Report on

Water Rate Study

June 2017

For:

Nipomo Community Services District

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Submitted By:

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June 23, 2017

Mr. Mario Iglesias
General Manager
Nipomo Community Services District
148 South Wilson Street
Nipomo, CA 93444

Dear Mr. Iglesias:

I am pleased to present this Water Rate Study (Study) report to the Nipomo Community Services District (District). The water rates presented in this Water Rate Study Report (Report) have been developed based on cost of service principles and industry methods that result in fair and equitable rates for the users of the water system in accordance with Proposition 218.

This study included a review and analysis of the water enterprise and supplemental water revenue and revenue requirements, number of customers, water sales volumes, and rate structures. The major objectives of the study include the following.

- Analyze the water enterprise funds and evaluate the adequacy of revenue using current rates
- Develop a financial plan to create positive levels of income during the study period
- Contribute to operating and capital reserves to meet or exceed target levels over time
- Maintain debt service coverage ratios at or greater than the minimum required
- Meet annual capital replacement spending from annual revenue and reserves

This Report presents the findings and recommendations for the financial plan and water rates developed for the District's water enterprise. The Report provides tables and figures to demonstrate and document the calculations.

It has been a pleasure to work with District staff during the performance of this study. If there are any questions, please contact me at (949) 760-9454.

Very Truly Yours,

TUCKFIELD & ASSOCIATES

G. Clayton Tuckfield
Principal Consultant

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Water Rate Study

NIPOMO COMMUNITY SERVICES DISTRICT

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Executive Summary

The Nipomo Community Services District (District) engaged Tuckfield & Associates in November 2016 to conduct a Water Rate Study (Study) for its water enterprise. This Study includes development of a financial plan of revenues and revenue requirements of the District's water and supplemental water system (together the "System"), various analyses to determine the costs of providing water service, and new water rates and charges for implementation.

Financial Plan

The revenue and revenue requirements of the System were identified and projected to create a forward looking financial plan of the water enterprise. Annual costs of the System include operation and maintenance expense (O&M), purchased water, debt service, and annual capital replacement transfers.

Projected revenue requirements for the Study period include application of inflation factors to the District's 2016-17 budget year expenses. In addition to these expenses, the District plans to add three new employees over the next three years. These include a customer service representative in FY 2017-18, a water system maintenance worker in FY 2018-19, and an office worker in FY 2019-20. Annual transfers for replacement capital related to both the water system and supplemental water system is included in the financial plan. Debt service payments of the 2013 and 2013A Certificates of Participation (COPs) are included in the financial plan and are partially offset by property taxes received by the District.

The District prepared a Capital Improvement Program (CIP) for FY 2017-18 through FY 2021-22. Costs for projects in this five-year CIP, and costs for projects awarded in the current year, equals $1.9 million annually when averaged over six years. The project costs within the six-year period total $11.7 million and will be directed exclusively to water infrastructure replacement and improvement projects, including the final phases of the Nipomo Supplemental Water Project. The District anticipates that all CIP improvements can be funded with reserves and transfers received into the Water Replacement Fund (Fund 805) and Supplemental Water Fund (Fund 500) funds.

A financial plan was prepared that combines the water system (Fund 125) and supplemental water system (Fund 126) to evaluate the sufficiency of revenue, using the District's current water rates, to meet the projected revenue requirements (costs) of the System. The analyses indicated that the current level of revenue being received should be increased to meet future obligations of the System during the Study period. Increases in revenue are required consisting of 9.2 percent increases annually beginning January 1, 2018 and continuing through January 1, 2020, then an increase of 14.4 percent on January 1, 2021, followed by an increase of 4.5 percent on January 1, 2022. The financial plan is presented in Table 10.

Proposed Water Rates

Current Water Rates

The current water rates for the District's customers consist of fixed charges and variable charges. Current fixed charges consist of water service, litigation, and supplemental water bi-monthly charges by meter size. Variable charges include consumption charges for single-family residential (SFR) customers and multifamily residential customers that include a four-tier conservation rate structure. Commercial, Agriculture, and Irrigation customers

include a two-tier rate structure. The current water rates are summarized in Table ES-1 and ES-2 while a complete listing of the fixed and variable charges is provided in Tables 3 and 4.

Proposition 218

The District completed a water rate study in 2011 that included rate adjustments for a five-year period. The final rate adjustment was implemented in November 2015. The 2011 rate study included a four-tier inclining rate structure that was designed to encourage water conservation. Recent findings from the San Juan Capistrano court decision (Court Decision) suggests that the District's current water rate structure no longer meets the tests of Proposition 218. The findings of the Court Decision indicate that rates not only need to be proportional to cost of service, but they need to be proportional to cost of service within rate tiers as well. Discussion with the Board of Directors and District staff during the course of this Study has resulted in a new water rate structure presented below.

Proposed Water Rate Structure and Rates

The proposed water rate structure modifies the current fixed and variable charges of the District. The current bi-monthly fixed charge structure is modified to combine the District's water system fixed service charge, the litigation charge, and the Supplemental Water fixed charge into one bi-monthly fixed charge while continuing to charge all customers based on their meter size. Detail of the design of the fixed charges can be found in the section of this Water Rate Study Report (Report) described as Proposed Rate Structure on page 19. The proposed fixed charges generate about 24 percent of the revenue received from water rates. Table ES-1 presents the proposed fixed charges for the System.

Table ES-1
Proposed Water Bi-Monthly Fixed Charges

	Current Rate	January 1, FY 17-18	January 1, FY 18-19	January 1, FY 19-20	January 1, FY 20-21	January 1, FY 21-22
Meter Size	Fixed Charge ($ per bi-month)					
5/8 thru 1 inch	$58.12	$42.51	$46.52	$51.59	$58.26	$60.15
1-1/2 inch	$163.54	$51.49	$55.55	$60.87	$67.97	$69.74
2 inch	$256.84	$67.40	$72.08	$78.43	$87.05	$88.97
3 inch	$469.68	$152.51	$163.70	$178.85	$200.11	$204.56
4 inch	$770.31	$197.75	$210.55	$228.44	$253.78	$258.52
6 inch	$1,524.85	$335.12	$349.88	$372.90	$406.41	$410.27
8 inch	$1,777.11	$492.11	$509.09	$538.01	$580.83	$583.68

The current variable charge rate structure is also modified to eliminate the tiered rate structure and is replaced by a uniform volume rate structure applicable to all customer classes. Table ES-2 presents the proposed variable charges for implementation.

Table ES-2
Proposed Water Bi-monthly Variable Charges

Classification	Current Rate	January 1, FY 17-18	January 1, FY 18-19	January 1, FY 19-20	January 1, FY 20-21	January 1, FY 21-22
	Variable Charge ($ per HCF)					
Single-family Residential (1")						
Tier 1 - 0 to 24 units	$3.40					
Tier 2 - 25 to 40 units	$3.98					
Tier 3 - 41 to 100 units	$5.17					
Tier 4 - Over 100	$8.11					
All Consumption		$4.97	$5.45	$5.95	$6.92	$7.17
Multifamily Residential (1")						
Tier 1 - 0 to 8 units	$3.40					
Tier 2 - 9 to 12 units	$3.98					
Tier 3 - 12 to 25 units	$5.17					
Tier 4 - Over 25	$8.11					
All Consumption		$4.97	$5.45	$5.95	$6.92	$7.17
Commercial (1")						
Tier 1 - 0 to 55 units	$3.98					
Tier 2 - Over 55 units	$5.17					
All Consumption		$4.97	$5.45	$5.95	$6.92	$7.17
Irrigation (1")						
Tier 1 - 0 to 55 units	$3.98					
Tier 2 - Over 55 units	$5.17					
All Consumption		$4.97	$5.45	$5.95	$6.92	$7.17
Agriculture	$4.44	$4.97	$5.45	$5.95	$6.92	$7.17
Construction/Hydrant	$4.44	$4.97	$5.45	$5.95	$6.92	$7.17
Supplemental Water	[$1.03 included in current rates above]					

Residential Bill Impacts

Table ES-3 presents the impacts to District single-family residential bills from the proposed water rate structure using the first implementation date of January 1, 2018. The table shows that the water bill of an average single-family residential customer using 25 hundred cubic feet (HCF) bi-monthly will increase from $143.70 to $166.76, an increase of $23.06, or 16.0 percent. However, customers that consume less than the average experience a significant reduction in their bi-monthly bill as shown in table. The dollar amount and percentage changes occurring in the bi-monthly bills are due to the rate structure change shown above where previously there was a tiered rate structure in place that provided lower variable rates in the initial tiers and higher rates in the upper tiers.

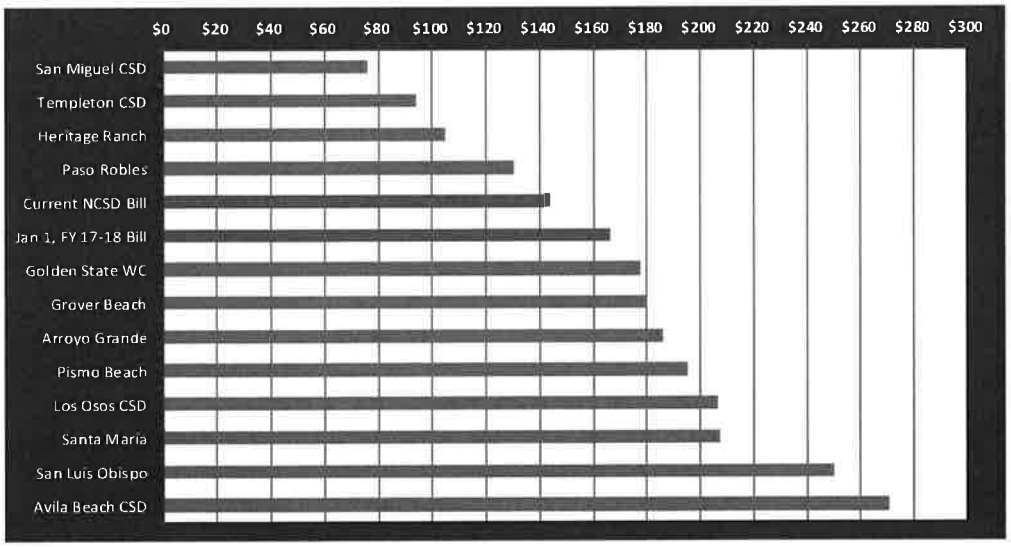
Table ES-3
Comparison of District Single-family Residential Current Bi-Monthly Bill with Proposed Bi-Monthly Bill Using January 2018 Water Rate Structure and Rates

		Single-family Residential							
		Current Bill			Proposed FY 17-18 Bill				
Description	Use (HCF)	Service Charge	Volume Charge	Current Bill	Service Charge	Volume Charge	Proposed Bill	Dollar Difference	Percent Change
	0	$58.12	$0.00	$58.12	$42.51	$0.00	$42.51	($15.61)	-26.9%
Very Low	5	$58.12	$17.00	$75.12	$42.51	$24.85	$67.36	($7.76)	-10.3%
Low	10	$58.12	$34.00	$92.12	$42.51	$49.70	$92.21	$0.09	0.1%
Median	19	$58.12	$64.60	$122.72	$42.51	$94.43	$136.94	$14.22	11.6%
Average	25	$58.12	$85.58	$143.70	$42.51	$124.25	$166.76	$23.06	16.0%
High	40	$58.12	$145.28	$203.40	$42.51	$198.80	$241.31	$37.91	18.6%
Very High	50	$58.12	$196.98	$255.10	$42.51	$248.50	$291.01	$35.91	14.1%

Water Rate Survey

Chart ES-1 has been prepared to compare the District's single-family residential water bill with water bills of other communities at the same consumption. The chart indicates that with the January 1, 2018 water rate structure change, a District single-family residential customer with a bi-monthly consumption of 25 hundred cubic feet (HCF) will experience a bill that is in the mid-range of the communities listed.

Chart ES-1
Survey of Single-family Residential Bi-Monthly Water Bills Using 25 HCF
For Rates in Effect March 2017



Note: Above table uses water rates in effect March 2017. District January 2018 bill is based on the rate structure and rates in Tables 19 and 20.

Introduction

The Nipomo Community Services District (District) engaged Tuckfield & Associates in November 2016 to conduct a Water Rate Study (Study) for its water enterprise. This Study includes development of a financial plan of revenues and revenue requirements of the water and supplemental water system (together the "System"), various analyses to determine the cost of providing water service, and new water rates and charges for implementation.

Background

The Nipomo Community Services District was formed in 1965 and covers an area of approximately 3,917 acres. The District is located in the central coastal region of the state of California in San Luis Obispo County, north of Los Angeles by approximately 175 miles. The District serves a population of over 12,800 (from NCSD 2015 Urban Water Management Plan) and provides water service inside and outside the District's service area. Water service is accounted for in an enterprise fund of the District and relies upon user charges to meet all financial obligations.

Currently, the District obtains its water supply from five active wells and from supplemental water supply from the City of Santa Maria. The five wells have a capacity of 2,500 gpm and extract water primarily from the Nipomo Mesa Management Area (NMMA) of the Santa Maria Groundwater Basin (Basin).

In July of 2015, Phase 1 of the Nipomo Supplemental Water Project was completed that provided additional water supply to the District. The percentage rights to the Supplemental Water and to the groundwater of the Basin were established in litigation in Santa Maria Valley Water Conservation District vs. City of Santa Maria, known as the Stipulation Agreement. The Stipulation Agreement created the NMMA Technical Group to manage the groundwater pumped by the District and other water purveyors.

In addition to water supply facilities, the water system includes five above ground storage reservoirs (tanks) and approximately 85 miles of distribution mains. The tanks have a storage capacity of 4 million gallons while the distribution system consists of piping ranging in size from 6 inch to 24 inches, valves, fire hydrants, and over 4,000 service connections.

Legal Framework and Industry Methodology

Proposition 218

Proposition 218 was approved by California voters in 1996. The initiative added Articles 13 C and D to the California Constitution, providing a definition of a "fee" and providing the requirements for new fees or to increase fees and charges. In 2006, the California Supreme Court ruled that provisions of Proposition 218 apply to water, sewer, and refuse charges. Article 13D states the requirements for new or increased fees and charges, including water rates, which are described below.

1. Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.

2. Revenues derived from the fees or charges shall not be used for any purpose other than that for which the fee or charge was imposed.

3. The amount of the fee or charge imposed upon any parcel or person as an incident of property ownership shall not the proportional cost of the service attributable to the parcel.

4. No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property.

5. The agency shall conduct a public hearing upon the proposed fee or charge not less than 45 days after mailing the notice of the proposed fee or charge to the record owners of each identified parcel upon which the fee or charge is proposed for imposition. At the public hearing, the agency shall consider all protests against the proposed fee or charge. If written protests against the proposed fee or charge are presented by a majority of owners of the identified parcels, the agency shall not impose the fee or charge.

Water rates and charges are considered property-related fees under Proposition 218 and must comply with the substantive and procedural requirements stated above.

Objectives

The objectives of this Study are to (1) review the current and future financial status of the District's water enterprise including supplemental water, (2) make any adjustments to the revenue being received to ensure that the financial obligations are being met now and in the future, including providing for adequate reserves and debt service coverage, and (3) design water rates that generate the required revenue while being fair and equitable for its customers and meeting requirements of Proposition 218.

Scope of the Study

This Study includes the findings and recommendations of analyzing the water enterprise financial status and related CIP of the System. Historical trends were analyzed from data supplied by the District showing the number of customers, water consumption volumes, revenue, and revenue requirements.

Revenue requirements of the System include operation and maintenance expense, routine capital outlays, debt service, replacement transfers, and additions to reserves. Changing conditions such as additional facilities, system growth, employee additions, and non-recurring maintenance expenditures are recognized. Inflation for ongoing expenditures is included to reflect cost escalation.

The financial plan and rates developed herein are based on funding of the capital improvement plan as stated as well as estimates of operation and maintenance expenses developed from information provided by the District. Deviation from the financial plans, construction cost estimates and funding requirements, major operational changes, or other financial policy changes that were not foreseen, may result in the need for lower or higher revenue than anticipated. It is suggested that the District conduct an update to the rate study at least every three years for prudent rate planning.

Assumptions

Several assumptions were used to conduct the Study for the period FY 2016-17 to FY 2021-22. The assumptions included growth rates in customer accounts, interest earnings on fund reserves, and expense inflation factors. The financial planning factors are provided in Table 1.

Table 1
Assumptions and Planning Factors

Description	Value
Annual Account & Demand growth [1]	
Single-family Residential	0.5%
All Other	0%
Interest earnings on fund reserves (annual)	0.65%
Cost Escalation	
Purchased Water	5%
Personnel Services [2]	5%
Benefits	5%
Electrical Power	3%
All Other Operations & Maintenance	3%
Chemicals	2%
Capital	2%

[1] Annualized growth in water accounts is based on historical information provided by staff.
[2] Personnel Services growth in promotions and inflation is 5.0% annually.

System Funds and Reserve Policy

The District has a written water system reserve policy provided in Resolution No. 2017-1435 (Reserve Policy). The Reserve Policy provides a basis to deal with unanticipated loss in revenues, changes in the costs of providing services, spending for fixed asset repair and replacement, natural disaster recovery, and other issues. It also provides guidelines to maintain the financial health and stability of the enterprise funds. The District's water system funds, reserve types, and the amount of the reserves are discussed below.

Water Fund #125 Operating Reserve – The purpose of the Water Fund Operating Reserve is to provide working capital to meet cash flow needs during normal operations and to support the operation, maintenance and administration of the utility. This reserve ensures that operations can continue should there be significant events

that impact cash flows. The target balance to be maintained is equal to or greater than 12 months of annual budgeted operation and maintenance expense, not including funded replacement.

Supplemental Water Fund #126 Operating Reserve – This is a new fund that has been established for the purpose of accounting for the operating revenue and expenses of the Supplemental Water Project. This fund is not currently included in the District's Reserve Policy and no reserve target has been established.

Water Fund #128 Rate Stabilization Reserve – The rate stabilization reserve is intended to serve as a buffer to water rates during any period where there are unexpected increases in operating costs or decreases in revenue. This reserve is also intended to absorb revenue losses due to severe drought or heavy rainfall. The reserve may be drawn into Fund 125 to stabilize water rates and may provide level increases to water rates. The target reserve is established at $400,000.

Water Replacement Fund #805 Reserve – The Water Replacement Reserve is used to fund future replacement of water system assets and capital projects and to provide a cushion for inaccuracy in the long-range capital replacement program. The target reserve is based on a replacement study performed for the District in 2007 (2007 Replacement Study). The District has established an annual amount that is transferred to this fund from Fund 125 that is equal to $566,000 and represents 50 percent of Option 2 from the 2007 Replacement Study.

Beginning Balances and Reserve Targets

The District's goal is to maintain operating and capital reserves as discussed above. As of June 30, 2016, the District's beginning water system reserve balances are listed in Table 2 below. The cash balances are used in the development of the financial plans for the System with the intent to meet the Target Reserves established in Resolution 2017-1435 during or by the end of a 10-year planning period.

Table 2
June 30, 2016 Reserve Balances and Reserve Targets

Reserve Type	Reserve Balance	Reserve Target
Fund 125 Water Operating Reserve	$1,449,165	$2,993,000
Fund 126 SWP	$55,946	$0
Fund 128 Rate Stabilization	$404,021	$400,000
Fund 805 Water Replacement Fund	$3,016,200	n/a
Total	$4,925,332	$3,393,000

Financial Planning

Financial planning for the System included identifying and projecting revenues and revenue requirements for a ten-year planning period. Estimates of revenue from various sources are compared with the projected revenue requirements of the System. This comparison allows the review of the adequacy of existing revenue to meet annual System obligations, and provide the basis for any rate adjustments. New water rates and charges are created to recover all of the District's annual operating and capital costs associated with the System.

This section discusses current water rates, current user classifications, projected revenues and revenue requirements, capital improvement expenditures and financing sources, and proposed revenue adjustments.

Existing Water Rates

The current water rates consist of fixed and variable charges to residential and non-residential customers of the District. All customers are charged bi-monthly fixed charges by meter size that include fixed charges for water service, litigation, and supplemental water. Private fire protection service is charged to those customers receiving this benefit. Current fixed charges of the District are provided in Table 3.

Table 3
Current Water Bi-monthly Fixed Charges

	Meter Size							
Bi-monthly Fixed Charge	5/8 & 3/4 inch	1 inch	1-1/2 inch	2 inch	3 inch	4 inch	6 inch	8 inch
Service Charge [1]	$44.92	$44.92	$123.94	$193.48	$350.88	$572.31	$1,128.85	$1,777.11
Supplemental Water	$13.20	$13.20	$39.60	$63.36	$118.80	$198.00	$396.00	$0.00
Fire Protection	$0.00	$0.00	$0.00	$0.00	$15.75	$18.90	$28.33	$39.37

[1] Includes Litigation Charge.

Variable charges include a four-tier rate structure for Single-family and Multifamily residential customers and a two-tier rate structure for Commercial and Irrigation customers. Agriculture customers are charged a uniform volume rate. All customers are charged additionally for supplemental water. The current water variable charges are presented in Table 4.

Water User Classifications

Number of Customers

The District currently classifies customers as Single-family Residential (SFR), Multifamily Residential (MFR), Commercial, Agriculture, Construction Hydrant, and Irrigation. SFR customers account for about 84 percent of the total customers served by the System. No growth is projected for the first three years followed by growth only in SFR accounts of 0.50 percent annually or 18 accounts added each year, following the assumptions in Table 1. Table 5 provides the historical and projected number of customers by classification.

Table 4
Current Water Bi-monthly Variable Rates

Tier	Current Rate ($/HCF)	Block by Meter Size					
		5/8 & 3/4 inch	1 inch	1-1/2 inch	2 inch	3 inch	4 inch
Single-family							
Tier 1	$3.40	0 to 24 units	0 to 24 units	0 to 24 units			
Tier 2	$3.98	25 to 40 units	25 to 40 units	25 to 40 units			
Tier 3	$5.17	41 to 100 units	41 to 100 units	41 to 100 units			
Tier 4	$8.11	Over 100 units	Over 100 units	Over 100 units			
Multifamily							
Tier 1	$3.40	0 to 8 units	0 to 8 units	0 to 8 units	0 to 8 units	0 to 8 units	0 to 8 units
Tier 2	$3.98	9 to 12 units	9 to 12 units	9 to 12 units	9 to 12 units	9 to 12 units	9 to 12 units
Tier 3	$5.17	12 to 25 units	12 to 25 units	12 to 25 units	12 to 25 units	12 to 25 units	12 to 25 units
Tier 4	$8.11	Over 25 units	Over 25 units	Over 25 units	Over 25 units	Over 25 units	Over 25 units
Commercial							
Tier 1	$3.98	0 to 35 units	0 to 55 units	0 to 290 units	0 to 165 units	0 to 82 units	
Tier 2	$5.17	Over 35 units	Over 55 units	Over 290 units	Over 165 units	Over 82 units	
Irrigation							
Tier 1	$3.98	0 to 50 units	0 to 75 units	0 to 350 units	0 to 350 units	0 to 3000 units	0 to 3000 units
Tier 2	$5.17	Over 50 units	Over 75 units	Over 350 units	Over 350 units	Over 3000 units	Over 3000 units
Agriculture	$4.44	All Consumption					
Construction Hydrant	$4.44	All Consumption					
Supplemental Water	[$1.03 included in current rates above]						

Table 5
Historical and Projected Water Customers by Classification

Customer Class	Historical	Projected					
	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Number of Accounts							
Single-family Residential [1]	3,581	3,581	3,581	3,581	3,599	3,617	3,635
Multifamily Residential	489	489	489	489	491	493	495
Commercial	102	102	102	102	102	102	102
Agriculture	1	1	1	1	1	1	1
Construction/Hydrant	4	4	4	4	4	4	4
Irrigation	89	89	89	89	89	89	89
Total Accounts	4,266	4,266	4,266	4,266	4,286	4,306	4,326
Fire Protection							
Public Fire Protection	660	660	660	660	660	660	660
Private Fire Protection	43	43	43	43	43	43	43
Total Fire Protection Hydrants	703	703	703	703	703	703	703
Number of Dwelling Units							
Single-family Residential [1]	3,581	3,581	3,581	3,581	3,599	3,617	3,635
Multifamily Residential	927	927	927	927	931	935	939

[1] Residential accounts are forecast to increase based on the assumed growth rate of 0.5% annually.

Number of Water Meters

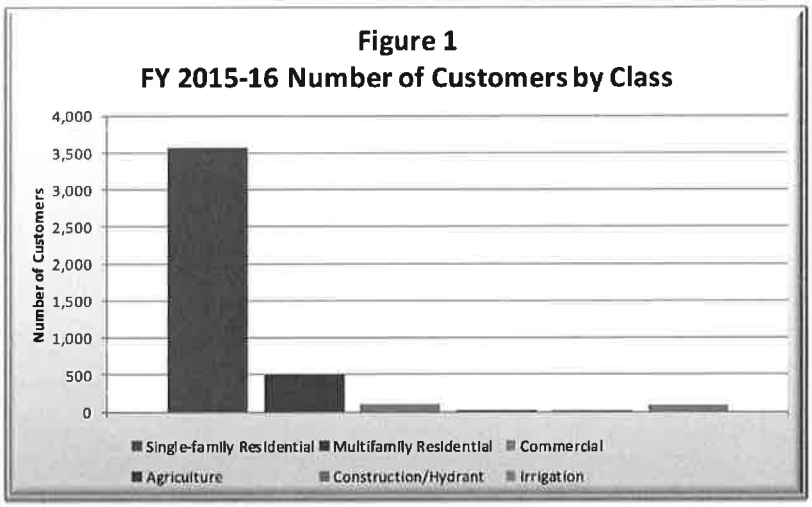
The majority of residential customers have 5/8 and 3/4-inch meters installed at the service location. For new construction, the minimum size is the 1-inch meter size and the projected growth in SFR is in this meter size. Table 6 provides a summary of the number of current and projected meters by size.

Table 6
Projected Number of Water Meters by Size

Description	Historical	Projected					
	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Active Water Meters/Accounts [1]							
5/8 & 3/4 inch	3,160	3,160	3,160	3,160	3,160	3,160	3,160
1 inch	1,033	1,033	1,033	1,033	1,053	1,073	1,093
1-1/2 inch	38	38	38	38	38	38	38
2 inch	19	19	19	19	19	19	19
3 inch	6	6	6	6	6	6	6
4 inch	6	6	6	6	6	6	6
6 inch	4	4	4	4	4	4	4
8 inch	0	0	0	0	0	0	0
Total Accounts	4,266	4,266	4,266	4,266	4,286	4,306	4,326

[1] Historical water accounts for FY 15-16 were provided through District billing records.

Figure 1 shows the current number of customers by classification. The figure illustrates that Single-family Residential customers dominate the number of water accounts served by the System.



Water Sales Volumes

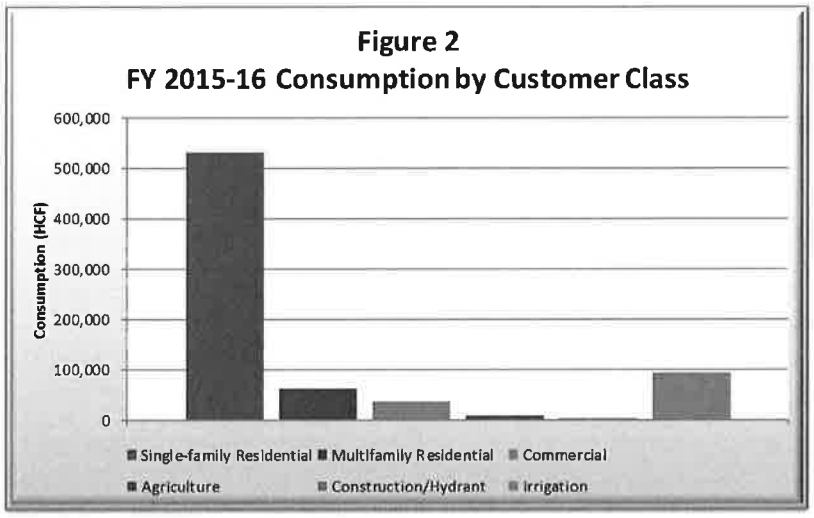
Table 7 provides the historical and projected water sales volume by customer classification. Water sales volumes were projected by recognizing the growth in the number of accounts and the FY 2015-16 use per customer.

Table 7
Projected Water Consumption (in HCF)

Description	Historical	Projected [1]					
	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Single-family Residential	531,613	531,613	531,613	531,613	534,285	536,957	539,630
Multifamily Residential	62,489	62,489	62,489	62,489	62,745	63,000	63,256
Commercial	37,357	37,357	37,357	37,357	37,357	37,357	37,357
Agriculture	7,763	7,763	7,763	7,763	7,763	7,763	7,763
Construction/Hydrant	294	294	294	294	294	294	294
Irrigation	92,086	92,086	92,086	92,086	92,086	92,086	92,086
Total Projected Consumption	731,602	731,602	731,602	731,602	734,530	737,457	740,386

[1] Forecast assumes that the use per customer from FY 15-16 and applied to the number of customers.

Figure 2 shows the projected water sales volume by customer classification for FY 2015-16. The figure shows that largest user group in terms of water sales volume of the System is SFR. The second largest water consumer group is Irrigation customers.



Water Financial Plan

The financial plan provides the means of analyzing the revenue and revenue requirements of the System and its impact on reserves as well as the ability to fund on-going operation and maintenance expense and capital infrastructure requirements. This section of the Report discusses the projection of revenue, operation and maintenance expenses, capital improvement needs of the System and its financing, debt service requirements, and revenue adjustments needed to maintain a sustainable water enterprise.

Revenues

The District receives operating and capital revenue from several sources. Operating revenue is received from rates and charges for water service. Additionally, miscellaneous revenue is received that includes penalties/late fees, meter connection fees, water turn on fees, plan check and inspection fees, interest income, and miscellaneous other sources. Capital revenue from capacity charges is received directly into the appropriate capital funds.

Table 8 presents the projected fixed and variable charge revenue from current water rates of the System. The revenue is projected by applying the current water rates to the projected number of accounts and consumption volume.

Table 8
Projected Rate-based Water Revenue Using Existing Rates

Description	Projected					
	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Water Service Revenues						
Fixed Charges [1]	$1,213,647	$1,213,647	$1,213,647	$1,219,038	$1,224,428	$1,229,818
Variable Charges [2]	1,986,044	1,986,044	1,986,044	1,993,647	2,001,247	2,008,855
Supplemental Water Fixed Charges [1]	359,742	359,742	359,742	361,326	362,910	364,494
Supplemental Water Variable Charges [2]	753,551	753,551	753,551	756,567	759,582	762,599
Subtotal Revenues From Current Rates	$4,312,984	$4,312,984	$4,312,984	$4,330,578	$4,348,167	$4,365,767
Fire Protection Revenues	6,764	6,764	6,764	6,764	6,764	6,764
Total Revenues From Current Rates	$4,319,748	$4,319,748	$4,319,748	$4,337,342	$4,354,931	$4,372,531

[1] FY 16-17 and forecast revenue calculated by multiplying current water service rate by the number of projected meters. Includes Litigation Charge revenue.
[2] FY 16-17 and forecast revenue calculated by multiplying projected water sales by the current variable rates.

Revenue Requirements

Revenue requirements of the System include operation and maintenance expense, annual capital replacement transfer, and existing debt service payments. Each of these items are discussed below.

Operation and Maintenance Expense

Operation and maintenance expenses (O&M) are an on-going obligation of the water system and such costs are normally met from water service revenue. O&M includes the cost to operate and maintain the water supply, reservoirs, and distribution system facilities. Costs also include technical services and other general and administrative expenses.

O&M has been projected recognizing the major expense categories of personnel services, electric power expense, chemicals, all other expenses, and capital outlay. Personnel costs consist of salaries and benefits expense of those personnel directly involved with providing water service. Personnel costs include the addition of a new customer service representative in FY 2017-18, a water system maintenance worker in FY 2018-19, and an office worker in FY 2019-20. Future personnel costs are projected to increase by 5 percent annually. Electric power expense is projected to increase annually at 3 percent. Chemicals expense and Capital outlay is projected to increase at 2 percent annually. Supplemental water purchases are projected to increase by 5 percent annually. All other O&M expense is projected to increase by 3 percent annually. Table 9 provides a summary of the O&M expenses for the Study period.

Table 9
Projected Operation and Maintenance Expense

Desription	Budget FY 16-17	Projected FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Operation and Maintenance Expense						
Personal Services	$754,300	$792,015	$885,154	$929,412	$975,881	$1,024,677
Electricty - Pumping	357,000	367,710	378,741	392,906	327,693	340,498
Chemicals	30,000	30,600	31,212	32,065	26,483	27,251
Water Conservation/Recycle Program	50,000	51,500	53,045	54,636	56,275	57,963
All Other	453,600	525,708	563,180	552,676	567,607	607,987
Subtotal	$1,644,900	$1,767,533	$1,911,332	$1,961,695	$1,953,939	$2,058,376
General and Administrative						
Personal Services	$518,450	$614,885	$645,627	$735,972	$772,771	$811,412
Insurance - Liability	46,500	47,895	49,332	50,812	52,336	53,906
Legal Services	223,000	229,690	236,581	243,678	250,988	258,518
Professional Services	150,000	154,500	159,135	163,909	168,826	173,891
Operating Transfer Out - Admin	247,497	254,922	262,570	270,447	278,560	286,917
All Other	163,000	161,710	172,562	171,559	182,705	182,005
Subtotal	$1,348,447	$1,463,602	$1,525,807	$1,636,377	$1,706,186	$1,766,649
Total Water System O&M Expense	$2,993,347	$3,231,135	$3,437,139	$3,598,072	$3,660,125	$3,825,025
Supplemental Water						
Supplemental Water Purchases	$850,303	$895,112	$940,988	$989,531	$1,300,260	$1,366,940
Supplemental Water O&M	71,881	74,073	76,341	78,677	94,085	96,933
Supplemental Water Overhead	10,781	11,320	11,886	12,480	16,380	17,199
Supplemental Water Replacement	149,439	149,439	150,729	157,680	163,043	168,316
Total Supplemental Water O&M Expense	$1,082,404	$1,129,944	$1,179,944	$1,238,368	$1,573,768	$1,649,388

Capital Replacement Transfer

Water line replacements generally occur on an annual basis. The District plans for water line replacements in its capital planning and these replacements occur from time to time during the fiscal year. An annual amount is transferred from the operating fund (Fund 125) to the Water Replacement Fund (Fund 805) to aid in funding these replacements. An annual amount of $566,000 was established from Board of Directors policy from a replacement study performed for the District in 2007 (2007 Replacement Study). This amount is projected to increase at the rate of 2.5 percent annually.

An amount for replacement for the supplemental water facilities has also been established. This amount changes with capital additions to the Supplemental Water Project and is currently calculated as the value of the facilities divided by a 100 year life multiplied by the District's capacity share of 72.24 percent. The current amount is $149,400 annually.

Existing Debt Service

The District has two outstanding debt issues consisting of the 2013 Revenue Certificates of Participation (COPs) and the 2013A Revenue Refunding Bond (Bonds) obligations. The 2013 COPs partially financed the Supplemental Water Project while the 2013A Bonds refinanced a prior debt issue related to the water system. The 2013 COPs have annual debt service payments of about $530,000 and will be retired in 2044. The 2013A Bonds has annual debt service payments of about $225,000 and will be retired in 2032.

Water Capital Improvement Program

The District has developed a capital improvement program (CIP) that lists capital expenditures for FY 2016-17 through FY 2021-22. Over this period the District projects that it would expend approximately $11,716,000. These improvements include Phase 2 and 3 of the Supplemental Water Project, watermain replacements,

Completing

reservoir maintenance, blow-off and air-vac valve repair/replacements, fire hydrant repair/replacements, and well refurbishment and maintenance.

The District anticipates that it can meet all capital expenditures in the Study period from capital reserves and replacement transfers into the capital funds.

Water Financial Plan

A financial plan has been prepared that includes the revenues and revenue requirements that were identified for the System. The financial plan includes combining the revenues and obligations of the water system Fund 125 with those of supplemental water Fund 126, such that an overall analysis of the sufficiency of revenue may be performed. The combined financial plan is presented in Table 10.

The financial plan incorporates specific planning criteria or goals to provide guidance to maintain the financial health of the System on an on-going basis. The criteria included the following.

- Generate positive levels of income in each year of the Study period
- Maintain the operating and capital reserves at or greater than target levels
- Maintain debt service coverage ratios at or greater than the minimum required
- Meet annual capital replacement spending from annual revenue and capital reserves

Proposed Revenue Adjustments

The revenue sufficiency analysis indicated that the current level of revenue being received should be increased to meet future obligations of the System during the Study period. The recommended revenue increases include 9.2 percent increases annually beginning January 1, 2018 and continuing through January 1, 2020, then an increase of 14.4 percent on January 1, 2021, followed by an increase of 4.5 percent on January 1, 2022. The increases are necessary to meet the planning criteria discussed above for a ten-year planning period even though only a five-year planning period is shown in Table 10.

Table 10
Water Financial Plan (Combined Fund 125 and 126)

Description	Projected					
	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Proposed Revenue Increase (January 1)		9.2%	9.2%	9.2%	14.7%	4.5%
Revenue						
Revenues from Existing Water Rates [1]	$3,206,455	$3,206,455	$3,206,455	$3,219,449	$3,232,439	$3,245,437
Supplemental Water Rate Revenues [1]	1,113,293	1,113,293	1,113,293	1,117,893	1,122,492	1,127,093
Total Additional Water Sales Revenue [2]	0	165,590	578,242	1,033,047	1,663,273	2,280,689
Miscellaneous Income	127,700	141,200	141,200	141,200	141,200	141,200
Transfer from Property Tax Fund	596,000	601,960	607,980	614,060	620,201	626,403
Interest Income [3]	11,306	8,167	5,605	4,303	4,422	7,518
Total Revenue	$5,054,754	$5,236,665	$5,652,775	$6,129,952	$6,784,027	$7,428,340
Revenue Requirements						
O&M and Capital Outlay	$2,993,347	$3,231,135	$3,437,139	$3,598,072	$3,660,125	$3,825,025
Replacement Transfer to Fund 805	566,000	580,000	595,000	610,000	625,000	641,000
2013 COPs Debt Service	529,508	532,405	529,640	531,288	532,413	533,025
2013A Revenue Refunding Bonds Debt Service	223,050	223,750	223,675	222,800	221,675	220,300
Supplemental Water Purchases	850,303	895,112	940,988	989,531	1,300,260	1,366,940
Supplemental Water O&M	71,881	74,073	76,341	78,677	94,085	96,933
Supplemental Water Overhead	10,781	11,320	11,886	12,480	16,380	17,199
Supplemental Water Replacement	149,439	149,439	150,729	157,680	163,043	168,316
Total Revenue Requirements	$5,394,309	$5,697,234	$5,965,398	$6,200,528	$6,612,981	$6,868,738
Net Funds Available	**($339,555)**	**($460,569)**	**($312,623)**	**($70,576)**	**$171,047**	**$559,602**
Available Reserves						
Beginning available reserves [4]	$1,909,132	$1,569,578	$1,109,009	$796,386	$725,810	$896,857
Additions (reductions)	(339,555)	(460,569)	(312,623)	(70,576)	171,047	559,602
Ending available reserves	$1,569,578	$1,109,009	$796,386	$725,810	$896,857	$1,456,459
Target Reserves [5]	$2,993,000	$3,231,000	$3,437,000	$3,598,000	$3,660,000	$3,825,000
Above (below) Target	($1,423,423)	($2,121,992)	($2,640,615)	($2,872,190)	($2,763,144)	($2,368,542)
Debt Service Coverage						
Net Revenues [6]	$2,021,086	$1,567,607	$2,765,796	$2,153,539	$2,424,429	$2,929,217
Annual Debt Service	$752,558	$756,155	$753,315	$754,088	$754,088	$753,325
Coverage [7]	269%	207%	367%	286%	322%	389%

[1] Projected using the existing rates.
[2] Additional revenue from proposed rate adjustments.
[3] Interest earnings on the average fund balance calculated at 0.65%.
[4] The available beginning FY 16-17 cash balance provided by District and includes Rate Stabilization Reserves.
[5] Build reserve to Target Reserve policy level equal to 12 months of Fund 125 operation and maintenance expense.
[6] Includes water and supplemental water revenues, capacity charge revenue, property tax revenue, and miscellaneous income.
[7] Minimum coverage is 125 percent.

Cost of Service

This section of the Report discusses the allocation of the System's operating and capital costs. Establishing rates in California requires that the agency responsible for imposing property-related fees create a nexus between the cost of providing service and the rates to be imposed.

Industry Methodology

This Study uses methodologies from the American Water Works Association (AWWA) to determine costs of service for the System. AWWA is an industry trade organization that provides guidance on operations and management of water utilities. Through their Manual M1, general guidelines and principles are provided to assist agencies with the design of water rates such that the rates may be consistent with local requirements while also recognizing state laws and legal framework. The guidelines and principles in the AWWA Manual M1 has been used to conduct this Study and to design the District's water rates while also following Proposition 218 and the recent San Juan Capistrano court decision.

The annual costs of providing water service from the financial plan are allocated to cost components according to industry standards provided in the AWWA Manual M1 in an effort to provide a defensible cost allocation. The methodology provides the basis to design fixed and variable rates and charges to recover the costs under the methodology such that adequate revenue is generated to meet the estimated annual revenue requirements from the financial plan.

Costs of Service to be Allocated

The annual cost of service consists of O&M expenses and capital costs of the water and supplemental water systems. O&M expenses include costs related to water distribution, maintenance of the facilities, and general and administrative costs. Capital costs include annual capital replacement and existing debt service discussed in the financial plan.

The water and supplemental water costs first need to be allocated to cost component based on the operating characteristics and design of the System facilities. Cost allocations consider the average quantity of water consumed as well as the peak rate at which water is consumed. The System is designed to serve average and peak demands, and costs that are related to serving average and peak demands are allocated in a manner such that they may be recovered appropriately.

For this Study, the cost allocation components include Supplemental Water, Base, Peaking, Meters and Services, Customer, Direct Fire Protection, and Conservation. Operating and capital costs from each year of the financial plan are assigned to each of these parameters resulting in total annual costs of service by cost component. A summary of the total cost to be recovered from the users of the water system by cost component for FY 2017-18 is presented in Table 11. A detailed allocation for this same year is provided Appendix A with a summary of the costs of service for each year of the financial plan, allocated in the same manner.

Table 11
Summary of FY 2017-18 Allocated Costs of Service

Cost Component	Water & Suppl Water		Fire Protection		Total
	Fixed	Variable	Public	Private	Costs
Base [1]		$1,508,887			$1,508,887
Peaking [2]	154,195	867,783	283,984	17,081	1,323,043
Meters & Services	308,766				308,766
Customer	320,778				320,778
Direct Fire Protection			41,729		41,729
Conservation		84,017			84,017
Supplemental Water		$1,129,944			1,129,944
Total	$783,739	$3,590,631	$325,714	$17,081	$4,717,165

[1] All Base costs recovered through variable charges.
[2] Fixed costs include 2013A Bonds debt service less proportional property tax revenue (Appendix A).

Rate Design

The cost of service allocations described in the previous section provides the basis for water rate design. The goal of the design of rates is to achieve fairness and ensure that each customer class reasonably pays its fair share of costs. Rates should be simple to administer, easy to understand, and comply with regulatory requirements. This section describes how water rates and charges are designed and includes the proposed schedule of water rates for implementation.

Proposed Rate Structure

The recommended water rate structure includes combining the individual fixed charges (water service, litigation, and supplemental water charges) into a single fixed charge by meter size while also modifying the current variable rate structure to include a uniform volume charge applicable to all users of the system.

Proposed Fixed Charges

The proposed fixed charges are designed to recover the fixed costs identified above in Table 11. The fixed charges include the Peaking, Meters and Services, and Customer costs of service and also recovers costs allocated to public fire protection. Peaking costs and Meters and Services costs are recovered based on capacity and meter and service ratios respectively. These ratios are provided by AWWA in their Manual M1. Customer and public fire protection costs are recovered based on the number of bills issued.

Tables 12 below presents the design of the proposed bi-monthly fixed charges for customers for FY 2017-18. The current fixed charges generate about 35 percent of revenue from water rates. The proposed fixed charges generate approximately 24 percent of the revenue from water rates.

Table 12
Design of Fixed Charges

Customer Service Cost	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Customer	$320,778	$362,815	$428,537	$504,301	$530,783
Public Fire Protection	325,714	361,403	392,956	439,673	458,236
Customer Cost	$646,491	$724,218	$821,492	$943,974	$989,019
Number of Bills	25,596	25,596	25,716	25,836	25,956
Customer Cost per Unit	$25.26	$28.29	$31.94	$36.54	$38.10

Meters and Services Cost	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Meters and Services	$308,766	$343,565	$389,113	$453,372	$471,425
Number of Equivalent Meters & Services	26,690	26,690	26,810	26,930	27,050
Meters and Services Cost per Unit	$11.57	$12.87	$14.51	$16.84	$17.43

Peaking Cost	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Peaking Costs Less Public Fire	$154,195	$145,335	$140,028	$133,887	$126,922
Number of Equivalent Meters	27,145	27,145	27,265	27,385	27,505
Peaking Cost per Unit	$5.68	$5.35	$5.14	$4.89	$4.61
Bi-Monthly Base Fixed Charge - 5/8", 3/4", 1"	$42.51	$46.52	$51.59	$58.26	$60.15

Fixed charges for meter sizes greater than 1-inch are increased as shown below in Table 13 for FY 2017-18. The total fixed charges by meter size reflect increases in the Peaking charge and in the Meter and Services charge from application of capacity and meter and service cost ratios respectively.

Table 13
Design of Fixed Charges by Meter Size
FY 17-18

Meter Size	Meter & Service Ratio	Meters & Services Charge	Meter Capacity Ratio	Peaking Charge	Public Fire Protection Charge	Customer Charge	Total Bi-Monthly Charge
inches							
5/8 & 3/4 inch	1.00	$11.57	1.00	$5.68	$12.73	$12.53	$42.51
1 inch	1.00	$11.57	1.00	$5.68	$12.73	$12.53	$42.51
1-1/2 inch	1.29	$14.87	2.00	$11.36	$12.73	$12.53	$51.49
2 inch	2.07	$23.96	3.20	$18.18	$12.73	$12.53	$67.40
3 inch	7.86	$90.90	6.40	$36.35	$12.73	$12.53	$152.51
4 inch	10.00	$115.69	10.00	$56.80	$12.73	$12.53	$197.75
6 inch	15.00	$173.53	24.00	$136.33	$12.73	$12.53	$335.12
8 inch	20.71	$239.63	40.00	$227.22	$12.73	$12.53	$492.11

Private Fire Protection Fixed Charges. Annual costs allocated to the Fire Protection cost component are separated into Public and Private Fire Protection costs as shown in Table 11. Public Fire Protection costs are included into the bi-monthly service charges as shown in Table 12. Private Fire Protection costs are recovered from those customers that receive the direct fire protection benefit. The bi-monthly cost by equivalent hydrant size is provided in Table 14. The bi-monthly private fire protection charges increase with fireline size based on hydrant ratios provided by AWWA. The proposed private fire protection fixed charges are shown in Table 15.

Table 14
Design of Private Fire Protection Charges

Fire Protection Cost	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Private Fire Protection	$17,081	$18,903	$20,514	$22,882	$23,816
Private Fire Protection Eq. Hydrants	238	238	238	238	238
Private Fire Protection	$71.71	$79.36	$86.13	$96.07	$99.99

Table 15
Proposed Bi-monthly Private Fire Protection Charges

Hydrant Size	Hydrant Ratio	Current Charge	January 1, FY 17-18	January 1, FY 18-19	January 1, FY 19-20	January 1, FY 20-21	January 1, FY 21-22
inches							
1 inch	0.01	$0.00	$0.64	$0.71	$0.77	$0.86	$0.90
1-1/2 inch	0.03	$0.00	$1.87	$2.07	$2.25	$2.51	$2.61
2 inch	0.06	$0.00	$3.99	$4.41	$4.79	$5.34	$5.56
3 inch	0.16	$15.75	$11.58	$12.82	$13.91	$15.52	$16.15
4 inch	0.34	$18.90	$24.69	$27.32	$29.65	$33.07	$34.42
6 inch	1.00	$28.33	$71.71	$79.36	$86.13	$96.07	$99.99
8 inch	2.13	$39.37	$152.82	$169.13	$183.54	$204.73	$213.08
10 inch	3.83	$47.23	$274.83	$304.15	$330.07	$368.17	$383.19

Proposed Variable Charges

The variable charges are designed to recover the Base, Peaking, Conservation, and Supplemental Water costs shown in Table 11. The proposed variable charges are designed to be uniform volume charges that apply to all users of the system. The design of the proposed variable charges for the District water system and supplemental water system are designed separately to show the individual volume rate for the two systems. The District water system uniform volume charge is presented in Table 16 whereas the supplemental water system uniform volume charge is presented in Table 17. Both tables include variable rates for projected years of the financial plan.

Table 16
Design of Uniform Volume Charge

Water System Volume Charge	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Base Costs	$1,508,887	$1,661,732	$1,842,455	$2,009,390	$2,124,018
Peaking Variable	$867,783	$985,673	$1,092,099	$1,246,262	$1,314,474
Conservation Cost	84,017	91,774	103,882	120,920	125,558
Uniform Volume Charge ($/Ccf)	$2,460,687	$2,739,179	$3,038,436	$3,376,572	$3,564,050
Units of Service (Ccf)	731,602	731,602	734,530	737,457	740,386
Uniform Volume Charge ($/Ccf)	$3.36	$3.74	$4.14	$4.58	$4.81
Units of Service with Demand Response	722,629	719,042	718,245	714,816	726,668
Uniform Volume Charge ($/Ccf)	$3.41	$3.81	$4.23	$4.72	$4.90

Table 17
Design of Supplemental Water Uniform Volume Charge

Supplemental Volume Charge	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Supplemental Water	$1,129,944	$1,179,944	$1,238,368	$1,573,768	$1,649,388
Units of Service (Ccf)	731,602	731,602	734,530	737,457	740,386
Uniform Volume Charge ($/Ccf)	$1.54	$1.61	$1.69	$2.13	$2.23
Units of Service with Demand Response	722,629	719,042	718,245	714,816	726,668
Supplemental Water Volume Charge ($/Ccf)	$1.56	$1.64	$1.72	$2.20	$2.27

Pass-Through Provision

Though the variable charges shown in Table 17 reflect projected costs, this study proposes a Pass-Through Adjustment for the costs of purchased supplemental water. Under a Pass-Through Adjustment, the District may pass-through any increase in the cost of purchased supplemental water at any time that such costs are increased to the District during the five-year period from January 1, 2018 to December 31, 2022.

The pass-through of costs are allowed under section 53756 of the California Government Code. For each change in purchased supplemental water supply rates and costs to the District, the District may calculate a revised variable charge and pass this change through to the customer's bill. An example is provided in Appendix C.

Outside District Rate Differential

The District receives property tax revenue from taxes paid by Inside District customers. Customers that reside outside the District do not pay property taxes for which the District receives any revenue. A rate differential is calculated to surcharge these customers such that they are charged the same rates as Inside District customers.

Table 18 below provides the methodology and the calculated Outside District rate surcharge. The surcharge is to be added to the inside District rate for charging Outside District customers. For Outside District customers that have a contract for water service with the District, the contract remains in effect.

Table 18
Calculation of Outside District Rate Differential

Description	January 1, FY 17-18	January 1, FY 18-19	January 1, FY 19-20	January 1, FY 20-21	January 1, FY 21-22
Property Tax Revenue	$601,960	$607,980	$614,060	$620,201	$626,403
Inside District Volume	727,188	727,188	730,116	733,043	735,972
Surcharge ($/HCF)	$0.83	$0.84	$0.84	$0.85	$0.85

Proposed Water Rates

Tables 19 and 20 present the proposed fixed charges and variable charges respectively for the System for the next five years. Tables 19 and 20 both include the current charges and the proposed future charges designed for the System. The fixed and variable charges are proposed to be effective beginning on January 1, 2018 and each January 1 through FY 2021-22.

Table 19
Proposed Bi-Monthly Fixed Charges with Uniform Rate Structure

	Current Rate	January 1, FY 17-18	January 1, FY 18-19	January 1, FY 19-20	January 1, FY 20-21	January 1, FY 21-22
Meter Size	Fixed Charge ($ per bi-month)					
5/8 thru 1 inch	$58.12	$42.51	$46.52	$51.59	$58.26	$60.15
1-1/2 inch	$163.54	$51.49	$55.55	$60.87	$67.97	$69.74
2 inch	$256.84	$67.40	$72.08	$78.43	$87.05	$88.97
3 inch	$469.68	$152.51	$163.70	$178.85	$200.11	$204.56
4 inch	$770.31	$197.75	$210.55	$228.44	$253.78	$258.52
6 inch	$1,524.85	$335.12	$349.88	$372.90	$406.41	$410.27
8 inch	$1,777.11	$492.11	$509.09	$538.01	$580.83	$583.68

Table 20
Proposed Bi-monthly Variable Rates with Uniform Rate Structure

Classification	Current Rate	January 1, FY 17-18	January 1, FY 18-19	January 1, FY 19-20	January 1, FY 20-21	January 1, FY 21-22
	Variable Charge ($ per HCF)					
Single-family Residential (1")						
Tier 1 - 0 to 24 units	$3.40					
Tier 2 - 25 to 40 units	$3.98					
Tier 3 - 41 to 100 units	$5.17					
Tier 4 - Over 100	$8.11					
All Consumption		$4.97	$5.45	$5.95	$6.92	$7.17
Multifamily Residential (1")						
Tier 1 - 0 to 8 units	$3.40					
Tier 2 - 9 to 12 units	$3.98					
Tier 3 - 12 to 25 units	$5.17					
Tier 4 - Over 25	$8.11					
All Consumption		$4.97	$5.45	$5.95	$6.92	$7.17
Commercial (1")						
Tier 1 - 0 to 55 units	$3.98					
Tier 2 - Over 55 units	$5.17					
All Consumption		$4.97	$5.45	$5.95	$6.92	$7.17
Irrigation (1")						
Tier 1 - 0 to 55 units	$3.98					
Tier 2 - Over 55 units	$5.17					
All Consumption		$4.97	$5.45	$5.95	$6.92	$7.17
Agriculture	$4.44	$4.97	$5.45	$5.95	$6.92	$7.17
Construction/Hydrant	$4.44	$4.97	$5.45	$5.95	$6.92	$7.17
Supplemental Water	[$1.03 included in current rates above]					

Customer Bill Impacts

An impact analysis was performed to evaluate the change in the District's SFR customer bills that would occur from the implementation of the proposed water rate structure and rates for January 1, 2018. The impacts are provided in Table 21 below. For an average single-family customer with a 1-inch or smaller meter size using 25 hundred cubic feet (HCF) bi-monthly, the bill will increase from $143.70 to $166.76, an increase of $23.06 or 16.0 percent. However, customers that consume less than the average could experience a significant reduction in their bi-monthly bill as shown in the table.

Table 21
Comparison of Single-family Residential Current Bi-Monthly Bill with Proposed Bi-Monthly Bill Using January 2018 Water Rate Structure and Rates

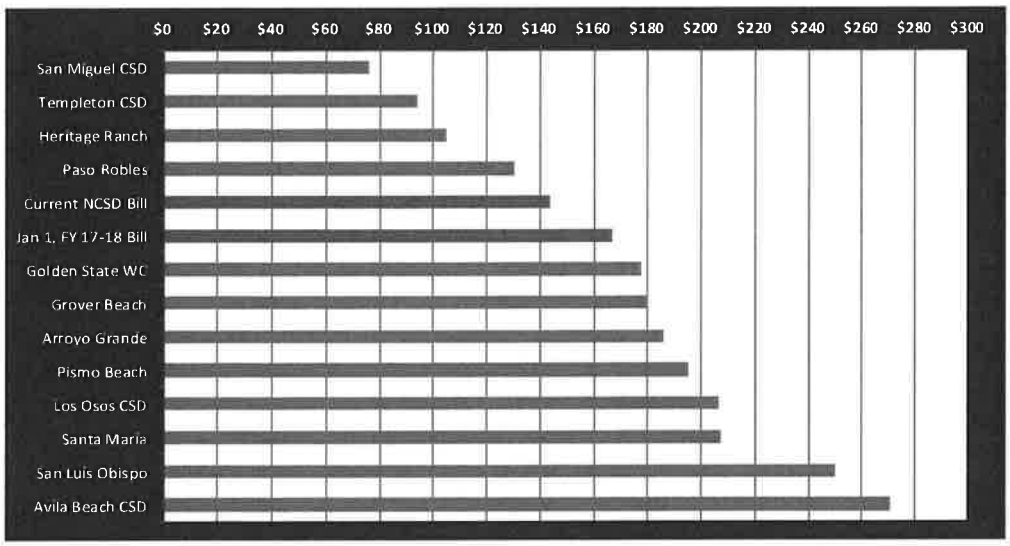
		Single-family Residential							
		Current Bill			Proposed FY 17-18 Bill				
Description	Use (HCF)	Service Charge	Volume Charge	Current Bill	Service Charge	Volume Charge	Proposed Bill	Dollar Difference	Percent Change
	0	$58.12	$0.00	$58.12	$42.51	$0.00	$42.51	($15.61)	-26.9%
Very Low	5	$58.12	$17.00	$75.12	$42.51	$24.85	$67.36	($7.76)	-10.3%
Low	10	$58.12	$34.00	$92.12	$42.51	$49.70	$92.21	$0.09	0.1%
Median	19	$58.12	$64.60	$122.72	$42.51	$94.43	$136.94	$14.22	11.6%
Average	25	$58.12	$85.58	$143.70	$42.51	$124.25	$166.76	$23.06	16.0%
High	40	$58.12	$145.28	$203.40	$42.51	$198.80	$241.31	$37.91	18.6%
Very High	50	$58.12	$196.98	$255.10	$42.51	$248.50	$291.01	$35.91	14.1%

Water Rate Survey

A water rate survey was conducted for neighboring communities to the Nipomo Community Services District. Chart 1 compares the estimated average District single-family residential bi-monthly water bill with those of neighboring communities at the same consumption of 25 hundred cubic feet (HCF) bi-monthly. The rate survey includes rate schedules in effect March 2017.

Water bills for the District are shown using the current rates and the proposed January 1, 2018 water rates from Tables 19 and 20. The chart indicates that with the January 2018 water rate structure change, a District single-family residential customer with a bi-monthly consumption of 25 hundred cubic feet (HCF) will experience a bill that is in the mid-range of the communities listed.

Chart 1
Survey of Single-family Residential Bi-Monthly Water Bills Using 25 HCF
For Rates in Effect March 2017



Note: Above table uses water rates in effect March 2017. District January 2018 bill is based on the rate structure and rates in Tables 19 and 20.

Appendix A

Technical Appendix

Appendix A-1
Allocation of Revenue Requirements to Cost Component FY 17-18

Description	Total FY 17-18	Supplemental Water Variable	Supplemental Water Fixed	Base	Peaking Max Month	Customer Meters/Serv	Customer Customer	Direct Fire Protection	Conservation
Operation and Maintenance Expense									
Maintenance Personnel Services	$792,015	$0	$0	$317,795	$319,837	$79,203	$63,361	$11,819	$0
Maintenance	577,208	0	0	180,883	182,070	110,029	46,000	6,726	51,500
Electricty - Pumping	367,710	0	0	322,287	45,423	0	0	0	0
Chemicals	30,600	0	0	30,600	0	0	0	0	0
Total Maintenance	$1,767,533	$0	$0	$851,565	$547,330	$189,232	$109,361	$18,545	$51,500
General and Administrative									
Admin Personnel Services	$614,885	$0	$0	$204,791	169,045	$63,735	$153,722	$6,246	$17,346
Admin Maintenance	848,717	0	0	304,581	298,297	101,702	105,438	11,022	27,677
Total General and Administration	$1,463,602	$0	$0	$509,372	$467,342	$165,437	$259,160	$17,268	$45,023
Supplemental Water									
Supplemental Water Purchases	$895,112	$895,112	$0	$0	$0	$0	$0	$0	$0
Supplemental Water O&M	74,073	74,073	0	0	0	0	0	0	0
Supplemental Water Overhead	11,320	11,320	0	0	0	0	0	0	0
Total Supplemental Water Costs	$980,505	$980,505	$0	$0	$0	$0	$0	$0	$0
Total O&M	$4,211,640	$980,505	$0	$1,360,937	$1,014,672	$354,669	$368,521	$35,813	$96,523
Capital Costs									
Replacement Transfer to Fund 805	$580,000	$0	$0	$283,766	$285,633	$47	$0	$10,555	$0
2013 COPs Debt Service	532,405	0	532,405	0	0	0	0	0	0
2013A Revenue Refunding Bonds Debt Service	223,750	0	0	0	223,750	0	0	0	0
Supplemental Water Replacement	149,439	149,439	0	0	0	0	0	0	0
Total Capital Costs	$1,485,594	$149,439	$532,405	$283,766	$509,383	$47	$0	$10,555	$0
Adjustments									
Revenue Offsets [1]	($751,327)	$0	($532,405)	($52,427)	($122,150)	($18,384)	($19,101)	($1,856)	($5,004)
Adjustments for Annual Cash Balance	(460,569)	0	0	(167,902)	(158,786)	(55,502)	(57,670)	(5,604)	(15,105)
Adjustments to Annualize Rate Increase [2]	231,827	0	0	84,514	79,924	27,937	29,028	2,821	7,603
Total Adjustments	($980,069)	$0	($532,405)	($135,815)	($201,012)	($45,949)	($47,743)	($4,639)	($12,506)
Total O&M and Capital	$4,717,165	$1,129,944	$0	$1,508,887	$1,323,043	$308,766	$320,778	$41,729	$84,017

[1] Includes property tax revenue, miscellaneous revenue, and interest income.
[2] Adjustment to annualize revenue from the parial year rate adjustment.

Fixed Costs	23.9%	$1,126,533		$0		$455,260	$308,766	$320,778	$41,729	
Variable Costs	76.1%	$3,590,631	$1,129,944		$1,508,887	$867,783				$84,017
Total Costs		$4,717,165	$1,129,944	$0	$1,508,887	$1,323,043	$308,766	$320,778	$41,729	$84,017

Cost Allocation Summary	Year	Total Revenue Requirement	Supplemental Water Variable	Supplemental Water Fixed	Base	Peaking Max Month	Customer Meters/Serv	Customer Customer	Direct Fire Protection	Conservation
	FY 17-18	$4,717,165	$1,129,944	$0	$1,508,887	$1,323,043	$308,766	$320,778	$41,729	$84,017
	FY 18-19	5,151,144	1,179,944	0	1,661,732	1,464,192	343,565	362,815	47,121	91,774
	FY 19-20	5,647,951	1,238,368	0	1,842,455	1,593,707	389,113	428,537	51,888	103,882
	FY 20-21	6,504,454	1,573,768	0	2,009,390	1,783,468	453,372	504,301	59,236	120,920
	FY 21-22	$6,824,620	$1,649,388	$0	$2,124,018	$1,861,170	$471,425	$530,783	$62,277	$125,558

Table A-2
FY 17-18 Development of Unit Costs

Description	FY 17-18 Total Costs	Supplemental Water Variable	Supplemental Water Fixed	Base	Peaking Max Month	Customer Meters/Serv	Customer Customer	Fire Protection	Conservation
Total Costs of Service	$4,717,165	$1,129,944	$0	$1,508,887	$1,323,043	$308,766	$320,778	$41,729	$84,017
Units of Service		731,602		731,602	3,363	26,690	25,596	3,960	2,598
Unit Costs of Service		$1.54		$2.06	$393.37	$11.57	$12.53	$10.54	$32.34
Units of Measure		Ccf		Ccf	Ccf/day	Eq. Mtr/Srv	Bills	Eq. Hyd	Ccf/day

Table A-3
Distribution of Costs to Fire Protection FY 17-18

Description	Allocated Total Cost	Supplemental Water Variable	Supplemental Water Fixed	Base	Peaking Max Month	Customer Meters/Serv	Customer Customer	Direct Fire Protection	Conservation
Unit Costs of Service		$1.54	$0.00	$2.06	$393.37	$11.57	$12.53	$10.54	$32.34
Units of Measure		Ccf	Eq. Mtr	Ccf	Ccf/day	Eq. Mtr/Srv	Bills	Eq. Hyd	Ccf/day
Public Fire Protection									
Units of Service		0	0	0	722	0	0	3,960	0
Allocated Cost of Service	$325,714	$0	$0	$0	$283,984	$0	$0	$41,729	$0
Private Fire Protection									
Units of Service		0	0	0	43	0	0	0	0
Allocated Cost of Service	$17,081	$0	$0	$0	$17,081	$0	$0	$0	$0

Appendix B

Technical Appendix

Multifamily, Commercial, Agriculture, and Irrigation Customer Bill Impacts

Multifamily Residential Bi-monthly Bill									
		Current Bill			Proposed FY 17-18 Bill				
Description	Use (HCF)	Service Charge	Volume Charge	Current Bill	Service Charge	Volume Charge	Proposed Bill	Dollar Difference	Percent Change
	0	$58.12	$0.00	$58.12	$42.51	$0.00	$42.51	($15.61)	-26.9%
Very Low	2	$58.12	$6.80	$64.92	$42.51	$9.94	$52.45	($12.47)	-19.2%
Low	5	$58.12	$17.00	$75.12	$42.51	$24.85	$67.36	($7.76)	-10.3%
Median	9	$58.12	$31.18	$89.30	$42.51	$44.73	$87.24	($2.06)	-2.3%
Average	11	$58.12	$39.14	$97.26	$42.51	$54.67	$97.18	($0.08)	-0.1%
High	15	$58.12	$58.63	$116.75	$42.51	$74.55	$117.06	$0.31	0.3%
Very High	25	$58.12	$110.33	$168.45	$42.51	$124.25	$166.76	($1.69)	-1.0%

Commercial (1-inch meter) Bi-monthly Bill									
		Current Bill			Proposed FY 17-18 Bill				
Description	Use (HCF)	Service Charge	Volume Charge	Current Bill	Service Charge	Volume Charge	Proposed Bill	Dollar Difference	Percent Change
	0	$58.12	$0.00	$58.12	$42.51	$0.00	$42.51	($15.61)	-26.9%
Very Low	10	$58.12	$39.80	$97.92	$42.51	$49.70	$92.21	($5.71)	-5.8%
Low	20	$58.12	$79.60	$137.72	$42.51	$99.40	$141.91	$4.19	3.0%
Median	45	$58.12	$191.00	$249.12	$42.51	$223.65	$266.16	$17.04	6.8%
Average	62	$58.12	$278.89	$337.01	$42.51	$308.14	$350.65	$13.64	4.0%
High	75	$58.12	$346.10	$404.22	$42.51	$372.75	$415.26	$11.04	2.7%
Very High	100	$58.12	$475.35	$533.47	$42.51	$497.00	$539.51	$6.04	1.1%

Agriculture (2-inch meter) Bi-monthly Bill									
		Current Bill			Proposed FY 17-18 Bill				
Description	Use (HCF)	Service Charge	Volume Charge	Current Bill	Service Charge	Volume Charge	Proposed Bill	Dollar Difference	Percent Change
	0	$256.84	$0.00	$256.84	$67.40	$0.00	$67.40	$68.18	-73.8%
Very Low	100	$256.84	$444.00	$700.84	$67.40	$497.00	$564.40	$564.66	-19.5%
Low	200	$256.84	$444.00	$700.84	$67.40	$497.00	$564.40	$564.66	-19.5%
Median	731	$256.84	$444.00	$700.84	$67.40	$497.00	$564.40	$564.66	-19.5%
Average	1,032	$256.84	$444.00	$700.84	$67.40	$497.00	$564.40	$564.66	-19.5%
High	1,200	$256.84	$444.00	$700.84	$67.40	$497.00	$564.40	$564.66	-19.5%
Very High	1,500	$256.84	$444.00	$700.84	$67.40	$497.00	$564.40	$564.66	-19.5%

Irrigation (1-inch meter) Bi-monthly Bill									
		Current Bill			Proposed FY 17-18 Bill				
Description	Use (HCF)	Service Charge	Volume Charge	Current Bill	Service Charge	Volume Charge	Proposed Bill	Dollar Difference	Percent Change
	0	$58.12	$0.00	$58.12	$42.51	$0.00	$42.51	($15.61)	-26.9%
Very Low	50	$58.12	$199.00	$257.12	$42.51	$248.50	$291.01	$33.89	13.2%
Low	80	$58.12	$354.10	$412.22	$42.51	$397.60	$440.11	$27.89	6.8%
Median	121	$58.12	$566.07	$624.19	$42.51	$601.37	$643.88	$19.69	3.2%
Average	170	$58.12	$819.40	$877.52	$42.51	$844.90	$887.41	$9.89	1.1%
High	200	$58.12	$974.50	$1,032.62	$42.51	$994.00	$1,036.51	$3.89	0.4%
Very High	250	$58.12	$1,233.00	$1,291.12	$42.51	$1,242.50	$1,285.01	($6.11)	-0.5%

Appendix C

Example Pass-Through Adjustment

Example Adjustment to the Variable Rate from a Change in the Cost per AFY of Supplemental Water

Appendix C
Example Pass-Through Adjustment

Description	Projected FY 16-17	Projected FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Supplemental Water Cost						
Acre-feet Purchased from SM	800	800	800	800	1,000	1,000
NCSD Share	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%
Purchased Water Cost ($ per AFY)	$1,594.00	$1,678.00	$1,764.00	$1,855.00	$1,950.00	$2,050.00
NCSD O&M Costs ($ per AFY)	$134.75	$138.86	$143.11	$147.49	$141.10	$145.37
NCSD Admin Overhead @ 15% of NCSD O&M	$20.21	$21.22	$22.28	$23.40	$24.57	$25.79
Purchased Water Cost ($)	$850,303	$895,112	$940,988	$989,531	$1,300,260	$1,366,940
NCSD O&M Costs ($ per AFY)	$71,881	$74,073	$76,341	$78,677	$94,085	$96,933
NCSD Admin Overhead @ 15% of NCSD O&M	$10,781	$11,320	$11,886	$12,480	$16,380	$17,199
Supplemental Water Replacement	$149,439	$149,439	$150,729	$157,680	$163,043	$168,316
Total Supplemental Water Cost [1]	$1,082,404	$1,129,945	$1,179,944	$1,238,368	$1,573,769	$1,649,388
Supplemental Water Pass-Through Adjustment						
Acre-feet Purchased from SM	800	800	800	800	1,000	1,000
NCSD Share	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%
Purchased Water Cost ($ per AFY) [2]	$1,610.00	$1,695.00	$1,782.00	$1,874.00	$1,970.00	$2,071.00
NCSD O&M Costs ($ per AFY)	$134.75	$138.86	$143.11	$147.49	$141.10	$145.37
NCSD Admin Overhead @ 15% of NCSD O&M	$20.21	$21.22	$22.28	$23.40	$24.57	$25.79
Purchased Water Cost ($)	$858,838	$904,181	$950,590	$999,667	$1,313,596	$1,380,943
NCSD O&M Costs ($ per AFY)	$71,881	$74,073	$76,341	$78,677	$94,085	$96,933
NCSD Admin Overhead @ 15% of NCSD O&M	$10,781	$11,320	$11,886	$12,480	$16,380	$17,199
Supplemental Water Replacement	$149,439	$149,439	$150,729	$157,680	$163,043	$168,316
Total Supplemental Water Cost [2]	$1,090,939	$1,139,013	$1,189,546	$1,248,504	$1,587,105	$1,663,391
Cost Difference	$8,535	$9,068	$9,602	$10,135	$13,336	$14,003
Units of Service with Demand Response (HCF)	725,230	722,629	719,042	718,245	714,816	726,668
Pass-Through Adjustment ($/HCF) [3]	$0.012	$0.013	$0.013	$0.014	$0.019	$0.019

[1] Table 17 of Water Rate Study report.

[2] Cost of supplemental water if actual cost per AFY to NCSD is 1% higher than projected in each year.

[2] Cost difference divided by Units of Service (HCF).

The example above assumes that the projected purchased supplemental water cost (yellow highlight) has increased from the projections in each year of the Study as shown in the orange highlight. The City of Santa Maria will notify Nipomo Community Service District of any change in its rate for supplemental water and that rate is to be used in the purchased water cost in $ per AFY (orange highlight)) to calculate the Pass-through Adjustment rate.