

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

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

Tuesday, September 17, 2019 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 September 3, 2019
    - 2. Board Workshop September 10, 2019
  - B. Payment of Bills
    - Approve/Ratify Invoices for Board Awarded Contracts

#### V. STAFF REPORT

#### VI. DISCUSSION ITEMS

1.

A. Status Report on the Geotechnical Investigation for the Artificial Groundwater Recharge Project in the Beaumont Groundwater Basin [Director Memorandum No. 19-103 - Page 21 of 69]

#### RECOMMENDED ACTION: Pending

B. Authorization to Participate in the Facilitation of a Possible Amendment to the Santa Ana River - Mill Creek Cooperative Water Project Agreement [Director Memorandum No. 19-104 - Page 25 of 69]

RECOMMENDED ACTION: That the Board authorizes participation in the review of the Santa Ana River - Mill Creek Cooperative Water Project Agreement for a sum not to exceed \$5,556.

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 <u>www.yvwd.dst.ca.us</u>

C. Authorization to Proceed with the Final Design of Sewer Lift Stations, Sewer Force Mainlines, and Sewer Collection System Upgrades [Director Memorandum No. 19-105 - Page 34 of 69]

RECOMMENDED ACTION: That the Board authorizes Krieger and Stewart to initiate the design of sewer infrastructure for a sum not to exceed \$598,500.

D. Authorization to Update the Preliminary Engineering Design Study for the Salinity and Groundwater Enhancement (SAGE) Project at the Wochholz Regional Water Recycling Facility [Director Memorandum No. 19-106 - Page 49 of 69]

RECOMMENDED ACTION: That the Board authorizes Separation Processes to update the preliminary design of the Salinity and Groundwater Enhancement (SAGE) Project for a sum not to exceed \$32,260.

E. Consideration of a Claim for Repair Costs Related to Water Line Leaks on Third Street -Alfredo Rodriguez [Director Memorandum No. 19-107 - Page 54 of 69]

RECOMMENDED ACTION: That the Board denies the claim for damages and notifies the District's insurance carrier of the denied claim for damages.

#### VII. BOARD REPORTS & DIRECTOR COMMENTS

#### VIII. ANNOUNCEMENTS

- A. September 24, 2019 at 4:00 p.m. Board Workshop
- B. September 25, 2019 at 1:30pm. Collaborative Workshop between the San Bernardino Valley Municipal Water District, San Gorgonio Pass Water Agency and Yucaipa Valley Water District. To be held at 380 E. Vanderbilt Way, San Bernardino, California.
- C. October 1, 2019 at 6:00 p.m. Board Meeting
- D. October 8, 2019 at 4:00 p.m. Board Workshop
- E. October 15, 2019 at 6:00 p.m. Board Meeting
- F. October 29, 2019 at 4:00 p.m. Board Workshop
- G. November 5, 2019 at 6:00 p.m. Board Meeting
- H. November 12, 2019 at 4:00 p.m. Board Workshop
- I. November 19, 2019 at 6:00 p.m. Board Meeting
- J. November 26, 2019 at 4:00 p.m. Board Workshop
- K. December 3, 2019 at 6:00 p.m. Board Meeting
- L. December 10, 2019 at 4:00 p.m. Board Workshop
- M. December 17, 2019 at 6:00 p.m. Board Meeting
- N. December 31, 2019 at 4:00 p.m. Board Workshop Cancelled
- O. January 7, 2020 at 6:00 p.m. Board Meeting Cancelled
- P. January 14, 2020 at 4:00 p.m. Board Workshop
- Q. January 21, 2020 at 6:00 p.m. Board Meeting
- R. January 28, 2020 at 4:00 p.m. Board Workshop

#### IX. Closed Session

 A. Conference with Real Property Negotiator(s) - Government Code 54956.8 Property: Assessor's Parcel Number: 473-070-019 Agency Negotiator: Joseph Zoba, General Manager Negotiating Parties: Vinh Nguyen Under Negotiation: Terms of Payment and Price

- B. Conference with Real Property Negotiator(s) Government Code 54956.8 Property: Assessor's Parcel Number: 473-070-020 Agency Negotiator: Joseph Zoba, General Manager Negotiating Parties: Hector Erami and Alexandra Rodriguez Under Negotiation: Terms of Payment and Price
- C. Conference with Legal Counsel Anticipated Litigation (Government Code 54956.9) Two Cases

#### X. ADJOURNMENT

# **Consent Calendar**



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### MINUTES OF A REGULAR BOARD MEETING

### September 3, 2019 at 6:00 P.M.

Directors Present: Chris Mann, President Bruce Granlund, Vice F Jay Bogh, Director Director Lonni Granlun Director Joyce McIntire	Kathryn Hallberg, Implementation Manager d Mike Kostelecky, Operations Manager
Directors Absent: None	Consulting Staff Present: David Wysocki, Legal Counsel
Registered Guests and Oth Linda Shelton Leonard Stephenson, S Mike Turner, Argent Ma	San Gorgonio Pass Water Agency
CALL TO ORDER	The regular meeting of the Board of Directors of the Yucaipa Valley Water District was called to order by Chris Mann at 6:00 p.m. at the Administrative Office Building, 12770 Second Street, Yucaipa, California.
FLAG SALUTE	Director Chris Mann 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 Joyce McIntire present.
PUBLIC COMMENTS	None
CONSENT CALENDAR	Director Jay Bogh moved to approve the consent calendar and Director Bruce Granlund seconded the motion.
	<ul> <li>A. Minutes of Meetings</li> <li>1. Regular Board Meeting - August 20, 2019</li> <li>2. Board Workshop - August 27, 2019</li> </ul>
	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 Joyce McIntire - Yes

STAFF REPORT

General Manager Joseph Zoba discussed the following items:

- On August 23, 2019, the State Water Resources Control Board announced guidelines for local agencies to follow in detecting and reporting the presence of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) in drinking water. The updated guidelines lowered the current notification levels from 14 parts per trillion (ppt) to 5.1 ppt for PFOA and from 13 ppt to 6.5 ppt for PFOS.
- Information was provided in the board packet related to the cost of drinking water service and sewer service increasing throughout the nation as well as recycled water efforts in Australia that resemble the work by the District.

#### **DISCUSSION ITEMS:**

DM 19-089

PURCHASE OF ADDITIONAL SOFTWARE COMPONENTS FOR THE CASELLE FINANCIAL PACKAGE Chief Financial Officer Allison Edmisten presented the purchase of the Caselle software module for purchase orders and purchase requisitions.

Director Lonni Granlund moved that the Board ratify the purchase of the purchase order application for a sum not to exceed \$3,075. Director Joyce McIntire seconded the motion.

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 Joyce McIntire - Yes

#### DM 19-090

REQUEST FOR PROPOSAL FOR PUBLIC RELATIONS SUPPORT SERVICES FOR THE RECYCLED WATER PROGRAM Implementation Manager Kathryn Hallberg presented the draft request for proposals for public relations work associated with the recycled water program.

Director Joyce McIntire moved that the Board authorize the release of the Request for Proposals for public relations support services for the recycled water program. Director Lonni Granlund seconded the motion.

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 Joyce McIntire - Yes

<u>DM 19-091</u>

REQUEST FOR PROPOSAL FOR PUBLIC RELATIONS SUPPORT SERVICES FOR THE SAN TIMOTEO CREEK HABITAT MONITORING PROGRAM AND THE SAN TIMOTEO GSA Implementation Manager Kathryn Hallberg presented the draft request for proposals for public relations work related to the San Timoteo Creek habitat monitoring program and the San Timoteo Groundwater Sustainability Agency.

Director Joyce McIntire moved that the Board authorize the release of the Request for Proposals for public relations support services for the San Timoteo creek habitat monitoring program and the San Timoteo GSA. Director Lonni Granlund seconded the motion.

The motion was approved by the following vote:

Director Jay Bogh - Yes Director Bruce Granlund - No Director Lonni Granlund - Yes Director Chris Mann - Yes Director Joyce McIntire - Yes

#### DM 19-092

RE-APPROVAL OF THE BRINELINE EASEMENT - CANAL PARCEL LICENSE AGREEMENT WITH THE CITY OF RIVERSIDE A Implementation Manager Kathryn Hallberg presented the renewal of the Canal Parcel License Agreement that was modified by the City of Riverside after receiving prior approval from the Board of Directors. This agreement is for a brineline easement.

Director Bruce Granlund moved that the Board authorize the General Manager to execute the Canal Parcel License Agreement with the City of Riverside. Director Joyce McIntire seconded the motion.

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 Joyce McIntire - Yes

DM 19-093

CONSIDERATION OF PURCHASING 1,000 ACRE FEET OF IMPORTED WATER FROM THE SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT FOR GROUNDWATER RECHARGE OF THE BUNKER HILL GROUNDWATER BASIN FOR CALENDAR YEAR 2020 General Manager Joseph Zoba presented information about an order of 1,000 acre feet for recharge in the Bunker Hill Basin to diversify our water resources in the region.

Director Bruce Granlund moved that the Board authorize the purchase of 1,000 acre-feet from the San Bernardino Valley Municipal Water District for a sum not to exceed \$118,400. Director Lonni Granlund seconded the motion.

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 Joyce McIntire - Yes

DM 19-094

CONSIDERATION OF **RESOLUTION NO. 2019-**17 UPDATING THE CALCULATION FOR FACILITY CAPACITY CHARGES NECESSARY TO SECURE SUPPLEMENTAL WATER RESOURCES FOR NEW **DEVELOPMENT WITHIN** THE BOUNDARY OF THE SAN GORGONIO PASS WATER AGENCY AND THE CITY OF CALIMESA

General Manager Joseph Zoba presented Resolution No. 2019-17 which will update the Facility Capacity Charge related to the purchase of additional supplemental water supplies for new development.

Director Joyce McIntire moved that the Board approve Resolution No. 2019-17. Director Bruce Granlund seconded the motion.

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 Joyce McIntire - Yes

#### DM 19-095

CONSIDERATION OF PURCHASING 250 ACRE FEET OF IMPORTED WATER FROM THE SAN GORGONIO PASS WATER AGENCY FOR DIRECT DELIVERY TO THE YUCAIPA VALLEY REGIONAL WATER FILTRATION FACILITY FOR CALENDAR YEAR 2020

#### DM 19-096

PURCHASE OF REPLACEMENT LAMPS FOR THE ULTRAVIOLET DISINFECTION PROCESS AT THE WOCHHOLZ REGIONAL WATER RECYCLING FACILITY General Manager Joseph Zoba presented the annual water order for the San Gorgonio Pass Water Agency.

Director Jay Bogh moved that the Board authorize the purchase of 250 acre-feet of imported water from the San Gorgonio Pass Water Agency for a sum not to exceed \$99,750. Director Bruce Granlund seconded the motion.

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 Joyce McIntire - Yes

Operation Manager Charles Thomas presented information about the need to replace the ultraviolet lamps at the Wochholz Regional Water Recycling Facility.

Director Lonni Granlund moved that the Board authorize the purchase of 336 ultraviolet lamps for a sum not to exceed \$133,954.80 from Trojan Technologies. Director Bruce Granlund seconded the motion.

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 Joyce McIntire - Yes

#### DM 19-097

CONSIDERATION OF AMENDMENT NO. 2 TO RECHARGE TESTING TO EVALUATE THE LONG-TERM INFILTRATION RATES IN THE WESTERN PORTION OF THE BEAUMONT BASIN -CALIMESA LAKE AND SPREADING BASIN General Manager Joseph Zoba presented information about additional geologic testing in Calimesa for the proposed Calimesa Lake and Artificial Recharge Facility.

Director Lonni Granlund moved that the Board authorize the General Manager to execute a contract for Amendment No. 2 with Geoscience for a sum not to exceed \$456,064. Director Joyce McIntire seconded the motion.

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 Joyce McIntire - Yes

<u>DM 19-098</u>	Operation Manager Mike Kostelecky presented information about the replacement of influent strainers at the Yucaipa Valley
CONSIDERATION OF REPLACING THE INFLUENT BASKET STRAINERS AT THE YUCAIPA VALLEY REGIONAL WATER FILTRATION FACILITY	Regional Water Filtration Facility. Director Bruce Granlund moved that the Board authorize the General Manager to purchase three Forsta Filters and contract with Pascal & Ludwig for the installation for a sum not to exceed \$338,100. Director Lonni Granlund seconded the motion. 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 Joyce McIntire - Yes
<u>DM 19-099</u> PARTICIPATION IN AN ENERGY DEMAND RESPONSE PROGRAM WITH ENERSPONSE	Implementation Manager Kathryn Hallberg presented information about the demand response program to reduce energy expenses for District facilities. Director Lonni Granlund moved that the Board authorize the General Manager to execute the participation agreement with Enersponse. Director Bruce Granlund seconded the motion. The motion was approved by the following vote: Director Jay Bogh - Yes Director Bruce Granlund - Yes Director Lonni Granlund - Yes Director Lonni Granlund - Yes Director Chris Mann - Yes Director Joyce McIntire - Yes
<u>DM 19-100</u> ACCEPTANCE OF	General Manager Joseph Zoba presented the transfer of overlying water rights for Tract No. 32702-4.
OVERLYING WATER RIGHTS IN THE BEAUMONT BASIN FOR TRACT NO. 32702-4 (145 LOTS) PURSUANT TO BEAUMONT BASIN WATERMASTER RESOLUTION NO. 2017- 02	Director Bruce Granlund moved that the Board accept the 53.60 acre feet of overlying water rights for Tract No. 32702-4. Director Lonni Granlund seconded the motion. 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 Joyce McIntire - Yes

DM 19-101 OVERVIEW OF A	Implementation Manager Kathryn Hallberg presented Development Agreement No. 2019-12 with Richmond American for Tract No. 32702-4.
PROPOSED DEVELOPMENT AGREEMENT NO. 2019- 12 WITH RICHMOND	Director Joyce McIntire moved that the Board authorize the President to execute Agreement No. 2019-12. Director Bruce Granlund seconded the motion.
AMERICAN HOMES FOR TRACT NO. 32702- 4 WITHIN THE SUMMERWIND TRAILS DEVELOPMENT - CALIMESA	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 Joyce McIntire - Yes
DM 19-102 APPROVAL OF	General Manager Joseph Zoba presented the amendments to Development Agreement Nos. 18-10, 18-11, and 18-17 related to pipeline facilities.
AMENDMENTS TO DEVELOPMENT AGREEMENTS FOR LENNAR HOMES (AGREEMENT NO. 18-	Director Lonni Granlund moved that the Board approve Amendment No. 1 to Development Agreement Nos. 18-10, 18- 11, and 18-17. Director Bruce Granlund seconded the motion.
10), DR HORTON (AGREEMENT NO. 18- 11), AND MERITAGE	The motion was approved by the following vote: Director Jay Bogh - Yes Director Bruce Granlund - Yes
HOMES (AGREEMENT NO. 18-17) IN THE SUMMERWIND TRAILS DEVELOPMENT	Director Lonni Granlund - Yes Director Chris Mann - Yes Director Joyce McIntire - Yes
BOARD REPORTS AND DIRECTOR COMMENTS	Director Lonni Granlund discussed the arsenic issue in the Coachella Valley.
	Director Bruce Granlund and Director Chris Mann reported on the City of Yucaipa Council Meeting held on August 26, 2019.
	Director Bruce Granlund and Director Lonni Granlund reported on the Yucaipa Sustainable Groundwater Management Agency meeting held on August 28, 2019.
ANNOUNCEMENTS	Director Chris Mann called attention to the announcements listed on the agenda.

<u>CLOSED SESSION</u> Director Jay Bogh, Director Bruce Granlund, Director Lonni Granlund, Director Chris Mann, and Director Joyce McIntire were present in closed session with Legal Counsel David Wysocki, and General Manager Joseph Zoba to discuss the following item.

- B. Conference with Real Property Negotiator(s) Government Code 54956.8
   Property: Assessor's Parcel Number: 473-070-020
   Agency Negotiator: Joseph Zoba, General Manager
   Negotiating Parties: Hector Erami and Alexandra
   Rodriguez
   Under Negotiation: Terms of Payment and Price
- C. Conference with Legal Counsel Anticipated Litigation (Government Code 54956.9) - One Case

After reconvening out of closed session, Legal Counsel David Wysocki reported that direction was provided to the General Manager and that there were no other reportable actions taken.

**CLOSED SESSION** 

The closed session was not conducted at this meeting.

ADJOURNMENT

The meeting was adjourned at 7:05 p.m.

Respectfully submitted,

Joseph B. Zoba, Secretary

(Seal)

### MINUTES OF A BOARD WORKSHOP

#### September 10, 2019 at 4:00 P.M.

Directors Present: Chris Mann, President Bruce Granlund, Vice President Lonni Granlund, Director Joyce McIntire, Director	Staff Present: Jennifer Ares, Water Resource Manager Madeline Blua, Water Resource Specialist Chelsie Fogus, Engineering Technician I Ashley Gibson, Regulatory Compliance Manager Kathryn Hallberg, Implementation Manager Dustin Hochreiter, Senior Engineering Technician Mike Kostelecky, Operations Manager Matt Porras, Implementation Manager Mike Rivera, Public Works Supervisor Charles Thomas, Operations Manager Joseph Zoba, General Manager
Directors Absent:	Consulting Staff Present:
Jay Bogh, Director	David Wysocki, Legal Counsel

Guests and Others Present: David Duron Linda Shelton Claire Teeters Leonard Stephenson, San Gorgonio Pass Water Agency Mike Turner, Argent Management

- I. Call to Order 4:00 p.m. The workshop of the Board of Directors of the Yucaipa Valley Water District was called to order by Chris Mann at 4:00 p.m. at the Administrative Office Building, 12770 Second Street, Yucaipa, California.
- II. Public Comments None
- III. Staff Report A staff report was not provided at this workshop.
- IV. Presentation
  - A. Overview of the Santa Ana River Mill Creek Cooperative Water Project Agreement [Workshop Memorandum No. 19-191] - General Manager Joseph Zoba provided an overview of the Santa Ana River - Mill Creek Cooperative Water Project Agreement.
  - B. Overview of the Stream Monitoring Requirements for Maximum Benefit Program Compliance [Workshop Memorandum No. 19-192] - Water Resource Specialist Madeline Blua informed the Board of Directors that the District staff would be performing stream monitoring in the future along San Timoteo Creek instead of using a consultant.
  - C. Overview of the Educational Element of the Yucaipa Valley Water District Public Outreach Program [Workshop Memorandum No. 19-193] - Water Resource Manager Jennifer Ares informed the Board of Directors that the District staff will be increasing our engagement at local schools as part of our educational outreach program.

- D. Overview of the San Timoteo Habitat Monitoring Program [Workshop Memorandum No. 19-194] Water Resource Manager Jennifer Ares and Water Resource Specialist Madeline Blua discussed the District's involvement in the monitoring for the Polyphagous shot hole borer in San Timoteo Creek.
- V. Capital Improvement Projects
  - A. Review of a Proposal to Update the Preliminary Engineering Design Study for the Salinity and Groundwater Enhancement (SAGE) Project [Workshop Memorandum No. 19-195] - General Manager Joseph Zoba presented a proposal from Separation Processes to update the preliminary design for the Salinity and Groundwater Enhancement (SAGE) Project at the Wochholz Regional Water Recycling Facility.
  - B. Status Report on the Improvements to the Primary Clarifiers at the Wochholz Regional Water Recycling Facility [Workshop Memorandum No. 19-196] -Operation Manager Charles Thomas presented a status report on the primary clarifier improvements at the Wochholz Regional Water Recycling Facility.
  - C. Status Report on the Geotechnical Studies Associated with the Calimesa Lake and Recharge Facility [Workshop Memorandum No. 19-197] - General Manager Joseph Zoba provided a status report on the geotechnical investigation of the Calimesa Lake and Recharge Facility Project.
- VI. Development Related
  - A. Overview of Requirements to Install Water Submeters on Multi-Family Housing Developments [Workshop Memorandum No. 19-198] General Manager Joseph Zoba provided an overview of Senate Bill No. 7 that requires the use of submeters for multi-unit residential structures to measure the quantity of water supplied to individual dwelling units.
- VII. Administrative Issues
  - A. Overview of the Draft Financial Rate Model for the Drinking Water, Sewer, and Recycled Water Enterprises [Workshop Memorandum No. 19-199] General Manager Joseph Zoba provided an update on the preparation of the comprehensive rate study.
  - B. Overview of Claim for Repair Costs Related to Water Line Leak on Third Street [Workshop Memorandum No. 19-200] - Implementation Manager Kathryn Hallberg provided an overview of the claim for damages submitted by Alfredo Rodriquez.
- VIII. Director Comments
  - A. None
- IX. Announcements The future meetings were referenced on the workshop agenda.
- X. Closed Session

Director Bruce Granlund, Director Lonni Granlund, Director Chris Mann, and Director Joyce McIntire were present in closed session with Legal Counsel David Wysocki, General Manager Joseph Zoba, and Chief Financial Officer Allison Edmisten to discuss the following items.

 A. Conference with Real Property Negotiator(s) - Government Code 54956.8 Property: Assessor's Parcel Number: 473-070-019 Agency Negotiator: Joseph Zoba, General Manager Negotiating Parties: Vinh Nguyen Under Negotiation: Terms of Payment and Price

- B. Conference with Real Property Negotiator(s) Government Code 54956.8 Property: Assessor's Parcel Number: 473-070-020 Agency Negotiator: Joseph Zoba, General Manager Negotiating Parties: Hector Erami and Alexandra Rodriguez Under Negotiation: Terms of Payment and Price
- C. Conference with Legal Counsel Anticipated Litigation (Government Code 54956.9) Two Cases

After reconvening out of closed session, Legal Counsel David Wysocki reported that direction was provided to the General Manager and that there were no other reportable actions taken.

XI. Adjournment - The meeting was adjourned at 5:45 p.m.

Respectfully submitted,

Joseph B. Zoba, Secretary

## **Board Awarded Contracts**

			Consent Cale		rded Contracts /leeting - Septe		)19			Encumbere	d Funds - Re	emaining Co	ntract Amoui	nt
District Awarded Contracts	Director Memorandum	Job or GL #	Job Cost Breakdown	Awarded Contract Amount	Prior Payments to Date	Pending Invoice Amount	Total Contract Payments	Remaining Contract Amount	Percent Remaining	General Operating Expenses	Water Division Funds	Sewer Division Funds	Recycled Division Funds	Other Funds
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Law Office of David L. Wysocki - FY 2019 Legal Services (Operating)		*-5-06-54107			\$34,915	\$3,375	\$38,290							
Borden Excavating (S-Reserves) WW Cyn Rd Sewer/Holmes St, N. of WW Creek Basins (422,555.00) DM Decrease amount of 14,532.00 (paving removed)	19-067	03-33949		\$408,023	\$0	\$408,023	\$408,023	\$0	0%			\$408,023		
DDB Engineering <b>(R-Reserves)</b> Application to DDW for the Recharge at Wilson Creek Basins	15-086	04-19771		\$35,900	\$25,395	\$0	\$25,395	\$10,505	29%				\$10,505	
Delta Partners \$90,000 per year-LegislativeConsult (exp 12/18) <b>W\S Oper</b> Three Year Contract Extension (exp 12/2021)	13-079 19-052	*-5-06-54109 *5-06-54109	\$90,000 \$270,000	\$360,000	\$142,500	\$7,500	\$150,000	\$210,000	58%	\$210,000				
Dudek (S-Operating) 2019-Max Benefit Monitoring for San Timoteo/Yucaipa Mgmt Zones	19-045	03-5-06-54109		\$89,426	\$31,448	\$0	\$31,448	\$57,978	65%	\$57,978				
Dudek (S-Operating) 2018-HMP in San Timoteo Creek	18-055	65-15339 03-5-06-57030		\$56,340	\$53,335	\$0	\$53,335	\$3,005	5%	\$3,005				
Dudek <b>(S-Operating)</b> 2019-Habitat Monitoring Program (HMP) in San Timoteo Creek	19-044	65-15339 03-5-06-57030		\$73,830	\$41,231	\$0	\$41,231	\$32,599	44%	\$32,599				
Dudek (W/S Operating) Insepction of Proposed Sites for Remote Telemetry	17-059	0*-5-06-54109		\$10,775	\$5,428	\$0	\$5,428	\$5,348	50%	\$5,348				
Dudek (W/S/R Operating) Developing a Comprehensive Database Management System (DMS) Amendment #1	17-084 0*-5-06-54109	65-26145 \$89,750 \$6,600		\$96,350	\$86,774	\$0	\$86,774	\$9,576	10%	\$9,576				
ECORP (W/S Reserves) Prepare Study/Mitigated Negative Declaration/Oak Valley Recharge DM 19-039 Ratification of original contract-addt'l sum not to exceed \$4500.00	02-5-06-54109 18-157 19-093	77-32719	\$47,520 \$4,500	\$52,020	\$23,421	\$2,553	\$25,974	\$26,047	50%		\$26,047			
ECORP (W/S Reserves) YVWD-Salinity and Groundwater Enhancement (Sage) Project W/S Reserves	03-502-51003 19-022	88-23792		\$9,645		\$266	\$266	\$9,379	97%			\$9,645		
Geoscience ( <b>R-Operating)</b> Preparation of a groundwater model for the Gateway Basin CO #1 - preparation of groundwater model	14-070 15-010	04-5-06-54109	\$35,320 \$16,390	\$51,710	\$49,284	\$0	\$49,284	\$2,426	5%	\$2,426				
Geoscience ( <b>W-Operating</b> ) Calculation of Water Budgets for Validation of Annual Change in Storage Exp of the Yucaipa Watershed & Yucaipa Groundwater Basin Model	16-058 16-110	02-5-06-54109	\$130,236 \$41,770	\$172,006	\$151,810	\$9,442	\$161,252	\$10,755	6%	\$10,755				
Geoscience Pilot Recharge Testing of the Beaumont Basin <b>(S-Reserves)</b> \$326,956 Amendement #1 -DM 19-057 - \$101,464 Amendement #1 -DM 19-097 - \$456,064	18-140 19-057 19-097	03-5-06-54109		\$884,484	\$418,825	\$24,267	\$443,092	\$441,392	50%			\$441,392		
Geoscience Tracer Study Analysis at Wilson Creek Spreading Basins	19-024	02-5-06-54109		\$34,560	\$23,400	\$5,879	\$29,279	\$5,281	15%	\$5,281				
HDR ( <b>W-Operating)</b> Perform Tracer Study on R13.1 Clearwell at YVRWFF	17-068	02-5-06-54109	\$37,726 \$4,000	\$41,726	\$41,319	\$0	\$41,319	\$407	1%	\$407				

## **Board Awarded Contracts**

			Consent Cale		Veeting - Septe		)19			Encumbere	ed Funds - Re	maining Co	ntract Amour	nt
District Awarded Contracts	Director Memorandum	Job or GL #	Job Cost Breakdown	Awarded Contract Amount	Prior Payments to Date	Pending Invoice Amount	Total Contract Payments	Remaining Contract Amount	Percent Remaining	General Operating Expenses	Water Division Funds	Sewer Division Funds	Recycled Division Funds	Other Funds
Inland Potable Services Reservoir Cleaning and Inspection Services/expires 2021(Water & Recycled) 2019- (15)Reservoirs-43,537.00- DM 19-038 Change Order to Increase 35,900.00 2020- (16)Reservoirs 54,540.00 2021- (17)Reservoirs-41,616.00	18-158 19-038	*5-01-51003		\$175,593	\$79,437	\$0	\$79,437	\$96,156	55%	\$96,156				
Krieger & Stewart Initiate Design of R-12.4 (W-Reserves) TO#4 Revised TO#4, Amendment #2 TO#5- Construction Mgmt Services TO#5, Amendment #1 - Construction Mmgt Services	04-164 05-075 14-014 14-092 16-069	65-295	\$74,900 \$600 \$45,000 \$482,500 \$102,600	\$585,100	\$552,636	\$0	\$552,636	\$32,464	6%		\$32,464			
TO#5, Design R-13.4 and H-2 Reservoirs for JP Ranch 60% R-13.4 and 40% H-2 (Developer Funds)	05-083 05-083	65-180 65-179	\$47,400 \$31,600	\$79,000	\$50,471	\$0	\$50,471	\$28,529	36%					\$28,529
Prepare a Biological Model of System Processes	19-041	03-5-06-54109		\$29,235		\$0	\$0	\$29,235	100%	\$29,235				
Novotx (Elements) <b>(W/S Operating)</b> Elements XS asset management software	18-127	*-5-06-54005		\$121,100	\$73,000	\$0	\$73,000	\$48,100	40%	\$48,100				
One Stop Landscape Supply FY 2019 Sludge Hauling\Reuse (Oper)		03-5-02-57031			\$275,782	\$23,341	\$299,123							
Platinum Advisors ( <b>W\S Operating</b> ) 2018 Lobbyist N-T-E per month 2018 Quarterly Filing & Misc. Expenses	13-080	*-5-06-54109 02-5-06-54109			+,	\$0 \$0	\$95,000 \$750							
Rain For Rent Pipeline-Calimesa Lakes Recharge Study-DM 19-008 was superseded by DM 19-017	19-017	02-5-03-51020		\$24,375	\$0	\$0	\$0	\$24,375	100%		\$24,375			
RMC Water & Environment/Woodard & Curran														
TO#26, SRF Mgmt Svcs-Calimesa Regional Recycled Pipeline (R-FCC)	14-023	04-5-06-54109		\$95,692	\$69,361	\$0	\$69,361	\$26,331	28%				\$26,331	
Application to DDW for the Recharge at Wilson Creek Basins ( <b>R-Resvs)</b> Amendment #3	15-086 18-085	04-19771		\$237,668	\$236,474	\$0	\$236,474	\$1,194	1%				\$1,194	
Scinor Water America/Pascal Ludwig (S- Reserves) Install UF Modules and Mesh Strainer AT WRWRF	17-088	03-10311		\$215,000	\$186,074	\$0	\$186,074	\$28,926	13%			\$28,926		
Separation Processes, Inc. (W-Reserves) Design & Construction Supports Servs for NF SCRAM	15-047	55-19200 02-14500		\$191,820	\$170,980	\$0	\$170,980	\$20,840	11%		\$20,840			
Application to DDW for the Recharge at Wilson Creek Basins (R-Resrvs)	15-086	04-19771		\$42,860	\$24,527	\$0	\$24,527	\$18,333	43%				\$18,333	
Feasibility Report for Wochholz SAGE Project	17-043	03-5-06-54109		\$67,575	\$66,201	\$0	\$66,201	\$1,374	2%			\$1,374		
WWTP Monitoring Operations & Reporting Enhancement (MORE) (S-Oper)	18-122	03-5-06-54109		\$330,436	\$88,679	\$13,600	\$102,279	\$228,158	69%			\$228,158		
WWTP -RCA - Foaming- Improve energy efficiency and treatment process	19-025	03-5-06-54109		\$36,800	\$21,609	\$4,176	\$25,785	\$11,015	30%			\$11,015		
Vavrinek, Trine, Day & Company (VTD) <b>(Operating)</b> FY 2019 Auditing Services \$23,900 + \$3,500 for Single Audit	15-106	*-5-06-54108		\$27,400		\$1,500	\$1,500	\$25,900	95%	\$25,900				

#### Board Awarded Contracts Consent Calendar Board Meeting - September 17, 2019

District Awarded Contracts	Director Memorandum	Job or GL #	Job Cost Breakdown	Awarded Contract Amount	Prior Payments to Date	Pending Invoice Amount	Total Contract Payments	Remaining Contract Amount	Percent Remaining
Villalobos and Associates (W-Operating) Permitting of Recharge Oper at the Wilson Creek Spreading Basins	16-064	02-5-06-54109		\$72,200	\$39,064	\$0	\$39,064	\$33,136	46%

**GRAND TOTALS** 

\$4,636,449 \$3,120,066 \$503,920 \$3,623,987 \$1,478,761 --

Encumbere	ed Funds - R	emaining Co	ntract Amou	nt
General Operating Expenses	Water Division Funds	Sewer Division Funds	Recycled Division Funds	Other Funds
\$33,136				
\$569.901	\$103.725	\$1,128,532	\$56.363	\$28,529

	\$569,901	\$103,725	\$1,128,532	\$56,363	\$28,529
+			+		+
	\$ <u>569,901</u>		\$ <u>1,288,620</u>		\$ <u>28,529</u>

# **Staff Report**



Yucaipa Valley Water District - September 17, 2019 - Page 19 of 69

## **Discussion Items**



Yucaipa Valley Water District - September 17, 2019 - Page 20 of 69





Date: September 17, 2019

Prepared By: Joseph Zoba, General Manager

Subject:Status Report on the Geotechnical Investigation for the Artificial<br/>Groundwater Recharge Project in the Beaumont Groundwater Basin

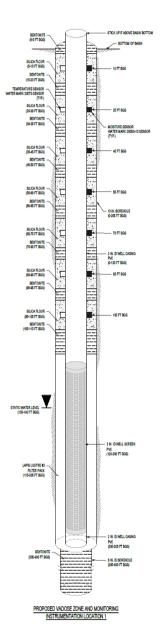
Recommendation: Pending.

On November 6, 2018, the Board of Directors authorized the General Manager to execute a contract with Geoscience to investigate the long-term infiltration rates in the western portion of the Beaumont Basin.

The District staff coordinated the construction of a 300 feet long and 75 feet wide recharge test basin. The testing utilized special instrumentation designed to measure changes in moisture and temperature at various depths at two separate locations to measure the rate of surface water infiltration into the groundwater.



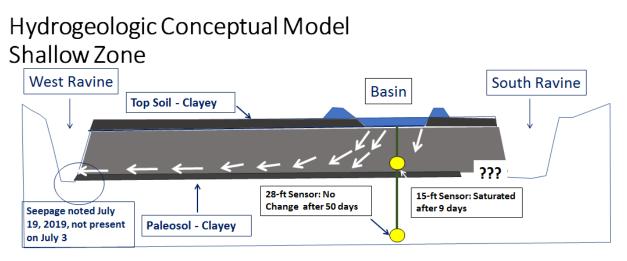
On April 20, 2019, the initial test was stopped to re-evaluate the project due to slow infiltration. The District staff drained the basin, tested the soils in the basin, and removed additional soil from the basin to reach a more permeable layer of soil. Following the modifications to the basin, the District staff and Geoscience restarted the infiltration investigation.



Based on the results of this initial phase of the study, the infiltration testing showed the movement of groundwater in a westerly direction instead of traveling vertically to reach the groundwater basin.



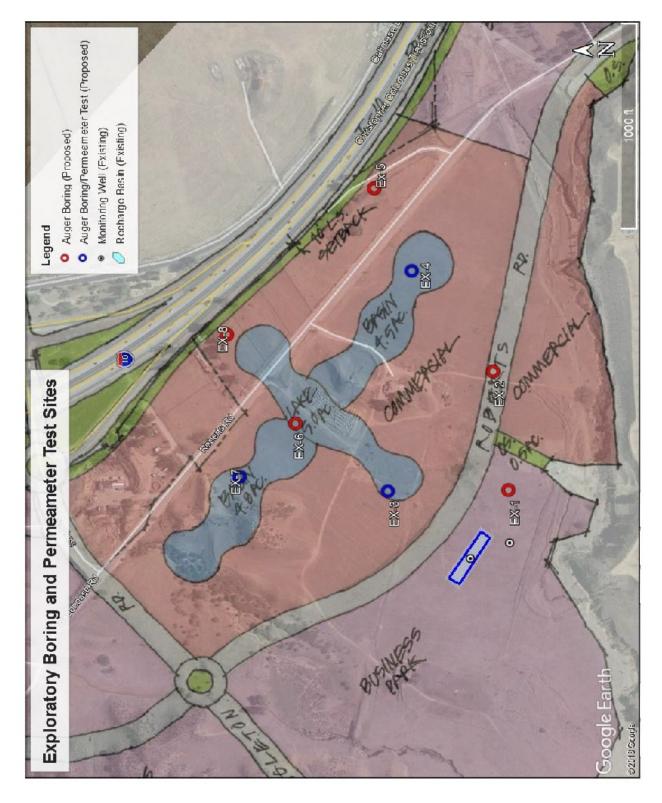
The following illustration shows how it is possible for the recharge water to move laterally instead of vertically to the groundwater basin.



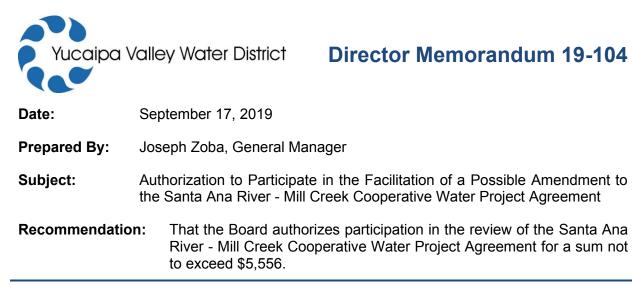
As a result of the initial testing, the District staff requested a proposal from Geoscience to conduct additional geological testing in the easterly portion of the groundwater basin. On September 3, 2019, the Board of Directors authorized Geoscience to proceed with additional tasks to further evaluate the long-term infiltration rates in the westerly portion of the Beaumont Basin [Director Memorandum No. 19-097].

The additional scientific study was developed to: (1) conduct additional exploratory drilling and testing; (2) perform additional infiltration testing; (3) prepare a groundwater model that will be used to support the recharge of recycled water at this location.

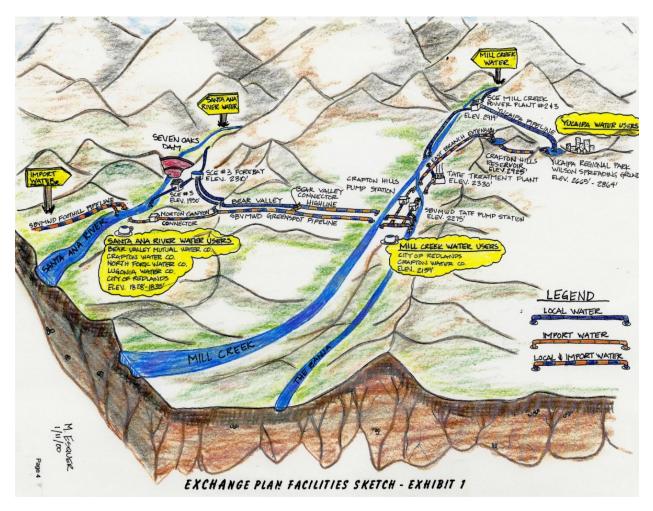
The Board of Directors requested that regular updates are provided to determine whether or not to continue with the proposed project. The District staff will add agenda items to future workshops and board meetings in order to provide weekly updates on the status of the project.







The Santa Ana River - Mill Creek Cooperative Water Project ("Exchange Plan") was a multi-entity effort adopted on May 3, 1976 in an effort to find the most efficient manner to deliver supplemental water to the higher elevations of the region (Yucaipa) regardless of water rights and infrastructure ownership.



The participants of the Exchange Plan have started to re-engage to review and maximize the efficiency and effectiveness of regional infrastructure. The Parties have agreed to hire a consultant to review and amend the Exchange Plan to improve the functionality of the Agreement.

On Wednesday, September 11, 2019, the San Bernardino Valley Water Conservation District approved a contract with Water Systems Consulting to assist with the development of an amendment for the Exchange Plan. The Yucaipa Valley Water District's share for the consultant will be \$5,556. This effort will be funded from the Bunker Hill GSC operating budget line item [02-506-57098]

Attachments:

- San Bernardino Valley Water Conservation District Memorandum No. 1669 Exchange Plan Agreement Support and Contribution for Plan Update YVWD Director Memorandum No. 19-104 - Page 3 of 9
- Water Systems Consulting Proposal dated August 30, 2019 YVWD Director Memorandum No. 19-104 - Page 6 of 9



San Bernardino Valley Water Conservation District

Helping Nature Store Our Water

Memorandum No. 1669

To:	Board of Directors
From:	General Manager, Daniel Cozad
Date:	September 11, 2019
Subject:	Exchange Plan Agreement Support and Contribution for Plan Update

#### **RECOMMENDATION**

Staff and the Exchange Plan Committee recommends the Board authorize the general manager to contract with Water Systems Consulting (WSC) for support services to enable the amendment and update of the Cooperative Exchange Plan Agreement under standard terms acceptable to legal counsel. The agreement is not expected to exceed \$100,000.

#### BACKGROUND

The District is a signatory and project manager for the Santa Ana/Mill Creek Cooperative Exchange Plan Agreement. The group has held over 100 meetings in the last 20 years but very few in the last 15 years. Several issues came to the attention of the Committee members, which reinitiated meetings in early 2019. Based on the early meeting the Committee has asked the Project Manager to contract for facilitation and updates to the plan and agreement.

#### **DISCUSSION**

After discussion of a draft scope developed for the Committee, they requested the District contract with WSC for services to support the committee meetings and updates to the plan. This procurement is considered a sole source as it was unanimously recommended by the Committee with no other recommendations. Additionally, the selected firm recently successfully won similar work for other agencies including SBVMWD. The selection of WSC is based on these factors. The Committee also requested the Conservation District provide legal counsel services to update the agreement after the plan changes are developed. The Committee has directed and reviewed the draft budget.

The Budget would obligate the District to provide some staff time and a contribution of approximately \$5,500 as a share of the consultant costs. This share is low because SBVMWD is seeking approval to pay half of the cost, and the other 9 participants pay the other 50%. The District would also have undetermined legal costs for agreement language.

1630 W. Redlands Blvd, Suite A Redlands, CA 92373 Phone: 909.793.2503 Fax: 909.793.0188 www.sbvwcd.org Email: info@sbvwcd.org

#### BOARD OF DIRECTORS Division 1: Richard Corneille

Division 2: David E. Raley Division 3: Robert Stewart Division 4: John Longville Division 5: GENERAL

MANAGER

Daniel B. Cozac

Division 5: Melody McDonald

Memorandum No. 1669

SBVWCD Board Letter, September 11, 2019

The update of this agreement and plan will continue to benefit the agencies regionally and the District by increasing flexibility of facility use in recharging and direct delivery of water.

#### ALTERNATIVES

Potential Board Actions include:

- Provide authorization to execute the agreement and make the contributions identified
- Cede the role of Project Manager for the Exchange Plan to another entity
- Table the issue to a later meeting delaying the effort of the Co0mmittee.

#### FISCAL IMPACT

Staff time for Exchange is included in the Water Enterprise of the approved budget. SBVMWD provides \$30,000 toward the administration of the Exchange Plan, and while this level of effort was not expected, it is likely recoverable from the Groundwater Council future budgets. This effort is supportive of field operations and is appropriate as a groundwater enterprise cost. The estimated cost by participate is shown below but may vary due to many factors; staff would only authorize work up to the revenue available.

#### Exchange Plan Agreement Update Budget

DRAFT 1 8/27/19

	Estimated Cost	\$	100,000
Signatory Participant Entity	Percentage	A	Amount
Bear Valley Mutual Water Company	5.6%	\$	5,556
City of Redlands	5.6%	\$	5,556
Crafton Water Company	5.6%	\$	5,556
Lugonia Water Company	5.6%	\$	5,556
East Valley Water District (East San Bernardino County Water District)	5.6%	\$	5,556
North Fork Water Company	5.6%	\$	5,556
Redlands Water Company	5.6%	\$	5,556
San Bernardino Valley Municipal Water District	50%	\$	50,000
San Bernardino Valley Water Conservation District	5.6%	\$	5,556
Yucaipa Valley Water District (Yucaipa Valley County Water District)	5.6%	\$	5,556
	100%	\$	100,000

#### **POTENTIAL MOTIONS**

- 1. Move staff's recommendation to provide authority to execute the agreement and support the Exchange Plan Committee
- 2. Direct staff on the other actions
- 3. Table the issue to a future meeting

#### ATTACHMENTS OR MATERIALS

Scope and Proposal

Memorandum No. 1669

SBVWCD Board Letter, September 11, 2019

<u>APPROVALS</u> Reviewed by District Counsel



8/30/2019

Daniel B. Cozad San Bernardino Valley Water Conservation District 1630 West Redlands Blvd., Suite A Redlands, CA 92373

## SUBJECT: PROPOSAL TO PROVIDE COORDINATION / FACILITATION TO UPDATE THE SANTA ANA RIVER – MILL CREEK COOPERATIVE WATER PROJECT AGREEMENT ("EXCHANGE PLAN")

Dear Mr. Cozad,

Water Systems Consulting, Inc. (WSC) appreciates the opportunity to submit this proposal to provide coordination and facilitation to update the Santa Ana River – Mill Creek Cooperative Water Project Agreement ("Exchange Plan"). The services are envisioned to help the Exchange Plan Task Force ("Task Force") conceptualize, develop, review and refine a modified or amended exchange plan document. The anticipated scope of services is included as Attachment 1.

WSC proposes to provide the coordination and facilitation services on a time and materials basis, with an anticipated not-to-exceed budget of \$79,800. A detailed breakdown of our budget estimate is included as Attachment 2. The expected duration of the project is between six and nine months from notice to proceed.

Due to the uncertainty associated with creative and collaborative multi-stakeholder projects such as this, we cannot provide a firm fixed fee for the proposed services, nor can we commit to a predetermined schedule as the schedule will be primarily driven by the needs and availability of the Task Force. However, we will partner with the Task Force to closely manage scope, schedule and budget to achieve the Task Force's objectives as cost-effectively and expeditiously as possible.

WSC's team will include Mr. Jeffery Szytel (Principal) and Ms. Laine Carlson (Project Manager), supported as needed by additional WSC staff. If you have any questions or would like to discuss any aspect this proposal, please contact Jeff (jszytel@wsc-inc.com) or Laine (lcarlson@wsc-inc.com) directly.

Sincerely,

Water Systems Consulting, Inc.

Jeffery M. Szytel, PE, MBA Principal

Laine Carlson, PE Project Manager

9375 Archibald Avenue Ste 200 | Rancho Cucamonga, CA 91730 | Phone: (909) 483-3200 | www.wsc-inc.com

Exchange Plan Update Facilitation

ATTACHMENT 1 – ANTICIPATED SCOPE OF SERVICES

#### TASK 0.0PROJECT MANAGEMENT

#### 0.1 **Project Administration**

- > Finalize and initiate contract
- > Prepare monthly invoices and progress reports (9 assumed)
- > Conduct as-needed coordination via phone and email

#### 0.2 Kickoff Meeting

Prepare for and conduct in-person kickoff meeting to review the agreements and plans that make up the Exchange Plan, discuss goals and objectives for the update, review the update facilitation scope and approach and define coordination needs.

#### TASK 1.0 BACKGROUND AND PREPARATION

#### 1.1 Data Review

- > Review existing Exchange Plan agreement and Bucket for Bucket guide
- > Review documentation of Seven Oaks Dam Water Quality Exchange and recharge exchanges

#### 1.2 Listening Sessions with Task Force Members

- Schedule and conduct up to three (3) one-hour listening sessions with individual Task Force members to understand unique perspectives, goals, & needs to in advance of larger Task Force working sessions. Meetings will be held in-person if possible, or via conference call if needed. The budget is based on all three in-person meetings being held on the same day.
- > Prepare summary of feedback received at the listening sessions.

#### TASK 2.0 TASK FORCE COORDINATION AND FACILITATION

#### 2.1 Task Force Working Sessions

- Plan, organize and facilitate two (2) 4-hour Working Sessions with the Task Force to brainstorm potential new facilities, processes or entities to be added or updated.
- Compile explanatory maps, charts and graphics to support the discussion at the Working Sessions.
- Prepare meeting summaries documenting key discussion points, decisions, data needs and action items.
- Following Working Session 1, coordinate with Task Force members to collect and review additional technical data needed to support new concepts identified in Working Session 1.
   Develop supplemental maps, charts and graphics to support the discussion at Working Session 2.

#### 2.2 Monthly Meetings

- Plan, organize and conduct up to four (4) two-hour in-person meetings with the Task Force to review progress, discuss key issues and review and discuss draft deliverables.
- > Prepare and distribute meeting summaries.

Exchange Plan Update Facilitation

ATTACHMENT 1 – ANTICIPATED SCOPE OF SERVICES

#### TASK 3.0 EXCHANGE PLAN ADDENDUM

#### 3.1 Define Proposed Changes

- > Identify any required updates to procedural issues or names and dates in the Exchange Plan.
- Describe new exchanges, including Seven Oaks Dam Water Quality Exchange and recharge exchanges.
- > Identify whether any desired changes cannot be included in an addendum.
- > Submit summary of proposed changes to the Task Force for review and approval.

#### 3.2 Preliminary Draft Addendum

- Draft Preliminary Addendum text and needed maps, tables or figures for legal and Task Force review. The budget is based on preparing an Addendum consisting of 5-pages of text and tables and up to two figures.
- > The scope assumes WSC will prepare materials for discussion and revision, but that revisions to or legal agreement addenda will be prepared by Water Conservation District legal counsel.
- The scope does not include revision of the Bucket for Bucket guide. The need for any updates to this guide will be discussed with the Task Force following review of the Preliminary Draft Addendum.

#### 3.3 Approval Draft Addendum

Incorporate comments received on the Preliminary Draft Addendum and prepare an Approval Draft Addendum

#### 3.4 Final Addendum

Incorporate comments received on the Approval Draft Addendum and prepare a Final Addendum

#### TASK 4.0BOARD PRESENATION SUPPORT

#### 4.1 Prepare PowerPoint Presentation

- Prepare a draft PowerPoint presentation summarizing the existing Exchange Plan and proposed changes to be used for Board/Counsel updates.
- > Present draft the Task Force at a Monthly Meeting (Task 2.2) to receive feedback
- > Incorporate comments from the Task Force and prepare a final Powerpoint Presentation

#### 4.2 Board/Counsel Memorandum

- Prepare draft Board/Counsel Memorandum summarizing the existing Exchange Plan and proposed changes and submit to the Task Force for review and comment.
- > Incorporate comments from the Task Force and prepare a final Board/Counsel Memorandum.

#### 4.3 Board Presentations

Attend up to two (2) Board/Counsel meetings to present the PowerPoint Presentation and support Task Force members in answering questions about the proposed amendment.

						WSC				ſ		
Task No.	Task No. Task Description	leqioninq	Project Manager	Document & Graphics Support	gnineenign∃ Toqqu2	WSC Labor Hours	Lat	wsc Labor Fee	Expenses	ses	>-	wsc Fee
0	Project Management											2
0.1	Project Administration	2	20			22	ş	5,480	Ş		Ş	5,480
0.2	Kickoff Meeting	10	10			20	Ş	5,350	\$	550	Ş	5,900
	SUBTOTAL	12	30	0	0	42	s	10,830	\$	550	Ş	11,380
1	Background and Preparation											
1.1	Data Review	9	12			18	Ş	4,680	Ş		Ş	4,680
1.2	Listening Sessions with Task Force Members	6	12			21	s	5,550	Ş	550	\$	6,100
	SUBTOTAL	15	24	0	0	39	ş	10,230	Ş	550	Ş	10,780
2	Task Force Coordination and Facilitation											
2.1	Task Force Working Sessions	20	32	∞	16	76	s	17,160	s	1,100	Ş	18,260
2.2	Monthly Meetings	28	30			58	Ş	15,470		2,200	Ş	17,670
	SUBTOTAL	48	62	8	16	134	Ş	32,630	Ş	3,300	Ş	35,930
3	Exchange Plan Addendum											
3.1	Define Proposed Changes	4	12		80	24	Ş	5,180	\$	-	\$	5,180
3.2	Preliminary Draft Addendum	4	12		∞	24	ş	5,180	Ş		Ş	5,180
3.3	Approval Draft Addendum	2	4		2	80	s	1,830	Ş		Ş	1,830
3.4	Final Addendum	2	4		2	8	Ş	1,830	Ş		Ş	1,830
	SUBTOTAL	12	32	0	20	64	Ş	14,020	\$		Ş	14,020
4	Board Presentation Support											
4.1	Prepare PowerPoint Presentation	2	80	8		18	Ş	3,900	Ş	1	Ş	3,900
4.2	Board/Counsel Memorandum	1	4			5	s	1,270	ş	4	ş	1,270
4.3	Board Presentations		10			10	Ş	2,450	\$	70	Ş	2,520
	SUBTOTAL	3	22	8	0	33	Ş	7,620	Ş	70	Ş	7,690

Exchange Plan Update Facilitation ATTACHMENT 2 – ANTICIPATED BUDGET 79,800

70

7,620

SV

36

333

16 8

170

SUBTOTAL COLUMN TOTALS

80

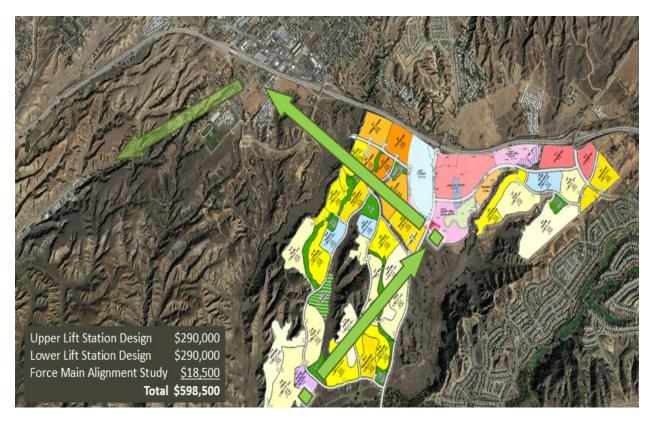


Subject:Authorization to Proceed with the Final Design of Sewer Lift Stations, SewerForce Mainlines, and Sewer Collection System Upgrades

**Recommendation:** That the Board authorizes Krieger and Stewart to initiate the design of sewer infrastructure for a sum not to exceed \$598,500.

On August 6, 2019, the Board of Directors approved Resolution No. 2019-12 Declaring Its Official Intent to Reimburse Project Expenditures with Bond Proceeds from an anticipated special assessment with the California Statewide Communities Development Authority.

The attached design proposals would assist the District with the planning and sizing two sewer lift stations and mainline infrastructure necessary to provide service to properties in the southern Calimesa area.



The District would use funds from Sewer Infrastructure Reserves [GL #03-10311] which would ultimately be reimbursed prior to initiating construction of the proposed facilities.



March 12, 2019

818-32.1A

Joseph B. Zoba, General Manager Yucaipa Valley Water District 12770 Second St. Yucaipa, CA 92399

Subject: Summerwind Lower Sewage Lift Station Engineering Services Proposal

Dear Mr. Zoba:

At the request of Mike Turner, we have prepared the following design fee proposal to prepare construction drawings and specifications for the lower lift station in the Summerwind development. Although the Developer (Argent) is responsible for the design and construction of the lift station, Yucaipa Valley Water District (YVWD) will own and operate the facility at its completion, and therefore, the lift station design must meet all District requirements. To that end, the Developer has requested that Krieger & Stewart provide a design proposal to the District so that the design and review process proceeds in an expeditious and efficient manner.

#### A. PROJECT DESCRIPTION

Based on information provided by Argent, 3,050 dwelling units will ultimately be served by the lower lift station. However, the design will need to consider facility phasing for flows varying from 50 gpm to 1,400 gpm. This will require designing facilities that can handle the low flows initially, and be expanded to handle the intermediate and high flows ultimately. This may include utilizing multiple variable speed drive pumping units, expandable or multi-chamber wet wells, and expandable electrical panels and components. It will also require performing hydraulics for multiple force mains pumping to two separate locations. Prior to commencing detailed design engineering, the phasing and ultimate capacity of the proposed lift station will be confirmed with Argent and YVWD.

The proposed lift station will be located at the westerly end of the development, at the lowest point in the development. The lift station will initially pump raw sewage from the first 304 dwelling units constructed in Phase 2 (designated as Phase 2A) to the interim lift station recently constructed by Argent for Phase 1 of the development. Once the development moves into Phase 2B, all raw sewage from Phases 2 to 5 (including flows from Phase 2A) will be pumped to the regional lift station that will be constructed by Argent as part of the Phase 2B infrastructure. Based on our initial review, the pumping units will be driven by variable speed drives (VFDs) and pumps will vary in speed to match inflow by maintaining a level in the wet well. Due to the proximity to proposed dwelling units, we anticipate that the electrical switchgear, VFDs, and controls will be housed in a building for sound attenuation and air conditioning (for the VFDs). We anticipate that the building will be constructed of masonry units, and that the building will also house the control equipment (and possibly the emergency standby generator).

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



Joseph B. Zoba March 12, 2019 Page 2

We anticipate that the proposed lift station facilities will include the following:

- 1. Two or more submersible non-clog type sewage pumps (duty and standby).
- 2. Below grade sewage wet wells (multiple or multi-chambered).
- 3. Below grade emergency storage tank (likely reinforced concrete due to the large required volume (2 hours of average day flow)).
- 4. Abovegrade pump discharge valves, including swing check valves and isolation valves.
- 5. Electrical service, switchgear, variable frequency drives, automatic controls, and telemetry.
- 6. An emergency standby generator with automatic transfer switch.
- 7. A masonry block control building.
- 8. A tubular steel fence around the site with two 20' wide automatic rolling steel access gates.
- 9. Liquid phase and air phase odor control facilities (or at least the provision to add these facilities).

#### **B. SCOPE OF SERVICES**

#### 1. Preliminary Engineering (25% Milestone)

Prior to meeting with YVWD, we will confirm the total number of dwelling units to be served by the lift station at various phases of the project; perform preliminary hydraulic analyses; select pumping units; size standby generator; determine wet well depth, size, and operating levels; prepare building layout; and prepare preliminary site layout.

#### 2. YVWD 25% Review Meeting

We will meet with YVWD staff to present preliminary hydraulic analysis results, pumping unit selection, generator and wet well sizing, and preliminary building and site layouts. We will confirm project design criteria, including pumping capacity, site size and access requirements, and building location and layout.

#### 3. 90% Construction Document Preparation

After approval of the preliminary site layout and pump station capacity, we will proceed with preparation of the construction documents (drawings and specifications). Design



documents will incorporate the items as discussed at the 25% review meeting with YVWD staff. When approximately 90% complete, we will submit three sets of construction drawings and specifications to YVWD for their review and comment.

The specifications will include YVWD-approved special conditions, technical specifications for all equipment, YVWD standard specifications for basic construction materials (e.g. concrete, steel, piping, painting, and electrical), and applicable YVWD standard drawings.

The special conditions will address any special construction constraints and work sequence requirements.

The construction drawings will be prepared using the YVWD-approved construction drawing title block, orientation, and layout. Drawings will be provided for site grading, site piping, structural, mechanical, building layout, and electrical work.

## 5. YVWD 90% Review and Meeting

As presented above, we will submit three sets of construction documents and supporting design calculations to YVWD for review. Approximately four weeks thereafter, we will obtain YVWD's comments during a review meetingt.

## 6. Final Construction Document Preparation

Based on YVWD staff comments from the 90% construction document review meeting, we will revise the documents as required and submit signed and stamped originals (specifications and drawing mylars) of same to YVWD staff for final approval and signatures.

Our proposed engineering services for the lift station include the following:

- 1. Verify with Argent the number of dwelling units to be served during each phase of the development, and the approximate time frame for each phase.
- 2. Verify flows and pumping conditions for each phase of the development, including analyzing pumping conditions for initial flows to the interim lift station, initial flows to the regional lift station, and ultimate flows to the regional station.
- 3. Select size of sewage pumps for each flow condition, and establish phasing criteria for replacing pumps to accommodate development growth.
- 4. Verify diameter of proposed force mains. It is anticipated that multiple force mains will be required to accommodate the various flow conditions.



- 5. Design lift station facilities.
- 6. Retain the services of a sub-consultant to perform a surge analysis of the pumping system to determine the need and/or size of the surge tank likely required to control surge forces from the pumping system (due to the high lift and long force main).
- 5. Prepare civil, architectural, structural, mechanical, and electrical construction drawings for the lift station facilities, including wet well and masonry block building.

We understand that the Developer will provide Krieger & Stewart with the following:

- 1. Completion dates for dwelling units tributary to the lift station.
- 2. AutoCAD base sheets for the lift station site. When the lift station site is rough graded by the Developer, all survey data with control and topography (1' contours) in AutoCAD format demonstrating site was graded in accordance with the approved rough grading plan..
- 3. Soils investigation for the site, including design parameters for both above and below grade structures.
- 4. Location data for existing and proposed below grade utilities adjacent to the lift station.
- 5. Alignment and profile of the proposed lift station force mains, including elevation of force main discharge locations.
- 6. Alignment and profile of the proposed gravity sewer to the lift station wet well, including invert elevation at wet well inlet.
- 7. Street improvement plans for all streets adjacent to the lift station site.

Our proposal has been prepared based on the following understandings:

- 1. Determination of lift station capacity (average daily flow and peak instantaneous flow) will be based on YVWD standards and design criteria.
- 2. Design of lift station force main and gravity sewer beyond the limits of the lift station site will be provided by others.
- 3. Coordination with all utilities except YVWD, including electrical service, will be provided by the Developer. Krieger & Stewart will provide the necessary technical information to obtain the required lift station utility services.
- 4. Any required site easements and related documents (e.g. grant deeds, grants of easements, legal descriptions and plats) will be provided by the Developer.



- 5. Site rough grading plan will be provided by Developer.
- 6. Potholing and field measuring of existing utilities (if required) will be provided by Developer.
- 7. Radio survey (if required) for lift station telemetry system will be provided by others.
- 8. Preparation of environmental related documents will be provided by Developer, including, but not limited to, CEQA documents, storm water pollution prevention plans, and erosion control plans.
- 9. Preparation, processing, and payment of fees for applications and permits will be provided by Developer, including SCAQMD permits.
- 10. Lift station plan review and approval by any agency other than YVWD will not be required.
- 11. Reports, drawings, data, and information prepared by others (as described above), which will be utilized by Krieger & Stewart in performing design engineering services, will be complete and accurate. Independent verification of same by Krieger & Stewart will not be required.
- 12. Bid phase and construction phase engineering services will be performed under separate contract.

**Our fee to provide design engineering services for the Summerwind Lower Lift Station is \$290,000**. Attached Table 1 presents a preliminary index of construction drawings for the lift station. We anticipate engineering services can be completed in 24 weeks (20 weeks for design and 4 weeks for YVWD review) once all information is provided by the Developer.

If you have any questions, please call.

Sincerely,

KRIEGER & STEWART

Patrick M. Watson

PMW/ 818-32P1-LS PRO

Attachments: Table 1 - Preliminary Construction Drawings Index

#### TABLE 1 YUCAIPA VALLEY WATER DISTRICT SUMMERWIND LOWER SEWAGE LIFT STATION PRELIMINARY CONSTRUCTION DRAWING INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET, VICINITY MAP, LOCATION MAP, AND DRAWING INDEX
2	CONSTRUCTION NOTES
3	CONSTRUCTION NOTES
4	LEGENDS, SYMBOLS, AND ABBREVIATIONS
5	SCHEDULES
6	FINE GRADING PLAN
7	SITE PIPING PLAN
8	CONTROL BUILDING EXCAVATION AND BACKFILL SECTIONS
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22	CONTROL BUILDING INTERIOR ELEVATIONS
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24	STANDARD STRUCTURAL DETAILS
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27	WET WELL AND EMERGENCY STORAGE STRUCTURAL SECTIONS
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34	MAIN CONTROL PANEL AND RTU PANEL LAYOUT
35	INTERCONNECT DIAGRAMS
36	STANDARD ELECTRICAL DETAILS
37	ELECTRICAL SINGLE LINE DIAGRAM, MCC ELEVATION, AND CONDUIT SCHEDULE
38	CONTROL BUILDING ELECTRICAL AND LIGHTING PLANS



May 24, 2019

818-32.1A

Joseph B. Zoba, General Manager Yucaipa Valley Water District 12770 Second St. Yucaipa, CA 92399

Subject: Summerwind Upper Sewage Lift Station Design and Force Main Alignment Study Engineering Services Proposal

Dear Mr. Zoba:

Pursuant to your request, we have prepared the following design fee proposal to prepare construction drawings and specifications for the upper lift station in the Summerwind/Oak Valley Core Development, and to determine a feasible route for the sewage force main conveying the pumped sewage from the lift station to the Wochholz Regional Water Recycling Facility (WRWRF). Although the Developers (Argent and Oak Valley Partners) are responsible for the design and construction of the lift station and force main, Yucaipa Valley Water District (YVWD) will own and operate the facilities at their completion, and therefore, the lift station design and force main design must meet all District requirements. To that end, the Developers have requested that Krieger & Stewart provide a design proposal to the District so that the design and review process proceeds in an expeditious and efficient manner.

## A. PROJECT DESCRIPTION

Based on information provided by the Developers, approximately 4,800 equivalent dwelling units will ultimately be served by the upper lift station (3,800 from Summerwind and 1,000 from the Oak Valley Core). However, the design will need to consider facility phasing for flows varying from approximately 600 gpm to 2,100 gpm, depending on the timing of the various stages of construction and occupancy. This will require designing facilities that can handle the low flows initially, and be expanded to handle the intermediate and high flows ultimately. This may include utilizing multiple variable speed drive pumping units, expandable or multi-chamber wet wells, and expandable electrical panels and components. It will also require performing hydraulics for multiple force mains pumping to various discharge locations within the District. The original plan was to pump the sewage into the Mesa Verde Development, where it would then be conveyed by gravity flow through the Development to the WRWRF. However, depending on the progress of the Mesa Verde Development, it may be necessary to initially pump the sewage to County Line Road (thereby by-passing the Mesa Verde Development), and then convey the sewage by gravity to the WRWRF in a new trunk sewer located in County Line Road and the WRWRF access road. Prior to commencing detailed design engineering, the phasing and ultimate capacity of the proposed lift station will be confirmed with Argent, Oak Valley Partners, and YVWD.

The proposed lift station will be located adjacent to a proposed fire station within the Oak Valley Core (fronting Singleton Road, approximately 2,500 lineal feet west of Interstate 10). The lift station will initially pump raw sewage from the Summerwind Phase 2A tract (which will be pumped up from the lower lift station), the Summerwind Phase 1 Tracts (thus eliminating the

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



interim lift station recently constructed by Argent), and the Oak Valley Core developments. Eventually, all raw sewage from Phases 1 through 5 of the Summerwind Development and all raw sewage from the Oak Valley Core Development will be pumped from the upper lift station to the gravity trunk sewer located in either the Mesa Verde Development or in County Line Road. Based on our initial review, the pumping units will be driven by variable speed drives (VFDs), and pumps will vary in speed to match inflow by maintaining a fixed level in the wet well. Due to the close proximity of proposed residential units to the lift station, we anticipate that the electrical switchgear, VFDs, and controls will be housed in a building for sound attenuation and air conditioning (for the VFDs). We anticipate that the building will be constructed of masonry units, and that the building will also house the control equipment (and possibly the emergency standby generator).

We anticipate that the proposed lift station facilities will include the following:

- 1. Two or more submersible non-clog type sewage pumps (duty and standby).
- 2. Below grade sewage wet wells (multiple or multi-chambered).
- 3. Below grade emergency storage tank (likely reinforced concrete due to the large required volume (2 hours of average day flow)).
- 4. Abovegrade pump discharge valves, including swing check valves and isolation valves.
- 5. Electrical service, switchgear, variable frequency drives, automatic controls, and telemetry.
- 6. An emergency standby generator with automatic transfer switch.
- 7. A masonry block control building.
- 8. A tubular steel fence around the site with two 20' wide automatic rolling steel access gates.
- 9. Liquid phase and air phase odor control facilities.

With regard to the force main and gravity sewer required to convey the pumped sewage to the WRWRF, an alignment must be determined that can be constructed without reliance upon the Mesa Verde Development proceeding in advance of the Summerwind/Oak Valley Core Development. This will require analyzing alignments through public and private properties along the freeway corridor for the force main, and reviewing routes within public streets for the trunk sewer to flow by gravity. Upon initial review, it appears that the sewage will need to be pumped to either Ave L, 7th Place, or County Line Road, which from those locations will then flow by



gravity to the WRWRF. This will be confirmed through review of topographical records. At this early stage in the planning the alignment study will be a desktop study only, and no surveying nor aerial mapping is anticipated. Once one or two viable alignments are determined, a more detailed study will need to be prepared.

Note that because the final pump selection for the lift station cannot be performed until the force main alignment and discharge location(s) are determined (which are necessary for determining the final pumping hydraulic conditions), the pump station design package cannot be completed until the force main alignment is finalized.

# **B. SCOPE OF SERVICES**

# 1. Preliminary Engineering (25% Milestone)

Prior to meeting with YVWD, we will confirm the total number of dwelling units to be served by the lift station at various phases of the project, and perform our initial record search and analysis of potential alignments and diameters for the force main and gravity sewer. We anticipate obtaining property ownership records along proposed routes, and using published topographical data (such as Google Earth) to determine ground surface elevations along potential routes.

Once the preliminary force main alignments are determined, we will perform preliminary hydraulic analyses; select pumping units; size standby generator; determine wet well depth, size, and operating levels; prepare building layout; and prepare preliminary site layout.

# 2. YVWD 25% Review Meeting

We will meet with YVWD staff to present preliminary alignment options, hydraulic analysis results, pumping unit selection, generator and wet well sizing, and preliminary building and site layouts. We will confirm project design criteria, including final force main alignment, station pumping capacity, site size and access requirements, and building location and layout.

# 3. Technical Memorandum Preparation

We will prepare a technical memorandum summarizing the anticipated sewage flows, project phasing, force main requirements (sizing, quantity, and discharge options), and station design criteria.

# 4. 90% Construction Document Preparation

After approval of the force main alignment, preliminary site layout, and pump station capacity, we will proceed with preparation of the construction documents (drawings and



specifications) for the lift station. Design documents will incorporate the items as discussed at the 25% review meeting with YVWD staff. When approximately 90% complete, we will submit three sets of construction drawings and specifications to YVWD for their review and comment.

The specifications will include YVWD-approved special conditions, technical specifications for all equipment, YVWD standard specifications for basic construction materials (e.g. concrete, steel, piping, painting, and electrical), and applicable YVWD standard drawings.

The special conditions will address any special construction constraints and work sequence requirements.

The construction drawings will be prepared using the YVWD-approved construction drawing title block, orientation, and layout. Drawings will be provided for site grading, site piping, structural, mechanical, building layout, and electrical work.

Concurrently, we anticipate that the Developers will be proceeding with easement acquisition for the force main (if necessary) and preparation of force main and trunk sewer design drawings.

## 5. YVWD 90% Review and Meeting

As presented above, we will submit three sets of lift station construction documents and supporting design calculations to YVWD for review. Approximately four weeks thereafter, we will obtain YVWD's comments during a review meeting.

## 6. Final Construction Document Preparation

Based on YVWD staff comments from the 90% construction document review meeting, we will revise the documents as required and submit signed and stamped originals (specifications and drawing mylars) of same to YVWD staff for final approval and signatures.

Our proposed engineering services for the project include the following:

- 1. Verify with Argent and Oak Valley Partners the number of dwelling units to be served during each phase of the development, and the approximate time frame for each phase.
- 2. Verify flows and pumping conditions for each phase of the development, including analyzing pumping conditions for initial and ultimate flows to the lift station.



- 3. Determine feasible force main alignments from the lift station to public right-of-way where the sewage can flow by gravity to the WRWRF. This will be a desktop study only, and no field surveying or aerial photogrammetry is included for this preliminary alignment study.
- 4. Verify diameters of proposed force mains. It is anticipated that multiple force mains will be required to accommodate the various flow conditions.
- 5. Select size of sewage pumps for each flow condition, and establish phasing criteria for replacing pumps to accommodate development growth.
- 6. Prepare a technical design memorandum summarizing the design conditions and phasing for the project.
- 7. Design lift station facilities.
- 8. Retain the services of a sub-consultant to perform a surge analysis of the pumping system to determine the need and/or size of the surge tank likely required to control surge forces from the pumping system (due to the high lift and long force main).
- 9. Prepare civil, architectural, structural, mechanical, and electrical construction drawings for the lift station facilities, including wet well and masonry block building.

We understand that the Developer will provide Krieger & Stewart with the following:

- 1. Completion dates for dwelling units tributary to the lift station.
- 2. AutoCAD base sheets for the lift station site. When the lift station site is rough graded by the Developer, all survey data with control and topography (1' contours) in AutoCAD format demonstrating site was graded in accordance with the approved rough grading plan..
- 3. Soils investigation for the site, including design parameters for both above and below grade structures.
- 4. Location data for existing and proposed below grade utilities adjacent to the lift station.
- 5. Final alignment and profile of the proposed lift station force mains if designed by others, including elevation of force main discharge locations.
- 6. Alignment and profile of the proposed gravity sewer to the lift station wet well, including invert elevation at wet well inlet.
- 7. Street improvement plans for all streets adjacent to the lift station site.



Our proposal has been prepared based on the following understandings:

- 1. Determination of lift station capacity (average daily flow and peak instantaneous flow) will be based on YVWD standards and design criteria.
- 2. Final design of lift station force mains and gravity sewer beyond the limits of the lift station site will be provided by others, or under separate contract.
- 3. Coordination with all utilities except YVWD, including electrical service, will be provided by the Developers. Krieger & Stewart will provide the necessary technical information to obtain the required lift station utility services.
- 4. Any required site easements and related documents (e.g. grant deeds, grants of easements, legal descriptions and plats) will be provided by the Developer.
- 5. Site rough grading plan will be provided by Developer.
- 6. Potholing and field measuring of existing utilities (if required) will be provided by Developer.
- 7. Radio survey (if required) for lift station telemetry system will be provided by others.
- 8. Preparation of environmental related documents will be provided by Developer, including, but not limited to, CEQA documents, storm water pollution prevention plans, and erosion control plans.
- 9. Preparation, processing, and payment of fees for applications and permits will be provided by Developer, including SCAQMD permits.
- 10. Lift station plan review and approval by any agency other than YVWD will not be required.
- 11. Reports, drawings, data, and information prepared by others (as described above), which will be utilized by Krieger & Stewart in performing design engineering services, will be complete and accurate. Independent verification of same by Krieger & Stewart will not be required.
- 12. Bid phase and construction phase engineering services will be performed under separate contract.

Our fee to provide design engineering services for the Summerwind Upper Lift Station is \$290,000, and our fee to prepare the Force Main Alignment Study is \$18,500. Attached Table 1 presents a preliminary index of construction drawings for the lift station. We anticipate engineering services can be completed in 24 weeks (20 weeks for design and 4 weeks for YVWD review) once all information is provided by the Developer.



If you have any questions, please call.

Sincerely,

**KRIEGER & STEWART** 

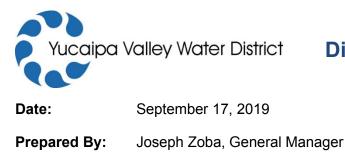
M. Tatu

Patrick M. Watson

PMW/ 818-32P1-Upper LS PRO Attachments: Table 1 - Preliminary Construction Drawings Index

TABLE 1
YUCAIPA VALLEY WATER DISTRICT
SUMMERWIND & OAK VALLEY CORE UPPER SEWAGE LIFT STATION
PRELIMINARY CONSTRUCTION DRAWING INDEX

SHEET NO.	DESCRIPTION					
1	TITLE SHEET, VICINITY MAP, LOCATION MAP, AND DRAWING INDEX					
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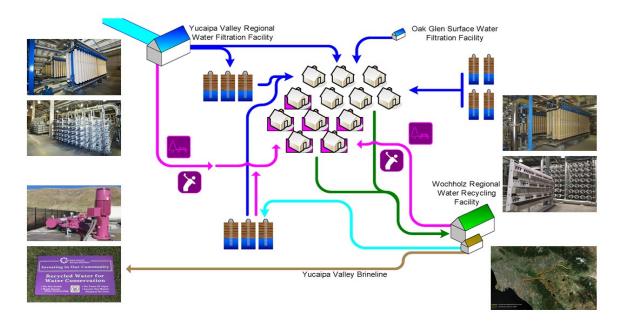


Subject: Authorization to Update the Preliminary Engineering Design Study for the Salinity and Groundwater Enhancement (SAGE) Project at the Wochholz Regional Water Recycling Facility

Director Memorandum 19-106

**Recommendation:** That the Board authorizes Separation Processes to update the preliminary design of the Salinity and Groundwater Enhancement (SAGE) Project for a sum not to exceed \$32,260.

Recognizing the impact that prolonged, severe, and reoccurring droughts, the Yucaipa Valley Water District has embarked on a series of capital improvement projects that integrated drinking water, recycled water, sewer treatment, and brine disposal facilities to create an exceptionally pure and renewable water resource.



# Sustainable and Integrated Infrastructure Concepts

In preparation for future droughts, the Yucaipa Valley Water District staff is recommending an expansion of the reverse osmosis equipment at the Yucaipa Valley Regional Water Filtration Facility and the reverse osmosis equipment at the Wochholz Regional Water Recycling Facility, as well as energy neutral equipment to create and store energy to achieve complete sustainability for our purification systems. These improvements will provide additional supplies of high-quality water for future use within our community.

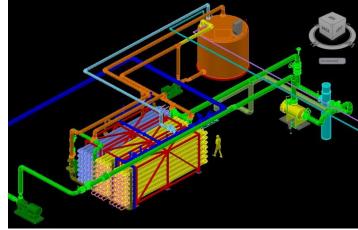
# Overview of the Yucaipa Valley Regional Water Supply Renewal Project

The Yucaipa Valley Water District continues to expand recycled water infrastructure to reduce the dependency on imported water supplies from the Sacramento -San Joaquin Delta and to provide a secure and reliable water supply for the region. During the summer months, the Yucaipa Valley Water District has been able to offset up to 15% of the total water demand with recycled water. The goal of the District is to achieve a 30% offset by 2030.



An investment in our water resources and water infrastructure directly benefits the environment and helps stimulate the local economy. Using this philosophy as a guide, the Yucaipa Valley Water District is prepared to implement the next phase of the Regional Water Supply Renewal Project which has been designed to accomplish the following goals:

Significantly Improve Water Quality – The Yucaipa Valley Water District is located at the headwaters of the Santa Ana Watershed. As a recycled water producer in the Santa Ana Watershed, the Yucaipa Valley Water District was required to extend the Santa Ana Regional Interceptor approximately 15 miles from San Bernardino to Yucaipa. This brine disposal pipeline allows the District to remove salt and minerals from



our recycled water supplies to achieve significantly cleaner water than imported water received from the State Water Project. With a drought proof supply of high quality recycled water available to the District, we have implemented dual-plumed homes to utilize recycled water for front and rear-yard irrigation, as well as planned recycled water recharge.

 <u>Minimize Dependency on Imported Water Supplies</u> – This project has been designed to take a proactive step to maximize the use of recycled water in a characteristically water starved region of Southern California. By constructing these additional facilities, the District will become less reliant on water from Northern California, thereby reducing the overall demand for imported water to the region.

Upon review of the overall project elements, the District staff recommends that we update the preliminary engineering design study for the Salinity and Groundwater Enhancement (SAGE) Project.



Separation Processes, Inc. 2386 Faraday Ave. Suite 100 Carlsbad, CA 92008 Tel: 760-804-5777 Fax: 760-804-5715 www.spi-engineering.com

August 26, 2019

Mr. Joseph B. Zoba General Manager Yucaipa Valley Water District 12770 Second Street Yucaipa, CA 92399

RE: Wochholz Salinity and Groundwater Enhancement (SAGE) Project Update.

Dear Mr. Zoba,

This letter provides a proposal for Separation Processes, Inc. (SPI) to update the preliminary engineering design study in the amount of \$32,260 for an nominal 8-mgd Reverse Osmosis and Advanced Oxidation Processes RO/AOP facility at the Henry N. Wochholz Regional Water Reclamation Facility (WRWRF) to achieve treatment suitable for groundwater recharge under Article 5.2 of the California Groundwater Recharge Regulations.

#### Background

The WRWRF can be configured produce 8-mgd of treated wastewater effluent that can be used as a water supply source in the District's under Article 5.2 of the Groundwater Recharge Regulations. For groundwater recharge, current California regulatory approval requires full advanced treatment (FAT) including RO/AOP.

In 2013, the District commissioned a partial Reverse Osmosis facility would be able to reduce the salinity in order to satisfy the salinity requirements for surface spreading under Article 5.1 of the regulations. In order to meet Article 5.2 of the regulations, the RO processes needs to be expanded, and advanced oxidation needs to be added. In addition, water of the quality produced from the RO/AOP treatment requires stabilization in order to make it compatible with materials in piping distribution system.

As part of the 2017 investigation, the preferred option at that time was to locate the RO/AOP facility behind the existing AWT facility. Option 2. The preliminary report was delivered in August 2017. Since that time, the District has used the report as a reference in support of project funding. There have been additional requests to investigate alternative locations, such as behind the filter press building in order to fit within the constraints of the site.

One of the basic assumptions of the report was that an expansion of the existing secondary clarifier system was required. This expansion was driven by challenges associated with foam generation in the secondary treatment system. Based on some recent work with the secondary aeration system, the construction of a secondary system would not be required. One idea that has come about based on the preliminary biological modeling is that replacement of the coarse bubble diffusers with fine bubble diffusers may be a more cost-effective alternative for operation in the foreseeable future.

Yucaipa Valley Water District
Wochholz Salinity and Groundwater Enhancement (SAGE) Update

August 26, 2019 Page 2 of 3

Fine bubble diffusers are more efficient than coarse bubble diffusers, and although there may be some reduction on overall treatment capacity, the reduced operating cost may be beneficial into the foreseeable future operation. The deliverable will be a technical memorandum that focuses on the changes to the secondary system (including blowers).

In addition, there were some reservations about the location, and the possibility of locating the RO/AOP facility behind the existing Filter Press Building remains a possible location. The location which is relatively undisturbed may have benefit in terms of construction as this is a relatively undisturbed (greenfield) location.

The update will also include revisiting the construction costs. Modifications to the secondary treatment system will be provides as a separate and/or included as part of the total project to provide flexibility to the District in its funding requests.

## Personnel

The proposed work will be managed by Jim Vickers, P.E., with assistance of Charlie Cruz, P.E.. These individuals have provided services to the District on previous projects.

## Proposed Budget

The estimate for the project work is provided in the following table.

# Yucaipa Valley Water District Wochholz Salinity and Groundwater Enhancement Project (SAGE) Update Schedule B Proposed Scope of Services

		Rate					
	\$232	\$207	\$115				
	РМ	SPE	CADD	тмн	Labor	ODC	Total
Task 1 - Water Quality							
Project Administration	4			4	\$928	\$46	\$974
Obtain Water Quality Information	1	2		3	\$646	\$32	\$678
Obtain Water Quality Demand	1	2		3	\$646	\$32	\$678
Task 2 - Process Development							
Update Process Flow Diagrams	2	4	16	22	\$3,132	\$157	\$3,289
Update Facility Layouts		4	24	30	\$4,052	\$203	\$4,255
Secondary Aeration Blowers and Fine Bubble Diffusers		24	8	44	\$8,672	\$434	\$9,106
Concentrate Disposal Investigation		4		6	\$1,292	\$65	\$1,357
Task 3 - Cost Development							
Update Facility Cost Estimate		12		20	\$4,340	\$217	\$4,557
Task 4 - Update Feasibility Study Report							
Draft Feasibility Report		8		16	\$3,512	\$176	\$3,688
Final Feasibility Report	4	8	8	20	\$3,504	\$175	\$3,679
TOTALS	44	68	56	168	\$30,724	\$1,536	\$32,260

Yucaipa Valley Water District	August 26, 2019
Wochholz Salinity and Groundwater Enhancement (SAGE) Update	Page 3 of 3

Services for this project will be billed monthly at the following rates:

Senior Project Manager	\$232/hr
Project Manager/Senior Project Engineer	\$207/hr
Project Engineer	\$154/hr
Engineer	\$118/hr
CAD Designer	\$115/hr
Authorized Expenses (reproduction costs)	as incurred
Travel	\$0.535/mile

The proposed work will be performed for a total not-to-exceed fee of \$32,260.

## Schedule

The proposed work is anticipated to take 6 weeks following authorization, assuming required data is provided by the District.

We hope this proposal meets the needs of the District. Please do not hesitate to contact me with any questions or if revision is needed.

Very Truly Yours,

James C. Vickers

James C. Vickers, P.E. President



Prepared By: Kathryn Hallberg, Implementation Manager

Subject: Consideration of a Claim for Repair Costs Related to Water Line Leaks on Third Street - Alfredo Rodriguez

**Recommendation:** That the Board denies the claim for damages and notifies the District's insurance carrier of the denied claim for damages.

On August 19, 2019, the Yucaipa Valley Water District received a claim from Mr. Alfredo Rodriguez ("Claimant") for repair cost \$8,040 due to a water service line break, which the Claimant states caused the curb to crack and sink. District staff called the Claimant on Thursday August 29, 2019 to determine the exact date(s) of the leak(s). The Claimant stated that the last three leaks were within the last two years and the most recent was within the last six months. District staff researched the location and the most recent work order for the location was on March 27, 2014.

The Claimant stated due to numerous waterline leaks at the front of the property the leaks have damaged the curb and the driveway curb, causing cracking and undermining. The Claimant stated that he observed water pouring from the crack after the last leak, which was within the last six months.

The claim was turned in to the District office on August 19, 2019. The Claimant is requesting the curb to be replaced and submitted a quote in the amount of \$8,040.

Attached is the claim turned in by the Claimant, pictures taken of the damaged curb on August 19, 2019, the work order for the work performed on March 27, 2014, and the quote that was obtained by the Claimant for the repairs.

RECEIVED

ALIG 1 9 2019

YUCAIPA VALLEY

WATEP DISTRICT

# YUCAIPA VALLEY WATER DISTRICT - CLAIM FORM

### INSTRUCTIONS

On the reverse side of sheet is a claim form for filing a claim against Yucaipa Valley Water District. The original and one identical copy of this form, together with a copy of all attachments, are to be filed with the Yucaipa Valley Water District. Retain one copy for your records. Please send to this address:

Yucaipa Valley Water District

Attn: Claims Dept.

12770 2nd St

Yucaipa, Ca. 92399

(909) - 797-6381 FAX

Please fill out form completely. Additional sheets may be attached if more space is needed. Missing information may delay the processing of your claim. Please print.

#### Claims:

Claims for death, injury to person or personal property must be filed not later than six months after the occurrence. (Gov. Code Sec. 911.2)

Claims for damage relating to any other cause of action must be filed not later than 1 year after the occurrence. (Gov. Code Sec. 911.2)

# This claim form must be signed and dated.

# Who is Responsible for Damages?

No utility is in a position to guarantee 100 percent continuity of water service. However, it is our policy to investigate claims in order to determine if our conduct or inaction was unreasonable under the circumstances, thereby causing injury or damages. YVWD will not be liable for interruption or shortage or insufficiency of supply, or any loss or damage of any kind, if same is caused by inevitable accident, act of God, fire, strikes, riots, war, or any other cause except that arising from its failure to exercise reasonable diligence.

# Determination of Responsibility and Payment if YVWD is at fault

YVWD will conduct an investigation based on the information you provide on your claim form and internal YVWD records and interviews with YVWD field personnel. The investigation results will determine weather your claim is accepted or rejected. If your claim is accepted, YVWD's payment with regard to property damage will depend on the extent of damage and value of the property. If the property can be repaired, YVWD will pay the cost of repair. If the property cannot be repaired, YVWD will generally pay reasonable market value for the property at the time it was damaged, or the depreciated cost to replace the property, whichever is less. Payment for bodily injury is determined by several factors including, but not limited to, type and severity of injury, medical bills incurred, loss of wages (if any) and permanent disability sustained (if any).

Mobile (909) 234-0033 Office (909) 790-3303 Fax (909) 797-6381 khallberg@yvwd.us

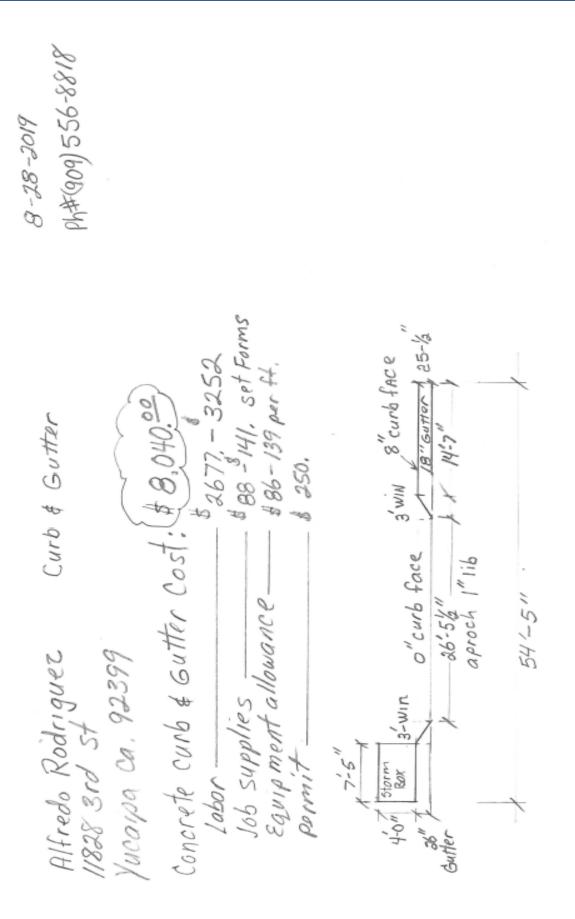


12770 Second St. + P.O. Box 730 + Yucaipa, CA 92399-0730 www.yvwd.us

617		Clerks Date Stamp
Name Alfredo is	odriguez	
Address 11828 31	d st Yucaipa Ca 93	399
Business 909-556-8818 Hon	ne 909)790-0024 Message/Cell 909	818
E-mail: <u>Fredyup@</u> Address at time of loss/Incident:	Yahoo, Com	
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# **Board Reports**



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# **Director Comments**



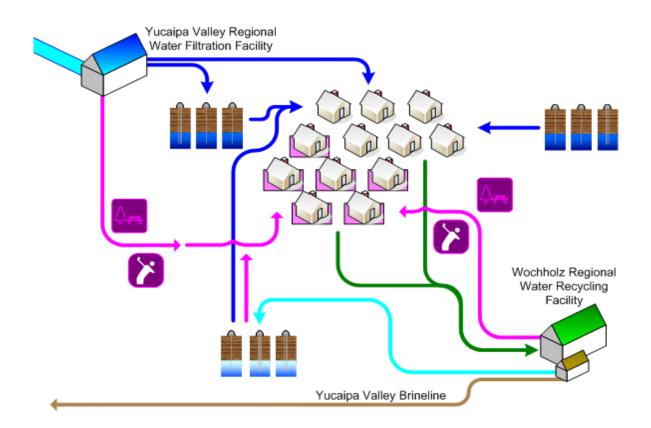
Yucaipa Valley Water District - September 17, 2019 - Page 61 of 69



# 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 Employee	es: 5 elected board members 72 full time employees
FY 2019-20 Operating	<b>g Budget:</b> Water Division - \$14,455,500 Sewer Division - \$12,217,712 Recycled Water Division - \$1,301,447
Number of Services:	13,794 drinking water connections serving 19,243 units 14,104 sewer connections serving 22,774 units 111 recycled water connections serving 460 units
Water System:	<ul> <li>223 miles of drinking water pipelines</li> <li>2,033 fire hydrants</li> <li>27 reservoirs - 34 million gallons of storage capacity</li> <li>18 pressure zones</li> <li>2.958 billion gallon annual drinking water demand</li> <li>Two water filtration facilities: <ul> <li>1 mgd at Oak Glen Surface Water Filtration Facility</li> <li>12 mgd at Yucaipa Valley Regional Water Filtration Facility</li> </ul> </li> </ul>
Sewer System:	<ul> <li>8.0 million gallon treatment capacity - current flow at 4.0 mgd</li> <li>213 miles of sewer mainlines</li> <li>4,504 sewer manholes</li> <li>5 sewer lift stations</li> <li>1.46 billion gallons of recycled water produced per year</li> </ul>
Recycled Water:	22 miles of recycled water pipelines 5 reservoirs - 12 million gallons of storage 0.681 billion gallon annual recycled water demand
Brine Disposal:	<ul><li>2.2 million gallon desalination facility at sewer treatment plant</li><li>1.756 million gallons of Inland Empire Brine Line capacity</li><li>0.595 million gallons of treatment capacity in Orange County</li></ul>

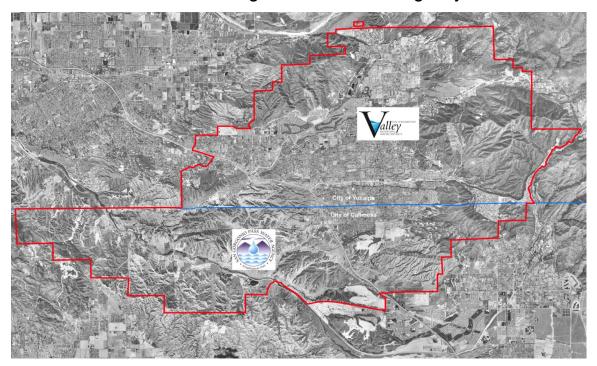
**Sustainability Plan:** A Strategic Plan for a Sustainable Future: The Integration and Preservation of Resources, adopted on August 20, 2008.



# **Typical Rates, Fees and Charges:**

- Drinking Water Commodity Charge: 1,000 gallons to 15,000 gallons 16,000 gallons to 60,000 gallons 61,000 gallons to 100,000 gallons 101,000 gallons or more
- Recycled Water Commodity Charge: 1,000 gallons or more
- \$1.429 per each 1,000 gallons \$1.919 per each 1,000 gallons
- \$2.099 per each 1,000 gallons
- \$2.429 per each 1,000 gallons
- \$1.425 per each 1,000 gallons
- Water Meter Service Charge (Drinking Water or Recycled Water): 5/8" x 3/4" Water Meter 1" Water Meter 1-1/2" Water Meter
   \$14.00 per month \$23.38 per month \$46.62 per month
- Sewer Collection and Treatment Charge: Typical Residential Charge \$42.43 per month

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



	San Bernardino Valley Municipal Water District	San Gorgonio Pass Water Agency
Service Area Size	353 square miles	222 square miles
Table "A" Water Entitlement	102,600 acre feet	17,300 acre feet
Imported Water Rate	\$125.80 / acre foot	\$399 / acre foot
Tax Rates for FY 2019-20	\$0.1425 per \$100	\$0.1775 per \$100
Number of Board Members	Five (5)	Seven (7)
Operating Budget FY 2019-20	\$58,372,000	\$9,551,000

Imported Water Charges (Pass-through State Water Project Charge)

- San Bernardino Valley Municipal Water District Customers in San Bernardino County or City of Yucaipa pay a pass-through amount of \$0.270 per 1,000 gallons.
- San Gorgonio Pass Water Agency Customers in Riverside County or City of Calimesa pay a pass-through amount of \$0.660 per 1,000 gallons. A proposed rate change to \$0.857 per 1,000 gallons is pending future consideration by YVWD.





# **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 wastewater 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 wastewater treatment process. This high-quality product can be recycled as a soil amendment on farmland or further processed as an earth-like product for commercial and home gardens to improve and maintain fertile soil and stimulate plant growth.

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

**Certificate of Participation (COP)** – A type of financing where an investor purchases a share of the lease revenues of a program rather than the bond being secured by those revenues.

**Coliform Bacteria** - A group of bacteria found in the intestines of humans and other animals, but also occasionally found elsewhere used as indicators of sewage pollution. E. coli are the most common bacteria in wastewater.

**Collections System** - In wastewater, it is the system of typically underground pipes that receive and convey sanitary wastewater or storm water.

**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.

**Contaminants of Potential Concern (CPC)** - Pharmaceuticals, hormones, and other organic wastewater contaminants.

**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.

**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.

Levels of Service (LOS) - Goals to support environmental and public expectations for performance.

**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.

**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.

**Santa Ana River Interceptor (SARI) Line** - A regional brine line designed to convey 30 million gallons per day (MGD) of non-reclaimable wastewater from the upper Santa Ana River basin to Orange County Sanitation District for treatment, use and/or disposal.

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

**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 wastewater.

**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.

**South Coast Air Quality Management District (SCAQMD)** - Regional regulatory agency that develops plans and regulations designed to achieve public health standards by reducing emissions from business and industry.

**Special district** - A form of local government created by a local community to meet a specific need. Yucaipa Valley Water District is a County Water District formed pursuant to Section 30000 of the California Water Code

**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.

**Surface Water** - Water found in lakes, streams, rivers, oceans, or reservoirs behind dams. In addition to using groundwater, Yucaipa Valley Water District receives surface water from the Oak Glen area.

**Sustainable Groundwater Management Act (SGMA)** - Pursuant to legislation signed by Governor Jerry Brown in 2014, the Sustainable Groundwater Management Act requires water agencies to manage groundwater extractions to not cause undesirable results from over production.

**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 wastewater as it trickles over them.

**Underground Service Alert (USA)** - A free service (<u>https://www.digalert.org</u>) 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 carry 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.

**Water Pressure** - Water pressure is created by the weight and elevation of water and/or generated by pumps that deliver water to customers.

**Water Service Line** - A water service line is used to deliver water from the Yucaipa Valley Water District's mainline distribution system.

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.

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

**Water-Wise House Call** - a service which provides a custom evaluation of a customer's indoor and outdoor water use and landscape watering requirements.

**Well** - a hole drilled into the ground to tap an underground aquifer.

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





# **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
SGMA	Sustainable Groundwater Management Act
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