AGENDA FOR A REGULAR MEETING OF THE BOARD OF DIRECTORS
OF THE VALLECITOS WATER DISTRICT
WEDNESDAY, JUNE 7, 2017, AT 5:00 P.M.
AT THE DISTRICT OFFICE
201 VALLECITOS DE ORO, SAN MARCOS, CALIFORNIA

CALL TO ORDER – PRESIDENT ELITHARP

PLEDGE OF ALLEGIANCE

ROLL CALL

In the case of an emergency, items may be added to the Agenda by a majority vote of the Board of Directors. An emergency is defined as a work stoppage; a crippling disaster; or other activity which severely imperils public health, safety, or both. Also, items which arise after the posting of the Agenda may be added by a two-thirds vote of the Board of Directors.

ADOPT AGENDA FOR THE REGULAR MEETING OF JUNE 7, 2017

PUBLIC COMMENT

Persons wishing to address a matter not on the Agenda may be heard at this time; however, no action will be taken until the matter is placed on a future agenda in accordance with Board policy. Public comments are limited to three minutes. A Request to Speak form is required to be submitted to the Executive Secretary prior to the start of the meeting, if possible. Public comment should start by stating name, address and topic. The Board is not permitted during this time to enter into a dialogue with the speaker.

NOTICE TO THE PUBLIC

All matters listed under the Consent Calendar will be voted upon by one motion. There will be no separate discussion of these items, unless a Board member or member of the public requests that a particular item(s) be removed from the Consent Calendar, in which case it will be considered separately under Action Items.

CONSENT CALENDAR

1.1 APPROVAL OF MINUTES (pp. 5-15)

A. REGULAR BOARD MEETING – MAY 17, 2017
B. BOARD WORKSHOP MEETING – MAY 24, 2017

Approved minutes become a permanent public record of the District.

Recommendation: Approve Minutes

1.2 WARRANT LIST THROUGH JUNE 7, 2017 – $6,747,943.43 (pp. 16-19)

Recommendation: Approve Warrant List

1.3 ACCEPTANCE OF MEADOWLARK WATER RECLAMATION FACILITY (MRF) TERTIARY MEDIA FILTER REPLACEMENT (pp. 20-22)

All work has been completed.

Recommendation: **1) Increase the budget by $59,730; 2) accept the project; 3) file a Notice of Completion; 4) authorize release of retention funds to the contractor following the 60-day notice period, provided no claims are filed.**

1.4 REQUEST FOR ANNEXATION OF CERTAIN PROPERTY DESIGNATED AS "MEADOWLARK CANYON" (APN 221-021-45) INTO THE SEWER IMPROVEMENT DISTRICT (MEADLOWLARK CANYON, LLC) (pp. 23-26)

The proposed subdivision is located on San Marcos Boulevard just west of Acacia Drive.

Recommendation: **Approve the annexation with conditions**

1.5 FINAL ACCEPTANCE OF WATER AND SEWER IMPROVEMENTS FOR SAN ELIJO HILLS, PHASE V P.A. "O", UNIT 7 APN 679-221-17 (SAN ELIJO HILLS DEVELOPMENT COMPANY, LLC) (pp. 27-29)

Installation of the water and sewer facilities has been completed.

Recommendation: **1) Accept project improvements; 2) approve filing notice of completion**

1.6 APPROVAL OF TEMPORARY OFF-SITE WATER AND SEWER SERVICE AGREEMENTS FOR DANG/MAI RESIDENCE (pp. 30-33)

The property is located within the water and sewer service boundary and is not located adjacent to any existing VWD facilities.

Recommendation: **Approve temporary off-site water and sewer service agreement with conditions**

1.7 Approval of Construction Agreement for North City East Infrastructure APN 221-110-20, 30, 220-200-40, 47, 48, 49 (Urban Villages San Marcos, LLC) (pp. 34-36)

The project is located east of Twin Oaks Valley Road between Barham Drive and Carmel Street.

Recommendation: **Approve construction agreement**

*******END OF CONSENT CALENDAR*******

ACTION ITEMS

2.1 VALLECITOS WATER DISTRICT RECOMMENDED FISCAL YEAR 2017/18 BUDGET (pp. 37)

Vallecitos Water District budget is presented for Board review and approval.

Recommendation: Approve Fiscal Year 2017/2018 Vallecitos Water District Budget

2.2 2017 COST OF SERVICE AND RATE STRUCTURE STUDY (pp. 38-99)

The Study incorporates both commodity and fixed rates for 2018 as proposed by the San Diego County Water Authority.

Recommendation: Approve Cost of Service and Rate Structure Study

2.3 2017 PUBLIC RATE HEARING NOTICE (pp. 100-104)

The District mails a Notice of Public Rate Hearing to all ratepayers in anticipation of any proposed rate increase.

Recommendation: Approve Public Rate Hearing Notice

2.4 RESOLUTION PLACING IN NOMINATION HAL J. MARTIN AS A MEMBER OF THE ASSOCIATION OF CALIFORNIA WATER AGENCIES (ACWA) REGION 10 BOARD OF DIRECTORS (pp. 105-106)

The Region 10 nominating committee is seeking ACWA members who are interested in leading the direction of ACWA Region 10 for the 2018-2019 term.

Recommendation: Adopt Resolution

*******END OF ACTION ITEMS*******

REPORTS

3.1 GENERAL MANAGER

3.2 DISTRICT LEGAL COUNSEL

3.3 SAN DIEGO COUNTY WATER AUTHORITY

3.4 ENCINA WASTEWATER AUTHORITY
- Capital Improvement Committee
- Policy and Finance Committee

3.5 STANDING COMMITTEES

3.6 DIRECTORS REPORTS ON MEETINGS/CONFERENCES/SEMINARS ATTENDED

*******END OF REPORTS*******

OTHER BUSINESS

4.1 MEETINGS (pp. 107)

URBAN WATER INSTITUTE ANNUAL WATER CONFERENCE
August 16 – 18, 2017 – Hilton Hotel, San Diego

*******END OF OTHER BUSINESS*******

5.1 DIRECTORS COMMENTS/FUTURE AGENDA ITEMS

*******END OF DIRECTORS COMMENTS/FUTURE AGENDA ITEMS*******

6.1 ADJOURNMENT

*******END OF AGENDA*******

If you have any disability which would require accommodation in order to enable you to participate in this meeting, please call the Executive Secretary at 760.744.0460 ext. 264 at least 48 hours prior to the meeting.

Audio and video recordings of all Board meetings are available to the public at the District website www.vwd.org

AFFIDAVIT OF POSTING

I, Diane Posvar, Executive Secretary of the Vallecitos Water District, hereby certify that I caused the posting of this Agenda in the outside display case at the District office, 201 Vallecitos de Oro, San Marcos, California by 5:00 p.m., Friday, June 2, 2017.

Diane Posvar

MINUTES OF A REGULAR MEETING OF THE BOARD OF DIRECTORS
OF THE VALLECITOS WATER DISTRICT
WEDNESDAY, MAY 17, 2017, AT 5:00 PM AT THE DISTRICT OFFICE,
201 VALLECITOS DE ORO, SAN MARCOS, CALIFORNIA

President Elitharp called the Regular meeting to order at the hour of 5:00 p.m.

Students from Alvin M. Dunn Elementary School led the pledge of allegiance.

Present:	Director Elitharp Director Evans Director Hernandez Director Martin
Absent:	Director Sannella
Staff Present:	General Manager Pruim Assistant General Manager Scaglione Legal Counsel Scott District Engineer Gumpel Finance Manager Fusco Operations & Maintenance Manager Pedrazzi Capital Facilities Senior Engineer Hubbard Accounting Supervisor Owen Public Information/Conservation Supervisor Robbins Financial Analyst Arthur Executive Secretary Posvar

ADOPT AGENDA FOR THE REGULAR MEETING OF MAY 17, 2017

17-05-05 MOTION WAS MADE by Director Hernandez, seconded by Director Martin, and carried unanimously, with Director Sannella absent, to adopt the agenda for the Regular Board Meeting of May 17, 2017.

PUBLIC COMMENT

Mike Hunsaker, member of the public, addressed the Board questioning the District's use of sodium hypochlorite and why a draft of the Master Water Plan has not been presented yet. He thanked the Board.

PRESENTATIONS

Public Information/Conservation Supervisor Robbins presented certificates and gift cards to Zyan Perkins, Zari O'Donnell, and Yaneli Melendez, the top three entrants in the Poster Contest selected to represent Vallecitos Water District in the North County Water Agency 2018 calendar.

CONSENT CALENDAR

17-05-06 MOTION WAS MADE by Director Martin, seconded by Director Hernandez, and carried unanimously, with Director Sannella absent, to approve the Consent Calendar as presented.

1.1 Approval of Minutes

A. Board Workshop Meeting – April 26, 2017
B. Closed Session Board Meeting – May 3, 2017
C. Regular Board Meeting – May 3, 2017

1.2 Warrant List through May 17, 2017 - $843,464.10

1.3 Financial Reports

A. Water Meter Count – April 30, 2017
B. Water Production/Sales Report – 2016/2017
C. Water Revenue and Expense Report – April 30, 2017
D. Sewer Revenue and Expense Report – April 30, 2017
E. Reserve Funds Activity – April 30, 2017
F. Investment Report – April 30, 2017

ACTION ITEMS

ADOPTION OF RESOLUTION BY THE BOARD OF DIRECTORS OF THE VALLECITOS WATER DISTRICT APPROVING ENCINA WASTEWATER AUTHORITY'S FISCAL YEAR 2018 OPERATING AND CAPITAL IMPROVEMENT BUDGET

Assistant General Manager Scaglione stated the District is a party to the Encina Joint Powers Basic Agreement for the acquisition, construction, ownership, operation, and maintenance of the Encina Joint Sewer System. The Encina Basic Agreement requires unanimous approval of the Encina Wastewater Authority (EWA) budget by member agencies prior to the budget becoming effective. The fiscal year ending 2018 budgets of EWA, as unanimously approved by the EWA Board of Directors and the Joint Advisory Committee on April 26, 2017, are $14.9 million for the total capital budget and $15.3 million for the total operating revenue and expense budget.

He further stated that on February 15, 2017, EWA General Manager Mike Steinlicht and staff from RMC Water and Environment presented the Water Reuse Feasibility Study and provided an update on Capital Improvement Projects to this Board.

Staff recommended the Board adopt the resolution approving Encina Wastewater Authority's Fiscal Year 2018 Operating and Capital Improvement Budget.

General discussion took place.

Mike Hunsaker, member of the public, addressed the Board inquiring about the revenue increase of almost 100% in one year and if the increase has been factored into the cost of service. He thanked the Board.

General Manager Pruim stated the information contained in the EWA budget has been incorporated into the District's cost of service and rate projections.

17-05-07 MOTION WAS MADE by Director Evans, seconded by Director Hernandez, and carried unanimously with Director Sannella absent, to adopt the resolution.

Resolution No. 1516 - the roll call vote was as follows:

AYES: Evans, Hernandez, Martin, Elitharp
NOES:
ABSTAIN:
ABSENT: Sannella

2017 PUBLIC RATE HEARING NOTICE DRAFT

Assistant General Manager Scaglione reviewed the draft Public Hearing Notice, noting that the first paragraph below the graph on the first page of the notice will be removed since rate changes will become effective on January 1, 2018 and each January thereafter. The draft was revised from the previous draft that was presented to the Board on May 3 to incorporate changes as directed by the Board including: effective dates of January 1, 2018, and January 1, 2019; number of gallons of water delivered in one month to the average single family residential customer; a link to more detailed information on proposed rates; and a description of the Ready-to-Serve, commodity, and sewer charges. The previous draft contained the San Diego County Water Authority's (SDCWA) draft proposed commodity and fixed rates. Those rates have been revised since the last draft, but are still not final. Another draft of the Public Hearing Notice will be presented to the Board at the Board Workshop scheduled on May 24.

General discussion took place during which Director Martin asked what steps were taken to decrease the proposed rates from where they were six months ago. Assistant General Manager Scaglione explained several factors that helped to decrease the proposed rate increases: the new rate structure shifts much of the desal burden to the higher tiers; the decision to not fully fund the reserve funds; the decision to only pass along half of the wholesale increase; and not being so ambitious in the District's five-year plan.

Director Elitharp suggested adding “January” to the headers in the graphs on the third page of the draft Public Hearing Notice to clarify that changes are effective January 2018 and January 2019.

Mike Hunsaker, member of the public, addressed the Board asking if the District is going to use potentially double the water cost increases to index the Ready-To-Serve water? He expressed his concerns about the future availability of water, whether there is enough waste treatment, the District’s creditworthiness, revenue requirements and that there is just one rate for agriculture. He thanked the Board.

Director Elitharp asked if the combined agricultural/domestic rate is still in use. Assistant General Manager Scaglione responded yes and explained that if a customer has one combined use meter, the first 26 units are considered to be domestic and the remaining units are agricultural.

ORDINANCE PROPOSING PUMP ZONE CHARGES FOR CALENDAR YEAR 2017

General Manager Pruim stated the proposed ordinance presented for the Board’s consideration is to establish pump zone rates based on direction from the Board at the April 20, 2017 workshop to recapture, over a period of three years, 95% of the cost of electricity only used to pump water to customers in the higher elevations. Pump zone charges would be adjusted on July 1, 2017, July 1, 2018, and July 1, 2019. The ordinance only adopts the increases to be effective July 1, 2017. He provided a timeline of actions regarding the pump zone charges and presented information which included a map of the District’s pump zones and longer term adjustments.

Staff recommended the Board adopt the ordinance establishing pump zone charges for Fiscal Year 2017/2018 to recover the costs of electricity.

General discussion took place.

Mary Matheson, member of the public, addressed the Board expressing her opposition to the proposed pump zone charge increase in the Wulf pump zone and her disappointment in not receiving any response from the Board and staff to letters she sent regarding this matter. Maintaining their rate, by far above the cost to the other zones, and refusing to work with them will force them out of business and cause financial hardship. She thanked the Board.

Malcolm Matheson, member of the public, addressed the Board stating his opposition to the proposed pump zone charge increase for the Wulff pump zone. He thanked the Board.

Director Hernandez stated that the rates for the Wulff pump zone will actually be decreasing.

Director Evans apologized to the Matheson's for not responding to their letters and for the General Manager as well. She acknowledged that Mr. Matheson wrote a letter several years ago and that Assistant General Manager Scaglione spoke to him at that time. She clarified that the Board determined they are only asking for the electrical costs, and that they've been asking for 100% of the electrical costs but settled for 95%. The weight-lift volume was established based on specific information.

Director Evans stated there was recent discussion regarding an approximately $675,000 pump replacement project at the Wulff tank of which the entire District shares in that cost, and that those pumps are only being used if there are fire issues in that area and to service the customers in that area. General Manager Pruim stated that the cost of maintenance and operation as well as replacement of facilities is being spread across the whole District, not just the pump zone customers. The pump zone customers are picking up a very small amount of the costs that their use incurs.

17-05-08 MOTION WAS MADE by Director Hernandez, seconded by Director Evans, and carried unanimously, with Director Sannella absent, to adopt the ordinance.

Ordinance No. 205 – The roll call vote was as follows:

AYES: Evans, Hernandez, Martin, Elitharp
NOES:
ABSTAIN:
ABSENT: Sannella

OPERATIONS BUILDING LOCKER ROOM EXPANSION – PROJECT UPDATE

Senior Capital Facilities Engineer Hubbard stated the Operations & Maintenance (O&M) men's locker room located in Building B is not large enough to accommodate the number of employees utilizing it. The proposed expansion will increase the size of the locker room and will provide adequate space for current O&M staff and account for future growth. On August 3, 2016, the Board approved a professional services agreement with Jeff Katz Architecture in the amount of $66,800 for the design of the locker room expansion. The project is currently in final review and the bid documents are being prepared. The project is scheduled to begin publicly advertising for bids in the next several weeks.

Senior Capital Facilities Engineer Hubbard summarized the project which will renovate the existing 710 SF men's locker room and expand the locker room by 783 SF. The project also features alternative bid items to upgrade the lighting in the existing men's locker room to match the new lighting, as well as upgrading the flooring, lighting, and counter/sink in the women's locker room to match the men's and can be authorized at the District's discretion based on cost, budget, and/or aesthetic preferences.

Approximately $117,000 has been spent to date on the design phase. The budget for this project in the proposed budget for Fiscal Year 2017/2018 is $810,000.

General discussion took place during which the Board concurred that the locker room expansion is necessary. The Board directed staff to move forward with the bidding process and look for ways to reduce the budget for the project.

Mike Hunsaker, member of the public, addressed the Board expressing his surprise that the District has only one shower. In the event of a sewer break, you wouldn't want people walking through the central plant dragging debris into it. He recalled former General Manager Lamb cautioning that if the District ever had to ration water, it would result in a significant number of new employees for regulation. How much of this new building is for future expansion?

This item was presented for information only.

ACWA REGION 10 NOMINATING COMMITTEE IS SEEKING REGION 10 BOARD CANDIDATES

General Manager Pruim stated the Association of California Water Agencies' (ACWA) Nominating Committee is currently seeking candidates for the Region 10 Board, comprised of Chair, Vice Chair and up to five Board Member positions, for the 2018-2019 term.

Director Martin stated he would like to be nominated for the ACWA Region 10 Board. A nomination form must be completed and a resolution of support from the agency candidate's Board of Directors is also required.

REPORTS

GENERAL MANAGER

General Manager Pruim reported the following:

- The District has been a sponsor of ACWA for many years, spending $1,000 each for the spring and fall conferences. He recommended the District continue its sponsorship as it good for public relations and shows the District as a leader in the industry.
- Fitch Ratings recently performed surveillance of the District's finances. The bond rating agency awarded the District a AA+ rating.
- A Board workshop regarding rates and the budget will be held on Wednesday, May 24 at 5:00 p.m. This will be the last meeting before the final proposed budget is presented for the Board's approval at the June 7 Board meeting.
- He attended the San Diego County Water Authority's (SDCWA) General Managers meeting on May 16 at which the SDCWA presented their Ready-to-

Serve rates. SDCWA will be sending emails to each individual agency to explain how their rates will impact each agency.

- An update on the SDCWA lawsuit against Metropolitan Water District was also provided at the General Managers meeting. Oral arguments were made to the Appeals Court. The Appellate Court has 90 days in which to make a decision on the case.
- Maureen Stapleton, General Manager of SDCWA, will be providing a presentation to the Board at the June 21 Board meeting. A representative from Metropolitan Water District has asked to speak at that meeting as well. This will be a good opportunity to hear from both sides about the lawsuit.

DISTRICT LEGAL COUNSEL

None.

SAN DIEGO COUNTY WATER AUTHORITY

Director Evans stated the Board meeting is scheduled for May 25.

Director Evans stated that on May 16, Assembly member Eduardo Garcia, Chair of the Assembly Water, Parks and Wildlife Committee, announced the formation of a bipartisan legislative workgroup to focus on the long-term water use efficiency policy.

ENCINA WASTEWATER AUTHORITY

Director Hernandez reported on his attendance to the Capital Improvement Committee meeting this morning at which the Committee reviewed a preview of the preliminary study on their Fats, Oils and Grease (FOG) program. Energy production has increased 30%.

STANDING COMMITTEES

None.

DIRECTORS REPORTS ON TRAVEL/CONFERENCES/SEMINARS ATTENDED

Directors Martin, Hernandez and Elitharp reported on their attendance to the ACWA/JPIA conference May 7 – 12 and the Council of Water Utilities meeting on May 16.

OTHER BUSINESS

None.

DIRECTORS COMMENTS/FUTURE AGENDA ITEMS

Director Hernandez requested dates be set for the Engineering/Equipment Committee meeting with Geoscience and the South Lake tour. He also requested an update on solar within the next 60 days.

ADJOURNMENT

There being no further business to discuss, President Elitharp adjourned the Regular Meeting of the Board of Directors at the hour of 6:28 p.m.

A Regular Meeting of the Vallecitos Water District Board of Directors has been scheduled for Wednesday, June 7, 2017, at 5:00 p.m. at the District office, 201 Vallecitos de Oro, San Marcos, California.

Craig Elitharp, President
Board of Directors
Vallecitos Water District

ATTEST:

Glenn Pruim, Secretary
Board of Directors
Vallecitos Water District

MINUTES OF A WORKSHOP MEETING OF THE BOARD OF DIRECTORS
OF THE VALLECITOS WATER DISTRICT
WEDNESDAY, MAY 24, 2017, AT 5:00 PM AT THE DISTRICT OFFICE,
201 VALLECITOS DE ORO, SAN MARCOS, CALIFORNIA

President Elitharp called the Workshop meeting to order at the hour of 5:00 p.m.

Director Sannella led the pledge of allegiance.

Present: Director Elitharp
Director Evans
Director Hernandez
Director Martin
Director Sannella

Staff Present: General Manager Pruim
Assistant General Manager Scaglione
Administrative Services Manager Emmanuel
District Engineer Gumpel
Finance Manager Fusco
Operations & Maintenance Manager Pedrazzi
Capital Facilities Senior Engineer Hubbard
Executive Secretary Posvar

ADOPT AGENDA FOR THE WORKSHOP MEETING OF MAY 24, 2017

17-05-08 MOTION WAS MADE by Director Evans, seconded by Director Hernandez, and carried unanimously to adopt the agenda for the Board Workshop Meeting of May 24, 2017.

DISCUSSION ITEM

BUDGET AND RATES REVIEW AND UPDATE

General Manager Pruim stated the agenda items are for information, review and update on the budget and upcoming rates. This review is the last step to the June 7 Board meeting in which adoption of the budget and approval of the Prop. 218 Notice will be considered. He also stated that a rate calculator has been placed on the District's website to assist customers in determining their combined water and sewer charge.

Finance Manager Fusco reviewed the Proposed Budget as follows:

FY 2017/18 Budget – operating revenues/expenses; replacement reserves; capital spending; capital projects; easements, vehicles and equipment. He facilitated the presentation as follows:

- Budget process including Cost of Service Study & Rates
- FY 17/18 Budget Projection – Principal Debt Balance
- Budget to Budget Comparison
- Operating Budget by Division
- 2017/18 Water Operating Expense Budget $39,763,000
- Water Operating Expense Budget to Budget Comparison
- 2017/18 Wastewater Operating Expenses Budget $13,217,000
- Wastewater Operating Expense Budget to Budget Comparison
- Salaries and Benefits $15.5 million
- Salary & Benefits Budget to Budget Comparison
- FY 17/18 Budget projections – Operating Transfers to Reserves
- Capital Budget to Budget Comparison
- Capital Improvement Projects by Function

Question and answer took place during and following the presentation.

Mike Hunsaker, member of the public, addressed the Board inquiring on equivalent EDU's, sewer monthly charges, ready to serve charges, and the comparison between apartments, single family dwellings and mobile home park residents. He also questioned the number of EDU's being added per year as it was less than 200 the last couple of years and is projected to be under 200 for the next couple of years even though the Davia project was approved adding 496 units. He thanked the Board.

Assistant General Manager Scaglione reviewed the Public Rate Hearing Notice and Proposed Rates as follows:

- Objectives of the presentation
- Notice of Public Hearing on Proposed Change in Water and Sewer Service Rates and Water Rate Structure
- Water Monthly Ready-to Serve Charges
- Water Commodity Tier Structure in Units
- Five-Year Rate Projection
- Total Rate Impact (water and sewer) at Varying Levels of Use
- Rate Impact – RTS plus Commodity
- Implications if Demand Projections Are Off
- Single Family 2017 Monthly water Bill with Low, Average, High and Very High Use (by Agency)
- Sewer Projected Replacement Reserves and Proposed Rates
- Financial Performance Indicators

Question and answer took place during and following the presentation. During discussion, the Board requested additional changes to the 218 notice as follows: 1) change <1" meter designation to 5/8" and 3/4"; 2) add "and received wastewater services" to the note at the bottom, and 3) add language regarding the SDCWA's rate increases over the last several years and how that impacts VWD's rates.

ADJOURNMENT

There being no further business to discuss, President Elitharp adjourned the Board Workshop Meeting at the hour of 6:40 p.m.

A Regular Meeting of the Vallecitos Water District Board of Directors has been scheduled for Wednesday, June 7, 2017, at 5:00 p.m. at the District office, 201 Vallecitos de Oro, San Marcos, California.

Craig Elitharp, President
Board of Directors
Vallecitos Water District

ATTEST:

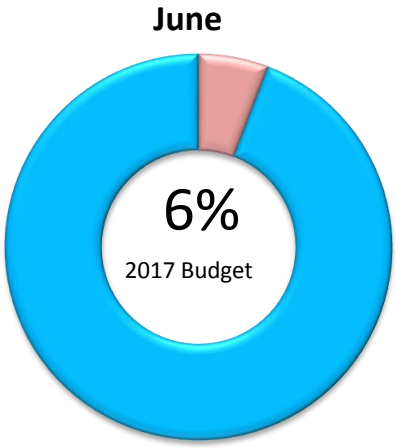
Glenn Pruim, Secretary
Board of Directors
Vallecitos Water District

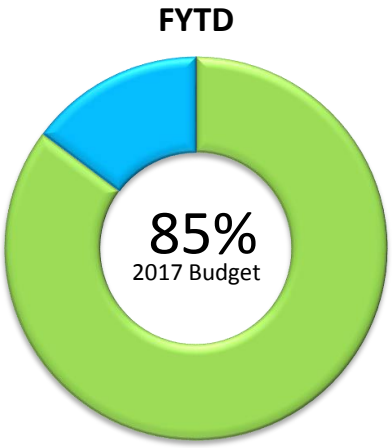
VALLECITOS WATER DISTRICT
WARRANTS LIST SUMMARY
June 7, 2017

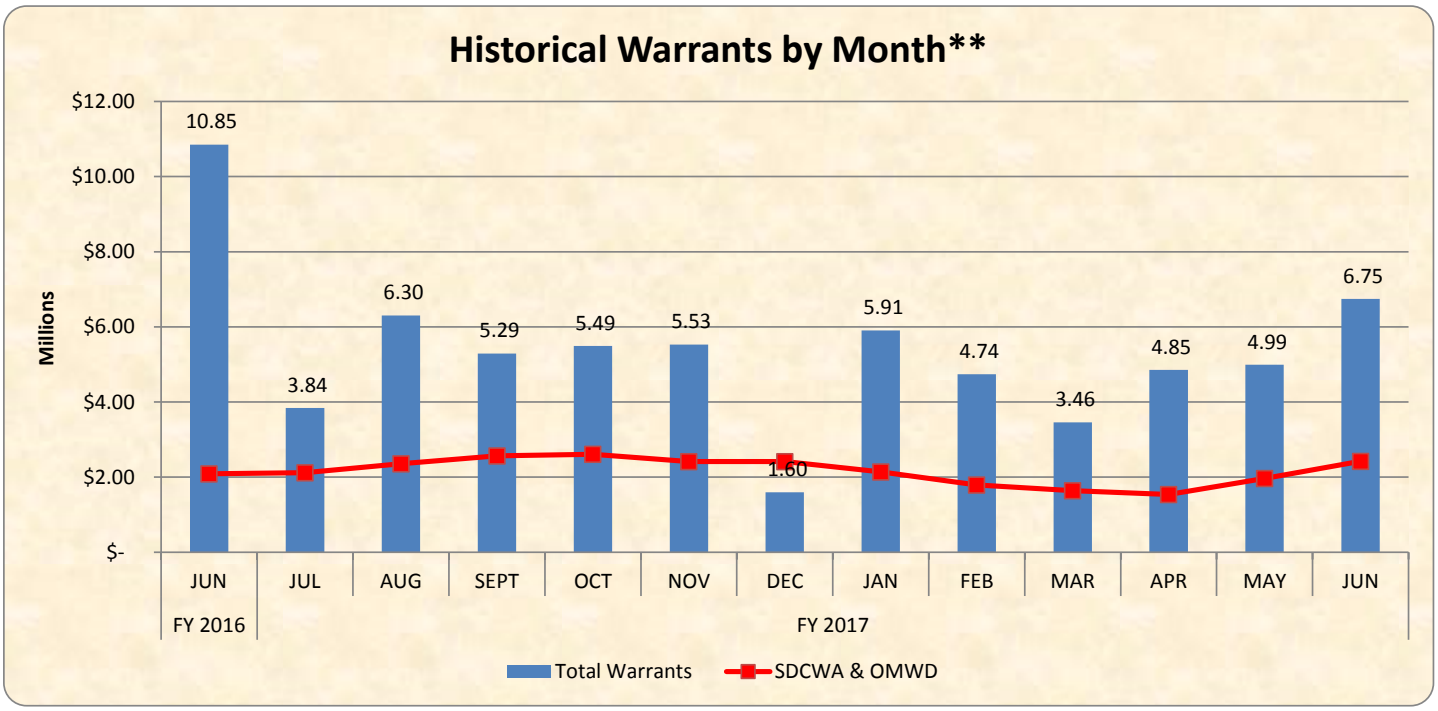
Summary

June Warrants	$	3,664,104	*
YTD Warrants	$	53,536,547	*
FY2017 Budget	$	62,827,000	

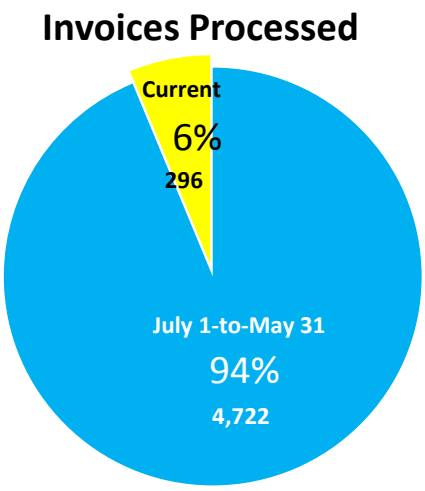
* Excludes Debt Service

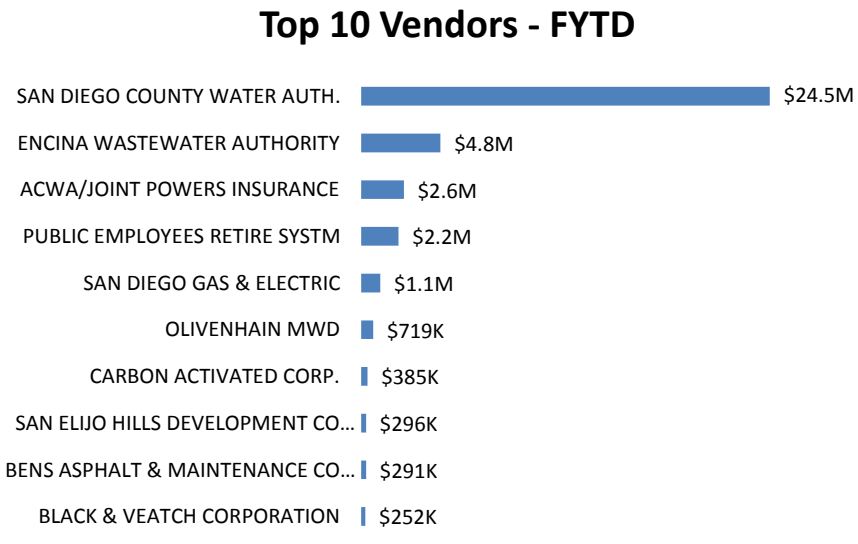






**** Historical Warrants by Month chart summarizes amounts in the Warrants List for the given month not amounts paid during the month with the exception of SDCWA & OMWD payments.***





VALLECITOS WATER DISTRICT
WARRANTS LIST
June 7, 2017

PAYEE	DESCRIPTION		CHECK#	AMOUNT
CHECKS				
ACWA/Joint Powers Insurance	Group Insurance June		110876	191,033.99
Airgas USA LLC	Cylinder Rental		110877	858.58
Altman Specialty Plants Inc	Succulents for Spring Garden Festival Prj 20171-27		110878	364.11
J.C. Ehrlich Co Inc	Plant Maintenance May		110879	263.00
AT&T	Phone Svc Apr		110880	2,886.75
Brady Sand & Material Inc	Rock & Cold Mix		110881	656.63
DirecTV Inc	Satellite Svc May		110882	69.54
Home Depot Credit Services	Hardware Supplies Apr		110883	588.68
Khan Iqbal Or Rubyna Iqbal	Refund Customer Overpayment		110884	398.85
Lloyd Pest Control	Pest Control Apr		110885	764.00
Manpower Temp Services	Customer Service Rep Week Ending 4-30-17		110886	554.99
SDG&E	Power Apr		110887	17,505.92
Smart & Final	Office Supplies Apr		110888	113.52
Staples Advantage	Office Supplies Apr		110889	504.17
Union Bank FKA 1st Bank Card	Meetings & Travel Apr		110890	2,260.45
Union Bank FKA 1st Bank Card	Meetings & Travel Apr		110891	1,684.10
Union Bank FKA 1st Bank Card	Meetings & Travel Apr		110892	1,864.16
Verizon Wireless	IPad & Cell Phone Svc Apr		110893	1,856.23
Garnishments	Payroll Garnishments	110894 through	110897	
Action Mail	Mailing Consumer Confidence Report Prj 20171-27		110898	6,668.55
AM Conservation Group Inc	Hose Nozzles Prj 20171-27		110899	124.85
AP Technology LLC	Secure Pro Annual Software Maintenance 6-17 To 6-18		110900	330.00
AT&T	Phone Svc Apr		110901	39.49
AT&T	Phone Svc May SCADA		110902	238.54
Athenx Inc	Access Control Double Doors Into Engineering Department		110903	4,083.21
B & C Crane Service Inc	Crane Rental Prj 20161-20		110904	652.50
Best Best & Krieger	2015 General Rate Case		110905	279.17
Black & Veatch Corporation	Recycled Water Business Plan 20141-712		110906	2,809.69
Boot World Inc	Safety Boots		110907	150.00
Brady Sand & Material Inc	Rock & Cold Mix		110908	334.77
CA Dept of Forestry/Fire Protection	Crew Work Apr		110909	914.48
Carbon Activated Corp.	Closed Account Refund		110910	1,100.00
Carbon Activated Corp.	MRF Tertiary Media Prj 20121-4		110911	76,604.20
City of Carlsbad	Quarterly Sewer Svc		110912	6,674.40
Christine Clark	Closed Account Refund		110913	68.89
Core Logic Information Solutions Inc	Engineering Map Svcs Apr		110914	300.00
Corodata Media Storage Inc	Backup Storage Tape Apr		110915	157.10
County of San Diego	Facility Permit		110916	2,337.00
Craig Elitharp	ACWA Conference 5-8-17, COWU Meeting 5-16-17		110917	1,444.74
CWEA	Membership D Toth		110918	172.00
CWEA	Membership & Cert Renewal D Austin		110919	260.00
CWEA	Membership D Richardson		110920	172.00
CWEA	Membership M Smith		110921	172.00
CWEA	Membership & Cert M Hill		110922	358.00
CWEA	Cert C Deering		110923	166.00
CWEA	Cert D McDougle		110924	83.00
Diamond Environmental Services	Pumping Svc Montiel LS		110925	780.00
DirecTV Inc	Satellite Svc May		110926	156.98
Douglas & Laurel Light	Closed Account Refund		110927	83.70
Dudek	North & South Pressure Reducing Stations 20171-7 & 8		110928	1,765.00
Electrical Sales Inc	Enclosure Fittings Prj 20171-17, Hardware Supplies		110929	587.18
Rhondi Emmanuel	ACWA Conference 5-9-17		110930	23.30
Erika Tyker & Brian Werner	Closed Account Refund		110931	48.98
Eurofins Eaton Analytical Inc	Algae ID & Count Mahr Reservoir		110932	210.00
Ewing Irrigation Products	PVC Supplies Prj 20171-15, Hardware Supplies		110933	614.62
Ferguson Enterprises, Inc	Air Vac Cans 3, Backflow Enclosure		110934	2,275.68
Fieldman Rolapp & Associates	Reimburse ACWA Meeting		110935	27.19
Fisher Scientific LLC	Lab Supplies		110936	490.63
Freedom Automation Inc	Svc Call North Twin Oaks		110937	1,050.00
Gallade Chemical Inc.	Sales Tax on Chemical Purchases		110938	487.88
Gallade Chemical Inc.	Sodium Hypochlorite		110939	436.23

VALLECITOS WATER DISTRICT
WARRANTS LIST
June 7, 2017

PAYEE	DESCRIPTION	CHECK#	AMOUNT
Ginger Chaldress	Closed Account Refund	110940	94.56
Glenn Pruim	ACWA Conference 5-9-17	110941	7.50
Grangetto's Farm Garden Supply	Landscaping Supplies	110942	31.51
James Gumpel	ACWA Conference 5-9-17	110943	137.87
Hach Company	Sensors For Oxygen Meters 4 MRF, Reagents	110944	2,515.78
Heather & Gordon Plotzke	Closed Account Refund	110945	14.12
James R Hernandez	COWU Meeting 5-16-17, CSDA Meeting 5-18-17	110946	46.55
Huntington & Associates, Inc.	Claval Parts	110947	758.56
Idexx Distribution Corp.	Lab Supplies	110948	522.17
Industrial Electric Machinery	Replacement Motor Montiel Lift Station Prj 20171-11	110949	12,057.85
Infinisource	Annual Svc 6-17 To 5-18, Admin Svcs Apr	110950	580.00
Infosend Inc	Postage & Printing Apr & May, Monthly Support Fee April	110951	12,069.80
Interstate Batteries	Gas Engine Batteries 2, Vehicle Batteries 14, Bldg A Batteries	110952	3,300.41
Jason Webb	Refund of Overpayment	110953	272.22
JCI Jones Chemicals Inc	Chlorine	110954	7,777.40
Julie Terwilliger	Closed Account Refund	110955	77.08
Kennedy/Jenks Consultants	Chlorine Tank Expansion Prj 20161-2	110956	2,202.50
Knight Security & Fire Systems	Svc Call	110957	60.00
Law Offices of Jeffrey G Scott	Legal Svcs Apr	110958	18,502.10
Tobias Luna	Self Improvement Program	110959	288.25
Mallory Safety & Supply, LLC	Safety Supplies	110960	462.53
Manpower Temp Services	Customer Service Rep Week Ending 5-7-17, 5-14-17, & 5-21-17	110961	1,416.69
Marcon Products Inc	Concrete MRF Prj 20171-17	110962	635.15
Hal Martin	COWU Meeting 5-16-17, CSDA Meeting 5-18-17	110963	46.55
Matheson Tri-Gas Inc	Cylinder Rental	110964	195.24
Melissa Dalby	Closed Account Refund	110965	186.16
MGM Plastics Inc	Cleaning Supplies	110966	27.91
Michael Baker International, Inc.	Montiel Gravity Outfall Prj 20161-3	110967	33,887.50
Miranda Shilling-Blackbuin	Closed Account Refund	110968	56.45
Navret Gill	Closed Account Refund	110969	8.01
Frank E Lance	Painting of District Light Poles 33	110970	8,509.00
Occu Med Ltd	Medical Svcs	110971	1,144.00
Olivenhain MWD	Treated Water Apr	110972	39,288.20
Olympic Coatings California	Powder Coating Svcs Motor, Pump Stand, & Fan	110973	763.68
Ostari Inc	IT Support Apr	110974	1,987.50
Pacific Pipeline Supply	Hardware Supplies Prj 20171-15	110975	476.60
Parkhouse Tire Inc	Tires 6 Veh 172	110976	1,622.03
Pencco, Inc.	Trioxyn, Sulfend RT	110977	8,968.24
Plumbers Depot Inc	CCTV Van Poles	110978	536.39
Polydyne Inc	Clarifloc	110979	5,204.33
Power Seal	Couplings 2, Repair Clamps 2	110980	965.95
Progressive Business Pub	Payroll Newsletter Subscription	110981	299.00
Quality Hoist & Electric	Furnish & Install Radio Controller For LS3 Crane	110982	732.20
Ray White Cement	Driveway Replacement & Delivery, Shadow Drive	110983	12,540.00
Rebecca Fyffe	Closed Account Refund	110984	37.48
Reed Electric Co	Deer Springs PS Motor #3 Refurbish Prj 20171-8	110985	5,171.15
Air Quality Compliance Solutions, Inc.	Operator Svc May	110986	175.00
Richmond American Homes	Closed Account Refund	110987	134.14
Rusty Wallis Inc	Soft Water Tanks Svc May	110988	225.00
S & J Supply Company, Inc.	Brass Inventory	110989	1,594.85
SDG&E	Power Apr	110990	102,589.79
San Marcos Unified School Dist	Transportation Svcs Prj 20171-29	110991	150.00
Scada Integrations	Desal Signal	110992	812.50
Thomas F Scaglione	ACWA Conference 5-7-17	110993	243.60
Schmidt Fire Protection Co Inc	Quarterly Sprinkler Maintenance MRF	110994	305.00
Select Portfolio Servicing, Inc	Closed Account Refund	110995	67.12
Siemens Water Technologies	Level Controller & Transducer Lake San Marcos Lift Station	110996	2,659.36
Silvia Lopez	Closed Account Refund	110997	7.76
Southern Counties Lubricants, LLC	Unleaded & Diesel Fuel	110998	31,659.01
Staples Advantage	Office Supplies	110999	1,130.42
State Water Resources Control	Water Distribution Cert T Luna	111000	105.00
State Water Resources Control	Waste Water Treatment Plant Cert M Smith	111001	230.00

VALLECITOS WATER DISTRICT
WARRANTS LIST
June 7, 2017

PAYEE	DESCRIPTION	CHECK#	AMOUNT
Steven Enterprises Inc	Plotter & Oce Paper	111002	219.95
T.S. Industrial Supply	4 Inch Hoses 35, Fire Hoses 10 MRF, Hardware Supplies	111003	2,415.69
Total Resource Mgt Inc	Maximo Support Apr	111004	1,059.50
Traffic Supply Inc	Custom Signs 3 Prj 71126	111005	145.78
Trussell Technologies Inc	MRF Media Study Prj 20121-4	111006	2,626.47
Union-Tribune Publishing Co.	Advertising Svcs May	111007	257.73
Univar USA Inc	Sodium Hypo Liquichlor, Sodium Bisulfite, Caustic Soda	111008	12,998.25
HD Supply Facilities Maintenance Ltd	Sludge Detector MRF	111009	1,086.77
Valley Chain & Gear Inc	Air Filter For Blower MRF, Hardware Supplies	111010	1,020.31
Vaughan's Indust Repair Inc.	Refurbish P3 Deer Springs PS Prj 20171-8, Refurbish Back Wash P1 MRF Prj 20161-20	111011	18,294.54
VWR International	Lab Supplies MRF	111012	995.92
Watkins Landmark Const	Closed Account Refund	111013	367.70
Win-911 Software	Win-911 Support 06-17 To 6-18 (Alert Notifications For SCADA System)	111014	495.00
Tri-City Emergency Medical Group	Medical Svcs	111015	170.00
Xylem Water Solutions USA, Inc.	Tertiary Filter Media MRF Prj 20121-4	111016	5,000.00
Ababa Bolt Inc	Hardware Supplies	111017	27.07
AH Water Inc	Carbon Scrubber Rental June	111018	1,573.15
American Compressor Company	Hardware Supplies	111019	156.47
Armorcast Products Co	Meter Boxes & Enclosures 422	111020	17,885.01
Bay City Electric Works Inc	Hardware Supplies	111021	93.20
Biotechnical Services Inc	Incubator Repair MRF	111022	220.00
CCI	Water Treatment May	111023	220.00
CDW Government Inc	Hardware Supplies	111024	231.45
Coast Equipment Rentals	Excavator Rental Prj 20171-15, Core Drill Rental Prj 20171-17	111025	1,523.00
County of San Diego	Recording Fees Apr	111026	79.28
County of San Diego	Inspection Svcs	111027	1,883.30
Charles P Crowley Co Inc	Hardware Supplies	111028	213.71
El Camino Rental	Concrete Prj 20171-15	111029	162.38
Grainger Inc	Sump Pump, Hardware Supplies	111030	1,772.06
Ken Grody Ford	Transmission Veh 234	111031	3,062.61
Harrington Industrial	Supplies For Chlorine Injection System, Hardware Supplies	111032	1,054.55
Hendrickson Appraisal Company, Inc.	VWD Property Research	111033	19,980.00
Land Surveying Consultants Inc	Annual Monitoring Mahr Reservoir	111034	2,500.00
R & B Automation Inc	Sludge Actuators 2 MRF Prj 20171-22	111035	25,528.13
Shred-It US JV LLC	Shredding Svcs Apr & May	111036	153.24
Unifirst Corporation	Uniform Delivery	111037	2,205.37
VAP Enterprises Inc	Right of Way Acquisitions 3 Prj 20161-26	111038	1,729.00
Walters Wholesale Electric	Hardware Supplies	111039	450.64
Waxie Sanitary Supply	Cleaning Supplies	111040	1,727.84
Total Disbursements (161 Checks)			800,117.41
WIRES			
San Diego County Water Authority	April Water Bill	Wire	2,424,776.22
Public Employees Retirement System	Retirement Contribution - May 24, 2017 Payroll	Wire	68,759.47
Union Bank	Union Bank debt payment - Principal	Wire	1,910,000.00
Union Bank	Union Bank debt payment - Interest	Wire	1,173,839.49
Total Wires			5,577,375.18
PAYROLL			
Total direct deposits		Wire	226,167.53
VWD Employee Association		110894	510.00
Garnishments	110895 through	110897	1,715.06
IRS	Federal payroll tax deposit	Wire	100,025.19
Employment Development Department	California payroll tax deposit	Wire	17,906.95
CalPERS	Deferred compensation withheld	Wire	14,537.48
VOYA	Deferred compensation withheld	Wire	9,588.63
Total May 24, 2017 Payroll Disbursements			370,450.84
TOTAL DISBURSEMENTS			6,747,943.43

DATE: **JUNE 7, 2017**
TO: **BOARD OF DIRECTORS**
SUBJECT: **ACCEPTANCE OF MEADOWLARK WATER RECLAMATION FACILITY (MRF) TERTIARY MEDIA FILTER REPLACEMENT**

BACKGROUND:

MRF has six (6) concrete tertiary filters that process secondary wastewater effluent into recycled water. The media in the basins was installed in 2005 during a plant upgrade. The current media profile is being replaced with finer media to assist in removing smaller particles from the secondary wastewater effluent thereby decreasing turbidity and improving the quality of the recycled water. The new media will also reduce chemical use and increase efficiency of the filters.

DISCUSSION:

All work has been completed with a total of two (2) change orders. The Board approved a change order on March 15, 2017 in the amount of $153,803 to remove and replace the existing epoxy coating with a more robust epoxy coating. At the time of approval, a budget shortfall was identified, but an adjustment was not requested until the project was complete. The second change order was created to extend the project schedule by 14 days at no additional cost to the District. Inspection and construction management was performed by District staff. Outside services by Trussell Technology and Xylem Water Solutions were utilized for specialized inspection.

FISCAL IMPACT:

The total cost and budget summary are as follows:

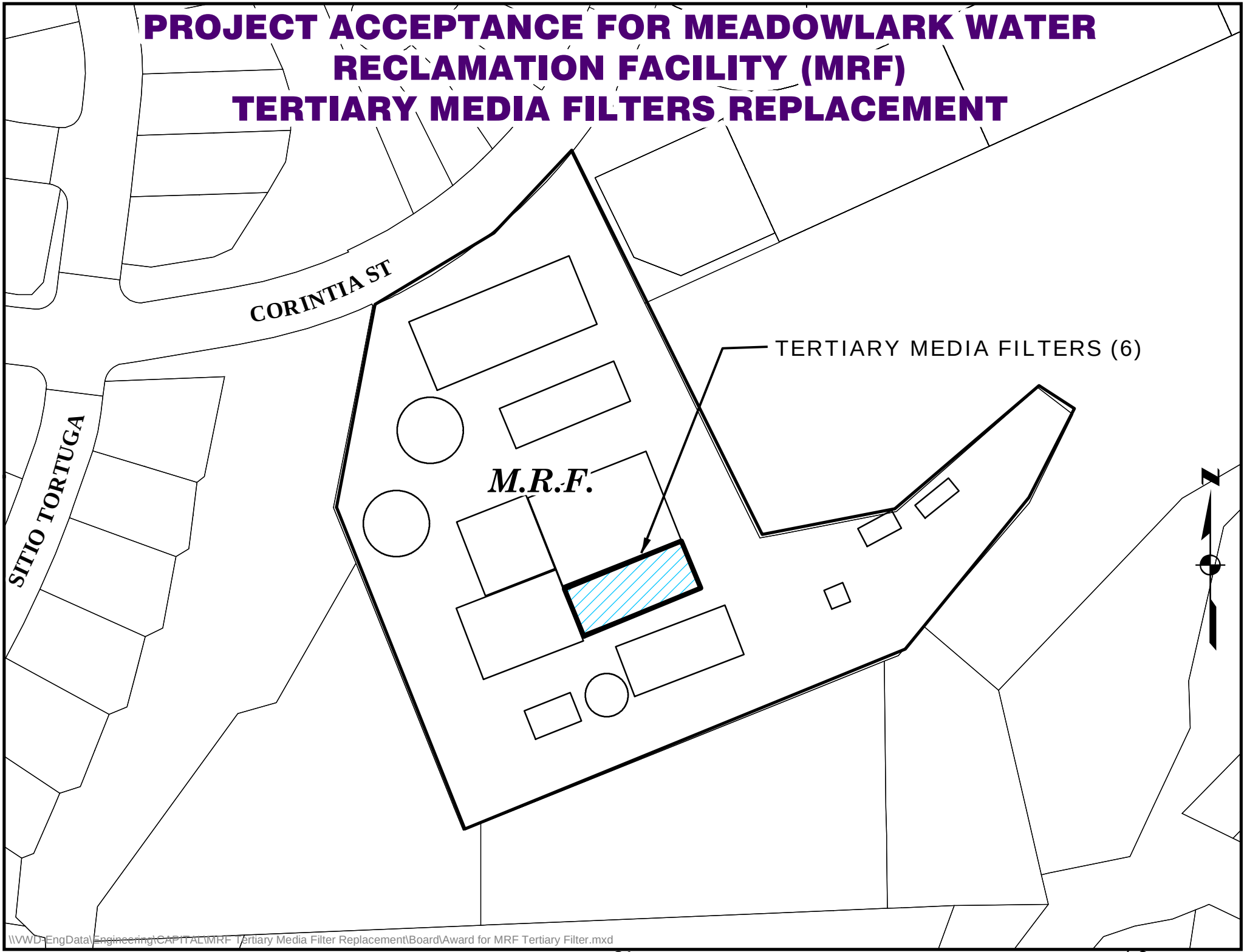
Budget	$ 545,000
Construction	$ 250,753
Change Orders	$ 153,803
Specialty Services	$ 36,755
Design	$ 36,177
Miscellaneous	$ 917
Staff	$ 43,553
Overhead	$ 82,772
Total	$ 604,730
Budget Shortfall	($ 59,730)

Funds are available in the sewer replacement reserve to cover the budget shortfall.

RECOMMENDATION:

Increase the budget by $59,730, accept the project, file a Notice of Completion, and authorize release of retention funds to the contractor following the 60-day notice period, provided no claims are filed.

PROJECT ACCEPTANCE FOR MEADOWLARK WATER RECLAMATION FACILITY (MRF)
TERTIARY MEDIA FILTERS REPLACEMENT



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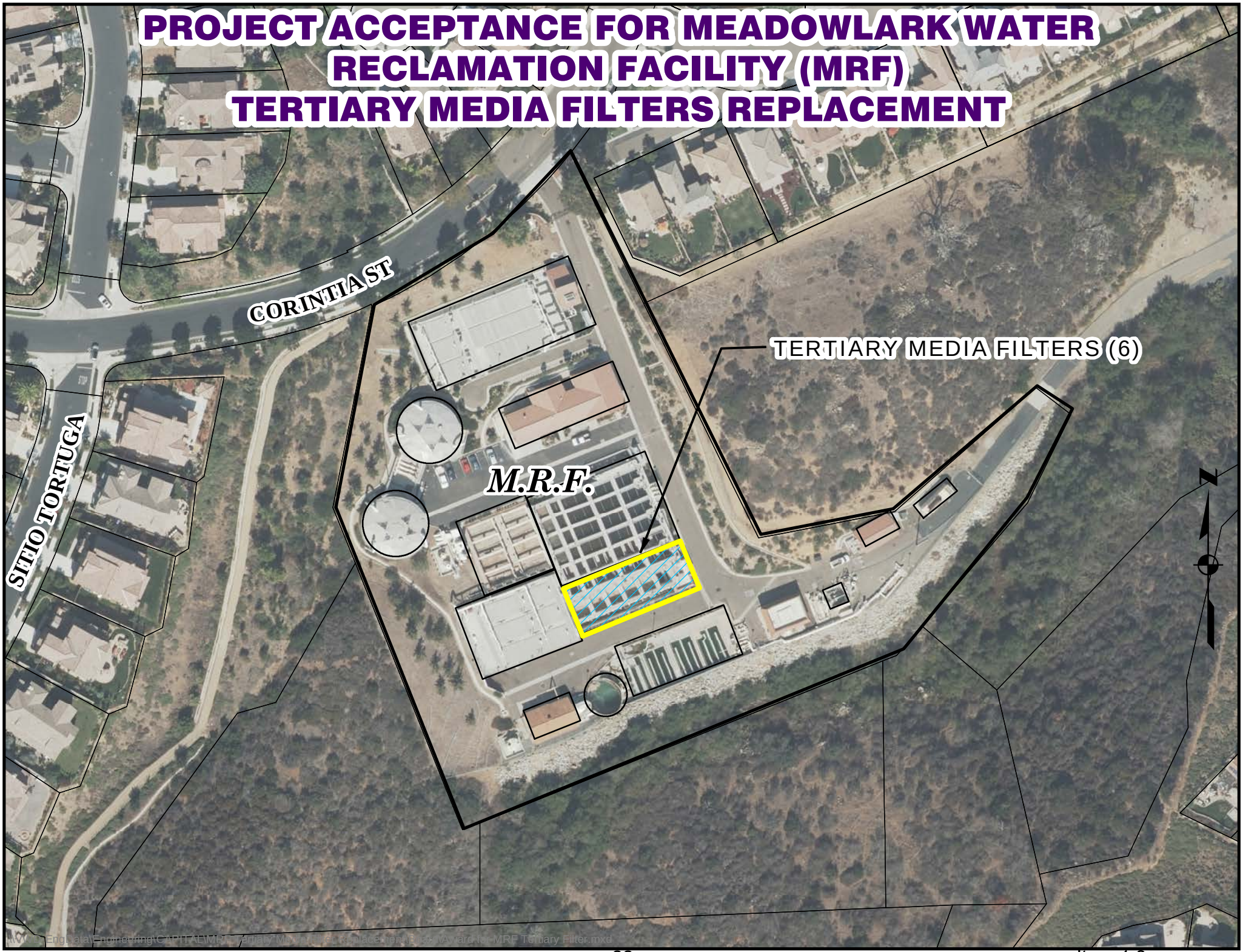
PROJECT ACCEPTANCE FOR MEADOWLARK WATER RECLAMATION FACILITY (MRF) TERTIARY MEDIA FILTERS REPLACEMENT



DATE: **JUNE 7, 2017**
TO: **BOARD OF DIRECTORS**
SUBJECT: **REQUEST FOR ANNEXATION OF CERTAIN PROPERTY DESIGNATED AS "MEADOWLARK CANYON" (APN 221-021-45) INTO THE SEWER IMPROVEMENT DISTRICT (MEADOWLARK CANYON, LLC.)**

BACKGROUND:

Meadowlark Canyon Development is a proposed 33 lot subdivision on approximately 16.38 acres of unimproved land located on San Marcos Boulevard just west of Acacia Drive. The proposed development includes 33 single-family residential lots on 6.22 acres with 10.16 acres of open space. The property is currently within the water service boundaries of the District.

DISCUSSION:

The Meadowlark Canyon project was originally proposed in 2004 and consisted of two parcels (Assessor Parcel Numbers 221-021-45 and 221-021-08). At that time the VWD wastewater service area map mistakenly indicated that only one of the two parcels (APN 221-021-08) needed annexation. APN 221-021-08, which was 3.46 acres, was annexed into VWD's sewer service area in 2004.

In 2007 a parcel map was recorded, subdividing and creating 33 new residential lots plus a private road and open space. Although the project construction was approved in 2007, the project laid dormant until 2016.

During staff's re-evaluation of the project, it was discovered that former APN 221-021-45 was not in the VWD sewer service area. The Local Agency Formation Commission (LAFCO) confirmed that this second parcel needed to be annexed.

Meadowlark Canyon will need to annex the remaining 12.92 acres within former APN 221-021-45 into the sewer service area to move forward with the project. Due to the District's information error, special consideration is being proposed to help this project move forward. Staff is proposing to charge the developer/owner of the project annexation fees based on the 2007 annexation rates of $2,653.47 per acre. Based on the current annexation rate of $8,184.00 per acre, the difference in total annexation fees would be $71,454.45.

FISCAL IMPACT:

Payment of $34,282.83 in annexation fees will increase the District's sewer replacement reserve. All other fees will cover actual costs and have no fiscal impact.

RECOMMENDATION:

Staff recommends approval of the annexation of certain property designated as "Meadowlark Canyon" (APN 221-021-45) into the Sewer Improvement District with the following conditions:

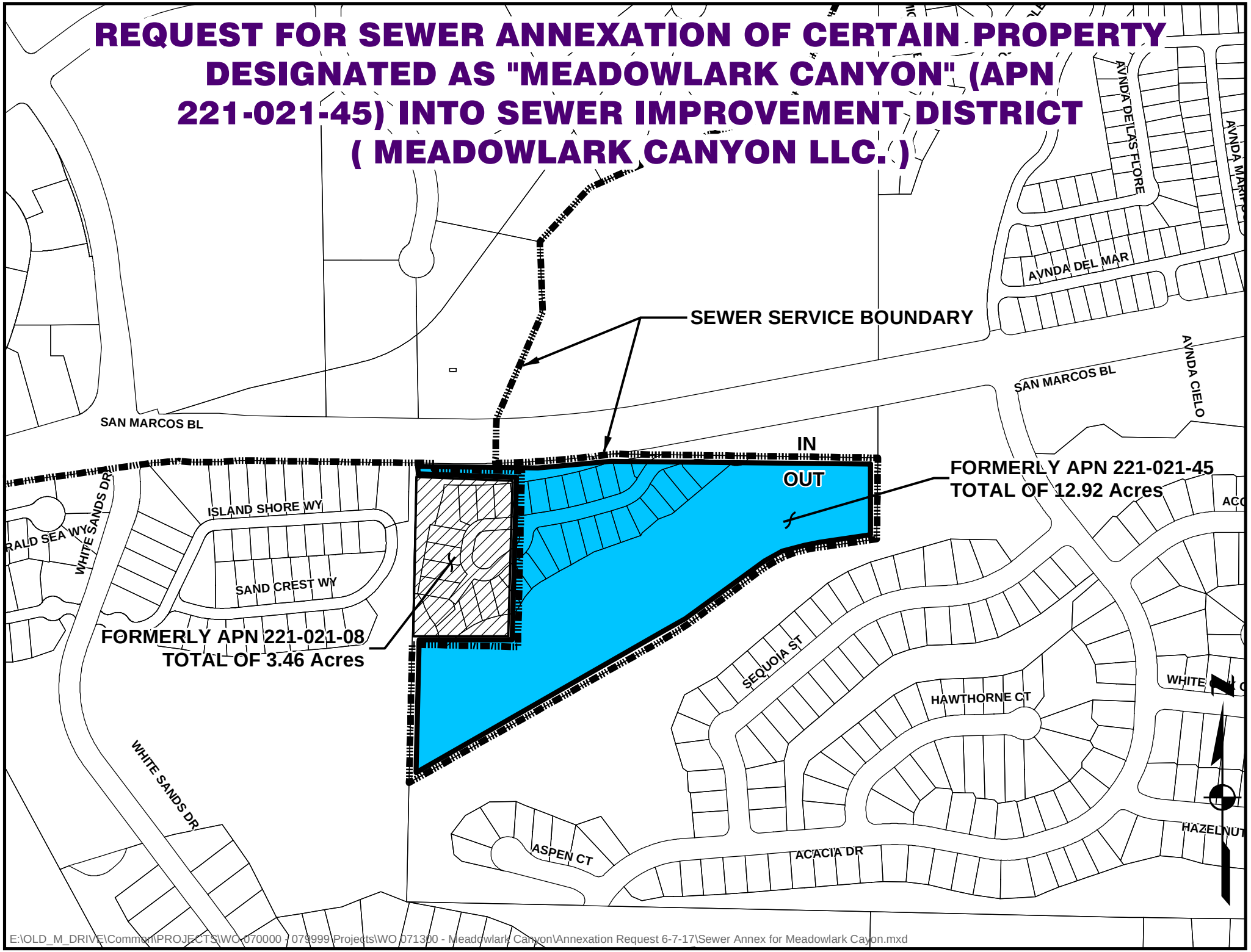
1. Payment of annexation fees of $2,653.47 per acre for 12.92 acres = $34,282.83.
2. Payment of State Board of Equalization fee of $800.00.
3. Submittal of a copy of the title report showing ownership and a geographic description* of the property including a plat map.
4. Construction of facilities per an Agreement for Construction of Water and Sewer Facilities to be Dedicated to Vallecitos Water District.
5. Final Acceptance of water and sewer facilities will not take place until completion of annexation, payment of annexation fees, completion of water and sewer facilities required for the project, and payment of all current fees and charges.
6. Completion of annexation within 180 days of initial Board approval.

ATTACHMENTS:

2 Map Exhibits - 1 Plat and 1 Aerial

**A geographic description is a State Board of Equalization requirement and is used to establish geodetic position and is not intended to establish property ownership in a court of law. The State Board of Equalization is not involved in issues relating to property ownership. Check the Board's website at www.boe.ca.gov for complete details.*

REQUEST FOR SEWER ANNEXATION OF CERTAIN PROPERTY DESIGNATED AS "MEADOWLARK CANYON" (APN 221-021-45) INTO SEWER IMPROVEMENT DISTRICT (MEADOWLARK CANYON LLC.)



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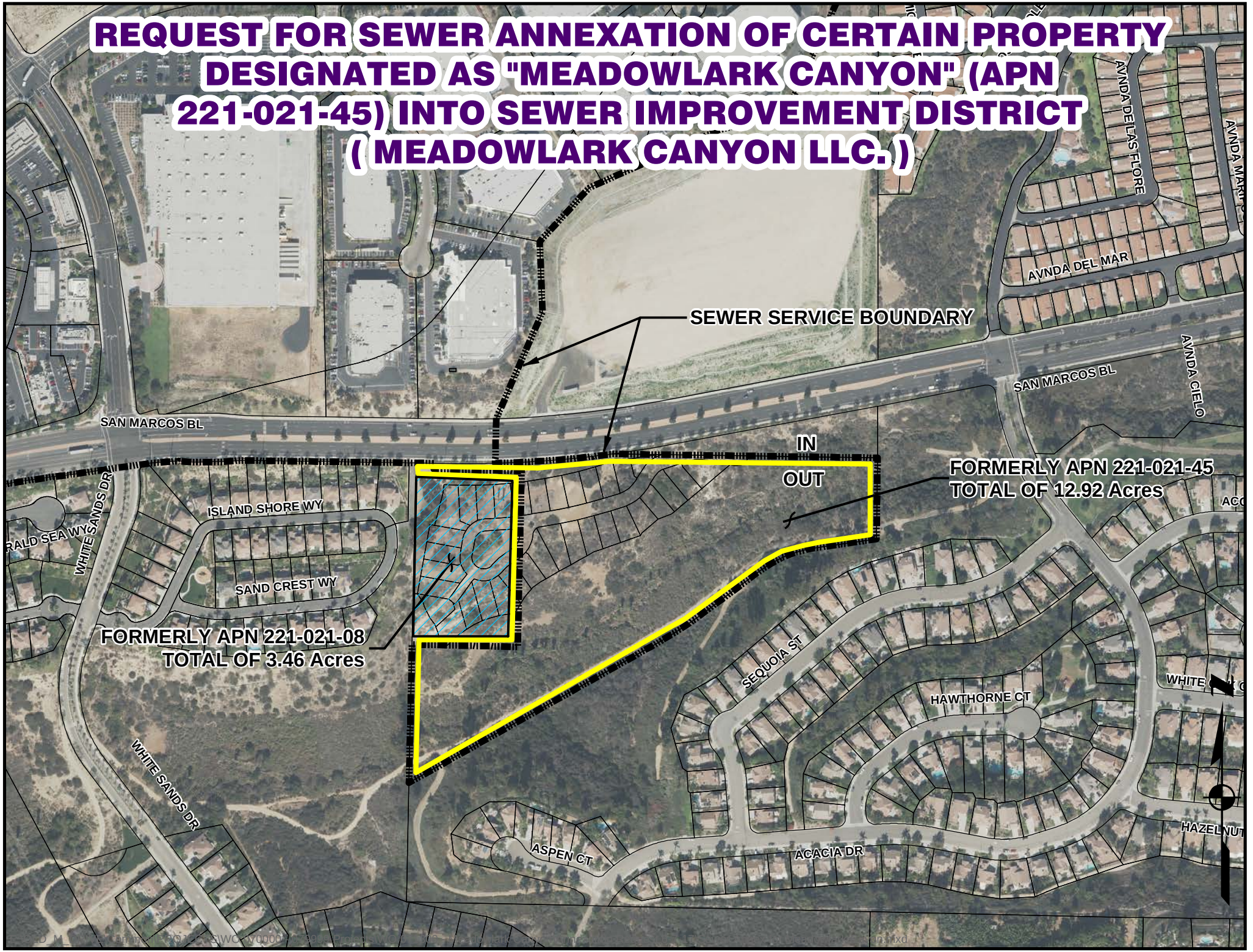

REQUEST FOR SEWER ANNEXATION OF CERTAIN PROPERTY DESIGNATED AS "MEADOWLARK CANYON" (APN 221-021-45) INTO SEWER IMPROVEMENT DISTRICT (MEADOWLARK CANYON LLC.)
SEWER SERVICE BOUNDARY
IN
OUT
FORMERLY APN 221-021-45
TOTAL OF 12.92 Acres
FORMERLY APN 221-021-08
TOTAL OF 3.46 Acres
SAN MARCOS BL
AVNDA DEL MAR
AVNDA DE LAS FLORE
AVNDA CIELO
ISLAND SHORE WY
SAND CREST WY
WHITE SANDS DR
SEQUOIA ST
HAWTHORNE CT
ASPEN CT
ACACIA DR

DATE: **JUNE 7, 2017**
TO: **BOARD OF DIRECTORS**
SUBJECT: **FINAL ACCEPTANCE OF WATER AND SEWER IMPROVEMENTS FOR SAN ELIJO HILLS, PHASE V, P.A. 'O', UNIT 7, APN 679-221-17 (SAN ELIJO HILLS DEVELOPMENT COMPANY, LLC.)**

BACKGROUND:

The San Elijo Hills Development Company, LLC, sold the project to Lennar Homes. As the current owner of the project, Lennar Homes has completed the installation of the water and sewer facilities for 16 single family homes. The 8.551-acre site is located on Jasper Court between Double Peak Drive and San Elijo Road.

DISCUSSION:

The project constructed approximately 792 feet of 10-inch diameter PVC water main and 728 feet of 8-inch diameter PVC sewer main along Jasper Court. Upon final acceptance of the project, water and sewer service will be available to 16 single family homes for Area O, Unit 7.

The owner has provided the District with the required security to guarantee repairs due to failure of materials or workmanship for a period of one year. All current fees and charges have been paid to date.

Along with the water and sewer mains, assorted appurtenances were installed such as water meters, fire hydrants, gate valves, sewer laterals and manholes.

The owner will pay Water & Wastewater Capital Facility fees prior to final building inspection or utility release by phase, per Resolution No. 1441.

FISCAL IMPACT:

None. Future water and sewer revenues will offset costs of service.

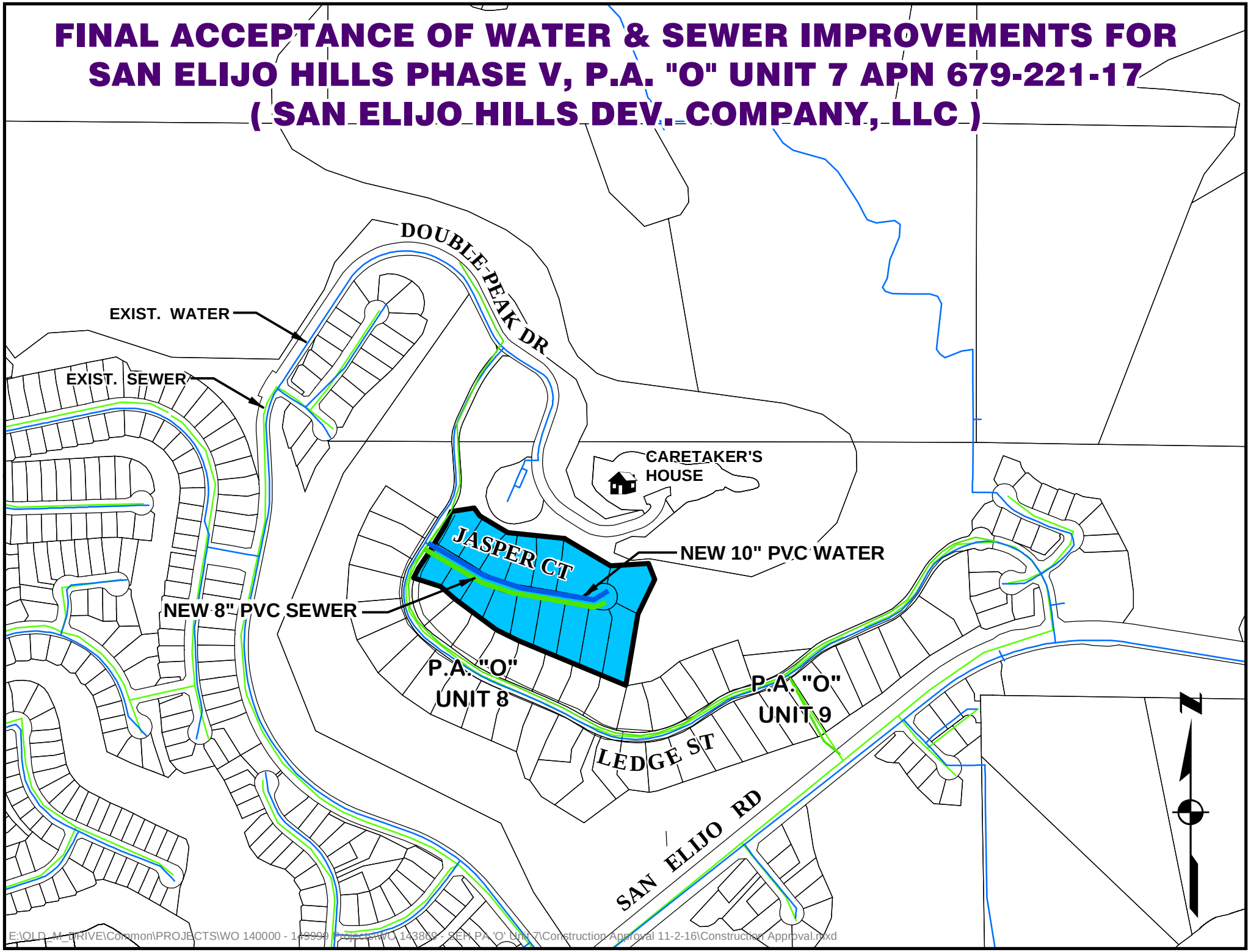
RECOMMENDATION:

Accept project improvements and approve filing a notice of completion for San Elijo Hills Phase V, P.A. 'O', Unit 7.

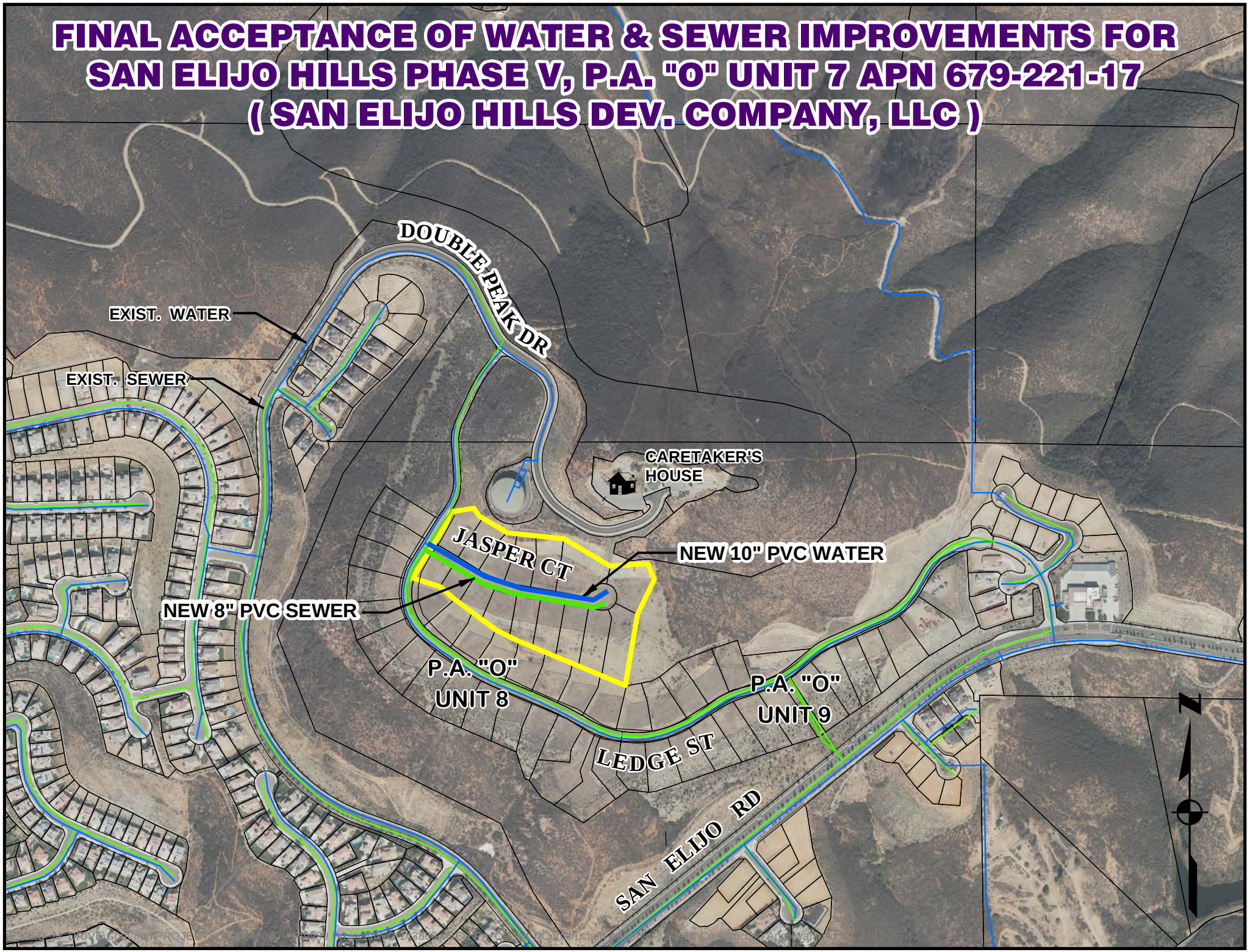
ATTACHMENTS:

2 Map Exhibits - 1 Plat and 1 Aerial

FINAL ACCEPTANCE OF WATER & SEWER IMPROVEMENTS FOR SAN ELIJO HILLS PHASE V, P.A. "O" UNIT 7 APN 679-221-17 (SAN ELIJO HILLS DEV. COMPANY, LLC)



FINAL ACCEPTANCE OF WATER & SEWER IMPROVEMENTS FOR SAN ELIJO HILLS PHASE V, P.A. "O" UNIT 7 APN 679-221-17 (SAN ELIJO HILLS DEV. COMPANY, LLC)



DATE: **JUNE 7, 2017**
TO: **BOARD OF DIRECTORS**
SUBJECT: **APPROVAL OF TEMPORARY OFF-SITE WATER & SEWER SERVICE AGREEMENTS FOR DANG/MAI RESIDENCE**
APN: 218-101-38 (THOMAS DANG AND CATHERINE MAI)

BACKGROUND:

Thomas Dang and Catherine Mai, owners of the subject property, have requested approval of Temporary Off-Site Water & Sewer Service Agreements to provide water & sewer service for a single-family residence on the above referenced property.

DISCUSSION:

The subject property is located within Vallecitos Water District's (VWD) water and sewer service boundary, on APN 218-101-38, and is not located adjacent to any existing VWD facilities. An existing VWD 8-inch water main is located in Rose Ranch Road approximately 320 feet south of the subject property. An existing 8-inch sewer main is located in a private road approximately 305 feet west of the subject property.

District standards require the extension of facilities along the frontage of properties requiring service. In this case, the extension of water & sewer mains to APN 218-101-38 will only serve this one property. There would be no benefit to the District for extension of these facilities. The property owner will be responsible to hire a private contractor for the water service lines, water meter and sewer lateral installation. The property owner will be required to pay Vallecitos Water District the associated Capital Facility fees for water and sewer.

Per District Ordinance No. 118, a "Temporary Off-Site Service Agreement" is defined as service to those properties that do not abut, traverse, or lie adjacent to existing pipelines.

It is not likely that future pipeline extensions would be constructed. If a pipeline extension is ever constructed which can serve this property, the Agreement requires the owners to relocate the water meter and/or sewer connection to the new main at that time.

FISCAL IMPACT:

None. Future water & sewer revenues will offset costs of service.

RECOMMENDATION:

Approve a Temporary Off-Site Water & Sewer Service Agreement with the following conditions:

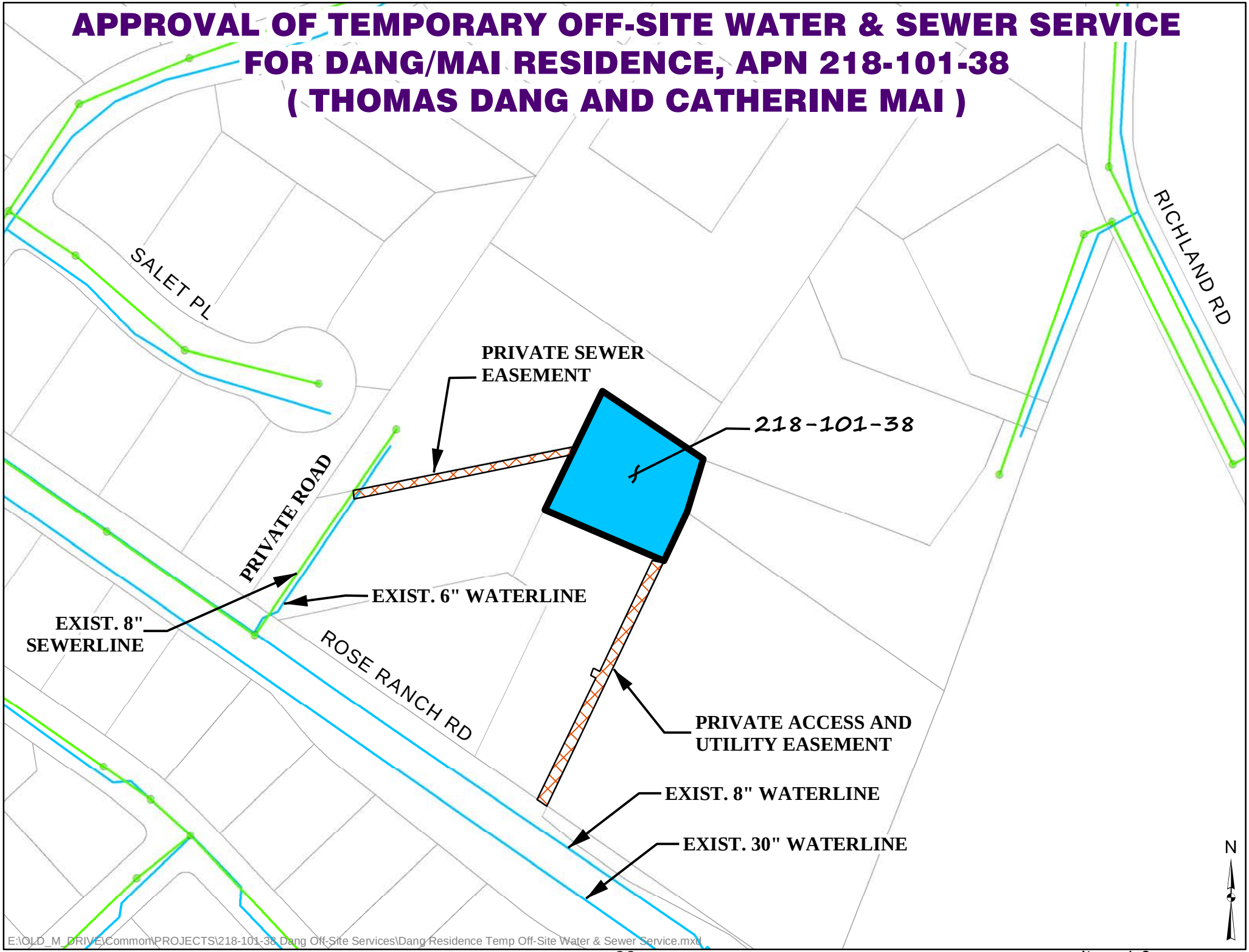
1. Execution of a Temporary Off-Site Water Agreement & Temporary Off-Site Sewer Service Agreement, each of which will be recorded against the property.
2. Payment of $1,000 Administration fee ($500 for each agreement) and County recording fees.

3. Submittal of proof of recorded easement across adjacent property for a private water service line.
4. Installation of a water service line, water meter and sewer lateral by owner's contractor with inspection by District personnel.
5. No water or sewer service will be allowed until payment of all current fees and charges (including Water & Wastewater Capital Facility Fees) and completion of the above conditions.

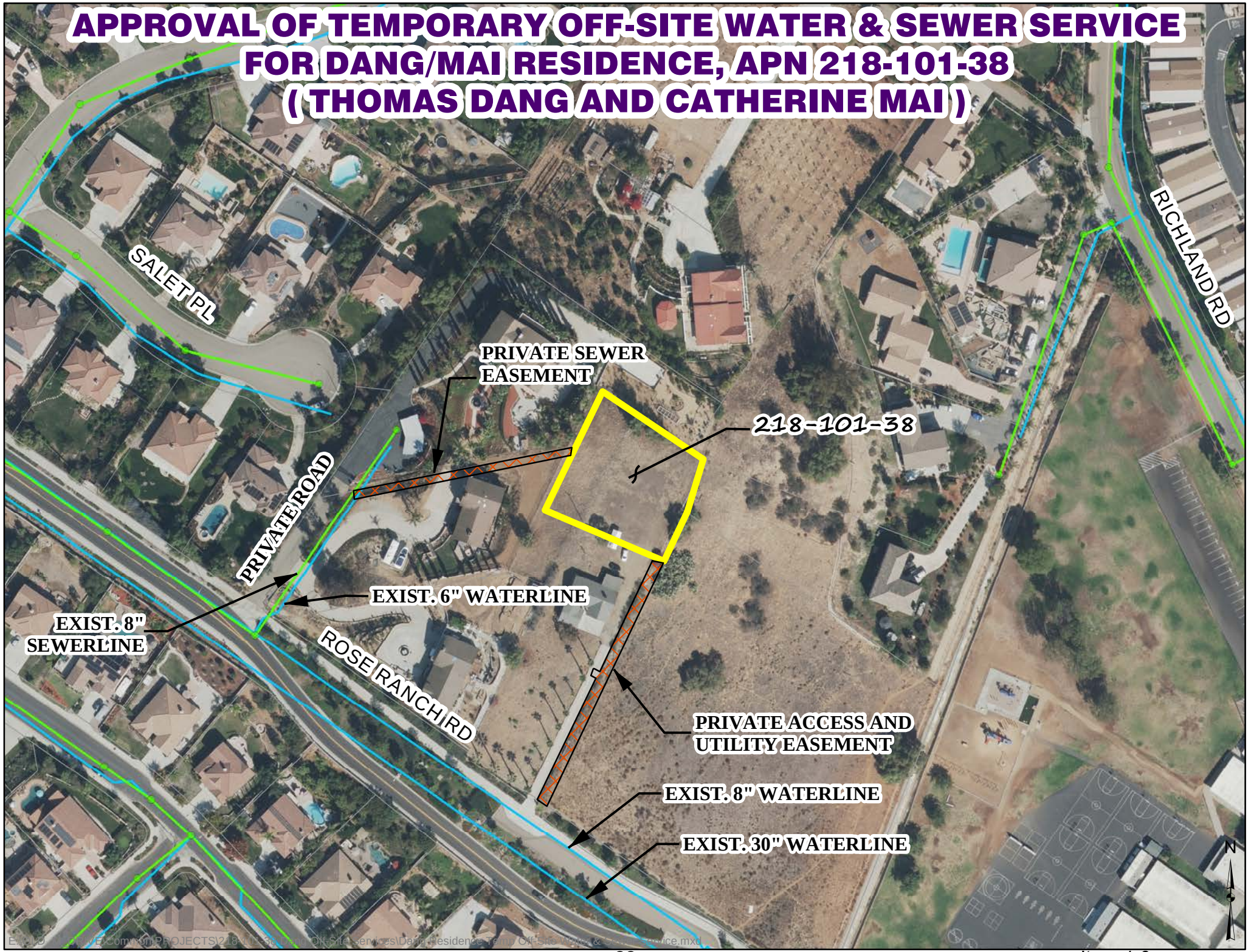
ATTACHMENTS:

2 Map Exhibits - 1 Plat & 1 Aerial

APPROVAL OF TEMPORARY OFF-SITE WATER & SEWER SERVICE FOR DANG/MAI RESIDENCE, APN 218-101-38 (THOMAS DANG AND CATHERINE MAI)



APPROVAL OF TEMPORARY OFF-SITE WATER & SEWER SERVICE FOR DANG/MAI RESIDENCE, APN 218-101-38 (THOMAS DANG AND CATHERINE MAI)



DATE: **JUNE 7, 2017**
TO: **BOARD OF DIRECTORS**
SUBJECT: **APPROVAL OF CONSTRUCTION AGREEMENT FOR NORTH CITY EAST INFRASTRUCTURE APN 221-110-20, 30, 220-200-40, 47, 48, 49 (URBAN VILLAGES SAN MARCOS, LLC.)**

BACKGROUND:

The Urban Villages San Marcos, LLC, owner of the project, has completed the plan check process with the District. The project is located east of Twin Oaks Valley Road between Barham Drive and Carmel Street.

DISCUSSION:

A Construction Agreement is typically entered into between a developer and the District to ensure that the required public facilities are constructed to support the demands of the development.

The project will construct approximately 2,635 feet of 12-inch diameter PVC water main, 1,180 feet of 8-inch diameter PVC sewer main and 304 feet of 12-inch diameter PVC sewer main.

Upon completion of the water and sewer facilities, water and sewer service will be available for future development of the University District East, including approximately 797 multi-family dwelling units, 639 student housing units, 420 hotel rooms plus commercial and office space.

All engineering fees and inspection deposits have been paid prior to Board approval of the Construction Agreement. Water and wastewater capital facility fees are due and payable prior to issuance of the final building inspection and/or utility release per Resolution 1441.

The owner has submitted standard surety bonds to guarantee completion of the project. The following bond amounts have been reviewed and approved by staff:

Labor and Materials	$686,781.15
Faithful Performance	$686,781.15

FISCAL IMPACT:

None. Future water and sewer revenues will offset costs of service.

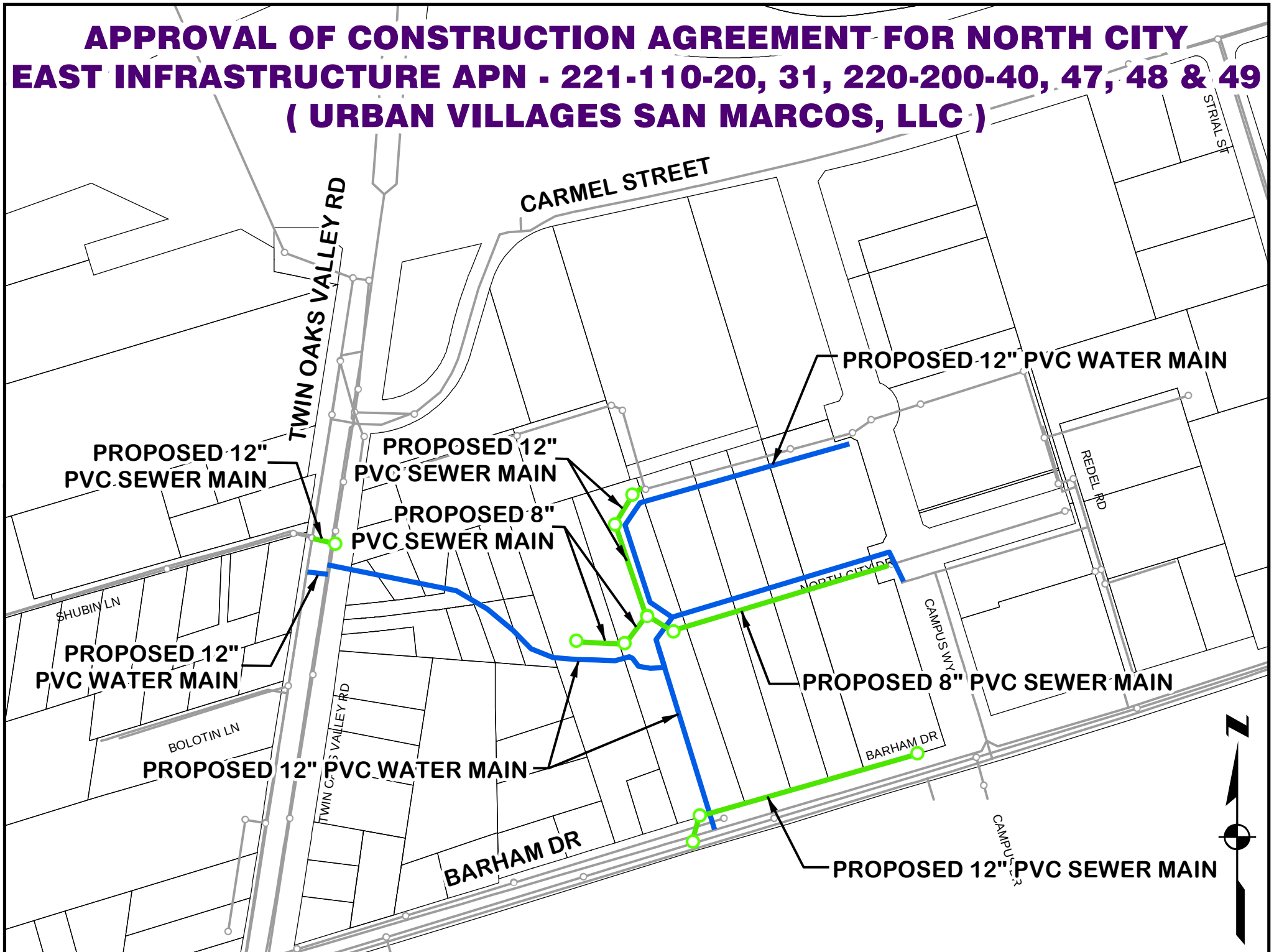
RECOMMENDATION:

Approve the construction agreement for North City East Infrastructure.

ATTACHMENTS:

2 Map Exhibits – 1 Plat Map & 1 Aerial

APPROVAL OF CONSTRUCTION AGREEMENT FOR NORTH CITY EAST INFRASTRUCTURE APN - 221-110-20, 31, 220-200-40, 47, 48 & 49 (URBAN VILLAGES SAN MARCOS, LLC)



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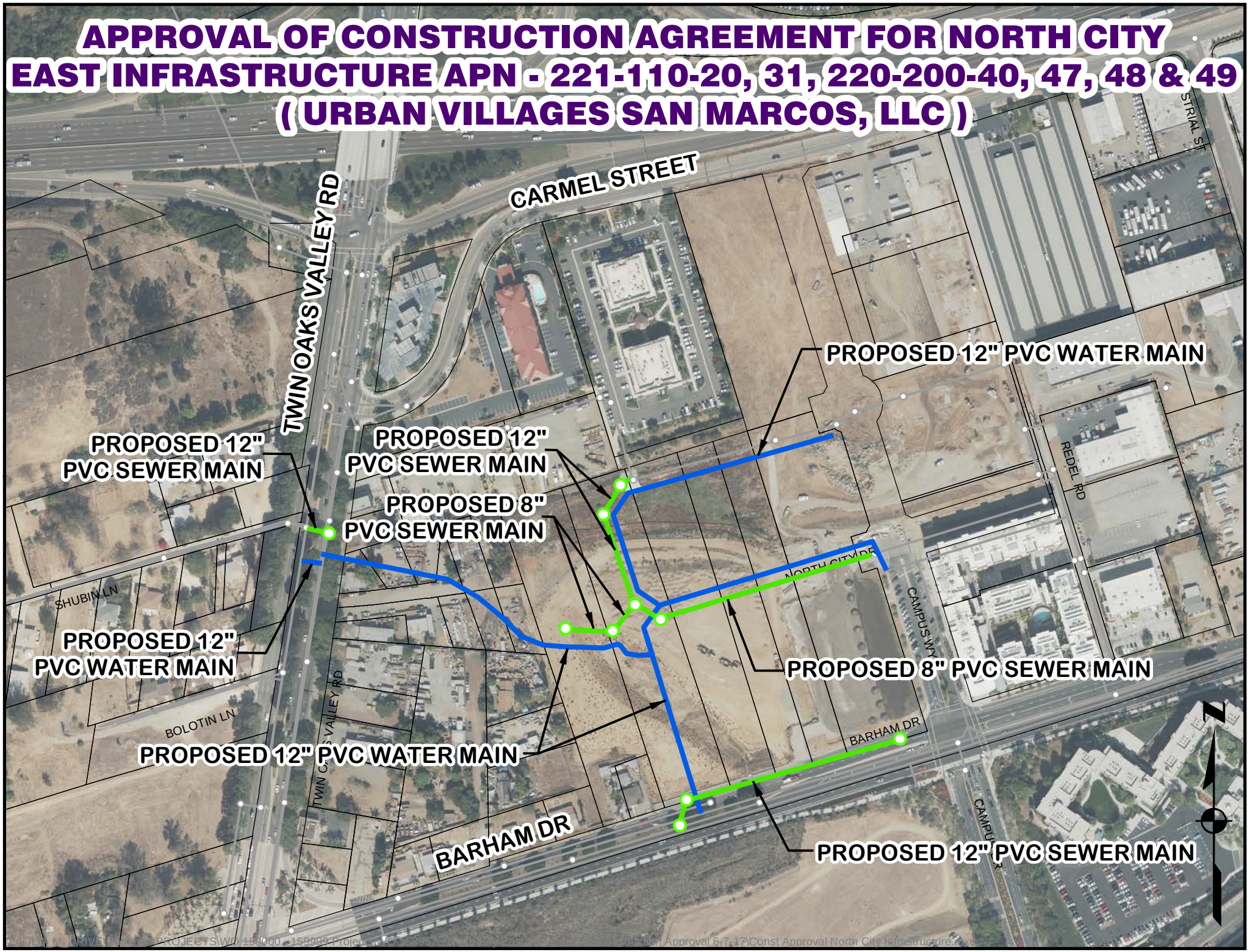

APPROVAL OF CONSTRUCTION AGREEMENT FOR NORTH CITY EAST INFRASTRUCTURE APN - 221-110-20, 31, 220-200-40, 47, 48 & 49 (URBAN VILLAGES SAN MARCOS, LLC)
CARMEL STREET
TWIN OAKS VALLEY RD
PROPOSED 12" PVC WATER MAIN
PROPOSED 12" PVC SEWER MAIN
PROPOSED 12" PVC SEWER MAIN
PROPOSED 8" PVC SEWER MAIN
REDEL RD
SHUBIN LN
PROPOSED 12" PVC WATER MAIN
NORTH CITY DR
CAMPUS WY
PROPOSED 8" PVC SEWER MAIN
BOLOTIN LN
TWIN OAKS VALLEY RD
BARHAM DR
PROPOSED 12" PVC WATER MAIN
BARHAM DR
CAMPUS WY
PROPOSED 12" PVC SEWER MAIN
N

DATE: **JUNE 7, 2017**
TO: **BOARD OF DIRECTORS**
SUBJECT: **VALLECITOS WATER DISTRICT RECOMMENDED FISCAL YEAR 2017/2018 BUDGET**

BACKGROUND:

The Board has had four workshops on the budget between February 1, 2017 and May 24, 2017. The Finance Committee also met to discuss the budget at four meetings outside the workshops. At each workshop and committee meeting the budget, or parts thereof, were reviewed and input from the Board and committee members received. The input received has been incorporated into the recommended budget for the Vallecitos Water District presented today.

DISCUSSION:

The Recommended Fiscal Year 2017/2018 Vallecitos Water District Budget, provided under separate cover, has been prepared by staff and is presented to the Board of Directors for consideration and approval.

The budget totals $175.4 million, comprised of $53 million of fiscal year 2017/18 operational expenses and a commitment of $122.4 million for capital items and projects over the next five years. In addition, $6.1 million from operations is being set aside for capital replacement. The recommended budget has been posted on the District website (www.vwd.org) for public review.

RECOMMENDATION:

Staff recommends approval of the Vallecitos Water District Recommended 2017/2018 Budget.

DATE: **JUNE 7, 2017**
TO: **BOARD OF DIRECTORS**
SUBJECT: **2017 COST OF SERVICE AND RATE STRUCTURE STUDY**

BACKGROUND:

At the May 3, 2017, Board meeting, staff recapped progress towards the final draft of the 2017 Cost of Service and Rate Structure Study (Study). The Study presented included proposed San Diego County Water Authority (SDCWA) commodity rates, but not fixed rates.

DISCUSSION:

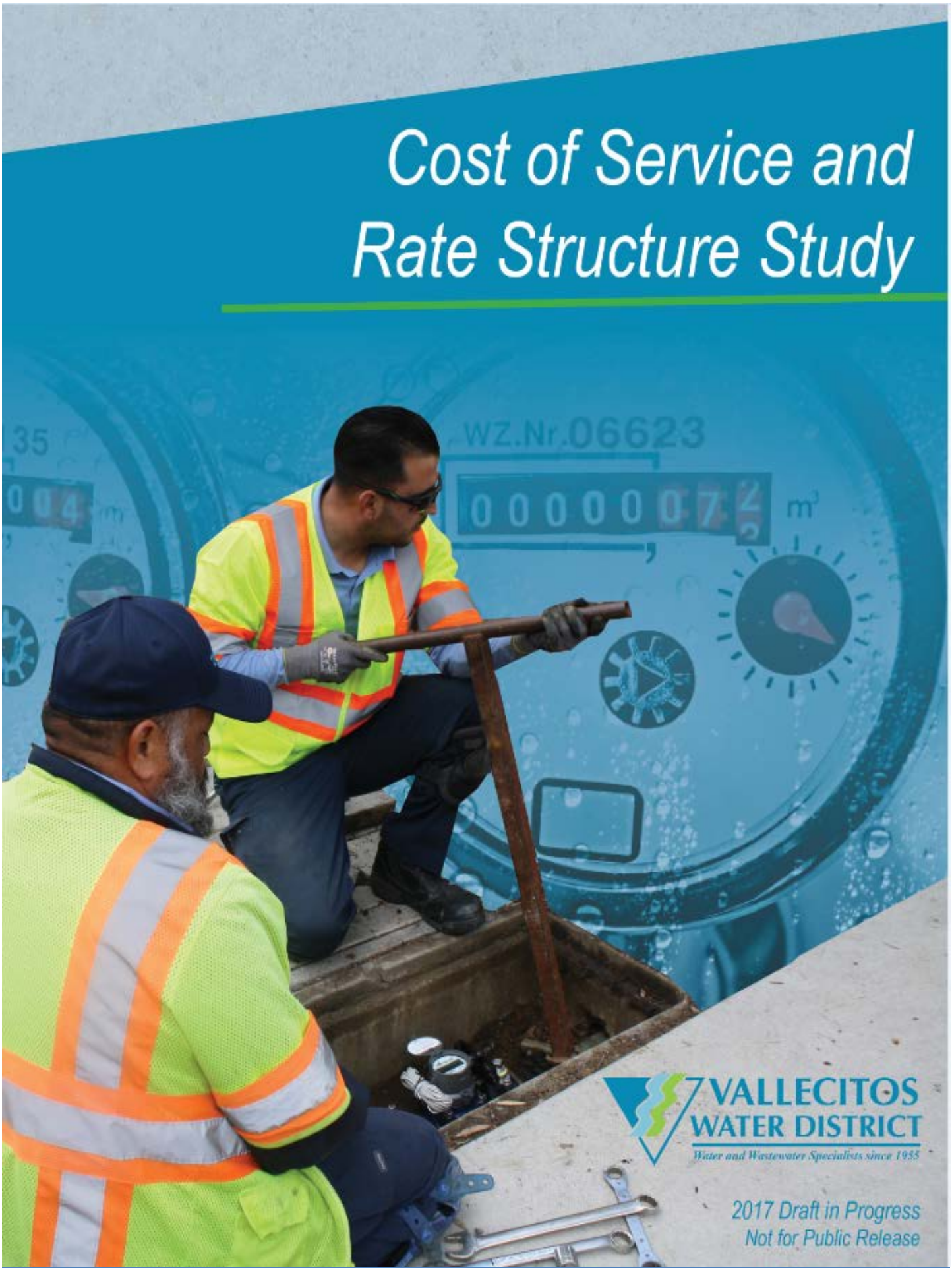
The final draft 2017 Cost of Service and Rate Structure Study is presented herein for the Board's consideration and approval. The Study now incorporates both commodity and fixed rates for 2018 as proposed by SDCWA, addresses rate consultant and legal review comments, and analyzes and recommends rates based on the Board's desired rate implementation dates of January 1, 2018 and January 1, 2019.

FISCAL IMPACT:

There is no fiscal impact from approving the Study. If recommended rates are ultimately adopted, replacement reserves are projected to decline by $4.8 million over the next two fiscal years. With projected rate increases over the next five years, the reserve levels are estimated to be at the 65 percentile between the target floor and ceiling of replacement reserves. Debt service coverage is projected to be maintained above targeted levels.

RECOMMENDATION:

Approve 2017 Cost of Service and Rate Structure Study.


Cost of Service and
Rate Structure Study
VALLECITOS
WATER DISTRICT
Water and Wastewater Specialists since 1955
2017 Draft in Progress
Not for Public Release

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EXECUTIVE SUMMARY AND RECOMMENDATIONS

This Cost of Service and Rate Structure Study (Study), prepared by Vallecitos Water District (District) staff, resulted in the recommended water rate structure and rates shown in the following tables.

Ready-to-Serve Charge

Meter Size	Current	Effective January: 2018	2019
5/8"	31.42	33.25	35.32
3/4"	36.52	36.52	36.52
1"	55.29	55.29	55.29
1.5"	110.59	120.63	130.67
2"	178.11	194.35	214.68
3"	356.22	356.22	356.22
4"	552.94	552.94	552.94
6"	1,105.88	1,105.88	1,105.88
10"	2,549.36	2,549.36	2,549.36
Multi	18.26	11.18	11.18
Fire	5.87	5.87	5.87
TC	204.48	230.91	257.33

Multi = additional living unit on one meter
Fire = per diameter inch of fire service line

Tier Structure in Units

Meter Size	Current Tier 1	Current Tier 2	Current Tier 3	Current Tier 4	Effective January 2018 Tier 1	Effective January 2018 Tier 2	Effective January 2018 Tier 3
<1"	1 - 5	6 - 17	18 - 36	37 +	1 - 6	7 - 21	22 +
1"	1 - 5	6 - 60	61 - 214	215 +	1 - 16	17 - 78	79 +
1.5"	1 - 5	6 - 157	158 - 627	628 +	1 - 43	44 - 196	197 +
2"	1 - 5	6 - 242	243 - 806	807 +	1 - 85	86 - 335	336 +
>2"	1 - 5	6 - 1133	1134-3970	3,971 +	1 - 430	431-1190	1,191 +
Ag	1 - 5	6 +				1 +	
TC = Temporary Construction Meter				1 +			1 +

Commodity Rates per Unit

	Current	CY 2018	CY 2019
Tier 1	$ 3.08	$ 3.38	$ 3.66
Tier 2	4.12	4.43	4.60
Tier 3	5.33	8.47	8.87
Tier 4	7.41		

Unit = 100 cubic feet, or 748 gallons, of water

The rate structure and rates are recommended to be part of a public hearing pursuant to California Proposition 218, with rates becoming effective on January 1, 2018, and January 1, 2019.

Ready-to-Serve Charge

The Ready-to-Serve charge (RTS) recovers pass-through fixed charges from the San Diego County Water Authority (the District's wholesaler), expenses associated with meters and service lines, expenses not directly associated with the flow of water (general and administration, engineering, information technology, etc.), and the portion of capital replacement allocated to service lines, meters, and general facilities.

Commodity Rates

Commodity rates recover per acre foot (commodity) charges from the San Diego County Water Authority (SDCWA), expenses directly associated with water flow (transmission and distribution, water treatment, tanks and reservoirs, etc.), conservation costs, and the portion of capital replacement allocated to water flow (tanks and reservoirs, transmission and distribution, and pumping less the portion allocated to fire protection).

Commodity rate increases become effective each January 1, but are not reflected on invoices until after February because some of the water purchased by the District at the previous year's SDCWA rate may not be billed to some of the District's customers until early February.

EXECUTIVE SUMMARY AND RECOMMENDATIONS
(Continued)

Rate Structure

The District's rate structure is made up of inclining block tiers with tier breaks varying by meter size. Customers with larger meters pay higher Ready-to-Serve charges (RTS), and pay for additional system capacity. The Study also compared actual 2015 and 2016 use within classes by customer type and classes by meter size, calculated relative standard deviations, and found that usage behavior was more homogeneous when grouped by meter size than when grouped by customer type.

The first tier limit is equal to the average minimum monthly use within each meter size class as calculated from the complete District billing data from 2013 through 2016. The second tier limit is equal to the average maximum monthly use from the same data. A consumptive use model (database of actual District bills with formulas to isolate use within hypothetical tiers) is used to calculate demand within each tier. Tier 1 demand is usage up to the Tier 1 limit (average minimum use). Tier 2 demand is usage up to the Tier 2 limit (average maximum use). Tier 3 demand is usage beyond the Tier 2 limit (average maximum use).

Minimal use does not drive costs associated with peaking or supply diversification. Peaking costs (costs associated with maintaining the portion of facilities sized to meet above average and peak demands) and supply diversification costs (the premium paid for desalinated water) are allocated to the higher tiers. Above average use drives additional costs. Average use is determined within each customer class to effectively assign costs to the higher tiers – the usage that causes these costs to be incurred.

The Tier 1 rate is equal to the wholesale cost of water produced to supply Tier 1 demand plus an allocation of transmission and distribution, water treatment, tanks and reservoirs, and other costs associated with flow, divided by Tier 1 demand. A treatment agreement with the Olivenhain Municipal Water District produces the lowest cost water for the District, and is allocated entirely to tier one with the remaining demand coming from the SDCWA treated water purchases.

The Tier 3 rate is equal to the wholesale cost of water produced to supply Tier 3 demand plus conservation costs and an allocation of transmission and distribution, water treatment, tanks and reservoirs, and other costs associated with flow, divided by Tier 3 demand. A purchase commitment agreement between the District and SDCWA for a direct take of desalinated water from the Carlsbad Desalination Plant provides drought proof, and the most expensive, water. If demand were much less and easily satisfied with current sources, the District would not have pursued increased reliability from desalinated water, and as such, all the Tier 3 demand comes from desalinated water.

The Tier 2 rate is equal to the wholesale cost of water produced to supply Tier 2 demand plus an allocation of transmission and distribution, water treatment, tanks and reservoirs, and other costs associated with flow, divided by Tier 2 demand. Tier 2 demand comes from the committed desalinated water purchases remaining after allocation to Tier 3, and SDCWA treated water purchases to make up the remaining Tier 2 demand.

This report details the methodologies, calculations, allocations, and development of the recommended rates and rate structure.

OBJECTIVES

All the following objectives of this Cost of Service and Rate Structure Study (Study) were presented to the Vallecitos Board of Directors (Board) during the beginning of the planning process and have been or will be achieved with the final presentation to the Board anticipated on June 7, 2017.

Provide Rates and a Structure to the Board for Approval – Staff anticipates that the rate structure and rates developed in this Study will be presented to the Board on June 7, 2017

Provide One or Two Alternative Structures – Staff introduced this Study to the Board by presenting the various common rate structures used in Southern California – Flat rate per unit, Inclining tiers by meter size, Inclining tiers by customer type, and Budget-based. After discussion on the pros and cons of each structure, and an analysis of homogeneity of customer classes by meter size and by customer type, Board consensus was to prepare the Study based on an inclining tier structure by meter size.

Keep the Board Apprised of Progress through Board Workshops throughout the Process – Staff has presented to the Board and Finance Committee regarding the rate process in 2017 at the following meetings: January 24 Finance Committee meeting – Public Rate Hearing Notice (218 Notice) discussion; February 1 Workshop – water rate structure considerations and the 218 process; February 15 Board Meeting – water rate structure development update; February 22 Finance Committee meeting – rate study update; March 15 Board meeting – Cost of Service and Rate Structure Study Review and update; March 27 Finance Committee meeting – handed out rate model and next rate update presentation; March 29 Workshop – rate model and allocation of fixed vs variable costs; April 19 Board meeting – legal review; May 3 Board meeting – reviewed updated Study with wholesale commodity rates and a relevant guidance and law review section, reviewed draft 218 Notice with optional effective dates; May 17 Board meeting – presented drat 218 Notice; May 24 Workshop – presented revised draft 218 Notice, proposed rates, and the water rate model; June 7 Board meeting – presented recommended rates, 218 Notice for approval, and the Study for adoption.

Alternatives Presented are Legal and Defensible – Staff developed the recommended rate structure with no arbitrary attributes or components. Staff followed guidance presented in American Water Works Association's Principles of Water Rates, Fees, and Charges. Staff was sensitive to the outcomes of recent rate litigation and common law guidance provided by their decisions.

Alternatives Presented Satisfy the District's Mission Statement, Strategic Plan Objectives, and Financial Master Plan Objectives – The District's Mission Statement, water and wastewater specialists providing exceptional and sustainable services, is achieved through satisfying adopted strategic plan objectives, including "consider and adopt water and sewer rates that support the operation and maintenance of the District and adequately fund replacement and upgrades required to ensure service and reliability." The revenue requirement covered by the recommended rates includes all operation and maintenance costs, as well as a provision for capital replacement and upgrades.

Provide a thorough and understandable administrative record – This Study along with the Rate Model; a spreadsheet documenting methodologies, calculations, and processes; a Consumptive Use Model; and all presentations to the Board, provide a thorough and understandable administrative record.

Nothing arbitrary (tier levels, cost acceleration from tie to tier, etc.) – Tier levels are tied to historical usage behavior patterns. Costs to provide water within each tier are well documented and based on the costs of water supply and maintenance costs associated with peaking at various levels.

Establish a revenue requirement that exhausts all efforts to cut costs and maintains or increases the current level of service and workforce engagement – This objective is achieved through the participative budget process employed by District staff.

VALLECITOS WATER DISTRICT WATER RATE STRUCTURE HISTORY

In 2003, the San Diego County Water Authority (SDCWA) changed their rate structure from recovering its entire revenue requirement from a single commodity charge to recovering a portion from fixed charges and the remainder from various categories of commodity-based charges. As a result, Vallecitos Water District (District) fixed costs increased while the variable cost of water decreased. District customers were suddenly faced with higher fixed charges (the Ready-to-Serve, or RTS charge) and lower commodity charges. To mitigate the potential disincentive to conserve, the District implemented inclining block rates.

2002 Rates	
RTS for 5/8" Meter	Per Metered Unit
$ 9.16	$ 1.53

2003 Rates			
RTS for 5/8" Meter	Per Metered Unit *A Unit = 100 Cu Ft, or 748 gallons*		
	Tier	Tier 2	Tier 3
$ 11.55	$ 1.41	$ 1.44	$ 1.59
Residential	1 to 16	17 to 34	35 +
Irrigation	1 to 174	175 to 769	770 +
Commercial	1 to 61	62 to 529	530 +
Agricultural	1 to 415	416 to 2,449	2,450 +

Starting in 2003, tier limits were established for each category of customer by analyzing average use and total use within the category. Ninety percent of average monthly use was set as the Tier 1 limit. The amount of use per customer totaled within each category that captured 90% of the use within that category was set as the Tier 2 limit.

2010 Commodity Rates			
	Tier 1	Tier 2	Tier 3
M&I	$ 2.60	$ 3.25	$ 3.90
Ag	$ 2.60	$ 2.82	$ 3.01
Multifamily	1 - 6	7 - 11	12 +
Meters			
< 1"	1 - 17	18 - 36	36 +
1"	1 - 60	61 - 214	215 +
1.5"	1 - 157	158 - 627	628 +
2"	1 - 242	243 - 806	807 +
> 2"	1 - 1,133	1,134 - 3,970	3,971 +

The next significant change in commodity rates was effective in 2010. Customer classes were changed from type to meter size and tier price ranges were widened to induce conservation. The board contemplated a change to budget based rates. Tiers by meter size allowed bigger allotments for justified higher demands without having to go through complex technical billing changes figuring out a separate budget for every single parcel. Larger meters also paid higher RTS charges and paid for more capacity that they would otherwise be penalized for using had the District retained tiers by customer type. Tier breaks were calculated as before: the first at 90% of average use, the second capturing 90% of total demand. Ag's tiers accelerated less because the incentive to conserve already existed as water is a growers most significant cost. Tier premium revenue was compared to conservation costs and the cost of SDCWA water beyond their wholesale cost from Metropolitan Water District (cost of diversification) to ensure that tier premiums weren't inflated (overcharged).

2017 Commodity Rates				
	Tier 1	Tier 2	Tier 3	Tier 4
M&I	$ 3.08	$ 4.12	$ 5.33	$ 7.41
Ag	$ 3.08	$ 4.12	$ 4.12	$ 4.12
Multifamily	1 - 5	1 - 6	7 - 11	12 +
Meters				
< 1"	1 - 5	6 - 17	0 - 17	36 +
1"	1 - 5	6 - 60	61 - 214	215 +
1.5"	1 - 5	6 - 157	158 - 627	628 +
2"	1 - 5	6 - 242	243 - 806	807 +
> 2"	1 - 5	6 - 1,133	1,134 - 3,970	3,971 +

For multifamily, the first tier is per meter, Tiers 2 through 4 are per dwelling unit. The Ag tier was flattened to align with the industry standard.

The first outside cost of service study was prepared by Black & Veatch for 2013 rates. B&V affirmed the meter size methodology for tiers but used peaking factors to differentiate pricing. The study addressed a frugal use discount in place at that time and recommended suspending the discount as it was not consistent with nexus requirement of Propositions 218 and 26 and the discount was only available to residential customers who used 5 units or less for the month. To ease the burden to low water users, the Board created a low tier, 1 to 5 units, for all customers, assigning only wholesale costs to that tier. The 2013 study is the basis of rates in effect today.

VALLECITOS WATER DISTRICT WATER RATE STRUCTURE HISTORY
(continued)

B&V was engaged again to perform a cost of service and rate study in 2016. B&V's 2016 study proposed eliminating the 5 unit first tier and changing customer class from meter size back to customer type, assigning 3 tiers to residential, 2 tiers to irrigation, and flat per-unit rate for remaining customers. The Board did not adopt the study or recommended rates, but instead passed through half of the wholesale increase from the San Diego County Water Authority which was significant due to 2016 being the first full year of committed desal deliveries.

District staff researched and compared the District's current rate structure to a budget-based rate structure and the 2016 B&V rate structure which proposed rates for 2017. As shown in the table below, for customers using 60 units of water under the 2016 B&V rate structure, a VWD customer with a 3/4" meter paid 42% more for water commodity than a customer with a 1" meter. Rancho California Water District (RCWD) is one of many water districts in Southern California using a budget-based rate structure. From a random sample of 10 RCWD bills, a customer using 60 units of water with a 3/4" meter pays 269% more for water commodity than a customer using the same amount of water with a 1" meter. At RCWD, as with all agencies using budget-based rates, every customer will likely pay a varying amount for the same water use, because every customer has a unique water budget imposed upon them. The B&V rate structure also yielded varying cost recoveries for a single-family resident with 60 units paying 61% more for the same amount of water through an irrigation meter.

	Monthly Bill								
Units	VWD's 2017 Rates		Budget Based Rates		B&V 2017 Proposed Rates				
used	3/4"	1"	3/4"	1"	SFR	Irr	CI	Public	Ag
34	$ 155	$ 135	$ 113	$ 36	$ 206	$ 130	$ 166	$ 171	$ 163
60	344	242	277	75	404	251	320	301	287
166	1,129	807	947	234	1,214	754	947	907	795

Water budgets imposed within a budget-based structure are justified through a complex analysis of each individual customer's needs. A meter-sized rate structure justifies need because larger meters are only provided to customers that have greater demands. A water rate structure tiered by meter size simulates the same allotments as a budget-based system without having to implement resource-draining methods, procedures, and technologies. Customers with larger meters pay higher ready-to-serve charges and pay for greater capacity in the system.

Per the industry standard as published in the American Water Works Association's Principles of Water Rates, Fees, and Charges (AKA M1 Manual), "In some cases, it may be better to determine customer classes based on meter size. A utility can also implement an increasing block structure by meter size if it can demonstrate a consistent relationship or homogeneous usage pattern by meter size." This Study analyzed the relative standard deviations of use within customer classes by meter size and customer classes by customer type and found that usage within meter size was more homogeneous than usage within customer types.

RELEVANT GUIDANCE AND LAW REVIEW

The California Constitution provides the highest level of authoritative support for California water rate setting. The next highest authority is case law that interprets the Constitution and sets precedent for future challenges and defenses. Industry guidance, while not authoritative, is most prevalent in the M1 Manual published by the American Water Works Association.

Statutory Law – California Constitution

The California Constitution has recognized the importance of conserving water since 1925 when Article X, Section 2 was adopted – "The general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use of water be prevented."

In 1977, the California Water Code, Section 375, provided that agencies may adopt and enforce a water conservation program. Later amended in 1993, Section 375 states that a water conservation ordinance or resolution may encourage conservation through rate structure design.

Proposition 218 (1996) added Articles XIII C and D to the California Constitution, which established procedural and substantive requirements for property related fees. Procedural requirements, Article XIII D Section 6(a), refer to holding a public hearing, the noticing thereof, and majority protests. Section(b) requires that fees not exceed the cost to provide the service, not be used for any other purpose, and not exceed the proportional cost of providing the service attributable to the parcel on which it is imposed.

Water Code sections 370-374 (2008) established volumetric allotments of water, a basic charge, a conservation charge, and proportionality and cost-revenue nexus requirements through tiers and allocations. Conservation and water resource management costs are to be determined and supported.

Proposition 26 (2010) clarified the meaning of "tax" requiring voter approval and identified five specific exceptions, one of which is "A charge imposed for a specific government service or product ... which does not exceed the reasonable costs ... of the service or product …"

Common Law

Common law is derived from judicial precedent rather that statutes. The following cases have set some of the more significant precedents and are often cited in challenges and other cases.

In ***Brydon v. East Bay Municipal Utility District*** *(1994)*, appellants alleged that tiered rates imposed by the District violated the California Constitution and were "arbitrary, capricious and not rationally related to any legitimate legislative or administrative objective." The opinion render by Judge Hodge of the Superior Court of Contra Costa County stated, "In our view, the inclining block rate structure is one small and modest component of a well-conceived and eminently reasonable drought management program [and] … does not violate the California Constitution. … The inclining block rate structure bears none of the indicia of taxation which California Constitution, article XIII A purported to address. … The rates were levied against water consumers in accordance with patterns of usage… The incremental rate was not compulsory to the extent that any consumer had the option of reducing his or her consumption."

RELEVANT GUIDANCE AND LAW REVIEW (continued)

Common Law (continued)

In ***City of Palmdale v. Palmdale Water District*** *(2011)*, the City of Palmdale (City) successfully challenged (on appeal) that the Palmdale Water District's rate structure discriminated unfairly against the customer class of irrigation accounts. In the discussion of the decision the City asserts that the Palmdale Water District (PWD) "failed to prove its revenues under the new rate structure will not exceed the costs of providing water service in contravention of Article XIII D, section 6(b)(1), … [and] makes no showing whatsoever that PWD's cost of delivering service to those irrigation users is proportionately higher than PWD's costs of delivering service to residential and commercial users."

As decided in the case of ***Griffith v. Pajaro Valley Water Management Agency*** *(2013)*, property related fees do not have to be established on a "parcel-by-parcel" basis, as allocating costs of service "is not a determination that lends itself to precise calculation."

In ***Morgan v. IID*** *(2014)*, the trial court determined that establishing customer classes is consistent with the proportionality requirement of Article XIII D, Section 6(b). The appellate court stated that Section 6 does not require data used in cost of service studies to be perfect.

In ***Capistrano Taxpayers Association v. City of San Juan Capistrano*** *(2015)*, the decision states that "Neither the voters nor the Constitution say anything we can find that would prohibit tiered pricing." And while the conclusion reiterates Proposition 218's provision that fees "not exceed the proportional cost of service attributable to the parcel," the conclusion also states that this doesn't mean that rates need to be calculated for *specific* parcels. The decision concludes that computations to show costs associated with high usage levels "would seem to satisfy Proposition 218." The City simply failed to show its computations. The conclusion is also explicit that passing on costs attributable to high use "to those consumers whose extra use of water forces water agencies to incur higher costs to supply that extra water" is not precluded by the California Constitution. The City simply failed to demonstrate the nexus.

A challenge to the ***Sweetwater Authority***, by Ben Benumof, the same attorney who sued San Juan Capistrano, was settled for an attorneys' fee payment. Sweetwater implemented new rates with *more cost analysis on the tiers and a higher Tier 1 rate*. Mr. Benumof is not challenging the new rates.

Industry Guidance

Principles of Water Rates, Fees and Charges, Manual of Water Supply Practices, M1, published by the American Water Works Association, is commonly known as the M1 Manual, and is frequently used as guidance by rate consultants. The M1 Manual is not specific to California rate setting, but most of the larger consulting firms performing cost of service studies in California rely heavily on the M1 Manual and are contributing authors and editors to the publication.

DATA COLLECTION AND ANALYSIS

Demand Projection

Staff analyzed recent growth and usage behavior trends to project demand. The Table 1 below isolates growth by showing the increase in meters year-to-year, and behavior by showing the increase in Municipal and Industrial (M&I) usage year-to-year.

TABLE 1

		Demand in Acre Feet					Increase		
		Meters	M&I	AG	Construction	Total	# of Meters	Meter%	M&I Demand
Actual	2007	19,929	17,595	2,438	465	20,499			
	2008	20,332	17,121	1,685	252	19,058	403	2.0%	-2.7%
	2009	20,445	14,985	1,607	62	16,655	113	0.6%	-12.5%
	2010	20,459	13,250	1,176	41	14,466	14	0.1%	-11.6%
	2011	20,622	13,532	1,062	40	14,634	163	0.8%	2.1%
	2012	20,828	14,109	1,342	38	15,489	206	1.0%	4.3%
	2013	21,080	14,399	1,535	50	15,984	252	1.2%	2.1%
	2014	21,273	14,994	1,455	74	16,522	193	0.9%	4.1%
	2015	21,340	11,398	991	37	12,426	67	0.3%	-24.0%
	2016	21,397	12,236	909	145	13,290	57	0.3%	7.4%
Projected	2017	21,460	12,600	900	100	13,600	*assumptions: 3% increase in M&I - 0.3% growth, 2.7% behavior; 1% decline in Ag; 30% decreasae in construction water*		
	2018	21,530	13,000	900	100	14,000	*assumptions: 3% increase in M&I - 0.3% growth, 2.7% behavior; Ag and construction flat*		
	2019	21,590	13,400	900	100	14,400	*assumptions: 3% increase in M&I - 0.3% growth, 2.7% behavior; Ag and construction flat*		
	2020	21,660	13,800	900	100	14,800	*assumptions: 3% increase in M&I - 0.3% growth, 2.7% behavior; Ag and construction flat*		
	2021	21,720	14,200	900	100	15,200	*assumptions: 3% increase in M&I - 0.3% growth, 2.7% behavior; Ag and construction flat*		
	2022	21,790	14,600	900	100	15,600	*assumptions: 3% increase in M&I - 0.3% growth, 2.7% behavior; Ag and construction flat*		

This Study assumes growth in the number of meters to be 0.3% annually and 2.7% increase in consumption per meter for M&I, for a total increase in demand of 3% per year. The 2.7% increase, based on historical averages, is known as bounce-back – the increase in consumptive behavior following conservation mandated during a period of drought. Agricultural (Ag) consumption was cut largely due to permanent removal of productive crop (i.e., no intent to return to previous levels of consumption). Therefore, Ag use is assumed to be steady. Grading activity picked up in 2016 with the increase in construction activity, and is assumed to remain steady at the conservative assumption of 100 acre feet per year.

Water Supply Tranches

Prior to receiving desalinated water (Desal) and contracting for water treatment services from Olivenhain Municipal Water District (OMWD), the District paid one price for all its water. Now with differing costs of supply, and supply making up about 78% of the revenue requirement, supply costs are the focus of this Study. This Study distinguishes supply sources in tranches. The lowest tranches are assigned to lowest cost water. A 5.6% assumption of unbilled water (most recent 3-year average) is include in the cost of each supply tranche.

TABLE 2

	2018 Cost per Unit	2018 Cost per AF	Projected AF Demand	Extended Cost
Tranche 3				
Desal	$ 5.51	$ 2,401	3,854	$ 9,252,005
Tranche 2				
SDCWA	3.13	1,362	6,306	8,590,589
Tranche 1				
Treated by OMWD	2.96	1,291	3,840	4,958,892
TOTAL			**14,000**	**$22,801,486**

Price per Acre Foot (AF) includeds unbilled water

DATA COLLECTION AND ANALYSIS
(continued)

Water Supply Tranches (continued)

Tranche 1 – Treated by OMWD

In 2012, the District contracted with the Olivenhain Municipal Water District (OMWD) to treat raw water from the San Diego County Water Authority (SDCWA) and deliver it to the District. OMWD charges the District 80% of SDCWA's treatment surcharge, so water treated by OMWD will always be less expensive than SDCWA water. Calendar Year 2016 was the first full year of operations under the agreement with OMWD. Vallecitos paid $1,109 per acre foot pursuant to the OMWD Agreement compared to $1,165 per acre foot from SDCWA. Per the agreement, OMWD can limit deliveries to specified monthly amounts totaling 2,750 acre feet per year if OMWD needs the capacity in their plant to meet their customers' demand. Deliveries from OMWD from April 2016 through March 2017 totaled 3,899 acre feet. Water operators from OMWD and Vallecitos both project that future deliveries will be at least equal to recent deliveries. While not all the District's customers receive OMWD treated water, all customers benefit because OMWD water can be pushed to other parts of the District in the event of a disruption in flow from the SDCWA Aqueduct. Because the District will maximize deliveries of OMWD water, and OMWD water is the least expensive water in the District's supply portfolio, all OMWD deliveries are allocated to Tier 1 in this recommended water rate structure.

Tranche 2 – SDCWA

Prior to the water treatment agreement with OMWD and the water purchase agreement with SDCWA for a direct supply of desalinated water, the District's only supply was from SDCWA's melded sources. SDCWA water is allocated mostly to Tier 2 and some to Tier 1 to make up the difference between OMWD supply and the Tier 1 demand.

Tranche 3 – Desal

In 2012, the District contracted with SDCWA for a direct purchase commitment of desalinated sea water from the Carlsbad Desalination Plant (Desal Plant). The commitment amount is priced at full recovery of cost – about $2,400 per acre foot in 2016. SDCWA's contract with Poseidon Resources LTD is for a County-wide purchase commitment of 48,000 acre feet. The District's contract with SDCWA carves out 3,500 acre feet of the 48,000 acre feet commitment by SDCWA. Annual deliveries from the Desal Plant are estimated at 87% of plant capacity, or 56,000 acre feet. Any County-wide deliveries from the Desal Plant in excess of the 48,000 acre feet commitment (Excess Water) is priced to recover variable costs only – projected at $735 per acre feet in 2018, the Study's base year. The District receives a pro-rata share of the Excess Water (County-wide Excess Water x 3,500 District Commitment / 48,000 SDCWA Commitment). Desal deliveries commenced in 2016. No Excess Water was delivered during Fiscal Year 2017 and none is expected during Fiscal Year 2018 due to decreased demands and the necessity of SDCWA to meet other purchase commitments. Both purchase commitment contracts are on a fiscal year basis – July through June. This Study assumes a steady ramp-up to the District's full anticipated Excess Water – 583 acre feet – from Fiscal Year 2019 to Fiscal Year 2022. While not all the District's customers receive Desal water, all customers benefit because Desal water can be pushed to other parts of the District in the event of a disruption in flow from the SDCWA Aqueduct, the drought proof Desal water provides additional allocations of water during cutbacks from Metropolitan Water District (MWD) and SDCWA to all customers, and reduces reliance on water imported from the Colorado River and the Delta. Because the District pursued the Desal contract to address reliability issues and secure a drought proof supply source, all Tier 3 demand comes from Desal, with the remaining Desal allocated to Tier 2.

DATA COLLECTION AND ANALYSIS
(continued)

Defining Customer Classifications - Tiers by Meters vs. Tiers by Customer Type

The ideal solution to developing rates for water utility customers is to assign cost responsibility to each individual customer served and to develop rates that reflect that cost. Unfortunately, it is neither economically practical nor often possible to determine the cost responsibility and applicable rates for each individual customer served. However, the cost of providing service can reasonably be determined for groups or classes of customers that have similar water-use characteristics …

American Water Works Association, Principles of Water Rates, Fees, and Charges – M1 Manual

The District's current rate structure establishes customer classifications by meter size. A water rate structure tiered by meter size simulates the same allotments as a budget-based system without having to implement resource-draining methods, procedures, and technologies. Customers with larger meters pay higher ready-to-serve charges and pay for greater capacity in the system.

District staff researched and compared the District's current rate structure to a budget-based rate structure and a rate structure by customer type proposed (but not adopted) in 2016 by the consulting firm of Black & Veatch (B&V). As shown in the table below, for customers using 60 units of water, a District customer with a 3/4" meter paid 42% more for water than a customer with a 1" meter. From a random sample of 10 Rancho California Water District bills, a customer using 60 units of water with a 3/4" meter pays 269% more than a customer using the same amount of water with a 1" meter. At Rancho, as with all agencies using budget-based rates, every customer will likely pay a varying amount for the same water use, because every customer has a unique water budget imposed upon them. The B&V rate structure also yielded varying cost recoveries for a single-family resident with 60 units paying 61% more for the same amount of water through an irrigation meter.

TABLE 3

	Monthly Bill								
Units	VWD's 2017 Rates		Budget Based Rates		B&V 2017 Proposed Rates				
used	3/4"	1"	3/4"	1"	SFR	Irr	CI	Public	Ag
34	$ 155	$ 135	$ 113	$ 36	$ 206	$ 130	$ 166	$ 171	$ 163
60	344	242	277	75	404	251	320	301	287
166	1,129	807	947	234	1,214	754	947	907	795

Staff studied water use characteristics for customers within meter size classifications versus the same customers within customer type classifications. Per the industry standard as published in the M1 Manual, "In some cases, it may be better to determine customer classes based on meter size. A utility can also implement an increasing block structure by meter size if it can demonstrate a consistent relationship or homogeneous usage pattern by meter size." The analysis focuses on average rather than maximum, or peak use, because 78% of the revenue requirement from the last cost of service study provided by B&V was supply, while only 12 % was allocated based on peaking. Since 2016, the cost of supply varies.

DATA COLLECTION AND ANALYSIS
(continued)

Defining Customer Classifications - Tiers by Meters vs. Tiers by Customer Type (continued)

Staff calculated relative standard deviations in average use of customers within meter size classifications compared to customers within customer type classifications for the two most recent years. Meter size classification results in a more homogeneous usage pattern.

TABLE 4

	CY 2016			
Meter		Avg Use	Standard Deviation	
size	# meters	per Month	Absolute	Relative
< 1"	19,239	12	11	96%
1"	1,021	40	66	164%
1.5"	689	101	152	151%
2"	505	188	236	126%
> 2"	101	511	754	148%

	CY 2016			
Customer		Avg Use	Standard Deviation	
Type	# meters	per Month	Absolute	Relative
Residential - SF	19,036	12	11	96%
Residential - MF	512	142	282	198%
Irrigation	826	106	175	165%
Agriculture	115	280	450	160%
Comm/Ind	939	49	106	216%
Other	91	126	317	252%

	CY 2015			
Meter		Avg Use	Standard Deviation	
size	# meters	per Month	Absolute	Relative
< 1"	19,206	11	11	93%
1"	1,016	37	55	147%
1.5"	682	94	150	160%
2"	500	170	217	127%
> 2"	95	476	682	143%

	CY 2015			
Customer		Avg Use	Standard Deviation	
Type	# meters	per Month	Absolute	Relative
Residential - SF	18,997	11.47	13	116%
Residential - MF	506	140.48	280	199%
Irrigation	818	84.51	132	156%
Agriculture	117	282.19	484	171%
Comm/Ind	942	47.55	97	205%
Other	89	123.79	321	259%

This Study recommends inclining tiers by customer classifications of meter size.

TIER STRUCTURE FOR WATER COMMODITY CHARGES

Staff presented pros and cons of various rate structures to the Board of Directors at a February 1, 2017, Board Workshop, and the analysis of usage patterns within in customer classes of meter size versus customer type at the February 15, 2017, Board meeting, and received consensus from the Board of Directors to continue this Study using a rate structure tiered by meter size.

Continuing with a study of usage patterns, staff calculated average minimum monthly use, average monthly use, and average maximum monthly use for the years from 2013 through 2016.

TABLE 5

	2013 through 2016 (averages in units, use captured in acre feet)					
Meter size	Average Min Use	Use Captured	Average Use	Use Captured	Average Max Use	Use Captured
< 1"	6	2,922	13	4,989	21	5,953
1"	16	346	45	688	78	854
1.5"	43	575	117	1,047	196	1,271
2"	85	829	201	1,527	335	1,939
> 2"	430	539	778	829	1,190	1,041
TOTAL		5,211		9,080		11,058

Multi-Family is currently Included in the above meter sizes

Average Minimum Use provides a natural and non-arbitrary threshold for the Limit of Tier 1 use. Average Maximum Use provides a natural and non-arbitrary threshold for the Limit of Tier 2 use.

TABLE 6

Meter Size	Tier Structure in Units		
	Tier 1	Tier 2	Tier 3
<1"	1 - 6	7 - 21	22 +
1"	1 - 16	17 - 78	79 +
1.5"	1 - 43	44 - 196	197 +
2"	1 - 85	86 - 335	336 +
>2"	1 - 430	431-1,190	1,191 +
Ag		1 +	
Temporary Construction			1 +

No costs associated with peaking or conservation will be allocated to Tier 1. Minimal use does not drive these costs. All the OMWD supply will be allocated to Tier 1, with the remaining demand made up from SDCWA water. Some costs associated with peaking and the Desal water remaining after fulling satisfying Tier 3 demand will be allocated to Tier 2. Costs associated with peaking, conservation, and Desal water will be allocated to Tier 3.

Multifamily

The existing rate structure distinguishes multifamily from other customer classes and provides use specified per living unit to calculate tier limits. This Study recommends nondiscriminatory classification for multifamily customers by meter size – no separate distinction of customer class.

Agricultural (Ag)

All water use by certified Ag customers is currently assigned to Tier 2 and not subject to higher tiers. This Study recommends that Ag use remain in Tier 2. Certified Ag customers who participate in the SDCWA Transitional Special Agricultural Water Rate program pay Metropolitan Water District's rate and not the blended rate because during times of cutback, alternative water sources are not available to Ag customers. Tier 2 use for Ag is consistent with SDCWA's program and with other water agencies.

Temporary Construction

By District ordinance, water purchased through a temporary construction meter is subject to the rate in the highest tier. Temporary use burdens the system beyond just operation and maintenance costs. Temporary use has not paid for capacity, annexation, or ongoing upkeep on the system.

COST OF SERVICE ALLOCATION

Effective Date of Rate Changes

The Ready-to-Serve charge (RTS) recovers pass-through fixed charges from the San Diego County Water Authority (the District's wholesaler), expenses associated with meters and service lines, expenses not directly associated with the flow of water (general and administration, engineering, information technology, etc.), and the portion of capital replacement allocated to service lines, meters, and general plant. The effective date of changes to RTS has traditionally been each July 1 – the beginning of each fiscal year – coinciding with the budget and financial reporting. The Board of Directors of the Vallecitos Water District provided direction to staff to change the effective date to coincide with the effective date for commodity charges – January 1.

Commodity rates recover per acre foot (commodity) charges from the San Diego County Water Authority (SDCWA), expenses directly association with water flow (transmission and distribution, water treatment, tanks and reservoirs, etc.), conservation costs, and the portion of capital replacement allocated to water flow (tanks and reservoirs, transmission and distribution, and pumping less the portion allocated to fire protection). Commodity rate increases become effective each January 1, to coincide with rate increases from SDCWA, but are not reflected on invoices until after February because some of the water purchased by the District at the previous year's SDCWA rate may not be billed to the District's customer until early February.

The District's Rate Model prepared as a part of this Study includes full cost allocations by calendar year to appropriately determine rates. Since budgeted and projected expenses are accumulated and presented by fiscal year, fiscal year expenses are averaged to convert to the revenue requirement for each calendar year, except for water purchases. Historically, 60% of annual water demand occurs from July through December. The 60/40 split is used to projected fiscal year water demand and costs for completing the budget.

Fixed versus Variable Cost Allocation

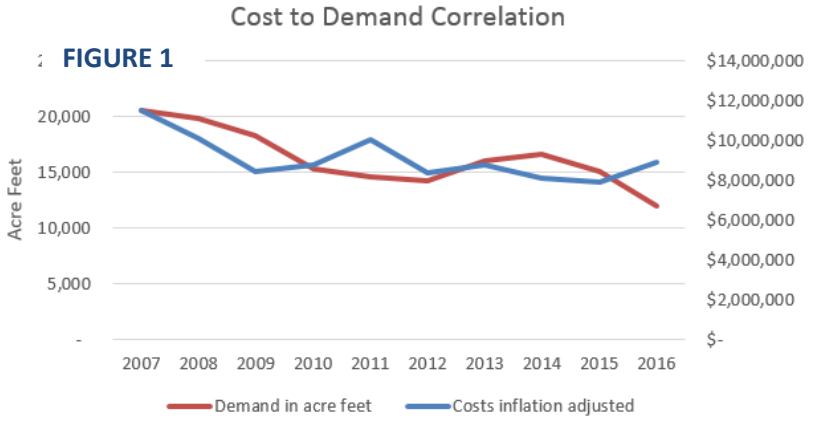
The last rate study performed for the District included an 80/20 RTS/commodity allocation split of expenses not directly associated with the flow of water (general and administration, engineering, information technology, etc.). One of the objectives of this study was to eliminate all arbitrary attributes and components of the rate design. Staff studied the relation of Target Costs – all operating expenses, less purchased water, revenue offsets, costs allocated to fire protection, and plus capital replacement costs – to determine if there was a correlation to demand. Staff accumulated the last ten years of Target Costs, adjusted them for inflation, compared them to demand in the corresponding year (Table 7), but found no correlation.

Staff plotted the Target Costs and related demand to visualize the amount of these costs that tend to vary compared to the amount that tends to be stable.

TABLE 7

	Costs	AF Demand
2007	$11,490,906	20,528
2008	10,070,960	19,776
2009	8,427,569	18,313
2010	8,733,230	15,346
2011	10,058,971	14,513
2012	8,391,661	14,259
2013	8,764,041	15,989
2014	8,104,832	16,581
2015	7,916,775	15,072
2016	8,866,004	11,981

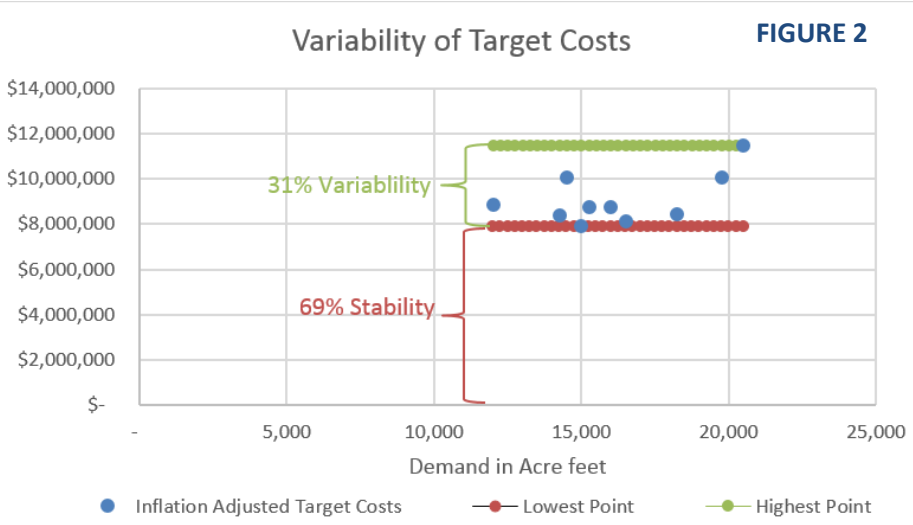
FIGURE 1



COST OF SERVICE ALLOCATION
(continued)

Fixed versus Variable Cost Allocation (continued)

FIGURE 2



Sixty-nine percent of Target Costs tend to not vary. Staff allocated all Target Costs directly associated with the flow of water flow (transmission and distribution, water treatment, tanks and reservoirs, etc.) to the commodity charge, and all Target Costs not directly associated with the flow of water (general and administration, engineering, information technology, etc.) to the RTS charge, and found a close resemblance to the trend in variability with the costs assigned to commodity – 34% in the preliminary allocated of estimated 2018 costs. To achieve the exact trend of 31% variability, a portion of the cost directly association with flow would have to be carved out and allocated to RTS. The Study does not recommend this carve out as it may be perceived as an arbitrary split and examples through the M1 Manual allocate 100% of costs directly associated with flow to commodity.

TABLE 8

	Projected		Ready-to-Serve		Commodity			Fire
	2018	Offset	Meters	Bill	Tier1	Tier2	Tier3	Protection
Water cost	$30,158,204	$ -	$ 7,036,880	$ -	$4,958,892	$12,704,467	$5,457,965	$ -
Operating Expenses								
Pumping	583,500	375,000	-	-	28,602	135,384	34,089	10,425
Water Quality	177,500	-	-	-	48,688	102,897	25,915	-
Water Treatment	401,500	-	-	-	57,977	274,425	69,098	-
Tanks & Reservoirs	363,500	-	-	-	49,865	236,030	59,430	18,175
Transmission & Dist.	1,490,000	-	-	-	129,377	612,628	673,495	74,500
Services	200,500	-	200,500	-	-	-	-	-
Meters	691,500	162,604	342,191	186,705	-	-	-	-
Backflow Prevention	77,000	77,000	-	-	-	-	-	-
Customer Accounts	759,500	235,227	524,273	-	-	-	-	-
Equipment & Vehicles	323,500	-	323,500	-	-	-	-	-
Building & Grounds	328,000	-	328,000	-	-	-	-	-
Engineering	1,639,500	31,314	1,608,186	-	-	-	-	-
Safety & Reg. Affairs	284,500	-	284,500	-	-	-	-	-
Information Technology	992,500	-	992,500	-	-	-	-	-
G&A - Conservation	683,079	-	-	-	-	-	683,079	-
General&Admin - Other	2,375,921	96,923	2,278,998	-	-	-	-	-
Capital Replacement	2,265,700	1,519,000	146,715	-	69,892	332,123	167,996	29,974
Reserve Target Adjustmnt	-	-	-	-	-	-	-	-
Total Costs to Recover	$43,795,404	$2,497,068	$13,541,970	$710,978	$5,343,293	$14,397,954	$7,171,067	$133,074

66%

34%

COST OF SERVICE ALLOCATION
(continued)

Peaking Factors and Tier Allocations

The District incurs proportionately more costs to maintain facilities designed to meet peak flows than facilities designed to meet average flows – bigger pipes, bigger reservoirs, bigger pumps, etc. Certain water system facilities are designed to meet maximum daily flows and some designed to meet maximum hourly flows. To allocate costs associated with peaking to higher tiers, District peaking factors determined for the District's Master Plan are used to formulate allocation percentages along with demand per tier. Average daily demand is assigned a factor of 1.0. Maximum Daily Demand (Max Day) is 1.9 times more than average daily demand and is therefore assigned a factor of 1.9. Maximum Hourly Demand is 3 time higher than demand during an average hour and is therefore assigned a factor of 3.0.

TABLE 9

Master Plan	Factor
Average Daily Demand	1.0
Maximum Day Demand	1.9
Maximum Hour Demand	3.0

Water quality expense is not impacted by peak demands (peak demands improve water quality). Water quality costs are allocated based on water demand without regard to peaking. Storage, treatment, and pumping facilities are designed for maximum daily flows, and related expenses are allocated based on average daily demand (1.0 / 1.9), and maximum daily flows (0.9 / 1.9). Transmission and distribution is designed to meet maximum hourly demand and related costs are allocated to average daily flows (1.0 / 3.0), maximum daily flows (0.9 / 3.0), and hourly maximum flows (1.1 / 3.0). Table 10 illustrates how percentages used to allocated costs directly associated with flow are calculated based on demand within each tier and peaking factors.

TABLE 10

	FY 2017/18 Allocation				CY 2018 Allocation			
	Total	Tier1	Tier2	Tier3	Total	Tier1	Tier2	Tier3
Water Demand in Acre Feet	13,760	5,187	6,561	2,012	14,000	5,195	6,761	2,044
Water Demand Percent	100.00%	37.70%	47.68%	14.62%	100.00%	37.11%	48.29%	14.60%
Facilities designed to meet max day demand								
E.g., Storage, treatment, pumping								
Base = (1.0/1.9) x 100 =	52.63%	19.85%	25.09%	7.69%	52.63%	19.53%	25.42%	7.68%
Max Day = (1.9 - 1.0)/1.9 x 100 =	47.37%	-	36.25%	11.12%	47.37%	-	36.37%	11.00%
		19.85%	61.34%	18.81%		19.53%	61.79%	18.68%
Facilities designed to meet max hour demand								
E.g., Transmission and distribution								
Base = (1.0/3) x 100 =	33.33%	12.57%	15.89%	4.87%	33.33%	12.36%	16.10%	4.87%
Max Day = (1.9 - 1.0)/3 x 100 =	30.00%	-	22.96%	7.04%	30.00%	-	23.04%	6.96%
Max Hr = (3 - 1.9)/3 x 100 =	36.67%	-	-	36.67%	36.67%	-	-	36.67%
		12.57%	38.85%	48.58%		12.36%	39.14%	48.50%

COST OF SERVICE ALLOCATION

(continued)

Peaking Factors and Tier Allocation (continued)

TABLE 10 (continued)

	FY 2018/19 Allocation				CY 2019 Allocation			
	Total	Tier1	Tier2	Tier3	Total	Tier1	Tier2	Tier3
Water Demand in Acre Feet	14,160	5,203	6,891	2,066	14,400	5,211	7,091	2,098
Water Demand Percent	100.00%	36.74%	48.67%	14.59%	100.00%	36.19%	49.24%	14.57%
Facilities designed to meet max day demand								
E.g., Storage, treatment, pumping								
Base = (1.0/1.9) x 100 =	52.63%	19.33%	25.62%	7.68%	52.63%	19.04%	25.92%	7.67%
Max Day = (1.9 - 1.0)/1.9 x 100 =	47.37%	-	36.44%	10.93%	47.37%	-	36.55%	10.82%
		19.33%	62.06%	18.61%		19.04%	62.47%	18.49%
Facilities designed to meet max hour demand								
E.g., Transmission and distribution								
Base = (1.0/3) x 100 =	33.33%	12.25%	16.22%	4.86%	33.33%	12.06%	16.41%	4.86%
Max Day = (1.9 - 1.0)/3 x 100 =	30.00%	-	23.08%	6.92%	30.00%	-	23.15%	6.85%
Max Hr = (3 - 1.9)/3 x 100 =	36.67%	-	-	36.67%	36.67%	-	-	36.67%
		12.25%	39.30%	48.45%		12.06%	39.56%	48.38%

	FY 2019/20 Allocation				CY 2020 Allocation			
	Total	Tier1	Tier2	Tier3	Total	Tier1	Tier2	Tier3
Water Demand in Acre Feet	14,560	5,219	7,221	2,120	14,800	5,227	7,421	2,152
Water Demand Percent	100.00%	35.85%	49.59%	14.56%	100.00%	35.32%	50.14%	14.54%
Facilities designed to meet max day demand								
E.g., Storage, treatment, pumping								
Base = (1.0/1.9) x 100 =	52.63%	18.87%	26.10%	7.66%	52.63%	18.59%	26.39%	7.65%
Max Day = (1.9 - 1.0)/1.9 x 100 =	47.37%	-	36.62%	10.75%	47.37%	-	36.72%	10.65%
		18.87%	62.72%	18.41%		18.59%	63.11%	18.30%
Facilities designed to meet max hour demand								
E.g., Transmission and distribution								
Base = (1.0/3) x 100 =	33.33%	11.95%	16.53%	4.85%	33.33%	11.77%	16.71%	4.85%
Max Day = (1.9 - 1.0)/3 x 100 =	30.00%	-	23.19%	6.81%	30.00%	-	23.26%	6.74%
Max Hr = (3 - 1.9)/3 x 100 =	36.67%	-	-	36.67%	36.67%	-	-	36.67%
		11.95%	39.72%	48.33%		11.77%	39.97%	48.26%

	FY 2020/21 Allocation				CY 2021 Allocation			
	Total	Tier1	Tier2	Tier3	Total	Tier1	Tier2	Tier3
Water Demand in Acre Feet	14,960	5,235	7,551	2,174	15,200	5,243	7,751	2,206
Water Demand Percent	100.00%	35.00%	50.47%	14.53%	100.00%	34.50%	50.99%	14.51%
Facilities designed to meet max day demand								
E.g., Storage, treatment, pumping								
Base = (1.0/1.9) x 100 =	52.63%	18.42%	26.56%	7.65%	52.63%	18.15%	26.84%	7.64%
Max Day = (1.9 - 1.0)/1.9 x 100 =	47.37%	-	36.78%	10.59%	47.37%	-	36.88%	10.49%
		18.42%	63.34%	18.24%		18.15%	63.72%	18.13%
Facilities designed to meet max hour demand								
E.g., Transmission and distribution								
Base = (1.0/3) x 100 =	33.33%	11.67%	16.82%	4.84%	33.33%	11.50%	16.99%	4.84%
Max Day = (1.9 - 1.0)/3 x 100 =	30.00%	-	23.29%	6.71%	30.00%	-	23.35%	6.65%
Max Hr = (3 - 1.9)/3 x 100 =	36.67%	-	-	36.67%	36.67%	-	-	36.67%
		11.67%	40.11%	48.22%		11.50%	40.34%	48.16%

COST OF SERVICE ALLOCATION
(continued)

Revenue Offsets

The District has sources of revenue other than from user fees – property tax, late/lock charges, pumping surcharges, investment earnings, backflow fees, engineering fees, and miscellaneous revenues – that offset, or reduce, budgeted and projected costs required to be recovered from user fees (revenue requirement). Property tax and investment earnings in replacement reserves offset the revenue requirement for capital replacement. Pumping surcharges assessed to recover the cost of power to pump water to customers in higher elevations, offset pumping expenses. Late and lock fees assessed to delinquent accounts, offset expenses in the meter and customer service department. A time analysis was performed to determine an allocation of meter department effort between meter reads and rereads, estimated at 27% of staff time; late and lock notice deliveries, meter locks and unlocks, estimated at 40% of staff time; and meter maintenance, estimated at 33% of staff time. After the 40% for late/lock meter department expenses reduces the offset of late/lock revenue, the remaining offset of late and lock revenue reduces the customer service expense revenue requirement. Backflow fees are collected to recover the administrative cost of water quality regulatory compliance – tracking test results, sending letters, etc. – and offset backflow expense with any remaining revenue offsetting meter department expense. Interest in the operating account and miscellaneous revenue (recoveries, cell tower rentals) offset general and administrative expenses.

TABLE 11

Meter Department Effort	
Meter reads/rereads	27%
Late/Lock	40%
Maintenance	33%
	100%

TABLE 12

CY 2018	Amount			Other						
EXPENSES	Before Offset	Pumping Charges	Interest	Late/Lock Charges	Backflow Fees	Engineering Fees	Misc	Property Tax	Investment Earnings	Total
Pumping	$ 739,000	$295,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 295,000
Meters	642,000	-	-	256,800	19,000	-	-	-	-	275,800
Backflow Prevention	65,000	-	-	-	65,000	-	-	-	-	65,000
Customer Accounts	627,500	-	-	135,700	-	-	-	-	-	135,700
Engineering	1,415,500	-	-	-	-	31,500	-	-	-	31,500
General & Admin.	2,895,500	-	5,000	-	-	-	176,500	-	-	181,500
Capital Replacement	2,474,164	-	-	-	-	-	-	1,981,500	224,000	2,205,500
		$295,000	$5,000	$392,500	$84,000	$31,500	$176,500	$1,981,500	$224,000	$3,190,000

CY 2019	Amount			Other						
EXPENSES	Before Offset	Pumping Charges	Interest	Late/Lock Charges	Backflow Fees	Engineering Fees	Misc	Property Tax	Investment Earnings	Total
Pumping	$ 875,500	$390,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 390,000
Meters	667,500	-	-	267,000	19,000	-	-	-	-	286,000
Backflow Prevention	67,000	-	-	-	67,000	-	-	-	-	67,000
Customer Accounts	660,000	-	-	136,500	-	-	-	-	-	136,500
Engineering	1,475,000	-	-	-	-	32,500	-	-	-	32,500
General & Admin.	3,082,500	-	5,000	-	-	-	181,500	-	-	186,500
Capital Replacement	2,494,918	-	-	-	-	-	-	2,007,000	217,000	2,224,000
		$390,000	$5,000	$403,500	$86,000	$32,500	$181,500	$2,007,000	$217,000	$3,322,500

COST OF SERVICE ALLOCATION
(continued)

Capital Replacement

Capital replacement costs fluctuate significantly year-to-year. The revenue requirement for capital replacement over each of the five budgeted and projected years has been smoothed and matched to the projected trend of revenue offset to avoid spikes and significant changes year-to-year.

TABLE 13

Property Tax &	5 Year Total	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Investment Earnings Offset	$ 11,501,000	$ 2,276,000	$ 2,135,000	$ 2,313,000	$ 2,358,000	$2,419,000
Capital Replacement	12,902,000	4,435,700	3,900,200	2,036,100	2,530,000	-
Capital Revenue Requirement Smoothed		2,553,252	2,395,076	2,594,759	2,645,241	2,713,672

Capital replacement is allocated based on existing assets and the peaking and tier allocations previously presented in the Study. The portion of capital replacement equal to the percent of existing service lines, meters, and general plant in relation to total assets is allocated to the RTS charge. The portion of capital replacement equal to the percent of existing pumping, water treatment, tanks and reservoirs, and transmission and distribution assets in relation to total assets is allocated to the commodity charge based on previously presented peaking factors. Fire protection is allocated 5% of related assets based on requirement for system capacity. Table 14 shows the percent used to allocate each year of capital revenue requirement determined in Table 13. General Plant is made up primarily of administrative facilities.

TABLE 14

			Commodity			Fire
Plant Assets	Total	Meters	Tier1	Tier2	Tier3	Protection
Pumping	$ 7,364,983	$ -	$ 1,388,851	$ 4,291,797	$ 1,316,086	$ 368,249
Water Treatment	95,357	-	18,928	58,492	17,937	-
Tanks & Reservoirs	54,313,776	-	10,242,220	31,650,267	9,705,600	2,715,689
Transmission&Distribution	50,658,198	-	6,049,349	18,696,674	23,379,265	2,532,910
Services	13,438,304	13,438,304	-	-	-	-
Meters	5,067,418	5,067,418	-	-	-	-
General Plant	8,987,362	8,987,362	-	-	-	-
	$139,925,398	$27,493,084	$17,699,348	$54,697,230	$34,418,888	$5,616,848
Allocation Percent	100.00%	19.65%	12.65%	39.09%	24.60%	4.01%

Projected Demand within Tiers

Demand is assumed to increase in Tier 1, average minimum use, by the growth assumption of 0.3% annually. The overall assumed 3% increase in M&I demand remaining after the assumed 0.3% increase in Tier 1 demand is allocated among the mid and highest tier based on the historical trend of increases between these tiers (as calculated in Table 15). The demand within tiers in the base or test year, 2018, was determined by entering the tier limits in a consumptive use model of over 220,000 recent customer bills representing one year of demand adjusted to the 2018 demand projection of 14,000 acre feet.

TABLE 15

2018 Base Year	Tier 1		Tier 2		Use in AF	
Meter Size	Limit	Use in AF	Limit	Use in AF	Tier 3	Total
< 1"	6	2,922	21	3,031	723	6,676
1"	16	343	78	510	201	1,054
1.5"	43	566	196	701	289	1,556
2"	85	829	335	1,104	493	2,426
> 2"	430	535	1,190	515	238	1,288
AG		-		900	-	900
Construction		-		-	100	100
TOTAL		5,195		6,761	2,044	14,000
composition of remaining tiers				76.8%	23.2%	
historical mid/high tier split				65.0%	35.0%	
Product of factors				49.9%	8.1%	
Allocation of remaining increase				86.0%	14.0%	

COST OF SERVICE ALLOCATION
(continued)

Cost Allocations

This Study incorporates a five-year outlook of cost allocations of the revenue requirement. The revenue requirement is the budgeted and projected, operating and capital expenses, less revenue offsets, and represents the amount needed to be recovered by user charges – RTS and commodity rates. Each year's allocation begins with a distribution of water demand and production among to each tier within the commodity charge with projected costs per acre foot applied. Expenses are budgeted and projected by fiscal year (July 1 through June 30) and averaged to arrive at calendar year expenses, since rates are to be effective each January 1.

2018 Cost Allocation

Budgeted/projected costs for the 2017/18 and 2018/19 fiscal years are averaged and noted as projected in the first column. The next column shows the "offsets" of revenues other than from user charges, as discussed previously under *Revenue Offsets*. The remaining columns spread the revenue requirement in accordance with how it will be recovered – through the RTS, Commodity, or Fire Service charges.

TABLE 16

	Projected		Ready-to-Serve		Commodity			Fire
	2018	Offset	Meters	Bill	Tier1	Tier2	Tier3	Protection
Water Costs								
Projected AF demand	14,000				5,195	6,761	2,044	
Projected AF production	14,830							
OMWD	3,899				3,899			
SDCWA	7,431				1,604	5,827		
Desal - committed	3,500					1,335	2,165	
Desal - excess	-						-	
Cost per AF					$ 1,249	$ 1,309	$ 2,560	
					$ 1,309	$ 2,560	$ 733	
Water purchases					$ 4,869,851	$ 7,627,543	$ 5,542,400	
					$ 2,099,636	$ 3,417,600	$ -	
Water cost	$ 29,405,194	$ -	$ 5,848,164	$ -	$ 6,969,487	$ 11,045,143	$ 5,542,400	$ -
Operating Expenses								
Pumping	739,000	295,000	-	-	82,378	260,630	78,792	22,200
Water Quality	181,000	-	-	-	67,169	87,405	26,426	-
Water Treatment	460,500	-	-	-	89,936	284,543	86,021	-
Tanks & Reservoirs	422,500	-	-	-	78,388	248,010	74,977	21,125
Transmission & Dist.	1,941,500	-	-	-	227,971	721,908	894,546	97,075
Services	259,000	-	259,000	-	-	-	-	-
Meters	642,000	275,800	192,860	173,340	-	-	-	-
Backflow Prevention	65,000	65,000	-	-	-	-	-	-
Customer Accounts	627,500	135,700	-	491,800	-	-	-	-
Equipment & Vehicles	302,500	-	302,500	-	-	-	-	-
Building & Grounds	359,500	-	359,500	-	-	-	-	-
Engineering	1,415,500	31,500	1,384,000	-	-	-	-	-
Safety & Reg. Affairs	266,500	-	266,500	-	-	-	-	-
Information Technology	1,024,500	-	1,024,500	-	-	-	-	-
G&A - Conservation	581,089	-	-	-	-	-	581,089	-
General&Admin - Other	2,314,411	181,500	2,132,911	-	-	-	-	-
Capital Replacement	2,474,164	2,205,500	52,787	-	33,984	105,022	66,086	10,785
Reserve Target Adjustmnt	780,000	-	153,257	-	98,663	304,904	191,865	31,311
Total Costs to Recover	$ 44,261,358	$ 3,190,000	$ 11,975,979	$ 665,140	$ 7,647,976	$ 13,057,565	$ 7,542,202	$ 182,496

COST OF SERVICE ALLOCATION
(continued)

2018 Cost Allocation (continued)

The RTS is divided into two columns – Meters and Bill. Expenses allocated to RTS are fixed in nature – do not change when demand changes – and are not directly related to the flow of water. Expenses allocated to Meters include SDCWA's fixed charges, general and administrative, engineering, information technology, maintenance expenses for meters and service lines, capital replacement allocated to meters, service lines, and general plant, and other overhead expenses (buildings and grounds, vehicles and equipment, safety and regulatory affairs).

Expenses directly related to customer billing – customer service and meter reading expenses – are allocated to the Bill column. Expenses directly related to flow (transmission and distribution, water treatment, tanks and reservoirs, etc.) are allocated to the commodity tiers based on demand and peaking factors – see *Peaking Factors and Tier Allocation*, Page 14. Conservation expenses are allocated to the highest use tier. A portion of capital replacement is allocated to tiers based on the District's investment in assets – see *Capital Replacement*, Page 16.

2019 Cost Allocation

TABLE 17

	Projected		Ready-to-Serve		Commodity			Fire
	2019	Offset	Meters	Bill	Tier1	Tier2	Tier3	Protection
Water Costs								
Projected AF demand	14,400				5,211	7,091	2,098	
Projected AF production	15,250							
OMWD	3,899				3,899			
SDCWA	7,705				1,621	6,084		
Desal - committed	3,500					1,278	2,222	
Desal - excess	146						146	
Cost per AF					$ 1,361	$ 1,426	$ 2,645	
					$ 1,426	$ 2,645	$ 767	
Water purchases					$ 5,306,539	$ 8,675,784	$ 5,877,190	
					$ 2,311,546	$ 3,380,310	$ 111,982	
Water cost	$ 32,033,351	$ -	$ 6,370,000	$ -	$ 7,618,085	$ 12,056,094	$ 5,989,172	$ -
Operating Expenses								
Pumping	875,500	390,000	-	-	87,817	288,127	85,281	24,275
Water Quality	193,500	-	-	-	70,028	95,279	28,193	-
Water Treatment	487,500	-	-	-	92,820	304,541	90,139	-
Tanks & Reservoirs	436,500	-	-	-	78,955	259,047	76,673	21,825
Transmission & Dist.	2,181,500	-	-	-	249,935	819,851	1,002,639	109,075
Services	290,000	-	290,000	-	-	-	-	-
Meters	667,500	286,000	201,275	180,225	-	-	-	-
Backflow Prevention	67,000	67,000	-	-	-	-	-	-
Customer Accounts	660,000	136,500	-	523,500	-	-	-	-
Equipment & Vehicles	306,500	-	306,500	-	-	-	-	-
Building & Grounds	363,000	-	363,000	-	-	-	-	-
Engineering	1,475,000	32,500	1,442,500	-	-	-	-	-
Safety & Reg. Affairs	277,000	-	277,000	-	-	-	-	-
Information Technology	1,069,500	-	1,069,500	-	-	-	-	-
G&A - Conservation	598,935	-	-	-	-	-	598,935	-
General&Admin - Other	2,483,565	186,500	2,297,065	-	-	-	-	-
Capital Replacement	2,494,918	2,224,000	53,231	-	34,269	105,903	66,640	10,875
Reserve Target Adjustmnt	680,000	-	133,609	-	86,014	265,814	167,267	27,296
Total Costs to Recover	$ 47,640,769	$ 3,322,500	$ 12,803,680	$ 703,725	$ 8,317,923	$ 14,194,656	$ 8,104,939	$ 193,346

COST OF SERVICE ALLOCATION
(continued)

2019 Cost Allocation (continued)
This Study includes cost allocations by calendar year to accommodate rate setting effective each January 1. Water cost changes from SDCWA are effective January 1 each year. Operating costs for calendar years are averaged from budget and projected fiscal year operating expenses as adopted in the District's operating budget.

2020 Cost Allocation
Although rates are proposed for only 2018 and 2019, cost allocations and rate determined is provided for subsequent years to assist in smoothing projected rate increases and for financial planning.

TABLE 18

	Projected		Ready-to-Serve		Commodity			Fire
	2020	Offset	Meters	Bill	Tier1	Tier2	Tier3	Protection
Water Costs								
Projected AF demand	14,800				5,227	7,421	2,152	
Projected AF production	15,680							
OMWD	3,899				3,899			
SDCWA	7,989				1,638	6,351		
Desal - committed	3,500					1,220	2,280	
Desal - excess	292						292	
Cost per AF					$ 1,445	$ 1,514	$ 2,733	
					$ 1,514	$ 2,733	$ 802	
Water purchases					$ 5,634,055	$ 9,615,414	$ 6,231,240	
					$ 2,479,932	$ 3,334,260	$ 234,184	
Water cost	$ 34,291,085	$ -	$ 6,762,000	$ -	$ 8,113,987	$ 12,949,674	$ 6,465,424	$ -
Operating Expenses								
Pumping	1,047,500	450,000	-	-	105,522	358,228	103,875	29,875
Water Quality	208,000	-	-	-	73,466	104,291	30,243	-
Water Treatment	518,000	-	-	-	96,296	326,910	94,794	-
Tanks & Reservoirs	461,000	-	-	-	81,415	276,390	80,145	23,050
Transmission & Dist.	2,557,000	-	-	-	285,911	970,931	1,172,308	127,850
Services	348,500	-	348,500	-	-	-	-	-
Meters	703,000	300,700	212,490	189,810	-	-	-	-
Backflow Prevention	68,500	68,500	-	-	-	-	-	-
Customer Accounts	700,000	133,300	-	566,700	-	-	-	-
Equipment & Vehicles	321,000	-	321,000	-	-	-	-	-
Building & Grounds	376,500	-	376,500	-	-	-	-	-
Engineering	1,473,000	33,500	1,439,500	-	-	-	-	-
Safety & Reg. Affairs	288,500	-	288,500	-	-	-	-	-
Information Technology	1,120,500	-	1,120,500	-	-	-	-	-
G&A - Conservation	622,237	-	-	-	-	-	622,237	-
General&Admin - Other	2,627,263	191,500	2,435,763	-	-	-	-	-
Capital Replacement	2,620,000	2,335,500	55,900	-	35,987	111,212	69,981	11,420
Reserve Target Adjustmnt	1,230,000	-	241,676	-	155,584	480,810	302,556	49,374
Total Costs to Recover	$ 51,581,585	$ 3,513,000	$ 13,602,329	$ 756,510	$ 8,948,168	$ 15,578,446	$ 8,941,563	$ 241,569

COST OF SERVICE ALLOCATION
(continued)

2021 Cost Allocation

TABLE 19

	Projected		Ready-to-Serve		Commodity			Fire
	2021	Offset	Meters	Bill	Tier1	Tier2	Tier3	Protection
Water Costs								
Projected AF demand	15,200				5,243	7,751	2,206	
Projected AF production	16,100							
OMWD	3,899				3,899			
SDCWA	8,264				1,655	6,609		
Desal - committed	3,500					1,163	2,337	
Desal - excess	437						437	
Cost per AF					$ 1,540	$ 1,613	$ 2,825	
					$ 1,613	$ 2,825	$ 840	
Water purchases					$ 6,004,460	$ 10,660,317	$ 6,602,025	
					$ 2,669,515	$ 3,285,475	$ 367,080	
Water cost	$ 36,794,872	$ -	$ 7,206,000	$ -	$ 8,673,975	$ 13,945,792	$ 6,969,105	$ -
Operating Expenses								
Pumping	1,252,500	470,000	-	-	134,922	473,679	134,774	39,125
Water Quality	222,500	-	-	-	76,762	113,453	32,285	-
Water Treatment	545,000	-	-	-	98,917	347,274	98,809	-
Tanks & Reservoirs	483,500	-	-	-	83,367	292,682	83,276	24,175
Transmission & Dist.	2,992,500	-	-	-	326,930	1,146,816	1,369,129	149,625
Services	410,000	-	410,000	-	-	-	-	-
Meters	730,000	312,500	220,400	197,100	-	-	-	-
Backflow Prevention	69,500	69,500	-	-	-	-	-	-
Customer Accounts	725,000	134,000	-	591,000	-	-	-	-
Equipment & Vehicles	336,500	-	336,500	-	-	-	-	-
Building & Grounds	387,000	-	387,000	-	-	-	-	-
Engineering	1,445,500	34,500	1,411,000	-	-	-	-	-
Safety & Reg. Affairs	295,500	-	295,500	-	-	-	-	-
Information Technology	1,167,000	-	1,167,000	-	-	-	-	-
G&A - Conservation	645,689	-	-	-	-	-	645,689	-
General&Admin - Other	2,766,311	196,500	2,569,811	-	-	-	-	-
Capital Replacement	2,679,457	2,388,500	57,167	-	36,804	113,736	71,570	11,680
Reserve Target Adjustmnt	1,000,000	-	196,484	-	126,491	390,903	245,980	40,142
Total Costs to Recover	$ 54,948,329	$ 3,605,500	$ 14,256,862	$ 788,100	$ 9,558,168	$ 16,824,335	$ 9,650,617	$ 264,747

The *Reserve Target Adjustment*, last line of the cost allocation, a necessary part of the revenue requirement to avert significant downward trends in reserve balances. This amount is also necessary to maintain the projected favorable debt service coverage ratio which will allow for a debt issuance. Without the reserve adjustment, the District may not have the capacity to incur debt. Without this adjustment, more debt would lower the projected debt service coverage ratio below the District's target of 1.15 times coverage without capacity fees or property tax.

COST OF SERVICE ALLOCATION
(continued)

2022 Cost Allocation

TABLE 20

	Projected		Ready-to-Serve		Commodity			Fire
	2022	Offset	Meters	Bill	Tier1	Tier2	Tier3	Protection
Water Costs								
Projected AF demand	15,600				5,259	8,081	2,260	
Projected AF production	16,530							
OMWD	3,899				3,899			
SDCWA	8,548				1,672	6,876		
Desal - committed	3,500					1,106	2,394	
Desal - excess	583						583	
Cost per AF					$ 1,614	$ 1,691	$ 2,921	
					$ 1,691	$ 2,921	$ 879	
Water purchases					$ 6,292,986	$ 11,627,316	$ 6,992,874	
					$ 2,827,352	$ 3,230,626	$ 512,457	
Water cost	$ 39,036,611	$ -	$ 7,553,000	$ -	$ 9,120,338	$ 14,857,942	$ 7,505,331	$ -
Operating Expenses								
Pumping	1,360,000	480,000	-	-	148,306	537,381	150,313	44,000
Water Quality	229,000	-	-	-	77,196	118,622	33,182	-
Water Treatment	555,000	-	-	-	98,457	356,754	99,789	-
Tanks & Reservoirs	489,000	-	-	-	82,411	298,613	83,526	24,450
Transmission & Dist.	3,186,000	-	-	-	340,201	1,231,867	1,454,632	159,300
Services	430,000	-	430,000	-	-	-	-	-
Meters	734,000	314,600	221,220	198,180	-	-	-	-
Backflow Prevention	70,000	70,000	-	-	-	-	-	-
Customer Accounts	729,000	138,400	-	590,600	-	-	-	-
Equipment & Vehicles	343,000	-	343,000	-	-	-	-	-
Building & Grounds	390,000	-	390,000	-	-	-	-	-
Engineering	1,452,000	35,000	1,417,000	-	-	-	-	-
Safety & Reg. Affairs	296,000	-	296,000	-	-	-	-	-
Information Technology	1,186,000	-	1,186,000	-	-	-	-	-
G&A - Conservation	656,682	-	-	-	-	-	656,682	-
General&Admin - Other	2,854,318	199,000	2,655,318	-	-	-	-	-
Capital Replacement	2,713,672	2,419,000	57,899	-	37,273	115,188	72,483	11,829
Reserve Target Adjustmnt	1,680,000	-	330,093	-	212,505	656,717	413,247	67,438
Total Costs to Recover	$ 58,390,283	$ 3,656,000	$ 14,879,530	$ 788,780	$ 10,116,687	$ 18,173,084	$ 10,469,185	$ 307,017

UNITS OF SERVICE

To calculate rates, the total costs to recover, or revenue requirement, determined in the Cost Allocation Section of this report – pages 18 through 22 – is broken down into Units of Service. The revenue requirement allocated to RTS-Meters is divided by total meter equivalents billed throughout the year. The revenue requirement allocated to RTS-Bill is divided by the number of water bills processed and sent throughout the year. The revenue requirement for each tier of water commodity is divided by the respective demand within each tier. The revenue requirement allocated to Fire Protection is divided by the number of diameter inches of service line billed through the year for fire services.

Meters

District rates include a Ready-to-Serve Charge (RTS) to recover costs that are fixed in relation to demand or not directly associated with the flow of water. The meters in service are projected from the actual active meters billed in December of 2016 using the 0.3% growth assumption – see Demand Projection, Page 7 – with the allocation of the 0.3% among meter sizes projected by historical increases by meter size. The number of meters in December, mid fiscal year, represents the monthly average throughout the year.

Bills

The monthly average number of meters is then multiplied by twelve to estimate the number of water bills processed each year. The revenue requirement allocated to Meters-Bill is divided by the estimated number of bills processed each year to assign a cost per bill for subsequent RTS calculation.

TABLE 21

Meter	Active Meters		Avg Annual	Projected Average Meters				
Size	12/31/2011	12/31/2016	Increase	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
< 1"	18,488	19,149	0.72%	19,160	19,171	19,185	19,196	19,210
1"	915	1,024	2.38%	1,053	1,081	1,114	1,142	1,175
1.5"	662	689	0.82%	699	709	720	730	741
2"	491	511	0.81%	521	531	542	552	563
3"	62	63	0.32%	64	65	66	67	68
4"	17	17	0.00%	17	17	17	17	17
6"	15	15	0.00%	15	15	15	15	15
10"	1	1	0.00%	1	1	1	1	1
Total	20,651	21,469		21,530	21,590	21,660	21,720	21,790
	Number of Bills Processed Each Year			258,360	259,080	259,920	260,640	261,480

Meter Equivalents

As of March 31, 2017, the District had 21,456 actively billed meters of sizes varying from 5/8" to 10". Larger meters and associated capacities require more resources to maintain. The District performed a Meter Equivalent Analysis (MEA), when the standard specification for the base meter changed from a 5/8" meter to a ¾" meter. The MEA resulted in a recommendation of an appropriate number of meter equivalents per meter size.

TABLE 22

	GPM Rating		Factor		
	Mid	High	Mid	High	Average
iPerl 5/8"	12.6	25.0	0.72	0.71	0.71
iPerl 3/4"	17.6	35.0	1.00	1.00	1.00
iPerl 1"	27.7	55.0	1.58	1.57	1.57
Omni 1 ½"	80.8	160.0	4.60	4.57	4.59
Omni 2"	100.8	200.0	5.74	5.71	5.73
Omni 3"	251.3	500.0	14.32	14.29	14.30
Omni 4"	501.5	1,000.0	28.58	28.57	28.57
Omni 6"	1,002.0	2,000.0	57.09	57.14	57.12
MAG 10"	4,015.5	8,000.0	228.80	228.57	228.69

UNITS OF SERVICE
(continued)

Meters (continued)

Meter Equivalents (continued)

TABLE 23

	Provision for Replacement								Factor
	Meter		Register/Calibration		MXU		Total Annual		Based on
	Cost	Life	Cost	Life	Cost	Life	Cost	Factor	Meter Cost
SRII 5/8"	$ 132.77	20	$ 68.51	10.0	$141.38	10.0	$ 27.63	1.26	0.85
iPerl 3/4"	155.51	20	-	10.0	141.38	10.0	21.91	1.00	1.00
iPerl 1"	226.20	20	-	10.0	141.38	10.0	25.45	1.16	1.45
Omni 1 ½"	870.74	20		10.0	141.38	10.0	57.67	2.63	5.60
Omni 2"	1,032.84	20	770.5	10.0	141.38	10.0	142.82	6.52	6.64
Omni 3"	1,287.05	20	946.3	10.0	141.38	10.0	173.12	7.90	8.28
Omni 4"	2,505.69	20	946.3	10.0	141.38	10.0	234.06	10.68	16.11
Omni 6"	4,511.06	20	1,633.5	10.0	141.38	10.0	403.04	18.39	29.01
MAG 10"	7,177.50	20	1,215.6	10.0	141.38	10.0	494.57	22.57	46.15

TABLE 24

	Meter Equivalent Multiple (Factor)				
	Based on GPM Rating		Based on Cost		
	Previous	Current	Replacement	Meter	Recommended
5/8"	0.7	0.7	1.3	0.9	1.0
3/4"	1.0	1.0	1.0	1.0	1.0
1"	1.7	1.6	1.2	1.5	1.5
1 ½"	3.3	4.6	2.6	5.6	4.0
2"	5.3	5.7	6.5	6.6	6.5
3"	10.7	14.3	7.9	8.3	10.0
4"	16.7	28.6	10.7	16.1	15.0
6"	33.3	57.1	18.4	29.0	30.0
10"	76.7	228.7	22.6	46.2	70.0

E.g., a base meter, ¾" is the equivalent of 1, when a 2" meter is the equivalent of 6.5 base meters in terms of the effort and resources expended to maintain the meter and the system to serve the capacity of that meter. The MEA focused on Gallons Per Minute (GPM) ratings, repair/replacement costs, and meter costs. Recommended meter equivalents are multiplied by the average number of meters anticipated to be billed throughout the year. The resulting product in the number of Units of Service to divide by the revenue requirement of RTS-Meters.

TABLE 25

Meter Size	Meter Equivalents per meter	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
< 1"	1.0	19,166.0	19,179.0	19,192.0	19,205.0	19,218.0
1"	1.5	1,600.5	1,647.0	1,693.5	1,740.0	1,788.0
1.5"	4.0	2,816.0	2,856.0	2,896.0	2,936.0	2,980.0
2"	6.5	3,419.0	3,484.0	3,549.0	3,614.0	3,685.5
3"	10.0	640.0	650.0	660.0	670.0	680.0
4"	15.0	255.0	255.0	255.0	255.0	255.0
6"	30.0	450.0	450.0	450.0	450.0	450.0
10"	70.0	70.0	70.0	70.0	70.0	70.0
Additional multi-family units	0.3	4,116.0	4,128.3	4,140.6	4,152.9	4,165.5
Units of Service						
Per Month		32,532.5	32,719.3	32,906.1	33,092.9	33,292.0
Per Year		390,390.0	392,631.6	394,873.2	397,114.8	399,504.0

UNITS OF SERVICE
(continued)

Meters (continued)

Additional Multi-Family Units

Multi-family residential accounts are currently charged one-half the base meter RTS for each additional living unit served by the meter – e.g., an apartment complex of 8 living units served by one 2" meter pays the 2" RTS charge plus 7 times one-half the ¾" RTS charge. The current additional unit charge includes unit of service for the processing of a bill. This Study recommends not including an allocation of the Bill revenue requirement since no additional bill is generated for the additional living units. Staff also analyzed average demand from multi-family meters compared to other same-size meters and found on average a 30% higher demand for multi-family meters. This Study also recommends reducing the meter equivalent for additional units from 0.5 to 0.3, representing the 30% more demand and maintenance/replacement burden from multi-family meters.

Fire Line RTS

The District assesses RTS on fire service lines based on the diameter in inches of the service line. A rate is applied for each inch of diameter. The current rate is $5.87 per service diameter inch (e.g., a customer with an 8" fire service line would pay $46.96 – 8" times $5.87 – per month in RTS monitor usage and maintain that fire service and meter). The total number of billing units (inches of fire service line, as of December 31, 2016 was 3,169 as shown in Table 26. The same growth assumption of 0.3% is applied to service line inches each year and multiplies by 12 to arrive at the number of units of service to divide into the fire protection revenue requirement to calculate a rate per inch of diameter fire line. December is used, the midpoint, to approximate the average for the fiscal year.

TABLE 26

Fire Lines as of December 31, 2016

Diameter	# of Accounts	Total Billing Units
1"	2	2
3"	23	69
4"	65	260
6"	180	1,080
8"	201	1,608
10"	15	150
Total	486	3,169

Commodity

Units of service of commodity within each tier are determined in each calendar year costs allocations – Tables 17 and 19. This demand is divided in to the revenue requirement for each tier to determine the rate.

RATE CALCULATIONS

RTS and commodity rates are calculated by dividing the revenue requirement components by the associated units of service.

RTS

RTS-Meter revenue requirements determined in Tables 16, 18, and 20, are divided by meter equivalents for the year determined in Table 25. RTS-Bill revenue requirement is divided by the number of bills processed for the year as determined in Table 21 to determine the unit cost of a bill. The unit cost of a bill is added to the product of the meter equivalents and meter equivalent unit cost to arrive at the recommended RTS.

TABLE 27

CY 2018	Ready-to-Serve Meters	Ready-to-Serve Bill	Fire Service
Revenue Requirement	$11,975,979	$ 665,140	$ 182,496
Billing Units	390,390	258,720	38,196
Unit Cost	$ 30.68	$ 2.57	$ 4.78

Meter	Meter Equivalents		Ready-to-Serve Charge		
Size	Per Meter	Unit Cost	Meter	Bill	Total
5/8"	1.0	$ 30.68	$ 30.68	$ 2.57	$ 33.25
3/4"	1.0	30.68	30.68	2.57	33.25
1"	1.5	30.68	46.02	2.57	48.59
1.5"	4.0	30.68	122.72	2.57	125.29
2"	6.5	30.68	199.42	2.57	201.99
3"	10.0	30.68	306.80	2.57	309.37
4"	15.0	30.68	460.20	2.57	462.77
6"	30.0	30.68	920.40	2.57	922.97
10"	70.0	30.68	2,147.60	2.57	2,150.17
multi	0.3	30.68	9.20	-	9.20

TABLE 28

CY 2019	Ready-to-Serve Meters	Ready-to-Serve Bill	Fire Service
Revenue Requirement	$12,803,680	$ 703,725	$ 193,346
Billing Units - HCFs	392,632	259,500	38,316
Unit Cost	$ 32.61	$ 2.71	$ 5.05

Meter	Meter Equivalents		Ready-to-Serve Charge		
Size	Per Meter	Unit Cost	Meter	Bill	Total
5/8"	1.0	$ 32.61	$ 32.61	$ 2.71	$ 35.32
3/4"	1.0	32.61	32.61	2.71	35.32
1"	1.5	32.61	48.92	2.71	51.63
1.5"	4.0	32.61	130.44	2.71	133.15
2"	6.5	32.61	211.97	2.71	214.68
3"	10.0	32.61	326.10	2.71	328.81
4"	15.0	32.61	489.15	2.71	491.86
6"	30.0	32.61	978.30	2.71	981.01
10"	70.0	32.61	2,282.70	2.71	2,285.41
multi	0.3	32.61	9.78	-	9.78

"Multi" = the charge for each additional multi-family living unit as discussed on Page 26.

RATE CALCULATIONS
(continued)

RTS (continued)

Although rates are recommended for 2108 and 2019 only, rates for 2020 and subsequent years are determined for financial planning and rate analysis and smoothing. The current fire service line charge of $5.87 is recommend to stay constant until 2020 when an increase is calculated, rather than drop to the amounts calculated for 2108 and 2019, and then increase beyond the current rate in 2020. The same recommendation holds for some of the larger meter sizes that would see a drop and then and increase in subsequent years. Meters schedules for significant increase (1.5" and 2") are recommended to be phased in evenly over three years rather than spike in 2018. The multi charge is recommended to drop from the current $18.26 to the rate projected for 2022 of $11.18 and hold steady until then.

TABLE 29

CY 2020	Ready-to-Serve Meters	Ready-to-Serve Bill	Fire Service
Revenue Requirement	$13,602,329	$ 756,510	$ 241,569
Billing Units	394,873	260,280	38,436
Unit Cost	$ 34.45	$ 2.91	$ 6.28

Meter Size	Meter Equivalents Per Meter	Meter Equivalents Unit Cost	Ready-to-Serve Charge Meter	Ready-to-Serve Charge Bill	Ready-to-Serve Charge Total
5/8"	1.0	$ 34.45	$ 34.45	$ 2.91	$ 37.36
3/4"	1.0	34.45	34.45	2.91	37.36
1"	1.5	34.45	51.68	2.91	54.59
1.5"	4.0	34.45	137.80	2.91	140.71
2"	6.5	34.45	223.93	2.91	226.84
3"	10.0	34.45	344.50	2.91	347.41
4"	15.0	34.45	516.75	2.91	519.66
6"	30.0	34.45	1,033.50	2.91	1,036.41
10"	70.0	34.45	2,411.50	2.91	2,414.41
multi	0.3	34.45	10.34	-	10.34

Commodity Rates

Commodity rates are determined by dividing the revenue requirement within each tier by the demand, or billing units (748 gallons, or 100 cubic feet), within this tiers. Both the revenue requirement and the demand are presented in Tables 17 and 19. Demand is presented in acre feet in Tables 17 and 19, and multiplied by 435.6 to convert to billing units.

TABLE 30

	2018 Tier 1	2018 Tier 2	2018 Tier 3	2019 Tier 1	2019 Tier 2	2019 Tier 3
Revenue Requirement	$7,647,976	$13,057,565	$7,542,202	$8,317,923	$14,194,656	$8,104,939
Billing Units - HCF	2,262,942	2,945,092	890,366	2,269,912	3,088,840	913,889
Unit Cost	$ 3.38	$ 4.43	$ 8.47	$ 3.66	$ 4.60	$ 8.87

RECOMMENDED RATES (before smoothing)

TABLE 31

Meter Size	Ready-to-Serve Charge Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	Increase to: CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
5/8"	$ 31.42	$ 33.25	$ 35.32	$ 37.36	$ 38.92	$ 40.26	5.8%	6.2%	5.8%	4.2%	3.4%
3/4"	36.52	33.25	35.32	37.36	38.92	40.26	-9.0%	6.2%	5.8%	4.2%	3.4%
1"	55.29	48.59	51.63	54.59	56.87	58.89	-12.1%	6.2%	5.7%	4.2%	3.5%
1.5"	110.59	125.29	133.15	140.71	146.62	152.01	13.3%	6.3%	5.7%	4.2%	3.7%
2"	178.11	201.99	214.68	226.84	236.37	245.14	13.4%	6.3%	5.7%	4.2%	3.7%
3"	356.22	309.37	328.81	347.41	362.02	375.51	-13.2%	6.3%	5.7%	4.2%	3.7%
4"	552.94	462.77	491.86	519.66	541.52	561.76	-16.3%	6.3%	5.7%	4.2%	3.7%
6"	1,105.88	922.97	981.01	1,036.41	1,080.02	1,120.51	-16.5%	6.3%	5.6%	4.2%	3.7%
10"	2,549.36	2,150.17	2,285.41	2,414.41	2,516.02	2,610.51	-15.7%	6.3%	5.6%	4.2%	3.8%
multi	18.26	9.20	9.78	10.34	10.77	11.18	-49.6%	6.3%	5.6%	4.2%	3.8%
Fire Line per diameter"	5.87	4.78	5.05	6.28	6.87	7.94	-18.6%	5.6%	24.4%	9.4%	15.6%
Construction	204.48	279.27	296.01	312.61	324.92	336.61	36.6%	6.0%	5.6%	3.9%	3.6%

Commodity Rates

	Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY2018	CY2019	CY2020	CY2021	CY2022
Tier 1	$ 3.08	$ 3.38	$ 3.66	$ 3.93	$ 4.19	$ 4.42	9.7%	8.3%	7.4%	6.6%	5.5%
Tier 2	4.12	4.43	4.60	4.82	4.98	5.16	7.5%	3.8%	4.8%	3.3%	3.6%
Tier 3	5.33	8.47	8.87	9.54	10.04	10.63	58.9%	4.7%	7.6%	5.2%	5.9%
Tier 4	7.41										

Tier Structure in Units

Meter Size	Current Tier 1	Tier 2	Tier 3	Tier 4	Effective CY 2018 Tier 1	Tier 2	Tier 3
<1"	1 - 5	6 - 17	18 - 36	37 +	1 - 6	7 - 21	22 +
1"	1 - 5	6 - 60	61 - 214	215 +	1 - 16	17 - 78	79 +
1.5"	1 - 5	6 - 157	158 - 627	628 +	1 - 43	44 - 196	197 +
2"	1 - 5	6 - 242	243 - 806	807 +	1 - 85	86 - 335	336 +
>2"	1 - 5	6 - 1,133	1134-3970	3,971 +	1 - 430	431-1,190	1,191 +
Ag	1 - 5	6 +				1 +	
Temporary Construction				1 +			1 +

RATE IMPACTS (before smoothing)

TABLE 32

Low User

	Effective						Increase				
	Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2018		CY 2019		CY2020
5/8"	$ 50.94	$ 53.53	$ 57.28	$ 60.94	$ 64.06	$ 66.78	$ 2.59	5.1%	$ 3.75	7.0%	6.4%
3/4"	56.04	56.80	58.48	60.94	64.06	66.78	0.76	1.4%	1.68	3.0%	4.2%
1"	116.01	109.37	113.85	118.17	123.91	129.61	(6.64)	-5.7%	4.48	4.1%	3.8%
1.5"	282.55	265.97	288.05	203.59	326.79	342.07	(16.58)	-5.9%	22.08	8.3%	-29.3%
2"	523.11	481.65	525.78	560.89	592.52	620.84	(41.46)	-7.9%	44.12	9.2%	6.7%
3"	2,122.62	1,809.62	1,930.02	2,046.12	2,163.72	2,276.11	(313.00)	-14.7%	120.40	6.7%	6.0%
Ag 1"	148.97	154.91	165.69	170.97	176.39	182.73	5.94	4.0%	10.78	7.0%	3.2%
Ag 1.5"	406.15	444.02	466.47	492.57	510.16	528.69	37.87	9.3%	22.45	5.1%	5.6%
Mf 1"	246.17	180.04	195.55	204.28	213.43	222.46	(66.13)	-26.9%	15.50	8.6%	4.5%
Mf 1.5"	610.01	461.62	494.60	527.39	553.08	576.78	(148.39)	-24.3%	32.98	7.1%	6.6%

Average User

	Effective						Increase				
	Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2018		CY 2019		CY2020
5/8"	$ 79.78	$ 84.54	$ 89.48	$ 94.68	$ 98.92	$ 102.90	$ 4.76	6.0%	$ 4.94	5.8%	5.8%
3/4"	84.88	87.81	90.68	94.68	98.92	102.90	2.93	3.5%	2.87	3.3%	4.4%
1"	235.49	237.84	247.25	257.95	268.33	279.25	2.35	1.0%	9.41	4.0%	4.3%
1.5"	587.43	593.79	628.45	666.38	695.31	723.91	6.36	1.1%	34.66	5.8%	6.0%
2"	1,001.03	995.53	1,059.38	1,120.01	1,170.20	1,219.40	(5.50)	-0.5%	63.84	6.4%	5.7%
3"	3,556.38	3,351.26	3,530.82	3,723.48	3,896.76	4,071.79	(205.12)	-5.8%	179.56	5.4%	5.5%
Ag 1"	470.33	507.15	524.49	546.93	564.83	585.21	36.82	7.8%	17.34	3.4%	4.3%
Ag 1.5"	1,633.91	1,764.16	1,837.27	1,928.93	1,994.20	2,066.37	130.25	8.0%	73.11	4.1%	5.0%
Mf 1"	414.57	341.79	356.55	372.98	387.73	403.06	(72.78)	-17.6%	14.75	4.3%	4.6%
Mf 1.5"	1,080.55	886.90	936.20	990.11	1,031.16	1,072.14	(193.65)	-17.9%	49.30	5.6%	5.8%

High User

	Effective						Increase				
	Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2018		CY 2019		CY2020
5/8"	$ 117.58	$ 119.98	$ 126.28	$ 133.24	$ 138.76	$ 144.18	$ 2.40	2.0%	$ 6.30	5.3%	5.5%
3/4"	122.68	123.25	127.48	133.24	138.76	144.18	0.57	0.5%	4.23	3.4%	4.5%
1"	393.23	384.03	399.05	417.01	432.67	449.53	(9.20)	-2.3%	15.02	3.9%	4.5%
1.5"	960.10	943.76	991.85	1,047.16	1,088.73	1,131.55	(16.34)	-1.7%	48.09	5.1%	5.6%
2"	1,665.64	1,589.15	1,675.78	1,765.89	1,837.52	1,910.84	(76.49)	-4.6%	86.62	5.5%	5.4%
3"	5,318.67	5,176.42	5,426.02	5,709.32	5,948.52	6,197.71	(142.25)	-2.7%	249.60	4.8%	5.2%
Ag 1"	816.41	879.27	910.89	951.81	983.15	1,018.65	62.86	7.7%	31.62	3.6%	4.5%
Ag 1.5"	2,754.55	2,969.12	3,088.47	3,239.97	3,348.76	3,469.89	214.57	7.8%	119.4	4.0%	4.9%
Mf 1"	727.22	634.06	661.76	698.44	728.21	761.07	(93.16)	-12.8%	27.7	4.4%	5.5%
Mf 1.5"	1,816.74	1,581.55	1,661.93	1,765.05	1,842.64	1,926.35	(235.19)	-12.9%	80.4	5.1%	6.2%

Very High User

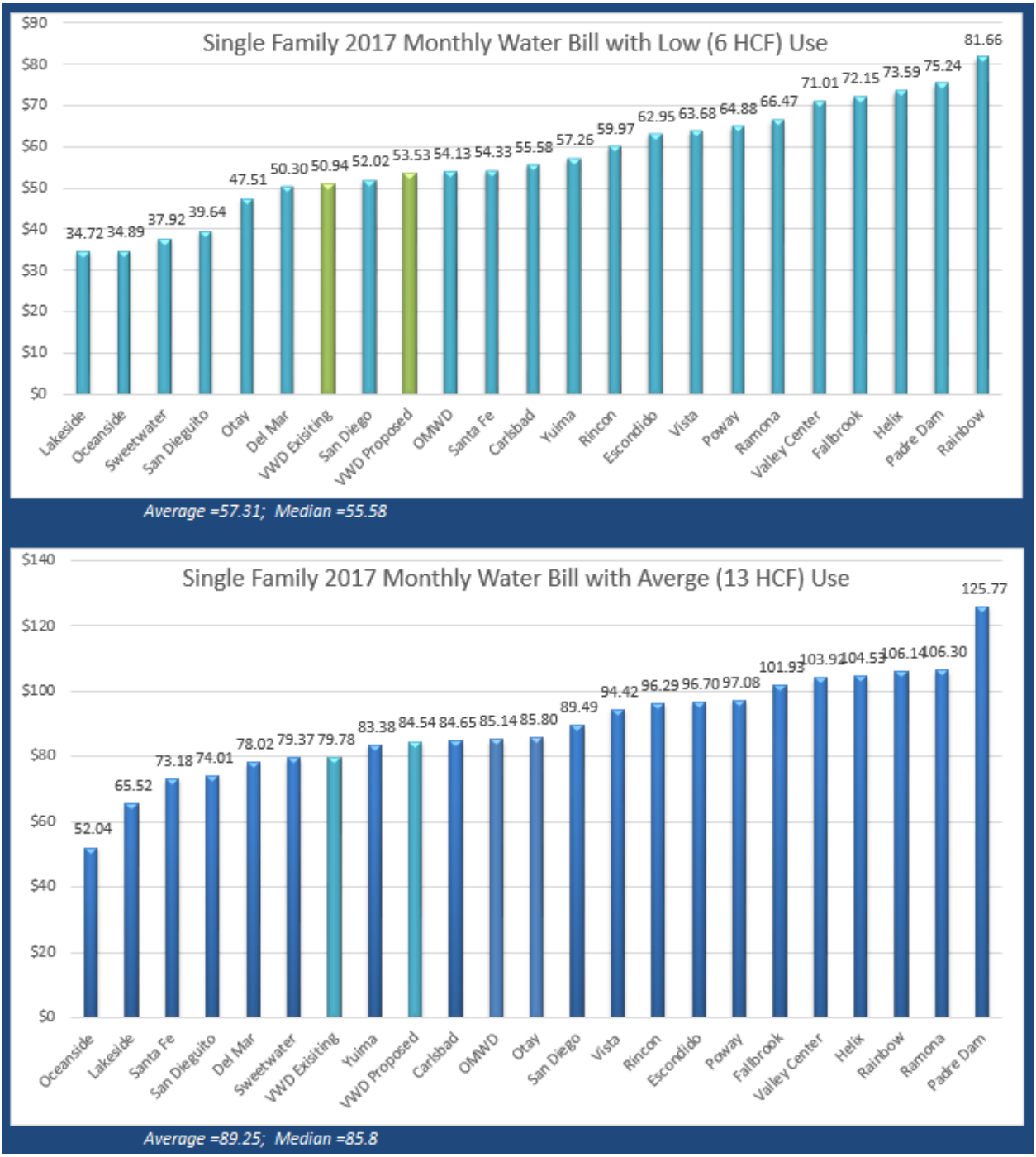
	Effective						Increase				
	Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2018		CY 2019		CY2020
5/8"	$ 241.99	$ 297.85	$ 312.55	$ 333.58	$ 349.60	$ 367.41	$ 55.86	23.1%	$ 14.70	4.9%	6.7%
3/4"	247.09	301.12	313.75	333.58	349.60	367.41	54.03	21.9%	12.63	4.2%	6.3%
1"	808.97	1,044.69	1,090.91	1,161.13	1,215.79	1,278.67	235.72	29.1%	46.22	4.4%	6.4%
1.5"	2,004.78	2,603.88	2,730.37	2,917.00	3,056.57	3,215.03	599.10	29.9%	126.49	4.9%	6.8%
2"	3,451.19	4,426.60	4,647.23	4,961.79	5,200.92	5,471.89	975.41	28.3%	220.62	5.0%	6.8%
3"	11,661.4	15,255.7	15,981.3	17,061.9	17,896.1	18,847.4	3,594.4	30.8%	725.6	4.8%	6.8%
Ag 1"	1,578.61	1,698.82	1,761.89	1,843.51	1,904.45	1,973.25	120.21	7.6%	63.07	3.7%	4.6%
Ag 1.5"	5,407.83	5,822.04	6,050.87	6,344.05	6,555.88	6,792.93	414.21	7.7%	228.8	3.9%	4.8%
Mf 1"	1,475.63	1,489.53	1,557.63	1,661.98	1,742.25	1,834.70	13.90	0.9%	68.1	4.6%	6.7%
Mf 1.5"	3,706.29	3,741.40	3,923.78	4,197.75	4,402.84	4,637.00	35.11	0.9%	182.4	4.9%	7.0%

Ag=agricultural, Mf=Multi-family (apartments, mobile homes, etc.,)

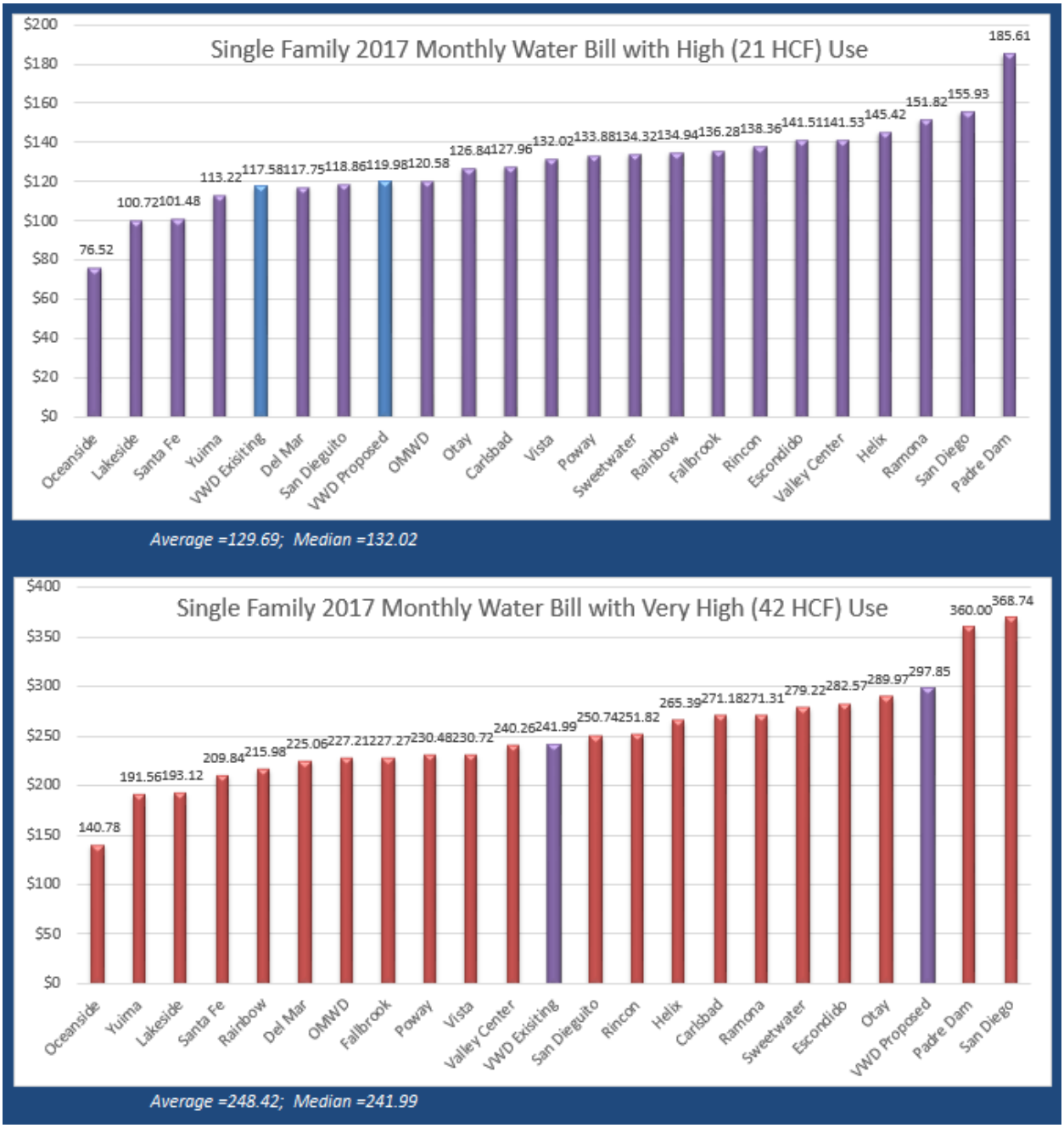
Low Use = minimum average use; High Use = maximum average use; Very High Use = twice the maximum average use.

RATE SURVEY

The VWD proposed rate for 2018 is compared to all other agencies' 2017 rate. The rate increase for all other agencies is unknown at this time.



RATE SURVEY
(continued)



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Demand Projections

	CY	Meters	Demand in Acre Feet M&I	AG	Construction	Total	Increase # of Meters	Meter%	M&I Demand	
	2007	19,920	17,595	2,438	465	20,499				
	2008	20,329	17,121	1,685	252	19,058	409	2.1%	-2.7%	
A	2009	20,510	14,985	1,607	62	16,655	181	0.9%	-12.5%	
c	2010	20,522	13,250	1,176	41	14,466	12	0.1%	-11.6%	
t	2011	20,623	13,532	1,062	40	14,634	101	0.5%	2.1%	
u	2012	20,826	14,109	1,342	38	15,489	203	1.0%	4.3%	
a	2013	21,060	14,399	1,535	50	15,984	234	1.1%	2.1%	
l	2014	21,295	14,994	1,455	74	16,522	235	1.1%	4.1%	
	2015	21,322	11,398	991	37	12,426	27	0.1%	-24.0%	
	2016	21,401	12,236	909	145	13,290	79	0.4%	7.4%	
P	2017	21,460	12,600	900	100	13,600	*assumptions: 3% increase in M&I - 0.3% growth, 2.7% behavior; 1% decline in Ag; 30% decreasae in construction water*			
r	2018	21,530	13,000	900	100	14,000	*assumptions: 3% increase in M&I - 0.3% growth, 2.7% behavior; Ag and construction flat*			
o	2019	21,590	13,400	900	100	14,400	*assumptions: 3% increase in M&I - 0.3% growth, 2.7% behavior; Ag and construction flat*			
j	2020	21,660	13,800	900	100	14,800	*assumptions: 3% increase in M&I - 0.3% growth, 2.7% behavior; Ag and construction flat*			
e	2021	21,720	14,200	900	100	15,200	*assumptions: 3% increase in M&I - 0.3% growth, 2.7% behavior; Ag and construction flat*			
c	2022	21,790	14,600	900	100	15,600	*assumptions: 3% increase in M&I - 0.3% growth, 2.7% behavior; Ag and construction flat*			
t										
e										
d										

Supply Distribution

Unbilled % assumption 5.6%

		Desal OMWD	SDCWA	Committed	Excess	Total
2016	January thru June	1,753	2,736	1,750	-	6,239
2016	July thru December	2,146	4,104	1,750	-	8,000
2017	January thru June	1,753	2,257	1,750	-	5,760
2017	July thru December	2,146	4,754	1,750	-	8,650
2018	January thru June	1,753	2,427	1,750	-	5,930
2018	July thru December	2,146	5,004	1,750	-	8,900
2019	January thru June	1,753	2,451	1,750	146	6,100
2019	July thru December	2,146	5,254	1,750	-	9,150
2020	January thru June	1,753	2,475	1,750	292	6,270
2020	July thru December	2,146	5,514	1,750	-	9,410
2021	January thru June	1,753	2,500	1,750	437	6,440
2021	July thru December	2,146	5,764	1,750	-	9,660
2022	January thru June	1,753	2,524	1,750	583	6,610
2022	July thru December	2,146	6,024	1,750	-	9,920

Tier Accumulation

2018 - Base Year	Tier 1		Tier 2		Use in AF	
Meter Size	Limit	Use in AF	Limit	Use in AF	Tier 3	Total
< 1"	6	2,922	21	3,031	723	6,676
1"	16	343	78	510	201	1,054
1.5"	43	566	196	701	289	1,556
2"	85	829	335	1,104	493	2,426
> 2"	430	535	1,190	515	238	1,288
AG		-		900	-	900
Construction		-		-	100	100
TOTAL		5,195		6,761	2,044	14,000
		Composition of remaining tiers		76.8%	23.2%	100%
		Historical mid/high tier split		65.0%	35.0%	100%
		Product of factors		49.9%	8.1%	
		Allocation of remaining increase		86.0%	14.0%	100%

Assume Tier 1 increase at growth assumption

Units of Service and Peaking Factors

Assumed growth	0.3%

Meter Size	Active Meters 12/31/2011	Active Meters 12/31/2016	Avg Annual Increase	Projected Average Meters CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
< 1"	18,488	19,149	0.72%	19,166	19,179	19,192	19,205	19,218
1"	915	1,024	2.38%	1,067	1,098	1,129	1,160	1,192
1.5"	662	689	0.82%	704	714	724	734	745
2"	491	511	0.81%	526	536	546	556	567
3"	62	63	0.32%	64	65	66	67	68
4"	17	17	0.00%	17	17	17	17	17
6"	15	15	0.00%	15	15	15	15	15
10"	1	1	0.00%	1	1	1	1	1
Total	20,651	21,469		21,560	21,625	21,690	21,755	21,823
Additional units		13,659		13,720	13,761	13,802	13,843	13,885
Fire lines		486						
inches		3,169		3,183	3,193	3,203	3,213	3,223

5/8" meters: 18,199

Assumes all growth in <1" meters will be 3/4" meters

Temporary Construction Meters: 36

Meter Size	Meter Equivalents per meter	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
< 1"	1.0	19,166.0	19,179.0	19,192.0	19,205.0	19,218.0
1"	1.5	1,600.5	1,647.0	1,693.5	1,740.0	1,788.0
1.5"	4.0	2,816.0	2,856.0	2,896.0	2,936.0	2,980.0
2"	6.5	3,419.0	3,484.0	3,549.0	3,614.0	3,685.5
3"	10.0	640.0	650.0	660.0	670.0	680.0
4"	15.0	255.0	255.0	255.0	255.0	255.0
6"	30.0	450.0	450.0	450.0	450.0	450.0
10"	70.0	70.0	70.0	70.0	70.0	70.0
Additional multi-family units	0.3	4,116.0	4,128.3	4,140.6	4,152.9	4,165.5
Units of Service						
Per Month		32,532.5	32,719.3	32,906.1	33,092.9	33,292.0
Per Year		390,390.0	392,631.6	394,873.2	397,114.8	399,504.0

Peaking Factors

Master Plan	Factor
Average Daily Demand	1.0
Maximum Day Demand	1.9
Maximum Hour Demand	3.0

Budget Input

	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Operating Revenues					
Water Sales	$24,866,000	$29,191,000	$31,762,000	$34,496,000	$37,120,000
Ready to Serve	13,605,000	14,128,000	15,124,000	15,560,000	15,919,000
Pumping Charges	250,000	340,000	440,000	460,000	480,000
Interest	5,000	5,000	5,000	5,000	5,000
Other	675,000	694,000	713,000	732,000	752,000
	39,401,000	44,358,000	48,044,000	51,253,000	54,276,000
Operating Expenses					
Water Purchases	28,531,000	30,454,000	32,908,000	35,279,000	37,656,000
Pumping	677,000	801,000	950,000	1,145,000	1,360,000
Water Quality	175,000	187,000	200,000	216,000	229,000
Water Treatment	447,000	474,000	501,000	535,000	555,000
Tanks & Reservoirs	416,000	429,000	444,000	478,000	489,000
Transmission & Dist.	1,835,000	2,048,000	2,315,000	2,799,000	3,186,000
Services	245,000	273,000	307,000	390,000	430,000
Meters	629,000	655,000	680,000	726,000	734,000
Backflow Prevention	64,000	66,000	68,000	69,000	70,000
Customer Accounts	614,000	641,000	679,000	721,000	729,000
Equipment & Vehicles	304,000	301,000	312,000	330,000	343,000
Building & Grounds	362,000	357,000	369,000	384,000	390,000
Engineering	1,388,000	1,443,000	1,507,000	1,439,000	1,452,000
Safety & Reg. Affairs	261,000	272,000	282,000	295,000	296,000
Information Technology	1,003,000	1,046,000	1,093,000	1,148,000	1,186,000
General & Admin.	2,812,000	2,979,000	3,186,000	3,313,000	3,511,000
	39,763,000	42,426,000	45,801,000	49,267,000	52,616,000
Operating Income	$ (362,000)	$ 1,932,000	$ 2,243,000	$ 1,986,000	$ 1,660,000
Other Revenue Detail					
Late/Lock Charges	$ 387,000	$ 398,000	$ 409,000	$ 420,000	$ 432,000
Backflow Fees	83,000	85,000	87,000	89,000	91,000
Engineering Fees	31,000	32,000	33,000	34,000	35,000
Misc	174,000	179,000	184,000	189,000	194,000
	$ 675,000	$ 694,000	$ 713,000	$ 732,000	$ 752,000
Conservation in G&A					
Salaries	$ 309,326	$ 316,796	$ 329,047	$ 343,308	$ 355,745
Benefits	187,761	192,295	199,732	208,388	215,937
Materials and service	77,000	79,000	81,000	83,000	85,000
	$ 574,087	$ 588,091	$ 609,779	$ 634,696	$ 656,682
Nonoperating Revenue					
Property Tax	$ 1,969,000	$ 1,994,000	$ 2,020,000	$ 2,046,000	$ 2,073,000
Investment Earnings	$ 307,000	$ 141,000	$ 293,000	$ 312,000	$ 346,000
Capital Replacement	$ 4,435,700	$ 3,900,200	$ 2,036,100	$ 2,530,000	$ -

Miscellaneous Input and Assumptions

	CY 2017	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Water Cost per AF						
OMWD	$ 1,197	$ 1,249	$ 1,361	$ 1,445	$ 1,540	$ 1,614
SDCWA	$ 1,255	$ 1,309	$ 1,426	$ 1,514	$ 1,613	$ 1,691
SDCWA Fixed Charges		$ 5,848,164	$ 6,370,000	$ 6,762,000	$ 7,206,000	$ 7,553,000
SDCWA ME IAC charge		$ 3.01	$ 3.28	$ 3.48	$ 3.71	$ 3.89

	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23
Desal - committed	$ 2,510	$ 2,594	$ 2,679	$ 2,769	$ 2,862	$ 2,960
Desal - excess	$ 733	$ 767	$ 802	$ 840	$ 879	$ 920

Meter Department Effort	
Meter reads/rereads	27%
Late/Lock	40%
Maintenance	33%
	100%

Water System Plant, Net of Depreciation	
Pumping	$ 7,364,983
Water Treatment	95,357
Tanks & Reservoirs	54,313,776
Transmission&Distribution	50,658,198
Services	13,438,304
Meters	5,067,418
General Plant	8,987,362
	$ 139,925,398

Allocation assumption for operating expenses not directly associated with water delivery

Fixed	100%	#REF!
Variable	0%	#REF!

Calendar Year Conversion

	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Operating Revenues					
Water Sales	27,028,500	30,476,500	33,129,000	35,808,000	37,120,000
Ready to Serve	13,866,500	14,626,000	15,342,000	15,739,500	15,919,000
Pumping Charges	295,000	390,000	450,000	470,000	480,000
Interest	5,000	5,000	5,000	5,000	5,000
Other	684,500	703,500	722,500	742,000	752,000
	41,879,500	45,857,000	49,429,000	51,353,000	51,353,000
Operating Expenses					
Water Purchases	29,492,500	31,681,000	34,093,500	36,467,500	37,656,000
Pumping	739,000	875,500	1,047,500	1,252,500	1,360,000
Water Quality	181,000	193,500	208,000	222,500	229,000
Water Treatment	460,500	487,500	518,000	545,000	555,000
Tanks & Reservoirs	422,500	436,500	461,000	483,500	489,000
Transmission & Dist.	1,941,500	2,181,500	2,557,000	2,992,500	3,186,000
Services	259,000	290,000	348,500	410,000	430,000
Meters	642,000	667,500	703,000	730,000	734,000
Backflow Prevention	65,000	67,000	68,500	69,500	70,000
Customer Accounts	627,500	660,000	700,000	725,000	729,000
Equipment & Vehicles	302,500	306,500	321,000	336,500	343,000
Building & Grounds	359,500	363,000	376,500	387,000	390,000
Engineering	1,415,500	1,475,000	1,473,000	1,445,500	1,452,000
Safety & Reg. Affairs	266,500	277,000	288,500	295,500	296,000
Information Technology	1,024,500	1,069,500	1,120,500	1,167,000	1,186,000
General & Admin.	2,895,500	3,082,500	3,249,500	3,412,000	3,511,000
	41,094,500	44,113,500	47,534,000	50,941,500	52,616,000
Operating Income	$ 785,000	$ 1,743,500	$ 1,895,000	$ 411,500	$ (1,263,000)
Other Revenue Detail					
Late/Lock Charges	$ 392,500	$ 403,500	$ 414,500	$ 426,000	$ 432,000
Backflow Fees	84,000	86,000	88,000	90,000	91,000
Engineering Fees	31,500	32,500	33,500	34,500	35,000
Misc	176,500	181,500	186,500	191,500	194,000
	$ 684,500	$ 703,500	$ 722,500	$ 742,000	$ 752,000
SDCWA Fixed Charges	$ 6,109,082	$ 6,566,000	$ 6,984,000	$ 7,379,500	$ 7,553,000
Conservation in G&A					
Salaries	313,061	322,922	336,178	349,527	355,745
Benefits	190,028	196,013	204,060	212,163	215,937
Materials and service	78,000	80,000	82,000	84,000	85,000
	$ 581,089	$ 598,935	$ 622,237	$ 645,689	$ 656,682
Nonoperating Revenue					
Property Tax	$ 1,981,500	$ 2,007,000	$ 2,033,000	$ 2,059,500	$ 2,073,000
Investment Earnings	$ 224,000	$ 217,000	$ 302,500	$ 329,000	$ 346,000
Capital Replacement	$ 4,167,950	$ 2,968,150	$ 2,283,050	$ 1,265,000	$ -

Peaking Factors and Tier Allocations

Master Plan	Factor
Avg Daily Demand	1.0
Max Day Demand	1.9
Max Hour Demand	3.0

Per VWD Master Plan: Maximum Day Demand Factor is 1.9 times Average Daily Demand. Maximum Hourly Demand is 3 times Average Daily Demand.

	FY 2017/18 Allocation				CY 2018 Allocation			
	Total	Tier1	Tier2	Tier3	Total	Tier1	Tier2	Tier3
Water Demand in Acre Feet	13,760	5,187	6,561	2,012	14,000	5,195	6,761	2,044
Water Demand Percent	100.00%	37.70%	47.68%	14.62%	100.00%	37.11%	48.29%	14.60%
Facilities designed to meet max day demand								
E.g., Storage, treatment, pumping								
Base = (1.0/1.9) x 100 =	52.63%	19.85%	25.09%	7.69%	52.63%	19.53%	25.42%	7.68%
Max Day = (1.9 - 1.0)/1.9 x 100 =	47.37%	-	36.25%	11.12%	47.37%	-	36.37%	11.00%
		19.85%	61.34%	18.81%		19.53%	61.79%	18.68%
Facilities designed to meet max hour demand								
E.g., Transmission and distribution								
Base = (1.0/3) x 100 =	33.33%	12.57%	15.89%	4.87%	33.33%	12.36%	16.10%	4.87%
Max Day = (1.9 - 1.0)/3 x 100 =	30.00%	-	22.96%	7.04%	30.00%	-	23.04%	6.96%
Max Hr = (3 - 1.9)/3 x 100 =	36.67%	-	-	36.67%	36.67%	-	-	36.67%
		12.57%	38.85%	48.58%		12.36%	39.14%	48.50%

	FY 2018/19 Allocation				CY 2019 Allocation			
	Total	Tier1	Tier2	Tier3	Total	Tier1	Tier2	Tier3
Water Demand in Acre Feet	14,160	5,203	6,891	2,066	14,400	5,211	7,091	2,098
Water Demand Percent	100.00%	36.74%	48.67%	14.59%	100.00%	36.19%	49.24%	14.57%
Facilities designed to meet max day demand								
E.g., Storage, treatment, pumping								
Base = (1.0/1.9) x 100 =	52.63%	19.33%	25.62%	7.68%	52.63%	19.04%	25.92%	7.67%
Max Day = (1.9 - 1.0)/1.9 x 100 =	47.37%	-	36.44%	10.93%	47.37%	-	36.55%	10.82%
		19.33%	62.06%	18.61%		19.04%	62.47%	18.49%
Facilities designed to meet max hour demand								
E.g., Transmission and distribution								
Base = (1.0/3) x 100 =	33.33%	12.25%	16.22%	4.86%	33.33%	12.06%	16.41%	4.86%
Max Day = (1.9 - 1.0)/3 x 100 =	30.00%	-	23.08%	6.92%	30.00%	-	23.15%	6.85%
Max Hr = (3 - 1.9)/3 x 100 =	36.67%	-	-	36.67%	36.67%	-	-	36.67%
		12.25%	39.30%	48.45%		12.06%	39.56%	48.38%

Peaking Factors and Allocations to Tiers

	FY 2019/20 Allocation				CY 2020 Allocation			
	Total	Tier1	Tier2	Tier3	Total	Tier1	Tier2	Tier3
Water Demand in Acre Feet	14,560	5,219	7,221	2,120	14,800	5,227	7,421	2,152
Water Demand Percent	100.00%	35.85%	49.59%	14.56%	100.00%	35.32%	50.14%	14.54%
Facilities designed to meet max day demand								
E.g., Storage, treatment, pumping								
Base = (1.0/1.9) x 100 =	52.63%	18.87%	26.10%	7.66%	52.63%	18.59%	26.39%	7.65%
Max Day = (1.9 - 1.0)/1.9 x 100 =	47.37%	-	36.62%	10.75%	47.37%	-	36.72%	10.65%
		18.87%	62.72%	18.41%		18.59%	63.11%	18.30%
Facilities designed to meet max hour demand								
E.g., Transmission and distribution								
Base = (1.0/3) x 100 =	33.33%	11.95%	16.53%	4.85%	33.33%	11.77%	16.71%	4.85%
Max Day = (1.9 - 1.0)/3 x 100 =	30.00%	-	23.19%	6.81%	30.00%	-	23.26%	6.74%
Max Hr = (3 - 1.9)/3 x 100 =	36.67%	-	-	36.67%	36.67%	-	-	36.67%
		11.95%	39.72%	48.33%		11.77%	39.97%	48.26%

	FY 2020/21 Allocation				CY 2021 Allocation			
	Total	Tier1	Tier2	Tier3	Total	Tier1	Tier2	Tier3
Water Demand in Acre Feet	14,960	5,235	7,551	2,174	15,200	5,243	7,751	2,206
Water Demand Percent	100.00%	35.00%	50.47%	14.53%	100.00%	34.50%	50.99%	14.51%
Facilities designed to meet max day demand								
E.g., Storage, treatment, pumping								
Base = (1.0/1.9) x 100 =	52.63%	18.42%	26.56%	7.65%	52.63%	18.15%	26.84%	7.64%
Max Day = (1.9 - 1.0)/1.9 x 100 =	47.37%	-	36.78%	10.59%	47.37%	-	36.88%	10.49%
		18.42%	63.34%	18.24%		18.15%	63.72%	18.13%
Facilities designed to meet max hour demand								
E.g., Transmission and distribution								
Base = (1.0/3) x 100 =	33.33%	11.67%	16.82%	4.84%	33.33%	11.50%	16.99%	4.84%
Max Day = (1.9 - 1.0)/3 x 100 =	30.00%	-	23.29%	6.71%	30.00%	-	23.35%	6.65%
Max Hr = (3 - 1.9)/3 x 100 =	36.67%	-	-	36.67%	36.67%	-	-	36.67%
		11.67%	40.11%	48.22%		11.50%	40.34%	48.16%

	FY 2021/22 Allocation				CY 2022 Allocation			
	Total	Tier1	Tier2	Tier3	Total	Tier1	Tier2	Tier3
Water Demand in Acre Feet	15,360	5,251	7,881	2,228	15,600	5,259	8,081	2,260
Water Demand Percent	100.00%	34.18%	51.31%	14.51%	100.00%	33.71%	51.80%	14.49%
Facilities designed to meet max day demand								
E.g., Storage, treatment, pumping								
Base = (1.0/1.9) x 100 =	52.63%	17.99%	27.00%	7.64%	52.63%	17.74%	27.26%	7.63%
Max Day = (1.9 - 1.0)/1.9 x 100 =	47.37%	-	36.93%	10.44%	47.37%	-	37.02%	10.35%
		17.99%	63.93%	18.08%		17.74%	64.28%	17.98%
Facilities designed to meet max hour demand								
E.g., Transmission and distribution								
Base = (1.0/3) x 100 =	33.33%	11.39%	17.10%	4.84%	33.33%	11.24%	17.26%	4.83%
Max Day = (1.9 - 1.0)/3 x 100 =	30.00%	-	23.39%	6.61%	30.00%	-	23.44%	6.56%
Max Hr = (3 - 1.9)/3 x 100 =	36.67%	-	-	36.67%	36.67%	-	-	36.67%
		11.39%	40.49%	48.12%		11.24%	40.70%	48.06%

Revenue Offsets

The District collects revenues and surcharges not directly related to resources required to provide service and water. These revenues are noted in the columns below and deducted from the Revenue Requirement in the Cost Allocation spreadsheet.

CY 2018

EXPENSES	Amount Before Offset	Pumping Charges	Interest	Other: Late/Lock Charges	Other: Backflow Fees	Other: Engineering Fees	Other: Misc	Property Tax	Investment Earnings	Total
Pumping	$ 739,000	$295,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 295,000
Meters	642,000	-	-	256,800	19,000	-	-	-	-	275,800
Backflow Prevention	65,000	-	-	-	65,000	-	-	-	-	65,000
Customer Accounts	627,500	-	-	135,700	-	-	-	-	-	135,700
Engineering	1,415,500	-	-	-	-	31,500	-	-	-	31,500
General & Admin.	2,895,500	-	5,000	-	-	-	176,500	-	-	181,500
Capital Replacement	2,136,830	-	-	-	-	-	-	1,981,500	224,000	2,205,500
		$295,000	$5,000	$392,500	$84,000	$31,500	$176,500	$1,981,500	$224,000	$3,190,000

CY 2019

EXPENSES	Amount Before Offset	Pumping Charges	Interest	Other: Late/Lock Charges	Other: Backflow Fees	Other: Engineering Fees	Other: Misc	Property Tax	Investment Earnings	Total
Pumping	$ 875,500	$390,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 390,000
Meters	667,500	-	-	267,000	19,000	-	-	-	-	286,000
Backflow Prevention	67,000	-	-	-	67,000	-	-	-	-	67,000
Customer Accounts	660,000	-	-	136,500	-	-	-	-	-	136,500
Engineering	1,475,000	-	-	-	-	32,500	-	-	-	32,500
General & Admin.	3,082,500	-	5,000	-	-	-	181,500	-	-	186,500
Capital Replacement	2,136,830	-	-	-	-	-	-	2,007,000	217,000	2,224,000
		$390,000	$5,000	$403,500	$86,000	$32,500	$181,500	$2,007,000	$217,000	$3,322,500

CY 2020

EXPENSES	Amount Before Offset	Pumping Charges	Interest	Other: Late/Lock Charges	Other: Backflow Fees	Other: Engineering Fees	Other: Misc	Property Tax	Investment Earnings	Total
Pumping	$1,047,500	$450,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 450,000
Meters	703,000	-	-	281,200	19,500	-	-	-	-	300,700
Backflow Prevention	68,500	-	-	-	68,500	-	-	-	-	68,500
Customer Accounts	700,000	-	-	133,300	-	-	-	-	-	133,300
Engineering	1,473,000	-	-	-	-	33,500	-	-	-	33,500
General & Admin.	3,249,500	-	5,000	-	-	-	186,500	-	-	191,500
Capital Replacement	2,136,830	-	-	-	-	-	-	2,033,000	302,500	2,335,500
		$450,000	$5,000	$414,500	$88,000	$33,500	$186,500	$2,033,000	$302,500	$3,513,000

CY 2021

EXPENSES	Amount Before Offset	Pumping Charges	Interest	Other: Late/Lock Charges	Other: Backflow Fees	Other: Engineering Fees	Other: Misc	Property Tax	Investment Earnings	Total
Pumping	$1,252,500	$470,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 470,000
Meters	730,000	-	-	292,000	20,500	-	-	-	-	312,500
Backflow Prevention	69,500	-	-	-	69,500	-	-	-	-	69,500
Customer Accounts	725,000	-	-	134,000	-	-	-	-	-	134,000
Engineering	1,445,500	-	-	-	-	34,500	-	-	-	34,500
General & Admin.	3,412,000	-	5,000	-	-	-	191,500	-	-	196,500
Capital Replacement	2,136,830	-	-	-	-	-	-	2,059,500	329,000	2,388,500
		$470,000	$5,000	$426,000	$90,000	$34,500	$191,500	$2,059,500	$329,000	$3,605,500

Revenue Offsets

CY 2022 EXPENSES	Amount Before Offset	Pumping Charges	Interest	Other: Late/Lock Charges	Other: Backflow Fees	Other: Engineering Fees	Other: Misc	Property Tax	Investment Earnings	Total
Pumping	$1,360,000	$480,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 480,000
Meters	734,000	-	-	293,600	21,000	-	-	-	-	314,600
Backflow Prevention	70,000	-	-	-	70,000	-	-	-	-	70,000
Customer Accounts	729,000	-	-	138,400	-	-	-	-	-	138,400
Engineering	1,452,000	-	-	-	-	35,000	-	-	-	35,000
General & Admin.	3,511,000	-	5,000	-	-	-	194,000	-	-	199,000
Capital Replacement	2,136,830	-	-	-	-	-	-	2,073,000	346,000	2,419,000
		$480,000	$5,000	$432,000	$91,000	$35,000	$194,000	$2,073,000	$346,000	$3,656,000

Capital Replacement Allocation

Budgeted capital replacement is volatile. Including each budget year in each rate setting year would cause the revenue requirement to fluctuate from year to year. The five years within the capital spending plan are averaged for recovery in each rate setting year.

The nature of replacements fluctuates from year to year. To smooth these fluctuations, each year's capital replacement is allocated to tiers based on book value of the components of the water system, and their nexus to peak demands. System costs associated with fire protection are allocated 5% based on the 5% requirement for system capacity.

			Commodity			Fire
Plant Assets	Total	Meters	Tier1	Tier2	Tier3	Protection
Pumping	$ 7,364,983	$ -	$ 1,388,851	$ 4,291,797	$ 1,316,086	$ 368,249
Water Treatment	95,357	-	18,928	58,492	17,937	-
Tanks & Reservoirs	54,313,776	-	10,242,220	31,650,267	9,705,600	2,715,689
Transmission&Distribution	50,658,198	-	6,049,349	18,696,674	23,379,265	2,532,910
Services	13,438,304	13,438,304	-	-	-	-
Meters	5,067,418	5,067,418	-	-	-	-
General Plant	8,987,362	8,987,362	-	-	-	-
	$139,925,398	$27,493,084	$17,699,348	$54,697,230	$34,418,888	$5,616,848
Allocation Percent	100.00%	19.65%	12.65%	39.09%	24.60%	4.01%

Capital Replacement Revenue Requirement

Property Tax &	5 Year Total	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Investment Earnings Offset	$ 11,501,000	$ 2,276,000	$ 2,135,000	$ 2,313,000	$ 2,358,000	$2,419,000
Capital Replacement	12,902,000	4,435,700	3,900,200	2,036,100	2,530,000	-
Capital Revenue Requirement Smoothed		2,553,252	2,395,076	2,594,759	2,645,241	2,713,672

Vallecitos Water District
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CY 2018 Cost Allocation and Distribution

	Projected 2018	Offset	Ready-to-Serve Meters	Ready-to-Serve Bill	Commodity Tier1	Commodity Tier2	Commodity Tier3	Fire Protection
Water Costs								
Projected AF demand	14,000				5,195	6,761	2,044	
Projected AF production	14,830							
OMWD	3,899				3,899			
SDCWA	7,431				1,604	5,827		
Desal - committed	3,500					1,335	2,165	
Desal - excess	-						-	
Cost per AF					$ 1,249	$ 1,309	$ 2,560	
					$ 1,309	$ 2,560	$ 733	
Water purchases					$4,869,851	$ 7,627,543	$5,542,400	
					$2,099,636	$ 3,417,600	$ -	
Water cost	$29,405,194	$ -	$ 5,848,164	$ -	$6,969,487	$11,045,143	$5,542,400	$ -
Operating Expenses								
Pumping	739,000	295,000	-	-	82,378	260,630	78,792	22,200
Water Quality	181,000	-	-	-	67,169	87,405	26,426	-
Water Treatment	460,500	-	-	-	89,936	284,543	86,021	-
Tanks & Reservoirs	422,500	-	-	-	78,388	248,010	74,977	21,125
Transmission & Dist.	1,941,500	-	-	-	227,971	721,908	894,546	97,075
Services	259,000	-	259,000	-	-	-	-	-
Meters	642,000	275,800	192,860	173,340	-	-	-	-
Backflow Prevention	65,000	65,000	-	-	-	-	-	-
Customer Accounts	627,500	135,700	-	491,800	-	-	-	-
Equipment & Vehicles	302,500	-	302,500	-	-	-	-	-
Building & Grounds	359,500	-	359,500	-	-	-	-	-
Engineering	1,415,500	31,500	1,384,000	-	-	-	-	-
Safety & Reg. Affairs	266,500	-	266,500	-	-	-	-	-
Information Technology	1,024,500	-	1,024,500	-	-	-	-	-
G&A - Conservation	581,089	-	-	-	-	-	581,089	-
General&Admin - Other	2,314,411	181,500	2,132,911	-	-	-	-	-
Capital Replacement	2,474,164	2,205,500	52,787	-	33,984	105,022	66,086	10,785
Reserve Target Adjustmnt	780,000	-	153,257	-	98,663	304,904	191,865	31,311
Total Costs to Recover	$44,261,358	$3,190,000	$11,975,979	$ 665,140	$7,647,976	$13,057,565	$7,542,202	$ 182,496

CY 2018	Ready-to-Serve Meters	Ready-to-Serve Bill	Commodity Tier 1	Commodity Tier 2	Commodity Tier 3	Fire Service
Revenue Requirement	$11,975,979	$ 665,140	$7,647,976	$13,057,565	$7,542,202	$ 182,496
Billing Units	390,390	258,720	2,262,942	2,945,092	890,366	38,196
Unit Cost	$ 30.68	$ 2.57	$ 3.38	$ 4.43	$ 8.47	$ 4.78

CY 2018 Target Costs -

Costs to Recover less Water Cost less Reserve Adj

Fixed - Stability	6,975,451	60%
Variable	4,690,713	40%

Some portion of these costs are always fixed, regardless of change in demand.
These fixed costs should be recovered through fixed revenue - RTS.
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Costs not associated directly with water are allocated to meter charges
The resulting allocation is compared to an historical analysis for reasonableness.
To continue to encourage conservation,
the resulting fixed allocation should not exceed historical cost stability of 69%.

Meter Size	Meter Equivalents Per Meter	Meter Equivalents Unit Cost	Ready-to-Serve Charge Meter	Ready-to-Serve Charge Bill	Ready-to-Serve Charge Total
5/8"	1.0	$ 30.68	$ 30.68	$ 2.57	$ 33.25
3/4"	1.0	30.68	30.68	2.57	33.25
1"	1.5	30.68	46.02	2.57	48.59
1.5"	4.0	30.68	122.72	2.57	125.29
2"	6.5	30.68	199.42	2.57	201.99
3"	10.0	30.68	306.80	2.57	309.37
4"	15.0	30.68	460.20	2.57	462.77
6"	30.0	30.68	920.40	2.57	922.97
10"	70.0	30.68	2,147.60	2.57	2,150.17
multi	0.3	30.68	9.20	-	9.20

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CY 2019 Cost Allocation and Distribution

	Projected 2019	Offset	Ready-to-Serve Meters	Ready-to-Serve Bill	Commodity Tier1	Commodity Tier2	Commodity Tier3	Fire Protection
Water Costs								
Projected AF demand	14,400				5,211	7,091	2,098	
Projected AF production	15,250							
OMWD	3,899				3,899			
SDCWA	7,705				1,621	6,084		
Desal - committed	3,500					1,278	2,222	
Desal - excess	146						146	
Cost per AF					$ 1,361	$ 1,426	$ 2,645	
					$ 1,426	$ 2,645	$ 767	
Water purchases					$5,306,539	$ 8,675,784	$5,877,190	
					$2,311,546	$ 3,380,310	$ 111,982	
Water cost	$32,033,351	$ -	$ 6,370,000	$ -	$7,618,085	$12,056,094	$5,989,172	$ -
Operating Expenses								
Pumping	875,500	390,000	-	-	87,817	288,127	85,281	24,275
Water Quality	193,500	-	-	-	70,028	95,279	28,193	-
Water Treatment	487,500	-	-	-	92,820	304,541	90,139	-
Tanks & Reservoirs	436,500	-	-	-	78,955	259,047	76,673	21,825
Transmission & Dist.	2,181,500	-	-	-	249,935	819,851	1,002,639	109,075
Services	290,000	-	290,000	-	-	-	-	-
Meters	667,500	286,000	201,275	180,225	-	-	-	-
Backflow Prevention	67,000	67,000	-	-	-	-	-	-
Customer Accounts	660,000	136,500	-	523,500	-	-	-	-
Equipment & Vehicles	306,500	-	306,500	-	-	-	-	-
Building & Grounds	363,000	-	363,000	-	-	-	-	-
Engineering	1,475,000	32,500	1,442,500	-	-	-	-	-
Safety & Reg. Affairs	277,000	-	277,000	-	-	-	-	-
Information Technology	1,069,500	-	1,069,500	-	-	-	-	-
G&A - Conservation	598,935	-	-	-	-	-	598,935	-
General&Admin - Other	2,483,565	186,500	2,297,065	-	-	-	-	-
Capital Replacement	2,494,918	2,224,000	53,231	-	34,269	105,903	66,640	10,875
Reserve Target Adjustmnt	680,000	-	133,609	-	86,014	265,814	167,267	27,296
Total Costs to Recover	$47,640,769	$3,322,500	$12,803,680	$ 703,725	$8,317,923	$14,194,656	$8,104,939	$ 193,346

CY 2019	Ready-to-Serve Meters	Ready-to-Serve Bill	Commodity Tier 1	Commodity Tier 2	Commodity Tier 3	Fire Service
Revenue Requirement	$12,803,680	$ 703,725	$8,317,923	$14,194,656	$8,104,939	$ 193,346
Billing Units - HCFs	392,632	259,500	2,269,912	3,088,840	913,889	38,316
Unit Cost	$ 32.61	$ 2.71	$ 3.66	$ 4.60	$ 8.87	$ 5.05

CY 2019 Target Costs -
Costs to Recover less Water Cost less Reserve Adj
Fixed - Stability 7,330,751 60%
Variable 4,954,167 40%

Some portion of these costs are always fixed, regardless of change in demand.
These fixed costs should be recovered through fixed revenue - RTS.
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Costs not associated directly with water are allocated to meter charges
The resulting allocation is compared to an historical analysis for reasonableness.
To continue to encourage conservation,
the resulting fixed allocation should not exceed historical cost stability of 69%.

Meter Size	Meter Equivalents Per Meter	Meter Equivalents Unit Cost	Ready-to-Serve Charge Meter	Ready-to-Serve Charge Bill	Ready-to-Serve Charge Total
5/8"	1.0	$ 32.61	$ 32.61	$ 2.71	$ 35.32
3/4"	1.0	32.61	32.61	2.71	35.32
1"	1.5	32.61	48.92	2.71	51.63
1.5"	4.0	32.61	130.44	2.71	133.15
2"	6.5	32.61	211.97	2.71	214.68
3"	10.0	32.61	326.10	2.71	328.81
4"	15.0	32.61	489.15	2.71	491.86
6"	30.0	32.61	978.30	2.71	981.01
10"	70.0	32.61	2,282.70	2.71	2,285.41
multi	0.3	32.61	9.78	-	9.78

Vallecitos Water District
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CY 2020 Cost Allocation and Distribution

	Projected 2020	Offset	Ready-to-Serve Meters	Ready-to-Serve Bill	Commodity Tier1	Commodity Tier2	Commodity Tier3	Fire Protection
Water Costs								
Projected AF demand	14,800				5,227	7,421	2,152	
Projected AF production	15,680							
OMWD	3,899				3,899			
SDCWA	7,989				1,638	6,351		
Desal - committed	3,500					1,220	2,280	
Desal - excess	292						292	
Cost per AF					$ 1,445	$ 1,514	$ 2,733	
					$ 1,514	$ 2,733	$ 802	
Water purchases					$5,634,055	$ 9,615,414	$6,231,240	
					$2,479,932	$ 3,334,260	$ 234,184	
Water cost	$34,291,085	$ -	$ 6,762,000	$ -	$8,113,987	$12,949,674	$6,465,424	$ -
Operating Expenses								
Pumping	1,047,500	450,000	-	-	105,522	358,228	103,875	29,875
Water Quality	208,000	-	-	-	73,466	104,291	30,243	-
Water Treatment	518,000	-	-	-	96,296	326,910	94,794	-
Tanks & Reservoirs	461,000	-	-	-	81,415	276,390	80,145	23,050
Transmission & Dist.	2,557,000	-	-	-	285,911	970,931	1,172,308	127,850
Services	348,500	-	348,500	-	-	-	-	-
Meters	703,000	300,700	212,490	189,810	-	-	-	-
Backflow Prevention	68,500	68,500	-	-	-	-	-	-
Customer Accounts	700,000	133,300	-	566,700	-	-	-	-
Equipment & Vehicles	321,000	-	321,000	-	-	-	-	-
Building & Grounds	376,500	-	376,500	-	-	-	-	-
Engineering	1,473,000	33,500	1,439,500	-	-	-	-	-
Safety & Reg. Affairs	288,500	-	288,500	-	-	-	-	-
Information Technology	1,120,500	-	1,120,500	-	-	-	-	-
G&A - Conservation	622,237	-	-	-	-	-	622,237	-
General&Admin - Other	2,627,263	191,500	2,435,763	-	-	-	-	-
Capital Replacement	2,620,000	2,335,500	55,900	-	35,987	111,212	69,981	11,420
Reserve Target Adjustmnt	1,230,000	-	241,676	-	155,584	480,810	302,556	49,374
Total Costs to Recover	$51,581,585	$3,513,000	$13,602,329	$ 756,510	$8,948,168	$15,578,446	$8,941,563	$ 241,569

CY 2020	Ready-to-Serve Meters	Ready-to-Serve Bill	Commodity Tier 1	Commodity Tier 2	Commodity Tier 3	Fire Service
Revenue Requirement	$13,602,329	$ 756,510	$8,948,168	$15,578,446	$8,941,563	$ 241,569
Billing Units	394,873	260,280	2,276,881	3,232,588	937,411	38,436
Unit Cost	$ 34.45	$ 2.91	$ 3.93	$ 4.82	$ 9.54	$ 6.28

CY 2020 Target Costs -
Costs to Recover less Water Cost less Reserve Adj
Fixed - Stability 7,838,408 57%
Variable 5,939,092 43%

Some portion of these costs are always fixed, regardless of change in demand.
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Costs not associated directly with water are allocated to meter charges
The resulting allocation is compared to an historical analysis for reasonableness.
To continue to encourage conservation,
the resulting fixed allocation should not exceed historical cost stability of 69%.

Meter Size	Meter Equivalents Per Meter	Meter Equivalents Unit Cost	Ready-to-Serve Charge Meter	Ready-to-Serve Charge Bill	Ready-to-Serve Charge Total
5/8"	1.0	$ 34.45	$ 34.45	$ 2.91	$ 37.36
3/4"	1.0	34.45	34.45	2.91	37.36
1"	1.5	34.45	51.68	2.91	54.59
1.5"	4.0	34.45	137.80	2.91	140.71
2"	6.5	34.45	223.93	2.91	226.84
3"	10.0	34.45	344.50	2.91	347.41
4"	15.0	34.45	516.75	2.91	519.66
6"	30.0	34.45	1,033.50	2.91	1,036.41
10"	70.0	34.45	2,411.50	2.91	2,414.41
multi	0.3	34.45	10.34	-	10.34

Vallecitos Water District
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CY 2021 Cost Allocation and Distribution

	Projected 2021	Offset	Ready-to-Serve Meters	Ready-to-Serve Bill	Commodity Tier1	Commodity Tier2	Commodity Tier3	Fire Protection
Water Costs								
Projected AF demand	15,200				5,243	7,751	2,206	
Projected AF production	16,100							
OMWD	3,899				3,899			
SDCWA	8,264				1,655	6,609		
Desal - committed	3,500					1,163	2,337	
Desal - excess	437						437	
Cost per AF					$ 1,540	$ 1,613	$ 2,825	
					$ 1,613	$ 2,825	$ 840	
Water purchases					$6,004,460	$10,660,317	$6,602,025	
					$2,669,515	$ 3,285,475	$ 367,080	
Water cost	$36,794,872	$ -	$ 7,206,000	$ -	$8,673,975	$13,945,792	$6,969,105	$ -
Operating Expenses								
Pumping	1,252,500	470,000	-	-	134,922	473,679	134,774	39,125
Water Quality	222,500	-	-	-	76,762	113,453	32,285	-
Water Treatment	545,000	-	-	-	98,917	347,274	98,809	-
Tanks & Reservoirs	483,500	-	-	-	83,367	292,682	83,276	24,175
Transmission & Dist.	2,992,500	-	-	-	326,930	1,146,816	1,369,129	149,625
Services	410,000	-	410,000	-	-	-	-	-
Meters	730,000	312,500	220,400	197,100	-	-	-	-
Backflow Prevention	69,500	69,500	-	-	-	-	-	-
Customer Accounts	725,000	134,000	-	591,000	-	-	-	-
Equipment & Vehicles	336,500	-	336,500	-	-	-	-	-
Building & Grounds	387,000	-	387,000	-	-	-	-	-
Engineering	1,445,500	34,500	1,411,000	-	-	-	-	-
Safety & Reg. Affairs	295,500	-	295,500	-	-	-	-	-
Information Technology	1,167,000	-	1,167,000	-	-	-	-	-
G&A - Conservation	645,689	-	-	-	-	-	645,689	-
General&Admin - Other	2,766,311	196,500	2,569,811	-	-	-	-	-
Capital Replacement	2,679,457	2,388,500	57,167	-	36,804	113,736	71,570	11,680
Reserve Target Adjustmnt	1,000,000	-	196,484	-	126,491	390,903	245,980	40,142
Total Costs to Recover	$54,948,329	$3,605,500	$14,256,862	$ 788,100	$9,558,168	$16,824,335	$9,650,617	$ 264,747

CY 2021	Ready-to-Serve Meters	Ready-to-Serve Bill	Commodity Tier 1	Commodity Tier 2	Commodity Tier 3	Fire Service
Revenue Requirement	$14,256,862	$ 788,100	$9,558,168	$16,824,335	$9,650,617	$ 264,747
Billing Units - HCFs	397,115	261,060	2,283,851	3,376,336	960,934	38,556
Unit Cost	$ 35.90	$ 3.02	$ 4.19	$ 4.98	$ 10.04	$ 6.87

CY 2021 Target Costs -

Costs to Recover less Water Cost less Reserve Adj

Fixed - Stability	8,103,709	56%
Variable	6,444,248	44%

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The resulting allocation is compared to an historical analysis for reasonableness.
To continue to encourage conservation,
the resulting fixed allocation should not exceed historical cost stability of 69%.

Meter Size	Meter Equivalents Per Meter	Meter Equivalents Unit Cost	Ready-to-Serve Charge Meter	Ready-to-Serve Charge Bill	Ready-to-Serve Charge Total
5/8"	1.0	$ 35.90	$ 35.90	$ 3.02	$ 38.92
3/4"	1.0	35.90	35.90	3.02	38.92
1"	1.5	35.90	53.85	3.02	56.87
1.5"	4.0	35.90	143.60	3.02	146.62
2"	6.5	35.90	233.35	3.02	236.37
3"	10.0	35.90	359.00	3.02	362.02
4"	15.0	35.90	538.50	3.02	541.52
6"	30.0	35.90	1,077.00	3.02	1,080.02
10"	70.0	35.90	2,513.00	3.02	2,516.02
multi	0.3	35.90	10.77	-	10.77

Vallecitos Water District
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CY 2022 Cost Allocation and Distribution

	Projected 2022	Offset	Ready-to-Serve Meters	Ready-to-Serve Bill	Commodity Tier1	Commodity Tier2	Commodity Tier3	Fire Protection
Water Costs								
Projected AF demand	15,600				5,259	8,081	2,260	
Projected AF production	16,530							
OMWD	3,899				3,899			
SDCWA	8,548				1,672	6,876		
Desal - committed	3,500					1,106	2,394	
Desal - excess	583						583	
Cost per AF					$ 1,614	$ 1,691	$ 2,921	
					$ 1,691	$ 2,921	$ 879	
Water purchases					$ 6,292,986	$11,627,316	$ 6,992,874	
					$ 2,827,352	$ 3,230,626	$ 512,457	
Water cost	$39,036,611	$ -	$ 7,553,000	$ -	$ 9,120,338	$14,857,942	$ 7,505,331	$ -
Operating Expenses								
Pumping	1,360,000	480,000	-	-	148,306	537,381	150,313	44,000
Water Quality	229,000	-	-	-	77,196	118,622	33,182	-
Water Treatment	555,000	-	-	-	98,457	356,754	99,789	-
Tanks & Reservoirs	489,000	-	-	-	82,411	298,613	83,526	24,450
Transmission & Dist.	3,186,000	-	-	-	340,201	1,231,867	1,454,632	159,300
Services	430,000	-	430,000	-	-	-	-	-
Meters	734,000	314,600	221,220	198,180	-	-	-	-
Backflow Prevention	70,000	70,000	-	-	-	-	-	-
Customer Accounts	729,000	138,400	-	590,600	-	-	-	-
Equipment & Vehicles	343,000	-	343,000	-	-	-	-	-
Building & Grounds	390,000	-	390,000	-	-	-	-	-
Engineering	1,452,000	35,000	1,417,000	-	-	-	-	-
Safety & Reg. Affairs	296,000	-	296,000	-	-	-	-	-
Information Technology	1,186,000	-	1,186,000	-	-	-	-	-
G&A - Conservation	656,682	-	-	-	-	-	656,682	-
General&Admin - Other	2,854,318	199,000	2,655,318	-	-	-	-	-
Capital Replacement	2,713,672	2,419,000	57,899	-	37,273	115,188	72,483	11,829
Reserve Target Adjustmnt	1,680,000	-	330,093	-	212,505	656,717	413,247	67,438
Total Costs to Recover	$58,390,283	$ 3,656,000	$14,879,530	$ 788,780	$10,116,687	$18,173,084	$10,469,185	$ 307,017

CY 2022	Ready-to-Serve Meters	Ready-to-Serve Bill	Commodity Tier 1	Commodity Tier 2	Commodity Tier 3	Fire Service
Revenue Requirement	$14,879,530	$ 788,780	$10,116,687	$18,173,084	$10,469,185	$ 307,017
Billing Units	399,504	261,876	2,290,820	3,520,084	984,456	38,676
Unit Cost	$ 37.25	$ 3.01	$ 4.42	$ 5.16	$ 10.63	$ 7.94

CY 2022 Target Costs -

Costs to Recover less Water Cost less Reserve Adj

Fixed - Stability 8,422,327 54%

Variable 7,275,345 46%

Some portion of these costs are always fixed, regardless of change in demand.
These fixed costs should be recovered through fixed revenue - RTS.
Prior cost of service studies included an 80/20 fixed/variable split on some costs.
This study allocates all costs directly associated with water to commodity.
Costs not associated directly with water are allocated to meter charges
The resulting allocation is compared to an histrorical analysis for reasonableness.
To continue to encourage conservation,
the resulting fixed allocation should not exceed historical cost stability of 69%.

Meter Size	Meter Equivalents Per Meter	Meter Equivalents Unit Cost	Ready-to-Serve Charge Meter	Ready-to-Serve Charge Bill	Ready-to-Serve Charge Total
5/8"	1.0	$ 37.25	$ 37.25	$ 3.01	$ 40.26
3/4"	1.0	37.25	37.25	3.01	40.26
1"	1.5	37.25	55.88	3.01	58.89
1.5"	4.0	37.25	149.00	3.01	152.01
2"	6.5	37.25	242.13	3.01	245.14
3"	10.0	37.25	372.50	3.01	375.51
4"	15.0	37.25	558.75	3.01	561.76
6"	30.0	37.25	1,117.50	3.01	1,120.51
10"	70.0	37.25	2,607.50	3.01	2,610.51
multi	0.3	37.25	11.18	-	11.18

Vallecitos Water District
2017 Water Rate Model

Rates

Meter Size	Ready-to-Serve Charge Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	Increase to: CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
5/8"	$ 31.42	$ 33.25	$ 35.32	$ 37.36	$ 38.92	$ 40.26	5.8%	6.2%	5.8%	4.2%	3.4%
3/4"	36.52	33.25	35.32	37.36	38.92	40.26	-9.0%	6.2%	5.8%	4.2%	3.4%
1"	55.29	48.59	51.63	54.59	56.87	58.89	-12.1%	6.2%	5.7%	4.2%	3.5%
1.5"	110.59	125.29	133.15	140.71	146.62	152.01	13.3%	6.3%	5.7%	4.2%	3.7%
2"	178.11	201.99	214.68	226.84	236.37	245.14	13.4%	6.3%	5.7%	4.2%	3.7%
3"	356.22	309.37	328.81	347.41	362.02	375.51	-13.2%	6.3%	5.7%	4.2%	3.7%
4"	552.94	462.77	491.86	519.66	541.52	561.76	-16.3%	6.3%	5.7%	4.2%	3.7%
6"	1,105.88	922.97	981.01	1,036.41	1,080.02	1,120.51	-16.5%	6.3%	5.6%	4.2%	3.7%
10"	2,549.36	2,150.17	2,285.41	2,414.41	2,516.02	2,610.51	-15.7%	6.3%	5.6%	4.2%	3.8%
multi	18.26	9.20	9.78	10.34	10.77	11.18	-49.6%	6.3%	5.6%	4.2%	3.8%
Fire Line per diameter"	5.87	4.78	5.05	6.28	6.87	7.94	-18.6%	5.6%	24.4%	9.4%	15.6%
Construction	204.48	279.27	296.01	312.61	324.92	336.61	36.6%	6.0%	5.6%	3.9%	3.6%

Commodity Rates

	Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY2018	CY2019	CY2020	CY2021	CY2022
Tier 1	$ 3.08	$ 3.38	$ 3.66	$ 3.93	$ 4.19	$ 4.42	9.7%	8.3%	7.4%	6.6%	5.5%
Tier 2	4.12	4.43	4.60	4.82	4.98	5.16	7.5%	3.8%	4.8%	3.3%	3.6%
Tier 3	5.33	8.47	8.87	9.54	10.04	10.63	58.9%	4.7%	7.6%	5.2%	5.9%
Tier 4	7.41										

Tier Structure in Units

Meter Size	Current Tier 1	Tier 2	Tier 3	Tier 4	Effective CY 2018 Tier 1	Tier 2	Tier 3
<1"	1 - 5	6 - 17	18 - 36	37 +	1 - 6	7 - 21	22 +
1"	1 - 5	6 - 60	61 - 214	215 +	1 - 16	17 - 78	79 +
1.5"	1 - 5	6 - 157	158 - 627	628 +	1 - 43	44 - 196	197 +
2"	1 - 5	6 - 242	243 - 806	807 +	1 - 85	86 - 335	336 +
>2"	1 - 5	6 - 1,133	1134-3970	3,971 +	1 - 430	431-1,190	1,191 +
Ag	1 - 5	6 +				1 +	
Temporary Construction				1 +			1 +

Average Single Family Rates - Water and Sewer

	Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
RTS	$ 31.42	$ 33.25	$ 35.32	$ 37.36	$ 38.92	$ 40.26
Commodity	48.36	51.29	54.16	57.32	60.00	62.64
Sewer	38.99	38.99	38.99	38.99	40.16	41.77
Total	$ 118.77	$ 123.53	$ 128.47	$ 133.67	$ 139.08	$ 144.67
Increase		$ 4.76	$ 4.94	$ 5.20	$ 5.41	$ 5.59
		4.0%	4.0%	4.0%	4.0%	4.0%
Water Only Increase		6.0%	5.8%	5.8%	4.5%	4.0%

Rate Impact - RTS plus Commodity

Low User

	Effective						Increase				
	Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2018		CY 2019		CY2020
5/8"	$ 50.94	$ 53.53	$ 57.28	$ 60.94	$ 64.06	$ 66.78	$ 2.59	5.1%	$ 3.75	7.0%	6.4%
3/4"	56.04	56.80	58.48	60.94	64.06	66.78	0.76	1.4%	1.68	3.0%	4.2%
1"	116.01	109.37	113.85	118.17	123.91	129.61	(6.64)	-5.7%	4.48	4.1%	3.8%
1.5"	282.55	265.97	288.05	203.59	326.79	342.07	(16.58)	-5.9%	22.08	8.3%	-29.3%
2"	523.11	481.65	525.78	560.89	592.52	620.84	(41.46)	-7.9%	44.12	9.2%	6.7%
3"	2,122.62	1,809.62	1,930.02	2,046.12	2,163.72	2,276.11	(313.00)	-14.7%	120.40	6.7%	6.0%
Ag 1"	148.97	154.91	165.69	170.97	176.39	182.73	5.94	4.0%	10.78	7.0%	3.2%
Ag 1.5"	406.15	444.02	466.47	492.57	510.16	528.69	37.87	9.3%	22.45	5.1%	5.6%
Mf 1"	246.17	180.04	195.55	204.28	213.43	222.46	(66.13)	-26.9%	15.50	8.6%	4.5%
Mf 1.5"	610.01	461.62	494.60	527.39	553.08	576.78	(148.39)	-24.3%	32.98	7.1%	6.6%

Average User

	Effective						Increase				
	Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2018		CY 2019		CY2020
5/8"	$ 79.78	$ 84.54	$ 89.48	$ 94.68	$ 98.92	$ 102.90	$ 4.76	6.0%	$ 4.94	5.8%	5.8%
3/4"	84.88	87.81	90.68	94.68	98.92	102.90	2.93	3.5%	2.87	3.3%	4.4%
1"	235.49	237.84	247.25	257.95	268.33	279.25	2.35	1.0%	9.41	4.0%	4.3%
1.5"	587.43	593.79	628.45	666.38	695.31	723.91	6.36	1.1%	34.66	5.8%	6.0%
2"	1,001.03	995.53	1,059.38	1,120.01	1,170.20	1,219.40	(5.50)	-0.5%	63.84	6.4%	5.7%
3"	3,556.38	3,351.26	3,530.82	3,723.48	3,896.76	4,071.79	(205.12)	-5.8%	179.56	5.4%	5.5%
Ag 1"	470.33	507.15	524.49	546.93	564.83	585.21	36.82	7.8%	17.34	3.4%	4.3%
Ag 1.5"	1,633.91	1,764.16	1,837.27	1,928.93	1,994.20	2,066.37	130.25	8.0%	73.11	4.1%	5.0%
Mf 1"	414.57	341.79	356.55	372.98	387.73	403.06	(72.78)	-17.6%	14.75	4.3%	4.6%
Mf 1.5"	1,080.55	886.90	936.20	990.11	1,031.16	1,072.14	(193.65)	-17.9%	49.30	5.6%	5.8%

High User

	Effective						Increase				
	Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2018		CY 2019		CY2020
5/8"	$ 117.58	$ 119.98	$ 126.28	$ 133.24	$ 138.76	$ 144.18	$ 2.40	2.0%	$ 6.30	5.3%	5.5%
3/4"	122.68	123.25	127.48	133.24	138.76	144.18	0.57	0.5%	4.23	3.4%	4.5%
1"	393.23	384.03	399.05	417.01	432.67	449.53	(9.20)	-2.3%	15.02	3.9%	4.5%
1.5"	960.10	943.76	991.85	1,047.16	1,088.73	1,131.55	(16.34)	-1.7%	48.09	5.1%	5.6%
2"	1,665.64	1,589.15	1,675.78	1,765.89	1,837.52	1,910.84	(76.49)	-4.6%	86.62	5.5%	5.4%
3"	5,318.67	5,176.42	5,426.02	5,709.32	5,948.52	6,197.71	(142.25)	-2.7%	249.60	4.8%	5.2%
Ag 1"	816.41	879.27	910.89	951.81	983.15	1,018.65	62.86	7.7%	31.62	3.6%	4.5%
Ag 1.5"	2,754.55	2,969.12	3,088.47	3,239.97	3,348.76	3,469.89	214.57	7.8%	119.4	4.0%	4.9%
Mf 1"	727.22	634.06	661.76	698.44	728.21	761.07	(93.16)	-12.8%	27.7	4.4%	5.5%
Mf 1.5"	1,816.74	1,581.55	1,661.93	1,765.05	1,842.64	1,926.35	(235.19)	-12.9%	80.4	5.1%	6.2%

Very High User

	Effective						Increase				
	Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2018		CY 2019		CY2020
5/8"	$ 241.99	$ 297.85	$ 312.55	$ 333.58	$ 349.60	$ 367.41	$ 55.86	23.1%	$ 14.70	4.9%	6.7%
3/4"	247.09	301.12	313.75	333.58	349.60	367.41	54.03	21.9%	12.63	4.2%	6.3%
1"	808.97	1,044.69	1,090.91	1,161.13	1,215.79	1,278.67	235.72	29.1%	46.22	4.4%	6.4%
1.5"	2,004.78	2,603.88	2,730.37	2,917.00	3,056.57	3,215.03	599.10	29.9%	126.49	4.9%	6.8%
2"	3,451.19	4,426.60	4,647.23	4,961.79	5,200.92	5,471.89	975.41	28.3%	220.62	5.0%	6.8%
3"	11,661.4	15,255.7	15,981.3	17,061.9	17,896.1	18,847.4	3,594.4	30.8%	725.6	4.8%	6.8%
Ag 1"	1,578.61	1,698.82	1,761.89	1,843.51	1,904.45	1,973.25	120.21	7.6%	63.07	3.7%	4.6%
Ag 1.5"	5,407.83	5,822.04	6,050.87	6,344.05	6,555.88	6,792.93	414.21	7.7%	228.8	3.9%	4.8%
Mf 1"	1,475.63	1,489.53	1,557.63	1,661.98	1,742.25	1,834.70	13.90	0.9%	68.1	4.6%	6.7%
Mf 1.5"	3,706.29	3,741.40	3,923.78	4,197.75	4,402.84	4,637.00	35.11	0.9%	182.4	4.9%	7.0%

Rate Presentation Tables

Ready-to-Serve Charge

Meter Size	Current	Effective January: 2018	2019
5/8"	31.42	33.25	35.32
3/4"	36.52	36.52	36.52
1"	55.29	55.29	55.29
1.5"	110.59	120.63	130.67
2"	178.11	194.35	214.68
3"	356.22	356.22	356.22
4"	552.94	552.94	552.94
6"	1,105.88	1,105.88	1,105.88
10"	2,549.36	2,549.36	2,549.36
Multi	18.26	11.18	11.18
Fire	5.87	5.87	5.87
TC	204.48	230.91	257.33

Multi = additional living unit on one meter

Fire = per diameter inch of fire service line

Tier Structure in Units

Meter Size	Current Tier 1	Current Tier 2	Current Tier 3	Current Tier 4	Effective January 2018 Tier 1	Effective January 2018 Tier 2	Effective January 2018 Tier 3
<1"	1 - 5	6 - 17	18 - 36	37 +	1 - 6	7 - 21	22 +
1"	1 - 5	6 - 60	61 - 214	215 +	1 - 16	17 - 78	79 +
1.5"	1 - 5	6 - 157	158 - 627	628 +	1 - 43	44 - 196	197 +
2"	1 - 5	6 - 242	243 - 806	807 +	1 - 85	86 - 335	336 +
>2"	1 - 5	6 - 1133	1134-3970	3,971 +	1 - 430	431-1190	1,191 +
Ag	1 - 5	6 +				1 +	
TC = Temporary Construction Meter				1 +			1 +

Commodity Rates

	Current	CY 2018	CY 2019
Tier 1	$ 3.08	$ 3.38	$ 3.66
Tier 2	4.12	4.43	4.60
Tier 3	5.33	8.47	8.87
Tier 4	7.41		

Use Level		Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Low		$ 89.93	$ 92.52	$ 96.27	$ 99.93	$ 104.22	$ 108.55
6 HCFs	Increase		$ 2.59	$ 3.75	$ 3.66	$ 4.29	$ 4.33
4,448 gallons			**2.9%**	**4.1%**	**3.8%**	**4.3%**	**4.2%**
Average		$ 118.77	$ 123.53	$ 128.47	$ 133.67	$ 139.08	$ 144.67
13 HCFs	Increase		$ 4.76	$ 4.94	$ 5.20	$ 5.41	$ 5.59
9,724 gallons			**4.0%**	**4.0%**	**4.0%**	**4.0%**	**4.0%**
High		$ 156.57	$ 158.97	$ 165.27	$ 172.23	$ 178.92	$ 185.95
21 HCFs	Increase		$ 2.40	$ 6.30	$ 6.96	$ 6.69	$ 7.03
15,708 gallons			**1.5%**	**4.0%**	**4.2%**	**3.9%**	**3.9%**
Very High		$ 280.98	$ 336.84	$ 351.54	$ 372.57	$ 389.76	$ 409.18
42 HCFs	Increase		$ 55.86	$ 14.70	$ 21.03	$ 17.19	$ 19.42
31,416 gallons			**19.9%**	**4.4%**	**6.0%**	**4.6%**	**5.0%**

Rate Alternative Sufficiency

Meter Size	CY 2018 Rate	CY 2018 Units	CY 2018 Revenue	CY 2018 Alternative Rate	CY 2018 Alternative Revenue	CY 2019 Rate	CY 2019 Units	CY 2019 Revenue	CY 2019 Alternative Rate	CY 2019 Alternative Revenue
5/8"	$ 33.25	18,199	$7,261,401	33.25	$7,261,401	$ 35.32	18,199	$7,713,464	35.32	$7,713,464
3/4"	33.25	967	385,833	36.52	423,778	35.32	980	415,363	36.52	429,475
1"	48.59	1,067	622,146	55.29	707,933	51.63	1,098	680,211	55.29	728,501
1.5"	125.29	704	1,058,450	120.63	1,019,082	133.15	714	1,140,829	130.67	1,119,581
2"	201.99	526	1,274,961	194.35	1,226,748	214.68	536	1,380,790	214.68	1,380,790
3"	309.37	64	237,596	356.22	273,577	328.81	65	256,472	356.22	277,852
4"	462.77	17	94,405	552.94	112,800	491.86	17	100,339	552.94	112,800
6"	922.97	15	166,135	1,105.88	199,058	981.01	15	176,582	1,105.88	199,058
10"	2,150.17	1	25,802	2,549.36	30,592	2,285.41	1	27,425	2,549.36	30,592
multi	9.20	13,720	1,515,347	11.18	1,839,852	9.78	13,761	1,615,486	11.18	1,845,350
Fireline	4.78	3,183	182,577	5.87	224,211	5.05	3,193	193,496	5.87	224,915
TC	279.27	36	120,645	230.91	99,751	296.01	36	127,876	257.33	111,167
Tier 1	$ 3.38	2,262,942	7,648,744	$ 3.38	7,648,744	$ 3.66	2,269,912	8,307,878	$ 3.66	8,307,878
Tier 2	4.43	2,945,092	13,046,758	4.43	13,046,758	4.60	3,088,840	14,208,664	4.60	14,208,664
Tier 3	8.47	890,366	7,541,400	8.47	7,541,400	8.87	913,889	8,106,195	8.87	8,106,195
Revenue			$ 41,061,554		$ 41,655,685			$ 44,323,195		$ 44,796,282
Revenue Requirement/Impact			41,071,358		$ 594,131			$ 44,318,269		$ 473,088

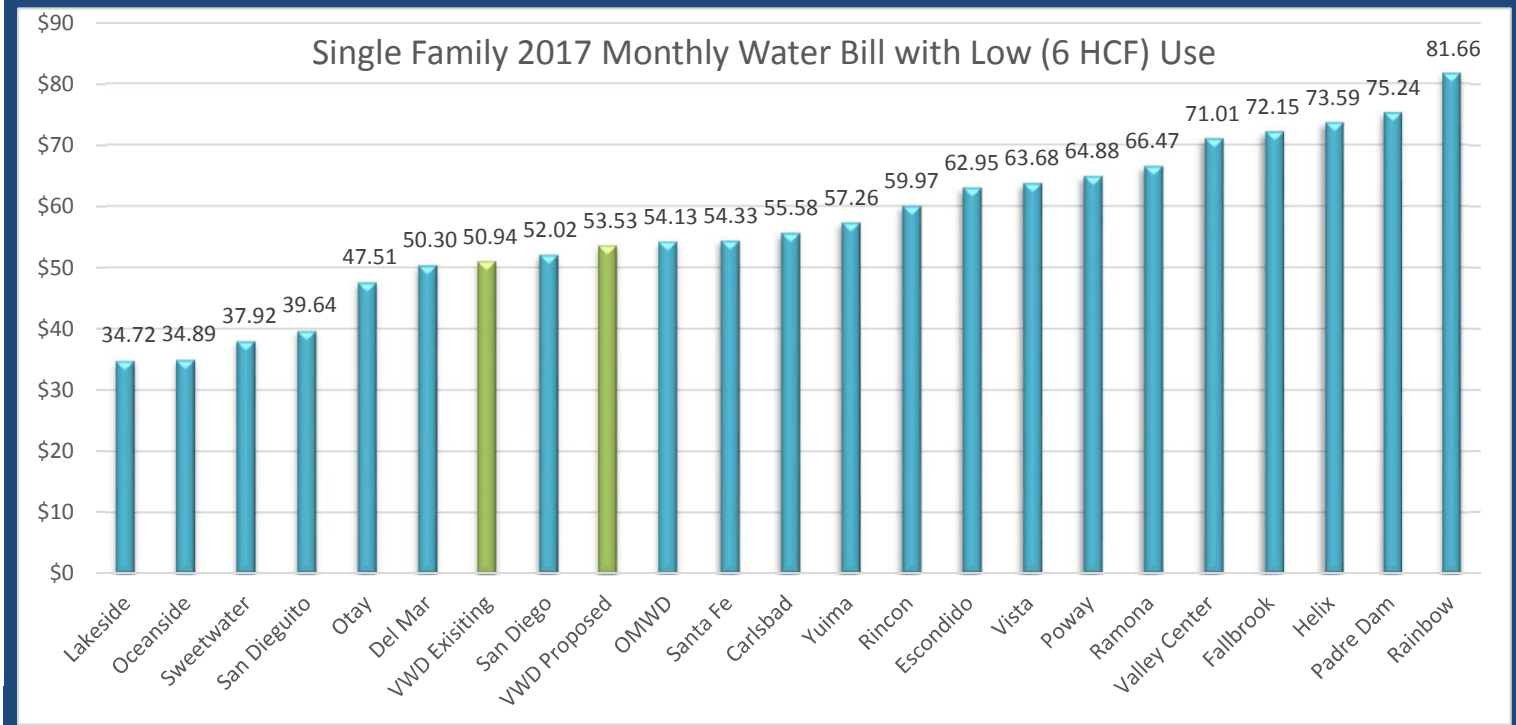
Meter Size	CY 2020 Rate	CY 2020 Units	CY 2020 Revenue	CY 2020 Alternative Rate	CY 2020 Alternative Revenue	CY 2021 Rate	CY 2021 Units	CY 2021 Revenue	CY 2021 Alternative Rate	CY 2021 Alternative Revenue
5/8"	$ 37.36	18,199	$8,158,976	37.36	$8,158,976	$ 38.92	18,199	$8,499,661	$ 38.92	$8,499,661
3/4"	37.36	993	445,182	37.36	445,182	38.92	1,006	469,842	38.92	469,842
1"	54.59	1,129	739,518	55.29	749,069	56.87	1,160	791,630	56.87	791,630
1.5"	140.71	724	1,222,488	140.71	1,222,488	146.62	734	1,291,429	146.62	1,291,429
2"	226.84	546	1,486,223	226.84	1,486,223	236.37	556	1,577,061	236.37	1,577,061
3"	347.41	66	275,149	356.22	282,126	362.02	67	291,064	362.02	291,064
4"	519.66	17	106,011	552.94	112,800	541.52	17	110,470	552.94	112,800
6"	1,036.41	15	186,554	1,105.88	199,058	1,080.02	15	194,404	1,105.88	199,058
10"	2,414.41	1	28,973	2,549.36	30,592	2,516.02	1	30,192	2,549.36	30,592
multi	10.34	13,802	1,711,724	11.18	1,850,848	10.77	13,843	1,789,069	11.18	1,856,346
Fireline	6.28	3,203	241,378	6.28	241,378	6.87	3,213	264,880	6.87	264,880
TC	312.61	36	135,048	283.76	122,583	324.92	36	140,365	310.18	133,999
Tier 1	$ 3.93	2,276,881	8,948,142	$ 3.93	8,948,142	$ 4.19	2,283,851	9,569,336	$ 4.19	9,569,336
Tier 2	4.82	3,232,588	15,581,074	4.82	15,581,074	4.98	3,376,336	16,814,153	4.98	16,814,153
Tier 3	9.54	937,411	8,942,901	9.54	8,942,901	10.04	960,934	9,647,777	10.04	9,647,777
Revenue			$ 48,074,292		$ 48,250,858			$ 51,340,969		$ 51,549,630
Revenue Requirement/Impact			48,068,585		$ 176,566			$ 51,342,829		$ 208,661

Meter Size	CY 2022 Rate	Units	Revenue	Alternative Rate	Alternative Revenue
5/8"	$ 40.26	18,199	$8,792,301	$ 40.26	$8,792,301
3/4"	40.26	1,019	492,299	40.26	492,299
1"	58.89	1,192	842,291	58.89	842,291
1.5"	152.01	745	1,358,969	152.01	1,358,969
2"	245.14	567	1,667,899	245.14	1,667,899
3"	375.51	68	306,416	375.51	306,416
4"	561.76	17	114,599	561.76	114,599
6"	1,120.51	15	201,692	1,120.51	201,692
10"	2,610.51	1	31,326	2,610.51	31,326
multi	11.18	13,885	1,861,979	11.18	1,861,979
Fireline	7.94	3,223	307,087	7.94	307,087
TC	336.61	36	145,416	336.61	145,416
Tier 1	$ 4.42	2,290,820	10,125,424	$ 4.42	10,125,424
Tier 2	5.16	3,520,084	18,163,633	5.16	18,163,633
Tier 3	10.63	984,456	10,464,767	10.63	10,464,767
Revenue			$ 54,730,683		$ 54,876,099
Revenue Requirement/Impact			54,734,283		$ 145,416

Vallecitos Water District
2017 Water Rate Model

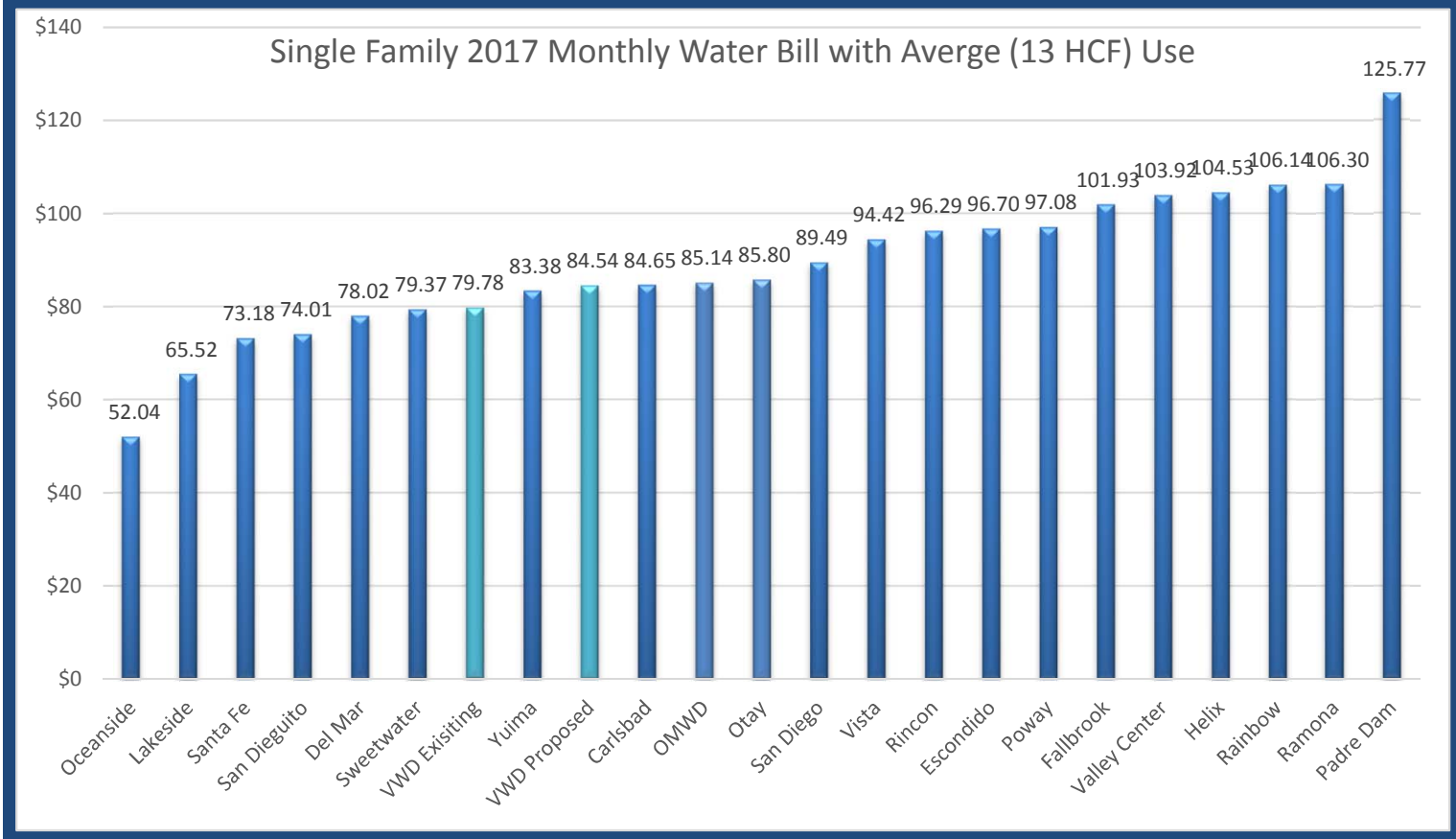
Rate Survey

Meter 5/8"	Meter 3/4"	Tier Limits			2017 Tier Rates				Use in Units (HCF)	6 Low	13 Average	21 High	42 Very High
24.11	32.54	10	18	na	3.84	4.57	6.82	na	Carlsbad	55.58	84.65	127.96	271.18
26.54	39.81	14	42	na	3.96	5.11	7.63	na	Del Mar	50.30	78.02	117.75	225.06
37.77	37.77	9.4	20.1	na	4.20	5.46	6.72	na	Escondido	62.95	96.70	141.51	282.57
	48.77	6.7	40.1	na	3.90	4.29	4.73	na	Fallbrook	72.15	101.93	136.28	227.27
47.07	47.07	14	34	na	4.42	5.21	6.53	na	Helix	73.59	104.53	145.42	265.39
8.86	10.24	6	na	na	4.31	4.40	na	na	Lakeside	34.72	65.52	100.72	193.12
20.19	20.19	13	na	na	2.45	3.06	na	na	Oceanside	34.89	52.04	76.52	140.78
30.08	38.95	6	25	80	2.53	4.43	5.23	6.13	OMWD	54.13	85.14	120.58	227.21
	30.91	5	10	22	2.53	3.95	5.13	7.90	Otay	47.51	85.80	126.84	289.97
34.02	34.02	9	27	36	6.87	7.48	8.37	9.03	Padre Dam	75.24	125.77	185.61	360.00
37.28	37.28	199	na	na	4.60	6.56	na	na	Poway	64.88	97.08	133.88	230.48
61.14	61.14	10	26	na	3.42	3.60	3.94	na	Rainbow	81.66	106.14	134.94	215.98
32.33	32.33	na	na	na	5.69	na	na	na	Ramona	66.47	106.30	151.82	271.31
32.64	32.64	6.7	32.1	na	4.56	5.26	5.57	na	Rincon	59.97	96.29	138.36	251.82
	23.92	4	12	18	4.50	5.04	7.21	10.13	San Diego	52.02	89.49	155.93	368.74
22.78	22.78	6	10	20	2.81	4.46	5.51	6.28	San Dieguito	39.64	74.01	118.86	250.74
40.53	40.53	7.5	18.5	82.5	2.30	2.80	5.16	6.01	Santa Fe	54.33	73.18	101.48	209.84
13.77		5	8	13.5	3.88	4.75	6.39	6.90	Sweetwater	37.92	79.37	134.32	279.22
	42.80	na	na	na	4.70	na	na	na	Valley Center	71.01	103.92	141.53	240.26
30.04	38.72	10	60	na	4.16	4.70	4.70	na	Vista	63.68	94.42	132.02	230.72
31.42	36.52	5	17	36	3.08	4.12	5.33	7.41	VWD Exisiting	50.94	79.78	117.58	241.99
33.25	33.25	4	21	na	3.38	4.43	8.47	na	VWD Proposed	53.53	84.54	119.98	297.85
34.88		na	na	na	3.73	na	na	na	Yuima	57.26	83.38	113.22	191.56
31.51	*35.34*								*Average*	*57.31*	*89.25*	*129.69*	*248.42*

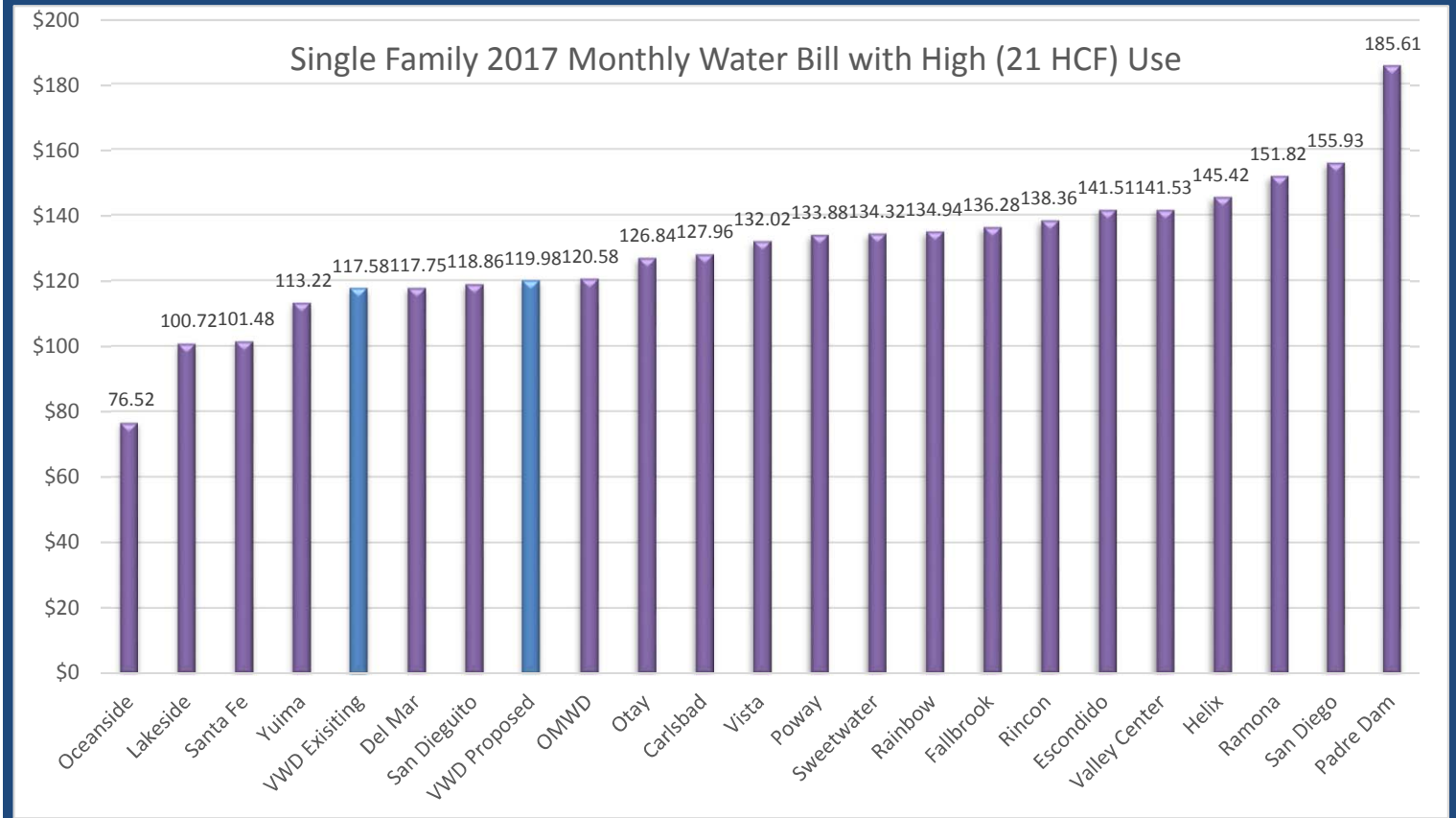


Average =57.31; Median =55.58

Rate Survey

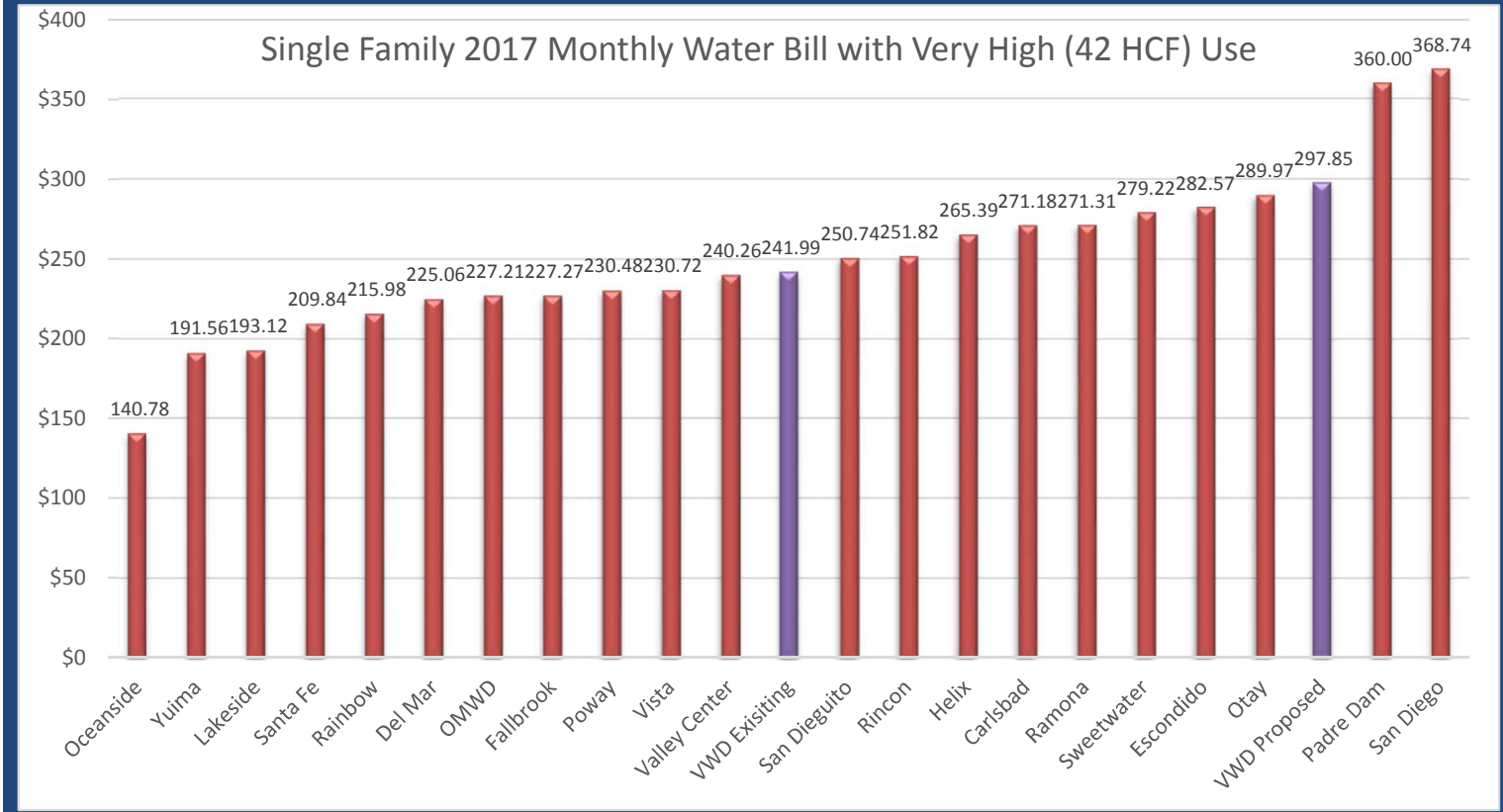


Average =89.25; Median =85.8



Average =129.69; Median =132.02

Rate Survey



Average =248.42; Median =241.99

Average Single Family Residents Monthly Water Bill with:

Low Use (6 HCFs)		Average Use (13 HCFs)		High Use (21 Units)		Very High Use (42 HCFs)	
Lakeside	34.72	Oceanside	52.04	Oceanside	76.52	Oceanside	140.78
Oceanside	34.89	Lakeside	65.52	Lakeside	100.72	Yuima	191.56
Sweetwater	37.92	Santa Fe	73.18	Santa Fe	101.48	Lakeside	193.12
San Dieguito	39.64	San Dieguito	74.01	Yuima	113.22	Santa Fe	209.84
Otay	47.51	Del Mar	78.02	VWD Exisiting	117.58	Rainbow	215.98
Del Mar	50.30	Sweetwater	79.37	Del Mar	117.75	Del Mar	225.06
VWD Exisiting	50.94	VWD Exisiting	79.78	San Dieguito	118.86	OMWD	227.21
San Diego	52.02	Yuima	83.38	VWD Proposed	119.98	Fallbrook	227.27
VWD Proposed	53.53	VWD Proposed	84.54	OMWD	120.58	Poway	230.48
OMWD	54.13	Carlsbad	84.65	Otay	126.84	Vista	230.72
Santa Fe	54.33	OMWD	85.14	Carlsbad	127.96	Valley Center	240.26
Carlsbad	55.58	Otay	85.80	Vista	132.02	VWD Exisiting	241.99
Yuima	57.26	San Diego	89.49	Poway	133.88	San Dieguito	250.74
Rincon	59.97	Vista	94.42	Sweetwater	134.32	Rincon	251.82
Escondido	62.95	Rincon	96.29	Rainbow	134.94	Helix	265.39
Vista	63.68	Escondido	96.70	Fallbrook	136.28	Carlsbad	271.18
Poway	64.88	Poway	97.08	Rincon	138.36	Ramona	271.31
Ramona	66.47	Fallbrook	101.93	Escondido	141.51	Sweetwater	279.22
Valley Center	71.01	Valley Center	103.92	Valley Center	141.53	Escondido	282.57
Fallbrook	72.15	Helix	104.53	Helix	145.42	Otay	289.97
Helix	73.59	Rainbow	106.14	Ramona	151.82	VWD Proposed	297.85
Padre Dam	75.24	Ramona	106.30	San Diego	155.93	Padre Dam	360.00
Rainbow	81.66	Padre Dam	125.77	Padre Dam	185.61	San Diego	368.74

Fiscal Year Distribution and Cost of Supply

FY 2018	Total	Meters	Commodity Tier1	Commodity Tier2	Commodity Tier3
Projected AF demand	13,760		5,187	6,561	2,012
Projected AF production	14,580				
OMWD	3,899		3,899		
SDCWA	7,181		1,596	5,585	
Desal - committed	3,500			1,369	2,131
Desal - excess	-				-
Cost per AF			$ 1,218	$ 1,277	$ 2,510
			$ 1,277	$ 2,510	$ 733
Water purchases			$ 4,748,982	$ 7,132,045	$ 5,348,810
			$ 2,038,092	$ 3,436,190	$ -
Water cost	$28,530,635	$ 5,826,516	$ 6,787,074	$10,568,235	$ 5,348,810

FY 2019	Total	Meters	Commodity Tier1	Commodity Tier2	Commodity Tier3
Projected AF demand	14,160		5,203	6,891	2,066
Projected AF production	15,000				
OMWD	3,899		3,899		
SDCWA	7,455		1,613	5,842	
Desal - committed	3,500			1,311	2,189
Desal - excess	146				146
Cost per AF			$ 1,294	$ 1,356	$ 2,594
			$ 1,356	$ 2,594	$ 767
Water purchases			$ 5,045,306	$ 7,921,752	$ 5,678,266
			$ 2,187,228	$ 3,400,734	$ 111,982
Water cost	$30,454,350	$ 6,109,082	$ 7,232,534	$11,322,486	$ 5,790,248

FY 2020	Total	Meters	Commodity Tier1	Commodity Tier2	Commodity Tier3
Projected AF demand	14,560		5,219	7,221	2,120
Projected AF production	15,420				
OMWD	3,899		3,899		
SDCWA	7,729		1,630	6,099	
Desal - committed	3,500			1,254	2,246
Desal - excess	292				292
Cost per AF			$ 1,395	$ 1,461	$ 2,679
			$ 1,461	$ 2,679	$ 802
Water purchases			$ 5,439,105	$ 8,910,639	$ 6,017,034
			$ 2,381,430	$ 3,359,466	$ 234,184
Water cost	$32,907,858	$ 6,566,000	$ 7,820,535	$12,270,105	$ 6,251,218

Fiscal Year Distribution and Cost of Supply

FY 2021	Total	Meters	Commodity Tier1	Commodity Tier2	Commodity Tier3
Projected AF demand	14,960		5,235	7,551	2,174
Projected AF production	15,850				
OMWD	3,899		3,899	-	
SDCWA	8,014		1,647	6,367	
Desal - committed	3,500			1,197	2,303
Desal - excess	437				437
Cost per AF			$ 1,483	$ 1,554	$ 2,769
			$ 1,554	$ 2,769	$ 840
Water purchases			$ 5,782,217	$ 9,894,318	$ 6,377,007
			$ 2,559,438	$ 3,314,493	$ 367,080
Water cost	$35,278,553	$ 6,984,000	$ 8,341,655	$13,208,811	$ 6,744,087

FY 2022	Total	Meters	Commodity Tier1	Commodity Tier2	Commodity Tier3
Projected AF demand	15,360		5,251	7,881	2,228
Projected AF production	16,270				
OMWD	3,899		3,899		
SDCWA	8,288		1,664	6,624	
Desal - committed	3,500			1,140	2,360
Desal - excess	583				583
Cost per AF			$ 1,570	$ 1,644	$ 2,862
			$ 1,644	$ 2,862	$ 879
Water purchases			$ 6,121,430	$10,889,856	$ 6,754,320
			$ 2,735,616	$ 3,262,680	$ 512,457
Water cost	$37,655,859	$ 7,379,500	$ 8,857,046	$14,152,536	$ 7,266,777

Budget Summary of Water Revenue and Cost

	FY2018	FY2019	FY2020	FY2021	FY2022
Sales	24,866,000	29,191,000	31,762,000	34,496,000	37,120,000
RTS	13,619,000	13,796,000	14,537,000	15,210,000	15,820,000
Water Cost	28,531,000	30,454,000	32,908,000	35,279,000	37,656,000

DATE: **JUNE 7, 2017**
TO: **BOARD OF DIRECTORS**
SUBJECT: **2017 PUBLIC RATE HEARING NOTICE**

BACKGROUND:

In accordance with Article XIII D Section 6(a) of the California Constitution, the District mails a Notice of Public Rate Hearing to all ratepayers in anticipation of any proposed rate increase. Ratepayers must receive the notification at least forty-five days in advance of a public hearing to consider rate increases. At the June 7, 2017, Board of Director's meeting, staff will be presenting the recommended 2017/18 budget, and 2017 Cost of Service and Rate Structure Study for consideration and approval. Both actions will support the rates reflected in the Public Rate Hearing Notice presented herein for approval.

DISCUSSION:

The Public Rate Hearing Notice presented herein, incorporates input received from the Board at the May 3rd and May 24th Board meetings. The date of the hearing is scheduled for August 16, 2017, which will allow ample time for processing, mailing, and the 45-day notice requirement prior to the Public Rate Hearing.

The impact to the average Vallecitos Water District customer is noted on the first page: 4% for 2018, and 4% for 2019, on the total combined water and sewer bill; comprised of 6% and 5.8% increases to the total water bill, for 2018 and 2019, respectively, and no increases to the sewer bill. Impacts from the proposed increase to different customer classes at varying usage levels are noted in the 2017 Cost of Service and Rate Structure Study which is posted on line along with a rate calculator referenced by link on the Public Rate Hearing Notice. Rate increases are detailed on Page 3 of the notice.

FISCAL IMPACT:

There is no fiscal impact from approving the Study. If recommended rates are ultimately adopted, replacement reserves are projected to decline by $4.8 million over the next two fiscal years. With projected rate increases over the next five years, the reserve levels are estimated to be at the 65 percentile between the target floor and ceiling of replacement reserves. Debt service coverage is projected to be maintained above targeted levels.

RECOMMENDATION:

Approve Public Rate Hearing Notice for mailing.

Draft

VALLECITOS WATER DISTRICT

Water and Wastewater Specialists since 1955

201 Vallecitos de Oro ● San Marcos, California ● 92069-1453 (760) 744-0460

NOTICE OF PUBLIC HEARING ON PROPOSED CHANGE IN WATER AND SEWER SERVICE RATES AND WATER RATE STRUCTURE

Date: **Wednesday, August 16, 2017**
Time: **5:00 p.m.**
Location: **201 Vallecitos de Oro, San Marcos, CA 92069**

You are receiving this notice because you are a Vallecitos Water District customer. This notice is being furnished to you pursuant to the California Constitution Article XIIID, also known as Proposition 218. The August 16, 2017, public hearing will cover the proposed adjustments for water and sewer rates, and water rate structure to become effective from January 1, 2017, through December 31, 2019. This notice addresses why rate changes are necessary, what the water and sewer rates fund, and the basis for the proposed rates.

What is the impact to the average single family residence?

EXAMPLE

The proposed rates will result in the following increases to the average single family residential bill. Your resulting increase will vary depending on your water usage and meter size. Visit www.vwd.org/ratecalculator to learn how rates will impact you.

Average Single Family Residential Customer Bill*	Current	Jan 2018	Jan 2019
Total Water Bill	$ 79.78	$ 84.54	$ 89.48
Increase over Prior Year		$ 4.76	$ 4.94
		6.0%	5.8%
Sewer Bill	$ 38.99	$ 38.99	$ 38.99
Increase over Prior Year		$ -	$ -
		0.0%	0.0%
Total Water and Sewer Bill	$ 118.77	$ 123.53	$ 128.47
Increase over Prior Year		$ 4.76	$ 4.94
		4.0%	4.0%

*The average Single Family Residential Bill assumes a 5/8" meter using 13 units (9,724 gallons) of water per month and receives sewer service.

Why are rate increases necessary?

Rate increases are necessary to continue to provide safe, reliable and sustainable water and sewer service to our customers and are required to cover the increased cost of wholesale water, electricity cost increases, inflationary cost increases, escalating costs to comply with increasingly stringent environmental regulations, replace aging infrastructure, fund an asset replacement program and meet debt service requirements.

Even with the proposed rate increases, Vallecitos is a public agency that does not operate for profit, so only those charges sufficient to support your service are billed to you. Each end user pays a fair share of the cost of water acquisition and delivery, as well as the rehabilitation, operation and maintenance of the public water and sewer facilities. As always, we will continue to honor our commitment to provide the most reliable service at the lowest possible cost.

What do water and sewer rates fund?

The proposed rates are being considered solely for the purpose of covering costs incurred by the water and sewer system, which include treated water purchases, collection and treatment of wastewater and disposal of treated effluent, water and sewer system operation and maintenance, facility and equipment maintenance, water and sewer system rehabilitation, regulatory compliance, metering, billing, and account management. The new rate structure will also be tiered to encourage conservation, fund conservation programs, comply with drought alerts and cover the costs of public awareness, education and outreach, and water reliability and diversification.

The proposed rate increases include wholesale water cost increases from our wholesaler, the San Diego County Water Authority (CWA). CWA has adopted rates for calendar year 2017 and proposed rates for 2018 but not for subsequent years and these wholesale rates are passed through to our customers. Wholesale rate increases from CWA to Vallecitos, without the impact of direct desalinated water purchases, were 5.5% in 2014, 3.8% in 2015, 5.1% in 2016, 3.8% in 2017, and proposed at 3.4% for 2018.

What is Vallecitos doing to control costs?

Vallecitos' priority to ensure financial stability is to control costs. In recent years, Vallecitos has restructured its organization, eliminating positions, and redistributing workload to maximize productivity and efficiency. The last two labor negotiations have resulted in cuts to employee benefits. Vallecitos contracted with the Olivenhain Municipal Water District for water treatment services at a cost of 20% less than the San Diego County Water Authority's treatment charge. Vallecitos has engaged consultants to perform energy and operational efficiency studies and has implemented recommendations from the studies. Vallecitos has also obtained input from staff, including changing and upgrading the sewer treatment process, which reduced chemical usage and power consumption, installing energy efficient lighting and pumping equipment, in-house mechanical and fleet maintenance, critical asset condition assessments, predictive asset maintenance and replacement, and strategic use of technology throughout field operations and customer billing. Staff evaluates the effectiveness of changes implemented and continuously improves efficiency of operations.

How are water and sewer rates determined?

A comprehensive Cost of Service Study was performed. One of the major goals of the study was to ensure equitable water and sewer rates that produce adequate revenues to meet the District's financial needs, recognize customer costs of service and encourage water conservation in a resource-constricted environment. No increase to sewer rates are being proposed. For more information, the report is posted to www.vwd.org/rates**.**

How to provide comments or protest the rate adjustment

You may comment or ask questions at any time by contacting Vallecitos Water District at (760) 744-0460 or vwd@vwd.org, or participating in the August 16, 2017, Public Hearing at 5:00 p.m.

You have the right to protest the rate change if you are:

i. The record owner of an affected parcel,
ii. A person with a legal interest in an affected parcel, or
iii. A person who is legally responsible to pay the rates for an affected parcel.

User rates are subject to majority protest, which means if a majority of impacted owners submit written protest against the increase, Vallecitos Water District cannot institute the new rates.

Protests must be in writing and mailed or hand-delivered to Vallecitos Water District. In accordance with State law, faxed or e-mailed protests cannot be accepted.

In compliance with Proposition 218, only one protest per property will be counted. All written protests must be received by Vallecitos Water District before the end of the Public Hearing on August 16, 2017. Please direct written protests to Vallecitos Water District, General Manager, 201 Vallecitos de Oro, San Marcos, CA 92069.

Water Monthly Ready-to-Serve Charges			
		Effective January:	
Meter Size	Current	2018	2019
5/8"	$ 31.42	$ 33.25	$ 35.32
3/4"	36.52	36.52	36.52
1"	55.29	55.29	55.29
1.5"	110.59	120.63	130.67
2"	178.11	194.35	214.68
3"	356.22	356.22	356.22
4"	552.94	552.94	552.94
6"	1,105.88	1,105.88	1,105.88
10"	2,549.36	2,549.36	2,549.36
Multiple Dwelling Unit	18.26	11.18	11.18
Temporary Meters	204.48	230.91	257.33
Fire Line per diameter inch	5.87	5.87	5.87

The monthly **Ready-to-Serve Charge** is assessed to recover fixed charges paid by the District to the District's wholesaler, the San Diego County Water Authority, expenses associated with meters and service lines, operating expenses not directly related to the flow of water (general and administrative, engineering, information technology, etc.), and capital asset replacement costs of service lines, meters, and general facilities. These expenses are incurred by the District even if no water is delivered to our customers.

Water Commodity Tier Structure in Units (748 gallons)							
Meter	Current				Effective January 2018		
Size	Tier 1	Tier 2	Tier 3	Tier 4	Tier 1	Tier 2	Tier 3
5/8" & 3/4"	1 - 5	6 - 17	18 - 36	37 +	1 - 6	7 - 21	22 +
1"	1 - 5	6 - 60	61 - 214	215 +	1 - 16	17 - 78	79 +
1.5"	1 - 5	6 - 157	158 - 627	628 +	1 - 43	44 - 196	197 +
2"	1 - 5	6 - 242	243 - 806	807 +	1 - 85	86 - 335	336 +
>2"	1 - 5	6 - 1133	1134-3970	3,971 +	1 - 430	431-1,190	1,191 +
Agricultural	1 - 5	6 +				1 +	
Temporary Construction				1 +			1 +

Water Commodity Rates per Unit			
		Effective January:	
	Current	2018	2019
Tier 1	$ 3.08	$ 3.38	$ 3.66
Tier 2	4.12	4.43	4.60
Tier 3	5.33	8.47	8.87
Tier 4	7.41		

Water Commodity Rates recover the cost of water supply, expenses directly associated with water flow (transmission and distribution, water treatment, tanks and reservoirs, etc.), conservation costs, and capital replacement costs of assets directly associated with water flow (tanks and reservoirs, transmission and distribution, pumping, etc.).

Sewer Monthly Service Charges			
		Effective January:	
Customer Type	Current	2018	2019
Single Family Residential	$ 38.99	$ 38.99	$ 38.99
Residential - Multiple Unit	35.09	35.09	35.09
Mobile Home	31.19	31.19	31.19
Nonresidential *(per 100 cubic feet of flow)*	4.96	4.96	4.96

Sewer Service Charges recover costs of capital replacement of sewer system assets and general facilities, disposal, collection and conveyance, sewer treatment, and operations (general and adminstrative, information technology, engineering, etc.).

VALLECITOS WATER DISTRICT
Water and Wastewater Specialists since 1955

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This legal notice contains important information regarding rates associated with providing 21,000 plus customers in San Marcos, portions of Carlsbad, Escondido, Vista and unincorporated areas in San Diego County with safe, reliable water and wastewater services. (Para información en Español, visítenos en www.vwd.org o llámenos a (760)744-0460.)

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Paper from responsible sources
FSC® C023469

Notice of Public Rate Hearing

Conservation Assistance

To assist customers to conserve water and reduce their water bill,Vallecitos offers free landscape irrigation audits to determine the efficiency of your irrigation system. For more information on water conservation programs, please visit our website at www.vwd.org/conservation or go to SustainableLandscapesSD.org.

"Like us" on Facebook or follow us on Twitter@vallecitoswater www.vwd.org | 760.744.0460

DATE: **JUNE 7, 2017**
TO: **BOARD OF DIRECTORS**
SUBJECT: **ACWA REGION 10 NOMINATING COMMITTEE SEEKING REGION 10 BOARD CANDIDATES**

BACKGROUND:
The Region 10 Nominating Committee is seeking ACWA members who are interested in leading the direction of ACWA Region 10 for the 2018-2019 term. The Nominating Committee is currently seeking candidates for the Region 10 Board, which is comprised of Chair, Vice Chair and up to five Board Member positions.

DISCUSSION:
At the May 17, 2017 Board meeting, the consensus of the Board was to nominate Director Martin for the ACWA Region 10 Board.

A nomination form must be completed and a resolution of support from the Board of Directors is also required. The deadline to submit the requested information is Friday, June 30.

The Region 10 Nominating Committee will announce their recommended slate by July 31, 2017. On August 1, 2017 the election will begin with ballots sent to the General Managers and Board Presidents. The election will be completed by September 29, 2017. On October 5, 2017, election results will be announced. The newly elected Region 10 Board members will begin their two-year term on January 1, 2018.

RECOMMENDATION:
Adopt the Resolution.

RESOLUTION NO.

**RESOLUTION OF THE BOARD OF DIRECTORS
OF THE VALLECITOS WATER DISTRICT
PLACING IN NOMINATION HAL J. MARTIN AS A MEMBER OF THE
ASSOCIATION OF CALIFORNIA WATER AGENCIES
REGION 10 BOARD OF DIRECTORS**

WHEREAS, The Board of Directors of the Vallecitos Water District does encourage and support the participation of its members in the affairs of the Association of California Water Agencies (ACWA); and

WHEREAS, Hal J. Martin has indicated a desire to serve as a Board member of ACWA Region 10.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Vallecitos Water District does place its full and unresolved support in the nomination of Hal J. Martin for Board member of ACWA Region 10.

BE IT FURTHER RESOLVED that the Board of Directors of the Vallecitos Water District does hereby determine that the expenses attendant with the service of Hal J. Martin in ACWA Region 10 shall be borne by the Vallecitos Water District.

PASSED AND ADOPTED by the Board of Directors of the Vallecitos Water District at a regular meeting held on this 7TH day of June, 2017, by the following roll call vote:

AYES:
NOES:
ABSTAIN:
ABSENT:

_____
Craig Elitharp, President
Board of Directors
Vallecitos Water District

ATTEST:

_____
Glenn Pruim, Secretary
Board of Directors
Vallecitos Water District

URBAN WATER INSTITUTE, INC.
A Non-Profit Organization

"Risk, Crisis & Uncertainty: Are We Ready??"

Urban Water Institute's 24th Annual Water Conference | | August 16-18, 2017

Wednesday, August 16, 2017

10:30 a.m. – Board of Directors Brunch & Meeting (Marbella/Las Palmas Room)

12:00 p.m. - Registration, Networking & Exhibits (Sorrento Ballroom)

1:00 p.m. - Opening Remarks & Introduction
Matt Stone, Chair, Urban Water Institute

1:15 p.m. - Welcome to San Diego

1:30 p.m. – Oroville Panel Engineering Panel
Moderator: Matt Stone, Chairman, Urban Water Institute & General Manager, Castaic Lake Water Agency
David A. Gutierrez, PE, GE, Senior Water Resources and Geotechnical Engineer, GEI Consultants
Jeanne Kuttel, Chief, Division of Engineering at CA Department of Water Resources
Jack Safely, Imported Supply Unit Manager, Metropolitan Water District of Southern California

2:30 p.m. – Oroville Panel Policy Panel
Moderator: Rita Schmidt Sudman, Author & Senior Advisor, Water Education Foundation
Bill Croyle, Acting Director, California Department of Water Resources
Ron Stork, Senior Policy Advocate, Friends of the River *(Invited)*
Jeff Kightlinger, General Manager, Metropolitan Water District of Southern California *(Invited)*

3:30 p.m. – Networking Break

3:45 p.m. –Infrastructure Panel
Burst pipes. Sinkholes in the middle of streets swallowing cars. Flint, Michigan. These are just a few symptoms of a serious national disease. Much of our nation's underground infrastructure was put into place after World War 2, and it's failing at accelerating rates. Combining this with generally decreasing revenues, particularly in California with drought restrictions and conservation as a way of life, we have a real crisis on our hands. This panel will discuss our infrastructure crisis and what is being done about it - nationally, locally, financially, and technologically.
Moderator: Dr. Greg Quist, Director, Rincon del Diablo Municipal Water District
Marty Adams, Chief Operating Officer, Los Angeles Department of Water and Power
Marc Bracken, Chairman, SWAN North America
Don Polese, Senior Vice President, Vectis Strategies

4:45 p.m. – Adjourn

5:00 p.m. – Welcome Reception (Suite 234)

6:00 p.m. – Dinner on Your Own

Thursday, August 17, 2017

8:00 a.m. – Registration, Exhibits, Networking & Continental Breakfast (Sorrento Ballroom)

8:45 a.m. – Opening Remarks
Ane Deister, Executive Director, Urban Water Institute

9:00 a.m. – Get to Know Our Exhibitors!

9:15 a.m. – Legislative Leadership & Policy (Confirmed)
Introduction by Larry Dick, Director, Metropolitan Water District of Southern California
Eric Sapirstein, Founder & President, ENS Resources

10:00 a.m. – Networking Break

10:15 a.m. – Updating the Bay-Delta WQCP: "Unimpaired" vs. "Functional" Flows & Implications for Southern California's Water Reliability
Moderator: Greg Zlotnick, Water Resources & Strategic Affairs, San Juan Water District
Jennifer Buckman, Bartkiewicz, Kronick & Shanahan

11:15 a.m. – One-on-One with Pat Mulroy
Interviewer: Rita Schmidt Sudman, Author & Senior Advisor, Water Education Foundation

12:15 p.m. – Luncheon (Riviera Room)

1:15 p.m. – California Water Fix
Moderator: Mary Aileen Matheis, Director, Irvine Ranch Water District

2:15 p.m. – Networking Break

2:30 p.m. – Water, Ethics & Crisis Management (Confirmed)
Moderator: Ed Means, President, Means Consulting, LLC
Steve Bucknam, President, Bucknam & Associates
Kevin Hunt, General Manager, Central Basin Municipal Water District

3:30 p.m. – Water Energy Nexus
Moderator: Steve Bucknam, President, Bucknam & Associates
Jamie Weisman, MBA, Energy-Water Nexus Strategist, OpTerra Energy

5:00 p.m. – Adjourn – Chairman's Reception (Bayside Terrace)

6:00 p.m. – Dinner on Your Own

Friday, August 18, 2017
8:00 a.m. – Registration, Exhibits, Networking & Buffet Breakfast (Sorrento Ballroom)
Chairman's Drawing: Don't miss out on your opportunity to participate in the Chairman's Drawing! Please pick up your raffle ticket at the registration desk.

8:30 a.m. – Opening Remarks
Ane Deister, Executive Director, Urban Water Institute

8:45 a.m. – 1,000 Year Mega Drought

9:45 a.m. – Networking Break

10:00 a.m. – Colorado River

11:00 a.m. – Panel/Speaker TBD

12:00 p.m. - Conference Adjourn