDB Licensing Desk; investigate the cause of the problem; take corrective actions and resample/test the water. You must not resume the distribution of water until the test shows no *E. coli* in the water.**

(v) Pursuant to H&SC Section 111155, FDB may ask you to test for other contaminants if FDB suspects other substances may be present in the water.

8. Storage of water in the water hauler tank
   (i) Water shall NOT be stored in the water hauler for a period of greater than one week.

9. Logs
   (i) The hauler shall keep a log of the following activities **on board the vehicle**;
      a) Dates of cleaning and sanitizing procedures. This log is to include descriptions of processes used for cleaning/sanitizing. For example: cleaning agents, contact time, concentration of sanitizing agent.
      b) Water sources used. This log is to include: dates, gallonage and the name of the person who authorized/directed use of the source.
      c) Delivery points, including dates and volumes delivered.
      d) Copies of agreements, contracts, licenses
      e) Test results of bacterial (coliform and *E. coli*) testing

10. Record Retention
   (i) Pursuant to 21 CFR Part 129.80(h) all testing, suitability, and performance records must be maintained for at least 2 years.

11. Design or Construction Changes
   (i) You must inform FDB when any changes are made in the design or construction of your water hauler.

Administrative Issues

Yucaipa Valley Water District

Yucaipa Valley Water District

Workshop Memorandum 17-015

Date: January 10, 2017

From: Joseph Zoba, General Manager

Subject: Overview of Rating Agency Redetermination of the Yucaipa Valley Water District Related to the 2015A Refunding Revenue Bonds

In 2015 the Yucaipa Valley Water District refinanced the 2004A Certificates of Participation used to finance the construction of the Yucaipa Valley Regional Water Filtration Facility.

Every two years, the District will be reevaluated to determine if the credit rating should be changed to reflect current financial conditions and external constraints.

The latest reassessment of the District credit rating has been held stable a AA- rating by Fitch Ratings.

The purpose of this agenda item is to discuss the strengths, challenges, overall rating methodology and to reinforce the fundamental financial indicators of the Yucaipa Valley Water District on behalf of our customers.

By continuously monitoring and strengthening our core financial standing, the District will be able to obtain lower interest rates in the future and attract additional investments for future infrastructure improvements.

Major Rating Agencies Rating Guide for Long and Short Term Debt

Moody's		S&P		Fitch		Risk
Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Characteristic
Aaa	P-1	AAA	A-1+	AAA	F1+	Prime
Aa1		AA+		AA+		High Grade
Aa2		AA		AA		
Aa3		AA-		AA-		
A1		A+	A-1	A+	F1	Upper Medium Grade
A2		A		A		
A3	P-2	A-	A-2	A-	F2	
Baa1		BBB+		BBB+		Lower Medium Grade
Baa2	P-3	BBB	A-3	BBB	F3	
Baa3		BBB-		BBB-		
Ba1	Not Prime	BB+	B	BB+	B	Non-investment grade speculative
Ba2		BB		BB		
Ba3		BB-		BB-		
B1		B+		B+		Highly Speculative
B2		B		B		
B3		B-		B-		
Caa1		CCC+	C	CCC	C	Substantial Risks
Caa2		CCC				Extremely Speculative
Caa3		CCC-				In default with little prospect for recovery
Ca		CC				
C		C				
/		D	/	DDD	/	In default
/				DD		
				D		

FitchRatings

Fitch Affirms Yucaipa Valley Water District, CA's Water Revs at 'AA-'; Outlook Stable

25 Jan 2017 11:56 AM EST

Fitch Ratings-Austin-25 January 2017: Fitch Ratings has affirmed its 'AA-' rating on the following bonds issued by the Yucaipa Valley Water District, CA (the district):

--Approximately $30.8 million water system revenue refunding bonds, series 2015A.

The Rating Outlook is Stable.

SECURITY

The bonds are secured by a first lien pledge on the revenues of the district's water system (the system) and a 1% ad valorem property tax levied by the district.

KEY RATING DRIVERS

IMPROVING FINANCIAL PROFILE: Despite a year-over-year decrease in water sales revenue driven by drought restrictions, in fiscal 2016, an increase in connection fees combined with reduced debt service carrying costs led to an improvement in the system's all-in debt service coverage (DSC) to 2.5x. Continued favorable financial results are expected.

ELEVATED DEBT METRICS TO IMPROVE: While currently somewhat elevated, the district's debt profile should improve due to an expected pay-go capital improvement plan (CIP) along with rapid debt amortization.

WATER SUPPLY: Extensive planning by a proactive management team has resulted in a sufficient and diverse water supply for medium- to long-term needs.

SOLID LOCAL ECONOMY: Unemployment and wealth metrics are sound albeit a bit below average. Growth in connections is up, having recovered from recessionary lows.

RATING SENSTIVITIES

WEAKENED PERFORMANCE: The rating on Yucaipa Valley Water District's revenue bonds could come under pressure if a deterioration in the district's financial and/or debt profiles were to occur.

CREDIT PROFILE

The district is located 70 miles east of Los Angeles in the foothills of the San Bernardino Mountains, with portions of the service area encompassing Riverside and San Bernardino

counties. The district provides retail water, wastewater and recycled water to a primarily residential population of approximately 44,900 through 12,670 connections in the cities of Calimesa and Yucaipa.

IMPROVED FINANCIAL PROFILE

The system's financial profile has improved since Fitch's last review in 2015, driven by the savings provided by the refunding of the previously outstanding 2015A bonds plus a rebound in connection fee revenue. The improvement to all-in DSC occurred even with a 9% decrease in operating revenue in fiscal 2016 - a result of the state-mandated water usage restrictions. The system's liquidity position also improved in fiscal 2016, finishing with the cash equivalent of approximately 350 days of operational expenses (days cash). This is a favorable turnaround from a cash standpoint, as fiscal 2013 finished with just 88 days cash.

Management is in the process of updating its five-year forecast and CIP; Fitch was not provided a draft. However, further improvements are expected in fiscals 2017 and 2018 as the lifting of the state's water restrictions is expected to combine with the trend of new connections thereby resulting in higher overall revenue. A recently completed six million gallon reservoir should help drive new development in the city of Calimesa beginning in 2018.

ELEVATED DEBT METRICS

The district's debt profile is somewhat elevated but improving. Total debt per customer finished fiscal 2016 at $2,604, which was above Fitch's 'AA' category median of $1,823. Based on the amortization schedule of the system's debt, debt-per-customer should reach approximately $1,800 at the end of five years, which would be more in line with the system's peers. The system's other debt metrics also align well with its peers.

An updated CIP is not available, but capital needs are reportedly minimal over the next few years with all projects reportedly related to rehabilitation of existing pipelines and reservoirs. Capital projects are expected to be funded entirely by cash, helping to alleviate any pressure to the system's debt profile.

DIVERSE WATER SUPPLY

The district has a wide array of water resources available for its customers, including the use of recycled water, which places it in a favorable position versus many other regional peers. Approximately 60% of the district's potable water supply is derived from the Yucaipa and Beaumont groundwater basins. The remaining 40% is derived from surface water sources, including treated water from the Oak Glen Plant and untreated water from the State Water Project (SWP), which is treated at the Yucaipa Filtration Facility. In times of drought, the district can utilize supply from its reservoirs and wells. Conversely, when supply is readily available, the district uses surpluses from the SWP to recharge its wells.

RATES REMAIN COMPETITIVE

Current rates, which have been held flat the last two years, include a fixed-charge component and a usage-based component. An additional 1% property tax charge is

assessed on service-area residents, the large majority of which is allocated to the district. Under Fitch's standard usage assumption of 7,500 gallons per month, rates are affordable at approximately 0.8% of median household income (MHI). Although actual usage is much higher in the region, customer bills are competitive with other regional providers.

GENERALLY STABLE ECONOMIC PROFILE

From a wealth and unemployment standpoint, the city of Yucaipa's local economic metrics are generally on par or slightly worse than the nation's. At 5.4% in November 2016, the city's unemployment rate ranked slightly higher than the state average (5.0%) and national (4.5%) levels. County income levels are mostly consistent with the national average but lower than the state average. New connections averaged 175-180 over the last two years, which is a solid improvement over the numbers realized during the last recession. The service area is approximately 50% built out, allowing for room to meet projected growth.

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Source: https://www.fitchratings.com/site/pr/1018105

Director Comments

Yucaipa Valley Water District

Adjournment

Yucaipa Valley Water District

Yucaipa Valley Water District

FACTS ABOUT THE YUCAIPA VALLEY WATER DISTRICT

Service Area Size: 40 square miles (sphere of influence is 68 square miles)

Elevation Change: 3,140 foot elevation change (from 2,044 to 5,184 feet)

Number of Employees:
5 elected board members
62 full time employees

Operating Budget:
Water Division - $13,397,500
Sewer Division - $11,820,000
Recycled Water Division - $537,250
Total Annual Budget - $25,754,750

Number of Services:
12,434 water connections serving 17,179 units
13,559 sewer connections serving 20,519 units
64 recycled water connections

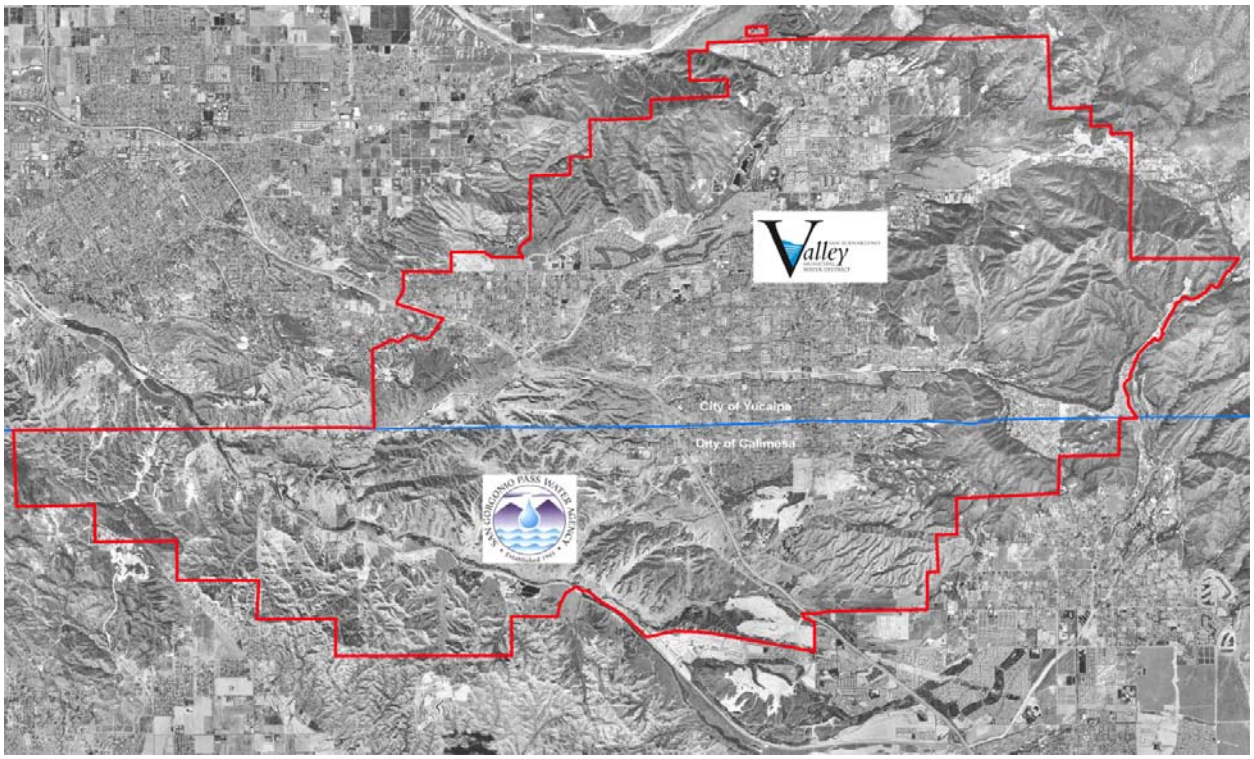
Water System:
215 miles of drinking water pipelines
27 reservoirs - 34 million gallons of storage capacity
18 pressure zones
12,000 ac-ft annual water demand (3.9 billion gallons)
Two water filtration facilities:
- 1 mgd at Oak Glen Surface Water Filtration Facility
- 12 mgd at Yucaipa Valley Regional Water Filtration Facility

Sewer System:
8.0 million gallon treatment capacity - current flow at 4.0 mgd
205 miles of sewer mainlines
5 sewer lift stations
4,500 ac-ft annual recycled water prod. (1.46 billion gallons)

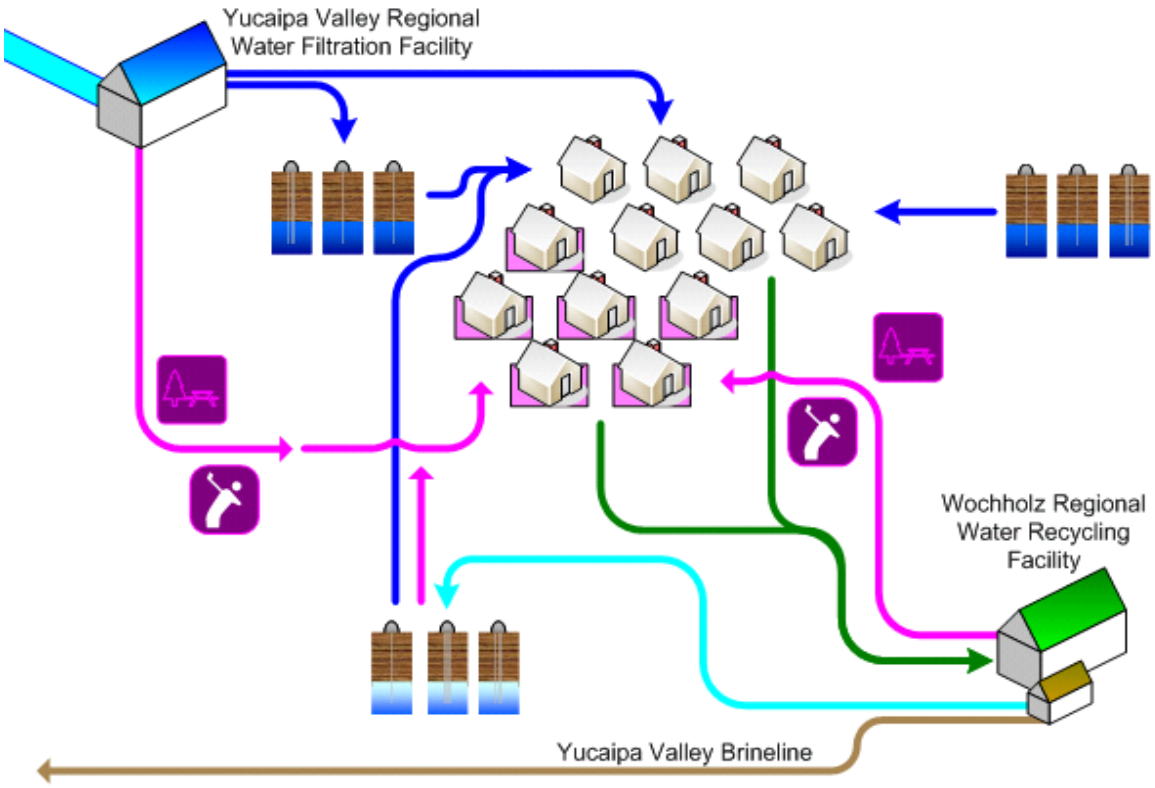
Recycled Water:
22 miles of recycled water pipelines
5 reservoirs - 12 million gallons of storage
1,200 ac-ft annual recycled demand (0.4 billion gallons)

Brine Disposal:
2.2 million gallon desalination facility at sewer treatment plant
1.108 million gallons of Inland Empire Brine Line capacity
0.295 million gallons of treatment capacity in Orange County

State Water Contractors: San Bernardino Valley Municipal Water District
San Gorgonio Pass Water Agency



Sustainability Plan: A Strategic Plan for a Sustainable Future: The Integration and Preservation of Resources, adopted on August 20, 2008.



Yucaipa Valley Water District

THE MEASUREMENT OF WATER PURITY

One part per hundred is generally represented by the percent (%).
This is equivalent to about fifteen minutes out of one day.

One part per thousand denotes one part per 1000 parts.
This is equivalent to about one and a half minutes out of one day.

One part per million (**ppm**) denotes one part per 1,000,000 parts.
This is equivalent to about 32 seconds out of a year.

One part per billion (**ppb**) denotes one part per 1,000,000,000 parts.
This is equivalent to about three seconds out of a century.

One part per trillion (**ppt**) denotes one part per 1,000,000,000,000 parts.
This is equivalent to about three seconds out of every hundred thousand years.

One part per quadrillion (**ppq**) denotes one part per 1,000,000,000,000,000 parts.
This is equivalent to about two and a half minutes out of the age of the Earth (4.5 billion years).

Yucaipa Valley Water District

GLOSSARY OF COMMONLY USED TERMS

Every profession has specialized terms which generally evolve to facilitate communication between individuals. The routine use of these terms tends to exclude those who are unfamiliar with the particular specialized language of the group. Sometimes jargon can create communication cause difficulties where professionals in related fields use different terms for the same phenomena.

Below are commonly used water terms and abbreviations with commonly used definitions. If there is any discrepancy in definitions, the District's Regulations Governing Water Service is the final and binding definition.

Acre Foot of Water - The volume of water (325,850 gallons, or 43,560 cubic feet) that would cover an area of one acre to a depth of 1 foot.

Activated Sludge Process – A secondary biological sewer treatment process where bacteria reproduce at a high rate with the introduction of excess air or oxygen, and consume dissolved nutrients in the wastewater.

Annual Water Quality Report - The document is prepared annually and provides information on water quality, constituents in the water, compliance with drinking water standards and educational material on tap water. It is also referred to as a Consumer Confidence Report (CCR).

Aquifer - The natural underground area with layers of porous, water-bearing materials (sand, gravel) capable of yielding a supply of water; see Groundwater basin.

Backflow - The reversal of water's normal direction of flow. When water passes through a water meter into a home or business it should not reverse flow back into the water mainline.

Best Management Practices (BMPs) - Methods or techniques found to be the most effective and practical means in achieving an objective. Often used in the context of water conservation.

Biochemical Oxygen Demand (BOD) – The amount of oxygen used when organic matter undergoes decomposition by microorganisms. Testing for BOD is done to assess the amount of organic matter in water.

Biosolids – Biosolids are nutrient rich organic and highly treated solid materials produced by the sewer treatment process. This high-quality product can be used as a soil amendment on farm land or further processed as an earth-like product for commercial and home gardens to improve and maintain fertile soil and stimulate plant growth.

Catch Basin – A chamber usually built at the curb line of a street, which conveys surface water for discharge into a storm sewer.

Capital Improvement Program (CIP) – Projects for repair, rehabilitation, and replacement of assets. Also includes treatment improvements, additional capacity, and projects for the support facilities.

Collector Sewer – The first element of a wastewater collection system used to collect and carry wastewater from one or more building sewer laterals to a main sewer.

Coliform Bacteria – A group of bacteria found in the intestines of humans and other animals, but also occasionally found elsewhere and is generally used as an indicator of sewage pollution.

Combined Sewer Overflow – The portion of flow from a combined sewer system, which discharges into a water body from an outfall located upstream of a wastewater treatment plant, usually during wet weather conditions.

Combined Sewer System– Generally older sewer systems designed to convey both sewage and storm water into one pipe to a wastewater treatment plant.

Conjunctive Use - The coordinated management of surface water and groundwater supplies to maximize the yield of the overall water resource. Active conjunctive use uses artificial recharge, where surface water is intentionally percolated or injected into aquifers for later use. Passive conjunctive use is to simply rely on surface water in wet years and use groundwater in dry years.

Consumer Confidence Report (CCR) - see Annual Water Quality Report.

Cross-Connection - The actual or potential connection between a potable water supply and a non-potable source, where it is possible for a contaminant to enter the drinking water supply.

Disinfection By-Products (DBPs) - The category of compounds formed when disinfectants in water systems react with natural organic matter present in the source water supplies. Different disinfectants produce different types or amounts of disinfection byproducts. Disinfection byproducts for which regulations have been established have been identified in drinking water, including trihalomethanes, haloacetic acids, bromate, and chlorite

Drought - a period of below average rainfall causing water supply shortages.

Dry Weather Flow – Flow in a sanitary sewer during periods of dry weather in which the sanitary sewer is under minimum influence of inflow and infiltration.

Fire Flow - The ability to have a sufficient quantity of water available to the distribution system to be delivered through fire hydrants or private fire sprinkler systems.

Gallons per Capita per Day (GPCD) - A measurement of the average number of gallons of water use by the number of people served each day in a water system. The calculation is made by dividing the total gallons of water used each day by the total number of people using the water system.

Groundwater Basin - An underground body of water or aquifer defined by physical boundaries.

Groundwater Recharge - The process of placing water in an aquifer. Can be a naturally occurring process or artificially enhanced.

Hard Water - Water having a high concentration of minerals, typically calcium and magnesium ions.

Hydrologic Cycle - The process of evaporation of water into the air and its return to earth in the form of precipitation (rain or snow). This process also includes transpiration from plants, percolation into the ground, groundwater movement, and runoff into rivers, streams and the ocean; see Water cycle.

Infiltration – Water other than sewage that enters a sewer system and/or building laterals from the ground through defective pipes, pipe joints, connections, or manholes. Infiltration does not include inflow. See *Inflow.*

Inflow - Water other than sewage that enters a sewer system and building sewer from sources such as roof vents, yard drains, area drains, foundation drains, drains from springs and swampy areas, manhole covers, cross connections between storm drains and sanitary sewers, catch basins, cooling towers, storm waters, surface runoff, street wash waters, or drainage. Inflow does not include infiltration. See *Infiltration*.

Inflow / Infiltration (I/I) – The total quantity of water from both inflow and infiltration.

Mains, Distribution - A network of pipelines that delivers water (drinking water or recycled water) from transmission mains to residential and commercial properties, usually pipe diameters of 4" to 16".

Mains, Transmission - A system of pipelines that deliver water (drinking water or recycled water) from a source of supply the distribution mains, usually pipe diameters of greater than 16".

Meter - A device capable of measuring, in either gallons or cubic feet, a quantity of water delivered by the District to a service connection.

Overdraft - The pumping of water from a groundwater basin or aquifer in excess of the supply flowing into the basin. This pumping results in a depletion of the groundwater in the basin which has a net effect of lowering the levels of water in the aquifer.

Peak Flow – The maximum flow that occurs over a specific length of time (e.g., daily, hourly, instantaneously).

Pipeline - Connected piping that carries water, oil or other liquids. See Mains, Distribution and Mains, Transmission.

Point of Responsibility, Metered Service - The connection point at the outlet side of a water meter where a landowner's responsibility for all conditions, maintenance, repairs, use and replacement of water service facilities begins, and the District's responsibility ends.

Potable Water - Water that is used for human consumption and regulated by the California Department of Public Health.

Pressure Reducing Valve - A device used to reduce the pressure in a domestic water system when the water pressure exceeds desirable levels.

Pump Station - A drinking water or recycled water facility where pumps are used to push water up to a higher elevation or different location.

Reservoir - A water storage facility where water is stored to be used at a later time for peak demands or emergencies such as fire suppression. Drinking water and recycled water systems will typically use concrete or steel reservoirs. The State Water Project system considers lakes, such as Shasta Lake and Folsom Lake to be water storage reservoirs.

Runoff - Water that travels downward over the earth's surface due to the force of gravity. It includes water running in streams as well as over land.

Sanitary Sewer System - Sewer collection system designed to carry sewage, consisting of domestic, commercial, and industrial wastewater. This type of system is not designed nor intended to carry water from rainfall, snowmelt, or groundwater sources. See *Combined Sewer System*.

Sanitary Sewer Overflow – Overflow from a sanitary sewer system caused when total wastewater flow exceeds the capacity of the system. See *Combined Sewer Overflow*.

Santa Ana River Interceptor (SARI) Line – A regional brine line designed to convey 30 million gallons per day of non-reclaimable wastewater from the upper Santa Ana River basin to the sewer treatment plant operated by Orange County Sanitation District.

Secondary Treatment – Biological sewer treatment, particularly the activated-sludge process, where bacteria and other microorganisms consume dissolved nutrients in wastewater.

Supervisory Control and Data Acquisition (SCADA) - A computerized system which provides the ability to remotely monitor and control water system facilities such as reservoirs, pumps and other elements of water delivery.

Service Connection - The water piping system connecting a customer's system with a District water main beginning at the outlet side of the point of responsibility, including all plumbing and equipment located on a parcel required for the District's provision of water service to that parcel.

Sludge – Untreated solid material created by the treatment of sewage.

Smart Irrigation Controller - A device that automatically adjusts the time and frequency which water is applied to landscaping based on real-time weather such as rainfall, wind, temperature and humidity.

Special District - A political subdivision of a state established to provide a public services, such as water supply or sanitation, within a specific geographic area.

Surface Water - Water found in lakes, streams, rivers, oceans or reservoirs behind dams.

Total Suspended Solids (TSS) – The amount of solids floating and in suspension in water or sewage.

Transpiration - The process by which water vapor is released into the atmosphere by living plants.

Trickling Filter – A biological secondary treatment process in which bacteria and other microorganisms, growing as slime on the surface of rocks or plastic media, consume nutrients in primary treated sewage as it trickles over them.

Underground Service Alert (USA) - A free service that notifies utilities such as water, telephone, cable and sewer companies of pending excavations within the area (dial 8-1-1 at least 2 working days before you dig).

Urban Runoff - Water from city streets and domestic properties that typically carries pollutants into the storm drains, rivers, lakes, and oceans.

Valve - A device that regulates, directs or controls the flow of water by opening, closing or partially obstructing various passageways.

Wastewater – Any water that enters the sanitary sewer.

Water Banking - The practice of actively storing or exchanging in-lieu surface water supplies in available groundwater basin storage space for later extraction and use by the storing party or for sale or exchange to a third party. Water may be banked as an independent operation or as part of a conjunctive use program.

Water cycle - The continuous movement water from the earth's surface to the atmosphere and back again; see Hydrologic cycle.

Water Pressure - Pressure created by the weight and elevation of water and/or generated by pumps that deliver water to the tap.

Water Service Line - The pipeline that delivers potable water to a residence or business from the District's water system. Typically the water service line is a 1" to 1½" diameter pipe for residential properties.

Watershed - A region or land area that contributes to the drainage or catchment area above a specific point on a stream or river.

Water Table - The upper surface of the zone of saturation of groundwater in an unconfined aquifer.

Water Transfer - A transaction, in which a holder of a water right or entitlement voluntarily sells/exchanges to a willing buyer the right to use all or a portion of the water under that water right or entitlement.

Water Well - A hole drilled into the ground to tap an underground water aquifer.

Wetlands - Lands which are fully saturated or under water at least part of the year, like seasonal vernal pools or swamps.

Wet Weather Flow – Dry weather flow combined with stormwater introduced into a combined sewer system, and dry weather flow combined with infiltration/inflow into a separate sewer system.

Yucaipa Valley Water District

COMMONLY USED ABBREVIATIONS

AQMD	Air Quality Management District
BOD	Biochemical Oxygen Demand
CARB	California Air Resources Board
CCTV	Closed Circuit Television
CWA	Clean Water Act
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FOG	Fats, Oils, and Grease
GPD	Gallons per day
MGD	Million gallons per day
O & M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration
POTW	Publicly Owned Treatment Works
PPM	Parts per million
RWQCB	Regional Water Quality Control Board
SARI	Santa Ana River Inceptor
SAWPA	Santa Ana Watershed Project Authority
SBVMWD	San Bernardino Valley Municipal Water District
SCADA	Supervisory Control and Data Acquisition system
SSMP	Sanitary Sewer Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
WDR	Waste Discharge Requirements
YVWD	Yucaipa Valley Water District