Yucaipa Valley Water District

Notice and Agenda of a Board Workshop

Tuesday, October 9, 2018 at 4:00 p.m.

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

I. Call to Order

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

III. Staff Report

IV. Presentations

A. Discussion Regarding the Draft Waste Load Allocation Model Update for the Santa Ana River [Workshop Memorandum No. 18-231 - Page 19 of 172]

V. Operational Updates

A. Overview of a Successful Grant Funding Opportunity and Status Report of the Automated Meter Infrastructure (AMI) Installation Forecast [Workshop Memorandum No. 18-232 - Page 64 of 172]

VI. Development Projects

A. Overview of a Draft Development Agreement for Drinking Water and Sewer Service to Property Located on the West side of 5th Street Between Avenue E and Wildwood Canyon Road, Yucaipa - Tentative Map No. 17031 – Lafferty Communities [Workshop Memorandum No. 18-233 - Page 70 of 172]

B. Overview of a Draft Development Agreement for Drinking Water and Sewer Service to Property Located North of Avenue E, between Douglas Street and Fremont Street, Yucaipa - Tentative Map No. 19901 – Pacific Horizon Homes [Workshop Memorandum No. 18-234 - Page 86 of 172]

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

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

C. Ratification of the Acceptance of Overlying Water Rights in the Beaumont Basin for Tract No. 32702-3 (80 lots) Pursuant to Beaumont Basin Watermaster Resolution No. 2017-02 [Workshop Memorandum No. 18-235 - Page 104 of 172]

VII. Administrative Items

A. Overview of the Proposed Workers' Compensation Insurance Policy Renewal [Workshop Memorandum No. 18-236 - Page 109 of 172]

B. Presentation of the Unaudited Financial Report for the Period Ending on September 30, 2018 [Workshop Memorandum No. 18-237 - Page 111 of 172]

C. Review the Updated Procurement Policy for the Yucaipa Valley Water District [Workshop Memorandum No. 18-238 - Page 136 of 172]

D. Discussion Regarding the Draft 2018 Imported Water Rate Analysis for the San Gorgonio Pass Water Agency [Workshop Memorandum No. 18-239 - Page 145 of 172]

VIII. Director Comments

IX. Announcements

A. October 16, 2018 at 6:00 p.m. - Regular Board Meeting
B. October 30, 2018 at 4:00 p.m. - Board Workshop
C. November 6, 2018 at 6:00 p.m. - Regular Board Meeting
D. November 13, 2018 at 4:00 p.m. - Board Workshop
E. November 20, 2018 at 6:00 p.m. - Regular Board Meeting
F. November 27, 2018 at 4:00 p.m. - Board Workshop
G. December 4, 2018 at 6:00 p.m. - Regular Board Meeting
H. December 11, 2018 at 4:00 p.m. - Board Workshop
I. December 18, 2018 at 6:00 p.m. - Regular Board Meeting
J. ~~December 25, 2018 at 4:00 p.m. - Board Workshop~~ Canceled
K. ~~January 1, 2019 at 6:00 p.m. - Regular Board Meeting~~ Canceled
L. January 8, 2019 at 4:00 p.m. - Board Workshop
M. January 15, 2019 at 6:00 p.m. - Regular Board Meeting
N. January 29, 2019 at 4:00 p.m. - Board Workshop

X. Closed Session

A. Conference with Real Property Negotiator(s) - Government Code 54956.8
Property: Assessor's Parcel Numbers: 413-380-001 - 009, and 013
Agency Negotiator: Joseph Zoba, General Manager
Negotiating Parties: Johnson Brothers Partnership
Under Negotiation: Terms of Payment and Price

B. Conference with Real Property Negotiator(s) - Government Code 54956.8
Property: Assessor's Parcel Number(s): 294-121-24, 25 / 473-020-006, 008, 029, 043
Agency Negotiator: Joseph Zoba, General Manager
Negotiating Parties: Joanna Averett
Under Negotiation: Terms of Payment and Price

C. Conference with Legal Counsel--Existing Litigation - Government Code 54956.9(d)
YVWD vs Hillcrest Mobile Home Park
San Bernardino Superior Court Case No. CIVDS 1808441

XI. Adjournment

Staff Report

Yucaipa Valley Water District

City of Calimesa

October 2, 2018

Chairman Iverson and Members -- Yucaipa-GSA
Western Heights Water Company
32352 Avenue D
Yucaipa, Ca. 92399

Re: NOTICE OF WITHDRAWAL OF THE CITY OF CALIMESA FROM YUCAIPA-GSA

Dear CHAIRMAN IVERSON AND MEMBERS OF THE YUCAIPA-GSA.

In accord with the requirements of the Sustainable Groundwater Management Act ("SGMA") as set forth in California Government Code §§ 65350.5 et seq. and California Water Code §§ 1070 et seq., on June 5, 2017, the City Council of the City of Calimesa approved a Memorandum of Agreement (MOA) to form a Groundwater Sustainability Agency (GSA) for the Yucaipa Sub-Basin (Sub-Basin No. 8-02.07)("Yucaipa-GSA"). Members of the GSA include the City of Calimesa ("CALIMESA"), the City of Redlands ("REDLANDS") and the City of Yucaipa ("YUCAIPA"), collectively referred to as the "MUNICIPALITIES" and; South Mesa Water Company ("SOUTH MESA"), South Mountain Water Company ("SOUTH MOUNTAIN"),Western Heights Water Company ("WESTERN HEIGHTS") and Yucaipa Valley Water District ("YVWD"), collectively referred to as the "WATER PURVEYORS"; and, the San Bernardino Valley Municipal Water District ("SAN BERNARDINO VALLEY MUNICIPAL") and the San Gorgonio Pass Water Agency ("SAN GORGONIO"), collectively referred to as the "REGIONALS".

Section IX. B. of the MOA provides that any Party may decide, in its sole discretion, to withdraw from the MOA by providing ninety (90) days written notice to the other Parties.

This NOTICE constitutes CALIMESA's written statement of its intention to withdrawal from the MOA effective 90 days from the date of this NOTICE.

CALIMESA has struggled from the beginning with being a member of the GSA. It was represented to CALIMESA early on, that if CALIMESA was not a full voting member of the GSA, control of the Yucaipa Sub-Basin would revert to the State. Because CALIMESA understands

and recognizes the importance of local control over water resources, CALIMESA agreed to join the GSA. However, CALIMESA, throughout the formation process and since, has consistently expressed its concern regarding the various costs that will be incurred by Yucaipa-GSA. CALIMESA is by far the smallest MUNICIPALITY in the GSA and simply does not have the same financial resources as others in the GSA do. In addition, CALIMESA is frustrated with the apparent lack of due diligence exercised on behalf of the majority of the members when selecting the consultant to Develop the Groundwater Sustainability Plan (GSP).

On August 29, 2018, the GSA recommended contracting with Dudek in the amount of $814,500 for the Development of a GSP. It should be noted that Dudek's original proposal was $1,180,480 but was reduced by $365,980 through subsequent conversations with Dudek. However, the lowest qualified cost proposal was submitted by Todd Groundwater with a projected cost of $477,514. SOUTH MESA and CALIMESA both requested that Todd Groundwater be contacted again to ascertain why there was such a discrepancy in costs between the two proposals. The GSA Board voted down the request to contact Todd Groundwater. There would have been no cost in following up with the lowest qualified cost consultant. It may have permitted full compliance with the SGMA and saved all members a substantial amount of money in the end.

In light of these concerns and the limited financial resources available to CALIMESA for purposes of groundwater management, CALIMESA submits this written statement of withdrawal from the GSA. Under the provisions of the MOA, withdrawal by CALIMESA will "not cause or require the termination of [the] MOA or the existence of the YUCAIPA-GSA with respect to the non-withdrawing Parties." CALIMESA understands the requirement set forth in Section IX. B of the MOA to meet and confer with YUCAIPA-GSA as to various alternatives and options available to CALIMESA to fully comply with the requirements of SGMA during the 90-day notice period. CALIMESA is amenable to meet and confer as required and complete all statutory requirements to assure compliance.

Respectfully,

Bonnie Johnson
City Manager
City of Calimesa

Copies to:

South Mountain Water Company
35 Cajon Street
Redlands Ca. 92373
Attn: Cecilia Griego, Water Resources Specialist

South Mesa Water Company
391 West Avenue L
Calimesa, Ca. 92320
Attn: Dave Armstrong, General Manager

Yucaipa Valley Water District
12770 Second Street
Yucaipa, Ca. 92399
Attn: Joseph Zoba, General Manager

City of Redlands
35 Cajon Street
Redlands, Ca. 92373
Attn: Municipal Utilities and Engineering Director

City of Yucaipa
34272 Yucaipa Blvd.
Yucaipa, Ca. 92399
Attn: Ray Casey, City Manager

San Bernardino Valley Municipal Water District
280 E. Vanderbilt Way
San Bernardino, Ca. 92408
Attn: Douglas Headrick, General Manager

San Gorgonio Pass Water Agency
1210 Beaumont Avenue
Beaumont, Ca. 92223
Attn: Jeff Davis, General Manager and Chief Engineer

County of Riverside
4080 Lemon Street
Riverside, Ca. 92501
Attn: Steve Horn, Senior Mgmt. Analyst, Executive Office

County of San Bernardino
385 N. Arrowhead Avenue
San Bernardino Ca. 92415-0120
Attn: Bob Page, Principal Mgmt. Analyst, Special Projects

2018 Water and Energy Efficiency Grants
WaterSMART

California

City of Bakersfield, Supervisory Control and Data Acquisition and Automation Project
Reclamation Funding: $743,300 **Total Project Cost: $1,664,992**

The City of Bakersfield will install monitoring devices with telemetry at 20 locations along the Kern River and a Supervisory Control and Data Acquisition system to accurately and remotely measure Kern River water diversions. The project is expected to result in an annual water savings of 4,592 acre-feet through improved measurements and reduction in over-deliveries and spills. The water conserved as a result of this project will be used to replenish the local groundwater, make more water available to users, and may help to reduce water-related conflict in the area.

Contra Costa Water District, Lawn to Garden Rebate Program
Reclamation Funding: $300,000 **Total Project Cost: $802,000**

The Contra Costa Water District, located near San Francisco, California, will implement a rebate program for residential customers to replace water intensive lawns with water-wise landscaping. The project is expected to replace approximately 800,000 square feet of water intensive turf, resulting in an annual water savings of 81 acre-feet. Water conserved through this project will reduce the amount of water drawn out of the Sacramento-San Joaquin Delta.

La Habra Utility Authority, Advanced Metering Infrastructure Project
Reclamation Funding: $300,000 **Total Project Cost: $1,607,306**

The La Habra Utility Authority in Orange County, California, will install 5,001 automated water meters with digital registers to allow for real-time access to current water consumption data and historical water usage data. The project will allow for more timely leak detection and improved water use efficiency through customer outreach and data access. The project is expected to result in water savings of 462 acre-feet annually and will reduce the Utility's dependence on imported water supplies.

Los Angeles County Waterworks District No. 40, Advanced Metering Infrastructure Project
Reclamation Funding: $1,000,000 **Total Project Cost: $14,140,665**

The Los Angeles County Waterworks District No. 40 will upgrade 18,000 residential and commercial meters to advanced metering infrastructure. Additionally, the District will install data collection devices and software to analyze meter data in real-time. This project will enable the District and customers to monitor water usage and better identify inefficiencies. Once completed, the project is expected to result in annual water savings of 2,133 acre-feet, which will reduce the District's reliance on groundwater withdrawals and imported water.

Los Angeles County Waterworks District No. 29, Advanced Metering Infrastructure Project
Reclamation Funding: $1,000,000 Total Project Cost: $6,022,825

The Los Angeles County Waterworks District No. 29, will convert 7,641 analog meters to smart meters with advanced metering infrastructure. The District will also install data collection devices and software to analyze meter data in real-time. The new meters and software will enable customers to monitor water usage and better identify inefficiencies. The project is expected to result in annual water savings of 1,102 acre-feet per year, which will reduce the District's reliance on groundwater withdrawals and on imported water.

Merced Irrigation District, Bear Creek Water Regulating Reservoir
Reclamation Funding: $1,000,000 Total Project Cost: $4,194,849

The Merced Irrigation District, located south of Sacramento, California, will construct an off-stream regulating reservoir in order to better control its obligated water deliveries from Bear Creek. The project is expected to save 5,300 acre-feet of water annually by reducing over-deliveries and spills, which will allow more water to remain in storage and improve water supply reliability.

Moulton Niguel Water District, Advanced Meter Infrastructure Implementation Program (Phase II)
Reclamation Funding: $300,000 Total Project Cost: $648,484

The Moulton Niguel Water District, located near Los Angeles, California, will install radio transmitters at 4,851 existing commercial, multi-family, and fire protection meters, in order to convert them to automated meters. The automated meters will allow the District to preemptively identify and address service leaks, improve operations through demand-side time-of-use management, and support a customer portal for monitoring water usage and promoting behavioral changes to optimize consumption. The project is expected to conserve 505 acre-feet of water annually, which will offset the District's reliance on imported water.

Municipal Water District of Orange County, Water Efficient Landscape Transformation Program
Reclamation Funding: $299,342 Total Project Cost: $2,539,771

The Municipal Water District of Orange County will offer rebates to residential and commercial customers to convert from water-intensive outdoor landscaping to California native/friendly landscapes and install high-efficiency irrigation equipment. The program will provide incentives to replace approximately 370,000 square feet of turf, upgrade 1850 flow controllers, and replace 37,500 landscape irrigation nozzles. The project is expected to result in annual water savings of 1,057 acre-feet, which will reduce the District's reliance on imported water.

North San Joaquin Water Conservation District, South Pump Station Automation Project
Reclamation Funding: $300,000 Total Project Cost: $746,700

The North San Joaquin Water Conservation District, located near Sacramento, California, will install meters, automated flow control equipment, and a programmable logic controller at the District's South Pump Station. The project is expected to conserve 1,000 acre-feet annually that is currently lost due to spills and unnecessary bypasses back to the river. The project will reduce demands on groundwater pumping and conserved water will be made available to existing users.

City of San Diego, Advanced Metering Infrastructure Project
Reclamation Funding: $1,000,000 Total Project Cost: $67,568,898

The City of San Diego will implement an Advanced Metering Infrastructure (AMI) system, including the replacement of existing manual read meters with 270,000 new AMI meters on residential, commercial, and industrial customer connections. The project will provide water consumption data on a near-real time basis to City staff and customers. The project is expected to save 25,232 acre-feet of water annually, which will be made available to current users and help to reduce the City's demand for imported water.

San Gabriel Valley Municipal Water District, Regional Smart Meter AMR/AMI Project
Reclamation Funding: $300,000 Total Project Cost: $1,363,004

The San Gabriel Valley Municipal Water District, located near Los Angeles, California, will install Advanced Metering Infrastructure and Automatic Meter Reading technology at 2,975 residential, commercial, and landscape sites. The project will provide accurate, real-time meter reading capabilities and enhanced customer awareness, which will enable improved leak detection and identification of unusual water usage so that issues can be remedied faster. The project is expected to result in water savings of 166 acre-feet per year and will contribute to conservation of the region's limited water supplies and help improve local supply reliability.

Yucaipa Valley Water District, Advanced Metering Infrastructure Project
Reclamation Funding: $1,000,000 Total Project Cost: $3,697,764

The Yucaipa Valley Water District, in San Bernardino County, California, will install advanced metering infrastructure on 12,848 residential connections. The project will provide real-time data to enable customers to monitor water usage and better identify inefficiencies. The project is expected to result in an annual water savings of 1,335 acre-feet, which will be used to reduce the District's use of imported water. After completion of this project, 100% of the District's drinking water and recycled water connections will be equipped with advanced metering infrastructure.

Idaho

Henry's Fork Ground Water District, Irrigation Flow Measurement Project
Reclamation Funding: $300,000 Total Project Cost: $664,000

The Henry's Fork Ground Water District, located in eastern Idaho, along with the Madison Ground Water District, will install advanced water flow measurement devices on 86 groundwater wells. The project will allow for accurate measurements of groundwater withdrawals to better manage and stabilize aquifer depletion in the area. The project is expected to result in annual water savings of 4,348 acre-feet, which will reduce groundwater withdrawals and surface water usage and increase drought resiliency in the area.

Shoshone-Bannock Tribes, Michaud Unit Irrigation Water Efficiency Improvements
Reclamation Funding: $888,818 Total Project Cost: $1,786,818

The Shoshone-Bannock Tribes, near Pocatello, Idaho, will remove a 1,500-horsepower pump assembly on the Portneuf River and install a new Variable Frequency Drive pump. The project will also line 1 mile of earthen canal to reduce water losses due to seepage. This project is expected to result in water savings of 5,628 acre-feet per year which will increase tribal water storage and improve drought resiliency.

Kansas

Kansas Bostwick Irrigation District, Open Lateral Conversion to Buried Pipeline System
Reclamation Funding: $300,000 **Total Project Cost: $650,151**

The Kansas Bostwick Irrigation District, in northern Kansas, will convert 4.1 miles of open lateral canal into a buried pipeline system. The project is expected to conserve 724 acre-feet of water annually, which is currently lost to evaporation, seepage and operational spills. The water conserved will allow for reduced diversions from the Republican River.

Southwest Kansas Groundwater Management District No. 3, Installation of a SCADA System and Ditch Lining on the Farmers Ditch
Reclamation Funding: $300,000 **Total Project Cost: $1,612,148**

The Southwest Kansas Groundwater Management District No. 3, located in western Kansas, will install a new head gate with a Supervisory Control and Data Acquisition system and line 3 miles of earthen canal with water impervious clay. The project is expected to save 498 acre-feet of water per year, currently lost to seepage and over deliveries. The water conserved as a result of this project will offset the need to pump water from the Ogallala Aquifer.

Montana

Malta Irrigation District, Exeter Siphon Project
Reclamation Funding: $300,000 **Total Project Cost: $845,020**

The Malta Irrigation District, located on the Milk River in northern Montana, will replace the existing Exeter Siphon with a new, geosynthetic lined canal embankment across Exeter Creek. The project also includes the installation of a series of culverts to pass creek flows and storm runoff to protect the canal embankment, which will also help to restore the creek bed for wildlife habitat and recreation. A large debris collection system will also be installed as part of the project to reduce spills by preventing plugging of the culverts. The project is expected to result in annual water savings of 2,500 acre-feet, currently lost due to leakage and spills, and is expected to improve the quantity and quality of water in the Milk River.

Pondera County Canal and Reservoir Company, E Canal Regulating Reservoir Project
Reclamation Funding: $170,000 **Total Project Cost: $350,281**

The Pondera County Canal and Reservoir Company in northern Montana will construct an embankment dam across an existing canal to create a regulating reservoir. The project will provide short-term water storage and allow for more consistent downstream water delivery. The project is expected to conserve 1,191 acre-feet of water annually, currently lost to seepage in the E Canal. Conserved water will be used to meet existing demands.

Nebraska

Upper Republican Natural Resources District, Remote Water Metering and Conservation Project
Reclamation Funding: $300,000 **Total Project Cost: $768,844**

The Upper Republican Natural Resources District, located in northwestern Nebraska, will upgrade 1,018 flow meters with digital registers and radio modules to transmit water usage information and crop evapotranspiration rates via a radio network. This information will allow farmers in the area to better match irrigation volumes with actual crop needs. The project is expected to reduce irrigation water use in the area

by 6.2%, which is equivalent to 8,271 acre-feet per year. The conserved water will reduce groundwater withdrawals and surface water use in the area. A portion of the groundwater that will not be used for irrigation as a result of this project will be used to maintain in-stream flows.

Nevada

Mason Valley Conservation District, Campbell Canal Water Conservation Project
Reclamation Funding: $82,272 **Total Project Cost: $164,772**

The Mason Valley Conservation District, located near Reno, Nevada, will upgrade the gate structure at the junction of the East and West Campbell Canals, install data loggers for continuous flow monitoring and tracking, and install diversion gates controlled by a Supervisory Control and Data Acquisition and Automation system. The project is expected to result in water savings of 1,203 acre-feet annually that is currently lost to delivery inefficiencies. Water saved through the project will be available for downstream users and instream flows to benefit Walker Lake.

Southern Nevada Water Authority, Water Smart Landscapes Rebate Program
Reclamation Funding: $300,000 **Total Project Cost: $3,300,000**

The Southern Nevada Water Authority in Las Vegas, Nevada, will expand its landscape rebate program, which provides a financial incentive for residential property owners to replace turf with water efficient landscaping. The project is expected to result in the replacement of approximately 1,833,333 square feet of turf, with an expected annual water savings of 225 acre-feet.

New Mexico

Elephant Butte Irrigation District, Picacho WHEN Project
Reclamation Funding: $998,182 **Total Project Cost: $2,028,394**

The Elephant Butte Irrigation District, located in Las Cruces, New Mexico, will convert two open channel laterals to 8,797 feet of pipe, install three new high-flow lift pumps, and install meters at the new piped laterals. The project is expected to conserve 2,362 acre-feet of water per year currently lost to seepage and evaporation. Conserved water will be used to improve water delivery reliability for irrigators in the area and will also reduce groundwater withdrawals.

Oregon

West Extension Irrigation District, Boardman East Piping and Pressurization Water Conservation Project
Reclamation Funding: $530,000 **Total Project Cost: $1,178,665**

The West Extension Irrigation District, on the Columbia River near Umatilla, Oregon, will convert 4.5 miles of open lateral to buried pipe, eliminate 1.5 miles of open lateral, and install three pump stations for metered, pressurized irrigation water delivery. The project is expected to result in annual water savings of 771 acre-feet, which is currently lost to seepage, evaporation, and operational losses. Conserved water will increase drought resiliency in the water system.

Texas

Cameron County Irrigation District No. 2, Conversion of Canal "F" from Open Canal to a Pipeline
Reclamation Funding: $299,785 **Total Project Cost: $666,188**

The Cameron County Irrigation District No. 2, will convert approximately 5,600 feet of unlined open canal in a segment of Canal "F" to buried 42-inch polyvinyl chloride pipeline. The project is expected to result in annual water savings of 815 acre-feet that is currently lost to seepage and evaporation.

Cameron County Irrigation District No. 2, Conversion of Lateral "C" from Open Canal to a Pipeline
Reclamation Funding: $299,543 **Total Project Cost: $665,650**

The Cameron County Irrigation District No. 2 will also convert approximately 5,700 feet of unlined open canal in a segment of Lateral "C" to buried 42-inch polyvinyl chloride pipeline. The project is expected to result in annual water savings of 575 acre-feet that is currently lost to seepage and evaporation.

Cameron County Irrigation District No. 2, Slip Gate Upgrades on Canals "J", "8", "C", "15", and "LI-1"
Reclamation Funding: $164,767 **Total Project Cost: $366,148**

The Cameron County Irrigation District No. 2, near Brownsville, Texas, will install automated slip-gates at five existing locations. The current wooden gates are manually operated and are experiencing failures which cause significant water loss. The project is expected to result in annual water savings of 2,050 acre-feet, which will reduce the amount of water pumped from the Rio Grande and improve drought resiliency in the area.

Delta Lake Irrigation District, A-20 Canal Conservation and Reliability Improvements
Reclamation Funding: $1,000,000 **Total Project Cost: $3,915,450**

The Delta Lake Irrigation District, near Brownsville, Texas, will convert the A-20 canal, a concrete-lined open channel canal, to 4.5 miles of pipeline. The District will also install a Supervisory Control and Data Acquisition system and replace system pumps with new variable frequency drive motors. The project is expected to result in annual water savings of 1,644 acre-feet, which is currently lost to seepage. The water conserved from this project will improve the water supply reliability for customers and improve habitat.

El Paso County Water Improvement District No. 1, Riverside Canal Lining Project
Reclamation Funding: $1,000,000 **Total Project Cost: $2,000,000**

The El Paso County Water Improvement District No. 1 will install 1.4 miles of fiber reinforced cement canal lining on an earthen-lined portion of the Riverside Canal to reduce seepage losses. The project is expected to save 2,639 acre-feet of water per year, which will be used to meet existing and future demands.

Hidalgo County Irrigation District No. 2, Lining of Lateral E Canal
Reclamation Funding: $1,000,000 **Total Project Cost: $7,040,831**

The Hidalgo County Irrigation District No. 2, near Brownsville, Texas, will line the existing Lateral E Canal with a synthetic geo-composite membrane covered with concrete. The project is expected to conserve approximately 1,110 acre-feet of water per year, currently lost to seepage and leaks. Conserved water will be made available to existing users.

Sharyland Water Supply Corporation, Treatment Plant Efficiency Improvements Project
Reclamation Funding: $300,000 **Total Project Cost: $2,891,392**

The Sharyland Water Supply Corporation near Brownsville, Texas, will install a Supervisory Control and Data Acquisition system, a new sludge dewatering system, and variable frequency drive motors on pumps at its Water Treatment Plant #1. These improvements will increase the water production efficiency of the plant, improve process flow control, and reduce spills and leaks at the plant. The project is expected to result in a water savings of 269 acre-feet per year, which will remain in the Rio Grande.

Utah

Ashley Central Irrigation Company, Canal Enclosure Phase I Project
Reclamation Funding: $300,000 **Total Project Cost: $674,390**

The Ashley Central Irrigation Company, located in eastern Utah, will replace 0.6 miles of open canal with approximately 3,000 feet of 36-inch and 34-inch high density polyethylene pipe and install a screen and overflow structure, user turnouts, and meters. The pipe will be buried within the existing canal easement which will be left open to become a future storm water facility for nearby communities. Once completed, this project is expected to save 980 acre-feet of water per year, which will be used to increase storage volumes in Steinaker Reservoir.

Ashley Central Irrigation Company, Canal Enclosure Phase II Project
Reclamation Funding: $300,000 **Total Project Cost: $703,860**

The Ashley Central Irrigation Company will also convert a portion of open canal to 4,000 feet of pressurized 32-inch and 34-inch high density polyethylene pipe and install user turnouts and meters. The project is expected to result in annual water savings of 1,302 acre-feet that is currently lost to seepage.

Ashley Central Irrigation Company, Canal Enclosure Phase III Project
Reclamation Funding: $300,000 **Total Project Cost: $723,340**

Lastly, the Ashley Central Irrigation Company will convert another 1-mile section of open canal to high density polyethylene pipe and install user turnouts and meters. The project is expected to result in annual water savings of 1,625 acre-feet that is currently lost to seepage.

Burns Bench Irrigation Company, Diversion and Piping Project
Reclamation Funding: $300,000 **Total Project Cost: $600,000**

The Burns Bench Irrigation Company, located in eastern Utah, will replace an existing irrigation pond with over 300 feet of pipe, which will deliver water to an existing inlet structure. The project also includes installation of a Supervisory Control and Data Acquisition system and a new diversion structure. The project is expected to result in a water savings of 3,208 acre-feet per year as a result of eliminating the use of the irrigation pond and conserving water that is currently lost to seepage and evaporation. The project will make the system more efficient, provide additional instream flows, and increase irrigation supply reliability.

City of Salem, Salem City Pressurized Irrigation Metering Project
Reclamation Funding: $300,000 **Total Project Cost: $2,432,600**

The City of Salem will install flow measurement devices with automated metering infrastructure for residential and commercial landscape irrigation connections. By installing automated water meters, the City will be able to monitor real-time flows in the system and more accurately bill each connection for the actual amount of water used. The project is expected to result in water savings of 460 acre-feet per year by reducing overwatering. Water saved through the project will eliminate the need for supplemental water from the Strawberry Valley Project.

Davis and Weber Counties Canal Company, Small Piping and Hydro Project
Reclamation Funding: $300,000 **Total Project Cost: $750,000**

The Davis and Weber Counties Canal Company, located near Salt Lake City, Utah, will convert 1,200 feet of existing, unlined earthen canal to pipe and replace 320 feet of leaking steel pipe with reinforced concrete pipe. The project is expected to conserve 523 acre-feet of water per year currently lost to seepage, evaporation, and evapotranspiration. Conserved water will be made available to existing users. The project also includes installation of a two-kilowatt hydropower unit, expected to generate approximately 8.2 megawatt-hours of power annually, which will be used to help meet the energy demands of the Company.

Davis and Weber Counties Canal Company, Secondary Water Metering and Small Hydro Project
Reclamation Funding: $300,000 **Total Project Cost: $750,000**

The Davis and Weber Counties Canal Company will also install 600 new water meters and a four-kilowatt hydropower unit within the Company's system. The project is expected to conserve 155 acre-feet of water annually, which is currently lost due to excessive consumption from non-metered consumers. Conserved water will be made available to existing users. The hydropower unit is expected to generate 3.6 megawatt-hours of power annually, which will serve Company loads.

Draper Irrigation Company (Water Pro), Pressure Irrigation Metering Project
Reclamation Funding: $1,000,000 **Total Project Cost: $4,134,924**

The Draper Irrigation Company, near Salt Lake City, Utah, will install 2,063 water meters on currently unmetered irrigation connections. The project will increase water conservation and water use efficiency by providing water consumption data to the Company and its customers and will also enable the Company to implement a tiered billing structure. The project is expected to result in water savings of 1,092 acre-feet per year, which will be supplied to existing users.

Duchesne County Water Conservancy District, Water Efficiency Project: Phase 2
Reclamation Funding: $238,000 **Total Project Cost: $595,000**

The Duchesne County Water Conservancy District, located in eastern Utah, will install telemetry, sensors, metering equipment, flumes, and weirs on diversions, canals, and laterals throughout the Duchesne County service area. By addressing over-delivery, seepage, and evaporation losses, the project is expected to save 3,907 acre-feet of water per year, which will be made available to existing users.

Little Cottonwood Brown Ditch Company, Brown Ditch Rehabilitation Project
Reclamation Funding: $1,000,000 **Total Project Cost: $2,526,300**

The Little Cottonwood Brown Ditch Company, near Salt Lake City, Utah, will improve the Little Cottonwood Brown Ditch System by replacing the existing diversion dam with two radial gates. The project will also replace 4.1 miles of open ditch and pipe with 2.7 miles of high density polyethylene pipe. The project is expected to save 2,020 acre-feet of water per year currently lost to spills. The conserved water will decrease the demand on the local groundwater resources and will be made available to meet existing demands.

Mapleton Irrigation District and Company, Hobble Creek Ditch Piping Project
Reclamation Funding: $300,000 **Total Project Cost: $1,220,000**
The Mapleton Irrigation District and Company, located near Provo, Utah, will replace 3 miles of existing open canals and a box culvert in Hobble Creek Canyon with a pressurized pipeline that will eliminate water losses due to seepage, evaporation, and ditch failure. The project is expected to result in annual water savings of 1,685 acre-feet which will be made available to existing users.

Peoa South Bench Canal and Irrigation Company, South Bench Piping and Small Hydro Project
Reclamation Funding: $1,000,000 **Total Project Cost: $2,145,730**

The Peoa South Bench Canal and Irrigation Company, near Salt Lake City, Utah, will replace the entire South Bench canal system with 19,760 feet of enclosed, pressurized pipe that is more efficient and has a less impactful alignment. The project also includes installation of a concrete screening structure, system meter, and 100-watt micro-hydropower unit. The project is expected to conserve 2,629 acre-feet of water annually that is currently lost to seepage, which will be made available to existing users. The hydropower unit is expected to generate approximately 588 kilowatt-hours of power each year, which will serve local canal operation power needs.

Provo River Water Users Association, Weber-Provo Diversion Metering Project
Reclamation Funding: $154,156 **Total Project Cost: $308,312**

The Provo River Water Users Association will add a piped bypass from the Weber-Provo diversion dam to the Weber River to allow for year-round control of flows in the river. Currently, during the winter, the diversion gate is frozen in place causing water to spill. The project also includes the installation of two magnetic meters housed in concrete vaults to provide accurate, real-time measurement of flows in the Upper Weber River. The project is expected to save 2,571 acre-feet of water per year by reducing spills and reducing over-deliveries, which will be made available to existing users and will help ensure that water rights, contracts, and instream flow needs are met.

Weber Basin Water Conservancy District, Woods Cross Small Secondary Water Metering and Hydro Project
Reclamation Funding: $300,000 **Total Project Cost: $750,000**

The Weber Basin Water Conservancy District, near Salt Lake City, Utah, will install 750 meters on residential landscape watering connections, providing real-time water usage data and outreach to customers. The project is expected to result in water savings of 300 acre-feet per year, which will reduce groundwater pumping and help meet future demands. The project also includes installation of a two-kilowatt hydropower unit, expected to generate approximately 8.7 megawatt-hours of power, annually which will be used to help meet the energy demands of the District.

West Cache Canal Company, Newton Lateral Piping Project
Reclamation Funding: $1,000,000 **Total Project Cost: $2,480,000**

The West Cache Canal Company, located in northern Utah, will replace 5.3 miles of earthen canal with a pressurized pipe and replace 23 small, inefficient pump stations with one centralized pump station. The project is expected to save 2,352 acre-feet of water per year currently lost to seepage. This project is expected to improve irrigation water quality and supply reliability which will allow for future conversion from flood irrigation to pivot irrigation in the service area.

Washington

Kennewick Irrigation District, Canal Lining Project
Reclamation Funding: $1,000,000 **Total Project Cost: $3,424,874**

The Kennewick Irrigation District, located near Yakima, Washington, will install 5.6 miles of high-density polyethylene geomembrane canal liner on their earthen main canals and diversions. The project is expected to result in annual water savings of 1,237 acre-feet currently lost to seepage. The conserved water will remain in the river system.

Kittitas Reclamation District, Water Conservation and Stream Supplementation
Reclamation Funding: $300,000 **Total Project Cost: $600,000**

The Kittitas Reclamation District, located near Yakima, Washington, will line approximately 1,600 feet of the South Branch Canal with an impermeable geotextile membrane and concrete. The project is expected to conserve 183 acre-feet of water per year, which is currently lost to seepage. The conserved water will provide benefits for fish and wildlife by helping to restore instream flows in over-appropriated or flow-impaired tributaries to the upper Yakima River.

Quincy-Columbia Basin Irrigation District, W53.1D & E Canal Lining
Reclamation Funding: $300,000 **Total Project Cost: $910,000**

The Quincy-Columbia Basin Irrigation District will line 8,422 feet of the currently unlined West Canal. The project is expected to save 855 acre-feet of water per year currently lost to seepage. The water saved will help meet the needs of rural and agricultural water users.

Wyoming

Eden Valley Irrigation and Drainage District, Eden Canal Lining Project
Reclamation Funding: $300,000 **Total Project Cost: $630,000**

The Eden Valley Irrigation and Drainage District, located in central Wyoming, will replace 1,100 linear feet of open canal with a polyvinyl chloride lining and shotcrete. The project is expected to result in annual water savings of 1,554 acre-feet that is currently lost to seepage. The conserved water will remain in the system to meet existing demands.

Hanover Irrigation District, Cottonwood Check and Spill Project
Reclamation Funding: $275,000 **Total Project Cost: $553,000**

The Hanover Irrigation District in northern Wyoming will improve the existing Cottonwood check and spill structure, which delivers water from the Boyson Reservoir, with a new upgraded check and spill structure. The project also includes measurement devices and controls to better manage flows. The project is

expected to result in annual water savings of 1,165 acre-feet that is currently lost to spills and seepage. Conserved water will be used to meet existing demands.

Heart Mountain Irrigation District, Rattlesnake Canal Liner Phase I Project
Reclamation Funding: $300,000 Total Project Cost: $900,005

The Heart Mountain Irrigation District, located in northern Wyoming, will improve an existing section of Rattlesnake Canal with 637 feet of new concrete lining. The project is expected to conserve 211 acre-feet of water that is currently being lost to seepage and spills. Water saved will be made available to existing users. The project also includes the installation of a two-kilowatt hydropower unit. The hydropower unit is expected to generate approximately 8.8 megawatt-hours of power each year, which will be used to power the Rattlesnake Canal screen and the Supervisory Control and Data Acquisition system.

Heart Mountain Irrigation District, Rattlesnake Canal Liner Phase II Project
Reclamation Funding: $300,000 Total Project Cost: $900,005

The Heart Mountain Irrigation District will also improve another section of Rattlesnake Canal with 637 feet of new concrete lining. The project is expected to conserve 211 acre-feet of water that is currently being lost to seepage and spills. The project also includes the installation of a two-kilowatt hydropower unit.

Heart Mountain Irrigation District, Rattlesnake Canal Liner Phase III Project
Reclamation Funding: $300,000 Total Project Cost: $900,005

Lastly, the Heart Mountain Irrigation District will improve an additional section of Rattlesnake Canal with 637 feet of new concrete lining. The project is expected to conserve 211 acre-feet of water that is currently being lost to seepage and spills. The project also includes the installation of a two-kilowatt hydropower unit.

Midvale Irrigation District, Pilot Butte 27.0 B and Wyoming 31.7 Laterals Piping Project
Reclamation Funding: $300,000 Total Project Cost: $1,381,232

The Midvale Irrigation District, located in central Wyoming, will convert 2.5 miles of open ditch and concrete lined laterals to buried polyvinyl chloride pipe. The project is expected to conserve 8,400 acre-feet of water annually by reducing seepage losses. Conserved water will be made available to downstream users.

Presentations

Yucaipa Valley Water District

Yucaipa Valley Water District

Workshop Memorandum 18-231

Date: October 9, 2018

From: Joseph Zoba, General Manager

Subject: Discussion Regarding the Draft Waste Load Allocation Model Update for the Santa Ana River

The Regional Water Quality Control Board ("Regional Board") establishes water quality objectives to protect the designated beneficial uses of surface and ground waters in the Santa Ana River watershed. These objectives are set forth in the Regional Water Quality Control Plan ("Basin Plan"). The Regional Board imposes effluent limitations or waste discharge requirements to ensure compliance with the water quality objectives.

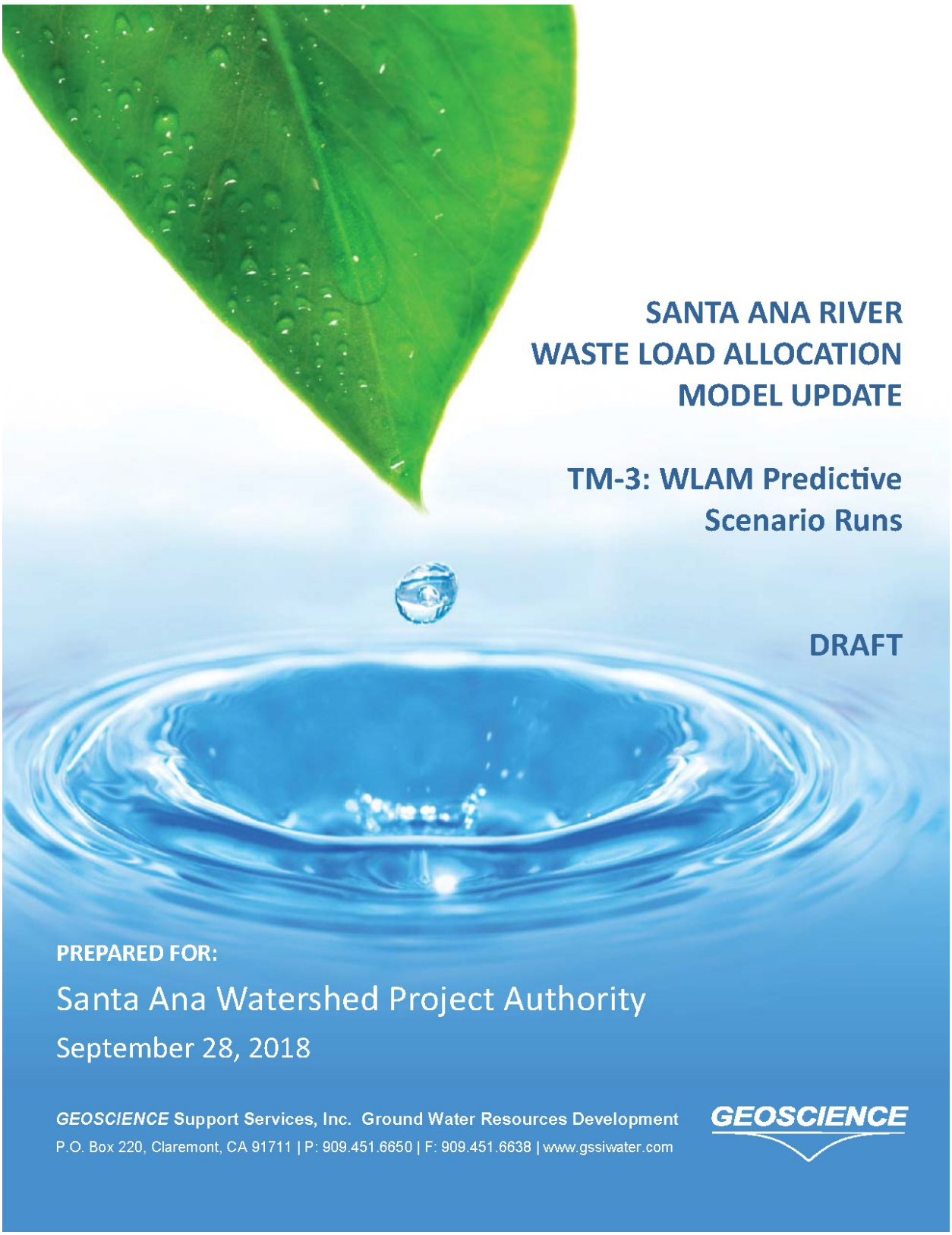
When issuing discharge permits, the Regional Board must take into consideration a wide range of factors in order to determine the most appropriate effluent limitation. This includes, but is not limited to:

- The water quality objectives;
- The current average water quality in the receiving water;
- The availability (or lack thereof) of assimilative capacity in the receiving water;
- The net effect of the regulated discharge on the receiving water (alone and in combination with all other discharges to the same receiving water); and
- The volume and quality of other natural and man-made flows reaching the receiving water.

Theoretically, the Regional Board could simplify the permitting process by establishing effluent limitations that prohibited pollutant concentrations from exceeding the applicable water quality objective or the current average concentration in the receiving water (whichever was more restrictive). However, such an approach, while administratively easier, would not be consistent with water resource management since it would tend to discourage greater use of recycled water in the region.

Working closely with stakeholders throughout the watershed, the Regional Board developed a more sophisticated tool for deriving appropriate effluent limitations and waste discharge that will ensure long-term compliance with the nitrogen and salinity objectives in the Basin Plan. This tool, the Waste Load Allocation Model (WLAM), evaluates the cumulative effects of a large number of different discharges, over a wide range of land use and planning conditions, on the surface and ground waters of the region. The WLAM also takes into consideration the normal fluctuations in weather patterns (e.g. extend droughts or El Niño winters) that also influence regional water quality. The WLAM assists regulatory permit writers in the process of deriving appropriate effluent limitations and waste discharge requirements.

The purpose of this workshop agenda item is to discuss the regional trends and future anticipated regulatory issues for the Yucaipa Valley Water District.



SANTA ANA RIVER WASTE LOAD ALLOCATION MODEL UPDATE

TM-3: WLAM Predictive Scenario Runs

DRAFT

PREPARED FOR:

Santa Ana Watershed Project Authority

September 28, 2018

GEOSCIENCE Support Services, Inc. Ground Water Resources Development
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GEOSCIENCE

THIS REPORT IS RENDERED TO THE SANTA ANA WATERSHED PROJECT AUTHORITY AS OF THE DATE HEREOF, SOLELY FOR THEIR BENEFIT IN CONNECTION WITH ITS STATED PURPOSE AND MAY NOT BE RELIED ON BY ANY OTHER PERSON OR ENTITY OR BY THEM IN ANY OTHER CONTEXT. AS DATA IS UPDATED FROM TIME TO TIME, ANY RELIANCE ON THIS REPORT AT A FUTURE DATE SHOULD TAKE INTO ACCOUNT UPDATED DATA.

THIS DOCUMENT HAS BEEN CHECKED FOR COMPLETENESS, ACCURACY, AND CONSISTENCY BY THE FOLLOWING PROFESSIONALS:

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SANTA ANA RIVER WASTE LOAD ALLOCATION MODEL UPDATE

TECHNICAL MEMORANDUM 3: WLAM PREDICTIVE SCENARIO RUNS

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ACRONYMS, ABBREVIATIONS, and INITIALISMS

Abbrev.	Description
2004 WLAM	Waste Load Allocation Model Developed by WEI in 2002-2003 and included in the 2004 Basin Management Plan.
2008 WLAM	Waste Load Allocation Model Developed by WEI in 2008-2009. Note: Scenario 8 was completed in 2015.
2017 WLAM HSPF	Waste Load Allocation Model Developed by GEOSCIENCE as part of the current WLAM update (2018).
BPA	Basin Plan Amendment
cfs	cubic feet per second
DP	discharge point
EMWD	Eastern Municipal Water District
EVMWD	Elsinore Valley Municipal Water District
ft	feet
GEOSCIENCE	GEOSCIENCE Support Services, Inc.
GMZ	groundwater management zone
HCP	Habitat Conservation Plan
HSPF	Hydrological Simulation Program – Fortran
IEUA	Inland Empire Utilities Agency
MWD	Metropolitan Water District
MWDOC	Metropolitan Water District of Orange County
MGD	million gallons per day

ACRONYMS, ABBREVIATIONS, and INITIALISMS (continued)

Abbrev.	Description
mg/L	milligrams per liter
OCWD	Orange County Water District
POTW	publically owned treatment work
Regional Board	California Regional Water Quality Control Board, Santa Ana Region
RFM	Recharge Facilities Model (operated by OCWD)
RIX	Rapid Infiltration and Extraction
RP	regional plant
RWAP	regional wastewater authority plant
RWQCP	regional water quality control plant
SAR	Santa Ana River
SARMP	Santa Ana River Mainstem Project
SAWPA	Santa Ana Watershed Project Authority
SBVMWD	San Bernardino Valley Municipal Water District (also known as Valley District)
SCAG	Southern California Association of Governments
SNRC	Sterling Natural Resources Center
Task Force	Basin Monitoring Program Task Force
TDS	total dissolved solids
TIN	total inorganic nitrogen
TM	technical memorandum

ACRONYMS, ABBREVIATIONS, and INITIALISMS (continued)

Abbrev.	Description
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
Valley District	San Bernardino Valley Municipal Water District
WEI	Wildermuth Environmental, Inc.
WLAM	Waste Load Allocation Model
WMWD	Western Municipal Water District
WRF	water recycling facility or water reclamation facility
WRP	water reclamation plant
WWRF	wastewater reclamation facility
WWTP	wastewater treatment plant
WY	Water Year
YVWD	Yucaipa Valley Water District

SANTA ANA RIVER WASTE LOAD ALLOCATION MODEL UPDATE

TECHNICAL MEMORANDUM 3: WLAM PREDICTIVE SCENARIO RUNS

1.0 INTRODUCTION

1.1 Purpose and Scope

The tributaries of the Santa Ana River (SAR) begin in the San Bernardino, San Gabriel, San Jacinto, and Santa Ana Mountains. The tributaries merge with the SAR, which flows to the Pacific Ocean. The SAR Watershed includes portions of San Bernardino County, Riverside County, Orange County, and a small portion of Los Angeles County. SAR stream reaches and associated groundwater management zones (GMZs) are shown on Figure 1.

The Santa Ana Watershed Project Authority (SAWPA) and Basin Monitoring Task Force retained GEOSCIENCE Support Services, Inc. (GEOSCIENCE) to update the Waste Load Allocation Model (WLAM) by developing and calibrating a watershed model using the Hydrological Simulation Program - Fortran (HSPF) computer code. During the course of developing this watershed model, referred to as the 2017 WLAM HSPF, the previous WLAM boundary was also expanded to include additional reaches of the SAR within Orange County (see Figure 2 for the 2017 WLAM HSPF boundary). The 2017 WLAM HSPF was then used to estimate the projected total dissolved solids (TDS) and total inorganic nitrogen (TIN) concentrations of the SAR recharge water and discharge at Prado Dam. This effort satisfies monitoring and analysis requirements in the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan).

The scope of work for this WLAM update includes:

- Task 1 — Update the Data Used in the Waste Load Allocation Model (WLAM)
- Task 2 — Update and Recalibrate the WLAM
- Task 3 — Evaluate Waste Load Allocation Scenarios for Major Stream Segments
- Task 4 — Develop WLAM for Managed Recharge in Percolation Basins (cancelled)
- Task 5 — Estimate Off-Channel Recharge from Natural Precipitation
- Task 6 — Run the WLAM in Retrospective Mode, using Historical Discharge Data, to Estimate the Quantity and Quality of Recharge that Actually Occurred
- Task 7 — Compile the WLAM into a Run-Time Software Simulation Package

- Task 8 — Draft Task Reports, Draft and Final Report
- Task 9 — Monthly Project Meetings
- Task 10 — Pilot Evaluation of the Doppler Data Compared to Precipitation Gauge Data

This Technical Memorandum No. 3 (TM-3) summarizes the results of Task 3 – Evaluate Waste Load Allocation Scenarios for Major Stream Segments.

1.2 Model Background

The TIN/TDS Task Force, consisting of representatives from water, wastewater, and groundwater agencies in the SAR Watershed, was established in 1995 to evaluate the impact of TDS/TIN on water resources. To do so, Wildermuth Environmental, Inc. (WEI) was contracted to perform a multi-phase TIN/TDS Study. Phase 1A of the study defined watershed hydrology and developed water quality objectives. Phase 1B evaluated analytical methodologies to investigate watershed hydrology. Phase 2A of the study was geared at developing a nitrogen loss rate for surface water recharge, developing a new monitoring plan, updating groundwater management zones and groundwater quality objectives, and estimating TIN/TDS concentrations in groundwater. Phase 2B included the development of a surface water WLAM and the Santa Ana Watershed Data Collection and Management Program.

Regional Basin Plans are required by the California Water Code (Section 13240) to protect the beneficial use of surface and groundwater resources within the basin, establish water quality objectives, and implement management plans to meet those objectives. The SAR Watershed Basin Plans include waste load allocations for discharges to the SAR. As part of the 2004 Basin Plan, WEI performed the waste load allocation analysis for both TIN and TDS using the surface water WLAM developed as part of the TIN/TDS Study Phase 2B (WEI, 2002 and 2003). Known as the 2004 WLAM, it was officially adopted into the Basin Plan by the California Regional Water Quality Control Board, Santa Ana Region (Regional Board) through Resolution No. R8-2004-0001. As of the date of this TM, the 2004 WLAM is the only WLAM to have gone through a formal review process and be approved by the Regional Board.

The 2004 WLAM is based on work conducted in the Chino Basin for the Chino Basin Watermaster, and uses in-house computer codes developed by WEI. These codes (RUNOFF and ROUTER) estimate surface runoff and route it through the watershed. TIN/TDS concentrations are also tracked by the computer codes using a water quality component. The 2004 WLAM was calibrated to observed streamflow and water quality data (TIN and TDS) for the period from Water Year (WY) 1995 through 1999. The calibrated model was then used to evaluate 50-year scenarios using future (2010) publically owned treatment work (POTW) discharge assumptions and hydrology from WY 1950 through 1999.

Shortly after the completion of the 2004 WLAM, the Basin Monitoring Task Force was established. As an extension of the TIN/TDS Task Force, the Basin Monitoring Task Force (hereafter referred to as "Task Force") facilitates the implementation of Basin Plan Amendments and oversees the collection and evaluation of water quality data to ensure compliance with surface water and groundwater quality objectives. In 2008, the Task Force contracted with WEI to update the 2004 WLAM in order to account for changing plans and conditions in the watershed (e.g., land use). The 2008 WLAM was calibrated to observed streamflow and water quality data (TIN and TDS) for Water Years 1995 through 2006. Six 50-year scenarios (WYs 1950 through 1999) were modeled with the calibrated 2008 WLAM for various future (2010 and 2020) discharge and Seven Oaks Dam operating assumptions. Following issuance of the 2008 WLAM model report (WEI, 2009), WEI was tasked with running an additional model scenario (Scenario 7) with the 2008 WLAM. When the Seven Oaks Dam operating assumptions were questioned, WEI ran another scenario (Scenario 8) with updated assumptions and hydrology from WY 1950 through 2012. The results of this scenario were presented in an addendum report to the 2008 WLAM (WEI, 2015a). While the 2008 WLAM was submitted to the Regional Board for review, it was never formally approved.

In order to further update the WLAM, GEOSCIENCE constructed and calibrated the 2017 WLAM HSPF from October 1, 2006 through September 30, 2016 (WYs 2007 through 2016) using the Hydrologic Simulation Program – Fortran (HSPF) computer code. The 2017 WLAM HSPF was expanded from the existing 2008 WLAM model area to include additional reaches of the SAR within Orange County (see Figure 2). The development of the HSPF model and calibration process are discussed in TM-2: WLAM Update and Recalibration (GEOSCIENCE, 2018). This updated model was then used to run predictive scenario runs to evaluate water quality in major stream segments for maximum, average, and minimum expected discharges under 2020 and 2040 conditions. Scenario assumptions are outlined in Section 2.0 of this TM while the predictive scenario results are presented in Section 3.0.

2.0 PREDICTIVE SCENARIO ASSUMPTIONS

Six predictive scenario runs (Scenario A through Scenario F) were made using the calibrated 2017 WLAM HSPF by varying the amount of recycled water discharge to surface water. The major assumptions are summarized in the table below.

Table 2-1. Major Assumptions for Predictive Scenarios

Model Scenario	Hydrologic Period	Model Conditions	Land Use	Recycled Water Discharge to Surface Water			TDS and TIN	
				Maximum Expected Discharge	Average Expected Discharge	Minimum Expected Discharge	Permit TDS	Permit TIN
A	WY 1950 - 2016	WY 2020	2012	X			X	X
B					X		X	X
C						X	X	X
D		WY 2040	General Plan (2040)	X			X	X
E					X		X	X
F						X	X	X

2.1 Hydrologic Period

The 2008 WLAM constructed and calibrated by Wildermuth Environmental, Inc. (WEI, 2009) ran predictive scenarios for the 50-year hydrologic period from October 1949 through September 1999. The 2008 WLAM was also calibrated for the period from October 1994 through September 2006. During the construction and calibration of the 2017 WLAM HSPF, the hydrologic data was updated through September 2016 and the model was calibrated for the period from October 2007 through September 2016. The predictive scenarios for the 2017 WLAM HSPF will make use of all of the available hydrologic data. Therefore, the 67-year period from October 1949 (WY 1950) through September 2016 (WY 2016) was used as the hydrologic base period for the 2017 WLAM HSPF scenarios. This base period was selected because it represents wet, dry and average hydrological conditions – therefore providing a range of hydrologic conditions under which to evaluate discharge effects. The same range of precipitation patterns seen over the hydrologic base period was assumed to represent future (2020 and 2040) conditions.

It is important to note the 67-year period used for the model simulation is not representative of conditions 67 years into the future. Rather, the hydrologic period is used to evaluate proposed discharge over 67 individual years representing a range of hydrologic conditons.

2.2 Land Use

Scenarios A through C represent the range of flows (wastewater and runoff) that may occur under 2020 land use and population conditions. While SAWPA has 2016 aerial mapping available (broken down by basic land use categories; as discussed at the April 16, 2018 Task Force Meeting), the land uses associated with this data set (and therefore pervious/impervious percentages) are not the same as those used to calibrate the 2017 WLAM HSPF. After discussing land use options with SAWPA, it was determined that the 2016 mapping would not be compatible with the calibrated model. In addition, the 2017 WLAM HSPF is already calibrated against Southern California Association of Governments (SCAG) 2012 land use through 2016 and shows satisfactory agreement between measured and observed streamflow. Therefore, the 2012 land use will also be used to represent 2020 land use conditions.

Scenarios D through F represent the range of wastewater and runoff flows that may occur using appropriate land use and population assumptions for the year 2040. General plan (2040) land use conditions will be used to represent these future land use conditions.

2.3 Streamflow

2.3.1 Discharges to Surface Water

2.3.1.1 De Minimis Discharge

De minimis discharge is defined by the Regional Water Quality Control Board (Regional Board) as discharges to surface waters that pose an insignificant threat to water quality, including dewatering discharges. While individual discharges may not have much of an impact on surface water quality, collectively and cumulatively they might. The de minimis discharge included in the 2017 WLAM HSPF scenario assumptions is dewatering discharge from the US Army Corps of Engineers (USACE) Santa Ana River Mainstem Project (SARMP) Phase 4, 5A, and 5B.

The dewatering (de minimis) discharge locations for USACE dewatering operations are shown on Figure 2. Flow assumptions for the dewatering operations were based on daily instantaneous flow rates presented in the monthly monitoring reports. These reports were available from November 2017 through February 2018 for Phase 5A and from June 2017 through March 2018 for Phase 2B. In the absence of reported data for Phase 4, flow was assumed to be the average of the average flows for Phases 5A and 5B. It is important to note that even those these projects were simulated for the entire duration under Scenario A conditions in order to evaluate impacts under a variety of hydrologic

conditions, these projects are temporary and will therefore only have a short-term effect on streamflow and groundwater recharge.

2.3.1.2 Recycled Water Discharge

Appendix A shows the data request form that was sent to the individual POTWs to establish current and projected (2020 and 2040) discharge volumes to surface water and associated concentrations for use in the predictive model scenarios. While this form also included fields for projected recycled water recharge in support of Task 4 (Develop WLAM for Managed Recharge in Percolation Basins), the Task Force later decided to forgo this aspect of the project. The recycled water discharge point locations are shown on Figure 2.

The completed data request forms are provided in Appendix B[1]. Recycled water discharge to surface water was obtained for the following facilities:

- Beaumont Wastewater Treatment Plant (WWTP)
- Yucaipa Valley Water District (YVWD) H.N. Wochholz Water Recycling Facility (WRF)
- East Valley Water District (EVWD) Sterling Natural Resource Center (SNRC)
- Rialto WWTP
- Rapid Infiltration and Extraction (RIX) facility
- Riverside Regional Water Quality Control Plant (RWQCP)
- Inland Empire Utility Agency (IEUA) Regional Plants (RPs) and Carbon Canyon Water Recycling Facility (CCWRF)
- Western Riverside County Regional Wastewater Authority Plant (RWAP)
- Corona WWTPs
- Temescal Valley Water Reclamation Facility (WRF)
- Elsinore Valley Municipal Water District (EVMWD) Regional Wastewater Reclamation Facility (WWRF)
- Eastern Municipal Water District (EMWD) Regional WRFs

Attached Table 1 shows the predictive model scenario flow assumptions. It should be noted that the expected discharges under 2020 and 2040 conditions were based on the values provided by the individual POTWs – with a few notable exceptions, as described in the following sections.

[1] Revised forms were provided, where available. Some discharge assumptions used for the predictive model scenarios were changed verbally or through email.

Additional comments or specific assumptions for individual POTWs are provided below.

2.3.1.2.1 Riverside RWQCP

Based on comments received from City of Riverside, a portion of the 2040 average expected discharge and minimum expected discharge for 2020 and 2040 will be piped to select upstream tributary locations to provide Santa Ana Sucker habitat as part of a regional project with San Bernardino Valley Municipal Water District (Valley District) and the Upper SAR Habitat Conservation Plan (HCP). This project is not yet permitted, but was included in these scenario runs to provide an indication of the project effects. Discharge quantities and locations are described below and shown on Figure 1.

- Plant Discharge (2040 Average Expected Discharge): 18.1 MGD
- Plant Discharge (2020 and 2040 Minimum Expected Discharge): 14.6 MGD
- Anza Drain (33.966, -117.415): 0.6 MGD
- Old Farm Rd. (33.970, -117.412): 1.3 MGD
- Tequesquite (33.976, -117.397): 0.6 MGD
- Evans Drain (33.997, -117.382): 1.9 MGD

The average expected discharge under 2020 conditions (25 MGD) and maximum expected discharge under 2020 and 2040 conditions (33.8 and 46 MGD, respectively) was simulated entirely as plant discharge.

2.3.1.2.2 IEUA RPs and CCWRF

IEUA owns and operates three RPs (RP-1, RP-4, and RP-5) and the CCWRF. IEUA discharges effluent from these facilities at four discharge points, including Discharge Point (DP) 001 at Prado Park Lake, DP-002 at Cucamonga Creek, DP-003 at Chino Creek, and DP-004 at Chino Creek.

Current maximum, average, and minimum discharges were available for each DP. Since maximum expected discharge was not available for future conditions, plant capacity was assumed for maximum discharge under 2020 and 2040 conditions. Total (combined) average and minimum expected discharges were provided for 2020 and 2040. This total average and minimum discharge was distributed to the individual DPs using current (FY16/17) average and minimum flow relationships.

2.3.1.2.3 Corona WWTPs

The City of Corona's WWTP No. 3 is expected to be decommissioned in 2020. The flow will be split between the Western Riverside County RWAP and Corona WWTP No. 2 (which discharges to recharge basins). This has been accounted for in the estimated flows for WWTP No. 1.

2.3.1.2.4 EVMWD Regional WWRF

EVMWD Regional WWRF discharges tertiary treated and disinfected wastewater to Temescal Creek (DP001) and Lake Elsinore (DP002). Since discharges to the lake are not included within the 2017 WLAM HSPF, these discharges will not be tracked. However, EVMWD is contractually committed to discharge most of their recycled water to Lake Elsinore; only a small portion (approximately 0.5 MGD) is committed to Temescal Creek. Historically, EVMWD has discharged more recycled water to Temescal Creek than the estimated discharge of 0.5 MGD during extreme wet conditions in which Lake Elsinore is completely full. The current Lake Elsinore agreement precludes EVMWD from discharging water into the lake when it reaches 1,247 ft, which is 8 ft below the spill elevation of 1,255 ft. Therefore, discharge to Temescal Creek was assumed to be 0.5 MGD under all scenario conditions except for the following time periods when the lake is too full:

Table 2-2. Periods of Maximum EVMWD Regional WWRF Discharge to Temescal Creek

Hydrologic Period of Maximum Discharge		Scenarios A, B, and C (2020 Conditions)	Scenarios D, E, and F (2040 Conditions)	Source
From	To	[MGD]		
3/3/1969	5/31/1969	12.0	16.8	2008 WLAM (WEI, 2009; Table 4-6)
2/3/1979	7/8/1979			
2/14/1980	3/9/1980			
3/20/1980	8/2/1980			
3/4/1983	8/31/1983			
1/29/1993	7/20/1993			
1/1/2005	6/30/2007			Historical recycled water flows in Temescal Creek
2/1/2011	9/30/2011			

2.3.1.2.5 EMWD Regional WRFs

Maximum and average expected discharge for all years (current, 2020, and 2040) were provided by EMWD as 52.5 MGD for 6 months and 52.5 MGD for 1 month, respectively. Per the recommendations of EMWD, the 1-month discharge of 52.5 MGD was applied to February of every year, while the 6-month discharge of 52.5 MGD was applied to the months of November through April during the wettest half of the years (34 years of the 67-year simulation period). It is important to note that these discharge assumptions are extremely conservative, since actual EMWD discharges are and are expected to continue to be much less. A minimum expected discharge value of 0 MGD was assumed for all scenarios, since the goal of EMWD is to utilize all of their recycled water.

2.3.1.3 Other Discharges to Surface Water

While the calibration period accounts for flows from OCWD's turnout OC-59, this discharge was not included in the predictive model scenario runs at the recommendation of the Task Force. However, assumptions were developed for discharges from the Arlington Desalter and San Bernardino Geothermal Plant based on historical observed data. For the predictive scenarios, discharge for the Arlington Desalter was assumed to be the same as the observed discharge for the periods from WY 1995 through WY 2006 (from 2008 WLAM) and WY 2007 through WY 2016 (2017 WLAM HSPF calibration period). The average discharge from the period from WY 1995 through WY 2016 was applied for the hydrologic time period prior to WY 1995 (WY 1950 through WY 1994). San Bernardino Geothermal Plant discharge for the hydrologic period covering WY 2007 through WY 2016 was assumed to be the same as the observed discharge over this same time period. The average discharge during this period was assumed for the hydrologic period covering WY 1950 through WY 2006.

Outflow from Seven Oaks Dam to the SAR was included in the 2017 WLAM HSPF calibration as part of the external inflow to the model area. Conversations with Valley District have indicated that, for now, operations at Seven Oaks Dam (including discharges to the SAR) will follow the existing control manual. Therefore, the underlying assumption for future conditions is that historical discharges will be representative of future discharges for similar hydrology. However, it should be noted that the USACE does not always follow formal operating rules and there is no way to predict these deviations in 2017 WLAM HSPF future model scenarios. The same is true of operations at Prado Dam.

2.3.2 Stormwater Recharge

Streamflow diversions for stormwater recharge were accounted for in the 2017 WLAM HSPF predictive scenarios by removing stormwater recharge volumes from the streamflow in the channel. Monthly

stormwater recharge for each basin was provided by the Chino Basin Watermaster for the time period from July 1977 through September 2016. In addition, total annual stormwater recharge was provided in the WEI Chino Basin modeling report from October 1961 through June 1977 (WEI, 2015b). Since there were no data available from WY 1950 through WY 1960, total annual stormwater recharge was estimated based on the correlation (ratio) of 20-year average total annual recharge to average annual precipitation at the Mira Loma Space Center gage (1021A). Total annual stormwater recharge was then assigned to each basin based on recharge percentages developed using data from July 1977 through September 2016. Daily stormwater recharge (and therefore diversion) was assumed to be constant within each month when monthly data was available and constant within each year when only annual data was available.

2.3.3 Prado Wetlands

The OCWD Prado Wetlands spreadsheet model developed for the calibration of the 2017 WLAM HSPF (refer to TM-2; GEOSCIENCE, 2018) was also used for the predictive scenario runs. The same flow diversion, wetland parameters, and nitrate removal schematic as the calibration model was assumed for the scenario runs. Historical precipitation and evapotranspiration was used to calculate additional losses from evapotranspiration.

2.3.4 OCWD Operations at and below Prado Dam

As with the 2017 WLAM HSPF calibration, the OCWD Recharge Facilities Model (RFM) was used in the predictive scenarios as an accounting tool to track diversions from the SAR, but does not estimate runoff from adjacent land areas. The 2017 WLAM HSPF was run to calculate local run-off in the watershed areas upstream of and surrounding the stretch of the SAR for which the RFM operates for the period from WY 1950 through WY 2016. This model-calculated runoff, along with Prado Dam calculated inflow, was used as RFM input. The RFM was then run separately for WY 1950 through WY 1971, WY 1972 through WY 1993, WY 1994 through WY 2015, and WY 2016.

2.3.5 Rising Water

Rising water discharges to the SAR at Riverside Narrows and in the vicinity of Prado Basin (refer to Figure 1 for locations). A recent study by WEI (2017) has also identified rising water in Temescal Creek upstream of the Main Street gage. In addition, rising water has been known to occur in Warm Creek. Rising water was accounted for in the 2017 WLAM HSPF scenarios in several ways.

In Temescal Creek upstream of the Main Street gaging station, an assumed flow with associated TDS/TIN concentrations was added to the watershed model based on the Salt and Nutrient Management Plan for the Upper Temescal Valley (WEI, 2017). In Warm Creek, an assumed flow with associated TDS/TIN concentrations was added to the watershed model based on the hydrologic investigation conducted by the U.S. Geological Survey (USGS; Danskin et al., 2005).

In the 2017 WLAM HSPF predictive scenarios, rising water in the SAR upstream of MWD Crossing and in the vicinity of Prado Basin was handled using the same approach used for model calibration (refer to TM-2; GEOSCIENCE 2018).

2.4 TDS and TIN

In order to evaluate water quality for major stream segments using the 2017 WLAM HSPF predictive scenarios, the TDS/TIN concentrations associated with the contributing sources (including runoff, discharges to streamflow, and rising groundwater) were needed. TDS and TIN concentrations for runoff were assumed to be the same as those used for model calibration. TDS and TIN data for the predictive model scenarios were also obtained from the POTWs listed in Section 4.0. The data request form (Appendix A) contained fields for the following TDS and TIN information:

- Effluent Limit in Current Discharge Permit
- Recent 12-mos. Volume Weighted Average
- Est. 12 mos. Volume Weighted Average in 2040

Table 1 shows the predictive model scenario flow assumptions. In general, the TDS and TIN effluent limits for current discharge permits provided by the individual POTWs were assumed for all predictive model scenarios. These represent very conservative assumptions since actual discharge is typically lower than the permitted levels, and often much lower. Additional comments or specific assumptions for individual discharge locations are provided below.

2.4.1 Discharges to Surface Water

2.4.1.1 De Minimus Discharge

TDS and TIN assumptions for the USACE dewatering operations (SARMP Phases 4, 5A, and 5B) were based on laboratory analyses presented in the monthly monitoring reports. In the absence of reported data for Phase 4, TDS and TIN concentrations were based on the average concentrations for Phases 5A and 5B.

2.4.1.2 Recycled Water Discharge

2.4.1.2.1 Beaumont WWTP

As shown in Table 1, the City of Beaumont has dual TDS and TIN effluent limits. Discharge requirements for the initial 1.8 MGD of flow have higher allowable TDS and TIN concentrations (400 mg/L and 6 mg/L, respectively). Any flows following the initial 1.8 MGD are subject to stricter water quality requirements (300 mg/L for TDS and 3.6 mg/L for TIN).

2.4.1.2.2 EVWD SNRC

The effluent limits for the SNRC will likely be based on the water quality objectives established for the Bunker Hill B management zone, unless the Regional Board agrees to grant an allocation of assimilative capacity following a maximum benefit demonstration. Since this information is not yet available, the estimated 12-month volume weighted average in 2040 was applied for all model scenarios throughout the model period.

2.4.1.2.3 IEUA RPs and CCWRF

IEUA's NPDES permit allows them to calculate compliance with effluent limits for TDS and TIN based on the system-wide, volume-weighted average off all four RPs, including CCWRF. For the purposes of the 2017 WLAM HSPF model scenarios, the combined effluent limits were assumed at each discharge location.

2.4.1.2.4 Temescal Valley WRF

EVMWD and EMWD completed a salt and nutrient management plan (SNMP) which was approved by the Regional Board (WEI, 2017). A Basin Plan Amendment (BPA) will be developed to formally adopt the water quality objectives for the newly defined "Upper Temescal Groundwater Management Zone (GMZ)". The Regional Board anticipates completing the BPA either by the end of FY 2018 or early 2019.

While Temescal Valley has a current TIN limit of 13.3 mg/L, Best Available Treatment (BAT) is generally considered to be 10 mg/L. At the request of the Regional Board, the TIN concentration for Temescal Valley WRF was assumed to be 10 mg/L for all scenario runs. This lower TIN limit could potentially help with waste load allocation compliance for downstream permittees and meet the proposed Nitrate-N objective of 7.9 mg/L for the Upper Temescal GMZ (assuming 25% N loss).

2.4.1.2.5 EVMWD Regional WWRF

Similar to discharges from Temescal Valley, the TIN concentration for EVMWD Regional WWRF discharge was assumed to be 10 mg/L for all scenario runs, despite the current TIN effluent limit of 13 mg/L.

2.4.1.2.6 Other Discharges to Surface Water

2.4.2 Rising Water

The TDS/TIN concentrations associated with rising water at the Riverside Narrows, Prado Basin (Prado Vicinity), Warm Creek, and in Temescal Creek upgradient of Main Street were incorporated into the predictive scenarios using the same approach used for model calibration (refer to TM-2; GEOSCIENCE 2018).

2.4.3 Nitrogen Loss Coefficients

A range of nitrogen loss coefficients were identified in the Basin Plan. Based on the recommendation of the Task Force, a region-wide nitrogen loss of 25% was applied to all discharges that affect groundwater in the model area, with the exception of the lower portions of Reach 3 of the SAR that overlie the Chino South GMZ. In this area, the City of Riverside has presented data that support a nitrogen loss coefficient of 50%, rather than 25%, due to losses associated with wetlands.

3.0 PREDICTIVE SCENARIO RESULTS

The 2017 WLAM HSPF generates daily estimates of discharge and TDS/TIN concentrations surface water and water recharging the GMZs along San Timoteo Creek, Temescal Creek, and the SAR over the entire predictive scenario simulation period. These daily estimates were used to compute monthly or annual volume-weighted average concentrations. Flow-weighted average TDS and TIN concentrations were evaluated over various time periods, including 1-year, 5-year, 10-year, 20-year, and 67-year. Each of these time periods is useful for evaluating possible compliance, depending on the planning objective. The 1-year compliance period is representative of the period of compliance for permits, while the 5-year compliance period typically covers the duration of the permit. The 10-year compliance period is useful for identifying possible future compliance issues because it represents a period of time that is typically long enough to cover one meteorological cycle (i.e., contains both wet and dry periods). This time period in particular is a useful indicator of how different discharge assumptions will affect the various GMZs. The 20-year compliance period represents the amount of time over which ambient groundwater concentrations are generally computed. Finally, the 67-year compliance period covers the entire predictive scenario duration and is useful for long-term planning.

The maximum 1-year, 5-year, 10-year, and 20-year flow-weighted averages from the model scenario runs are summarized in attached Tables 2 and 3 for TDS and TIN, respectively. Included in Tables 2 and 3 are water quality objectives, current groundwater ambient quality, and the magnitude of assimilative capacity, if any, for each GMZ and surface water body affected by POTW discharge. Bold black values represent concentrations above the ambient but below the objective, and designate a use of assimilative capacity. Bold blue values represent concentrations above basin objectives. The results of Scenarios A through F are also fully documented in Appendices C through H. These appendices include tables and time history charts for each year of the predictive simulation.

3.1 Groundwater Recharge

It is important to note that the model-calculated water quality results for surface water becoming groundwater recharge through streambed percolation are only representative of those reaches of the SAR and its tributaries that are permeable and coincide with reaches where wastewater discharges flow. Stream reaches upgradient of the farthest upstream discharge points were excluded from the computation of compliance metrics. For example, in the Beaumont GMZ, streambed recharge and quality were only computed for reaches downstream of wastewater effluent discharge locations. Therefore, stormwater that percolates in the unlined reaches upstream of this discharge location was excluded from the computation of the compliance metrics. The predictive scenario results, along with a

description of the area over which each recharge and quality were computed, are summarized in the following sections for each GMZ.

3.1.1 Beaumont Management Zone (San Timoteo Creek Reach 4)

TDS and TIN objectives for the Beaumont GMZ are 330 mg/L and 5.0 mg/L, respectively (see Table 3-1 below). Current ambient groundwater quality is 290 mg/L for TDS and 2.9 mg/L for TIN, creating an assimilative capacity of 40 mg/L for TDS and 2.1 mg/L for TIN. POTW discharge in the Beaumont GMZ comes from Beaumont WWTP No. 1. Annual recharge from streambed percolation and water quality was calculated for Noble Creek below Beaumont DP 008, the unnamed tributary to Marshall Creek below Beaumont DP 007, Cooper's Creek below Beaumont WWTP No. 1, and Reach 4 of San Timoteo Creek overlying the Beaumont GMZ.

Table 3-1. Predictive Scenario Results – Beaumont Management Zone

Constituent	Objective	Ambient	Assimilative Capacity	Compliance Period	MAXIMUM VALUE FOR THE VOLUME-WEIGHTED RECHARGE					
					2020 Conditions			2040 Conditions		
					Scen A (Max)	Scen B (Avg)	Scen C (Min)	Scen D (Max)	Scen E (Avg)	Scen F (Min)
	[mg/L]	[mg/L]	[mg/L]		[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]
TDS	330	290	40	1-year	228	230	233	203	203	204
				5-year	196	198	200	175	176	176
				10-year	187	189	190	167	167	168
				20-year	185	186	187	166	166	166
TIN	5.0	2.9	2.1	1-year	2.20	2.24	2.28	1.85	1.86	1.87
				5-year	1.82	1.85	1.89	1.52	1.52	1.53
				10-year	1.69	1.71	1.74	1.40	1.40	1.41
				20-year	1.62	1.65	1.67	1.36	1.37	1.37

As shown in Tables 2 and 3 and in the graphs provided in Appendices C through H, the TDS and TIN concentrations under Scenario A through Scenario F conditions do not exceed the TDS or TIN objectives for Beaumont GMZ. The maximum 10-year volume-weighted TDS average ranges from 167 mg/L under Scenarios D and E conditions to 190 mg/L under Scenario C conditions, while the 10-year volume weighted TIN average ranges from 1.4 mg/L under Scenarios D and E conditions to 1.7 mg/L under

Scenarios B and C conditions. The differences between water quality concentrations under the different scenario assumptions indicate that reduced discharge actually leads to greater concentrations of TDS and TIN in recharge water. This is largely due to the dual limit for discharge from the City of Beaumont. Since any discharge over 1.8 MGD is subject to stricter water quality requirements, TDS and TIN concentrations are lower at higher discharge rates.

3.1.2 San Timoteo Management Zone (San Timoteo Creek Reaches 2, 3, & 4)

TDS and TIN objectives for the San Timoteo GMZ are 400 mg/L and 5.0 mg/L, respectively (see Table 3-2 below). Current ambient groundwater quality is 420 mg/L for TDS and 2.0 mg/L for TIN, creating an assimilative capacity of 3.0 mg/L for TIN, but none for TDS. This area is designated as a maximum benefit zone. POTW discharges that may affect groundwater quality in the San Timoteo GMZ includes those from YVWD H.N. Wochholz WRF, located within the GMZ, and upgradient Beaumont WWTP No. 1. Annual recharge from streambed percolation and water quality was calculated for Cooper's Creek and Temescal Creek Reaches 2, 3, and 4 overlying the San Timoteo GMZ.

Table 3-2. Predictive Scenario Results – San Timoteo Management Zone

Constituent	Objective	Ambient	Assimilative Capacity	Compliance Period	MAXIMUM VALUE FOR THE VOLUME-WEIGHTED RECHARGE					
					2020 Conditions			2040 Conditions		
					Scen A (Max)	Scen B (Avg)	Scen C (Min)	Scen D (Max)	Scen E (Avg)	Scen F (Min)
	[mg/L]	[mg/L]	[mg/L]		[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]
TDS	400	420	none	1-year	371	368	369	348	344	327
				5-year	355	353	352	305	302	286
				10-year	337	335	333	278	276	265
				20-year	306	304	302	251	249	238
TIN	5.0	2.0	3.0	1-year	***4.26***	***4.14***	***4.01***	***3.79***	***3.70***	***3.25***
				5-year	***4.07***	***3.94***	***3.80***	***3.26***	***3.17***	***2.84***
				10-year	***3.84***	***3.72***	***3.57***	***2.98***	***2.92***	***2.61***
				20-year	***3.47***	***3.36***	***3.22***	***2.67***	***2.61***	***2.32***

Note: Bold black values represent concentrations above ambient groundwater quality, but below the objective

As shown in Tables 2 and 3 and in the graphs provided in Appendices C through H, the TDS concentrations under Scenario A through Scenario F conditions do not exceed the basin objectives. The maximum 10-year volume-weighted TDS average ranges from 265 mg/L under Scenario F conditions to 337 mg/L under Scenario A conditions. On the other hand, water recharged in the San Timoteo GMZ from Coopers Creek and San Timoteo Creek Reaches 2, 3, and 4 causes TIN concentrations to rise above ambient groundwater concentrations, but below basin objectives. The maximum 10-year volume weighted TIN average ranges from 2.6 mg/L under Scenario F conditions to 3.8 mg/L under Scenario A conditions.

It is important to note that the 2017 WLAM HSPF does not currently take into account the effect of upgradient landfills, like the Riverside County Badlands Landfill. This is something that may be usefult to investigate in subsequent WLAM updates. In addition, YVWD is currently investigating the removal of its effluent from San Timoteo Creek (i.e., zero discharge), and plans to reassess this possibility during the next WLAM update.

3.1.3 Bunker Hill-B Management Zone (San Timoteo Creek Reach 1 and SAR Reach 5)

TDS and TIN objectives for the Bunker Hill-B GMZ are 330 mg/L and 7.3 mg/L, respectively (see Table 3-3 below). Current ambient groundwater quality is 290 mg/L for TDS and 5.8 mg/L for TIN, creating an assimilative capacity of 40 mg/L for TDS and 1.5 mg/L for TIN. Annual recharge from streambed percolation and water quality was calculated for Temescal Creek Reach 1 overlying the Bunker Hill-B GMZ and SAR Reach 5 from the confluence of City Creek to the San Jacinto Fault (coincident with the western boundary of the GMZ). Since there are no POTW discharges in San Timoteo Creek Reach 1, the water quality of recharge from the San Timoteo Creek in this GMZ is largely affected by upstream Reaches 2 and 3 (i.e., discharges from YVWD's Henry N. Wochholz WRF and the Beaumont WWTP). Other discharges that may affect groundwater quality in the Bunker Hill-B GMZ includes those from the proposed EVWD SNRC. However, the modeling indicates that discharge from the SNRC does not typically reach SAR except during periods of high precipitation.

Table 3-3. Predictive Scenario Results – Bunker Hill-B Management Zone

Constituent	Objective	Ambient	Assimilative Capacity	Compliance Period	MAXIMUM VALUE FOR THE VOLUME-WEIGHTED RECHARGE					
					2020 Conditions			2040 Conditions		
					Scen A (Max)	Scen B (Avg)	Scen C (Min)	Scen D (Max)	Scen E (Avg)	Scen F (Min)
	[mg/L]	[mg/L]	[mg/L]		[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]
TDS	330	290	40	1-year	***348***	***319***	241	***332***	***320***	276
				5-year	***312***	273	208	***296***	282	232
				10-year	***295***	257	204	281	267	220
				20-year	277	244	201	265	253	211
TIN	7.3	5.8	1.5	1-year	3.77	3.08	2.34	3.46	3.25	2.40
				5-year	3.35	2.61	1.97	3.04	2.83	2.04
				10-year	3.15	2.48	1.81	2.88	2.68	1.94
				20-year	2.92	2.36	1.77	2.71	2.53	1.86

Note: Bold black values represent concentrations above ambient groundwater quality, but below the objective. Bold blue values represent concentrations above the basin objective.

As shown in Tables 2 and 3 and in the graphs provided in Appendices C through H, the TIN concentrations under Scenario A through Scenario F conditions do not exceed the TIN objectives for Bunker Hill-B GMZ. The maximum 10-year volume-weighted TIN average ranges from 1.8 mg/L under Scenario C conditions to 3.2 mg/L under Scenario A conditions. Some of the maximum 1-year volume-weighted average TDS concentrations do exceed TDS objectives and ambient quality. In addition, some of the maximum 5-year and 10-year volume-weighted average TDS concentrations exceed ambient concentrations under Scenarios A and D conditions (i.e., maximum expected discharge). The maximum 10-year volume-weighted TDS average ranges from 204 mg/L under Scenario C conditions to 295 mg/L under Scenario A conditions.

3.1.4 Colton Management Zone (SAR Reach 4)

TDS and TIN objectives for the Colton GMZ are 410 mg/L and 2.7 mg/L, respectively. Current ambient groundwater quality is 480 mg/L for TDS and 3.3 mg/L for TIN, meaning that no assimilative capacity exists for either constituent. Annual recharge from streambed percolation and water quality was

calculated for the SAR Reach 4 overlying the Colton GMZ. Since there are no POTW discharges in the Colton GMZ, this area is primarily affected by upgradient discharges.

Table 3-4. Predictive Scenario Results – Colton Management Zone

Constituent	Objective	Ambient	Assimilative Capacity	Compliance Period	MAXIMUM VALUE FOR THE VOLUME-WEIGHTED RECHARGE					
					2020 Conditions			2040 Conditions		
					Scen A (Max)	Scen B (Avg)	Scen C (Min)	Scen D (Max)	Scen E (Avg)	Scen F (Min)
	[mg/L]	[mg/L]	[mg/L]		[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]
TDS	410	480	none	1-year	392	317	277	353	355	288
				5-year	318	260	247	304	294	241
				10-year	297	251	233	288	277	230
				20-year	281	239	212	275	264	220
TIN	2.7	3.3	none	1-year	***3.77***	2.49	2.40	***3.45***	***3.27***	2.33
				5-year	***3.04***	2.04	1.86	***2.92***	2.67	1.87
				10-year	***2.78***	1.92	1.61	***2.73***	2.52	1.70
				20-year	***2.73***	1.86	1.51	2.69	2.48	1.66

Note: Bold blue values represent concentrations above the basin objective.

As shown in Tables 2 and 3 and in the graphs provided in Appendices C through H, the TDS concentrations under Scenario A through Scenario F conditions do not exceed the TDS objectives for Colton GMZ. The maximum 10-year volume-weighted TDS average ranges from 230 mg/L under Scenario F conditions to 297 mg/L under Scenario A conditions. However, TIN concentrations exceed TIN objectives under Scenario A, Scenario D, and Scenario E conditions. The 10-year volume weighted TIN average ranges from 1.6 mg/L under Scenario C conditions to 2.8 mg/L under Scenario A conditions.

3.1.5 Riverside-A Management Zone (SAR Reaches 3 & 4)

TDS and TIN objectives for the Riverside-A GMZ are 560 mg/L and 6.2 mg/L, respectively (see Table 3-5 below). Current ambient groundwater quality is 440 mg/L for TDS and 5.6 mg/L for TIN, creating an assimilative capacity of 120 mg/L for TDS and 0.6 mg/L for TIN. Annual recharge from streambed percolation and water quality was calculated for SAR Reaches 3 and 4 overlying Riverside-A GMZ. Primary discharges that affect groundwater quality in the Riverside-A GMZ include those from RIX and

the Rialto WWTP. In addition, the predictive scenarios assume additional discharge locations from the Riverside RWQCP which are located within the Riverside-A GMZ.

Table 3-5. Predictive Scenario Results – Riverside-A Management Zone

Constituent	Objective	Ambient	Assimilative Capacity	Compliance Period	MAXIMUM VALUE FOR THE VOLUME-WEIGHTED RECHARGE					
					2020 Conditions			2040 Conditions		
					Scen A (Max)	Scen B (Avg)	Scen C (Min)	Scen D (Max)	Scen E (Avg)	Scen F (Min)
	[mg/L]	[mg/L]	[mg/L]		[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]
TDS	560	440	120	1-year	***502***	***482***	***503***	***486***	***490***	***494***
				5-year	***478***	***453***	***474***	***461***	***462***	***463***
				10-year	***466***	439	***459***	***449***	***447***	***447***
				20-year	***451***	422	***443***	436	432	431
TIN	6.2	5.6	0.6	1-year	***6.74***	***6.46***	***6.57***	***6.60***	***6.49***	***6.41***
				5-year	***6.35***	***5.98***	***6.12***	***6.20***	***6.03***	***5.92***
				10-year	***6.13***	***5.73***	***5.87***	***5.99***	***5.79***	***5.67***
				20-year	***5.92***	5.49	***5.64***	***5.79***	5.57	5.43

Note: Bold black values represent concentrations above ambient groundwater quality, but below the objective. Bold blue values represent concentrations above the basin objective.

As shown in Tables 2 and 3 and in the graphs provided in Appendices C through H, the TDS concentrations under Scenario A through Scenario F conditions do not exceed the TDS objectives for Riverside-A GMZ. However, the maximum 1-year and 5-year volume-weighted average TDS concentrations are above ambient under all of the scenario conditions. TDS concentrations in excess of the ambient also occur under some of the scenario conditions for the maximum 10-year and 20-year volume-weighted average TDS. The maximum 10-year volume-weighted TDS average ranges from 439 mg/L under Scenario B conditions to 466 mg/L under Scenario A conditions. All of the maximum 1-year volume-weighted average TIN concentrations exceed TIN objectives, along with the maximum 5-year concentrations under maximum expected discharge conditions (Scenarios A and D). The maximum 10-year volume-weighted TIN average ranges from 5.7 mg/L under Scenario B and F conditions to 6.1 mg/L under Scenario A conditions.

3.1.6 Chino-South Management Zone (SAR Reach 3)

TDS and TIN objectives for the Chino-South GMZ are 680 mg/L and 5.0 mg/L, respectively (see Table 3-6 below). Current ambient groundwater quality is 940 mg/L for TDS and 27.8 mg/L for TIN, meaning that no assimilative capacity exists for either constituent. Annual recharge from streambed percolation and water quality was calculated for the portion of the SAR Reach 3 overlying the Chino-South GMZ. POTW discharge that affect Chino-South GMZ comes from upstream discharges, and discharges from the Riverside RWQCP.

Table 3-6. Predictive Scenario Results – Chino-South Management Zone

Constituent	Objective	Ambient	Assimilative Capacity	Compliance Period	MAXIMUM VALUE FOR THE VOLUME-WEIGHTED RECHARGE					
					2020 Conditions			2040 Conditions		
					Scen A (Max)	Scen B (Avg)	Scen C (Min)	Scen D (Max)	Scen E (Avg)	Scen F (Min)
	[mg/L]	[mg/L]	[mg/L]		[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]
TDS	680	940	none	1-year	632	630	630	636	651	659
				5-year	489	482	482	486	471	474
				10-year	431	418	422	425	414	414
				20-year	378	364	366	378	362	360
TIN	5.0[1]	27.8	none	1-year	4.62	4.39	4.32	4.71	4.59	4.50
				5-year	3.51	3.31	3.25	3.53	3.25	3.17
				10-year	3.06	2.84	2.80	3.05	2.81	2.72
				20-year	2.67	2.47	2.43	2.70	2.46	2.37

[1] On August 4, 2017, the California Regional Water Quality Control Board, Santa Ana Region, adopted Resolution No. R8-2017-0036 revising the water quality objective for nitrate as nitrogen from 4.2 mg/L to 5.0 mg/L in the Chino South Groundwater Management Zone. The State Water Resource Control Board approved the amendment under Resolution No. 2018-0004 on February 6, 2018. The new objective became effective when the Office of Administrative Law approved the Basin Plan amendment on July 2, 2018

As shown in Tables 2 and 3 and in the graphs provided in Appendices C through H, the TDS and TIN concentrations under Scenario A through Scenario F conditions do not exceed the TDS or TIN objectives for Chino-South GMZ. The maximum 10-year volume-weighted TDS average ranges from 414 mg/L under Scenarios E and F conditions to 431 mg/L under Scenario A conditions. The 10-year volume weighted TIN average ranges from 2.7 mg/L under Scenario F conditions to 3.1 mg/L under Scenarios A and D conditions.

3.1.7 Upper Temescal Valley Management Zone (Temescal Creek Reaches 2, 3, 4, 5 & 6)

The proposed TDS and TIN objectives for the Upper Temescal Valley GMZ[2] are 820 mg/L and 7.9 mg/L, respectively (see Table 3-7 below). However, as mentioned in Section 2.4.1.2.4, these proposed limits have yet to be approved. The Basin Plan Amendment to adopt the Salt and Nutrient Management Plan for the Upper Temescal Valley GMZ is expected to be approved by 2020. Nevertheless, the 2017 WLAM HSPF was used to evaluate the impact and the compliance of streamflow and groundwater recharge with the proposed TDS and TIN. Current ambient groundwater quality is 822 mg/L for TDS and 7.9 mg/L for TIN. Therefore, with the current proposed objectives, is no assimilative capacity for either constituent. Annual recharge from streambed percolation and water quality was calculated for Temescal Creek Reachs 2, 3, 4, 5, and the upper portion of 6 overlying the Upper Temescal Valley GMZ. POTW charges that affect groundwater quality in Upper Temescal Valley GMZ include Temescal Valley WRF, EVMWD Regional WWRF, and EMWD Regional WRFs.

Table 3-7. Predictive Scenario Results – Upper Temescal Valley Management Zone

Constituent	Objective	Ambient	Assimilative Capacity	Compliance Period	MAXIMUM VALUE FOR THE VOLUME-WEIGHTED RECHARGE					
					2020 Conditions			2040 Conditions		
					Scen A (Max)	Scen B (Avg)	Scen C (Min)	Scen D (Max)	Scen E (Avg)	Scen F (Min)
	[mg/L]	[mg/L]	[mg/L]		[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]
TDS	820[1]	822[2]	none	1-year	620	594	610	593	593	593
				5-year	539	442	428	501	425	409
				10-year	492	408	380	469	393	368
				20-year	488	361	323	463	372	332
TIN	7.9[1]	7.9[2]	none	1-year	6.66	6.34	6.46	6.38	6.37	6.33
				5-year	5.90	4.66	4.37	5.57	4.41	4.19
				10-year	5.52	4.30	3.92	5.19	4.11	3.75
				20-year	5.46	3.81	3.25	5.11	3.99	3.42

[1] Proposed objective from June 2018 CEQA Scoping Meeting

[2] Calculated Historical Ambient Concentration from June 2018 CEQA Scoping Meeting

[2] Proposed Upper Temescal Valley GMZ includes Bedford GMZ, Lee Lake GMZ, Warm Springs Valley GMZ

As shown in Tables 2 and 3 and in the graphs provided in Appendices C through H, the TDS and TIN concentrations under Scenario A through Scenario F conditions do not exceed the proposed TDS or TIN objectives for Upper Temescal Valley GMZ. The maximum 10-year volume-weighted TDS average ranges from 368 mg/L under Scenario F conditions to 492 mg/L under Scenario A conditions. The 10-year volume weighted TIN average ranges from 3.8 mg/L under Scenario F conditions to 5.5 mg/L under Scenario A conditions.

3.1.8 Prado Basin Management Zone (SAR Reach 3)

The August only TDS and TIN objectives for the Prado Basin GMZ are 700 mg/L and 10.0 mg/L, respectively (see Table 3-8 below). Since ambient groundwater quality for TDS/TIN was not computed after 1997, no assimilative capacity exists for the Prado Basin GMZ. It should be noted that the Prado Basin GMZ is typically treated as surface water since no percolation is thought to occur in this area. Any percolation would be temporary, as it is assumed to become streamflow again through rising groundwater farther downstream. Therefore, the concentrations presented here reflect the average surface water quality for SAR Reach 3, Chino Creek, Temescal Creek, Mill Creek, and Cucamonga Creek overlying the Prado Basin GMZ. POTW discharge that affect Prado Basin GMZ comes from upstream discharges, Carbon Canyon WRF, Western Riverside Co. RWAP, Corona WWTP-1, and IEUA RP-1 001, RP-1 002, RP-2, RP-4, and RP-5.

Table 3-8. Predictive Scenario Results – Prado Basin Management Zone

Constituent	Objective	Ambient	Assimilative Capacity	Compliance Period	MAXIMUM VALUE FOR THE VOLUME-WEIGHTED RECHARGE					
					2020 Conditions			2040 Conditions		
					Scen A (Max)	Scen B (Avg)	Scen C (Min)	Scen D (Max)	Scen E (Avg)	Scen F (Min)
	[mg/L]	[mg/L]	[mg/L]		[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]
TDS	700[1]	na[2]	none	1-year	647	634	641	664	674	669
				5-year	631	617	623	645	653	648
				10-year	623	610	614	637	643	639
				20-year	614	600	604	628	633	628
TIN	10.0[1]	na[2]	none	1-year	6.45	5.88	5.67	6.83	6.38	6.02
				5-year	6.29	5.73	5.52	6.64	6.18	5.83
				10-year	6.22	5.66	5.46	6.56	6.10	5.76
				20-year	6.14	5.59	5.39	6.48	6.02	5.69

[1] Chino Creek, Reach 1A, Chino Creek, 1B, Mill Creek (Prado Area) and Santa Ana River, Reach 3 TDS and TIN numeric objectives apply

[2] No Prado Basin ambient TDS or Nitrate as Nitrogen was computed after 1997

As shown in Tables 2 and 3 and in the graphs provided in Appendices C through H, the TDS and TIN concentrations under Scenario A through Scenario F conditions do not exceed the TDS or TIN objectives for Prado Basin GMZ. The maximum 10-year volume-weighted TDS average ranges from 610 mg/L under Scenario B conditions to 643 mg/L under Scenario E conditions. The 10-year volume weighted TIN average ranges from 5.5 mg/L under Scenario C conditions to 6.6 mg/L under Scenario D conditions.

3.1.9 Orange County Management Zone (SAR Reach 2)

TDS and TIN objectives for the Orange County GMZ are 580 mg/L and 3.4 mg/L, respectively (see Table 3-9 below). Current ambient groundwater quality is 600 mg/L for TDS and 3.0 mg/L for TIN, creating an assimilative capacity of 0.4 mg/L for TIN, but none for TDS. Annual recharge from streambed percolation and water quality was calculated for SAR Reach 2 overlying the Orange County GMZ. POTW discharges affecting the Orange County GMZ come largely from upgradient sources, and from USACE dewatering discharge under 2020 conditions (Scenarios A-C only).

Table 3-9. Predictive Scenario Results – Orange County Management Zone

Constituent	Objective	Ambient	Assimilative Capacity	Compliance Period	MAXIMUM VALUE FOR THE VOLUME-WEIGHTED RECHARGE					
					2020 Conditions			2040 Conditions		
					Scen A (Max)	Scen B (Avg)	Scen C (Min)	Scen D (Max)	Scen E (Avg)	Scen F (Min)
	[mg/L]	[mg/L]	[mg/L]		[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]
TDS	580	600	none	1-year	558	285	283	***612***	313	289
				5-year	432	274	268	492	290	274
				10-year	400	271	263	439	281	272
				20-year	389	269	261	423	280	268
TIN	3.4	3.0	0.4	1-year	2.57	0.89	0.87	***3.25***	1.01	0.84
				5-year	1.76	0.85	0.82	2.36	0.85	0.80
				10-year	1.53	0.82	0.78	1.94	0.83	0.78
				20-year	1.46	0.77	0.72	1.85	0.79	0.72

Note: Bold black values represent concentrations above ambient groundwater quality, but below the objective. Bold blue values represent concentrations above the basin objective.

As shown in Tables 2 and 3 and in the graphs provided in Appendices C through H, TDS concentrations rise above the basin objective under Scenario D conditions for only the maximum 1-year volume-weighted TDS average. All other scenario conditions do not exceed the TDS objectives for Orange County GMZ. The maximum 10-year volume-weighted TDS average ranges from 263 mg/L under Scenario C to 439 mg/L under Scenario D conditions. Similarly, TIN concentrations rise above the ambient concentration only under Scenario D conditions for the maximum 1-year volume-weighted TIN average. All other scenario conditions do not exceed the TIN objectives for Orange County GMZ. The 10-year volume weighted TIN average ranges from 0.8 mg/L under Scenario B, C, E, and F conditions to 1.9 mg/L under Scenario D conditions.

3.2 Surface Water Flow

The TDS and TIN concentrations of surface water were also evaluated in two locations: at the SAR below Prado Dam and SAR at Santa Ana. Traditionally, the quality of streamflow below Prado Dam has been used as an indication of the quality of recharge in the Orange County GMZ. Annual water quality measurements are reported in the Annual Report of the Santa Ana River Water Quality (SAWPA, 2017).

Predicted water quality results from the scenario runs for surface water below Prado Dam and at Santa Ana are presented in attached Tables 2 and 3, while charts and summary tables are provided in Appendices C through H. The results are also summarized in the following sections.

3.2.1 Santa Ana River below Prado Dam

Surface water flow and quality in the SAR below Prado Dam was compared to Reach 3 (August Only) and Reach 2 (5-year moving average of the 1-year volume-weighted average) surface water objectives. The August only objectives for Reach 3 are 700 mg/L for TDS and 10.0 mg/L for TIN (see Table 3-10 below). Current ambient surface water quality, as measured from September 2016 grab samples (SAWPA, 2017), is 550 mg/L for TDS and 2.1 mg/L for TIN. For Reach 2, the 5-year moving average objective for TDS is 650 mg/L while the ambient water quality, as reported by the SAR Watermaster for WYs 2012 through 2016, is 573 mg/L. There are currently no objectives or ambient surface water concentrations for Reach 2. The Regional Board does not currently recognize the existence of assimilative capacity for TDS or TIN in the SAR.

Table 3-10. Predictive Scenario Results – Santa Ana River below Prado Dam

Constituent	Objective	Ambient	Assimilative Capacity	Compliance Period	MAXIMUM VALUE FOR THE VOLUME-WEIGHTED DISCHARGE					
					2020 Conditions			2040 Conditions		
					Scen A (Max)	Scen B (Avg)	Scen C (Min)	Scen D (Max)	Scen E (Avg)	Scen F (Min)
	[mg/L]	[mg/L]	[mg/L]		[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]
TDS	700	550[1]	na[2]	August Only (Reach 3)	**677**	***714***	**675**	**689**	***764***	***753***
	650[3]	573[4]	na[2]	5-year moving average of the 1-year volume-weighted average (Reach 2)	560	431	321	**579**	462	341
TIN	10.0	2.1[1]	na[2]	August Only (Reach 3)	**6.96**	**5.59**	**4.42**	**7.11**	**6.11**	**4.76**
	na	na	na[2]	5-year moving average of the 1-year volume-weighted average (Reach 2)	5.79	3.56	2.39	6.04	3.91	2.54

Note: Bold black values represent concentrations above ambient groundwater quality, but below the objective. Bold blue values represent concentrations above the basin objective.

[1] As measured from grab samples from the Santa Ana River below Prado Dam in August and September 2016 (SAWPA, 2017)

[2] Currently, the Regional Board does not recognize the existence of assimilative capacity for TDS or TIN in the Santa Ana River

[3] 5-year moving average

[4] 5-year moving average of the annual flow-weighted average TDS concentration of total flow of the Santa Ana River below Prado Dam as reported by the Santa Ana River Watermaster for water years 2011/12-2015/16.

As shown, the maximum August only TDS concentration for volume-weighted discharge exceeds the Reach 3 objective under Scenarios B, E, and F conditions, and is above the ambient under Scenarios A, C, and D condition. The 5-year moving average of the 1-year volume-weighted average TDS meets Reach 2 objectives, but is over the ambient under Scenario D conditions. August only maximum TIN concentrations exceed the ambient surface water quality under all scenario conditions.

3.2.2 Santa Ana River at Santa Ana

Surface water flow and quality was also evaluated in the SAR at Santa Ana. For the SAR Reach 2, the 5-year moving average objective for TDS is 650 mg/L while the ambient water quality, as reported by the SAR Watermaster for WYs 2012 through 2016, is 573 mg/L. There are currently no objectives or ambient surface water concentrations for Reach 2. The Regional Board does not currently recognize the existence of assimilative capacity for TDS or TIN in the SAR.

Table 3-11. Predictive Scenario Results – Santa Ana River at Santa Ana

Constituent	Objective	Ambient	Assimilative Capacity	Compliance Period	MAXIMUM VALUE FOR THE VOLUME-WEIGHTED DISCHARGE					
					2020 Conditions			2040 Conditions		
					Scen A (Max)	Scen B (Avg)	Scen C (Min)	Scen D (Max)	Scen E (Avg)	Scen F (Min)
	[mg/L]	[mg/L]	[mg/L]		[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]	[mg/L]
TDS	650[1]	573[2]	na[3]	5-year moving average of the 1-year volume-weighted average (Reach 2)	464	275	270	493	310	283
TIN	na	na	na[3]	5-year moving average of the 1-year volume-weighted average (Reach 2)	2.55	1.05	0.91	3.15	1.37	1.06

Note: Bold black values represent concentrations above ambient groundwater quality, but below the objective. Bold blue values represent concentrations above the basin objective.

[1] 5-year moving average

[2] 5-year moving average of the annual flow-weighted average TDS concentration of total flow of the Santa Ana River below Prado Dam as reported by the Santa Ana River Watermaster for water years 2011/12-2015/16.

[3] Currently, the Regional Board does not recognize the existence of assimilative capacity for TDS or Nitrogen in the Santa Ana River

As shown, the 5-year moving average of the 1-year volume-weighted average TDS and TIN concentrations at Santa Ana do not exceed surface water objectives in Reach 2 of the SAR.

4.0 SUMMARY

The calibrated 2017 WLAM HSPF was used to run predictive scenario runs to evaluate water quality in major stream segments for maximum, average, and minimum expected discharges under 2020 and 2040 conditions. The scenario runs covered the 67-year hydrologic period from October 1949 (WY 1950) through September 2016 (WY 2016). Flow-weighted average TDS and TIN concentrations were evaluated over various time periods, including 1-year, 5-year, 10-year, 20-year, and 67-year. Each of these time periods is useful for evaluating possible compliance, depending on the planning objective. The 10-year compliance period is particularly useful for identifying possible future compliance issues because it represents a period of time that is typically long enough to cover one meteorological cycle (i.e., contains both wet and dry periods).

In general, the predictive model scenarios show:

- TDS and TIN concentrations under Scenario A through Scenario F conditions do not exceed the TDS or TIN objectives or ambient groundwater quality for the Beaumont GMZ, Chino-South GMZ, Upper Temescal Valley GMZ, and Prado Basin GMZ.
- In the San Timoteo GMZ, TDS concentrations under Scenario A through Scenario F conditions do not exceed the basin objectives. However, water recharged in the San Timoteo GMZ from Coopers Creek and San Timoteo Creek Reaches 2, 3, and 4 causes TIN concentrations to rise above ambient groundwater concentrations, but below basin objectives.
- TIN concentrations under Scenario A through Scenario F conditions do not exceed the TIN objectives for Bunker Hill-B GMZ. However, some of the maximum 1-year volume-weighted average TDS concentrations do exceed TDS objectives and ambient quality. In addition, some of the maximum 5-year and 10-year volume-weighted average TDS concentrations exceed ambient concentrations under Scenarios A and D conditions (i.e., maximum expected discharge).
- In the Riverside-A GMZ, TDS concentrations under Scenario A through Scenario F conditions do not exceed the TDS objectives. However, all of the maximum 1-year volume-weighted average TIN concentrations exceed TIN objectives, along with the maximum 5-year concentrations under maximum expected discharge conditions (Scenarios A and D).
- TDS degradation in the Orange County GMZ occurs under Scenario D conditions for only the maximum 1-year volume-weighted TDS average. All other scenario conditions do not exceed the TDS objectives. TIN concentrations rise above the ambient concentration only under Scenario D conditions for the maximum 1-year volume-weighted TIN average.

- In the SAR below Prado Dam, the maximum August only TDS concentration for volume-weighted discharge exceeds the Reach 3 objective under Scenarios B, E, and F conditions and is above the ambient under Scenarios A, C, and D condition. The 5-year moving average of the 1-year volume-weighted average TDS meets Reach 2 objectives, but is over the ambient under Scenario D conditions. August only maximum TIN concentrations exceed the ambient surface water quality under all scenario conditions.
- The 5-year moving average of the 1-year volume-weighted average TDS and TIN concentrations at Santa Ana do not exceed surface water objectives in Reach 2 of the SAR.

5.0 REFERENCES

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Operational Updates

Yucaipa Valley Water District

Yucaipa Valley Water District

Workshop Memorandum 18-232

Date: October 9, 2018

Prepared By: Matthew Porras, Implementation Manager

Subject: Overview of a Successful Grant Funding Opportunity and Status Report of the Automated Meter Infrastructure (AMI) Installation Forecast

On October 2, 2018, the District was informed by the US Bureau of Reclamation that we were one of 54 agencies to receive a grant for improving our water efficiency.

In California, only four agencies received the maximum grant of $1 million from the Bureau of Reclamation. Those agencies include: Los Angeles County (2 - $1 million grants); Merced Irrigation District; City of San Diego; and Yucaipa Valley Water District.

The District will use the $1 million grant to fully install and activate the Advanced Meter Infrastructure (AMI) so all of our water meters will be able to transmit water consumption data and allow for remote meter reading. The data from this AMI system will significantly improve our water use efficiency and provide our customers with more information to identify leaks.

Project Status: The installation of three strategically located base-stations is now essentially complete. Two of the three locations had existing electrical service and are fully operational. The third location will need an electrical service to make the base-station operational, a project that is currently being designed. The District staff is making the installations of the endpoint equipment to remotely read water meters throughout the service area.

Endpoint Installation: The endpoint is comprised of two pieces, the AMI capable meter and the radio transceiver. To complete the installation of the radio transceiver, the meter box is modified to accommodate a flush mount configuration. The service area has approximately 40% of the AMI capable meters already installed and will just need a radio transceiver and meter box lid modification (Retro-Fit). The remaining water services that do not already have an AMI capable meter installed will receive an AMI capable meter, radio transceiver, and meter box lid modification (Replacement). All endpoints are programmed at the time of installation to eliminate an additional step of completion. District staff is currently performing the endpoint installations and the following table reflects the progress of the project.

Yucaipa Valley Water District - Actual AMI Meter Appurtenance Quantities							
Action	**Description**	**Part**	**2018**				
			Q-1	Q-2	Q-3	Q-4	**2018 Totals**
New Homes	1" Fire Service Meters (Drinking Water)	1" FS iPearl	0	44	39	0	
	3/4" Irrigation Meter (Recycled Water)	3/4" iPearl	0	0	2	0	
	Radio Transceiver	520M Dual Port	0	44	115	0	
Retro-Fit	Radio Transceiver	520M Dual Port	0	745	185	0	
Replacement	3/4" Drinking Water Meter	3/4" iPearl	0	69	33	0	
	Radio Transceiver	520M Dual Port	0	69	33	0	
Other	Larger Meter with Radio	520M Dual Port	0	2	2	0	
Totals	1" Fire Service iPearl		0	44	39	0	**83**
	3/4" iPearl		0	69	35	0	**104**
	520M Dual Port Radio		0	860	333	0	**1193**
	Other		0	2	2	0	**4**
	Total Installations		**0**	**862**	**409**	0	**1271**
	Installation Target		450	450	450	450	**1800**
Notes:	The values assigned herein are the actual quantities installed.						

Project Projections (Without Grant Funding): The task of installing 12,600 endpoints will take approximately seven (7) years if the District staff installs 1,800 endpoints per year, 150 per month.

Updated Project Projections (With Grant Funding): The timeline of the project will be re-evaluated with the additional funding from the WaterSMART grant. Once District staff meets with the Bureau of Reclamation and further defines the applicable items for funding, District staff will provide options and recommendations to expedite the project.

Financial Consideration: Funding for this project will be from the Water Fund, Infrastructure Reserves [GL Account #02-10311]. This project is included in the 2018-19 budget as a Capital Improvement Project. There is sufficient funding available in the reserve fund listed above.

Additional Federal Funding: This project has been selected for grant funding from the Bureau of Reclamation. The successful application of this project to the WaterSMART Water and Energy Efficiency grant qualifies the District to receive financial assistance in the amount of $1,000,000 for the Advanced Metering Infrastructure Project costs.

United States Department of the Interior

BUREAU OF RECLAMATION
PO Box 25007
Denver, Colorado 80225-0007

IN REPLY REFER TO

84-27814
1.3.11

October 2, 2018

VIA ELECTRONIC MAIL

Yucaipa Valley Water District
Attn: Mrs. Kathryn Hallberg
12770 Second Street
Yucaipa, CA 92399

Subject: Funding Opportunity Announcement (FOA) No. BOR-DO-18-F006 – WaterSMART: Water and Energy Efficiency Grants for Fiscal Year (FY) 2018 – Application Review Status, Your Application Titled, "Yucaipa Valley Water District: Advanced Metering Infrastructure Project"

Dear Ms. Hallberg:

Thank you for submitting a WaterSMART Water and Energy Efficiency Grant application. The Bureau of Reclamation is pleased to inform you that your application was among those receiving the highest ratings and is now being considered for award of a financial assistance agreement. Your application included a request for $1,000,000 to complete your proposal titled "Yucaipa Valley Water District: Advanced Metering Infrastructure Project." Reclamation anticipates awarding Federal funds in the full amount of $1,000,000 for your proposed project with FY 2018 appropriations. In working with you to develop your financial assistance agreement, Reclamation will closely review the activities outlined in your proposal to ensure that all activities are eligible for funding and that the proposed costs are allowable under financial assistance regulations. If some costs or activities are determined to be ineligible or unallowable, Reclamation will work with you to refine the scope of work and budget for the project.

Please note that this letter is not a final commitment of funding. A financial assistance agreement will not be executed, and funds will not be awarded until further information about your project is developed and all statutory and regulatory requirements have been met as described in Section E.2.5 of the FOA. In addition, Reclamation must have sufficient evidence prior to award that non-Federal cost share will be available. The final funding amount for each year of the project may be adjusted if necessary.

Please note that for costs, including pre-award costs, to be eligible for inclusion in the agreement, the costs must meet the applicable administrative and cost principles criteria established in 2 Code of Federal Regulations (CFR) Part 200. In particular, the procurement of goods and/or services must be compliant with the Procurement Standards (2 CFR §200.317 through §200.326) and contract costs must be compliant with 2 CFR §200.323 – Contract Cost and Price. A copy of the Procurement Standards, which include the contract cost and price regulations, and Appendix II from 2 CFR Part 200, which identifies mandatory contract content, are attached for your reference. The Federal financial assistance regulations can be found online at www.ecfr.gov.

Federal statute (42 U.S.C. 10364(a)(3)(B)) requires that before any funds are awarded, you agree not to use any water savings resulting from your proposed project to increase your total irrigated acreage or to otherwise increase the consumptive use of water in your operations. This requirement, which was

discussed in Section F.2.3 of the FOA, will be included in the financial assistance agreement for your project.

Please be advised that your application has been ranked, in part, based on your description of the expected benefits of your project and the non-Federal cost share percentage identified in your application. Selection criteria placed an emphasis on conserving and using water more efficiently; increasing the production of hydropower; mitigating conflict risk in areas at a high risk of future water conflict; and accomplishing other benefits that contribute to water supply reliability in the western United States. Revisions to the scope of the project or changes to the non-Federal cost share percentage identified in your application can be made only after Reclamation determines that revisions would not impact the overall ranking or the expected benefits of the project.

In addition, please be advised that as stated in Section F.4 of the FOA, we intend to post copies of successful Water and Energy Efficiency Grant applications as examples on Reclamation's website. While this generally does not raise any issues, we find it prudent to provide successful grant applicants with an opportunity to redact any sensitive information from their proposals prior to posting them on our website. As a rule, we remove the SF-424s; however, if there are any other items you would like to request be redacted, please let me know by Friday, November 2, 2018. Should we not hear from you by this date we will assume that there are no objections to posting the full application.

Thank you for your interest and participation in the WaterSMART Grants Program. If you have any questions about the program, please contact Ms. Robin Graber, Program Analyst, at rgraber@usbr.gov or 303-445-2764. We will contact you later in the fall of 2018 to set up an initial call to discuss the timeline for the development and award of your financial assistance agreement.

Sincerely,

Irene M. Hoiby
Grants Officer

Development Projects

Yucaipa Valley Water District

Yucaipa Valley Water District

Workshop Memorandum 18-233

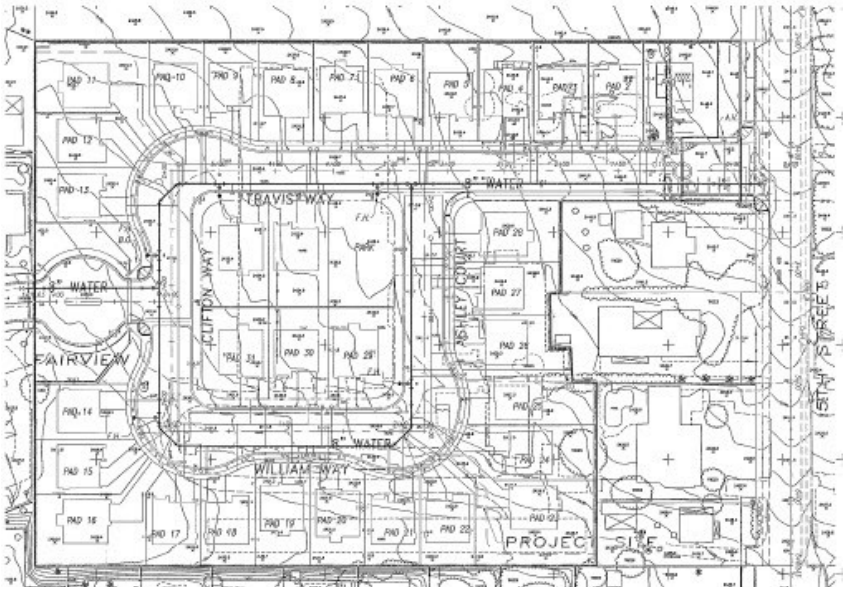
Date: October 9, 2018

Prepared By: Dustin Hochreiter, Senior Engineering Technician
Chelsie Fogus, Engineering Technician I

Subject: Overview of a Draft Development Agreement for Drinking Water and Sewer Service to Property Located on the West side of 5th Street Between Avenue E and Wildwood Canyon Road, Yucaipa - Tentative Map No. 17031 – Lafferty Communities

On May 16, 2007 the District entered into a Development Agreement with Yucaipa Villas, LLC for water, sewer and recycled water service. Potable water and sewer infrastructure installation took place, but the project was never completed.

District staff is working together with Lafferty Communities for the development of thirty-three (33) detached condominium units and a clubhouse on 5.75 acres on 5th Street between Avenue E and Wildwood Canyon Road. This project will be served drinking water and sewer service by the Yucaipa Valley Water District. District staff is in the process of preparing a development agreement to document the terms and conditions for potable water and sewer service to this project.



AGREEMENT TO PROVIDE DRINKING WATER, RECYCLED WATER AND SEWER SERVICE TO TRACT NUMBER 17031 (33 LOTS) IN THE CITY OF YUCAIPA, COUNTY OF SAN BERNARDINO

This Agreement is made and effective this 16th day of October 2018, by and between the Yucaipa Valley Water District, a public agency ("District") and Lafferty Communities ("Developer"). Each is sometimes referred to herein as a "Party" and jointly as the "Parties".

Project File(s)	Work Order(s)
P-65-240	# 65-12508

For contractual issues, the Parties are represented by the following responsible individuals authorized to execute this Agreement:

District	Developer
Yucaipa Valley Water District	Lafferty Communities
12770 Second Street	8213 White Oak Ave.
Post Office Box 730	Rancho Cucamonga, CA 91730
Yucaipa, California 92399	Attention: Jim Didion
Attention: Joseph Zoba, General Manager	Telephone: (909) 240-0735
Telephone: (909) 797-5119 x2	Email: jdidion@laffertycommunities.com
Email: jzoba@yvwd.us	

The Developer has represented to the District that they are the owner of the following parcel(s) which is/are the subject of this Agreement and described herein as the "Property":

Assessor Parcel Numbers	City / County
318-174-22	Yucaipa / San Bernardino

RECITALS

WHEREAS, the Developer desires to develop its Property situated within the service area of the District consisting of a development with a total of 33 lots; and

WHEREAS, the Developer has provided plans, drawings, and/or concepts to the District to construct the proposed "Project" as shown on Exhibit A attached hereto; and

WHEREAS, the Developer desires to obtain drinking water, recycled water and sewer service from the District for the Project in accordance with the current Rules, Regulations, and Policies of the District; and General Construction Conditions as provided in Exhibit B attached hereto; and

WHEREAS, it is the purpose of this Agreement to set forth the terms and conditions by which the District will provide service to the Project.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the Developer and the District agree as follows:

A. **Project Overview.** The proposed development of the Tract Map Number 17031 consists of 31 single family residences on approximately 5.75 acres. The project will not consist of dual plumed homes but will be served recycled water for some irrigation purposes. The project at APN 318-174-22 which is located on the west side of 5th St, between Wildwood Canyon Road and Avenue E in the City of Yucaipa, San Bernardino County, (the "Property"). The proposed development of the Property will not include phased construction. The project will receive drinking water, recycled water and sewer service from the Yucaipa Valley Water District.

The Yucaipa Valley Water District has been involved in the review process for this project and has established the following development related project files: P-65-240, Work Order 65-12508

B. **Special Conditions.** In addition to the General Construction Conditions attached hereto as Exhibit B, the following conditions, being contained herein, are hereby required by the District for the Developer to receive service for the Project.

1. Project Specific Drinking Water Conditions: The Project will be served drinking water from Yucaipa Valley Water District. The Developer shall provide approved drinking water plans, specifications, and construction drawings to Yucaipa Valley Water District for review and identification of potential utility conflicts prior to activation of water service for the Project

2. Project Specific Recycled Water Conditions: The Project will receive recycled water from Yucaipa Valley Water District. The Developer shall provide approved drinking water plans, specifications, and construction drawings to Yucaipa Valley Water District for review and identification of potential utility conflicts prior to activation of water service for the Project.

3. Project Specific Sewer Conditions: The Project will receive sewer service from the Yucaipa Valley Water District. The Developer shall design and construct, at its sole cost and expense, on-site and/or off-site sewer infrastructure ("Facilities") pursuant to District approved plans and requirements.

   a. The Yucaipa Valley Water District will not provide sewer service to the Project until all sewer infrastructure is completed, pressure tested and accepted by the District.

   b. Developer shall pay all applicable rates, fees, and charges as required herein and in effect at the time sewer service is activated to any portion of the Project.

4. Project Specific Stormwater Conditions. The City of Yucaipa and/or the County of San Bernardino will retain responsibility and authority for stormwater related to the Project. The Developer shall provide, at its sole cost and expense, approved plans, specifications, and construction drawings to the District for review and identification of onsite stormwater collection facilities and retention basins and the District will review such plans, specifications and drawings to ensure that the Facilities will not interfere with existing District infrastructure and/or the stormwater facilities.

5. Project Specific Conditions. The Developer, at its sole cost and expense, shall design and construct all Facilities and related appurtenances pursuant to the District approved plans and construction drawings to serve the Project.

   a. The District will not provide drinking water, recycled water or sewer service to the Project until the necessary infrastructure is completed and accepted by the District to provide service to each lot.

   b. Project phases will be coordinated and approved in writing by the District staff.

   c. The Developer shall provide electronic design drawings of parcels and infrastructure in native AutoCAD file formats consistent with existing District enterprise systems prior to receiving occupancy.

   d. Facilities located in easements shall be protected pursuant to District requirements.

6. Rates, Fees and Charges.

   a. The most current rates, fees and charges will be payable pursuant to the Resolution/Ordinance in effect at the time building permits are issued or renewed for each lot.

7. Project Related Invoices. Pursuant to Exhibit B - Design and Construction Requirements, Section O, the Developer agrees to deposit funds in the amount of $25,000 with the District within 10 business days following the District's approval of this Agreement. The Developer acknowledges and hereby agrees that the District is authorized, from time-to-time, to reimburse itself from the funds on deposit for Project costs incurred and that the District will not release any structure for occupancy unless there is a minimum balance of $5,000 in the Project Cash Account.

8. Ownership; Operation and Maintenance. Once constructed and accepted by the District, title to the Facilities (excluding private, on-site Facilities) will be conveyed by the Developer to the District, and the District will operate and maintain the Facilities and provide service to the Developer's Property in accordance with the District's Rules, Regulations and Policies and the provisions of this Agreement.

9. Easements, Dedications, and Recorded Documentation: All easements, dedications, and recorded documentation required by the District shall be provided by the Developer to the District prior to the release of occupancy of any structure within the Project.

10. Annexation. This Project is located within the service area of the District, so an annexation is not required.

11. Annual Review of Construction Drawings. The District requires an annual review of approved construction drawings related to this Project. The District will not charge the Developer for the annual construction drawing review. However, the Developer will be required to update and resubmit construction drawings based on comments provided by the District at the sole cost and expense of the Developer prior to the start of construction.

12. Amendment. This Agreement may be amended, from time-to-time, by mutual agreement, in writing signed by both Parties. The District and the Developer further agree that to the extent this Agreement does not address all aspects of the Developer's Property and/or Project, the Parties will meet and confer and negotiate in good faith and execute a written amendment or supplement to this Agreement.

13. Assignment. This Agreement will not be assigned, whether in whole or in part by either Party.

14. Term and Termination of Agreement. Unless extended by mutual agreement of the parties in writing, this Agreement shall terminate at 5:00 p.m., on the day before the sixth (6th) anniversary date of this Agreement; provided, however, that this Agreement shall automatically terminate, without further liability to either party, as follows:

    a. Immediately, upon abandonment by the Developer of the Developer's Property and/or the work hereunder. "Abandonment" is defined as the act of bankruptcy or Developer's failure to improve the Property in a manner consistent with the proposed development plan within twelve months of the effective date of this Agreement; and/or

    b. Within 45 days of the date of the issuance of a Notice of Default by the District to the Developer in the event, the Developer fails or refuses to perform, keep or observe any of the terms, conditions or covenants set forth in this Agreement.

IN WITNESS WHEREOF, the parties have executed is Agreement to be effective on the day and year first above written.

YUCAIPA VALLEY WATER DISTRICT

Dated: _____ By: _____
Jay Bogh, President

DEVELOPER

Dated: _____ By: _____

Print Name: _____

Print Title: _____

Attachments	Status
Exhibit A - Proposed Development Concept	Included
Exhibit B - General Construction Conditions	Included
Exhibit C - Transfer of Overlying Water Rights	Not Included

Exhibit A - Proposed Development Concept

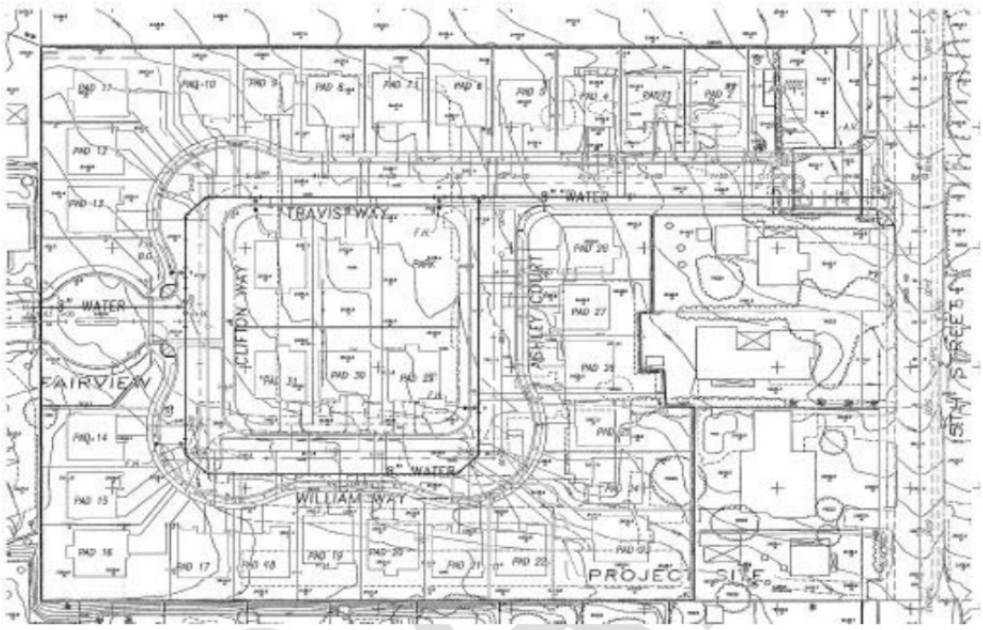


Exhibit B - General Construction Conditions

DESIGN AND CONSTRUCTION

A. Licensed Professionals. All work, labor and services performed and provided in connection with, for example, the preparation of surveys and descriptions of real property and rights-of-way, the preparation of construction specifications, plans and drawings, and the construction of all Facilities shall be performed by or under the direction of professionals appropriately licensed by the State of California and in good standing.

B. Plan Acceptance; Facility Acceptance. Upon its final review and approval of the plans and specifications ("Plans"), the District shall sign the construction drawings ("Approved Plans") indicating such approval ("Plan Acceptance"). Plans are subject to an annual review by the District and modifications will be required by the District to conform to revised construction standards and policies as part of the Plan Acceptance. The Developer shall update and resubmit the Plans for final approval by the District.

1. The Developer shall not permit, or suffer to permit, the construction of any Facility without having first obtained Plan Acceptance or completed modifications required by annual updates. In the event the Developer fails or refuses to obtain the District's Plan Acceptance, the District may refuse, in its sole discretion and without liability to the Developer, to issue its Facility Acceptance (as that term is defined below) as to such Facility when completed.

2. The Developer shall not deviate from any Approved Plans and/or specifications without the District's prior written approval.

C. Facility Inspection. All construction work shall be inspected on a timely basis by District personnel and/or by District's consultants at the sole cost of the Developer. The Developer acknowledges that the inspector(s) shall have the authority to require that any and all unacceptable materials, workmanship, construction and/or installation not in conformance with either (i) the Approved Plans, or (ii) standard practices, qualities and standards in the industry, as reasonably determined by the District, shall be replaced, repaired or corrected at Developer's sole cost and expense.

1. In the event the Developer's contractor proposes to work overtime and beyond normal business hours, the Developer shall obtain the District's approval at least 24 hours in advance so that inspection services may be appropriately scheduled. The Developer shall be solely responsible for paying all costs and expenses associated with such inspection services.

2. The District shall promptly upon request of Developer cause the final inspection of a Facility which Developer indicates is completed. If the District finds such Facilities to have been completed in conformance with the Approved Plans for which a Plan Acceptance has been issued, then the District shall issue to Developer its letter ("Facility Acceptance") indicating satisfactory completion of the Facility and District's acceptance thereof. Neither inspection nor issuance of the Facility Acceptance shall constitute a waiver by District of any claims it might have

against Developer for any defects in the work performed, the materials provided, or the Facility constructed arising during the one-year warranty period.

D. Project Coordination and Designation of Developer's Representative. The Developer shall be solely responsible for coordinating the provision of all work, labor, material and services associated with the planning, design and construction of the Facilities required for the Project.

1. The Developer shall be solely responsible for compliance with all applicable federal, state and local safety rules and regulations, and shall conduct periodic safety conferences as required by law and common sense.

2. Prior to proceeding with any Facility construction, the Developer shall schedule and conduct a preconstruction conference with the District. In the event the Developer fails or refuses to conduct any such conference, the District may refuse, in its sole discretion, to accept the Facilities constructed by the Developer.

3. The District and the Developer hereby designate the individual identified on page 1 of this Agreement as the person who shall have the authority to represent the District and Developer in matters concerning this Agreement. In order to ensure maximum continuity and coordination, the District and Developer agree not to arbitrarily remove or replace the authorized representative, but in the event of a substitution, the substituting Party shall promptly advise the other Party of such substitution, in writing.

E. District's Right to Complete Facilities. The District is hereby granted the unqualified right to complete, construct or repair all or any portion of the water and/or sewer Facilities, at Developer's sole cost and expense in the event there is a threat to the public's health, safety or welfare.

F. Construction of Connections to District Facilities. Unless otherwise agreed to in writing by the District, the District shall furnish all labor, materials and equipment necessary to construct and install connections between the Developer's Facilities and the District's water, recycled water, and sewer systems. All costs and expenses associated therewith shall be paid by the Developer.

G. Compliance with Law and District Regulations. The Developer hereby agrees that all Facilities shall be planned, designed and constructed in accordance with all applicable laws, and the District's Rules, Regulations and Policies in effect at the time of construction. The Developer shall keep fully informed of and obey all laws, rules and regulations, and shall indemnify the District against any liability arising from Developer's violation of any such law, rule or regulation.

H. Developer's Warranties. The Developer shall unconditionally guaranty, for a period of one year following the District's Facility Acceptance thereof, any and all materials and workmanship, at the Developer's sole cost and expense. The provision of temporary water service through any of the Developer's Facilities, prior to District's acceptance of same, shall not nullify nor diminish the Developer's warranty obligation, nor shall the Developer's warranty obligation be voided if the District determines, in its sole discretion, to make any emergency repairs necessary to protect the public's health, safety or welfare or to ensure

continuity of water or sewer service. The District shall notify Developer of such emergency repairs.

I. Testing and Disinfection. Upon approval by the District, the Developer, at its sole cost and expense, shall undertake and satisfactorily complete a testing program, including without limitation, compaction, cleaning, video and air testing, and pressurized and disinfection testing (drinking water Facilities), for all Facilities prior to acceptance by the District.

J. Bond Requirements. The Developer shall provide to the District, in a form satisfactory to the District, the following bonds:

1. Performance and Warranty Bond. A performance bond issued by a corporate surety or sureties licensed and permitted to do business by and within the State of California in an amount representing not less than one hundred percent (100%) of any and all construction work to be conducted or performed under this Agreement. A warranty bond issued by a corporate surety or sureties licensed and permitted to do business by and within the State of California in an amount representing not less than fifty percent (50%) of the total cost of any and all construction performed hereunder, insuring against any and all defects in the Facilities constructed hereunder, for a period of not less than one full year after the date of acceptance thereof by the District.

2. Labor and Materials Payment Bond. A labor and materials payment bond issued by a corporate surety or sureties licensed and permitted to do business by and within the State of California in an amount representing not less than one hundred percent (100%) of the total cost of any and all construction performed hereunder per California Civil Code Sections 9550 and following.

3. Miscellaneous Bond Requirements. All bonds required by this section are subject to the approval as to form and content by the General Manager and District's Legal Counsel. All bonds required by this section shall be provided by a surety that is an "admitted" surety insurer authorized to transact surety insurance in California, with assets exceeding its liabilities in the amount equal to or in excess of the amount of the bonds, and each bond shall not be in excess of ten percent (10%) of the surety insurer's assets. The bond shall be duly executed and shall meet all of the requirements of Section 995.660 of the Code of Civil Procedure.

K. Title to Facilities and Right-of-Way. Provided that the Developer's Facilities are designed and constructed as required hereunder and the District proposes to issue its Facility Acceptance, the Developer shall, concurrently with the District's Facility Acceptance, convey ownership title to all Facilities (and right-of-way, if applicable) to the District, free and clear of any and all liens and encumbrances except those that are expressly agreed to by the District. The District may require fee title or an easement, depending upon the location of the Facility through action by the Board of Directors. Upon conveyance of title, the District shall assume the responsibility of operating and maintaining the Facilities, subject to the Developer's warranty as provided herein. The Developer acknowledges and agrees that the District shall not be obligated to operate and maintain the Facilities and to provide service to and through them until all applicable conditions imposed by this

Agreement hereunder are satisfied and title to the Facilities has been conveyed and delivered to the District in recordable form.

L. Risk of Loss. Until such time as acceptance thereof by the District, and until good and marketable title to the easements, rights-of-way and Facilities are conveyed and delivered to the District in recordable form, the Developer shall be solely and completely responsible for any and all losses and/or damage of every kind or nature to the easements, rights-of-way and Facilities. In the event Developer believes the loss and/or damages arose from or are related to acts performed by the District, this provision does not preclude Developer's insurance carrier from seeking indemnity and/or reimbursement from the District.

M. Conditions Precedent to the Provision of Water and Sewer Service. Unless the District otherwise agrees in writing, the District shall not be obligated to provide any water and/or sewer service to the Developer's Property or any part thereof, including model homes, until Facility Acceptance by the District and Developer conveys to the District the right-of-way and Facilities associated with the requested service. Upon acceptance of the right-of-way and appurtenant Facilities, the District shall provide the service requested and assume the responsibility for operating and maintaining the affected Facilities. Service provided by the District shall be in accordance with its Rules, Regulations and Policies and shall be comparable in quality of service to that provided all similarly situated customers.

FEES AND CREDITS

N. Developer Fees, Charges, Costs and Expenses. The Developer shall be solely responsible for the payment to the District of all fees, charges, costs and expenses related to this Project.

O. Developer Cash Account Deposit. The Developer acknowledges and hereby agrees that the District is authorized, from time-to-time, to reimburse itself from the funds on deposit for Project costs incurred.

1. The Developer shall provide the initial deposit to the District, and maintain the minimum balance in the Cash Account for the Project as provided below:

   a. An initial deposit of $2,500 and a minimum balance of $1,000 for a Project that involves the construction of 1 to 2 proposed structures;

   b. An initial deposit of $5,000 and a minimum balance of $2,000 for a Project that involves the construction of 3 to 5 proposed structures;

   c. An initial deposit of $10,000 and a minimum balance of $3,000 for a Project that involves the construction of 6 to 20 proposed structures;

   d. An initial deposit of $25,000 and a minimum balance of $5,000 for all other Projects.

2. The initial deposit shall be received by the District within 10 business days following the District's approval of this Agreement.

3. The District shall provide a monthly accounting of how funds were disbursed.

4. The Developer agrees to deposit funds with the District within 30 calendar days upon the date an invoice is issued by the District or a Notice of Default will be issued by the District.

5. The District will not release any structure for occupancy unless the minimum balance is available to the District in the Project Cash Account.

6. Should any unexpended funds remain in the Cash Account upon completion of the Project or termination of this Agreement, then such funds shall be reimbursed to the Developer within 60 days.

P. Current Fees and Charges. In the event of a change in the District's schedule of fees and charges, such change shall automatically be incorporated into this Agreement as though set forth in full. Unless otherwise agreed to in writing by the District, the Developer shall pay, when due, the then-current amount of the applicable fee or charge.

Q. Sustainability Water. The Developer shall pay for the purchase of a quantity of imported water pursuant to the Sustainability Policy adopted by the Board of Directors as a Resolution No. 11-2008 on August 20, 2008, or the latest version with a revised quantity or fee structure. The imported water rate shall be the rate in effect at the time water is secured from the San Bernardino Valley Municipal Water District. Imported water for compliance with the Yucaipa Valley Water District's Sustainability Policy may be pre-paid to lock in the Development Sustainability fee or purchased prior to the issuance of building permits and pay the fee in effect at that time.

R. San Gorgonio Pass Water Agency Facility Capacity Charges. If the Project is within the service area of the San Gorgonio Pass Water Agency, the Developer will be required to pay the latest San Gorgonio Pass Water Agency Facility Capacity Charge as set forth by District resolution.

S. District Financial Participation; Credits. The District may agree to participate in certain Facilities for this Project. Any participation or financial contribution to construct the water and/or sewer infrastructure associated with this Project is identified in the Special Conditions at the beginning of the Agreement.

PERMITS AND DOCUMENTATION

T. Permits, Licenses and CEQA Documentation. The Developer shall be solely responsible for securing and paying for all permits and licenses necessary to develop its project. The Developer shall be solely responsible for complying with the California Environmental Quality Act under the auspices of the City and/or County within which the Property is situated. However, upon request, the Developer shall furnish to the District all relevant environmental documentation and information.

1. The Developer, at its sole cost and expense, shall be solely responsible for defending against any and all legal challenges, including but not limited to permits, licenses and CEQA documentation.

U. Documents Furnished by the Developer. The Developer shall furnish to the District documentation as required by the District specified below, within the time periods specified. Each and every document submittal shall consist of a fully executed original or certified copy (in recordable form, if applicable) and two copies.

Document(s)	Due Date
Certification of Streets to Rough Grade	Prior to Construction
City/County Encroachment Permits and Conditions	Prior to Construction
Field Engineering Surveys ("Cut Sheets")	Prior to Construction
Grant of Easements and Rights-of-Way	Prior to Construction
Labor and Materials Bond	Prior to Construction
Liability Insurance Certificate(s)	Prior to Construction
Performance Bond	Prior to Construction
Soil Compaction Tests	Prior to Acceptance
Warranty Bond	Prior to Acceptance
List of Approved Street Addresses and Assessor Parcel Numbers	Prior to Setting Meter
Notice of High/Low Water Pressure	Prior to Setting Meter
Notice of Water Pumping Facility	Prior to Construction
Mechanic's Lien Releases	Upon Request of District

NOTE: The DEVELOPER hereby acknowledges and agrees that the foregoing list is not intended to be exclusive; therefore, the DISTRICT reserves the right to request, from time-to-time, additional documents or documentation.

INSURANCE AND INDEMNIFICATION

V. Indemnification and Hold Harmless. The Developer and the District agree that the District should, to the extent permitted by law, be fully protected from any loss, injury, damage, claim, lawsuit, cost, expense, attorneys' fees, litigation costs, defense costs, court costs or any other costs arising out of or in any way related to the performance by Developer of this Agreement. Accordingly, the provisions of this indemnity provision are intended by the Parties to be interpreted and construed to provide the fullest protection possible under the law to the District, except for liability attributable to the District's intentional and/or negligent acts. Developer acknowledges that the District would not enter into this Agreement in the absence of this commitment from the Developer to indemnify and protect the District as set forth here.

Therefore, the Developer shall defend, indemnify and hold harmless the District, its employees, agents and officials, from any liability, claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, losses, expenses or costs of any kind, whether actual, alleged or threatened, actual attorneys' fees incurred by the District, court costs, interest, defense costs including expert witness fees and any other costs or expenses of any kind whatsoever without restriction or limitation incurred in relation to, as a consequence of or arising out of or in any way attributable actually, allegedly or impliedly, in whole or in part in the performance by Developer of this

Agreement. All obligations under this provision are to be paid by the Developer as incurred by the District. Notwithstanding the foregoing, the Developer shall have no obligation to defend, indemnify or hold harmless the District, its employees, agents or officials from any liability arising, in whole or in part, from the District's intentional and/or negligent acts.

W. Insurance. The Developer agrees to provide insurance in accordance with the requirements set forth here throughout the term of this Agreement. If the Developer uses existing coverage to comply with these requirements and that coverage does not meet the requirements set forth herein, the Developer agrees to amend, supplement or endorse the existing coverage to do so. The following coverages will be provided by the Developer and maintained on behalf of the District and in accordance with the requirements set forth herein.

1. Commercial General Liability Insurance (Primary) shall be provided on ISO-CGL Form No. CG 00 01 10 93. Policy limits shall be no less than $1,000,000 per occurrence for all coverages and $2,000,000 general aggregate. The District and its officials, employees and agents shall be added as additional insureds using ISO Form CG 20 10 10 93. Coverage shall apply on a primary non-contributing basis in relation to any other insurance or self-insurance, primary or excess, available to the District or any employee or agent of the District. Coverage shall not be limited to the vicarious liability or supervisory role of any additional insured. Coverage shall contain no contractors' limitation endorsement. There shall be no endorsement or modification limiting the scope of coverage for liability arising from explosion, collapse, or underground property damage.

2. Umbrella Liability Insurance (over Primary) shall apply to bodily injury/property damage, personal injury/advertising injury, at a minimum, and shall include a "drop down" provision providing primary coverage above a maximum $25,000 self-insured retention for liability not covered by primary policies but covered by the umbrella policy. Coverage shall be following form to any underlying coverage. Coverage shall be provided on a "pay on behalf" basis, with defense costs payable in addition to policy limits. There shall be no cross-liability exclusion and no contractor's limitation endorsement. Policy limits shall be not less than $1,000,000 per occurrence and $1,000,000 in the aggregate, above any limits required in the underlying policies. The policy shall have starting and ending dates concurrent with the underlying coverages.

3. Workers' Compensation/Employer's Liability shall provide workers' compensation statutory benefits as required by law. Employer's liability limits shall be no less than $1,000,000 per accident or disease. Employer's liability coverage shall be scheduled under any umbrella policy described above. Unless otherwise agreed, this policy shall be endorsed to waive any right of subrogation as respects the District, its employees or agents.

4. The Developer and the District further agree as follows:

   a. All insurance coverage provided pursuant to this Agreement shall not prohibit the Developer, and the Developer's employees or agents, from waiving the right of subrogation prior to a loss. The Developer waives its right of subrogation against the District.

b. Unless otherwise approved by the District in writing, the Developer's insurance shall be written by insurers authorized to do business in the State of California and with a minimum "Best's" Insurance Guide rating of "A:VII". Self-insurance will not be considered to comply with these insurance specifications.

c. The Developer agrees to provide evidence of the insurance required herein, satisfactory to the District, consisting of certificate(s) of insurance evidencing all of the coverages required and an additional insured endorsement to the Developer's general liability and umbrella liability policies. Certificate(s) are to reflect that the insurer will provide 30 days' notice of any cancellation of coverage. The Developer agrees to require its insurer to modify such certificate(s) to delete any exculpatory wording stating that failure of the insurer to mail written notice of cancellation imposes no obligation, and to delete the word "endeavor" with regard to any notice provisions. The Developer agrees to provide complete certified copies of policies to the District within 10 days of the District's request for such copies.

d. In the event of any loss that is not insured due to the failure of the Developer to comply with these requirements, the Developer agrees to be responsible for any all losses, claims, suits, damages, defense obligations and liability of any kind attributed to the District, or the District's officials, employees and agents as a result of such failure.

e. The Developer agrees not to attempt to avoid its defense and indemnity obligations to the District and its employees, agents and officials by using as defense the Developer's statutory immunity under workers' compensation and similar statutes.

MISCELLANEOUS PROVISIONS

X. Status of the Parties. This Agreement is not intended to create, and nothing herein contained shall be construed to create, an association, a trust, a joint venture, a partnership or other entity of any kind, or to constitute either party as the agent, employee or partner of the other.

Y. Force Majeure. If either the District or the Developer is delayed, hindered or prevented from performing any term of this Agreement by any cause beyond either party's control including, without limitation, any strike, walkout, prohibitions imposed by law, rules or regulations, riot, war, act of God or the default of the other party, then such performance may be excused or the time of performance tolled during the period of delay.

Z. Incorporation of Prior Agreements. This Agreement contains all of the agreements of the parties with respect to any matter covered or mentioned in this Agreement, and no prior agreement or understanding pertaining to any such matter shall be effective for any purpose.

AA. Waiver. No waiver by either Party of any provisions of this Agreement shall be deemed to be a waiver of any other provision hereof or of any subsequent breach by either Party of the same or any other provisions.

BB. Severance. If any provision of this Agreement is determined to be void by any court of competent jurisdiction then such determination shall not affect any other provision of this Agreement provided that the purpose of this Agreement is not frustrated.

CC. Disclaimer. Utilizing fees and Facilities provided to the District by the Developer, the District will supply sewer collection and treatment services to the Developer's Property and Project, however, the District shall not be obligated to utilize public funds to subsidize the Project.

DD. Water Supply Availability. The District does not guarantee water supply availability and shall not be required to authorize the issuance of grading, building, or occupancy permits during the period of time that the State of California and/or the Board of Directors have declared a water supply reduction of 20% or greater for a specific portion or all of the District's service area.

EE. Preparation of This Agreement. This Agreement shall not be construed against the Party preparing it but shall be construed as if both Parties prepared it.

FF. Alternative Dispute Resolution. Any dispute as to the construction, interpretation or implementation of this Agreement, or any rights or obligations hereunder, shall be submitted to mediation. Unless the Parties enter into a written stipulation to the contrary, prior to the filing of any complaint to initiate legal action, all disputes shall first be submitted to non-binding mediation, conducted by the Judicial Arbitration and Mediation Services, Inc./Endispute, or its successor, or any other neutral, impartial mediation service that the Parties mutually agree upon in accordance with its rules for such mediation. Mediation fees shall be shared equally by the DEVELOPER and the DISTRICT.

END OF SECTION

Yucaipa Valley Water District

Workshop Memorandum 18-234

Date: October 9, 2018

Prepared By: Dustin Hochreiter, Senior Engineering Technician
Chelsie Fogus, Engineering Technician I

Subject: Overview of a Draft Development Agreement for Drinking Water and Sewer Service to Property Located North of Avenue E, between Douglas Street and Fremont Street, Yucaipa - Tentative Map No. 19901 – Pacific Horizon Homes

On November 1, 2016 the District entered into a Development Agreement with MBTK Homes, LLC for water, sewer, and recycled water service. This project was never built and is now in the process of being purchased by Pacific Horizon Builders, Inc.

District staff is working together with Pacific Horizon Homes for the development of 21 single family residences on 12.78 acres located north of Avenue E between Douglas Street and Fremont Street. This project will be served potable water and sewer by the Yucaipa Valley Water District. District staff is in the process of preparing a development agreement to document the terms and conditions for potable water and sewer service to this project.

AGREEMENT TO PROVIDE DRINKING WATER AND SEWER SERVICE TO TRACT NUMBER 19901 (21 LOTS) IN THE CITY OF YUCAIPA, COUNTY OF SAN BERNARDINO

This Agreement is made and effective this 16th day of October 2018, by and between the Yucaipa Valley Water District, a public agency ("District") and Pacific Horizon Builders, Inc. ("Developer"). Each is sometimes referred to herein as a "Party" and jointly as the "Parties".

Project File(s)	Work Order(s)
P-65-317	# 65-22245

For contractual issues, the Parties are represented by the following responsible individuals authorized to execute this Agreement:

District	Developer
Yucaipa Valley Water District	Pacific Horizon Builders, Inc.
12770 Second Street	420 North McKinley Street
Post Office Box 730	Suite 111-401
Yucaipa, California 92399	Corona, California 92879
Attention: Joseph Zoba, General Manager	Attention: David L. Klein
Telephone: (909) 797-5119 x2	Telephone: (951) 218-2121
Email: jzoba@yvwd.us	Email: Dklein@pbhhomes.com

The Developer has represented to the District that they are the owner of the following parcel(s) which is/are the subject of this Agreement and described herein as the "Property":

Assessor Parcel Numbers	City / County
322-083-42 322-083-43 322-083-69 322-083-71	Yucaipa / San Bernardino

RECITALS

WHEREAS, the Developer desires to develop its Property situated within the service area of the District consisting of a development with a total of 21 lots; and

WHEREAS, the Developer has provided plans, drawings, and/or concepts to the District to construct the proposed "Project" as shown on Exhibit A attached hereto; and

WHEREAS, the Developer desires to obtain drinking water and sewer service from the District for the Project in accordance with the current Rules, Regulations, and Policies of the District; and General Construction Conditions as provided in Exhibit B attached hereto; and

WHEREAS, it is the purpose of this Agreement to set forth the terms and conditions by which the District will provide service to the Project.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the Developer and the District agree as follows:

A. **Project Overview.** The proposed development of the Tract Map Number 19901 consists of 21 single family residences on approximately 12.78 acres. The project consists of APN's 0322-083-42, 0322-083-43, 0322-083-69 and 0322-083-71 which are located to the north of Avenue E, between Douglas Street and Fremont Street in the City of Yucaipa, San Bernardino County, (the "Property"). The proposed development of the Property will not include phased construction. The project will receive drinking water and sewer service from the Yucaipa Valley Water District.

The Yucaipa Valley Water District has been involved in the review process for this project and has established the following development related project files: P-65-317, Work Order 65-22245

B. **Special Conditions.** In addition to the General Construction Conditions attached hereto as Exhibit B, the following conditions, being contained herein, are hereby required by the District for the Developer to receive service for the Project.

1. Project Specific Drinking Water Conditions: A Zone 15 potable water pipeline exists within both Douglas Street and Fremont Street fronting the westerly and easterly boundaries of Tract Map 19901. The DEVELOPER shall design and construct a new 8-inch minimum ductile iron pipeline or of suitable size greater than 8-inch, for potable water service and fire flow protection, to be connected to both of these pipelines and extended into and through Tract Map 19901 to serve the individual parcels.

2. Project Specific Recycled Water Conditions: The Project will not receive recycled water service from Yucaipa Valley Water District.

   The General Construction Conditions related to recycled water within Exhibit B are not applicable to this Project.

3. Project Specific Sewer Conditions: The Project will receive sewer service from the Yucaipa Valley Water District. The Developer shall design and construct, at its sole cost and expense, on-site and/or off-site sewer infrastructure ("Facilities") pursuant to District approved plans and requirements.

   a. The Yucaipa Valley Water District will not provide sewer service to the Project until all sewer infrastructure is completed, pressure tested and accepted by the District.

   b. Developer shall pay all applicable rates, fees, and charges as required herein and in effect at the time sewer service is activated to any portion of the Project.

4. Project Specific Stormwater Conditions. The City of Yucaipa and/or the County of San Bernardino will retain responsibility and authority for stormwater related to the Project. The Developer shall provide, at its sole cost and expense, approved plans, specifications, and construction drawings to the District for review and identification of onsite stormwater collection facilities and retention basins and the District will review such plans, specifications and drawings to ensure that the Facilities will not interfere with existing District infrastructure and/or the stormwater facilities.

5. Previously Constructed Facilities: There are multiple service connections between water and sewer that were used or installed to serve the original parent parcels of this project. The following is a list of those items and their respective requirements;

   a. 12437 Douglas Street (APN: 0322-083-71) has an existing water service line that the DISTRICT has no record of being paid for or used. There is also a sewer lateral shown on the DISTRICT Sewer Plan A.D. No. 4, sheet 4 of 26 that was previously connected to on October 27, 1988, and then disconnected at the public right-of-way on April 8, 1994. The DEVELOPER shall abandon both service laterals pursuant to DISTRICT standards at their serving main connection locations. This parent parcel has 1 (EDU) sewer credit that will be applied towards the first development impact fees due at the time of building permit for Tract 19901.

   b. 12453 Douglas Street (APN: 0322-083-69) has an existing 3/4-inch water service that is currently serving the existing home. The DEVELOPER shall identify the service location within Douglas Street to ensure that the service will remain on the proposed remainder parcel that the current home will reside upon. If this water service falls outside of the Douglas Street frontage of the remainder parcel, the DEVELOPER shall abandon and relocate the water service to the southerly parcel line to be paired up with the proposed Tract 19901, Lot 21 water service.

   c. This same parent APN: 0322-083-69 has two existing sewer laterals from Douglas Street. The existing home is currently connected to the lateral that will no longer front the remainder parcel after the recordation of Tract Map No. 19901. The DEVELOPER shall abandon this sewer lateral connection at the public right-of-way and reconnect the remainder parcel to the remaining sewer lateral fronting the home. The locations of these existing laterals are shown on DISTRICT Sewer Plan A.D. No. 4, sheet 4 of 26. If the location of the lateral currently serving the existing home is in an acceptable location pursuant to DISTRICT standards after the right-of-way improvements have taken place on Douglas Street, proposed Lot 21, then the DEVELOPER may reuse this same lateral to serve the residential lot. However, if it is no longer in a reasonable location to serve Lot 21, then the DEVELOPER shall abandon this same lateral to the main and relocate it in the appropriate location per DISTRICT standards. This parent parcel has 1 (EDU) water and sewer credit that will remain with the existing home upon

the remainder parcel. No EDU credits are available to be applied to the development of Tract 19901 from this parcel.

d. The parent APN: 0322-083-42 has an existing DISTRICT Sewer Manhole and Sewer Easement as shown on DISTRICT Sewer Plan A.D. No. 4, sheet 4 of 26. The DEVELOPER shall bring this Sewer Manhole up to DISTRICT standards by way of Standard Drawing S-3 and reflect this on the sewer design drawings for Tract 19901. No EDU credits are available to be applied to the development of Tract 19901 from this parcel.

e. The parent APN: 0322-083-43 has an existing 1-inch water service and an existing sewer lateral. The DISTRICT has no record of the sewer lateral having been paid for or used. The DEVELOPER shall abandon both service laterals to the public mains pursuant to DISTRICT standards. The existing lateral is shown on DISTRICT Sewer Map A.D. No. 4, sheet 7 of 26. This parent parcel has 1.67 (EDU) credit for water that will be applied towards the first development impact fees due at the time of building permit for Tract 19901.

6. Project Specific Conditions. The Developer, at its sole cost and expense, shall design and construct all Facilities and related appurtenances pursuant to the District approved plans and construction drawings to serve the Project.

a. The District will not provide water sewer service to the Project until the necessary infrastructure is completed and accepted by the District to provide service to each lot.

b. Project phases will be coordinated and approved in writing by the District staff.

c. The Developer shall provide electronic design drawings of parcels and infrastructure in native AutoCAD file formats consistent with existing District enterprise systems prior to receiving occupancy.

d. Facilities located in easements shall be protected pursuant to District requirements.

7. Rates, Fees and Charges.

a. The most current rates, fees and charges will be payable pursuant to the Resolution/Ordinance in effect at the time building permits are issued or renewed for each lot.

8. Project Related Invoices. Pursuant to Exhibit B - Design and Construction Requirements, Section O, the Developer agrees to deposit funds in the amount of $10,000 with the District within 10 business days following the District's approval of this Agreement. The Developer acknowledges and hereby agrees that the District is authorized, from time-to-time, to reimburse itself from the funds on deposit for Project costs incurred and that the District will not release any structure

for occupancy unless there is a minimum balance of $3,000 in the Project Cash Account.

9. Ownership; Operation and Maintenance. Once constructed and accepted by the District, title to the Facilities (excluding private, on-site Facilities) will be conveyed by the Developer to the District, and the District will operate and maintain the Facilities and provide service to the Developer's Property in accordance with the District's Rules, Regulations and Policies and the provisions of this Agreement.

10. Easements, Dedications, and Recorded Documentation: All easements, dedications, and recorded documentation required by the District shall be provided by the Developer to the District prior to the release of occupancy of any structure within the Project.

11. Annexation. This Project is located within the service area of the District, so an annexation is not required.

12. Annual Review of Construction Drawings. The District requires an annual review of approved construction drawings related to this Project. The District will not charge the Developer for the annual construction drawing review. However, the Developer will be required to update and resubmit construction drawings based on comments provided by the District at the sole cost and expense of the Developer prior to the start of construction.

13. Amendment. This Agreement may be amended, from time-to-time, by mutual agreement, in writing signed by both Parties. The District and the Developer further agree that to the extent this Agreement does not address all aspects of the Developer's Property and/or Project, the Parties will meet and confer and negotiate in good faith and execute a written amendment or supplement to this Agreement.

14. Assignment. This Agreement will not be assigned, whether in whole or in part by either Party.

15. Term and Termination of Agreement. Unless extended by mutual agreement of the parties in writing, this Agreement shall terminate at 5:00 p.m., on the day before the sixth (6^{th}) anniversary date of this Agreement; provided, however, that this Agreement shall automatically terminate, without further liability to either party, as follows:

    a. Immediately, upon abandonment by the Developer of the Developer's Property and/or the work hereunder. "Abandonment" is defined as the act of bankruptcy or Developer's failure to improve the Property in a manner consistent with the proposed development plan within twelve months of the effective date of this Agreement; and/or

    b. Within 45 days of the date of the issuance of a Notice of Default by the District to the Developer in the event, the Developer fails or refuses to perform, keep or observe any of the terms, conditions or covenants set forth in this Agreement.

IN WITNESS WHEREOF, the parties have executed is Agreement to be effective on the day and year first above written.

YUCAIPA VALLEY WATER DISTRICT

Dated: _____ By: _____
Jay Bogh, President

DEVELOPER

Dated: _____ By: _____

Print Name: _____

Print Title: _____

Attachments	Status
Exhibit A - Proposed Development Concept	Included
Exhibit B - General Construction Conditions	Included
Exhibit C - Transfer of Overlying Water Rights	Not Included

Exhibit A - Proposed Development Concept

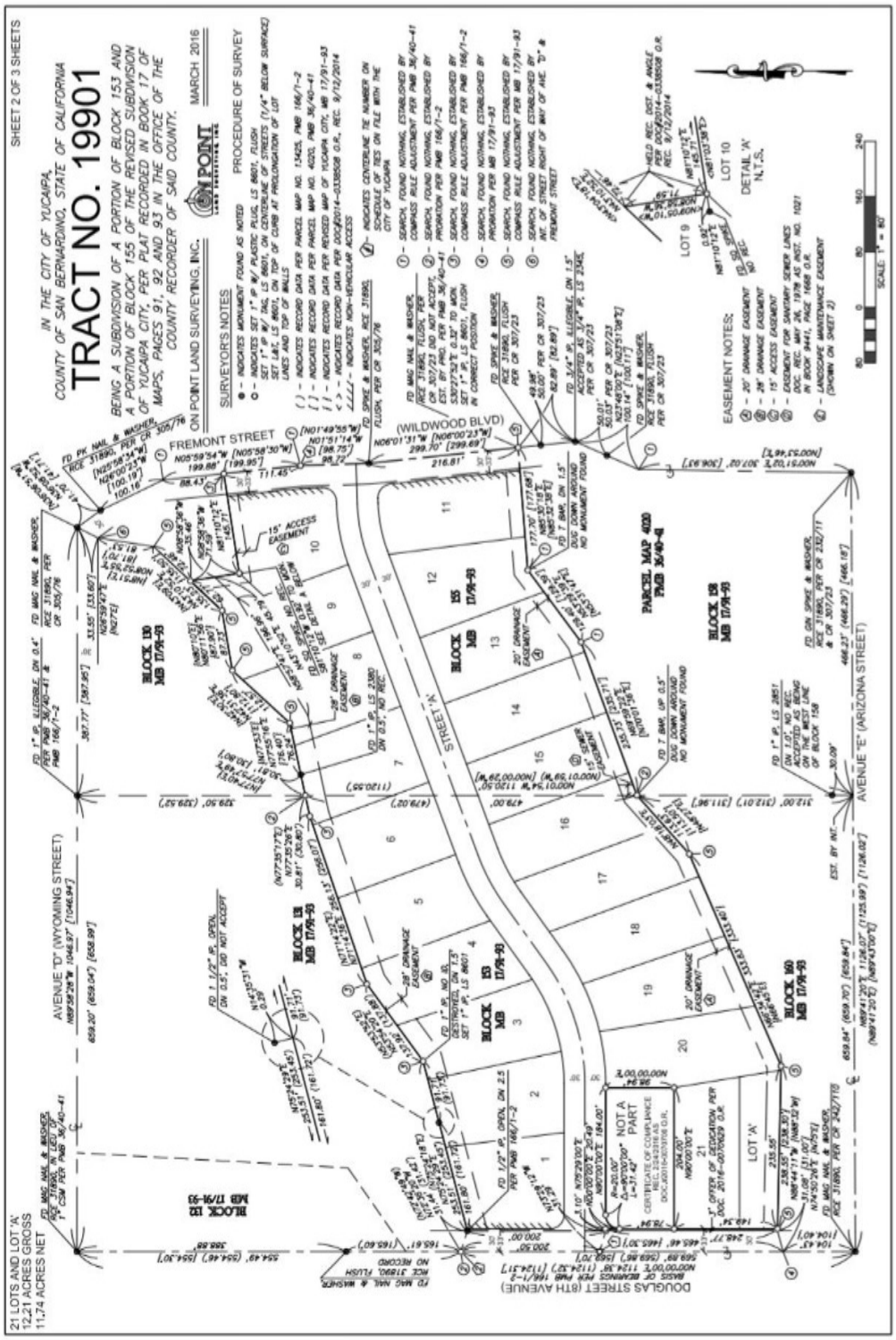

SHEET 2 OF 3 SHEETS
IN THE CITY OF YUCAIPA,
COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA
TRACT NO. 19901
BEING A SUBDIVISION OF A PORTION OF BLOCK 153 AND A PORTION OF BLOCK 155 OF THE REVISED SUBDIVISION OF YUCAIPA CITY, PER PLAT RECORDED IN BOOK 17 OF MAPS, PAGES 91, 92 AND 93 IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.
ON POINT LAND SURVEYING, INC.
ON POINT
MARCH 2016
SURVEYOR'S NOTES
PROCEDURE OF SURVEY
EASEMENT NOTES:
DETAIL 'A'
N.T.S.
FREMONT STREET
(WILDWOOD BLVD)
STREET 'A'
AVENUE 'D' (WYOMING STREET)
AVENUE 'E' (ARIZONA STREET)
DOUGLAS STREET (8TH AVENUE)
PARCEL MAP 4020
PMB 36/40-41
BLOCK 150
MB 17/91-93
BLOCK 151
MB 17/91-93
BLOCK 153
MB 17/91-93
BLOCK 155
MB 17/91-93
BLOCK 158
MB 17/91-93
BLOCK 160
MB 17/91-93
BLOCK 152
MB 17/91-93
LOT 9
LOT 10
LOT 'A'
NOT A PART
21 LOTS AND LOT 'A'
12.21 ACRES GROSS
11.74 ACRES NET

Exhibit B - General Construction Conditions

DESIGN AND CONSTRUCTION

A. Licensed Professionals. All work, labor and services performed and provided in connection with, for example, the preparation of surveys and descriptions of real property and rights-of-way, the preparation of construction specifications, plans and drawings, and the construction of all Facilities shall be performed by or under the direction of professionals appropriately licensed by the State of California and in good standing.

B. Plan Acceptance; Facility Acceptance. Upon its final review and approval of the plans and specifications ("Plans"), the District shall sign the construction drawings ("Approved Plans") indicating such approval ("Plan Acceptance"). Plans are subject to an annual review by the District and modifications will be required by the District to conform to revised construction standards and policies as part of the Plan Acceptance. The Developer shall update and resubmit the Plans for final approval by the District.

1. The Developer shall not permit, or suffer to permit, the construction of any Facility without having first obtained Plan Acceptance or completed modifications required by annual updates. In the event the Developer fails or refuses to obtain the District's Plan Acceptance, the District may refuse, in its sole discretion and without liability to the Developer, to issue its Facility Acceptance (as that term is defined below) as to such Facility when completed.

2. The Developer shall not deviate from any Approved Plans and/or specifications without the District's prior written approval.

C. Facility Inspection. All construction work shall be inspected on a timely basis by District personnel and/or by District's consultants at the sole cost of the Developer. The Developer acknowledges that the inspector(s) shall have the authority to require that any and all unacceptable materials, workmanship, construction and/or installation not in conformance with either (i) the Approved Plans, or (ii) standard practices, qualities and standards in the industry, as reasonably determined by the District, shall be replaced, repaired or corrected at Developer's sole cost and expense.

1. In the event the Developer's contractor proposes to work overtime and beyond normal business hours, the Developer shall obtain the District's approval at least 24 hours in advance so that inspection services may be appropriately scheduled. The Developer shall be solely responsible for paying all costs and expenses associated with such inspection services.

2. The District shall promptly upon request of Developer cause the final inspection of a Facility which Developer indicates is completed. If the District finds such Facilities to have been completed in conformance with the Approved Plans for which a Plan Acceptance has been issued, then the District shall issue to Developer its letter ("Facility Acceptance") indicating satisfactory completion of the Facility and District's acceptance thereof. Neither inspection nor issuance of the Facility Acceptance shall constitute a waiver by District of any claims it might have

against Developer for any defects in the work performed, the materials provided, or the Facility constructed arising during the one-year warranty period.

D. Project Coordination and Designation of Developer's Representative. The Developer shall be solely responsible for coordinating the provision of all work, labor, material and services associated with the planning, design and construction of the Facilities required for the Project.

1. The Developer shall be solely responsible for compliance with all applicable federal, state and local safety rules and regulations, and shall conduct periodic safety conferences as required by law and common sense.

2. Prior to proceeding with any Facility construction, the Developer shall schedule and conduct a preconstruction conference with the District. In the event the Developer fails or refuses to conduct any such conference, the District may refuse, in its sole discretion, to accept the Facilities constructed by the Developer.

3. The District and the Developer hereby designate the individual identified on page 1 of this Agreement as the person who shall have the authority to represent the District and Developer in matters concerning this Agreement. In order to ensure maximum continuity and coordination, the District and Developer agree not to arbitrarily remove or replace the authorized representative, but in the event of a substitution, the substituting Party shall promptly advise the other Party of such substitution, in writing.

E. District's Right to Complete Facilities. The District is hereby granted the unqualified right to complete, construct or repair all or any portion of the water and/or sewer Facilities, at Developer's sole cost and expense in the event there is a threat to the public's health, safety or welfare.

F. Construction of Connections to District Facilities. Unless otherwise agreed to in writing by the District, the District shall furnish all labor, materials and equipment necessary to construct and install connections between the Developer's Facilities and the District's water, recycled water, and sewer systems. All costs and expenses associated therewith shall be paid by the Developer.

G. Compliance with Law and District Regulations. The Developer hereby agrees that all Facilities shall be planned, designed and constructed in accordance with all applicable laws, and the District's Rules, Regulations and Policies in effect at the time of construction. The Developer shall keep fully informed of and obey all laws, rules and regulations, and shall indemnify the District against any liability arising from Developer's violation of any such law, rule or regulation.

H. Developer's Warranties. The Developer shall unconditionally guaranty, for a period of one year following the District's Facility Acceptance thereof, any and all materials and workmanship, at the Developer's sole cost and expense. The provision of temporary water service through any of the Developer's Facilities, prior to District's acceptance of same, shall not nullify nor diminish the Developer's warranty obligation, nor shall the Developer's warranty obligation be voided if the District determines, in its sole discretion, to make any emergency repairs necessary to protect the public's health, safety or welfare or to ensure

continuity of water or sewer service. The District shall notify Developer of such emergency repairs.

I. Testing and Disinfection. Upon approval by the District, the Developer, at its sole cost and expense, shall undertake and satisfactorily complete a testing program, including without limitation, compaction, cleaning, video and air testing, and pressurized and disinfection testing (drinking water Facilities), for all Facilities prior to acceptance by the District.

J. Bond Requirements. The Developer shall provide to the District, in a form satisfactory to the District, the following bonds:

1. Performance and Warranty Bond. A performance bond issued by a corporate surety or sureties licensed and permitted to do business by and within the State of California in an amount representing not less than one hundred percent (100%) of any and all construction work to be conducted or performed under this Agreement. A warranty bond issued by a corporate surety or sureties licensed and permitted to do business by and within the State of California in an amount representing not less than fifty percent (50%) of the total cost of any and all construction performed hereunder, insuring against any and all defects in the Facilities constructed hereunder, for a period of not less than one full year after the date of acceptance thereof by the District.

2. Labor and Materials Payment Bond. A labor and materials payment bond issued by a corporate surety or sureties licensed and permitted to do business by and within the State of California in an amount representing not less than one hundred percent (100%) of the total cost of any and all construction performed hereunder per California Civil Code Sections 9550 and following.

3. Miscellaneous Bond Requirements. All bonds required by this section are subject to the approval as to form and content by the General Manager and District's Legal Counsel. All bonds required by this section shall be provided by a surety that is an "admitted" surety insurer authorized to transact surety insurance in California, with assets exceeding its liabilities in the amount equal to or in excess of the amount of the bonds, and each bond shall not be in excess of ten percent (10%) of the surety insurer's assets. The bond shall be duly executed and shall meet all of the requirements of Section 995.660 of the Code of Civil Procedure.

K. Title to Facilities and Right-of-Way. Provided that the Developer's Facilities are designed and constructed as required hereunder and the District proposes to issue its Facility Acceptance, the Developer shall, concurrently with the District's Facility Acceptance, convey ownership title to all Facilities (and right-of-way, if applicable) to the District, free and clear of any and all liens and encumbrances except those that are expressly agreed to by the District. The District may require fee title or an easement, depending upon the location of the Facility through action by the Board of Directors. Upon conveyance of title, the District shall assume the responsibility of operating and maintaining the Facilities, subject to the Developer's warranty as provided herein. The Developer acknowledges and agrees that the District shall not be obligated to operate and maintain the Facilities and to provide service to and through them until all applicable conditions imposed by this

Agreement hereunder are satisfied and title to the Facilities has been conveyed and delivered to the District in recordable form.

L. Risk of Loss. Until such time as acceptance thereof by the District, and until good and marketable title to the easements, rights-of-way and Facilities are conveyed and delivered to the District in recordable form, the Developer shall be solely and completely responsible for any and all losses and/or damage of every kind or nature to the easements, rights-of-way and Facilities. In the event Developer believes the loss and/or damages arose from or are related to acts performed by the District, this provision does not preclude Developer's insurance carrier from seeking indemnity and/or reimbursement from the District.

M. Conditions Precedent to the Provision of Water and Sewer Service. Unless the District otherwise agrees in writing, the District shall not be obligated to provide any water and/or sewer service to the Developer's Property or any part thereof, including model homes, until Facility Acceptance by the District and Developer conveys to the District the right-of-way and Facilities associated with the requested service. Upon acceptance of the right-of-way and appurtenant Facilities, the District shall provide the service requested and assume the responsibility for operating and maintaining the affected Facilities. Service provided by the District shall be in accordance with its Rules, Regulations and Policies and shall be comparable in quality of service to that provided all similarly situated customers.

FEES AND CREDITS

N. Developer Fees, Charges, Costs and Expenses. The Developer shall be solely responsible for the payment to the District of all fees, charges, costs and expenses related to this Project.

O. Developer Cash Account Deposit. The Developer acknowledges and hereby agrees that the District is authorized, from time-to-time, to reimburse itself from the funds on deposit for Project costs incurred.

1. The Developer shall provide the initial deposit to the District, and maintain the minimum balance in the Cash Account for the Project as provided below:

   a. An initial deposit of $2,500 and a minimum balance of $1,000 for a Project that involves the construction of 1 to 2 proposed structures;

   b. An initial deposit of $5,000 and a minimum balance of $2,000 for a Project that involves the construction of 3 to 5 proposed structures;

   c. An initial deposit of $10,000 and a minimum balance of $3,000 for a Project that involves the construction of 6 to 20 proposed structures;

   d. An initial deposit of $25,000 and a minimum balance of $5,000 for all other Projects.

2. The initial deposit shall be received by the District within 10 business days following the District's approval of this Agreement.

3. The District shall provide a monthly accounting of how funds were disbursed.

4. The Developer agrees to deposit funds with the District within 30 calendar days upon the date an invoice is issued by the District or a Notice of Default will be issued by the District.

5. The District will not release any structure for occupancy unless the minimum balance is available to the District in the Project Cash Account.

6. Should any unexpended funds remain in the Cash Account upon completion of the Project or termination of this Agreement, then such funds shall be reimbursed to the Developer within 60 days.

P. Current Fees and Charges. In the event of a change in the District's schedule of fees and charges, such change shall automatically be incorporated into this Agreement as though set forth in full. Unless otherwise agreed to in writing by the District, the Developer shall pay, when due, the then-current amount of the applicable fee or charge.

Q. Sustainability Water. The Developer shall pay for the purchase of a quantity of imported water pursuant to the Sustainability Policy adopted by the Board of Directors as a Resolution No. 11-2008 on August 20, 2008, or the latest version with a revised quantity or fee structure. The imported water rate shall be the rate in effect at the time water is secured from the San Bernardino Valley Municipal Water District. Imported water for compliance with the Yucaipa Valley Water District's Sustainability Policy may be pre-paid to lock in the Development Sustainability fee or purchased prior to the issuance of building permits and pay the fee in effect at that time.

R. San Gorgonio Pass Water Agency Facility Capacity Charges. If the Project is within the service area of the San Gorgonio Pass Water Agency, the Developer will be required to pay the latest San Gorgonio Pass Water Agency Facility Capacity Charge as set forth by District resolution.

S. District Financial Participation; Credits. The District may agree to participate in certain Facilities for this Project. Any participation or financial contribution to construct the water and/or sewer infrastructure associated with this Project is identified in the Special Conditions at the beginning of the Agreement.

PERMITS AND DOCUMENTATION

T. Permits, Licenses and CEQA Documentation. The Developer shall be solely responsible for securing and paying for all permits and licenses necessary to develop its project. The Developer shall be solely responsible for complying with the California Environmental Quality Act under the auspices of the City and/or County within which the Property is situated. However, upon request, the Developer shall furnish to the District all relevant environmental documentation and information.

1. The Developer, at its sole cost and expense, shall be solely responsible for defending against any and all legal challenges, including but not limited to permits, licenses and CEQA documentation.

U. Documents Furnished by the Developer. The Developer shall furnish to the District documentation as required by the District specified below, within the time periods specified. Each and every document submittal shall consist of a fully executed original or certified copy (in recordable form, if applicable) and two copies.

Document(s)	Due Date
Certification of Streets to Rough Grade	Prior to Construction
City/County Encroachment Permits and Conditions	Prior to Construction
Field Engineering Surveys ("Cut Sheets")	Prior to Construction
Grant of Easements and Rights-of-Way	Prior to Construction
Labor and Materials Bond	Prior to Construction
Liability Insurance Certificate(s)	Prior to Construction
Performance Bond	Prior to Construction
Soil Compaction Tests	Prior to Acceptance
Warranty Bond	Prior to Acceptance
List of Approved Street Addresses and Assessor Parcel Numbers	Prior to Setting Meter
Notice of High/Low Water Pressure	Prior to Setting Meter
Notice of Water Pumping Facility	Prior to Construction
Mechanic's Lien Releases	Upon Request of District

NOTE: The DEVELOPER hereby acknowledges and agrees that the foregoing list is not intended to be exclusive; therefore, the DISTRICT reserves the right to request, from time-to-time, additional documents or documentation.

INSURANCE AND INDEMNIFICATION

V. Indemnification and Hold Harmless. The Developer and the District agree that the District should, to the extent permitted by law, be fully protected from any loss, injury, damage, claim, lawsuit, cost, expense, attorneys' fees, litigation costs, defense costs, court costs or any other costs arising out of or in any way related to the performance by Developer of this Agreement. Accordingly, the provisions of this indemnity provision are intended by the Parties to be interpreted and construed to provide the fullest protection possible under the law to the District, except for liability attributable to the District's intentional and/or negligent acts. Developer acknowledges that the District would not enter into this Agreement in the absence of this commitment from the Developer to indemnify and protect the District as set forth here.

Therefore, the Developer shall defend, indemnify and hold harmless the District, its employees, agents and officials, from any liability, claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, losses, expenses or costs of any kind, whether actual, alleged or threatened, actual attorneys' fees incurred by the District, court costs, interest, defense costs including expert witness fees and any other costs or expenses of any kind whatsoever without restriction or limitation incurred in relation to, as a consequence of or arising out of or in any way attributable actually, allegedly or impliedly, in whole or in part in the performance by Developer of this

Agreement. All obligations under this provision are to be paid by the Developer as incurred by the District. Notwithstanding the foregoing, the Developer shall have no obligation to defend, indemnify or hold harmless the District, its employees, agents or officials from any liability arising, in whole or in part, from the District's intentional and/or negligent acts.

W. Insurance. The Developer agrees to provide insurance in accordance with the requirements set forth here throughout the term of this Agreement. If the Developer uses existing coverage to comply with these requirements and that coverage does not meet the requirements set forth herein, the Developer agrees to amend, supplement or endorse the existing coverage to do so. The following coverages will be provided by the Developer and maintained on behalf of the District and in accordance with the requirements set forth herein.

1. Commercial General Liability Insurance (Primary) shall be provided on ISO-CGL Form No. CG 00 01 10 93. Policy limits shall be no less than $1,000,000 per occurrence for all coverages and $2,000,000 general aggregate. The District and its officials, employees and agents shall be added as additional insureds using ISO Form CG 20 10 10 93. Coverage shall apply on a primary non-contributing basis in relation to any other insurance or self-insurance, primary or excess, available to the District or any employee or agent of the District. Coverage shall not be limited to the vicarious liability or supervisory role of any additional insured. Coverage shall contain no contractors' limitation endorsement. There shall be no endorsement or modification limiting the scope of coverage for liability arising from explosion, collapse, or underground property damage.

2. Umbrella Liability Insurance (over Primary) shall apply to bodily injury/property damage, personal injury/advertising injury, at a minimum, and shall include a "drop down" provision providing primary coverage above a maximum $25,000 self-insured retention for liability not covered by primary policies but covered by the umbrella policy. Coverage shall be following form to any underlying coverage. Coverage shall be provided on a "pay on behalf" basis, with defense costs payable in addition to policy limits. There shall be no cross-liability exclusion and no contractor's limitation endorsement. Policy limits shall be not less than $1,000,000 per occurrence and $1,000,000 in the aggregate, above any limits required in the underlying policies. The policy shall have starting and ending dates concurrent with the underlying coverages.

3. Workers' Compensation/Employer's Liability shall provide workers' compensation statutory benefits as required by law. Employer's liability limits shall be no less than $1,000,000 per accident or disease. Employer's liability coverage shall be scheduled under any umbrella policy described above. Unless otherwise agreed, this policy shall be endorsed to waive any right of subrogation as respects the District, its employees or agents.

4. The Developer and the District further agree as follows:

   a. All insurance coverage provided pursuant to this Agreement shall not prohibit the Developer, and the Developer's employees or agents, from waiving the right of subrogation prior to a loss. The Developer waives its right of subrogation against the District.

b. Unless otherwise approved by the District in writing, the Developer's insurance shall be written by insurers authorized to do business in the State of California and with a minimum "Best's" Insurance Guide rating of "A:VII". Self-insurance will not be considered to comply with these insurance specifications.

c. The Developer agrees to provide evidence of the insurance required herein, satisfactory to the District, consisting of certificate(s) of insurance evidencing all of the coverages required and an additional insured endorsement to the Developer's general liability and umbrella liability policies. Certificate(s) are to reflect that the insurer will provide 30 days' notice of any cancellation of coverage. The Developer agrees to require its insurer to modify such certificate(s) to delete any exculpatory wording stating that failure of the insurer to mail written notice of cancellation imposes no obligation, and to delete the word "endeavor" with regard to any notice provisions. The Developer agrees to provide complete certified copies of policies to the District within 10 days of the District's request for such copies.

d. In the event of any loss that is not insured due to the failure of the Developer to comply with these requirements, the Developer agrees to be responsible for any all losses, claims, suits, damages, defense obligations and liability of any kind attributed to the District, or the District's officials, employees and agents as a result of such failure.

e. The Developer agrees not to attempt to avoid its defense and indemnity obligations to the District and its employees, agents and officials by using as defense the Developer's statutory immunity under workers' compensation and similar statutes.

MISCELLANEOUS PROVISIONS

X. Status of the Parties. This Agreement is not intended to create, and nothing herein contained shall be construed to create, an association, a trust, a joint venture, a partnership or other entity of any kind, or to constitute either party as the agent, employee or partner of the other.

Y. Force Majeure. If either the District or the Developer is delayed, hindered or prevented from performing any term of this Agreement by any cause beyond either party's control including, without limitation, any strike, walkout, prohibitions imposed by law, rules or regulations, riot, war, act of God or the default of the other party, then such performance may be excused or the time of performance tolled during the period of delay.

Z. Incorporation of Prior Agreements. This Agreement contains all of the agreements of the parties with respect to any matter covered or mentioned in this Agreement, and no prior agreement or understanding pertaining to any such matter shall be effective for any purpose.

AA. Waiver. No waiver by either Party of any provisions of this Agreement shall be deemed to be a waiver of any other provision hereof or of any subsequent breach by either Party of the same or any other provisions.

BB. Severance. If any provision of this Agreement is determined to be void by any court of competent jurisdiction then such determination shall not affect any other provision of this Agreement provided that the purpose of this Agreement is not frustrated.

CC. Disclaimer. Utilizing fees and Facilities provided to the District by the Developer, the District will supply sewer collection and treatment services to the Developer's Property and Project, however, the District shall not be obligated to utilize public funds to subsidize the Project.

DD. Water Supply Availability. The District does not guarantee water supply availability and shall not be required to authorize the issuance of grading, building, or occupancy permits during the period of time that the State of California and/or the Board of Directors have declared a water supply reduction of 20% or greater for a specific portion or all of the District's service area.

EE. Preparation of This Agreement. This Agreement shall not be construed against the Party preparing it but shall be construed as if both Parties prepared it.

FF. Alternative Dispute Resolution. Any dispute as to the construction, interpretation or implementation of this Agreement, or any rights or obligations hereunder, shall be submitted to mediation. Unless the Parties enter into a written stipulation to the contrary, prior to the filing of any complaint to initiate legal action, all disputes shall first be submitted to non-binding mediation, conducted by the Judicial Arbitration and Mediation Services, Inc./Endispute, or its successor, or any other neutral, impartial mediation service that the Parties mutually agree upon in accordance with its rules for such mediation. Mediation fees shall be shared equally by the DEVELOPER and the DISTRICT.

END OF SECTION

Yucaipa Valley Water District

Workshop Memorandum 18-235

Date: October 9, 2018

Prepared By: Joseph Zoba, General Manager

Subject: Ratification of the Acceptance of Overlying Water Rights in the Beaumont Basin for Tract No. 32702-3 (80 lots) Pursuant to Beaumont Basin Watermaster Resolution No. 2017-02

On August 30, 2017, the Beaumont Basin Watermaster adopted Resolution No. 2017-02 Approving the Transfer of Overlying Water Rights to Specific Parcels - Oak Valley Partners. This resolution approved the transfer of all overlying water rights from Oak Valley Partners to parcels within the service area of the Yucaipa Valley Water District.

The attached correspondence dated September 26, 2018 will transfer 29.57 acre-feet of the Oak Valley overlying water rights to Tract No. 32702-3 (80 lots). This transfer of overlying water rights is anticipated to be sufficient for 80 residential, dual-plumbed dwelling units.

The transfer of overlying water rights to appropriative water rights allows the Yucaipa Valley Water District to utilize this groundwater resource within our service area conditioned upon the guarantee of sufficient water supplies for the proposed development.

Yucaipa Valley Water District
12770 Second Street • P. O. Box 730 • Yucaipa, California 92399-0730
(909) 797-5117 • Fax: (909) 797-6381 • www.yvwd.dst.ca.us

September 26, 2018

Mr. Dan Jaggers, Secretary
Beaumont Basin Watermaster
c/o Beaumont Cherry Valley Water District
560 Magnolia Avenue
Beaumont, California 92223

Thierry Montoya
Alvarado Smith
1 MacArthur Place, Suite 200
Santa Ana, California 92707

Hannibal Blandon
ALDA Engineering
5928 Vineyard Avenue
Alta Loma, California 91701

Subject: Transfer of 29.57 Acre Feet of Overlying Water Rights in the Beaumont Basin for Tract No. 32702-3 (80 lots) Pursuant to Beaumont Basin Watermaster Resolution No. 2017-02

Gentlemen:

The Yucaipa Valley Water District has accepted the transfer of Overlying Water Rights from Oak Valley Partners for Tract Nos. 32702-3 (80 lots) pursuant to Beaumont Basin Watermaster Resolution No. 2017-02 adopted on August 30, 2017.

The attached correspondence dated September 17, 2018, confirms the transfer of 29.57 acre-feet of overlying water rights from Oak Valley Partners and the acceptance of said overlying-appropriative water rights by Yucaipa Valley Water District.

Sincerely,

Joseph B. Zoba
General Manager

Copies to:
- John Ohanian, Oak Valley Partners
- Mike Turner, Argent Management

Argent Management

September 17, 2018

Joe Zoba
General Manager
Yucaipa Valley Water District
12770 Second Street
Yucaipa, CA 92399

RE: Summerwind Trails – Transfer of Overlying Water Rights for Water Service – Tract 32702-3, 80 Single Family Residential Lots

Dear Mr. Zoba:

This letter is written on behalf of San Gorgonio Land, LLC, the owner and developer of the residential portion of the Summerwind Ranch Project in Calimesa. Argent Management, LLC is the managing arm for San Gorgonio Land, LLC.

We are hereby requesting to transfer 29.57 acre-feet of the Summerwind Ranch Beaumont Basin Overlyer Water Rights to Tract 32702-3 (80 lots) to provide potable water requirements for 80 residential single family lots. This Tract encompasses approximately 20.0 acres and is included within APN 413-290-037 per the attached Exhibit 1.

The merchant builder for this Tract is Meritage Homes of California, Inc., a California Corporation. Upon this transfer, we understand that Meritage Homes will be exempt from paying the District's Supplemental Water Facility Capacity Charge pursuant to the District's Resolution No. 2017-23, Section 2.D.

If acceptable to you, please indicate so with your approval signature below.

Very truly yours,

Mike Turner, P.E.
Corporate VP, Land Development
Argent Management, LLC

CONCURRENCE:

John Ohanian – Oak Valley Partners

APPROVAL:

Joe Zoba – General Manager, YVWD

CORPORATE OFFICE
2392 Morse Ave, Irvine, CA 92614 • MAIN 949 777 4000 • FAX 949 777 4050 • www.ArgentManagementLLC.com

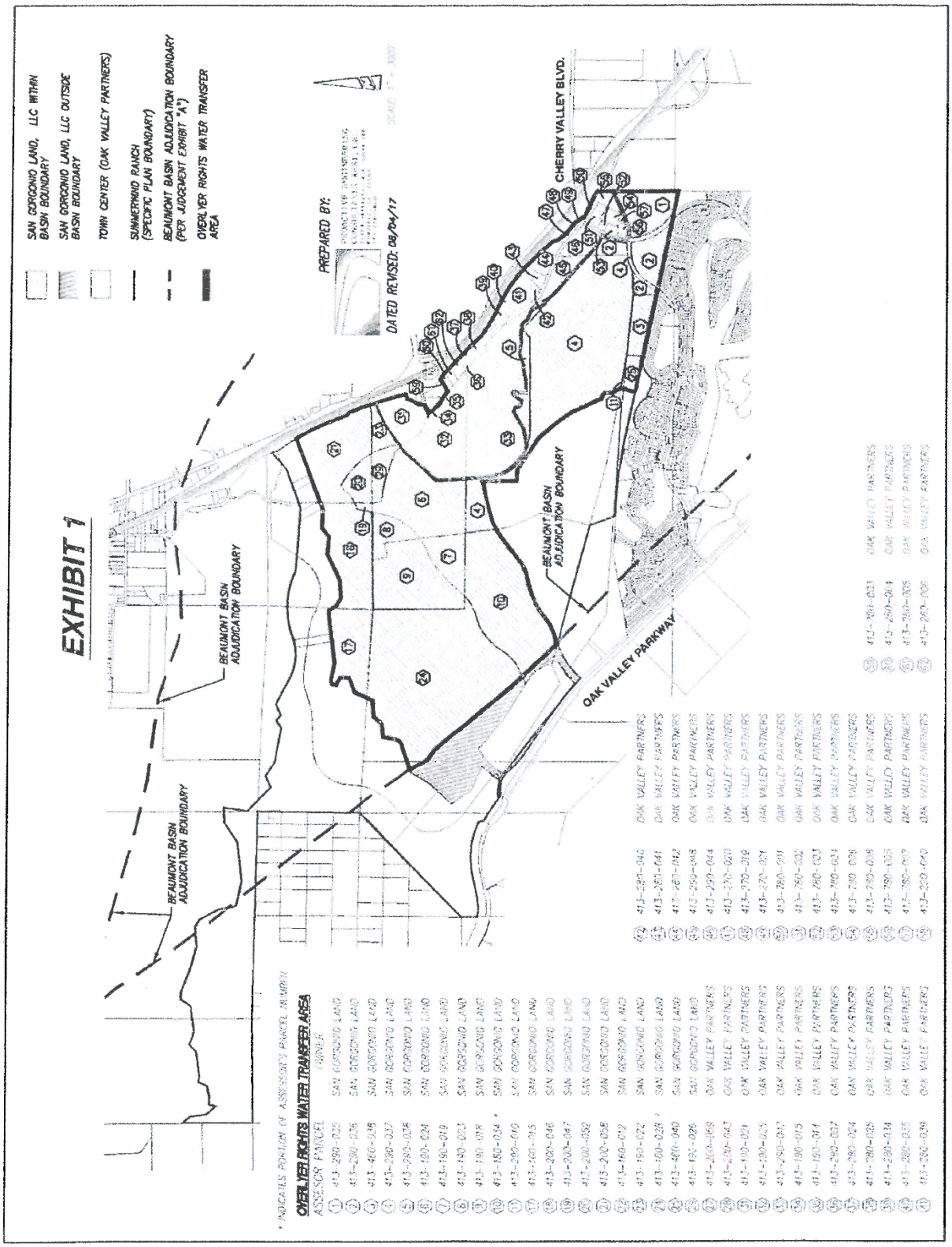


EXHIBIT 1
SAN GORGONIO LAND, LLC WITHIN BASIN BOUNDARY
SAN GORGONIO LAND, LLC OUTSIDE BASIN BOUNDARY
TOWN CENTER (OAK VALLEY PARTNERS)
SUMMERWIND RANCH (SPECIFIC PLAN BOUNDARY)
BEAUMONT BASIN ADJUDICATION BOUNDARY (PER JUDGEMENT EXHIBIT "A")
OVERLYER RIGHTS WATER TRANSFER AREA
PREPARED BY:
DATED REVISED: 08/04/17
CHERRY VALLEY BLVD.
OAK VALLEY PARKWAY
BEAUMONT BASIN ADJUDICATION BOUNDARY
OVERLYER RIGHTS WATER TRANSFER AREA
ASSESSOR PARCEL NUMBER
OWNER
* INDICATES PORTION OF ASSESSOR'S PARCEL IN MAP

Administrative Items

Yucaipa Valley Water District

Yucaipa Valley Water District

Workshop Memorandum 18-236

Date: October 9, 2018

From: Kathryn Hallberg, Implementation Manager

Subject: Overview of the Proposed Workers' Compensation Insurance Policy Renewal

Yucaipa Valley Water District currently has a workers' compensation insurance policy with EPIC Brokers with insurance coverage provided by Berkshire and Hathaway.

The District has investigated and requested a variety of quotes. The District maintains a very good safety record that has allowed the broker to obtain multiple competitive quotes.

The attached spreadsheet details the quotes received. Redwood F&C Berkshire Hathaway submitted a quote for $117,066 and has the strongest rating of A++XV, which is the highest rating given and a more than sufficient financial capacity to provide the necessary policy limits. Cal Mutual JPRIMA's premium quote of $110,290 with a rating of A XII was less than Redwood F&C Berkshire Hathaway but requires a 3-year commitment without a guarantee of price locking the premium in the following years.

Financial Consideration

Funding for the insurance will be split between the Water, Sewer and Recycled Water Funds, [GL Account #xx-5-xx-50019] Workers Compensation. This expense is included in the 2018-19 approved budget.

		10/31/17 to 10/31/18			10/31/18 to 10/31/19			10/31/18 to 5/01/19 (Short-Term)			10/31/18 to 10/31/19			10/31/18 to 10/31/19		
		Redwood F&C (BHHC)			Redwood F&C (BHHC)			Short-Term Payroll Used Cal Mutual JPRIMA The Zenith, a Fairfax Ins Co			Starstone			State Compensation Insurance Fund		
AM Best Rating		A ++ XV			A ++ XV			A XII			A-XI					
State/Class Code	Description	Estimated Payroll	Base Rate	Net Rate	Estimated Payroll	Base Rate	Net Rate	Estimated Payroll	Base Rate	Net Rate	Estimated Payroll	Base Rate	Net Rate	Estimated Payroll	Base Rate	Net Rate
CA 7520	Waterworks Ops	$2,464,531	7.00	3.55	$3,349,402	6.51	2.71	$1,670,113	5.07	2.54	$3,349,402	5.29	3.04	$3,349,402	6.37	4.33
CA 7580	Sanitation	$616,671	8.16	4.13	$666,604	7.35	3.06	$332,389	5.79	2.87	$666,604	5.99	3.45	$666,604	7.21	4.91
CA 8810	Clerical – NOC	$1,059,935	0.80	0.41	$1,410,313	0.71	0.30	$231,966	0.72	0.36	$1,410,313	0.58	0.33	$1,410,313	0.70	0.48
CA 8742	Salespersons-O/S	$341,778	1.02	0.44	$465,206	0.92	0.38	$703,225	0.57	0.29	$465,206	0.75	0.43	$465,206	0.90	0.61
	Experience Modification Factor	60%			74%			74%			74%			74%		
	Total Annual Payroll	$4,482,915			$5,891,525			$5,891,525			$5,891,525			$5,891,525		
	Total Short Term Payroll							$2,937,693								
	* Short Term Premium							$55,231								
	* Estimated Annual Premium	$119,053			$117,066			$110,290			$131,672			$167,641		

Premium Does Not Include State Taxes and Fees

Yucaipa Valley Water District

Workshop Memorandum 18-237

Date: October 9, 2018

From: Allison M. Edmisten, Chief Financial Officer
Peggy Little, Administrative Supervisor

Subject: Presentation of the Unaudited Financial Report for the Period Ending on September 30, 2018

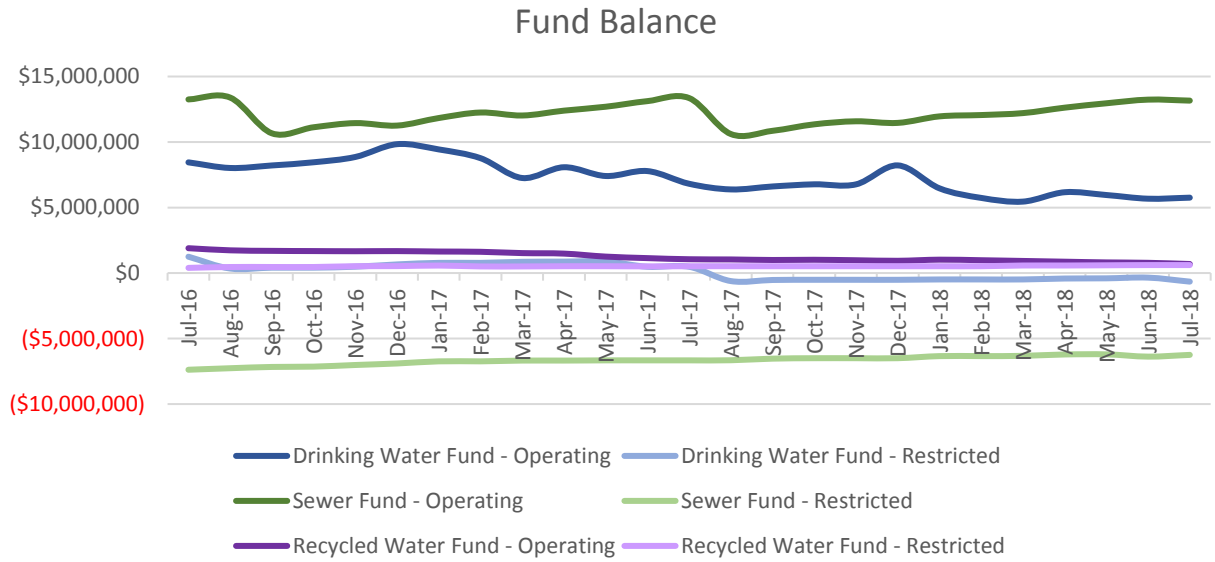
The following unaudited financial report has been prepared by the Administrative Department for your review. The report has been divided into five sections to clearly disseminate information pertaining to the financial status of the District. Please remember that the following financial information has not been audited.

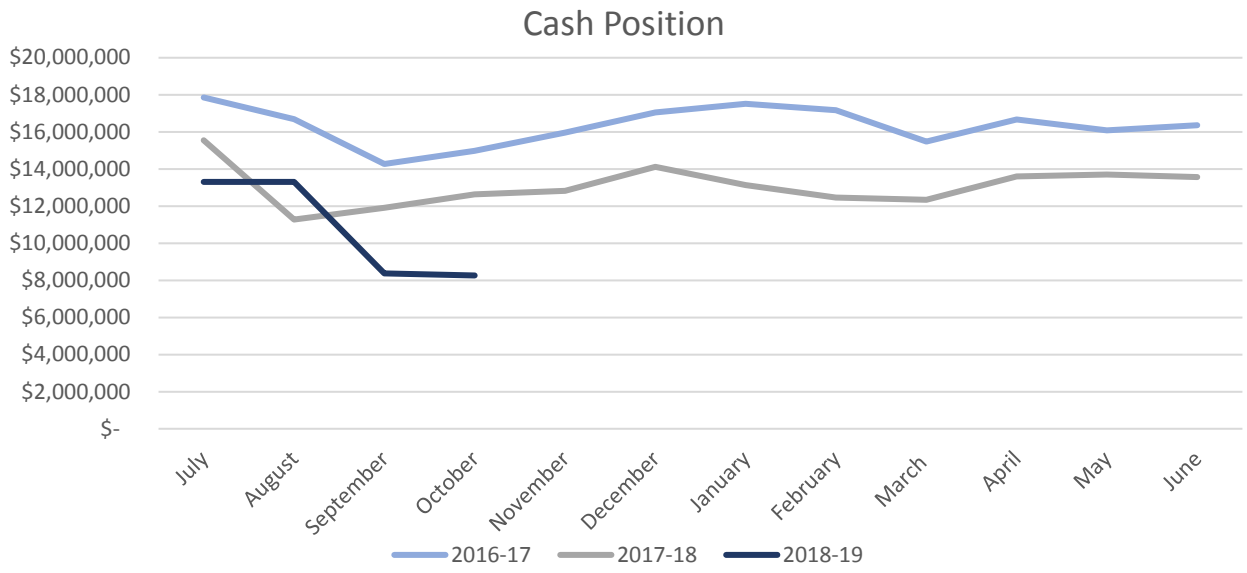
Cash Fund Balance and Cash Flow Reports

[Detailed information can be found on page 7 to 8 of 25]

The Cash Fund Balance Report provides a summary of how the total amount of funds maintained by financial institutions is distributed throughout the enterprise and non-enterprise funds of the District. A summary of the report is as follows:

Fund Source	Operating Funds	Restricted Funds	Total Funds
Water Division	$ 4,990,690.58	$ (1,738,983.24)	$ 3,161,707.34
Sewer Division	$ 10,048,096.29	$ (6,167,164.31)	$ 3,880,931.98
Recycled Water Division	$ 592,085.78	$ 628,559.55	$ 1,220,645.33
Total	**$ 15,540,872.65**	**$ (7,277,588.00)**	**$ 8,263,284.65**





Most of the funds reflected in the Cash Fund Balance Report are designated for specific purposes and are therefore restricted, either by law or by District policy.

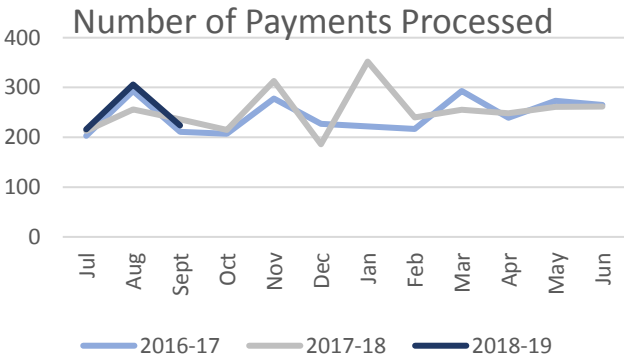
The Cash Flow Report provides a list of the debt service payment due dates and amounts as well as the cash flow requirements for debt service for each month of the fiscal year.

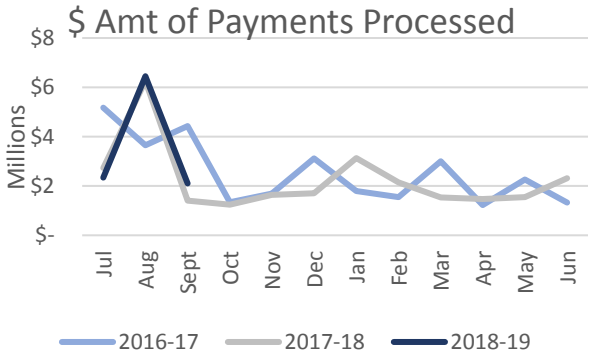
Cash Disbursement Report

[Detailed information can be found on pages 9 to 14 of 25]

The cash disbursement report lists each check and electronic payment processed during the month of September 2018. All payments are reviewed by District staff for accuracy and completeness, checks are usually signed by the General Manager and one Director but may be signed by two Directors. The Chief Financial Officer will make any check, payment, invoice or supporting documentation available for review to any board member upon request.

	Number Processed	Amount Processed
Checks	212	$ 1,765,962.88
Electronic Payments	12	$ 336,910.51
Total	**224**	**$ 2,102,873.39**





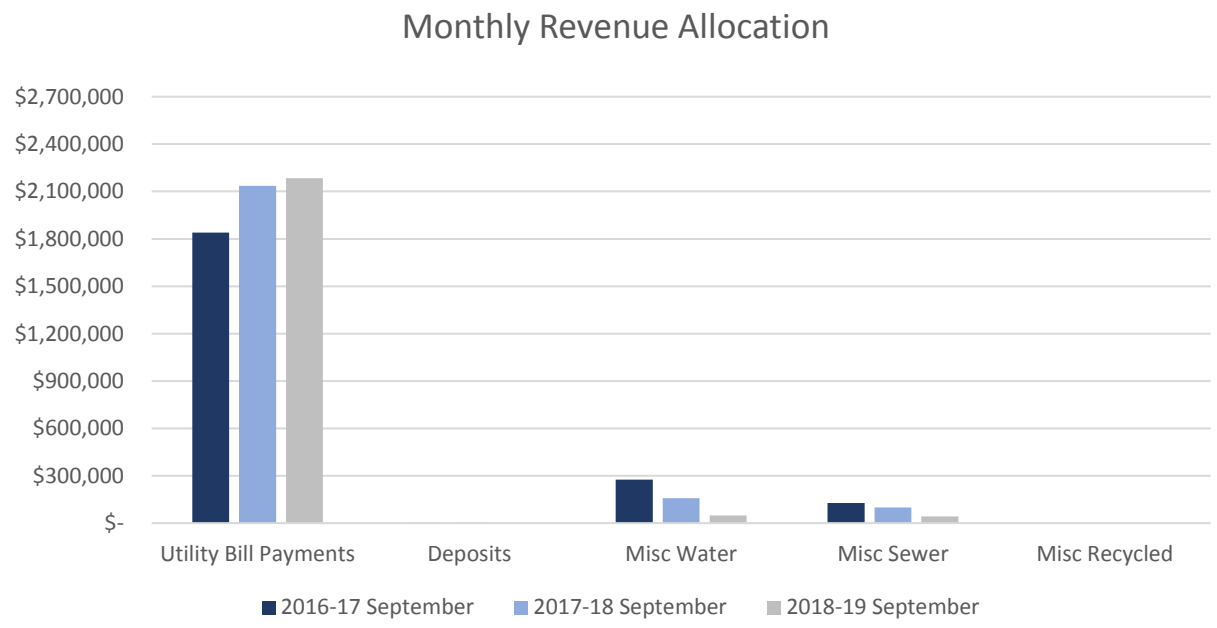
Financial Account Information

The District currently deposits all revenue received into the Deposit Checking account. The General Checking account is used as a sole processing account for all District checks and electronic payroll. The Investment Checking account is used for the purchase and redemption of US treasury notes and bills and for the transfer of LAIF funds. The US treasury notes and bills are booked at cost.

The LAIF investment account is a pooled money account administered by the State of California. Additional information on the LAIF account is provided below in the investment summary report.

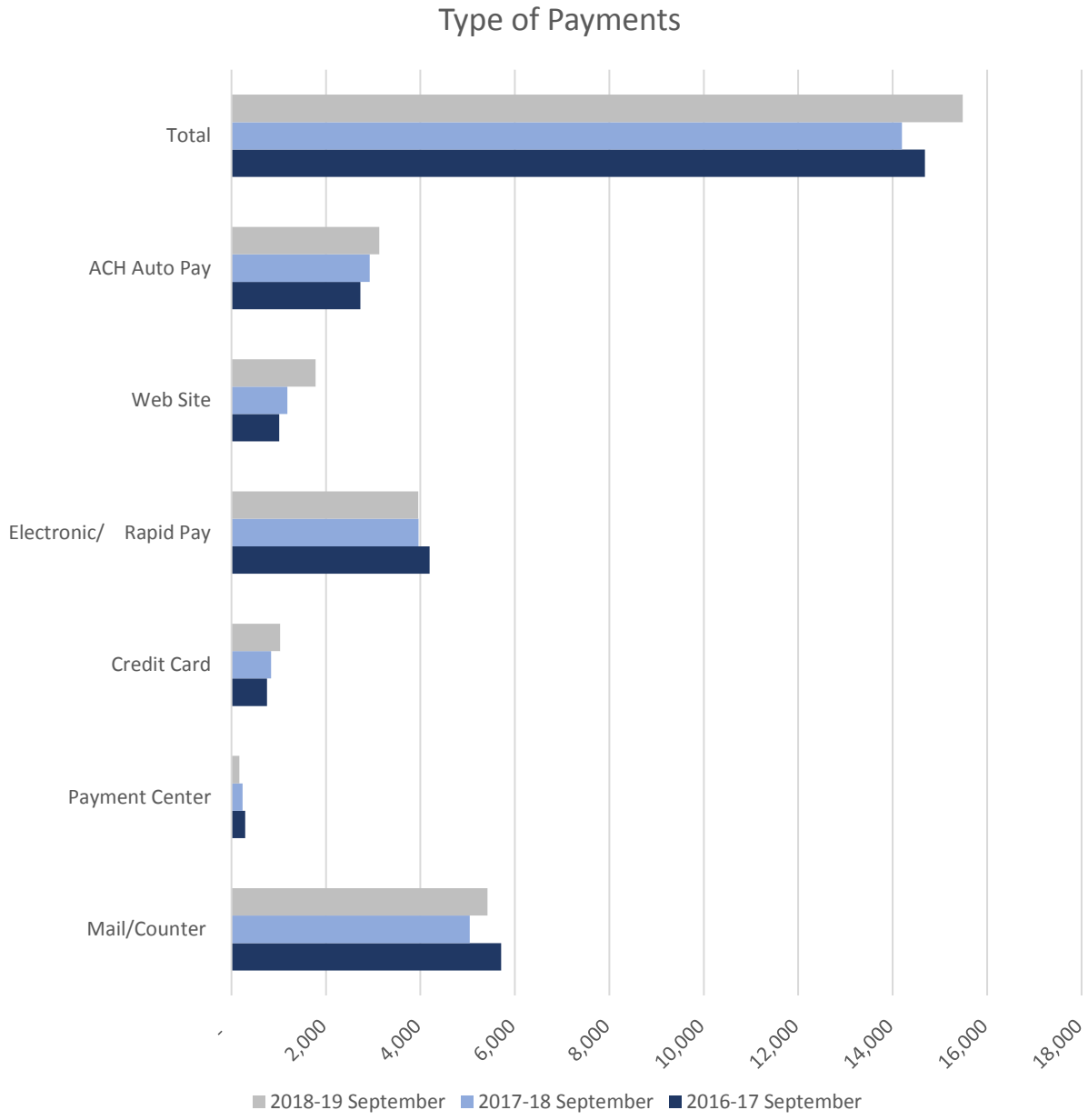
Monthly Revenue Allocation:

Funding Source	Total
Utility Bill Payments	$ 2,184,498.60
Deposits	$ 240.00
Misc. Water Related Activities	$ 49,497.37
Misc. Sewer Related Activities	$ 41,881.60
Misc. Recycled Related Activities	$ 13.04
Total	**$ 2,276,130.61**



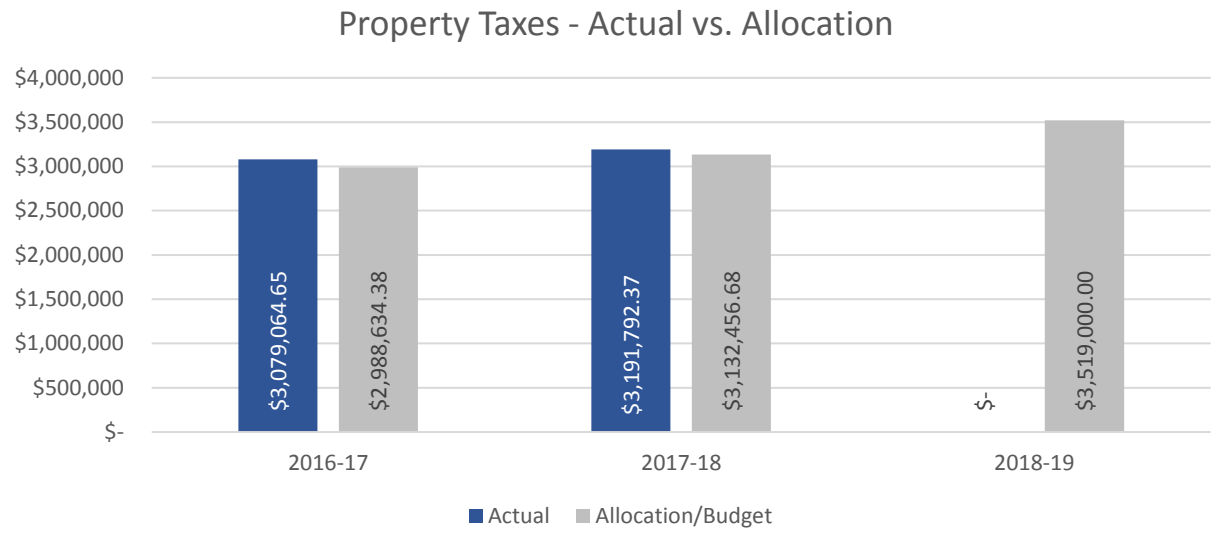
Summary of Utility Bill Payments:

Payment Method	Number of Payments	% of Total Received
Mail/Counter	5,420	35.01%
Payment Center	166	1.07%
Credit Card	1,032	6.67%
Electronic Rapid Pay	3,952	25.52%
Web Site	1,782	11.51%
ACH Auto Pay	3,131	20.22%
Total	**15,483**	**100.00%**



Summary of Property Tax Revenue:

Current Month	Year-to-Date	Budget Amount	Percentage
Property Taxes	$ 0	$ 3,519,000	0%



Investment Summary

[Detailed information can be found on pages 15 to 16 of 25]

The investment summary report illustrates the District's investments in US treasury notes and bills in addition to the investments held by the Local Agency Investment Fund or LAIF. The yields for the treasury notes and bills are provided for each individual transaction. The historical annual yield for funds invested with LAIF is also provided.

Separate pooled money investment reports prepared by the State of California are maintained by the District and available for review.

Investment Policy Disclosure - The District is currently compliant with the portfolio of its Investment Policy and State law. The District is using Sandy Gage with Merrill Lynch Wealth Management (Bank of America Corporation) for Treasury investments. The District expects to meet its expenditure requirements for the next six months.

Fiscal Year 2018-19 Detail Budget Status

[Detailed information can be found on pages 17 to 25 of 25]

The revenue and expense budget status for the 2018-19 Fiscal Year is provided for your review.

Questions or Comments

If you have any questions about a particular budget account, please do not hesitate to contact the Chief Financial Officer directly. If you need additional information, the members of the Administrative Department would be happy to provide you with any detailed information you may desire.

Summary of Revenue Budget
As of September 30, 2018 (20% of Budget Cycle)

Division	Current Month	Year-to-Date	Budget Amount	Percentage
Water	$ 1,042,225	$ 2,612,245	$ 14,150,445	18.46%
Sewer	$ 980,601	$ 2,274,918	$ 12,337,754	18.44%
Recycled Water	$ 81,246	$ 175,838	$ 1,293,270	13.60%
District Revenue	**$ 2,104,072**	**$ 5,063,001**	**$ 27,781,469**	**18.22%**

Summary of Water Budget vs. Expenses
As of September 30, 2018 (20% of Budget Cycle)

Department	Current Month	Year-to-Date	Budget Amount	Percentage
Water Resources	$ 324,451	$ 1,414,178	$ 5,274,337	26.81%
Public Works	$ 239,210	$ 698,401	$ 3,177,454	21.98%
Administration	$ 223,211	$ 862,182	$ 3,403,916	25.33%
Long Term Debt	$ -	$ 1,718,806	$ 2,294,738	74.90%
Asset Acquisition	$ -	$ -	$ -	0.00%
TOTAL	**$ 786,872**	**$ 4,693,567**	**$ 14,150,445**	**33.17%**

Summary of Sewer Budget vs. Expenses
As of September 30, 2018 (20% of Budget Cycle)

Department	Current Month	Year-to-Date	Budget Amount	Percentage
Treatment	$ 247,070	$ 931,448	$ 4,256,607	21.88%
Administration	$ 200,636	$ 676,514	$ 2,924,466	23.13%
Environmental Control	$ 92,809	$ 305,888	$ 1,322,963	23.12%
Long Term Debt	$ 2,923,669	$ 2,923,669	$ 3,833,718	76.26%
Asset Acquisition	$ -	$ -	$ -	0.00%
TOTAL	**$ 3,464,184**	**$ 4,837,519**	**$ 12,337,754**	**39.21%**

Summary of Recycled Water Budget vs. Expenses
As of September 30, 2018 (20% of Budget Cycle)

Department	Current Month	Year-to-Date	Budget Amount	Percentage
Administration	$ 89,882	$ 316,511	$ 1,293,270	24.47%
TOTAL	**$ 89,882**	**$ 316,511**	**$ 1,293,270**	**24.47%**
District Expenses	**$ 4,340,938**	**$ 9,847,597**	**$ 27,781,469**	**35.45%**

Cash Fund Balance Report - September 2018

	Water Division	GL#		Balance
Restricted	*ID 1 Construction Funds	02-10216	$	293,145.85
	*ID 2 Construction Funds	02-10217	$	80,409.31
	*FCC - Debt Service YVRWFF Phase I	02-10401	$	(4,961,368.98)
	*FCC - Future YVRWFF Phase II & III	02-10403	$	440,927.95
	*FCC - Recycled System	02-10410	$	(832,343.53)
	*FCC - Booster Pumping Plants	02-10411	$	724,051.23
	*FCC - Pipeline Facilities	02-10412	$	178,104.60
	*FCC - Water Storage Reservoirs	02-10413	$	2,338,090.33
Operating	Depreciation Reserves	02-10310	$	633,178.39
	Infrastructure Reserves	02-10311	$	4,172,743.00
	Sustainability Fund	02-10313	$	160,316.06
	Rate Stabilization Fund	02-10314	$	500,209.14
	Imported Water Fund - MUNI	02-10315	$	772,510.37
	Imported Water Fund - SGPWA	02-10316	$	789,920.92
	Operating Funds:		$	(2,128,187.30)
		Total Water Division	**$**	**3,161,707.34**

	Sewer Division	GL#		Balance
Restricted	*SRF Reserve Fund - Brineline	03-10218	$	637,449.00
	*SRF Reserve Fund - WISE	03-10219	$	184,928.00
	*SRF Reserve Fund - R 10.3	03-10220	$	51,531.00
	*SRF Reserve Fund - Crow St	03-10221	$	19,255.00
	*FCC - Debt Service WWTP Expansion & Upgrade	03-10405	$	2,051,515.04
	*FCC - Future WWTP Expansion	03-10407	$	1,559,457.57
	*FCC - Sewer Interceptors	03-10415	$	(726,118.22)
	*FCC - Lift Stations	03-10416	$	384,567.66
	*FCC - Effluent Disposal Facilities	03-10417	$	(1,559,851.52)
	*FCC - Salt Mitigation Facilities	03-10418	$	(8,769,897.84)
Operating	Project Fund - Encumbered	03-10215	$	285,000.00
	Depreciation Reserves	03-10310	$	3,921,542.84
	Infrastructure Reserves	03-10311	$	5,436,299.97
	Rate Stabilization Fund	03-10314	$	1,464,394.90
	Operating Funds:		$	(1,059,141.42)
		Total Wastewater Division	**$**	**3,880,931.98**

	Recycled Water Division	GL#		Balance
Restricted	*FCC - Recycled System	04-10410	$	74,178.39
	*FCC - Booster Pumping Plants	04-10411	$	11,534.09
	*FCC - Pipeline Facilities	04-10412	$	272,145.09
	*FCC - Water Storage Reservoirs	04-10413	$	270,701.98
Operating	Project Fund - Encumbered	04-10215	$	-
	Depreciation Reserves	04-10310	$	38,163.01
	Infrastructure Reserves	04-10311	$	281,242.31
	Operating Funds:		$	272,680.46
		Total Recycled Water Division	**$**	**1,220,645.33**

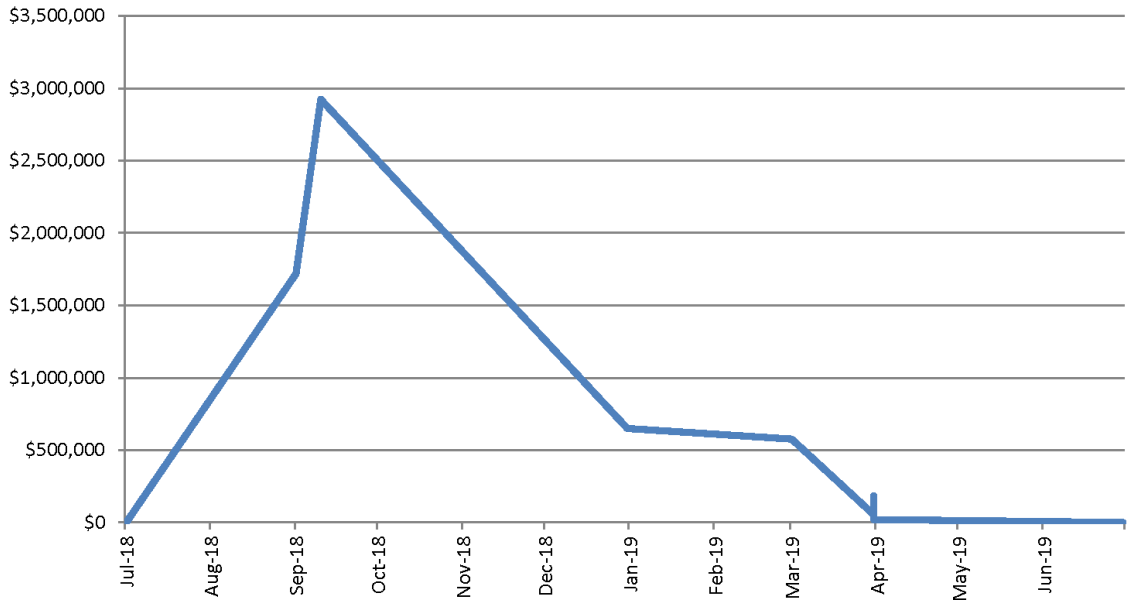
DISTRICT TOTAL	**$**	**8,263,284.65**

*=Restricted Funds

Cash Flow Report for Fiscal Year 2018-19

Financial Obligations for Fiscal Year 2018-19					
Due Date	Fund	Description	Term of Obligation		Amount
9/1/2018	Water	2015A Bond Payment - YVRWFF	2015-2034	$	1,718,806.25
9/10/2018	Sewer	SRF Payment - WRWRF	2009-2028	$	2,923,668.75
12/31/2018	Sewer	SRF Payment - Yucaipa Regional Brineline	2013-2032	$	649,273.50
3/1/2019	Water	2015A Bond Payment - YVRWFF	2015-2034	$	575,931.25
3/31/2019	Sewer	SRF Payment - Recycled Reservoir R-10.3	2014-2033	$	54,277.31
3/31/2019	Sewer	SRF Payment - Desalinization at WRWRF	2014-2033	$	185,251.30
3/31/2019	Sewer	SRF Payment - Crow Street/Recycled Booster B-12.1	2016-2035	$	21,247.48
			Total	**$**	**6,128,455.84**

Payment Schedule and Cash Flow Requirements for Fiscal Year 2018-19



Check Register - September 2018

Check Date	Check Number	Name		Check Amount
9/4/2018	32703	Ameripride Uniform Services	$	738.79
9/4/2018	32704	John F. Simister	$	223.60
9/4/2018	32705	Eco Pro Environmental Services	$	85.00
9/4/2018	32706	Inland Counties Insurance Serv	$	73.00
9/4/2018	32707	Innerline Engineering	$	1,750.00
9/4/2018	32708	Carlos Murillo	$	216.54
9/4/2018	32709	Nagem, Inc.	$	170.00
9/4/2018	32710	Pro-Pipe & Supply, Inc.	$	19.74
9/4/2018	32711	SB CNTY-Fire Protection Distri	$	1,127.70
9/4/2018	32712	Spectrum Business	$	1,834.00
9/4/2018	32713	The Gas Company	$	55.75
9/4/2018	32714	All American Sewer Tools	$	2,394.58
9/4/2018	32715	Avista Technologies, Inc.	$	5,044.71
9/4/2018	32716	Brenntag Pacific, Inc	$	21,249.80
9/4/2018	32717	Calolympic Glove & Safety Co.,	$	238.80
9/4/2018	32718	Commercial Door Metal Systems,	$	6,089.40
9/4/2018	32719	Grainger	$	882.93
9/4/2018	32720	Hach Company	$	220.23
9/4/2018	32721	Harrington Ind. Plastic, LLC	$	4,491.62
9/4/2018	32722	House Of Quality, Parts Plus	$	1,776.83
9/4/2018	32723	Inland Water Works Supply Co.	$	645.56
9/4/2018	32724	Nuckles Oil Company, Inc.	$	5,173.51
9/4/2018	32725	BlueTarp Financial, Inc.	$	119.99
9/4/2018	32726	Sinclair Rock and Sand Inc.	$	3,100.00
9/4/2018	32727	Grainger	$	243.43
9/4/2018	32728	DONKOR, KOFI	$	60.85
9/4/2018	32729	California Water Environment A	$	376.00
9/4/2018	32730	Jeremy Costello	$	15.00
9/4/2018	32731	CWEA-TCP (OAKPORT ST.)	$	174.00
9/4/2018	32732	Water Environment Federation	$	510.00
9/4/2018	32733	Standard Insurance Company	$	1,764.72
9/4/2018	32734	Standard Insurance Vision Plan	$	1,010.00
9/4/2018	32735	MetLife Small Business Center	$	147.22
9/4/2018	32736	Blue Shield of California	$	4,266.70
9/4/2018	32737	Nippon Life Insurance Co. of A	$	2,314.09
9/10/2018	32738	State Water Resources Control	$	55.00
9/10/2018	32739	Matthew Vara	$	15.00
9/10/2018	32740	Marcus Almanza	$	188.00
9/10/2018	32741	State Water Resources Control	$	60.00
9/10/2018	32742	Ronald Elisalda	$	150.00
9/10/2018	32743	James Rowell	$	165.00
9/10/2018	32744	Marcus Almanza	$	226.00
9/10/2018	32745	Luke's Transmission Inc.	$	149.80
9/10/2018	32746	Alliant Insurance Services, In	$	38,184.00
9/10/2018	32747	Ameripride Uniform Services	$	824.41

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Check Date	Check Number	Name		Check Amount
9/10/2018	32748	Bear Communications, Inc.	$	1,287.28
9/10/2018	32749	Cal's Towing	$	100.00
9/10/2018	32750	Victor James Valenti	$	4,251.79
9/10/2018	32751	Corelogic, Inc.	$	330.00
9/10/2018	32752	Coverall North America, Inc.	$	1,331.00
9/10/2018	32753	Crider Public Relations, Inc.	$	3,400.00
9/10/2018	32754	Crown Ace Hardware - Yucaipa	$	2,558.46
9/10/2018	32755	VOID CHECK	$	-
9/10/2018	32756	First American Data Tree, LLC	$	50.00
9/10/2018	32757	Eco Pro Environmental Services	$	85.00
9/10/2018	32758	Evoqua Water Technologies LLC	$	3,983.04
9/10/2018	32759	Fedex	$	192.13
9/10/2018	32760	Frontier Communications	$	148.30
9/10/2018	32761	G&G Environmental Compliance,I	$	4,026.22
9/10/2018	32762	Innerline Engineering	$	1,750.00
9/10/2018	32763	JB Paving & Engineering, Inc.	$	32,700.00
9/10/2018	32764	Raiset R. Santana and Adriana	$	166.68
9/10/2018	32765	MBC Applied Environmental Scie	$	1,350.00
9/10/2018	32766	Nautilus Environmental, LLC	$	1,500.00
9/10/2018	32767	NetComp Technologies,Inc.	$	1,250.00
9/10/2018	32768	Odyssey Power Corporation	$	2,450.00
9/10/2018	32769	Office Solutions Business Prod	$	49.30
9/10/2018	32770	Pacific Coast Landscape & Desi	$	445.00
9/10/2018	32771	John Deere Financial f.s.b.	$	1,058.32
9/10/2018	32772	Pro-Pipe & Supply, Inc.	$	263.52
9/10/2018	32773	Q Versa, LLC	$	49,097.54
9/10/2018	32774	Quinn Company	$	702.00
9/10/2018	32775	Hadronex, Inc.	$	120.00
9/10/2018	32776	Spectrum Business	$	1,834.00
9/10/2018	32777	Underground Service Alert Of S	$	485.20
9/10/2018	32778	Yucaipa Disposal, Inc.	$	1,548.21
9/10/2018	32779	Yucaipa Valley Water District	$	51,074.98
9/10/2018	32780	Aqua-Metric Sales Company	$	19,711.56
9/10/2018	32781	Brenntag Pacific, Inc	$	19,908.22
9/10/2018	32782	Elite Parts, LLC	$	4,411.74
9/10/2018	32783	Fastenal Company	$	929.11
9/10/2018	32784	Hach Company	$	6,092.40
9/10/2018	32785	Harrington Ind. Plastic, LLC	$	2,535.06
9/10/2018	32786	Hasa, Inc.	$	3,871.25
9/10/2018	32787	Inland Water Works Supply Co.	$	1,794.36
9/10/2018	32788	Nicholas C. Hendrickson	$	357.75
9/10/2018	32789	Harold J. Cossette	$	43,401.70
9/10/2018	32790	Lowe's Companies, Inc.	$	1,671.82
9/10/2018	32791	McMaster-Carr Supply Co.	$	99.67
9/10/2018	32792	Nuckles Oil Company, Inc.	$	4,756.42

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Check Date	Check Number	Name		Check Amount
9/10/2018	32793	Office Solutions Business Prod	$	238.50
9/10/2018	32794	Polydyne Inc.	$	2,949.12
9/10/2018	32795	Uline, Inc.	$	2,505.53
9/10/2018	32796	Calmat Company	$	5,197.09
9/10/2018	32797	YRC, Inc.	$	277.62
9/10/2018	32798	ZEP Manufacturing Company	$	374.85
9/10/2018	32799	Ward & Ward	$	350.00
9/14/2018	32800	PAYROLL CHECK	$	2,223.81
9/14/2018	32801	PAYROLL CHECK	$	174.16
9/14/2018	32802	WageWorks, Inc.	$	1,381.51
9/14/2018	32803	IBEW Local 1436	$	667.00
9/14/2018	32804	California State Disbursement	$	115.38
9/14/2018	32805	California State Disbursement	$	397.38
9/17/2018	32806	Alfa Laval Inc.	$	415,517.17
9/17/2018	32807	Delta Partners, LLC	$	7,500.00
9/17/2018	32808	Dudek & Associates, Inc	$	11,777.59
9/17/2018	32809	One Stop Landscape Supply Inc	$	22,995.50
9/17/2018	32810	Platinum Advisors, LLC	$	5,125.00
9/17/2018	32811	David L. Wysocki	$	3,900.00
9/17/2018	32812	Luke's Transmission Inc.	$	676.32
9/17/2018	32813	Ralph C. Casas	$	69.95
9/17/2018	32814	Ameripride Uniform Services	$	806.80
9/17/2018	32815	AT&T Mobility	$	1,758.83
9/17/2018	32816	Burgeson's Heating & Air Cond.	$	227.00
9/17/2018	32817	C & B Crushing, Inc.	$	200.00
9/17/2018	32818	Cal-Mesa Steel Supply, Inc.	$	431.00
9/17/2018	32819	Center Electric Services, Inc.	$	277.50
9/17/2018	32820	Central Communications	$	439.39
9/17/2018	32821	Clinical Laboratory of San Ber	$	12,948.00
9/17/2018	32822	Evoqua Water Technologies LLC	$	1,932.41
9/17/2018	32823	Fedex	$	172.99
9/17/2018	32824	Warren Anderson Ford	$	26,092.72
9/17/2018	32825	J Kevin King	$	60.00
9/17/2018	32826	Konica Minolta Business Soluti	$	794.14
9/17/2018	32827	Nagem, Inc.	$	1,695.20
9/17/2018	32828	Pacific Coast Landscape & Desi	$	6,905.00
9/17/2018	32829	San Gorgonio Pass Water Agency	$	23,048.31
9/17/2018	32830	Separation Processes, Inc.	$	5,471.00
9/17/2018	32831	Spectrum Business	$	2,649.00
9/17/2018	32832	Yucaipa Disposal, Inc.	$	1,326.19
9/17/2018	32833	All American Sewer Tools	$	200.41
9/17/2018	32834	Backflow Apparatus & Valve Co.	$	9,599.02
9/17/2018	32835	Brenntag Pacific, Inc	$	8,268.13
9/17/2018	32836	Center Electric Services, Inc.	$	7,226.93
9/17/2018	32837	Grainger	$	427.51

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Check Date	Check Number	Name	Check Amount
9/17/2018	32838	Haaker Equipment Company	$ 454.00
9/17/2018	32839	Hach Company	$ 2,930.08
9/17/2018	32840	Hemet Valley Tool Inc.	$ 329.08
9/17/2018	32841	Inland Water Works Supply Co.	$ 2,639.18
9/17/2018	32842	Nicholas C. Hendrickson	$ 357.75
9/17/2018	32843	Inverters R US Corp	$ 412.99
9/17/2018	32844	Nuckles Oil Company, Inc.	$ 6,217.51
9/17/2018	32845	Nalco Company	$ 7,746.75
9/17/2018	32846	Office Solutions Business Prod	$ 315.55
9/17/2018	32847	Optics Planet, Inc.	$ 162.49
9/17/2018	32848	Pall Corporation	$ 17,834.55
9/17/2018	32849	Steven Enterprises, Inc	$ 807.87
9/17/2018	32850	Terracon Consultants, Inc.	$ 459.00
9/17/2018	32851	State Water Resources Control	$ 90.00
9/17/2018	32852	California Water Environment A	$ 376.00
9/17/2018	32853	Kelly Hamilton	$ 188.00
9/17/2018	32854	American Family Life Assurance	$ 3,410.03
9/17/2018	32855	Western Dental Services, Inc.	$ 203.54
9/17/2018	32856	Sara Onate	$ 162.54
9/17/2018	32857	WageWorks, Inc.	$ 207.50
9/24/2018	32858	State Water Resources Control	$ 140.00
9/24/2018	32859	California Water Environment A	$ 188.00
9/24/2018	32860	NOBLE, ANEESA	$ 110.37
9/24/2018	32861	American Eagle Interiors, Inc.	$ 3,178.00
9/24/2018	32862	Ameripride Uniform Services	$ 854.45
9/24/2018	32863	John F. Simister	$ 487.05
9/24/2018	32864	Best Home Center	$ 127.37
9/24/2018	32865	Burgeson's Heating & Air Cond.	$ 1,420.00
9/24/2018	32866	Center Electric Services, Inc.	$ 1,910.79
9/24/2018	32867	Cliff's Pest Control, Inc.	$ 115.00
9/24/2018	32868	David Sunden	$ 2,615.96
9/24/2018	32869	Eco Pro Environmental Services	$ 85.00
9/24/2018	32870	Frontier Communications	$ 149.58
9/24/2018	32871	Hudco, Inc.	$ 537.17
9/24/2018	32872	InfoSend, Inc.	$ 6,738.18
9/24/2018	32873	Innerline Engineering	$ 5,250.00
9/24/2018	32874	JB Paving & Engineering, Inc.	$ 600.00
9/24/2018	32875	Krieger & Stewart	$ 90,650.22
9/24/2018	32876	Nagem, Inc.	$ 552.50
9/24/2018	32877	NetComp Technologies,Inc.	$ 850.00
9/24/2018	32878	Office Solutions Business Prod	$ 123.28
9/24/2018	32879	John Deere Financial f.s.b.	$ 736.24
9/24/2018	32880	Project Resources Group	$ 3,206.82
9/24/2018	32881	Quinn Company	$ 4,042.45
9/24/2018	32882	Western Oilfields Supply Compa	$ 4,813.18

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Check Date	Check Number	Name		Check Amount
9/24/2018	32883	Red Alert Special Couriers	$	344.26
9/24/2018	32884	SB CNTY-Fire Protection Distri	$	2,373.00
9/24/2018	32885	SCE Rosemead	$	278,103.48
9/24/2018	32886	Southern CA Emergency Medicine	$	450.00
9/24/2018	32887	Association of San Bernardino	$	35.00
9/24/2018	32888	The Counseling Team Internatio	$	480.00
9/24/2018	32889	Tri County Pump Company	$	129,238.83
9/24/2018	32890	Aqua-Metric Sales Company	$	131,230.89
9/24/2018	32891	American Water Works Assoc.	$	91.50
9/24/2018	32892	Brenntag Pacific, Inc	$	10,064.35
9/24/2018	32893	Evans-Hydro Inc.	$	7,626.93
9/24/2018	32894	Fisher Scientific Co.	$	494.43
9/24/2018	32895	Grainger	$	1,299.02
9/24/2018	32896	Hach Company	$	96.92
9/24/2018	32897	Inland Water Works Supply Co.	$	15,245.46
9/24/2018	32898	Nuckles Oil Company, Inc.	$	7,660.01
9/24/2018	32899	Nalco Company	$	5,164.50
9/24/2018	32900	National Business Furniture LL	$	2,392.05
9/24/2018	32901	Pro-Pipe & Supply, Inc.	$	267.22
9/24/2018	32902	Sinclair Rock and Sand Inc.	$	3,100.00
9/24/2018	32903	ZEP Manufacturing Company	$	10.78
9/28/2018	32904	PAYROLL CHECK	$	2,400.72
9/28/2018	32905	WageWorks, Inc.	$	1,381.51
9/28/2018	32906	California State Disbursement	$	115.38
9/28/2018	32907	California State Disbursement	$	397.38
9/28/2018	32908	US Healthworks Medical Group,	$	311.27
9/28/2018	32909	Joan Cadiz	$	603.36
9/28/2018	32910	Joe DeSalliers	$	646.39
9/28/2018	32911	Rodd Greene	$	648.15
9/28/2018	32912	Dennis Neff	$	599.99
9/28/2018	32913	Robert Wall	$	599.99
9/28/2018	32914	Blue Shield of California	$	2,582.80
			$	**1,765,962.88**

Check Register - September 2018

Check Date	Check Number	Name		Check Amount
9/4/2018	electronic pmt	Public Employees' Retirement S	$	700.00
9/14/2018	electronic pmt	IRS - PAYROLL TAXES	$	56,420.74
9/14/2018	electronic pmt	CA-EDD	$	10,129.79
9/14/2018	electronic pmt	VOYA-457	$	6,202.14
9/14/2018	electronic pmt	CA-PERS Supplemental Income 45	$	26,191.24
9/14/2018	electronic pmt	Public Employees' Retirement S	$	28,681.68
9/28/2018	electronic pmt	IRS - PAYROLL TAXES	$	54,451.54
9/28/2018	electronic pmt	CA-EDD	$	9,986.62
9/28/2018	electronic pmt	VOYA-457	$	4,916.14
9/28/2018	electronic pmt	CA-PERS Supplemental Income 45	$	23,523.73
9/28/2018	electronic pmt	Public Employees' Retirement S	$	28,805.20
9/30/2018	electronic pmt	CalPERS - HEALTH	$	86,901.69
			$	**336,910.51**

Investment Summary - September 2018

U.S. TREASURIES

Quantity	Description	Cusip	Maturity Date	Yield	Cost of Purchase	Market Value
510,000	US Treasury Bill	912796QM4	June 20, 2019	2.150%	$ 500,225.51	$ 510,557.36
510,000			**Total Values**		**$ 500,225.51**	**$ 510,557.36**

Money Market Account Activity-Beginning Balance		**$ 10,035.45**
7/31/17 - Bond Interest	$	-
7/31/18 - Dividend/Interest	$	2.81
Cusip 912796PQ6 Accrued Interest Paid		
Business Account Fee	$	-
Income	**$**	**2.81**
Intra-Bank Transfers to/from Investment Checking	$	-
Fund Transfers	**$**	**-**
Cusip Maturity	$	-
Redemptions	**$**	**-**
Cusip Purchase	$	-
Purchases	**$**	**-**
Ending Balance - Money Market	**$**	**10,038.26**
US Treasury Securities Investment Principal	**$**	**500,225.51**
Total Assets	**$**	**510,263.77**

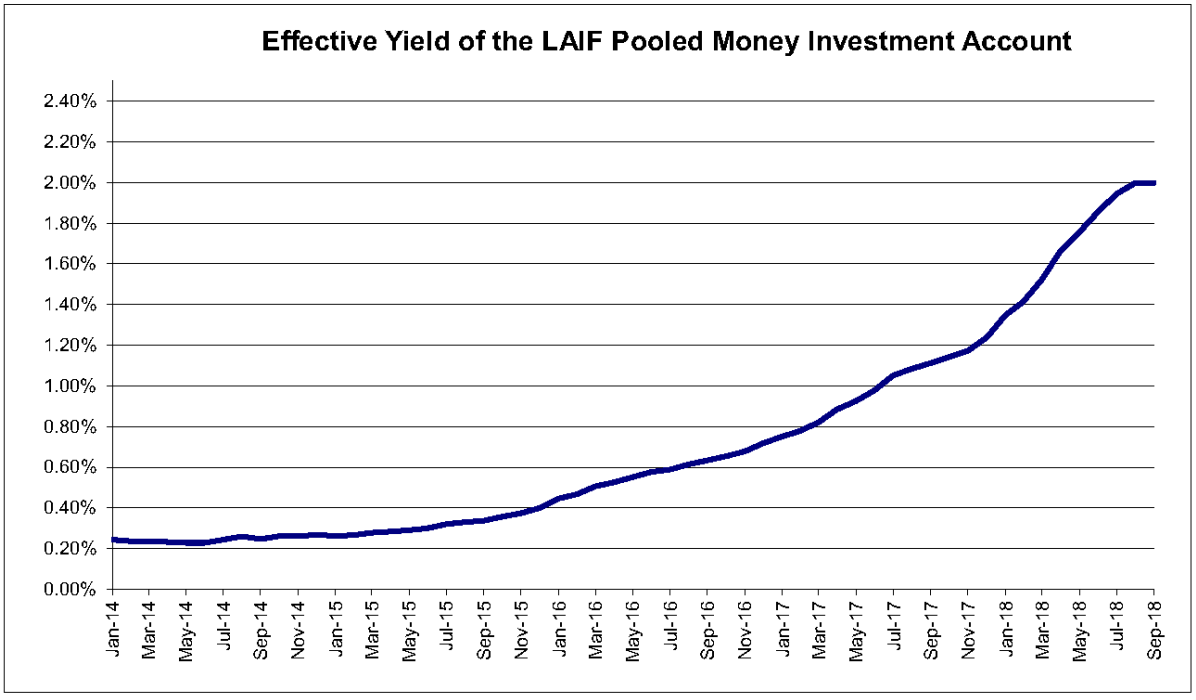
Note: As of 10/4/18, the updated treasury information for September has not been received. The information above is as of 8/31/18.

Investment Summary - September 2018

LOCAL AGENCY INVESTMENT FUND

PERIOD	TOTAL WITHDRAWAL AMOUNT	TOTAL DEPOSIT AMOUNT	ACCRUED INTEREST (QUARTERLY)	ENDING BALANCE
July 31, 2018	$ -	$ -	$ 50,409.17	$ 10,674,082.68
August 31, 2018	$ (4,000,000.00)	$ -	$ -	$ 6,674,082.68
September 30, 2018	$ -	$ -	$ -	$ 6,674,082.68
October 31, 2018	$ -	$ -	$ -	$ 6,674,082.68
November 30, 2018	$ -	$ -	$ -	$ 6,674,082.68
December 31, 2018	$ -	$ -	$ -	$ 6,674,082.68
January 31, 2019	$ -	$ -	$ -	$ 6,674,082.68
February 28, 2019	$ -	$ -	$ -	$ 6,674,082.68
March 31, 2019	$ -	$ -	$ -	$ 6,674,082.68
April 30, 2019	$ -	$ -	$ -	$ 6,674,082.68
May 31, 2019	$ -	$ -	$ -	$ 6,674,082.68
June 30, 2019	$ -	$ -	$ -	$ 6,674,082.68

L.A.I.F. INCOME SUMMARY	CURRENT QUARTER	FY YEAR-TO-DATE
INCOME RECEIVED	$ 50,409.17	$ 50,409.17



FY 2018-19 Water Revenue					
G/L ACCOUNT #	DESCRIPTION	BUDGET	Sept '18	Year to Date	%
02-40010	Sales - Water	$ 5,958,445	$ 621,559	$ 1,533,732	25.74%
02-40011	Sales - Construction Water	$ 25,000	$ 20,620	$ 43,570	174.28%
02-40012	Sales - Imported Water (SGPWA)	$ 250,000	$ 24,027	$ 77,783	31.11%
02-40013	Sales - Imported Water (MUNI)	$ 850,000	$ 86,000	$ 193,277	22.74%
02-40014	Sales Disc.-Multi Units Usage Chrg.	$ (110,000)	$ (10,106)	$ (25,039)	22.76%
02-40015	Water Wholesale Revenue	$ 200,000	$ -	$ 20,728	10.36%
02-40016	Service Establishment Fee	$ 5,000	$ 25	$ 600	12.00%
02-41000	Service Demand Charges	$ 3,400,000	$ 266,003	$ 588,638	17.31%
02-41001	Fire Service Standby Fees	$ 45,000	$ 3,221	$ 7,811	17.36%
02-41003	Construction Service Charge	$ 15,000	$ 271	$ 598	3.99%
02-41005	Sales Disc-Multi Units Service Chrg.	$ (135,000)	$ (11,360)	$ (25,229)	18.69%
02-41010	Unauthorized Use of Water Charge	$ 2,000	$ -	$ -	0.00%
02-41110	Meter/Lateral installation	$ 50,000	$ -	$ 19,940	39.88%
02-41112	Fire Flow Test Fees	$ 4,500	$ 575	$ 875	19.44%
02-41113	Disconnect/Reconnect Fees	$ 100,000	$ 7,725	$ 17,775	17.78%
02-41121	Penalty - Late Charges	$ 135,000	$ 16,416	$ 36,720	27.20%
02-41124	Bad Debt	$ (20,000)	$ -	$ 335	-1.68%
02-42122	Revenue - Other Operating	$ -	$ (6)	$ (6)	N/A
02-42123	Management & Accounting Fees	$ 202,500	$ 16,875	$ 50,625	25.00%
02-43010	Interest Earned	$ 85,000	$ -	$ 26,174	30.79%
02-43110	Property Tax - Unsecured	$ 80,000	$ -	$ -	0.00%
02-43120	Property Tax - Secured	$ 2,700,000	$ -	$ -	0.00%
02-43130	Tax Collection - Prior	$ 25,000	$ -	$ -	0.00%
02-43140	Other Taxes	$ 180,000	$ -	$ -	0.00%
02-49110	Rental Income (WATER STOCK)	$ 3,000	$ -	$ -	0.00%
02-49150	Revenue - Misc. Non-Operating	$ 100,000	$ 380	$ 9,587	9.59%
	WATER OPERATING REVENUE	**$ 14,150,445**	**$ 1,042,225**	**$ 2,612,245**	**18.46%**
	Grants	$ -	$ -	$ -	
02-89901	Facility Capacity Charges	$ -	$ 13,478	$ 127,391	
02-89902	Sustainability	$ -	$ 881	$ 38,532	
	TOTAL WATER REVENUE	**$ 14,150,445**	**$ 1,056,583**	**$ 2,778,168**	

NOTE: Plan check & inspection fees to 02-42122

FY 2018-19 Sewer Revenue					
G/L ACCOUNT #	DESCRIPTION	BUDGET	Sept '18	Year to Date	%
03-40016	Sales - Establish Service Fee	$ 500	$ 25	$ 25	5.00%
03-41000	Sales - Sewer Charges	$ 12,116,254	$ 968,244	$ 2,241,034	18.50%
03-41005	Sales Disc-Multi Units Service Chrg.	$ (200,000)	$ (18,304)	$ (42,209)	21.10%
03-41110	Meter/Lateral Installation	$ 2,500	$ 2,500	$ 2,500	100.00%
03-41121	Penalty - Late Charges	$ 135,000	$ 11,526	$ 32,692	24.22%
03-41124	Bad Debt	$ (15,000)	$ -	$ -	0.00%
03-41131	Front Footage Fees	$ 30,000	$ 16,250	$ 16,250	54.17%
03-42122	Revenue - Other Operating	$ 2,000	$ 360	$ 360	18.00%
03-43010	Interest Earned	$ 95,000	$ -	$ 24,208	25.48%
03-43110	Property Tax - Unsecured	$ 50,000	$ -	$ -	0.00%
03-43120	Property Tax - Secured	$ 100,000	$ -	$ -	0.00%
03-43130	Tax Collection - Prior	$ 10,000	$ -	$ -	0.00%
03-43140	Other Taxes	$ 1,500	$ -	$ -	0.00%
03-49150	Misc. Non-Oper Revenue	$ 10,000	$ -	$ 58	0.58%
	SEWER OPERATING REVENUE	**$ 12,337,754**	**$ 980,601**	**$ 2,274,918**	**18.44%**
	Grants	$ -	$ -	$ -	
03-89901	Facility Capacity Charges	$ -	$ 22,065	$ 211,148	
03-89903	Contrib Capital-Front Footage Fees	$ -	$ -	$ -	
03-89905	Contrib Capital-Infrastructure	$ -	$ -	$ 9,000	
	TOTAL SEWER REVENUE	**$ 12,337,754**	**$ 1,002,667**	**$ 2,495,066**	

FY 2018-19 Recycled Revenue					
G/L ACCOUNT #	DESCRIPTION	BUDGET	Sept '18	Year to Date	%
04-40010	Sales - Recycled Water	$ 694,270	$ 74,707	$ 152,653	21.99%
04-40011	Sales - Construction Water	$ 65,000	$ 8	$ 87	0.13%
04-41000	Sales - Service Demand Chrg.	$ 85,000	$ 6,283	$ 13,747	16.17%
04-41003	Const. Water Minimum Chrg.	$ 5,000	$ 56	$ 118	2.37%
04-41110	Meter/Lateral installation	$ 45,000	$ -	$ 2,940	6.53%
04-41121	Penalty - Late Charges	$ 5,000	$ 191	$ 913	18.25%
04-41122	Revenue - Other Operating	$ 500	$ -	$ -	0.00%
04-43010	Interest Earned	$ 20,000	$ -	$ 5,380	26.90%
04-43110	Property Tax - Unsecured	$ 10,000	$ -	$ -	0.00%
04-43120	Property Tax - Secured	$ 350,000	$ -	$ -	0.00%
04-43130	Property Tax - Prior	$ 10,000	$ -	$ -	0.00%
04-43140	Property Tax - Other	$ 2,500	$ -	$ -	0.00%
04-49150	Misc. Non-Operating Revenue	$ 1,000	$ -	$ -	0.00%
	RECYCLED OPERATING REVENUE	**$ 1,293,270**	**$ 81,246**	**$ 175,838**	**13.60%**
	Grants	$ -	$ -	$ -	
04-89901	Facility Capacity Charges	$ -	$ -	$ 21,061	
	TOTAL RECYCLED REVENUE	**$ 1,293,270**	**$ 81,246**	**$ 196,899**	

FY 2018-19 Water Expenses					
G/L ACCOUNT #	DESCRIPTION	BUDGET	Sept '18	Year to Date	%
02-5-01-50010	Labor-Water Resources	$ 997,976	$ 69,612	$ 222,832	22.33%
02-5-01-50011	Labor Credit	$ -	$ -	$ -	
02-5-01-50013	Benefits-Fica	$ 76,345	$ 5,512	$ 17,588	23.04%
02-5-01-50014	Benefits-Life Insurance	$ 5,568	$ 115	$ 373	6.70%
02-5-01-50016	Benefits-Health\Defrd Comp	$ 218,544	$ 29,406	$ 64,409	29.47%
02-5-01-50017	Benefits-Disability Insurance	$ 8,982	$ 1,005	$ 3,207	35.70%
02-5-01-50019	Benefits-Workers Compensation	$ 26,945	$ -	$ 2,024	7.51%
02-5-01-50021	Benefits-PERS-Employee	$ -	$ (154)	$ (3,129)	
02-5-01-50022	Benefits-PERS-Employer	$ 149,696	$ 4,800	$ 14,858	9.93%
02-5-01-50023	Benefits-Uniforms	$ 5,800	$ 99	$ 538	9.27%
02-5-01-50024	Benefits-Vacation & Sick Pay	$ 6,001	$ 1,017	$ 2,567	42.78%
02-5-01-50025	Benefits-Boot Allowance	$ 3,480	$ -	$ 900	25.86%
02-5-01-51003	R&M - Structures	$ 319,000	$ 9,938	$ 267,239	83.77%
02-5-01-51011	R&M - CLA Valves	$ 20,000	$ -	$ 11,427	57.13%
02-5-01-51140	General Supplies & Expenses	$ 2,000	$ -	$ 74	3.69%
02-5-01-51210	Utilities - Power Purchases	$ 1,394,000	$ 162,753	$ 370,231	26.56%
02-5-01-51211	Utilities - Electricity & Fuel	$ 5,000	$ 364	$ 941	18.81%
02-5-01-51316	Imported Water Purchases	$ 1,200,000	$ -	$ 284,515	23.71%
02-5-01-54019	Licenses & Permits	$ 70,000	$ 1,192	$ 1,192	1.70%
02-5-01-54110	Laboratory Services	$ 65,000	$ -	$ 25,613	39.40%
02-5-01-57040	YVRWFF Operating Expense	$ 700,000	$ 38,792	$ 126,780	18.11%
	WATER RESOURCE TOTALS	**$ 5,274,337**	**$ 324,451**	**$ 1,414,178**	**26.81%**
02-5-03-50010	Labor-Public Works	$ 1,650,107	$ 111,275	$ 305,509	18.51%
02-5-03-50011	Labor Credit	$ -	$ -	$ (3,036)	
02-5-03-50013	Benefits-Fica	$ 126,443	$ 8,686	$ 23,907	18.91%
02-5-03-50014	Benefits-Life Insurance	$ 10,776	$ 202	$ 568	5.27%
02-5-03-50016	Benefits-Health\Defrd Comp	$ 422,958	$ 68,196	$ 137,532	32.52%
02-5-03-50017	Benefits-Disability Insurance	$ 14,851	$ 1,511	$ 4,245	28.59%
02-5-03-50019	Benefits-Workers Compensation	$ 44,553	$ 311	$ 2,335	5.24%
02-5-03-50021	Benefits-PERS Employee	$ -	$ (445)	$ (5,486)	
02-5-03-50022	Benefits-PERS Employer	$ 247,516	$ 7,587	$ 23,028	9.30%
02-5-03-50023	Benefits-Uniforms	$ 11,225	$ 471	$ 3,337	29.73%
02-5-03-50024	Benefits-Vacation & Sick Pay	$ 4,000	$ 393	$ 1,440	36.00%
02-5-03-50025	Benefits-Boot Allowance	$ 6,525	$ -	$ 6,900	105.75%
02-5-03-51001	R & M -Vehicles & Equipment	$ 200,000	$ 7,999	$ 56,536	28.27%
02-5-03-51011	R&M - Valves	$ 10,000	$ -	$ 800	8.00%
02-5-03-51020	R&M - Pipelines	$ 225,000	$ 14,093	$ 52,853	23.49%
02-5-03-51021	R&M - Service Lines	$ 96,000	$ 5,978	$ 16,092	16.76%
02-5-03-51022	R&M - Fire Hydrants	$ 25,000	$ 1,000	$ 8,272	33.09%
02-5-03-51029	R&M - Backflow	$ 20,000	$ 9,599	$ 13,430	67.15%
02-5-03-51030	R&M - Water Meters	$ 30,000	$ 2,354	$ 48,043	160.14%
02-5-03-51031	Fire Flow Testing	$ 30,000	$ -	$ 3,117	10.39%
02-5-03-51092	Equipment Credits	$ -	$ -	$ (2,516)	
02-5-03-51140	General Supplies & Expenses	$ 2,500	$ -	$ 1,493	59.73%
	PUBLIC WORKS TOTALS	**$ 3,177,454**	**$ 239,210**	**$ 698,401**	**21.98%**

FY 2018-19 Water Expenses					
G/L ACCOUNT #	DESCRIPTION	BUDGET	Sept '18	Year to Date	%
02-5-06-50010	Labor-Administration	$ 602,359	$ 42,432	$ 142,756	23.70%
02-5-06-50011	Labor Credit	$ -	$ -	$ (556)	
02-5-06-50012	Director Fees	$ 25,000	$ 2,853	$ 4,751	19.00%
02-5-06-50013	Benefits-Fica	$ 46,080	$ 3,362	$ 10,977	23.82%
02-5-06-50014	Benefits-Life Insurance	$ 2,952	$ 105	$ 351	11.88%
02-5-06-50016	Benefits-Health\Defrd Comp	$ 115,866	$ 23,254	$ 53,853	46.48%
02-5-06-50017	Benefits-Disability Insurance	$ 5,421	$ 583	$ 2,090	38.56%
02-5-06-50019	Benefits-Workers Compensation	$ 16,264	$ -	$ 1,012	6.22%
02-5-06-50021	Benefits PERS Employee	$ -	$ (117)	$ (2,544)	
02-5-06-50022	Benefits PERS Employer	$ 90,354	$ 3,220	$ 10,809	11.96%
02-5-06-50023	Uniforms	$ 3,075	$ 98	$ 383	12.46%
02-5-06-50024	Benefits-Vacation & Sick Pay	$ 10,000	$ 283	$ 1,042	10.42%
02-5-06-50025	Benefits-Boots	$ 1,845	$ -	$ 3,300	178.86%
02-5-06-51003	R&M - Structures	$ 30,000	$ 4,029	$ 10,837	36.12%
02-5-06-51091	Expense Credits (overhead)	$ -	$ -	$ (1,065)	
02-5-06-51120	Safety Equipment/Supplies	$ 25,000	$ -	$ 4,530	18.12%
02-5-06-51125	Petroleum Products	$ 105,000	$ 14,428	$ 51,078	48.65%
02-5-06-51130	Office Supplies & Expenses	$ 35,000	$ 961	$ 7,395	21.13%
02-5-06-51140	General Supplies & Expenses	$ 35,000	$ -	$ 7,117	20.33%
02-5-06-51199	Disaster Incidences	$ -	$ -	$ -	
02-5-06-51211	Utilities - Electricity	$ 65,000	$ 3,903	$ 11,151	17.16%
02-5-06-51213	Utilities - Natural Gas	$ 1,500	$ -	$ 59	3.92%
02-5-06-54002	Dues & Subscriptions	$ 41,500	$ 1,316	$ 4,655	11.22%
02-5-06-54005	Computer Expenses	$ 100,000	$ 1,350	$ 13,490	13.49%
02-5-06-54010	Postage	$ 4,200	$ 173	$ 690	16.42%
02-5-06-54011	Printing & Publications	$ -	$ -	$ 101	
02-5-06-54012	Education & Training	$ 15,000	$ 392	$ 6,120	40.80%
02-5-06-54013	Utility Billing Expenses	$ 150,000	$ 5,099	$ 37,862	25.24%
02-5-06-54014	Public Relations	$ 25,000	$ -	$ 5,260	21.04%
02-5-06-54016	Travel Related Expenses	$ 8,000	$ -	$ 2,519	31.49%
02-5-06-54017	Certifications & Renewals	$ 8,000	$ 495	$ 2,048	25.60%
02-5-06-54020	Meeting Related Expenses	$ 8,000	$ 105	$ 1,354	16.93%
02-5-06-54022	Utilities - YVWD Services	$ 60,000	$ -	$ 40,587	67.65%
02-5-06-54024	Utilities - Waste Disposal	$ 2,500	$ -	$ 3,039	121.55%
02-5-06-54025	Utilities - Telephone & Internet	$ 45,000	$ 2,205	$ 11,066	24.59%
02-5-06-54099	Conservation & Rebates	$ 30,000	$ -	$ -	0.00%
02-5-06-54104	Contractual Services	$ 100,000	$ 2,242	$ 24,587	24.59%
02-5-06-54107	Legal	$ 50,000	$ -	$ 4,554	9.11%
02-5-06-54108	Audit & Accounting	$ 12,000	$ -	$ -	0.00%
02-5-06-54109	Professional Fees	$ 165,000	$ 2,500	$ 48,724	29.53%
02-5-06-55500	Depreciation Reserves	$ 200,000	$ 16,667	$ 50,000	25.00%
	Infrastructure Replacement	$ 1,000,000	$ 83,333	$ 249,999	25.00%
02-5-06-56001	Insurance	$ 100,000	$ 7,942	$ 25,570	25.57%
02-5-06-57030	Regulatory Compliance	$ 15,000	$ -	$ 10,630	70.86%
02-5-06-57090	Election Related Expenses	$ 5,000	$ -	$ -	
02-5-06-57096	Beaumont Basin Watermaster	$ 44,000	$ -	$ -	0.00%
02-5-06-57199	Suspense	$ -	$ -	$ -	

FY 2018-19 Water Expenses					
G/L ACCOUNT #	DESCRIPTION	BUDGET	Sept '18	Year to Date	%
	ADMINISTRATION TOTALS	**$ 3,403,916**	**$ 223,211**	**$ 862,182**	**25.33%**
02-5-40-57201	Debt Srv-Series 2015A Princ.(2500	$ 1,115,000	$ -	$ 1,115,000	100.00%
02-5-40-57402	Interest-Long-Term Debt Bonds	$ 1,179,738	$ -	$ 603,806	51.18%
	40 - Debt	**$ 2,294,738**	**$ -**	**$ 1,718,806**	**74.90%**
02-5-40-57001	Asset Acq, - Water Resources	$ -	$ -	$ -	--
02-5-40-57003	Asset Acq, - Public works	$ -	$ -	$ -	--
02-5-40-57006	Asset Acq. - Admin (fuel master)	$ -	$ -	$ -	--
	40 - Capital Outlay	**$ -**	**$ -**	**$ -**	**--**
				$ 4,693,567	
	TOTAL WATER EXPENSES	**$ 14,150,445**	**$ 786,872**	**$ 4,693,567**	**33.17%**

FY 2018-19 Sewer Expenses					
G/L ACCOUNT #	DESCRIPTION	BUDGET	Sept '18	Year to Date	%
03-5-02-50010	Labor-S Treatment	$ 1,170,711	$ 79,061	$ 240,891	20.58%
03-5-02-50013	Benefits-Fica	$ 89,559	$ 6,130	$ 18,656	20.83%
03-5-02-50014	Benefits-Life Insurance	$ 6,336	$ 131	$ 409	6.45%
03-5-02-50016	Benefits-Health\Defrd Comp	$ 248,688	$ 31,792	$ 64,866	26.08%
03-5-02-50017	Benefits-Disability Insurance	$ 10,536	$ 1,098	$ 3,374	32.02%
03-5-02-50019	Benefits-Workers Compensation	$ 31,609	$ -	$ 2,024	6.40%
03-5-02-50021	Benefits-PERS Employee	$ -	$ (154)	$ (3,128)	
03-5-02-50022	Benefits-PERS Employer	$ 175,607	$ 5,440	$ 16,518	9.41%
03-5-02-50023	Benefits-Uniforms	$ 6,600	$ 199	$ 872	13.21%
03-5-02-50024	Benefits-Vacation & Sick Pay	$ 5,001	$ 723	$ 2,273	45.44%
03-5-02-50025	Benefits-Boot Allowance	$ 3,960	$ -	$ 5,400	136.36%
03-5-02-51003	R&M - Structures	$ 300,000	$ 9,154	$ 81,307	27.10%
03-5-02-51010	R&M - Automation Control	$ 70,000	$ -	$ 21,435	30.62%
03-5-02-51106	Chemicals	$ 600,000	$ 21,499	$ 160,529	26.75%
03-5-02-51111	Propane	$ 1,000	$ -	$ -	0.00%
03-5-02-51115	Laboratory Supplies	$ 35,000	$ 2,930	$ 9,281	26.52%
03-5-02-51140	General Supplies & Expenses	$ 2,000	$ 16	$ 952	47.60%
03-5-02-51210	Utilities - Power Purchases	$ 800,000	$ 88,673	$ 242,060	30.26%
03-5-02-54110	Laboratory Services	$ 85,000	$ 344	$ 18,500	21.77%
03-5-02-57031	Sludge Disposal	$ 230,000	$ -	$ 42,740	18.58%
03-5-02-57034	Brine Operating Expenses	$ 385,000	$ 33	$ 2,489	0.65%
	TREATMENT TOTALS	**$ 4,256,607**	**$ 247,070**	**$ 931,448**	**21.88%**
03-5-06-50010	Labor-Administration	$ 602,359	$ 42,432	$ 132,713	22.03%
03-5-06-50011	Labor Credit	$ -	$ -	$ -	
03-5-06-50012	Directors Fees	$ 25,000	$ 2,853	$ 4,751	19.00%
03-5-06-50013	Benefits-Fica	$ 46,080	$ 3,362	$ 10,189	22.11%
03-5-06-50014	Benefits-Life Insurance	$ 2,952	$ 105	$ 332	11.26%
03-5-06-50016	Benefits-Health\Defrd Comp	$ 115,866	$ 23,319	$ 51,507	44.45%
03-5-06-50017	Benefits-Disability Insurance	$ 5,421	$ 583	$ 1,943	35.85%
03-5-06-50019	Benefits-Workers Compensation	$ 16,264	$ -	$ 1,012	6.22%
03-5-06-50021	Benefits PERS Employee	$ -	$ (94)	$ (2,093)	
03-5-06-50022	Benefits PERS Employer	$ 90,354	$ 3,220	$ 10,395	11.50%
03-5-06-50023	Benefits-Uniforms	$ 3,075	$ 31	$ 129	4.20%
03-5-06-50024	Benefits-Vacation & Sick Pay	$ 5,000	$ 283	$ 1,042	20.84%
03-5-06-50025	Benefits-Boot Allowance	$ 1,845	$ -	$ -	0.00%
03-5-06-51120	Safety Equipment/Supplies	$ 5,500	$ -	$ 3,426	62.29%
03-5-06-51125	Petroleum Products	$ 18,000	$ 1,500	$ 4,500	25.00%
03-5-06-51130	Office Supplies	$ 10,000	$ 335	$ 717	7.17%
03-5-06-51140	General Supplies & Expenses	$ 30,000	$ 11	$ 5,680	18.93%
03-5-06-51199	Disaster Repairs	$ -	$ -	$ -	
03-5-06-54002	Dues & Subscriptions	$ 25,000	$ 510	$ 1,015	4.06%
03-5-06-54003	Management & Admin Services	$ 202,500	$ 16,875	$ 50,625	25.00%
03-5-06-54005	Computer Expenses	$ 100,000	$ 1,001	$ 12,720	12.72%
03-5-06-54011	Printing & Publications	$ -	$ -	$ 101	N/A
03-5-06-54012	Education & Training	$ 15,000	$ -	$ 4,986	33.24%
03-5-06-54014	Public Relations	$ 25,000	$ -	$ -	0.00%
03-5-06-54016	Travel Related Expenses	$ 10,000	$ -	$ 3,427	34.27%
03-5-06-54017	Certifications & Renewals	$ 7,500	$ 210	$ 1,472	19.63%
03-5-06-54019	Licenses & Permits	$ 65,000	$ 2,373	$ 2,873	4.42%
03-5-06-54020	Meeting Related Expenses	$ 5,000	$ 70	$ 1,138	22.76%

FY 2018-19 Sewer Expenses					
G/L ACCOUNT #	DESCRIPTION	BUDGET	Sept '18	Year to Date	%
03-5-06-54022	Utilities - YVWD Services	$ 1,500	$ -	$ 339	22.63%
03-5-06-54024	Utilities - Waste Disposal	$ 13,000	$ -	$ 4,081	31.39%
03-5-06-54025	Utilities - Telephone & Internet	$ 45,000	$ 3,479	$ 13,878	30.84%
03-5-06-54030	Drinking Water	$ 1,250	$ 70	$ 240	19.19%
03-5-06-54104	Contractual Services	$ 50,000	$ 803	$ 14,413	28.83%
03-5-06-54107	Legal	$ 45,000	$ 350	$ 6,182	13.74%
03-5-06-54108	Audit & Accounting	$ 12,000	$ -	$ -	0.00%
03-5-06-54109	Professional Fees	$ 159,000	$ 2,500	$ 38,823	24.42%
03-5-06-55500	Depreciation Reserves	$ 500,000	$ 41,667	$ 125,000	25.00%
	Infrastructure Replacement	$ 500,000	$ 41,667	$ 125,000	25.00%
03-5-06-56001	Insurance	$ 115,000	$ 11,124	$ 33,371	29.02%
03-5-06-57030	Regulatory Compliance	$ 50,000	$ -	$ 10,587	21.17%
	ADMINISTRATION TOTALS	**$ 2,924,466**	**$ 200,636**	**$ 676,514**	**23.13%**
03-5-07-50010	Labor-Enviromental Control	$ 614,646	$ 42,352	$ 133,812	21.77%
03-5-07-50011	Labor Credit	$ -	$ -	$ -	0.00%
03-5-07-50013	Benefits-Fica	$ 47,020	$ 3,230	$ 10,251	21.80%
03-5-07-50014	Benefits-Life Insurance	$ 3,888	$ 85	$ 219	5.64%
03-5-07-50016	Benefits-Health\Defrd Comp	$ 152,604	$ 25,757	$ 51,063	33.46%
03-5-07-50017	Benefits-Disability Insurance	$ 5,532	$ 590	$ 1,779	32.16%
03-5-07-50019	Benefits-Workers Compensation	$ 16,595	$ -	$ 2,024	12.20%
03-5-07-50021	Benefits-PERS Employee	$ -	$ (127)	$ (1,653)	
03-5-07-50022	Benefits-PERS Employer	$ 92,197	$ 2,926	$ 8,577	9.30%
03-5-07-50023	Benefits-Uniforms	$ 4,050	$ 169	$ 1,135	28.02%
03-5-07-50024	Benefits-Vacation & Sick Pay	$ 2,501	$ 314	$ 1,032	41.28%
03-5-07-50025	Benefits-Boot Allowance	$ 2,430	$ -	$ 600	24.69%
03-5-07-51003	R&M - Structures	$ 225,000	$ 6,203	$ 61,630	27.39%
03-5-07-51140	General Supplies & Expenses	$ 1,000	$ -	$ 9	0.91%
03-5-07-51241	Lift Station #1	$ 55,000	$ 9,130	$ 16,416	29.85%
03-5-07-51242	Lift Station #2	$ 14,000	$ 1,089	$ 2,943	21.02%
03-5-07-51243	Lift Station #3	$ 9,000	$ 258	$ 661	7.34%
03-5-07-51244	Lift Station #4	$ 14,500	$ 737	$ 2,322	16.02%
03-5-07-51248	Lift Station #8	$ 3,000	$ 94	$ 241	8.03%
03-5-07-54111	Pretreatment	$ 60,000	$ -	$ 12,826	21.38%
	ENVIRONMENTAL CONTROL TOTAL	**$ 1,322,963**	**$ 92,809**	**$ 305,888**	**23.12%**
03-5-40-57202	Debt Service - Principal - WRWRF	$ 2,252,312	$ 2,252,312	$ 2,252,312	100.00%
03-5-40-57203	Debt Service - Principal - Brineline	$ 435,383	$ -	$ -	0.00%
03-5-40-57204	Debt Service - Principal - WISE	$ 133,659	$ -	$ -	0.00%
03-5-40-57205	Debt Service - Principal - R 10.3	$ 39,161	$ -	$ -	0.00%
03-5-40-57206	Debt Service - Principal - Crow & B12-1	$ 15,330	$ -	$ -	0.00%
03-5-40-57403	Debt Service - Interest	$ 957,873	$ 671,356	$ 671,356	70.09%
	40 - Debt	**$ 3,833,718**	**$ 2,923,669**	**$ 2,923,669**	**76.26%**
03-5-40-57002	Asset Acq. - Treatment	$ -	$ -	$ -	
03-5-40-57006	Asset Acq. - Admin (fuel master)	$ -	$ -	$ -	
03-5-40-57007	Asset Acq. - EC (ADS flow monitors & smart covers)	$ -	$ -	$ -	
	40 - Capital Outlay	$ -	$ -	$ -	
				$ 4,837,519	
	TOTAL SEWER EXPENSES	**$ 12,337,754**	**$ 3,464,184**	**$ 4,837,519**	**39.21%**

FY 2018-19 Recycled Expenses					
G/L ACCOUNT #	DESCRIPTION	BUDGET	Sept '18	Year to Date	%
04-5-06-50010	Labor-Recycled Water	$ 677,931	$ 45,547	$ 148,742	21.94%
04-5-06-50011	Labor - Credit	$ -	$ -	$ -	
04-5-06-50012	Director Fees	$ 5,000	$ -	$ -	0.00%
04-5-06-50013	Benefits-FICA	$ 51,862	$ 3,391	$ 11,185	21.57%
04-5-06-50014	Benefits-Life Insurance	$ 3,528	$ 78	$ 212	6.02%
04-5-06-50016	Benefits-Health & Def Comp	$ 138,474	$ 24,052	$ 48,702	35.17%
04-5-06-50017	Benefits-Disability Insurance	$ 6,101	$ 617	$ 1,967	32.24%
04-5-06-50019	Benefits-Workers Compensation	$ 18,304	$ -	$ 1,124	6.14%
04-5-06-50021	Benefits-PERS Employee	$ -	$ (96)	$ (1,538)	
04-5-06-50022	Benefits-PERS Employer	$ 101,690	$ 3,371	$ 9,914	9.75%
04-5-06-50023	Benefits-Uniforms	$ 3,675	$ 34	$ 139	3.79%
04-5-06-50024	Benefits-Vacation & Sick Pay	$ 1,000	$ 56	$ 197	19.66%
04-5-06-50025	Benefits-Boots	$ 2,205	$ -	$ 600	27.21%
04-5-06-51003	R & M-Structures	$ 34,000	$ -	$ 6,261	18.42%
04-5-06-51011	R & M-Valves	$ 5,000	$ -	$ -	0.00%
04-5-06-51020	R & M-Pipelines	$ 2,500	$ -	$ -	0.00%
04-5-06-51021	R & M-Service Lines	$ 2,500	$ -	$ 2,752	110.08%
04-5-06-51022	R & M-Fire Hydrants	$ 1,000	$ -	$ 3,348	334.77%
04-5-06-51030	R & M-Meters/Backflows	$ 10,000	$ -	$ 104	1.04%
04-5-06-51140	General Supplies & Expenses	$ 5,000	$ -	$ 1,220	24.39%
04-5-06-51210	Utilities-Power Purchasess	$ 70,000	$ 9,067	$ 22,969	32.81%
04-5-06-54002	Dues & Subscriptions	$ 1,500	$ -	$ 16	1.03%
04-5-06-54005	Computer Expense	$ 5,000	$ -	$ 750	15.00%
04-5-06-54011	Printing & Publications	$ -	$ -	$ -	N/A
04-5-06-54012	Education & Training	$ 4,000	$ -	$ 807	20.17%
04-5-06-54014	Public Relations	$ 6,500	$ -	$ -	0.00%
04-5-06-54016	Travel Related Expenses	$ 2,500	$ -	$ 376	15.03%
04-5-06-54017	Certifications & Renewals	$ 1,000	$ 15	$ 15	1.50%
04-5-06-54019	Licenses & Permits	$ 10,000	$ -	$ -	0.00%
04-5-06-54020	Meeting Related Expenses	$ 1,500	$ 70	$ 249	16.58%
04-5-06-54022	Utilities - YVWD Services	$ 30,000		$ 30,710	102.37%
04-5-06-54025	Utilities - Telephone & Internet	$ 2,000	$ -	$ 267	13.37%
04-5-06-54010	Contractural Services	$ 5,000	$ -	$ 2,084	41.68%
04-5-06-54107	Legal	$ 1,500	$ -	$ -	0.00%
04-5-06-54108	Audit & Accounting	$ 2,500	$ -	$ -	0.00%
04-5-06-54109	Professional Fees	$ 10,000	$ -	$ 7,092	70.92%
04-5-06-54110	Laboratory Services	$ -	$ -	$ -	
04-5-06-55500	Depreciation	$ 8,000	$ 665	$ 2,015	25.19%
	Infrastructure Replacement	$ 15,000	$ 1,250	$ 3,750	25.00%
04-5-06-56001	Insurance	$ 20,000	$ 1,765	$ 5,294	26.47%
04-5-06-57030	Regulatory Compliance	$ 25,000	$ -	$ 5,188	20.75%
04-5-06-57040	Environmental Compliance	$ 2,500	$ -	$ -	0.00%
				$ 316,511	
	TOTAL RECYCLED EXPENSES	**$ 1,293,270**	**$ 89,882**	**$ 316,511**	**24.47%**

Yucaipa Valley Water District

Workshop Memorandum 18-238

Date: October 9, 2018

Prepared By: Allison M. Edmisten, Chief Financial Officer

Subject: Review the Updated Procurement Policy for the Yucaipa Valley Water District

During the most recent year-end financial audit, District staff became aware that our procurement policy was out of date and needed to be updated. Attached is a revised version of the District's current procurement policy that was adopted by the Board on June 20, 2007 [DM 07-070].

The changes to the procurement policy include:

- Definitions – "Formal Solicitation" (Page 1): clarified that all vendors should receive the same information regarding scope/specifications and all responses received must be kept in confidence until the bid is awarded.
- Section 1.9 (Page 3): Added "expenses, lodging and meals" to the Travel line item.
- Section 2.5 (Page 4): New language to clarify the first level of approval should ensure the quotes are in accordance with the procurement policy.
- Authorization Table (Page 4): Updated titles across the top and changed the Manager limit from $10,000 maximum to $25,000 which is in line with how the District has been operating.
- Section 3.1 Table (Page 5): Changed the lower limit to $4,999 maximum and updated language to state "Solicit two informal (phone/written) quotes whenever practical."
- Section 3.3: Clarified when it is appropriate to use a sole source vendor and how it should be documented.
- Section 3.4: Added language to address the new Department of Industrial Relations (DIR) requirements the District currently follows.

Legal counsel has reviewed the recommended policy as well as our auditors Vavrinek, Trine, Day & Company, LLP.

Financial Consideration

There is no financial impact to the District by updating the procurement policy.

Yucaipa Valley Water District

PROCUREMENT POLICY

Purpose

The purpose of this policy is to provide uniform procedures for acquiring services and materials for the District, including bidding regulations, as required by Government Code, Section 54202 to assure purchases are accomplished in a manner providing maximum benefits and minimum costs to the District.

Scope

This policy applies to the purchase of all equipment, services and materials that have been budgeted by the Board of Directors ("Board") through the annual budget process.

From time-to-time the Board may provide direction that may create more restrictive purchasing definitions, methods of purchasing, delivery policy and authority limits. If this policy is ever in conflict with Board direction, the direction of the Board shall govern until this policy can be revised to be consistent with Board direction.

Definitions

"Budgeted" shall mean the amount of appropriations within a fund adopted for expenditure by the Board.

"Change Order and Amendment" shall mean any modification to an existing procurement or respective contractual document.

"Emergency Procurement" shall mean any procurement required for the prevention against imminent danger, or to mitigate the loss or impairment of: (1) life, health, or public safety of District employees, suppliers, contractors; or (2) public or private property; or (3) any other valid danger/situation which cannot reasonably be foreseen and would have a significant effect on the public's health/safety.

"Formal Bid Process" shall mean the public bidding process used for purchases of supplies, equipment or services having a value greater than fifty thousand dollars ($50,000) not otherwise excluded from this policy. The process requires a public notice of intent to bid, availability of specifications and bid opening, public access to the results of the process, and Board approval of bid award.

"Formal Solicitation" shall mean the issuance of a written request for bids, proposals, or quotations. All vendors must receive the same information about specifications and requirements and requirements of the product or service, and all responses received must be kept in confidence until the bid is awarded.

"Informal Solicitation" shall mean the verbal or written request for a verbal or written bid, proposal, or quotation.

"Procurement" shall mean the purchase of otherwise compensatory securing of materials, supplies, services, leases, equipment, real property, or public works services.

"Professional Services" shall mean any specially trained and experienced person, firm or corporation, providing services and advice in financial, economic, accounting, engineering, information services, technical architectural, or administrative / professional matters.

"Public Works" shall mean the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other improvement as specified in the California Public Contract Code; specifically, Article 40, sections 20640-20644, and Article 72, sections 21050-21051.

"Single Source" shall mean procurement where there is a compelling reason for only one source, a preferred brand, like material, etc., to be procured.

"Sole Source" shall mean procurement where only one viable source exists. This is usually due to legal restrictions of patent rights, a proprietary process, warranty issues, original equipment, copyrights, etc.

1.0 PROCUREMENT INSTRUMENTS

1.1 Petty Cash – Petty cash is available through the Administrative Services Department and may be used for emergency purposes, cash advances, and/or reimbursements for approved cash expenditures. Petty cash is generally limited to a maximum of $50.00 per transaction. The use of petty cash for the purchases of goods, supplies, materials or equipment, except in the event of an immediate need or emergency, is discouraged and shall not be for the purpose of circumventing any provision of the procurement process. Authorization for the use of petty cash must be by the employee's supervisor. Additionally, an employee cannot approve their own use or receipt of petty cash.

1.2 Credit Cards – Credit cards are only to be used for materials, supplies and equipment, for travel related expenses to attend meetings, conferences, seminars and trips, and for single transactions less than or equal to $2,000, unless authorized by the General Manager.

1.3 Check Requests – The check request method is used to request payment for items when a Purchase Order is not accepted by the Vendor, the amount exceeds Petty Cash limits, there is no ability to have an invoice submitted, and the purchase is not more than $2,000. Some examples may include C.O.D. deliveries, education reimbursement, fees and permits, conference registration or subscriptions.

1.4 Purchase Orders – Purchase Orders are used to procure goods such as materials, equipment, parts and supplies.

1.5 Task Orders – Task Orders are used to identify specific work requirements authorized by a "General Services Agreement" (GSA) and is used for the procurement of services that will be performed over more than one fiscal year.

1.6 General Services Agreement (GSA) – A General Services Agreement (GSA) is used to set forth the terms and conditions when establishing a contractual relationship for services between the District and an Independent Contractor. All agreements must contain the signature of both the Contractor and the District representative in accordance with the Levels of Authority listed below. A Task Order detailing the scope of work, deliverables and performance requirements will accompany the GSA prior to the payment for such services.

1.7 Construction Contracts – Formal Notice Inviting Bids, boilerplate documents and specifications must be prepared in accordance with State law. All Construction Contracts equal or greater than $35,000 must be administered in accordance with the State, Public Contract Code, Sections 20640, et seq. and be approved by the Board of Directors.

1.8 Change Orders – A change order is required for Task Orders or Construction Contracts when work performed will exceed the approved amount.

1.9 Invoices – There are occasions when invoices are the only document used to authorize expenditures. Examples include but are not limited to items listed in the table below.

Advertisements	Laboratory Services
Annexation Expenses	Legal Fees
Application Fees	Leases (Equipment & Vehicles)
Assessment District Expenses	Licenses and Permits
Association Fees	Medical Services
Audit and Accounting Charges	Memberships
Bank Charges and Fees	Meter / Copy Usage
Bond Transactions	Newspaper / Employment Ads
Claims	Notices
Computer Hardware / Software	Payroll
Conferences	Petty Cash
Contributions to Other Agencies	Postage
Court Reporting	Printing & Publishing
Credit Card Purchases	Public Relations
Certifications and Renewals	Refunds (Construction & Billing)
Debt Service	Regulatory Expenses
Director Fees and Expenses	Safety
Dues and Subscriptions	Seminars
Easements	Supplemental Water Purchases
Education Reimbursements	Subscriptions
Employee Benefits	Tax Collection Fees
Employee Reimbursements	Temporary Employment Agencies
Fees & Permits, Environmental	Training
Fees & Permits, General	Travel Expenses, Lodging and Meals
Insurance	Utilities

2.0 PURCHASING AUTHORIZATION & APPROVAL REQUIREMENTS

The Purchasing Agent (i.e, Supervisor, Executive Team Manager, Implementation Manager/CFO. General Manager or Board, as the case may be) has the authority set forth in the Standard Purchase Authorization Table below to purchase supplies, equipment and services subject to the limitations set forth in the Budget and hereafter stated to the

Purchasing Agent. The following limits do not apply to utility services or other amounts imposed by rates or charges of other agencies providing service.

2.1 Purchases, agreements, services, leases and/or contracts for materials, supplies, equipment, and other personal property shall be made in accordance with this policy.

2.2 Splitting or separating of material, supply, service, lease, and equipment orders or projects for the express purpose of evading the requirements of this policy, is strictly forbidden.

2.3 Unbudgeted expenditures for specific funds that remain within the District's approved budget are at the General Manager's discretion. Board approval will be required for transfer requests between funds (projects) or any increases to the overall District budget.

2.4 All purchase requests must be submitted on a Purchase Order Request (POR) form authorized by the appropriate signatory level as indicated in the table below.

2.5 The first level of approval should review any required quotes in accordance with this policy.

Standard Purchase Authorization Table					
Dollar Amount	**Supervisor**	**Executive Team Manager**	**Implementation Manager/CFO**	**General Manager**	**Board of Directors**
$0 to $2,500	X				
$2,501 to $25,000		X			
$25,001 to $40,000			X		
$40,001 to $100,000				X	
Greater than $100,001					X

3.0 PROCUREMENT SOLICITATION & SELECTION

Solicitation of quotations, proposals and offers will be provided for each procurement effort. Selection will be performed in a fair process to provide the best value to the District for the available funding.

3.1 Competitive Solicitation

As a statement of policy and in accordance with the criteria specified in this policy, all purchases or contracts for materials, supplies, equipment and services will be based, whenever possible and practicable, on competitive solicitation. There may be

exceptions to the competitive process for emergency conditions, supply limitations, or other circumstances with justification for such waiver being documented with the acquisition.

Examples of exceptions to the competitive process may include:

- Emergency Conditions as defined in this policy;
- Sole source limitations; time constraints; or other circumstances where the General Manager is satisfied that the best price, terms and conditions for the procurement have been negotiated;
- Purchases listed in Section 1.9 above; and
- When the goods, services, materials or equipment required are of such a nature that specifications are not readily available and cannot be developed in a timely manner to meet the needs of the District, in which case the General Manager shall be authorized to negotiate the procurement for the price, terms and conditions deemed to be in the best interest of the District.

Purchase Amount	Bid Type
$0 to $4,999	Solicit two informal (phone/written) quotes whenever practical
$5,000 to $49,999	Solicit three informal (phone/written) quotes
$50,000 to $100,000	Solicit three formal quotes
$100,001 +	Solicit three formal quotes/RFP/Bid Process

Upon completion of selection and purchase authorization, all documentation shall be forwarded to Administrative Services for input to the financial accounting and document management systems for processing.

3.2 Professional Services

Professional services are defined as any specially trained and experienced person, firm, or corporation specializing in financial, economic, accounting, engineering, technical, legal, architectural, or other specialized disciplines. Technical and maintenance services (e.g. janitorial services, landscape maintenance, etc.) differs from professional services in that they involve limited discretionary judgment and are primarily manual in nature.

Although there is no one absolute definition for professional services, the following elements shall be used as a guideline to determine whether or not a trade or occupation qualifies as a professional service:

- Is a license indicating sufficient qualification for a trade or occupation required?
- Are there general standards established and widely accepted for performance of this trade, occupation or service?
- Is advanced and prolonged academic study a prerequisite for practicing this trade, occupation or service?

- Does the trade or occupation involve specialized knowledge and experience beyond mere skill?
- Is work performed predominately mental rather than manual?

Due to the nature of these services, California law does not require competitive bidding for acquisition of professional services. As a matter of policy, competitive proposals will be solicited where practical and possible from more than one service provider at the recommendation of the General Manager and subject to the approval of the Board.

3.3 Sole Source Requests

District policy is to base the purchase of materials, supplies, equipment and services on competitive solicitation whenever possible and practicable.

A sole/single source purchase is necessary when the acquisition can be made from only one qualified supplier of a product or service. Similarly, a sole brand request is required when a given brand of product specifically meets the form, fit, and function of procurement; or is necessary to standardize certain parts, designs, or features in order to realize overall economics.

Sole source purchases may also include equipment which has been standardized by the District or items that have only one distributor authorized to sell in this area.

These purchases must be justified/documented in writing and approved by the appropriate approver from the authorization table.

3.4 Public Works

Public Works projects are limited to the new construction, reconstruction, erection, alterations, and improvements involving publicly owned or operated facilities have a value of $100,000 or more. Public Works projects do not include routine, recurring, replacement, and usual maintenance work and repair performed on existing public facilities to keep them operational.

- Pursuant to Labor Code, Section 1725.5, all contractors have to register as a public works contractor with the Department of Industrial Relations (DIR) if the total value of the project exceeds $15,000 for maintenance work or $25,000 for new construction, alteration remodel, demolition or repair work.
    - Contractor must be registered at the time of the bid or the bidder will be declared unresponsive.

3.5 Emergency Purchases

While the occasional need for emergency or immediate acquisitions of supplies, materials, services, or equipment is recognized, the practice should be minimized in order to allow all functional areas to best perform their responsibilities in accordance with this policy and the systematic processing of work.

The definition of an “emergency” as defined in the Public Contracts Code, Section 1102, is a sudden, unexpected occurrence that poses a clear and imminent danger, requiring action to prevent or mitigate the loss or impairment of life, health, property or essential public service.

Emergency procurement shall be initiated by a Department Manager, approved by the General Manager and subsequently ratified by the Board. The General Manager has authority to procure goods, materials, services and equipment of over $100,000 in

emergency situations, but ratification of the procurement must be brought to the next scheduled Board Meeting.

Emergency Conditions:

For the purposes of this procedure, emergency or immediate procurement action may be taken for the purchase of goods, materials, services and equipment under the following conditions:

- A great public calamity as described above, such as a sanitary sewer overflow.
- The breakdown of machinery or an essential function which requires immediate purchasing action to protect public health, welfare, safety, or service.
- Other conditions, which may not be considered essential for the protection of public health, safety, welfare, or service, but may significantly interrupt essential District functions.

4.0 VENDOR GIFTS & GRATUITIES

The receiving of gifts and/or other symbols of appreciation may compromise the integrity of professional relationships and can lead to inappropriate business practices.

All District employees are prohibited from accepting gifts offered by vendors, contractors, consultants, and any other person or organization that may receive financial reimbursement, contribution, or revenue from the District. Gifts shall include, without limitation, entertainment, meals, trips, or other notable gestures of appreciation aggregating $50.00 or more from any one source in a calendar year. All gifts that are tendered or received should be disclosed to the Department Manager and returned.

5.0 ETHICAL PRACTICES

It is a policy of the District to maintain good working relationships with its vendors, contractors and suppliers, as well as the community at large. Every employee has the ability to influence the opinions of others through daily interaction with the business community. In personal contracts with vendors and suppliers, employees shall represent the best interests of the District by conducting business in a fair, equitable, open and ethical manner.

The following are suggested guidelines as recommended by the National Association of Purchasing Management (NAPM):

- Avoid the intent and appearance of unethical or compromising practice in relationships, actions and communications.
- Demonstrate loyalty to the employer by diligently following the lawful instructions of the employer, using reasonable care and only authority granted.
- Refrain from any private business or professional activity that would create a conflict between personal interests and the interests of the employer.
- Refrain from soliciting or accepting money, loans, credits, or prejudicial discounts, and the acceptance of gifts, entertainment, favors, or services from present or potential suppliers that might influence, or appear to influence, purchasing decisions.

- Handle confidential or proprietary information belonging to employers or suppliers with due care and proper consideration of ethical and legal ramifications and governmental regulations.
- Promote positive supplier relationships through courtesy and impartiality in all phases of the purchasing cycle.
- Refrain from reciprocal agreements that restrain competition.
- Know and obey the letter and spirit of laws governing the purchasing function and remain alert to the legal ramifications of purchasing decisions.
- Encourage all segments of society to participate by demonstrating support for small, disadvantaged, and minority-owned businesses.
- Discourage purchasing involvement in employer-sponsored programs of personal purchases that are not business related.
- Enhance the proficiency and structure of the purchasing profession by acquiring and maintaining current technical knowledge and the highest standards of ethical behavior.
- Conduct international purchasing in accordance with the laws, customs, and practices of foreign countries, consistent with the United States laws, your organizations policies, and these Ethical Standards and Guidelines.

6.0 DISPOSITION OF SURPLUS DISTRICT PROPERTY

From time to time, personal property formerly necessary for District operations becomes outmoded, spent, unnecessary and otherwise surplus. The Board hereby approves the following procedure for the disposition of such surplus property:

- The General Manager, after consultation with the Board, will seek informal letter bids from one or more potential purchasers of surplus property, and shall dispose of such property on terms and conditions that are in the best interest of the District. The Board shall be advised in advance of the exact terms and conditions of such disposal.
- Where, in the discretion of the General Manager, no potential purchaser is likely to be found or where no purchaser has been found, the General Manager may, after advising the Board, dispose of the property by the most efficient and economical means, including discard or donation.
- No sale or other disposition shall be made to a District employee, official, representative, consultant or to any member of the immediate family of any such persons.
- "Surplus property" shall include, but is not limited to, machinery, motor vehicles, furniture or other personal property owned by the District and carried on its accounts at a value less than $500.00. Property valued at more than $500.00 shall not be disposed of without prior approval by the Board.

Yucaipa Valley Water District

Workshop Memorandum 18-239

Date: October 9, 2018

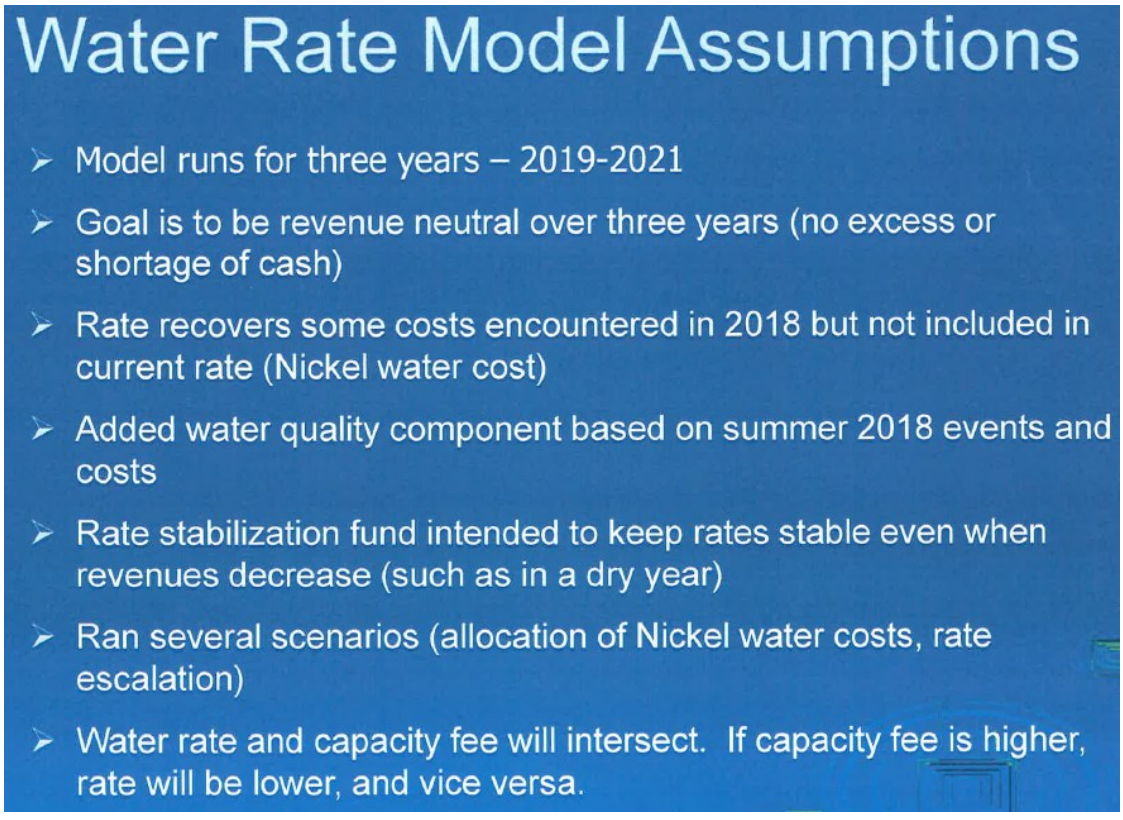
From: Joseph Zoba, General Manager

Subject: Discussion Regarding the Draft 2018 Imported Water Rate Analysis for the San Gorgonio Pass Water Agency

On January 16, 2018, the San Gorgonio Pass Water Agency authorized David Taussig and Associates to proceed with the development of a water rate study for an amount of $40,000.

On March 1, 2018, the San Gorgonio Pass Water Agency conducted their initial Water Rate Workshop to provide information about the process and receive input from the public about issues related to adjustments in the imported water rate.

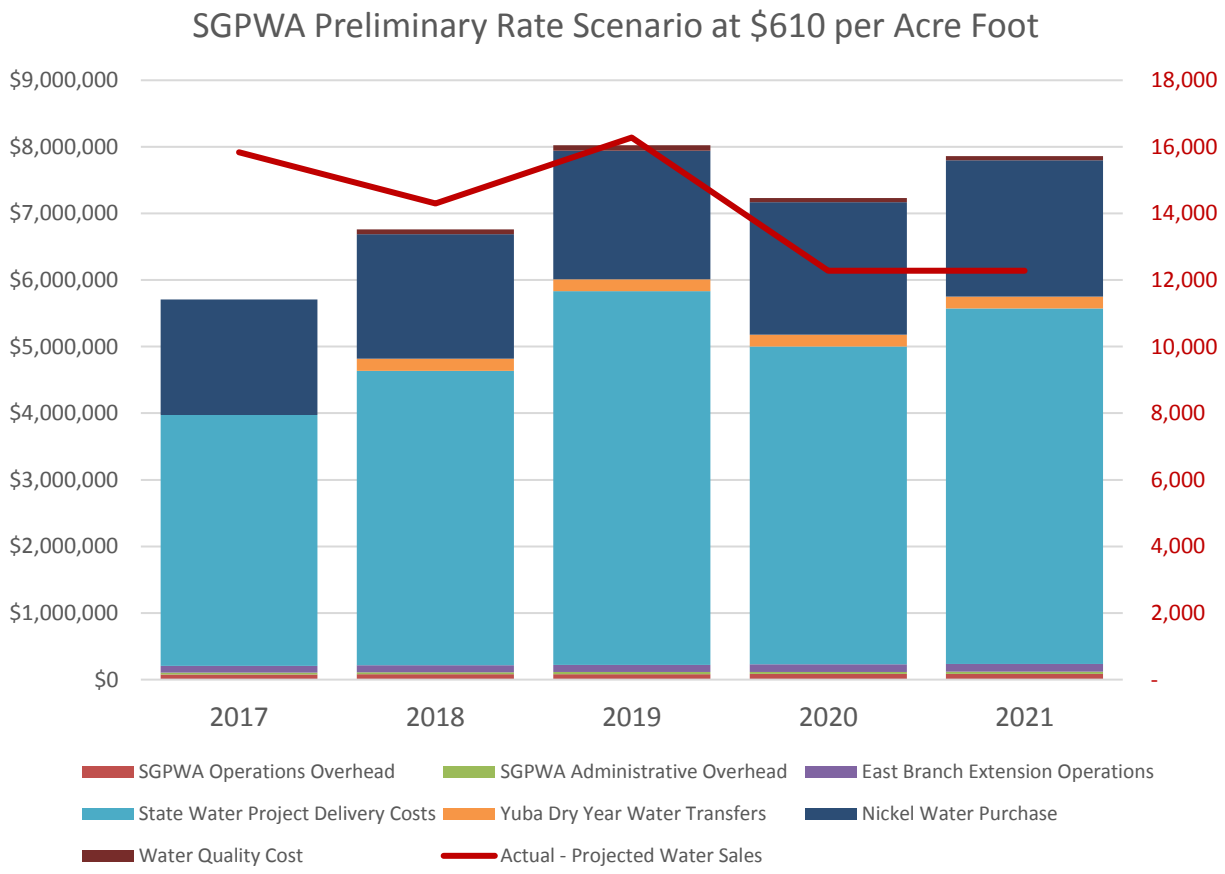
On September 13, 2018, the San Gorgonio Pass Water Agency presented the preliminary results of a water rate model developed by David Taussig & Associates. The assumptions that are included in the model are provided on the following presentation slide from the meeting.



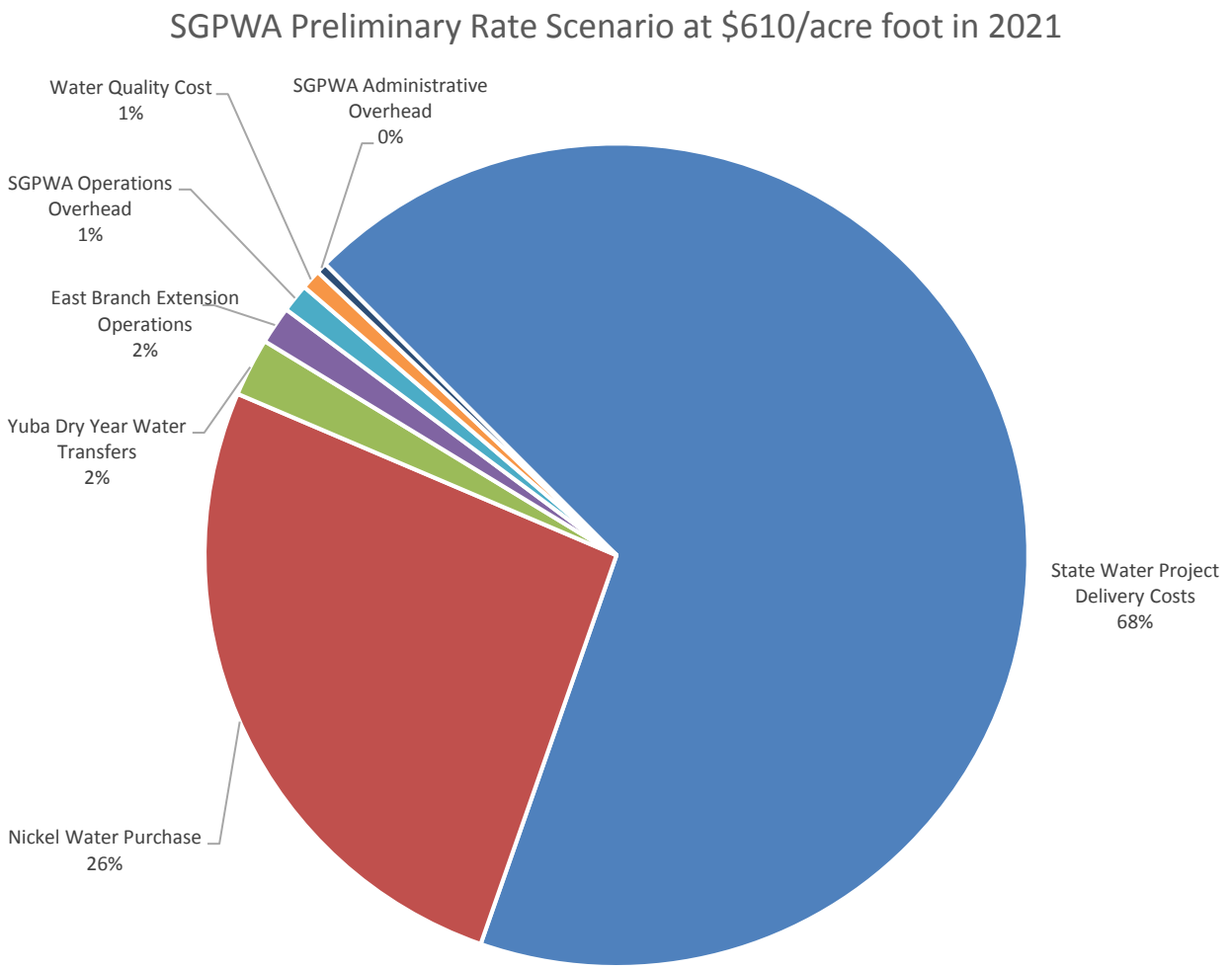
On September 13, 2018, the Agency staff and Consultant provided the following preliminary scenarios that show how water rates are likely to change from the existing imported water rate of $309/acre foot. The units for the table below are $ per acre foot.

Model Run	2019	2020	2021
Constant rate, 100% of Nickel water on capacity fee	464	464	464
Constant rate, 50% of Nickel water on capacity fee	537	537	537
Constant rate, 0% of Nickel water on capacity fee	610	610	610
Gradually increasing rate, 100% of Nickel water on capacity fee	417	467	523
Gradually increasing rate, 50% of Nickel water on capacity fee	483	541	606
Gradually increasing rate, 0% of Nickel water on capacity fee	549	615	689

Details of the rate analysis for the “Constant Rate, 0% of Nickel Water on Capacity Fee” scenario are attached for your review and illustrated below.



Based on the data from this preliminary scenario, the most significant components in this proposed rate model in Calendar Year 2021 will be the State Water Project Delivery Costs (68%) and the Nickel Water Purchase (26%) making up 94% of the total imported water rate under this preliminary scenario.



From the District's staff perspective, the main points from the workshop on September 13, 2018 include:

- The San Gorgonio Pass Water Agency is interested in working with retail water customers and receiving input about the proposed rate at future meetings.
- There is a consensus that there will be uncertainty about the quantity of imported water available each year from the State Water Project. The amount of imported water available is beyond the control of the San Gorgonio Pass Water Agency since it is determined by the Department of Water Resources.
- The proposed imported water rate is likely to include the following components:
    - San Gorgonio Pass Water Agency Operational Overhead - 50% of annual operations cost of one employee
    - San Gorgonio Pass Water Agency Administrative Overhead - 5% of the annual administrative budget.

- East Branch Extension Operational Costs - 50% of the annual overall expenses will be included in the imported water rate.
- Department of Water Resources Energy and Transmission Costs - This is the largest component to the imported water rate and will likely include a projection of anticipated energy increases based on prior year data.
- Yuba Dry Year Transfers - This cost component provides additional water supplies to the region.
- Nickel Water Supplies - This cost component is the second most significant component and will be a factor in future rates for the remaining term of the contract (about 19 years).
- Water Quality Cost - The cost for reducing algae in the State Water Project will likely be an ongoing expense.

To actively contribute to the rate setting process, the District staff recommends that the Board of Directors consider making the following request to facilitate the imported water rate process:

- The Yucaipa Valley Water District should request from the San Gorgonio Pass Water Agency, monthly invoices from the Department of Water Resources from January 2010 to current to evaluate the past trend of 12% annual increases in expenses from the Department of Water Resources.

- The spreadsheet model prepared by David Taussig & Associates should be expanded to include actual data from 2012, 2013, 2014, 2015, and 2016.

- The spreadsheet model prepared by David Taussig & Associates should be expended to include projected revenue and expenses for 2022, 2023, 2024, and 2025.

- The final rate spreadsheet should be made available to the retail water agencies in its native format so future expenses related to water supplies can be quickly analyzed to determine the impact on rates before agreements are executed.

- The San Gorgonio Pass Water Agency should consider conducting an annual review of the imported water rate spreadsheet at a public workshop to determine the future trends of likely imported water rate changes.

- The San Gorgonio Pass Water Agency should provide written memorandums and distribute data, tables, and concepts in advance of workshops and meetings to maximize the involvement by the board members and public.

- The San Gorgonio Pass Water Agency should use this opportunity to develop a wheeling rate to provide retail water agencies with the ability to secure additional sources of supplemental water.

Financial Impact to Existing District Customers

At this time, the current rate charged by the San Gorgonio Pass Water Agency results in a charge to our customers in Calimesa at a rate of $0.66 per 1,000 gallons. With a typical home using 22,000 gallons per month, the current rate results in a monthly charge of $14.52. This is a direct pass-through rate from the San Gorgonio Pass Water Agency. The table below shows the anticipated changes in the rates to customers in the San Gorgonio Pass Water Agency service area (Calimesa).

Model Run	2019	2020	2021
Constant rate, 100% of Nickel water on capacity fee	464	464	464
Constant rate, 50% of Nickel water on capacity fee	537	537	537
Constant rate, 0% of Nickel water on capacity fee	610	610	610
Gradually increasing rate, 100% of Nickel water on capacity fee	417	467	523
Gradually increasing rate, 50% of Nickel water on capacity fee	483	541	606
Gradually increasing rate, 0% of Nickel water on capacity fee	549	615	689

Existing SGPWA Pass Through Rate = $0.664/kgal	$/kgal	$/kgal	$/kgal
Constant Rate, 100% of Nickel Water on Capacity Fee	$0.997	$0.997	$0.997
Constant Rate, 50% of Nickel Water on Capacity Fee	$1.154	$1.154	$1.154
Constant Rate, 0% of Nickel Water on Capacity Fee	$1.310	$1.310	$1.310
Increasing Rate @ 12%, 100% of Nickel Water on Capacity Fee	$0.896	$1.004	$1.124
Increasing Rate @ 12%, 50% of Nickel Water on Capacity Fee	$1.038	$1.163	$1.302
Increasing Rate @ 12%, 0% of Nickel Water on Capacity Fee	$1.180	$1.322	$1.481

Financial Impact to New Development

Depending on the final imported water rate adopted by the San Gorgonio Pass Water Agency, new development will also be impacted by the significance of the proposed rate adjustment. The table below shows the charges to new development based on the existing imported water rate of $309/acre foot as compared to Scenario 3 which is described as the worst-case scenario.

Annual Purchase Direct Delivery	**Annual Purchase** Conjunctive Use	**Facility Capacity Charge** Water Rights	**Facility Capacity Charge** Water Pre-Purchase / Sustainability
$309 / Acre Foot	Pending	$4,683 / EDU	7 Acre Feet $2,163 / EDU
$610 / Acre Foot	Pending	$4,683 / EDU	7 Acre Feet $4,270 / EDU

This table illustrates the cost for new development will be increased to $8,953 for a dual-sourced home, as compared to the existing cost of $6,846.

MEMORANDUM

TO: Board of Directors

FROM: General Manager

RE: Contracting With Consultant to Review Water Rate

DATE: January 16, 2018

Summary:
In 2017, the Board discussed water rates at Board meetings and workshops many times. The Board gave direction to Staff to revisit the Agency's water rate in 2018. The purpose of this proposed Board action is to decide if the Board wishes to hire a consultant to perform a nexus study that would lead to a new water rate.

Background:
In February 2009, the Board adopted a new water rate. The rate adopted by the Board went into effect that month, and the nexus study identified that that rate should be increased somewhat in July of that year. The rate set that month for July 2009 is still in effect today.

Detailed Report:
The Board discussions on the water rate in 2017 focused on what costs the Agency was attempting to recover in its 2009 water rate and what costs the Agency should try to recover in a new water rate. Having consummated a deal to procure additional water supplies in 2017, and having several more deals on the table that could be consummated in 2018, the Board will need to consider how to recover these costs, with the water rate being one distinct possibility.

Staff has received a proposal from David Taussig & Associates to perform the proposed work (enclosed in the agenda package). This is the same firm that developed the previous water rate and has worked with Agency staff over the past few years on a capacity fee as well. It wrote both the nexus study for the current water rate and the nexus study for the capacity fee, and has worked with staff on

revising the amount of the capacity fee. The firm performs rate and financial studies for public agencies across Southern California.

Staff will review the proposal with the Board at the Board meeting. The proposal includes the cost of up to five public meetings. Staff will recommend that, early in the process, a workshop be held to invite input from the public and retail water agencies on what elements the water rate should include. The entire process of developing and adopting a rate structure must be completely transparent to the public.

Staff anticipates that the process will last at least six months. The proposal indicates that the cost is good for up to six months and that delays beyond that time could result in increased costs.

Fiscal Impact:
The Agency's General Fund budget for this year includes $40,000 for a water rate study and an additional $20,000 for water rate modeling. The modeling may or may not be required as part of this scope of work, depending on what the Board asks the consultant to do. In any case, funds are budgeted this year for this work, so the impact has already been factored in to the Agency's finances.

Recommendation:
Staff recommends that the Board authorize staff to contract with David Taussig and Associates to perform a water rate nexus study and to begin work on adoption of a new water rate.

DTA DAVID TAUSSIG & ASSOCIATES

SCOPE OF WORK

Water Rate Study

The scope of work set forth below describes the various tasks and deliverables to be provided by DTA that will produce a reasonable and defensible water rate study. A key component of the rate calculation will be the funding of water conveyance facilities, groundwater recharge facilities and the purchase of additional water rights. The rate justification study will conform to the guidelines of AWWA Manual M1, Principles of Water Rates, Fees and Charges.

TASK NO. 1 – FACILITIES AND COSTS

This task will determine the component of revenue needs related to capital facilities. Water conveyance, groundwater recharge and the purchase of additional water rights are the major capital facility items that will be considered

Subtask 1.1 – Facilities Costs

SGPWA and/or SGPWA consultants shall provide facility descriptions and costs for pipeline conveyance facilities, groundwater recharge systems, and other facilities needed to serve existing development.

Subtask 1.2 – Cost of Additional Water Rights

DTA will work with SGPWA to determine the "best guess" market price for the purchase of additional water rights on the secondary market.

TASK NO. 2 – IDENTIFY ALL OTHER REVENUE REQUIREMENTS

Subtask 2.1 – Existing Revenue Requirements

DTA will review and analyze historic financial and usage pattern information provided by the SGPWA including:

- Operating and maintenance expenses
- Debt service costs
- Capital expenditures funded directly from current revenues
- Reserve balances
- Other capital requirements
- Rate Stabilization Reserves

Subtask 2.2 – Future Revenue Requirements

DTA will work with SGPWA staff to provide a projection of revenue requirements over a five year period resulting from the items listed in Task 2.1 above.

TASK NO. 3 – COST ALLOCATION AND RATE DESIGN

As a wholesale water Agency, allocation methods and rate design is straight forward. The customer class is basically member retail agencies.

DAVID TAUSSIG & ASSOCIATES

Subtask 3.1 – Review Current Rate Structure

DTA shall review and summarize SGPWA current water rate structure and cost allocation methodology. Applicability to current and near future conditions will be evaluated. If appropriate, modifications or changes will be recommended

Subtask 3.2 – Review Water Demand Data

DTA will review historical water demand data, sales data and any other data upon which past costs were allocated. DTA will then work with SGPWA to provide a five year projection of water demand, based on historical data, demographic patterns and local entitlements.

Subtask 3.3 – Areas of Benefit

DTA will review the appropriateness of service sub-areas where costs v. benefits are not uniform across the district boundaries. Sub-areas may be determined by pressure zones, extend of distribution and storage requirements, reliability, demand diversity, etc.

Subtask 3.4 – Allocate costs and Calculate Rate

DTA will calculate new rates based on the total cost of service determined from the above tasks distributed across projected demand variables. Commodity based and capacity based components can be used if consistent with the recommended rate structure.

TASK NO. 4 - PREPARE DRAFT AND FINAL ADMINISTRATIVE REPORTS

This task entails preparation of the draft and final Rate Study for consideration by SGPWA Board and member agencies.

Subtask 4.1 – Prepare Draft Rate Study for Comments

Based on the work completed in Task Nos. 1 through 3, DTA will prepare the Draft Rate Study. The report will include such items as i) cost of service summaries; ii) rate calculations; iii) projected cash flow tables; iv) proposed rate schedules; v) reserve analysis; vi) any other supporting documentation

Subtask 4.2 – Prepare Final Rate Study

After incorporating comments from SGPWA staff, DTA will submit the Final Rate Study for consideration by the SGPWA Board and its member agencies.

TASK NO. 5 - MEETINGS

DTA will attend up to five meetings as requested by Client. One or more of the meetings would be for DTA to present the preliminary and final report to stakeholders at workshops or public agency meetings as directed by SGPWA Staff.

DAVID TAUSSIG & ASSOCIATES

FEE SCHEDULE

DTA's proposed budget for the tasks listed in the Scope of Work described above is time and materials up to $40,000. These tasks shall be billed according to actual hours worked at the rates shown below

HOURLY RATES	
MANAGING DIRECTOR	$250/HOUR
VICE PRESIDENT	$225/HOUR
MANAGER	$200/HOUR
SR. ASSOCIATE	$180/HOUR
ASSOCIATE	$165/HOUR
SENIOR ANALYST	$145/HOUR
ANALYST	$125/HOUR
RESEARCH ASSISTANT	$105/HOUR

Monthly progress payments will be made by Client upon presentation of invoice by Consultant providing details or services rendered and expenses incurred. At Client's request services in addition to those identified in the Scope of Work may be provided if the total fee required to complete Tasks 1 through 5 is less than the amount shown above. Alternatively, if the Scope of Work can be completed for less than the maximum amount, only the hours actually expended will be billed.

In addition to fees for services, Client shall reimburse Consultant for travel, copying, courier, facsimile, telephone expenses, data services, maps, clerical charges, administrative charges, and other out-of-pocket expenses, in an amount not to exceed $1,000 for each fiscal year. Monthly progress payments shall be made by Client upon presentation of invoices by Consultant providing details of services rendered and expenses incurred.

Limitations

The preceding hourly rates apply for a 12 month period from execution of the Agreement and are subject to a cost-of-living and/or other appropriate increase every 12 months thereafter.

The maximum fee listed above assumes that the time between initiation of work and completion of all tasks in the Scope of Work is no longer than six (6) months. Any delays in the schedule beyond this timeframe may result in increased fees. In addition, an excessive number of meetings (more than five) may also require additional fees if the total fee has been exceeded. Lastly, unanticipated work related to data gathering may result in increased fees. Such additional fees shall be added to the "Total Fee" amounts listed above

Scenario 1 - Constant Water Rate with 100% of Nickel on Capacity Fee

Friday, September 21, 2018

2019 trial rate in $ per Acre-Ft: 464.00
rate escalator for years 2020 and 2021: 0.00%

2018 Rate Analysis For San Gorgonio Pass Water Agency

Study Year I.D.		1	2	3	4
Calendar Year	2017 Actuals	2018 Projected	2019	2020	2021
REVENUE					
Water Sales (acre-ft)	15,837	14,300	16,280	12,280	12,280
Water Rate ($ per Acre-ft)	$ 317.00	$ 317.00	$ 464.00	$ 464.00	$ 464.00
Revenue From Water Sales	$ 5,020,329	$ 4,533,100	$ 7,553,920	$ 5,697,920	$ 5,697,920
Previous year carry over		$ -	$ -	$ 691,637	$ 636,801
Contribution from General Fund Revenue	$ -				
Total Expected Revenue	**$ 5,020,329**	**$ 4,533,100**	**$ 7,553,920**	**$ 6,389,557**	**$ 6,334,721**
REVENUE REQUIREMENTS					
I. SGPWA OVERHEAD					
SGPWA Operations Overhead					
Salaries	$ 106,382	$ 109,573	$ 112,861	$ 116,246	$ 119,734
Payroll Taxes	$ 8,536	$ 8,792	$ 9,056	$ 9,328	$ 9,607
Workman's Comp Insurance	$ 367	$ 378	$ 389	$ 401	$ 413
PERS	$ 13,695	$ 14,106	$ 14,529	$ 14,965	$ 15,414
Health Insurance	$ 24,365	$ 25,096	$ 25,849	$ 26,624	$ 27,423
Dental Insurance	$ 1,769	$ 1,822	$ 1,877	$ 1,933	$ 1,991
Long Term Disability Insurance	$ 581	$ 598	$ 616	$ 635	$ 654
total	$ 155,695	$ 160,366	$ 165,177	$ 170,132	$ 175,236
Operations Cost Allocated Rate Requirements at 50%	**$ 77,848**	**$ 80,183**	**$ 82,588**	**$ 85,066**	**$ 87,618**
SGPWA Administrative Overhead					
Salaries	$ 387,663	$ 399,293	$ 411,272	$ 423,610	$ 436,318
Payroll Taxes	$ 26,153	$ 26,938	$ 27,746	$ 28,578	$ 29,435
Workman's Comp Insurance	$ 2,191	$ 2,257	$ 2,324	$ 2,394	$ 2,466
PERS	$ 113,505	$ 116,910	$ 120,417	$ 124,030	$ 127,751
Health Insurance	$ 49,433	$ 50,916	$ 52,443	$ 54,017	$ 55,637
Dental Insurance	$ 3,537	$ 3,643	$ 3,752	$ 3,865	$ 3,981
Long Term Disability Insurance	$ 4,604	$ 4,742	$ 4,884	$ 5,031	$ 5,182
Total Administrative Overhead	$ 587,086	$ 604,699	$ 622,840	$ 641,525	$ 660,770
Total Administrative Overhead Allocated to Rate Requirements at 5%	**$ 29,354**	**$ 30,235**	**$ 31,142**	**$ 32,076**	**$ 33,039**
II. WATER DELIVERY COSTS:					
EBX Operations	$ 199,214	$ 207,183	$ 215,470	$ 224,089	$ 233,052
Amount Allocated to Rate Requirements at 50%	**$ 99,607**	**$ 103,591**	**$ 107,735**	**$ 112,044**	**$ 116,526**
CALIFORNIA DEPT. OF WATER RESOURCES					
Water Amount Delivered (Acre-ft)	$ 15,843	$ 14,400	$ 16,380	$ 12,380	$ 12,380
Unit Cost for Energy and Transmission ($ per Acre-ft)	$ 231	$300	$336	$376	$421
Cost for Energy and Transmission	$ 3,666,916	$ 4,320,000	$ 5,503,680	$ 4,658,842	$ 5,217,903
Subtotal Water Delivery Cost ($)	**$ 3,766,523**	**$ 4,423,591**	**$ 5,611,415**	**$ 4,770,886**	**$ 5,334,429**
III. WATER PURCHASE COSTS					
CALIFORNIA DEPT. OF WATER RESOURCES - Table A					
Water Amount Delivered (Acre-ft)	15,843	14,400	16,380	12,380	12,380
Cost per Acre-Ft	$0	$0	$0	$0	$0
Total ($)	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
YUBA DRY YEAR TRANSFERS					
Water transfers (acre-ft)[2]	0	300	300	300	300
Cost ($ per acre-ft)	$600	$600	$600	$600	$600
Total ($)	**$ -**	**$ 180,000**	**$ 180,000**	**$ 180,000**	**$ 180,000**
NICKEL WATER					
Water Amount Purchased (Acre-ft) 0%	1,700	1,700	0	0	0
Cost ($ per acre-ft)	$1,021	$1,103	$1,136	$1,170	$1,205
Total ($)[3]	$ 1,735,700	$ 1,869,985	$ -	$ -	$ -
Subtotal Water Purchase Cost ($)	**$ 1,735,700**	**$ 2,049,985**	**$ 180,000**	**$ 180,000**	**$ 180,000**
IV. Water Quality Cost at $5 per acre-ft sold, $5.00	**n/a**	**$ 71,500**	**$ 81,400**	**$ 61,400**	**$ 61,400**
TOTAL REVENUE REQUIREMENTS ($)[1]	**$ 5,609,425**	**$ 6,655,494**	**$ 5,986,545**	**$ 5,129,428**	**$ 5,696,485**
NET OPERATING REVENUE	**$ (589,096)**	**$ (2,122,394)**	**$ 1,567,375**	**$ 1,260,129**	**$ 638,235**
Transfers from General Fund (no repayment)	$ 589,096				
Transfers from Nickel Water Reserve Fund[1]		$ 1,869,985			
Repayment to Nickel Water Reserve Fund[1]			$ (623,328)	$ (623,328)	$ (623,328)
Transfers from Rate Stabilization Reserves		$ 252,409	$ -	$ -	$ -
Repayment to Rate Stabilization Reserves			$ (252,409)	$ -	$ -
OPERATING FUND ENDING BALANCE. ANY SURPLUS CARRIED FORWARD	$ -	$0	$691,637	$636,801	$14,907
RESERVES AND OTHER FUNDS - STATUS					
A. Rate Stabilization Reserve Balances					
Beginning Balance		$ 265,000	$ 12,591	$ 265,000	$ 265,000
Repayment *from* Net Operating Revenue		$ -	$ 252,409	$ -	$ -
Transfers *to* Net Operating Revenue		$ (252,409)	$ -	$ -	$ -
Ending Balance	$ 265,000	$ 12,591	$ 265,000	$ 265,000	$ 265,000
B. Nickel Water Loan Fund					
Beginning Balance		$ 1,869,985	$ 1,869,985	$ 1,246,657	$ 623,328
Repayments		$ -	$ (623,328)	$ (623,328)	$ (623,328)
Ending Balance		$ 1,869,985	$ 1,246,657	$ 623,328	$ -

1. For year 2018 only, the total revenue requirement summation includes $1,869,985 purchase of Nickel water. This purchase amount was covered by transfer from reserves for 2018 (Nickel Water Reserve Fund). This amount will be repaid in equal amounts from rate revenue in 2019 through 2021

2. For years 2018 through 2021 Assume Agency's annual purchase amount is 300 ac-ft, however, due to losses in wheeling the actual amount sold is 200 ac-ft, reflected in the water sales line under "REVENUE"

3. The total for year 2018 is the actual invoiced amount, which due to round off acuracy is slightly different than the product of the rate and the amount purchased

Scenario 2 - Constant Water Rate with 50% of Nickel on Capacity Fee

Friday, September 21, 2018

2019 trial rate in $ per Acre-Ft: 537.00
rate escalator for years 2020 and 2021: 0.00%

2018 Rate Analysis For San Gorgonio Pass Water Agency

Study Year I.D.			1	2	3	4
Calendar Year		2017 Actuals	2018 Projected	2019	2020	2021
REVENUE						
Water Sales (acre-ft)		15,837	14,300	16,280	12,280	12,280
Water Rate ($ per Acre-ft)		$ 317.00	$ 317.00	$ 537.00	$ 537.00	$ 537.00
Revenue From Water Sales		$ 5,020,329	$ 4,533,100	$ 8,742,360	$ 6,594,360	$ 6,594,360
Previous year carry over			$ -	$ -	$ 914,287	$ 761,126
Contribution from General Fund Revenue		$ -				
Total Expected Revenue		**$ 5,020,329**	**$ 4,533,100**	**$ 8,742,360**	**$ 7,508,647**	**$ 7,355,486**
REVENUE REQUIREMENTS						
I. SGPWA OVERHEAD						
SGPWA Operations Overhead						
Salaries		$ 106,382	$ 109,573	$ 112,861	$ 116,246	$ 119,734
Payroll Taxes		$ 8,536	$ 8,792	$ 9,056	$ 9,328	$ 9,607
Workman's Comp Insurance		$ 367	$ 378	$ 389	$ 401	$ 413
PERS		$ 13,695	$ 14,106	$ 14,529	$ 14,965	$ 15,414
Health Insurance		$ 24,365	$ 25,096	$ 25,849	$ 26,624	$ 27,423
Dental Insurance		$ 1,769	$ 1,822	$ 1,877	$ 1,933	$ 1,991
Long Term Disability Insurance		$ 581	$ 598	$ 616	$ 635	$ 654
total		$ 155,695	$ 160,366	$ 165,177	$ 170,132	$ 175,236
Operations Cost Allocated Rate Requirements at	50%	**$ 77,848**	**$ 80,183**	**$ 82,588**	**$ 85,066**	**$ 87,618**
SGPWA Administrative Overhead						
Salaries		$ 387,663	$ 399,293	$ 411,272	$ 423,610	$ 436,318
Payroll Taxes		$ 26,153	$ 26,938	$ 27,746	$ 28,578	$ 29,435
Workman's Comp Insurance		$ 2,191	$ 2,257	$ 2,324	$ 2,394	$ 2,466
PERS		$ 113,505	$ 116,910	$ 120,417	$ 124,030	$ 127,751
Health Insurance		$ 49,433	$ 50,916	$ 52,443	$ 54,017	$ 55,637
Dental Insurance		$ 3,537	$ 3,643	$ 3,752	$ 3,865	$ 3,981
Long Term Disability Insurance		$ 4,604	$ 4,742	$ 4,884	$ 5,031	$ 5,182
Total Administrative Overhead		$ 587,086	$ 604,699	$ 622,840	$ 641,525	$ 660,770
Total Administrative Overhead Allocated to Rate Requirements at	5%	**$ 29,354**	**$ 30,235**	**$ 31,142**	**$ 32,076**	**$ 33,039**
II. WATER DELIVERY COSTS:						
EBX Operations		$ 199,214	$ 207,183	$ 215,470	$ 224,089	$ 233,052
Amount Allocated to Rate Requirements at	50%	**$ 99,607**	**$ 103,591**	**$ 107,735**	**$ 112,044**	**$ 116,526**
CALIFORNIA DEPT. OF WATER RESOURCES						
Water Amount Delivered (Acre-ft)		$ 15,843	$ 14,400	$ 16,380	$ 12,380	$ 12,380
Unit Cost for Energy and Transmission ($ per Acre-ft)		$ 231	$300	$336	$376	$421
Cost for Energy and Transmission		$ 3,666,916	$ 4,320,000	$ 5,503,680	$ 4,658,842	$ 5,217,903
Subtotal Water Delivery Cost ($)		**$ 3,766,523**	**$ 4,423,591**	**$ 5,611,415**	**$ 4,770,886**	**$ 5,334,429**
III. WATER PURCHASE COSTS						
CALIFORNIA DEPT. OF WATER RESOURCES - Table A						
Water Amount Delivered (Acre-ft)		15,843	14,400	16,380	12,380	12,380
Cost per Acre-Ft		$0	$0	$0	$0	$0
Total ($)		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
YUBA DRY YEAR TRANSFERS						
Water transfers (acre-ft)[2]		0	300	300	300	300
Cost ($ per acre-ft)		$600	$600	$600	$600	$600
Total ($)		**$ -**	**$ 180,000**	**$ 180,000**	**$ 180,000**	**$ 180,000**
NICKEL WATER						
Water Amount Purchased (Acre-ft)	50%	1,700	1,700	850	850	850
Cost ($ per acre-ft)		$1,021	$1,103	$1,136	$1,170	$1,205
Total ($)[3]		$ 1,735,700	$ 1,869,985	$ 965,790	$ 994,764	$ 1,024,607
Subtotal Water Purchase Cost ($)		**$ 1,735,700**	**$ 2,049,985**	**$ 1,145,790**	**$ 1,174,764**	**$ 1,204,607**
IV. Water Quality Cost at $5 per acre-ft sold,	$5.00	**n/a**	**$ 71,500**	**$ 81,400**	**$ 61,400**	**$ 61,400**
TOTAL REVENUE REQUIREMENTS ($)[1]		**$ 5,609,425**	**$ 6,655,494**	**$ 6,952,336**	**$ 6,124,192**	**$ 6,721,092**
NET OPERATING REVENUE		**$ (589,096)**	**$ (2,122,394)**	**$ 1,790,024**	**$ 1,384,455**	**$ 634,394**
Transfers from General Fund (no repayment)		$ 589,096				
Transfers from Nickel Water Reserve Fund[1]			$ 1,869,985			
Repayment to Nickel Water Reserve Fund[1]				$ (623,328)	$ (623,328)	$ (623,328)
Transfers from Rate Stabilization Reserves			$ 252,409	$ -	$ -	$ -
Repayment to Rate Stabilization Reserves				$ (252,409)	$ -	$ -
OPERATING FUND ENDING BALANCE. ANY SURPLUS CARRIED FORWARD		$ -	$0	$914,287	$761,126	$11,066
RESERVES AND OTHER FUNDS - STATUS						
A. Rate Stabilization Reserve Balances						
Beginning Balance			$ 265,000	$ 12,591	$ 265,000	$ 265,000
Repayment *from* Net Operating Revenue			$ -	$ 252,409	$ -	$ -
Transfers *to* Net Operating Revenue			$ (252,409)	$ -	$ -	$ -
Ending Balance		$ 265,000	$ 12,591	$ 265,000	$ 265,000	$ 265,000
B. Nickel Water Loan Fund						
Beginning Balance			$ 1,869,985	$ 1,869,985	$ 1,246,657	$ 623,328
Repayments			$ -	$ (623,328)	$ (623,328)	$ (623,328)
Ending Balance			$ 1,869,985	$ 1,246,657	$ 623,328	$ -

1. For year 2018 only, the total revenue requirement summation includes $1,869,985 purchase of nickel water. This purchase amount was covered by transfer from reserves for 2018 (Nickel Water Reserve Fund). This amount will be repaid in equal amounts from rate revenue in 2019 through 2021.

2. For years 2018 through 2021 Assume Agency's annual purchase amount is 300 ac-ft, however, due to losses in wheeling the actual amount sold is 200 ac-ft, reflected in the water sales line under "REVENUE"

3. The total for year 2018 is the actual invoiced amount, which due to round off acuracy is slightly different than the product of the rate and the amount purchased

Scenario 3 - Constant Water Rate with 0% of Nickel on Capacity Fee

Friday, September 21, 2018

2019 trial rate in $ per Acre-Ft: 610.00
rate escalator for years 2020 and 2021: 0.00%

2018 Rate Analysis For San Gorgonio Pass Water Agency

Study Year I.D. / Calendar Year		2017 Actuals	1 2018 Projected	2 2019	3 2020	4 2021
REVENUE						
Water Sales (acre-ft)		15,837	14,300	16,280	12,280	12,280
Water Rate ($ per Acre-ft)		$ 317.00	$ 317.00	$ 610.00	$ 610.00	$ 610.00
Revenue From Water Sales		$ 5,020,329	$ 4,533,100	$ 9,930,800	$ 7,490,800	$ 7,490,800
Previous year carry over			$ -	$ -	$ 1,136,937	$ 885,452
Contribution from General Fund Revenue		$ -				
Total Expected Revenue		**$ 5,020,329**	**$ 4,533,100**	**$ 9,930,800**	**$ 8,627,737**	**$ 8,376,252**
REVENUE REQUIREMENTS						
I. SGPWA OVERHEAD						
SGPWA Operations Overhead						
Salaries		$ 106,382	$ 109,573	$ 112,861	$ 116,246	$ 119,734
Payroll Taxes		$ 8,536	$ 8,792	$ 9,056	$ 9,328	$ 9,607
Workman's Comp Insurance		$ 367	$ 378	$ 389	$ 401	$ 413
PERS		$ 13,695	$ 14,106	$ 14,529	$ 14,965	$ 15,414
Health Insurance		$ 24,365	$ 25,096	$ 25,849	$ 26,624	$ 27,423
Dental Insurance		$ 1,769	$ 1,822	$ 1,877	$ 1,933	$ 1,991
Long Term Disability Insurance		$ 581	$ 598	$ 616	$ 635	$ 654
total		$ 155,695	$ 160,366	$ 165,177	$ 170,132	$ 175,236
Operations Cost Allocated Rate Requirements at	50%	**$ 77,848**	**$ 80,183**	**$ 82,588**	**$ 85,066**	**$ 87,618**
SGPWA Administrative Overhead						
Salaries		$ 387,663	$ 399,293	$ 411,272	$ 423,610	$ 436,318
Payroll Taxes		$ 26,153	$ 26,938	$ 27,746	$ 28,578	$ 29,435
Workman's Comp Insurance		$ 2,191	$ 2,257	$ 2,324	$ 2,394	$ 2,466
PERS		$ 113,505	$ 116,910	$ 120,417	$ 124,030	$ 127,751
Health Insurance		$ 49,433	$ 50,916	$ 52,443	$ 54,017	$ 55,637
Dental Insurance		$ 3,537	$ 3,643	$ 3,752	$ 3,865	$ 3,981
Long Term Disability Insurance		$ 4,604	$ 4,742	$ 4,884	$ 5,031	$ 5,182
Total Administrative Overhead		$ 587,086	$ 604,699	$ 622,840	$ 641,525	$ 660,770
Total Administrative Overhead Allocated to Rate Requirements at	5%	**$ 29,354**	**$ 30,235**	**$ 31,142**	**$ 32,076**	**$ 33,039**
II. WATER DELIVERY COSTS:						
EBX Operations		$ 199,214	$ 207,183	$ 215,470	$ 224,089	$ 233,052
Amount Allocated to Rate Requirements at	50%	**$ 99,607**	**$ 103,591**	**$ 107,735**	**$ 112,044**	**$ 116,526**
CALIFORNIA DEPT. OF WATER RESOURCES						
Water Amount Delivered (Acre-ft)		$ 15,843	$ 14,400	$ 16,380	$ 12,380	$ 12,380
Unit Cost for Energy and Transmission ($ per Acre-ft)		$ 231	$300	$336	$376	$421
Cost for Energy and Transmission		$ 3,666,916	$ 4,320,000	$ 5,503,680	$ 4,658,842	$ 5,217,903
Subtotal Water Delivery Cost ($)		**$ 3,766,523**	**$ 4,423,591**	**$ 5,611,415**	**$ 4,770,886**	**$ 5,334,429**
III. WATER PURCHASE COSTS						
CALIFORNIA DEPT. OF WATER RESOURCES - Table A						
Water Amount Delivered (Acre-ft)		15,843	14,400	16,380	12,380	12,380
Cost per Acre-Ft		$0	$0	$0	$0	$0
Total ($)		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
YUBA DRY YEAR TRANSFERS						
Water transfers (acre-ft)[2]		0	300	300	300	300
Cost ($ per acre-ft)		$600	$600	$600	$600	$600
Total ($)		**$ -**	**$ 180,000**	**$ 180,000**	**$ 180,000**	**$ 180,000**
NICKEL WATER						
Water Amount Purchased (Acre-ft)	100%	1,700	1,700	1,700	1,700	1,700
Cost ($ per acre-ft)		$1,021	$1,103	$1,136	$1,170	$1,205
Total ($)[3]		$ 1,735,700	$ 1,869,985	$ 1,931,581	$ 1,989,528	$ 2,049,214
Subtotal Water Purchase Cost ($)		**$ 1,735,700**	**$ 2,049,985**	**$ 2,111,581**	**$ 2,169,528**	**$ 2,229,214**
IV. Water Quality Cost at $5 per acre-ft sold,	$5.00	**n/a**	**$ 71,500**	**$ 81,400**	**$ 61,400**	**$ 61,400**
TOTAL REVENUE REQUIREMENTS ($)[1]		**$ 5,609,425**	**$ 6,655,494**	**$ 7,918,126**	**$ 7,118,956**	**$ 7,745,699**
NET OPERATING REVENUE		**$ (589,096)**	**$ (2,122,394)**	**$ 2,012,674**	**$ 1,508,780**	**$ 630,553**
Transfers from General Fund (no repayment)		$ 589,096				
Transfers from Nickel Water Reserve Fund[1]			$ 1,869,985			
Repayment to Nickel Water Reserve Fund[1]				$ (623,328)	$ (623,328)	$ (623,328)
Transfers from Rate Stabilization Reserves			$ 252,409	$ -	$ -	$ -
NOI after Nckel payback surplus				$ 1,389,346	$ 885,452	$ 7,224
NOI after Nckel payback deficit				$ -	$ -	$ -
Maximum RSF repay				$ 252,409	$ -	$ -
actual RSF repay				$ 252,409	$ -	$ -
Repayment to Rate Stabilization Reserves				$ (252,409)	$ -	$ -
OPERATING FUND ENDING BALANCE. ANY SURPLUS CARRIED FORWARD		$ -	$0	$1,136,937	$885,452	$7,224
RESERVES AND OTHER FUNDS - STATUS						
A. Rate Stabilization Reserve Balances						
Beginning Balance			$ 265,000	$ 12,591	$ 265,000	$ 265,000
Repayment *from* Net Operating Revenue			$ -	$ 252,409	$ -	$ -
Transfers *to* Net Operating Revenue			$ (252,409)	$ -	$ -	$ -
Ending Balance		$ 265,000	$ 12,591	$ 265,000	$ 265,000	$ 265,000
B. Nickel Water Loan Fund						
Beginning Balance			$ 1,869,985	$ 1,869,985	$ 1,246,657	$ 623,328
Repayments			$ -	$ (623,328)	$ (623,328)	$ (623,328)
Ending Balance			$ 1,869,985	$ 1,246,657	$ 623,328	$ -

1. For year 2018 only, the total revenue requirement summation includes $1,869,985 purchase of nickel water. This purchase amount was covered by transfer from reserves for 2018 (Nickel Water Reserve Fund). This amount will be repaid in equal amounts from rate revenue in 2019 through 2021

2. For years 2018 through 2021 Assume Agency's annual purchase amount is 300 ac-ft, however, due to losses in wheeling the actual amount sold is 200 ac-ft, reflected in the water sales line under "REVENUE"

3. The total for year 2018 is the actual invoiced amount, which due to round off acuracy is slightly different than the product of the rate and the amount purchased

Scenario 4 - 12% Annual Escalator with 100% of Nickel on Capacity Fee

Friday, September 21, 2018

2019 trial rate in $ per Acre-Ft: 417.00

rate escalator for years 2020 and 2021: 12.00%

2018 Rate Analysis For San Gorgonio Pass Water Agency

Study Year I.D. / Calendar Year		2017 Actuals	1 2018 Projected	2 2019	3 2020	4 2021
REVENUE						
Water Sales (acre-ft)		15,837	14,300	16,280	12,280	12,280
Water Rate ($ per Acre-ft)		$ 317.00	$ 317.00	$ 417.00	$ 467.04	$ 523.08
Revenue From Water Sales		$ 5,020,329	$ 4,533,100	$ 6,788,760	$ 5,735,251	$ 6,423,481
Previous year carry over			$ -	$ -	$ -	$ -
Contribution from General Fund Revenue		$ -				
Total Expected Revenue		**$ 5,020,329**	**$ 4,533,100**	**$ 6,788,760**	**$ 5,735,251**	**$ 6,423,481**
REVENUE REQUIREMENTS						
I. SGPWA OVERHEAD						
SGPWA Operations Overhead						
Salaries		$ 106,382	$ 109,573	$ 112,861	$ 116,246	$ 119,734
Payroll Taxes		$ 8,536	$ 8,792	$ 9,056	$ 9,328	$ 9,607
Workman's Comp Insurance		$ 367	$ 378	$ 389	$ 401	$ 413
PERS		$ 13,695	$ 14,106	$ 14,529	$ 14,965	$ 15,414
Health Insurance		$ 24,365	$ 25,096	$ 25,849	$ 26,624	$ 27,423
Dental Insurance		$ 1,769	$ 1,822	$ 1,877	$ 1,933	$ 1,991
Long Term Disability Insurance		$ 581	$ 598	$ 616	$ 635	$ 654
total		$ 155,695	$ 160,366	$ 165,177	$ 170,132	$ 175,236
Operations Cost Allocated Rate Requirements at	50%	**$ 77,848**	**$ 80,183**	**$ 82,588**	**$ 85,066**	**$ 87,618**
SGPWA Administrative Overhead						
Salaries		$ 387,663	$ 399,293	$ 411,272	$ 423,610	$ 436,318
Payroll Taxes		$ 26,153	$ 26,938	$ 27,746	$ 28,578	$ 29,435
Workman's Comp Insurance		$ 2,191	$ 2,257	$ 2,324	$ 2,394	$ 2,466
PERS		$ 113,505	$ 116,910	$ 120,417	$ 124,030	$ 127,751
Health Insurance		$ 49,433	$ 50,916	$ 52,443	$ 54,017	$ 55,637
Dental Insurance		$ 3,537	$ 3,643	$ 3,752	$ 3,865	$ 3,981
Long Term Disability Insurance		$ 4,604	$ 4,742	$ 4,884	$ 5,031	$ 5,182
Total Administrative Overhead		$ 587,086	$ 604,699	$ 622,840	$ 641,525	$ 660,770
Total Administrative Overhead Allocated to Rate Requirements at	5%	**$ 29,354**	**$ 30,235**	**$ 31,142**	**$ 32,076**	**$ 33,039**
II. WATER DELIVERY COSTS:						
EBX Operations		$ 199,214	$ 207,183	$ 215,470	$ 224,089	$ 233,052
Amount Allocated to Rate Requirements at	50%	**$ 99,607**	**$ 103,591**	**$ 107,735**	**$ 112,044**	**$ 116,526**
CALIFORNIA DEPT. OF WATER RESOURCES						
Water Amount Delivered (Acre-ft)		$ 15,843	$ 14,400	$ 16,380	$ 12,380	$ 12,380
Unit Cost for Energy and Transmission ($ per Acre-ft)		$ 231	$300	$336	$376	$421
Cost for Energy and Transmission		$ 3,666,916	$ 4,320,000	$ 5,503,680	$ 4,658,842	$ 5,217,903
Subtotal Water Delivery Cost ($)		**$ 3,766,523**	**$ 4,423,591**	**$ 5,611,415**	**$ 4,770,886**	**$ 5,334,429**
III. WATER PURCHASE COSTS						
CALIFORNIA DEPT. OF WATER RESOURCES - Table A						
Water Amount Delivered (Acre-ft)		15,843	14,400	16,380	12,380	12,380
Cost per Acre-Ft		$0	$0	$0	$0	$0
Total ($)		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
YUBA DRY YEAR TRANSFERS						
Water transfers (acre-ft)[2]		0	300	300	300	300
Cost ($ per acre-ft)		$600	$600	$600	$600	$600
Total ($)		**$ -**	**$ 180,000**	**$ 180,000**	**$ 180,000**	**$ 180,000**
NICKEL WATER						
Water Amount Purchased (Acre-ft)	0%	1,700	1,700	0	0	0
Cost ($ per acre-ft)		$1,021	$1,103	$1,136	$1,170	$1,205
Total ($)[3]		$ 1,735,700	$ 1,869,985	$ -	$ -	$ -
Subtotal Water Purchase Cost ($)		**$ 1,735,700**	**$ 2,049,985**	**$ 180,000**	**$ 180,000**	**$ 180,000**
IV. Water Quality Cost at $5 per acre-ft sold,	$5.00	**n/a**	**$ 71,500**	**$ 81,400**	**$ 61,400**	**$ 61,400**
TOTAL REVENUE REQUIREMENTS ($)[1]		**$ 5,609,425**	**$ 6,655,494**	**$ 5,986,545**	**$ 5,129,428**	**$ 5,696,485**
NET OPERATING REVENUE		**$ (589,096)**	**$ (2,122,394)**	**$ 802,215**	**$ 605,823**	**$ 726,996**
Transfers from General Fund (no repayment)		$ 589,096				
Transfers from Nickel Water Reserve Fund[1]			$ 1,869,985			
Repayment to Nickel Water Reserve Fund[1]				$ (623,328)	$ (623,328)	$ (623,328)
Transfers from Rate Stabilization Reserves			$ 252,409	$ -	$ 17,505	$ -
Repayment to Rate Stabilization Reserves				$ (178,886)	$ -	$ (91,028)
OPERATING FUND ENDING BALANCE. ANY SURPLUS CARRIED FORWARD		$ -	$0	$0	$0	$12,640
RESERVES AND OTHER FUNDS - STATUS						
A. Rate Stabilization Reserve Balances						
Beginning Balance			$ 265,000	$ 12,591	$ 191,477	$ 173,972
Repayment *from* Net Operating Revenue			$ -	$ 178,886	$ -	$ 91,028
Transfers *to* Net Operating Revenue			$ (252,409)	$ -	$ (17,505)	$ -
Ending Balance		$ 265,000	$ 12,591	$ 191,477	$ 173,972	$ 265,000
B. Nickel Water Loan Fund						
Beginning Balance			$ 1,869,985	$ 1,869,985	$ 1,246,657	$ 623,328
Repayments			$ -	$ (623,328)	$ (623,328)	$ (623,328)
Ending Balance			$ 1,869,985	$ 1,246,657	$ 623,328	$ -

1. For year 2018 only, the total revenue requirement summation includes $1,869,985 purchase of nickel water. This purchase amount was covered by transfer from reserves for 2018 (Nickel Water Reserve Fund). This amount will be repaid in equal amounts from rate revenue in 2019 through 2021

2. For years 2018 through 2021 Assume Agency's annual purchase amount is 300 ac-ft, however, due to losses in wheeling the actual amount sold is 200 ac-ft, reflected in the water sales line under "REVENUE"

3. The total for year 2018 is the actual invoiced amount, which due to round off acuracy is slightly different than the product of the rate and the amount purchased

Scenario 5 - 12% Annual Escalator with 50% of Nickel on Capacity Fee

Friday, September 21, 2018

2019 trial rate in $ per Acre-Ft: 483.00
rate escalator for years 2020 and 2021: 12.00%

2018 Rate Analysis For San Gorgonio Pass Water Agency

Study Year I.D.		1	2	3	4
Calendar Year	2017 Actuals	2018 Projected	2019	2020	2021
REVENUE					
Water Sales (acre-ft)	15,837	14,300	16,280	12,280	12,280
Water Rate ($ per Acre-ft)	$ 317.00	$ 317.00	$ 483.00	$ 540.96	$ 605.88
Revenue From Water Sales	$ 5,020,329	$ 4,533,100	$ 7,863,240	$ 6,642,989	$ 7,440,147
Previous year carry over		$ -	$ -	$ 35,167	$ -
Contribution from General Fund Revenue	$ -				
Total Expected Revenue	**$ 5,020,329**	**$ 4,533,100**	**$ 7,863,240**	**$ 6,678,156**	**$ 7,440,147**
REVENUE REQUIREMENTS					
I. SGPWA OVERHEAD					
SGPWA Operations Overhead					
Salaries	$ 106,382	$ 109,573	$ 112,861	$ 116,246	$ 119,734
Payroll Taxes	$ 8,536	$ 8,792	$ 9,056	$ 9,328	$ 9,607
Workman's Comp Insurance	$ 367	$ 378	$ 389	$ 401	$ 413
PERS	$ 13,695	$ 14,106	$ 14,529	$ 14,965	$ 15,414
Health Insurance	$ 24,365	$ 25,096	$ 25,849	$ 26,624	$ 27,423
Dental Insurance	$ 1,769	$ 1,822	$ 1,877	$ 1,933	$ 1,991
Long Term Disability Insurance	$ 581	$ 598	$ 616	$ 635	$ 654
total	$ 155,695	$ 160,366	$ 165,177	$ 170,132	$ 175,236
Operations Cost Allocated Rate Requirements at 50%	**$ 77,848**	**$ 80,183**	**$ 82,588**	**$ 85,066**	**$ 87,618**
SGPWA Administrative Overhead					
Salaries	$ 387,663	$ 399,293	$ 411,272	$ 423,610	$ 436,318
Payroll Taxes	$ 26,153	$ 26,938	$ 27,746	$ 28,578	$ 29,435
Workman's Comp Insurance	$ 2,191	$ 2,257	$ 2,324	$ 2,394	$ 2,466
PERS	$ 113,505	$ 116,910	$ 120,417	$ 124,030	$ 127,751
Health Insurance	$ 49,433	$ 50,916	$ 52,443	$ 54,017	$ 55,637
Dental Insurance	$ 3,537	$ 3,643	$ 3,752	$ 3,865	$ 3,981
Long Term Disability Insurance	$ 4,604	$ 4,742	$ 4,884	$ 5,031	$ 5,182
Total Administrative Overhead	$ 587,086	$ 604,699	$ 622,840	$ 641,525	$ 660,770
Total Administrative Overhead Allocated to Rate Requirements at 5%	**$ 29,354**	**$ 30,235**	**$ 31,142**	**$ 32,076**	**$ 33,039**
II. WATER DELIVERY COSTS:					
EBX Operations	$ 199,214	$ 207,183	$ 215,470	$ 224,089	$ 233,052
Amount Allocated to Rate Requirements at 50%	**$ 99,607**	**$ 103,591**	**$ 107,735**	**$ 112,044**	**$ 116,526**
CALIFORNIA DEPT. OF WATER RESOURCES					
Water Amount Delivered (Acre-ft)	$ 15,843	$ 14,400	$ 16,380	$ 12,380	$ 12,380
Unit Cost for Energy and Transmission ($ per Acre-ft)	$ 231	$300	$336	$376	$421
Cost for Energy and Transmission	$ 3,666,916	$ 4,320,000	$ 5,503,680	$ 4,658,842	$ 5,217,903
Subtotal Water Delivery Cost ($)	**$ 3,766,523**	**$ 4,423,591**	**$ 5,611,415**	**$ 4,770,886**	**$ 5,334,429**
III. WATER PURCHASE COSTS					
CALIFORNIA DEPT. OF WATER RESOURCES - Table A					
Water Amount Delivered (Acre-ft)	15,843	14,400	16,380	12,380	12,380
Cost per Acre-Ft	$0	$0	$0	$0	$0
Total ($)	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
YUBA DRY YEAR TRANSFERS					
Water transfers (acre-ft)[2]	0	300	300	300	300
Cost ($ per acre-ft)	$600	$600	$600	$600	$600
Total ($)	**$ -**	**$ 180,000**	**$ 180,000**	**$ 180,000**	**$ 180,000**
NICKEL WATER					
Water Amount Purchased (Acre-ft) 50%	1,700	1,700	850	850	850
Cost ($ per acre-ft)	$1,021	$1,103	$1,136	$1,170	$1,205
Total ($)[3]	$ 1,735,700	$ 1,869,985	$ 965,790	$ 994,764	$ 1,024,607
Subtotal Water Purchase Cost ($)	**$ 1,735,700**	**$ 2,049,985**	**$ 1,145,790**	**$ 1,174,764**	**$ 1,204,607**
IV. Water Quality Cost at $5 per acre-ft sold, $5.00	**n/a**	**$ 71,500**	**$ 81,400**	**$ 61,400**	**$ 61,400**
TOTAL REVENUE REQUIREMENTS ($)[1]	**$ 5,609,425**	**$ 6,655,494**	**$ 6,952,336**	**$ 6,124,192**	**$ 6,721,092**
NET OPERATING REVENUE	**$ (589,096)**	**$ (2,122,394)**	**$ 910,904**	**$ 553,963**	**$ 719,055**
Transfers from General Fund (no repayment)	$ 589,096				
Transfers from Nickel Water Reserve Fund[1]		$ 1,869,985			
Repayment to Nickel Water Reserve Fund[1]			$ (623,328)	$ (623,328)	$ (623,328)
Transfers from Rate Stabilization Reserves		$ 252,409	$ -	$ 69,365	$ -
Repayment to Rate Stabilization Reserves			$ (252,409)	$ -	$ (69,365)
OPERATING FUND ENDING BALANCE. ANY SURPLUS CARRIED FORWARD	$ -	$0	$35,167	$0	$26,362
RESERVES AND OTHER FUNDS - STATUS					
A. Rate Stabilization Reserve Balances					
Beginning Balance		$ 265,000	$ 12,591	$ 265,000	$ 195,635
Repayment *from* Net Operating Revenue		$ -	$ 252,409	$ -	$ 69,365
Transfers *to* Net Operating Revenue		$ (252,409)	$ -	$ (69,365)	$ -
Ending Balance	$ 265,000	$ 12,591	$ 265,000	$ 195,635	$ 265,000
B. Nickel Water Loan Fund					
Beginning Balance		$ 1,869,985	$ 1,869,985	$ 1,246,657	$ 623,328
Repayments		$ -	$ (623,328)	$ (623,328)	$ (623,328)
Ending Balance		$ 1,869,985	$ 1,246,657	$ 623,328	$ -

1. For year 2018 only, the total revenue requirement summation includes $1,869,985 purchase of nickel water. This purchase amount was covered by transfer from reserves for 2018 (Nickel Water Reserve Fund). This amount will be repaid in equal amounts from rate revenue in 2019 through 2021.

2. For years 2018 through 2021 Assume Agency's annual purchase amount is 300 ac-ft, however, due to losses in wheeling the actual amount sold is 200 ac-ft, reflected in the water sales line under "REVENUE"

3. The total for year 2018 is the actual invoiced amount, which due to round off acuracy is slightly different than the product of the rate and the amount purchased

Scenario 6 - 12% Annual Escalator with 0% of Nickel on Capacity Fee

Friday, September 21, 2018

2019 trial rate in $ per Acre-Ft: 549.00
rate escalator for years 2020 and 2021: 12.00%

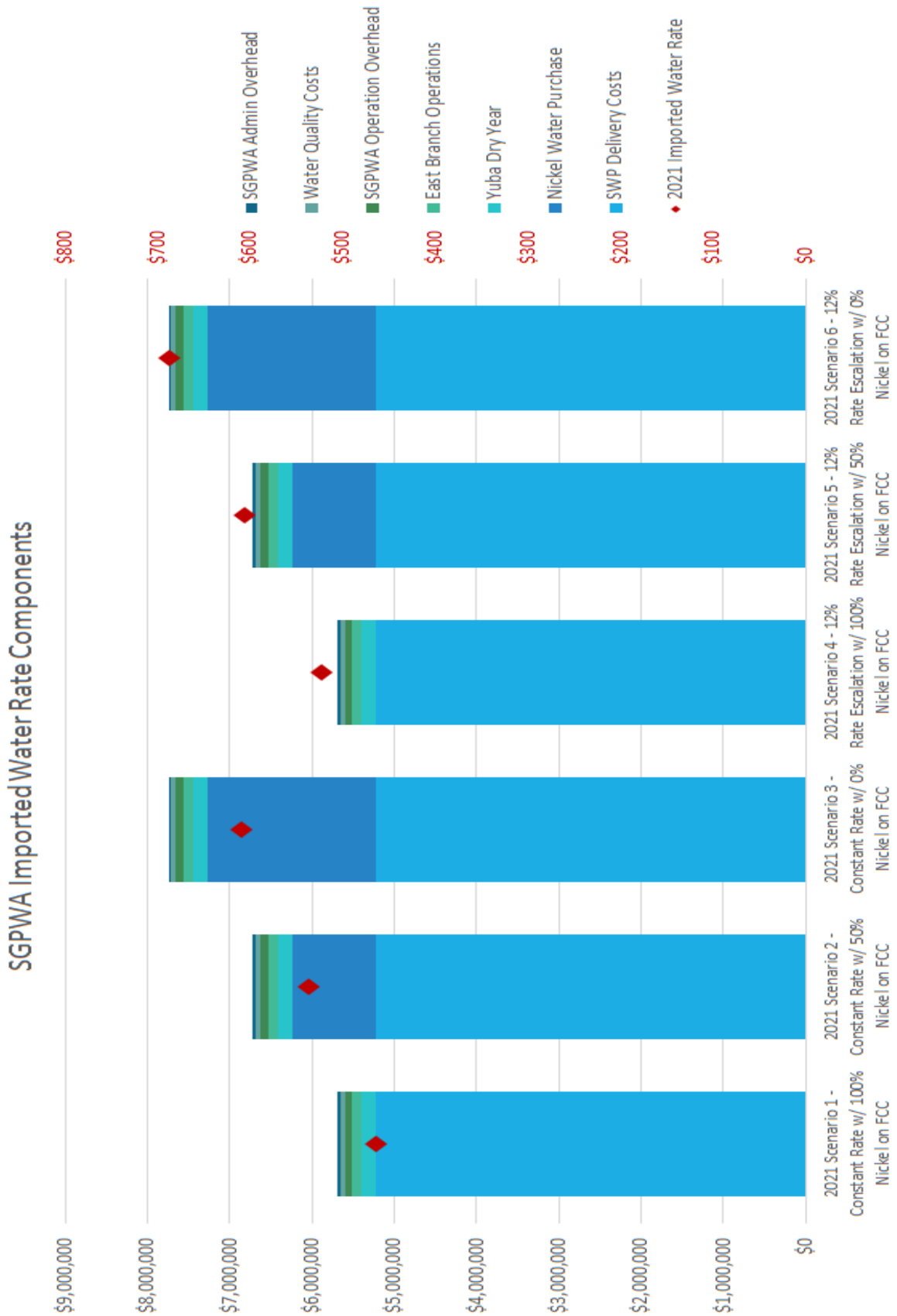
2018 Rate Analysis For San Gorgonio Pass Water Agency

Study Year I.D.		1	2	3	4
Calendar Year	2017 Actuals	2018 Projected	2019	2020	2021
REVENUE					
Water Sales (acre-ft)	15,837	14,300	16,280	12,280	12,280
Water Rate ($ per Acre-ft)	$ 317.00	$ 317.00	$ 549.00	$ 614.88	$ 688.67
Revenue From Water Sales	$ 5,020,329	$ 4,533,100	$ 8,937,720	$ 7,550,726	$ 8,456,814
Previous year carry over		$ -	$ -	$ 143,857	$ -
Contribution from General Fund Revenue	$ -				
Total Expected Revenue	**$ 5,020,329**	**$ 4,533,100**	**$ 8,937,720**	**$ 7,694,583**	**$ 8,456,814**
REVENUE REQUIREMENTS					
I. SGPWA OVERHEAD					
SGPWA Operations Overhead					
Salaries	$ 106,382	$ 109,573	$ 112,861	$ 116,246	$ 119,734
Payroll Taxes	$ 8,536	$ 8,792	$ 9,056	$ 9,328	$ 9,607
Workman's Comp Insurance	$ 367	$ 378	$ 389	$ 401	$ 413
PERS	$ 13,695	$ 14,106	$ 14,529	$ 14,965	$ 15,414
Health Insurance	$ 24,365	$ 25,096	$ 25,849	$ 26,624	$ 27,423
Dental Insurance	$ 1,769	$ 1,822	$ 1,877	$ 1,933	$ 1,991
Long Term Disability Insurance	$ 581	$ 598	$ 616	$ 635	$ 654
total	$ 155,695	$ 160,366	$ 165,177	$ 170,132	$ 175,236
Operations Cost Allocated Rate Requirements at 50%	**$ 77,848**	**$ 80,183**	**$ 82,588**	**$ 85,066**	**$ 87,618**
SGPWA Administrative Overhead					
Salaries	$ 387,663	$ 399,293	$ 411,272	$ 423,610	$ 436,318
Payroll Taxes	$ 26,153	$ 26,938	$ 27,746	$ 28,578	$ 29,435
Workman's Comp Insurance	$ 2,191	$ 2,257	$ 2,324	$ 2,394	$ 2,466
PERS	$ 113,505	$ 116,910	$ 120,417	$ 124,030	$ 127,751
Health Insurance	$ 49,433	$ 50,916	$ 52,443	$ 54,017	$ 55,637
Dental Insurance	$ 3,537	$ 3,643	$ 3,752	$ 3,865	$ 3,981
Long Term Disability Insurance	$ 4,604	$ 4,742	$ 4,884	$ 5,031	$ 5,182
Total Administrative Overhead	$ 587,086	$ 604,699	$ 622,840	$ 641,525	$ 660,770
Total Administrative Overhead Allocated to Rate Requirements at 5%	**$ 29,354**	**$ 30,235**	**$ 31,142**	**$ 32,076**	**$ 33,039**
II. WATER DELIVERY COSTS:					
EBX Operations	$ 199,214	$ 207,183	$ 215,470	$ 224,089	$ 233,052
Amount Allocated to Rate Requirements at 50%	**$ 99,607**	**$ 103,591**	**$ 107,735**	**$ 112,044**	**$ 116,526**
CALIFORNIA DEPT. OF WATER RESOURCES					
Water Amount Delivered (Acre-ft)	$ 15,843	$ 14,400	$ 16,380	$ 12,380	$ 12,380
Unit Cost for Energy and Transmission ($ per Acre-ft)	$ 231	$300	$336	$376	$421
Cost for Energy and Transmission	$ 3,666,916	$ 4,320,000	$ 5,503,680	$ 4,658,842	$ 5,217,903
Subtotal Water Delivery Cost ($)	**$ 3,766,523**	**$ 4,423,591**	**$ 5,611,415**	**$ 4,770,886**	**$ 5,334,429**
III. WATER PURCHASE COSTS					
CALIFORNIA DEPT. OF WATER RESOURCES - Table A					
Water Amount Delivered (Acre-ft)	15,843	14,400	16,380	12,380	12,380
Cost per Acre-Ft	$0	$0	$0	$0	$0
Total ($)	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
YUBA DRY YEAR TRANSFERS					
Water transfers (acre-ft)[2]	0	300	300	300	300
Cost ($ per acre-ft)	$600	$600	$600	$600	$600
Total ($)	**$ -**	**$ 180,000**	**$ 180,000**	**$ 180,000**	**$ 180,000**
NICKEL WATER					
Water Amount Purchased (Acre-ft) 100%	1,700	1,700	1,700	1,700	1,700
Cost ($ per acre-ft)	$1,021	$1,103	$1,136	$1,170	$1,205
Total ($)[3]	$ 1,735,700	$ 1,869,985	$ 1,931,581	$ 1,989,528	$ 2,049,214
Subtotal Water Purchase Cost ($)	**$ 1,735,700**	**$ 2,049,985**	**$ 2,111,581**	**$ 2,169,528**	**$ 2,229,214**
IV. Water Quality Cost at $5 per acre-ft sold, $5.00	**n/a**	**$ 71,500**	**$ 81,400**	**$ 61,400**	**$ 61,400**
TOTAL REVENUE REQUIREMENTS ($)[1]	**$ 5,609,425**	**$ 6,655,494**	**$ 7,918,126**	**$ 7,118,956**	**$ 7,745,699**
NET OPERATING REVENUE	**$ (589,096)**	**$ (2,122,394)**	**$ 1,019,594**	**$ 575,627**	**$ 711,114**
Transfers from General Fund (no repayment)	$ 589,096				
Transfers from Nickel Water Reserve Fund[1]		$ 1,869,985			
Repayment to Nickel Water Reserve Fund[1]			$ (623,328)	$ (623,328)	$ (623,328)
Transfers from Rate Stabilization Reserves		$ 252,409	$ -	$ 47,702	$ -
Repayment to Rate Stabilization Reserves			$ (252,409)	$ -	$ (47,702)
OPERATING FUND ENDING BALANCE. ANY SURPLUS CARRIED FORWARD	$ -	$0	$143,857	$0	$40,084
RESERVES AND OTHER FUNDS - STATUS					
A. Rate Stabilization Reserve Balances					
Beginning Balance		$ 265,000	$ 12,591	$ 265,000	$ 217,298
Repayment *from* Net Operating Revenue		$ -	$ 252,409	$ -	$ 47,702
Transfers *to* Net Operating Revenue		$ (252,409)	$ -	$ (47,702)	$ -
Ending Balance	$ 265,000	$ 12,591	$ 265,000	$ 217,298	$ 265,000
B. Nickel Water Loan Fund					
Beginning Balance		$ 1,869,985	$ 1,869,985	$ 1,246,657	$ 623,328
Repayments		$ -	$ (623,328)	$ (623,328)	$ (623,328)
Ending Balance		$ 1,869,985	$ 1,246,657	$ 623,328	$ -

1. For year 2018 only, the total revenue requirement summation includes $1,869,985 purchase of nickel water. This purchase amount was covered by transfer from reserves for 2018 (Nickel Water Reserve Fund). This amount will be repaid in equal amounts from rate revenue in 2019 through 2021.

2. For years 2018 through 2021 Assume Agency's annual purchase amount is 300 ac-ft, however, due to losses in wheeling the actual amount sold is 200 ac-ft, reflected in the water sales line under "REVENUE"

3. The total for year 2018 is the actual invoiced amount, which due to round off acuracy is slightly different than the product of the rate and the amount purchased


SGPWA Imported Water Rate Components
$9,000,000
$8,000,000
$7,000,000
$6,000,000
$5,000,000
$4,000,000
$3,000,000
$2,000,000
$1,000,000
$0
$800
$700
$600
$500
$400
$300
$200
$100
$0
SGPWA Admin Overhead
Water Quality Costs
SGPWA Operation Overhead
East Branch Operations
Yuba Dry Year
Nickel Water Purchase
SWP Delivery Costs
2021 Imported Water Rate
2021 Scenario 1 - Constant Rate w/ 100% Nickel on FCC
2021 Scenario 2 - Constant Rate w/ 50% Nickel on FCC
2021 Scenario 3 - Constant Rate w/ 0% Nickel on FCC
2021 Scenario 4 - 12% Rate Escalation w/ 100% Nickel on FCC
2021 Scenario 5 - 12% Rate Escalation w/ 50% Nickel on FCC
2021 Scenario 6 - 12% Rate Escalation w/ 0% Nickel on FCC

Director Comments

Yucaipa Valley Water District

Adjournment

Yucaipa Valley Water District

Yucaipa Valley Water District

FACTS ABOUT THE YUCAIPA VALLEY WATER DISTRICT

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

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

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

FY 2018-19 Operating Budget:
Water Division - $14,150,445
Sewer Division - $12,337,754
Recycled Water Division - $1,293,270
Total Annual Budget - $25,754,750

Number of Services:
12,693 water connections serving 17,362 units
13,980 sewer connections serving 21,806 units
92 recycled water connections

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

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

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

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

Typical Rates, Fees and Charges:

- Drinking Water Commodity Charge:

1,000 gallons to 15,000 gallons	$1.429 per each 1,000 gallons
16,000 gallons to 60,000 gallons	$1.919 per each 1,000 gallons
61,000 gallons to 100,000 gallons	$2.099 per each 1,000 gallons
101,000 gallons or more	$2.429 per each 1,000 gallons

- Recycled Water Commodity Charge:

1,000 gallons or more	$1.425 per each 1,000 gallons

- Water Meter Service Charge (Drinking Water or Recycled Water):

5/8” x 3/4” Water Meter	$14.00 per month
1” Water Meter	$23.38 per month
1-1/2” Water Meter	$46.62 per month

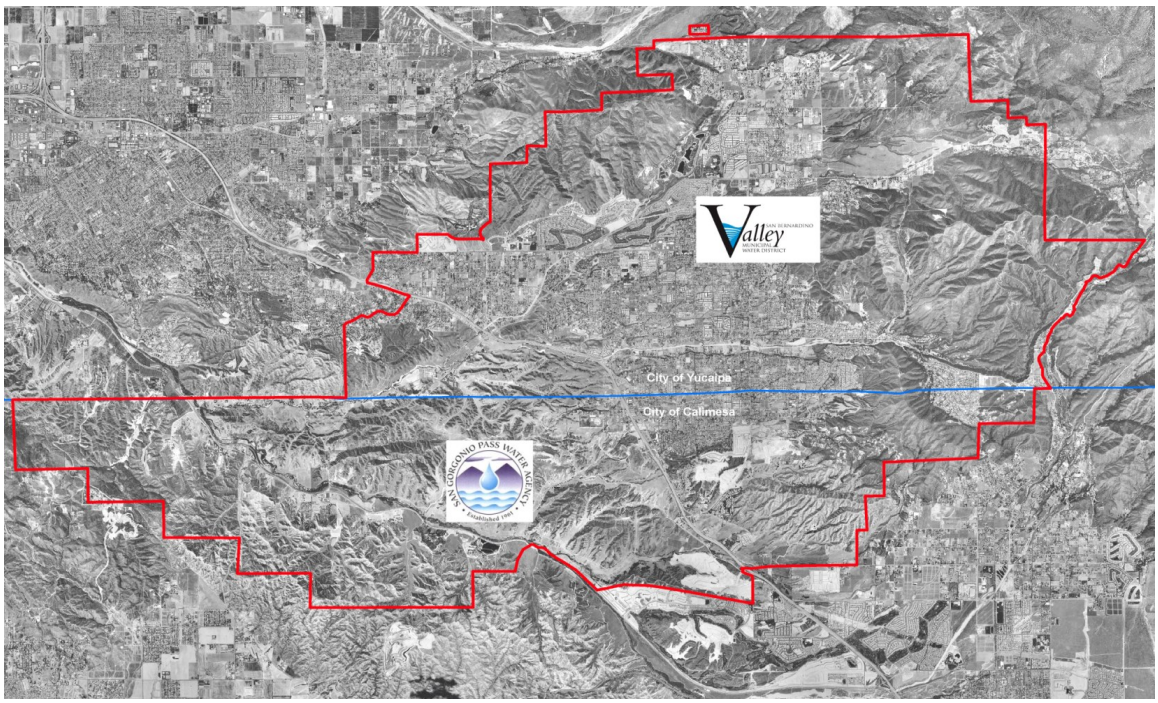
- Sewer Collection and Treatment Charge:

Typical Residential Charge	$42.43 per month

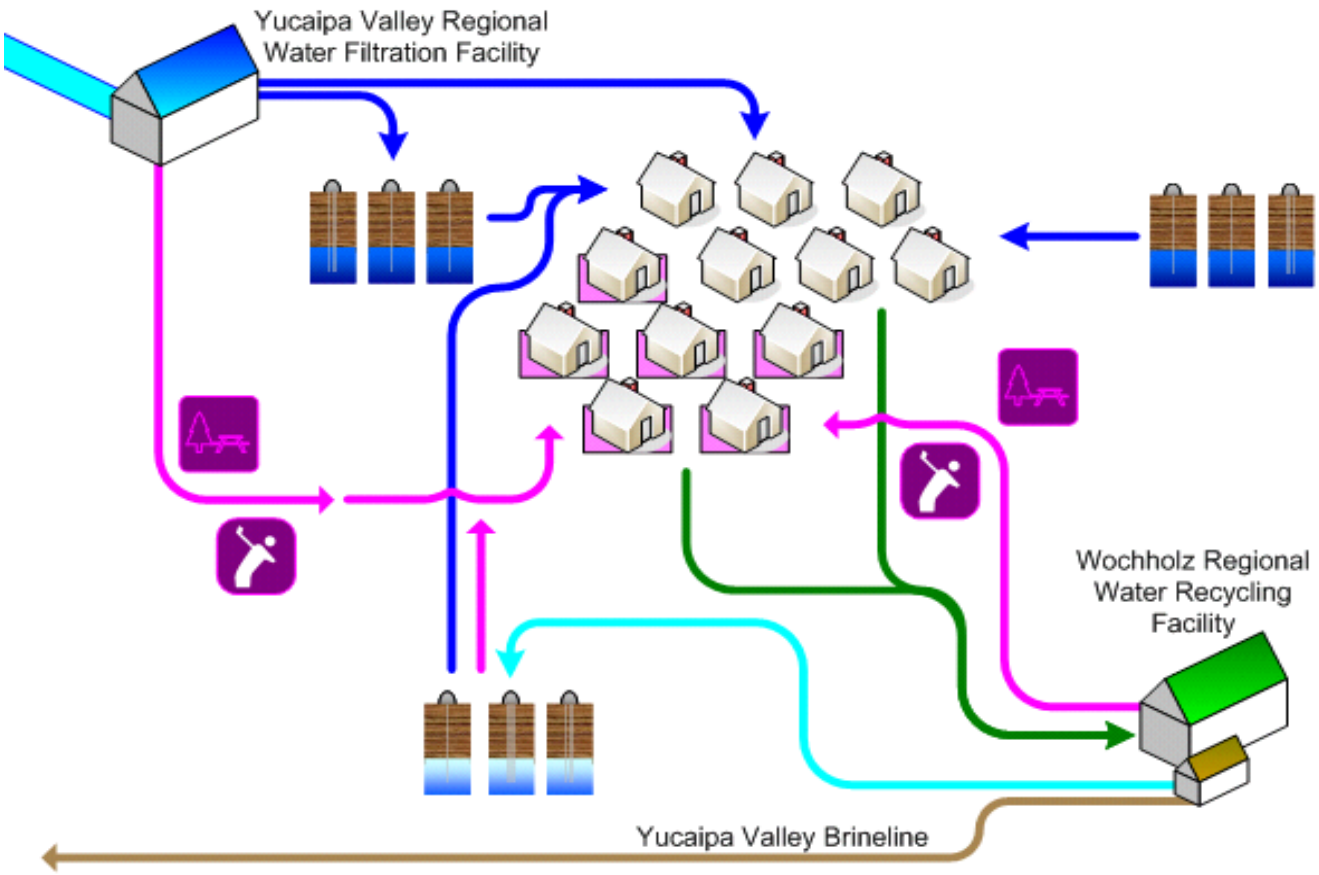
- Imported Water Charges (Pass-through State Water Project Charge):

San Bernardino Valley Municipal Water District	$0.27 per each 1,000 gallons
San Gorgonio Pass Water Agency	$0.66 per each 1,000 gallons

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



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



Yucaipa Valley Water District

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 farm land or further processed as an earth-like product for commercial and home gardens to improve and maintain fertile soil and stimulate plant growth.

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 (https://www.digalert.org) 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.

Yucaipa Valley Water District

COMMONLY USED ABBREVIATIONS

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