Yucaipa Valley Water District

12770 Second Street, Yucaipa, California 92399 Phone: (909) 797-5117

Notice and Agenda of a Regular Meeting of the Board of Directors

Tuesday, February 7, 2017 at 6:00 p.m.

I. CALL TO ORDER - Pledge of Allegiance

II. ROLL CALL

III. PUBLIC COMMENTS - At this time, members of the public may address the Board of Directors on matters within its jurisdiction. To provide comments on specific agenda items, please complete a speaker's request form and provide the completed form to the Board Secretary prior to the board meeting.

IV. CONSENT CALENDAR - All consent calendar matters are routine and will be acted upon in one motion. There will be no discussion of these items unless board members, administrative staff, or members of the public request specific items to be discussed and/or removed prior to the vote for approval.

A. Minutes of Meetings

1. Regular Board Meeting - January 17, 2017
2. Board Workshop - January 31, 2017

V. STAFF REPORT

VI. DISCUSSION ITEMS

A. Authorization to Implement the Automated Meter Infrastructure (AMI) Project [Director Memorandum No. 17-017 - Page 12 of 38]

RECOMMENDED ACTION: That the Board authorizes the General Manager to take the necessary steps to implement the Automated Infrastructure Project with Sensus using the FlexNet backbone communication system.

B. Notice of Completion for the Construction of a 6.0 Million Gallon R-12.4 Reservoir - Calimesa [Director Memorandum No. 17-018 - Page 22 of 38]

RECOMMENDED ACTION: That the Board authorizes the General Manager to file the Notice of Completion for Gateway Pacific Contractors.

C. Award of a Construction Contract for Site Improvements at the RWB-12.4 Recycled Water Booster Station [Director Memorandum No. 17-019 - Page 25 of 38]

RECOMMENDED ACTION: That the Board awards a construction contract to TSR Construction and Inspection for a sum not to exceed $293,900.

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. BOARD REPORTS & DIRECTOR COMMENTS

VIII. ANNOUNCEMENTS

A. February 14, 2017 at 4:00 p.m. - Board Workshop

B. February 21, 2017 at 6:00 p.m. - Regular Board Meeting

C. February 28, 2017 at 4:00 p.m. - Board Workshop

D. March 7, 2017 at 6:00 p.m. - Regular Board Meeting

E. March 14, 2017 at 4:00 p.m. - Board Workshop

F. March 21, 2017 at 6:00 p.m. - Regular Board Meeting

G. March 28, 2017 at 4:00 p.m. - Board Workshop

H. April 4, 2017 at 6:00 p.m. - Regular Board Meeting

IX. 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))

X. ADJOURNMENT

Consent Calendar

Yucaipa Valley Water District

MINUTES OF A REGULAR BOARD MEETING

January 17, 2017 at 6:00 P.M.

Directors Present:
- Jay Bogh, President
- Bruce Granlund, Vice President
- Lonni Granlund, Director
- Tom Shalhoub, Director
- Chris Mann, Director

Staff Present:
- Joseph Zoba, General Manager
- Vicky Elisalda, Controller
- Brent Anton, Engineering Manager
- John Hull, Public Works Manager
- Mike Kostelecky, Operations Manager
- Matthew Porras, Management Analyst
- Kathryn Hallberg, Management Analyst
- Linda Kilday, Engineering Technician IV
- Jeremy Costello, Engineering Technician II
- Chelsie Fogus, Engineering Technician I

Directors Absent:
- None

Consulting Staff Present:
- David Wysocki, Legal Counsel

Registered Guests and Others Present:
- Linda Shelton, Customer
- Larry Kilday, Customer

CALL TO ORDER

The regular meeting of the Board of Directors of the Yucaipa Valley Water District was called to order by Director Jay Bogh at 6:00 p.m. at the Administrative Office Building, 12770 Second Street, Yucaipa, California.

FLAG SALUTE

Director Jay Bogh led the pledge of allegiance.

ROLL CALL

The roll was called with Director Jay Bogh, Director Bruce Granlund, Director Lonni Granlund, Director Chris Mann, and Director Tom Shalhoub present.

PUBLIC COMMENTS

None.

CONSENT CALENDAR

Director Lonni Granlund moved to approve the consent calendar and Director Bruce Granlund seconded the motion.

A. Minutes of Meetings
   1. Regular Board Meeting – January 3, 2017
   2. Board Workshop – January 10, 2017

The motion was approved by the following vote:

Director Jay Bogh - Yes
Director Bruce Granlund - Yes
Director Lonni Granlund - Yes
Director Chris Mann - Yes
Director Tom Shalhoub - Yes

STAFF REPORT

General Manager Joseph Zoba reported that Yucaipa Valley Water District would be hosting an Ethic Training class at Crystal Creek on January 19, 2017.

Operations Manager Mike Kostelecky reported that San Bernardino Valley Municipal Water District will be providing water to Yucaipa Valley Water District to reduce the quantity of water in the San Luis Reservoir.

DISCUSSION ITEMS:

DM17-014
RECOGNITION OF LINDA KILDAY ON THE OCCASION OF HER RETIREMENT FROM THE YUCAIPA VALLEY WATER DISTRICT

Following a staff presentation by General Manager Joseph Zoba, Director Lonni Granlund moved and Director Tom Shalhoub seconded a motion to adopt Resolution No. 2017-07.

The motion was approved by the following vote:
Director Jay Bogh - Yes
Director Bruce Granlund -Yes
Director Lonni Granlund -Yes
Director Chris Mann - Yes
Director Tom Shalhoub - Yes

DM 17-015
PRESENTATION OF THE UNAUDITIED FINANCIAL REPORT FOR THE PERIOD ENDING ON DECEMBER 31, 2016

Following a staff presentation by Controller Vicky Elisalda, Director Bruce Granlund moved and Director Tom Shalhoub seconded a motion to receive and file the unaudited financial report.

The motion was approved by the following vote:
Director Jay Bogh - Yes
Director Bruce Granlund - Yes
Director Lonni Granlund - Yes
Director Chris Mann - Yes
Director Tom Shalhoub - Yes

Following a staff presentation by General Manager Joseph Zoba, Director Tom Shalhoub moved and Director Chris Mann seconded a motion to execute the Compensation Agreement with the City of Yucaipa

DM 17-016
CONSIDERATION OF A TAXING ENTITY COMPENSATION AGREEMENT WITH THE CITY OF YUCAIPA

The motion was approved by the following vote:

Director Jay Bogh - Yes
Director Bruce Granlund - Yes
Director Lonni Granlund - Yes
Director Chris Mann - Yes
Director Tom Shalhoub - Yes

Following a staff presentation by General Manager Joseph Zoba, Director Tom Shalhoub moved and Director Bruce Granlund seconded a motion to adopt Resolution No. 2017-05.

DM 17-004
ADOPTING GUIDELINES FOR MEMBERS OF THE BOARD OF DIRECTORS

The motion was approved by the following vote:

Director Jay Bogh - Yes
Director Bruce Granlund - Yes
Director Lonni Granlund - Yes
Director Chris Mann - Yes
Director Tom Shalhoub - Yes

BOARD REPORTS

Director Tom Shalhoub reported on the San Bernardino Municipal Valley Water District meeting held on December 19, 2016.

Director Tom Shalhoub reported on the San Gorgonio Pass Water Agency meeting held on December 19, 2016

Director Bruce Granlund reported on the San Bernardino Municipal Valley Water District meeting held on January 3, 2017.

Director Chris Mann reported on the Yucaipa Valley Chambers of Commerce meeting held on January 6, 2017.

Director Chris Mann reported on the City of Yucaipa council meeting held on January 9, 2017.

Director Tom Shalhoub reported on the San Gorgonio Pass Water Agency meeting held on January 9, 2017.Director Tom Shalhoub reported on the San Bernardino Municipal Water meeting held on January 11, 2017.

Director Jay Bogh stated that there would be an Ethics Meeting on Thursday January 19th 2017.

DIRECTOR COMMENTS

Director Jay Bogh called attention to the announcements listed on the agenda.

ANNOUNCEMENTS

The meeting was adjourned at 6:19 p.m.

ADJOURNMENT

Respectfully submitted,

Joseph B. Zoba, Secretary (Seal)

MINUTES OF A BOARD WORKSHOP

January 31, 2017 at 4:00 P.M.

Directors Present:
Jay Bogh, President
Bruce Granlund, Vice President
Lonni Granlund, Director
Chris Mann, Director
Tom Shalhoub, Director

Staff Present:
Joseph Zoba, General Manager
Jennifer Ares, Water Resource Manager
Brent Anton, Engineering Manager
John Hull, Public Works Manager
John Wrobel, Regulatory & Environmental Control Manager
Kevin King, Operations Manager
Mike Kostelecky, Operations Manager
Vicky Elisalda, Controller
Matthew Porras, Management Analyst
Kathryn Hallberg, Management Analyst
Chelsie Fogus, Engineering Technician
Ashley Gibson, Water Resource Project Supervisor

Directors Absent:
None.

Consulting Staff Present:
David Wysocki, Legal Counsel

Guests and Others Present:
Linda Shelton, Customer
Al Ineichen, Customer

I. Call to Order - 4:00 p.m.

II. Public Comments - No comments were provided by individuals in the audience:

III. Staff Report - General Manager Joseph Zoba discussed the following topics:

- An overview of the current water storage levels in Northern California.
- Workshop presentations will be added to the website for future reference.
- The elements of a capacity fee and water rights agreement with San Gorgonio Pass Water Agency.

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] - General Manager Joseph Zoba provided an overview of the California Drought and Yucaipa Valley Water District's Action Plan Related to the State Water Resources Control Board Water Conservation Restrictions.

V. Operational Updates

A. Overview of the Recent Winter Storm Events [Workshop Memorandum No. 17-010]. Regulatory and Environmental Control Manager John Wrobel and Engineering Manager Brent Anton provided an overview of the recent winter storm events that have occurred and the related impacts to infrastructure.

VI. Capital Improvement Projects

A. Consideration to Authorize the Implementation of Phase II of the Automated Meter Infrastructure Project [Workshop Memorandum No. 17-011] - Management Analyst Matthew Porras provided an overview of the potential costs related to the proposed implementation of Phase II of the Automated Meter Infrastructure Project.

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] - Engineering Manager Brent Anton provided an overview of a 6.0-million-gallon reservoir project and the notice of completion for the contract with Gateway Pacific Contractors.

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] - Engineering Manager Brent Anton discussed the award of a construction contract for the construction of site improvements for RWB-12.4 Recycled Water Booster Station.

VII. Policy Issues

A. Discussion Regarding Construction Meters, Agriculture Meters, and Residential Hydrant Meters [Workshop Memorandum No. 17-014] - Management Analyst Kathryn Hallberg discussed the components and policy issues related to construction, agriculture, and residential hydrant meters.

VIII. Administrative Items

A. Overview of Rating Agency Redetermination of the Yucaipa Valley Water District Related to the 2015A Refunding Revenue Bonds [Workshop Memorandum No. 17-015]- General Manger Joseph Zoba provided an overview of Rating Agency Redetermination of the Yucaipa Valley Water District Related to the 2015A Refunding Revenue Bonds.

IX. Director Comments

A. None.

X. Adjournment - The meeting was adjourned at 5:15 p.m.

Respectfully submitted,

Joseph B. Zoba, Secretary

Staff Report

Yucaipa Valley Water District

Discussion Items

Yucaipa Valley Water District

Yucaipa Valley Water District

Director Memorandum 17-017

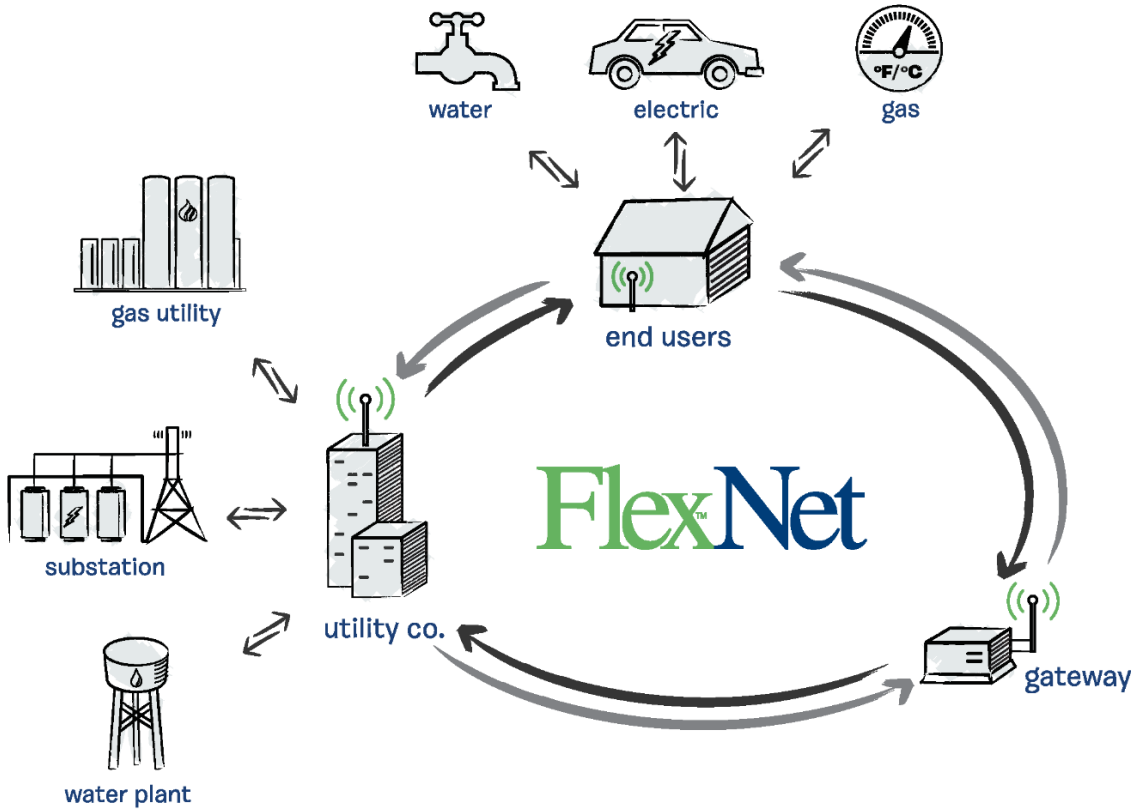
Date: February 7, 2017

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

Subject: Authorization to Implement the Automated Meter Infrastructure (AMI) Project

Recommendation: That the Board authorizes the General Manager to take the necessary steps to implement the Automated Infrastructure Project with Sensus using the FlexNet backbone communication system.

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
Cellular Modem	3	$775.00		2,325.00
Cellular Modem Fee	1	$720.00		720.00
			Total Phase 2	**1,106,563.75**

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
Cellular Modem Fee	3	$720.00		2,160.00
			Total Phase 3	**2,484,428.40**
Per Year Total Over 3yr				828,142.80
Per Year Total Over 2yr				1,227,241.70

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
Cellular Modem	1	$720.00		720.00
			Total Annual w/o 3% Increase	**29,945.00**

Total for Phase 2 and 3	**3,590,992.15**

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

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		6,250.00
			Total Portal Option with 1,260 Users	**25,000.00**

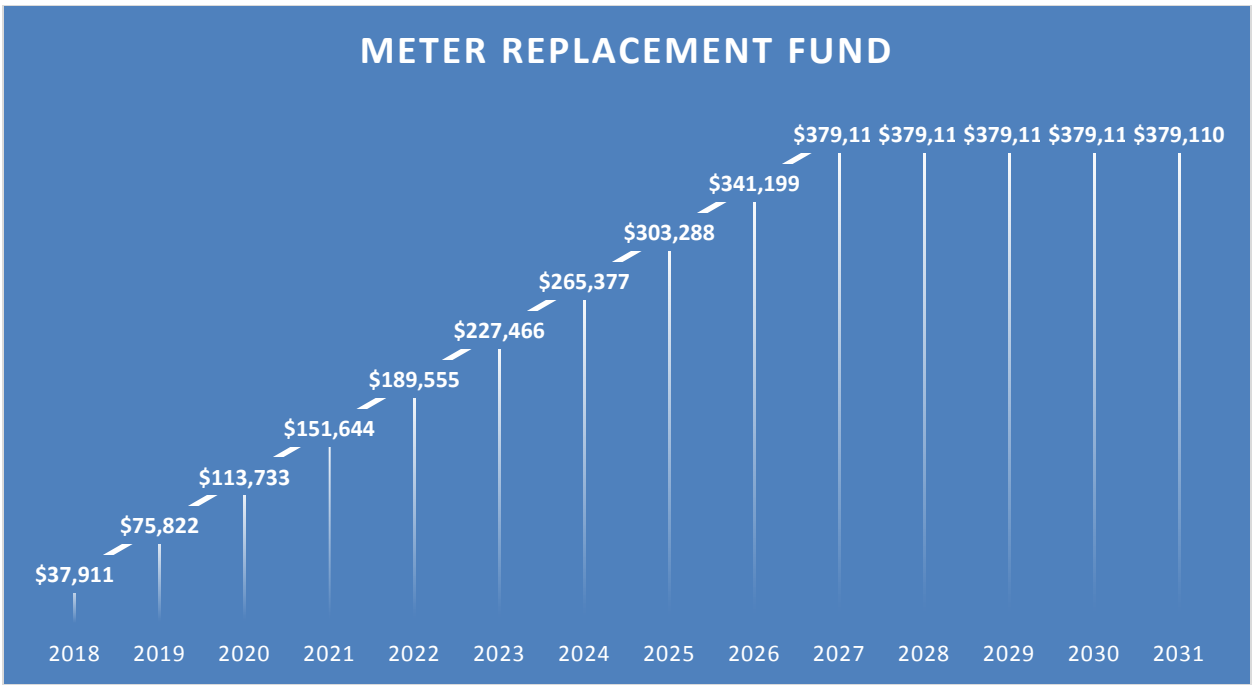
Hand-Held Programming Device Option				
Trimble T41-XGS	1	$2,899.00		2,899.00
Trimble Cable	1	$45.00		45.00
Sensus Command Link	1	$496.00		496.00
			Total	**3,440.35**

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 consisting of ten annual increases 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. It is important to make sure this program is sustainable for the future.



District Staff Recommendations

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

1. Authorize the District staff to implement the AMI Project funded from water depreciation reserves and possible grant funds using Sensus as the primary provider of the FlexNet communication system.

2. Authorize the District staff to present 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 include in a future financial rate study the proposed annual increase of $0.25 for ten years to provide funding for the replacement and sustainability of the overall AMI system.

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

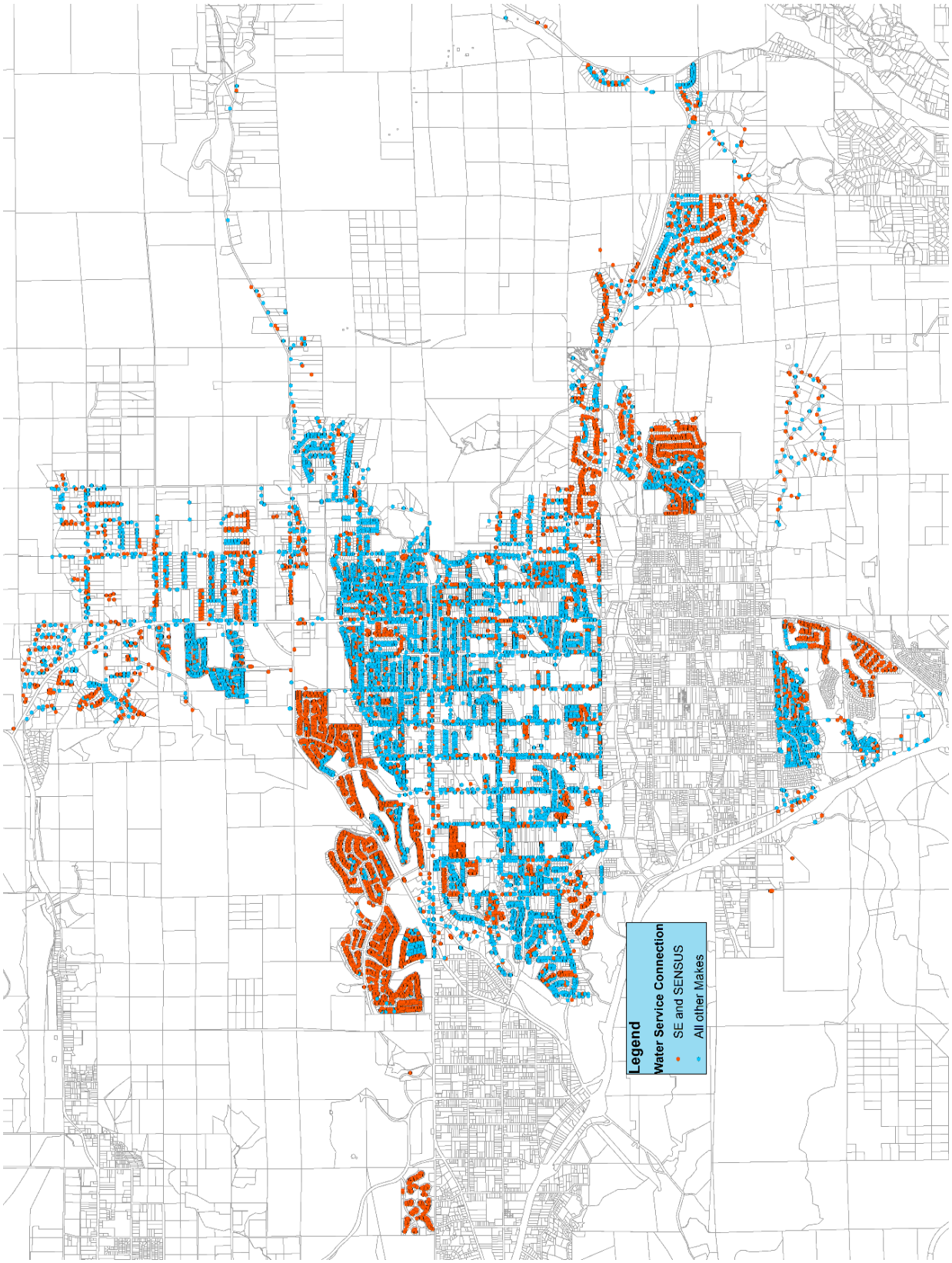
Aqua Metric Sales Company 4050 Flat Rock Dr., Riverside CA 92505 • Phone: (951) 637-1400 Fax: (951) 637-1500

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

Director Memorandum 17-018

Date: February 7, 2017

Prepared By: Brent Anton, Engineering Manager

Subject: Notice of Completion for the Construction of a 6.0 Million Gallon R-12.4 Reservoir - Calimesa

Recommendation: That the Board authorizes the General Manager to file the Notice of Completion for Gateway Pacific Contractors.

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

Director Memorandum 17-019

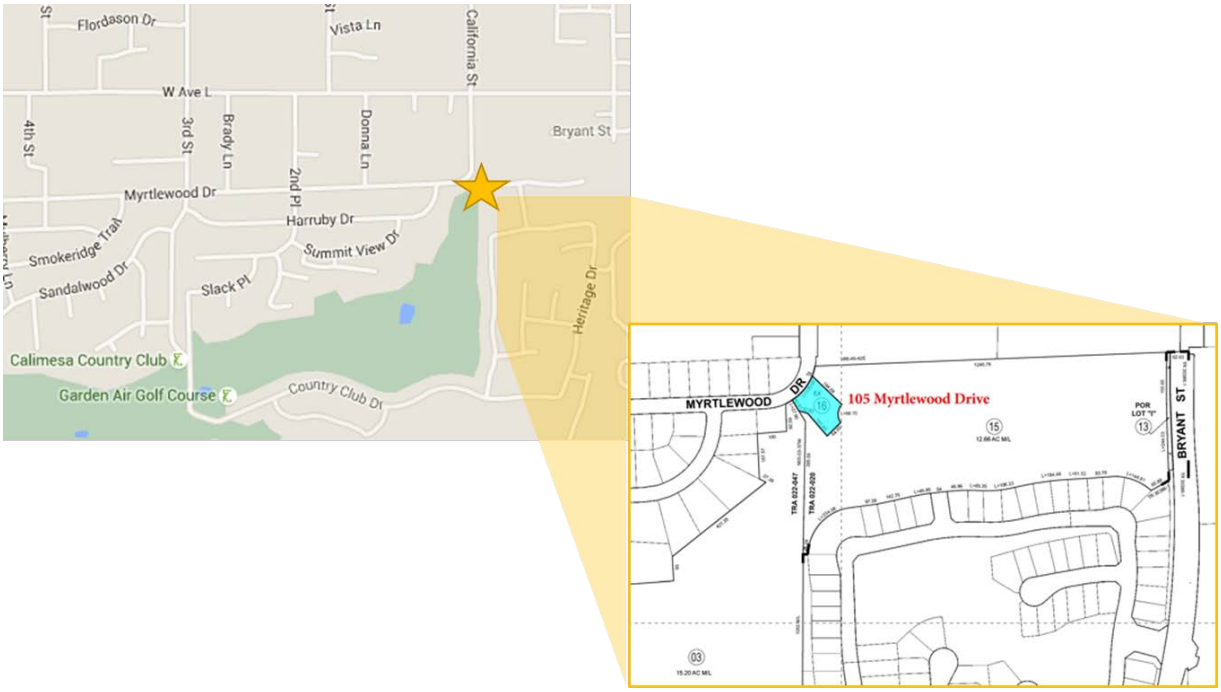
Date: February 7, 2017

Prepared By: Brent Anton, Engineering Manager

Subject: Award of a Construction Contract for Site Improvements at the RWB-12.4 Recycled Water Booster Station

Recommendation: That the Board awards a construction contract to TSR Construction and Inspection for a sum not to exceed $293,900.

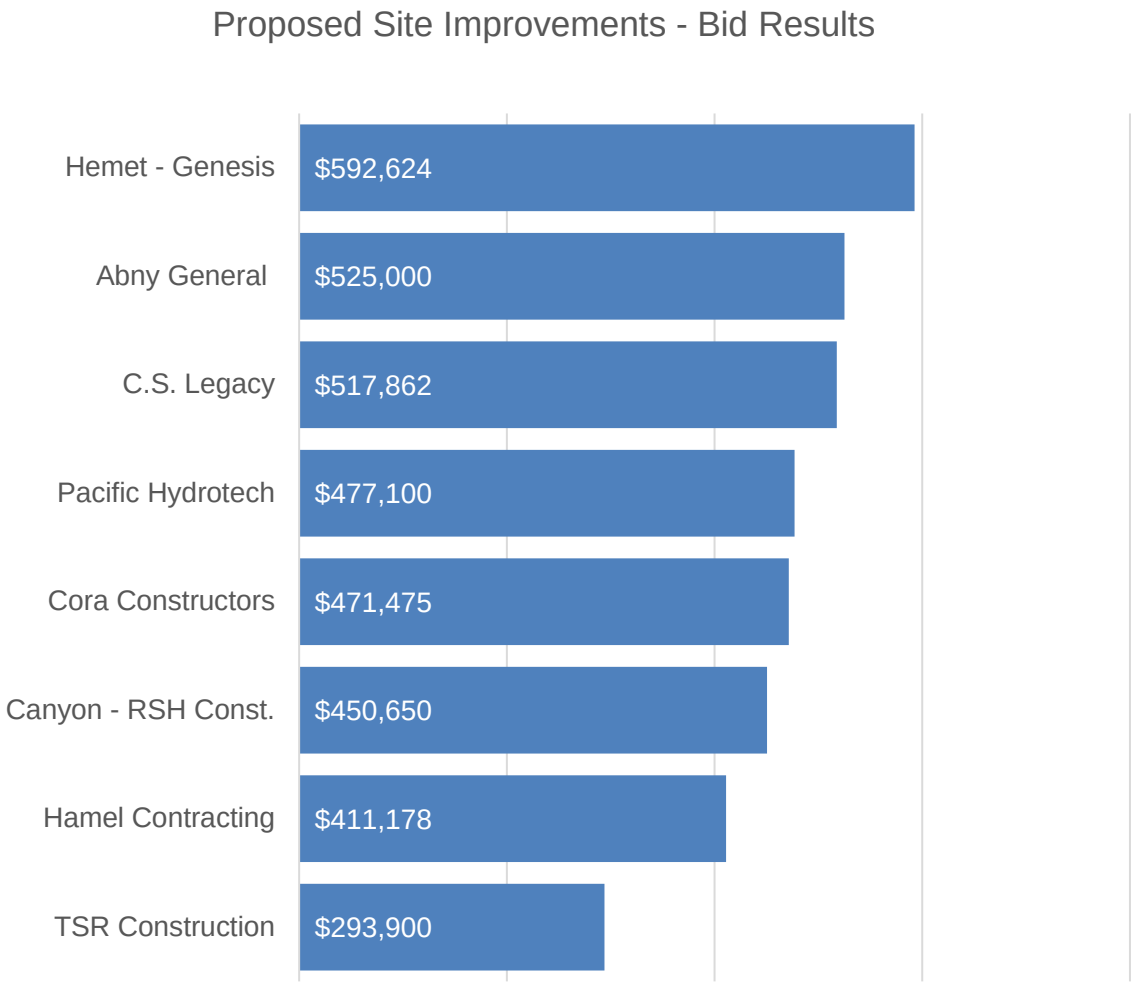
On November 15, 2016, the Board of Directors authorized the District staff to solicit bids for the construction of site improvements for the RWB-12.2 Recycled Booster Station at the intersection of Myrtlewood Drive and California Street. The project includes the construction of 315± linear feet of 8-foot 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)

Board Reports

Yucaipa Valley Water District

Director Comments

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

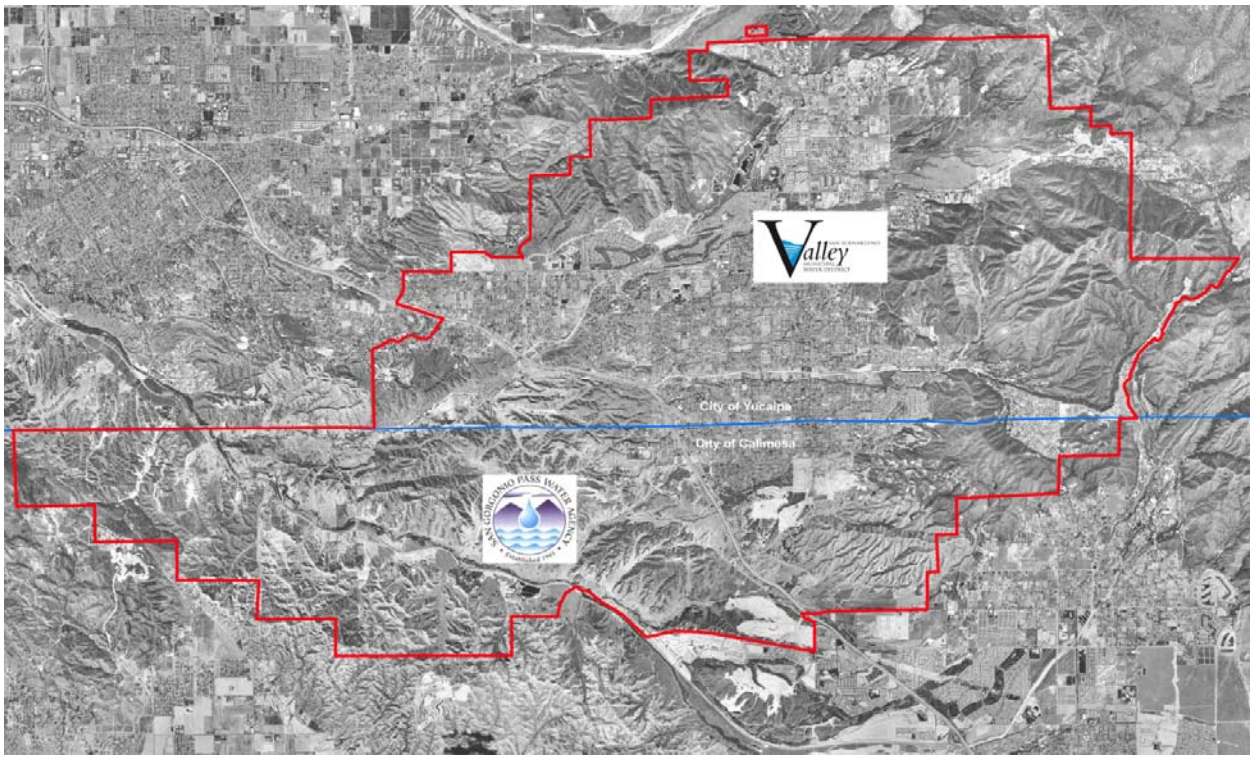
Water System:
215 miles of drinking water pipelines
27 reservoirs - 34 million gallons of storage capacity
18 pressure zones
12,000 ac-ft annual water demand (3.9 billion gallons)
Two water filtration facilities:
- 1 mgd at Oak Glen Surface Water Filtration Facility
- 12 mgd at Yucaipa Valley Regional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

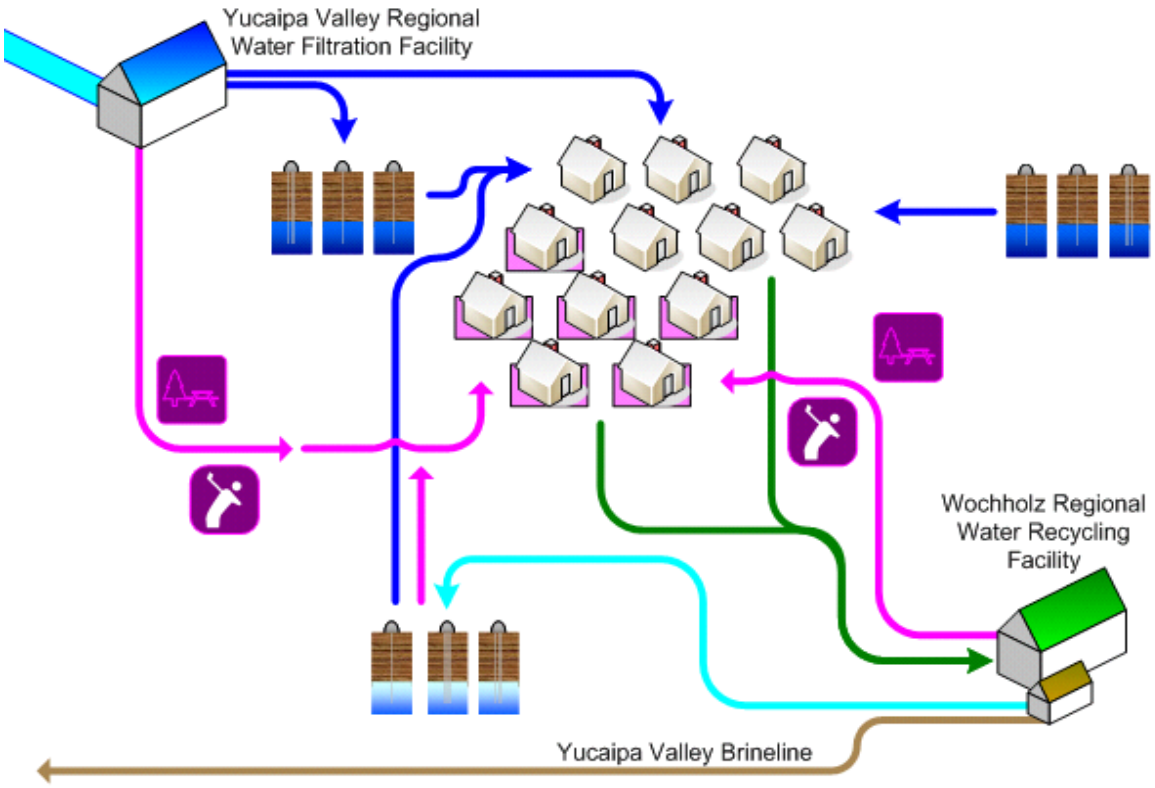
Recycled Water:
22 miles of recycled water pipelines
5 reservoirs - 12 million gallons of storage
1,200 ac-ft annual recycled demand (0.4 billion gallons)

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