

Water Rate Study

Santa Nella County Water District

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1 Introduction

The Santa Nella County Water District (District) provides water and sewer services to the small community of Santa Nella, CA. Santa Nella is located along the I-5 corridor, about 10 miles west of Los Banos. The community consists of approximately 40 retail businesses, a mobile home park with about 263 residential services, and a residential subdivision of approximately 335 single-family dwellings. There is also a fire station and a library. Merced County governs the township, providing services to greenbelts and public landscaping, as well as other public services such as lighting, streets, and storm drainage.

1.1 Purpose

This study is pertinent only to the rates that the District charges to provide water service to customers within the District's service area. The purpose of this study is to determine the level of funding required for the District to provide clean, safe, and reliable potable water that meets state and federal regulatory requirements for the next four (4) years. This study provides an overview of the rates and documents adherence to the law regarding the setting of rates by a municipality per California Constitution Article 13 D and projects revenues and expenses and calculates rates for the next four years (through 2023/2024) to be adopted with the Proposition 218 notification and hearing.

1.2 Proposition 218 Process

In 1996, Prop 218 was passed by voters to amend the California Constitution. Within this amendment, voters adopted Article XIII D which provides procedures for levying assessments and property-related fees and charges. Water, wastewater, solid waste disposal, and stormwater service fees have been determined to be property-related fees that are limited by and require procedural steps under Prop 218. (*Bighorn-Desert View Water Agency v. Verjil* (2006), 39 Cal. 4th 205, 217.) Therefore, to adopt an increase to its water rates, the District must satisfy both the procedural and substantive requirements of Prop 218.

Calculating the Fees to Meet Prop 218 Substantive Requirements

To comply with Prop 218 (Cal. Const., art. 13D, § 6(b)), all property-related fees or charges must:

- (1) Not exceed the funds required to provide the property related service.
- (2) Not be used for any purpose other than that for which the fee or charge was imposed.
- (3) Not exceed the proportional cost of the service attributable to the parcel.
- (4) Not be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question.
- (5) Not be imposed for general governmental services including, but not limited to, police, fire, ambulance or library services, where the service is available to the public at large in substantially the same manner as it is to property owners.

Procedural Requirements for Adopting Water Rate Schedules

Under Article 13D of Prop 218, fees or charges for sewer, water, and refuse collection services, are specifically exempt from the election requirement. (Cal. Const., art. 13D, § 6(c).) Therefore, property-related fee schedules for water service do not have to go through an election but they must meet the other notice and hearing requirements. (Cal. Const., art. 13D, § 6(a); Gov. Code, § 53756)

The Prop 218 requirements are summarized below for the District:

- (1) The District and the District Engineer must calculate fees:
 - a. The District must identify the specific parcels upon which a fee or charge is proposed, and the fee or charge must be calculated for each parcel.
 - b. The formula used to calculate the fee or charge must provide that the fee or charge imposed does not exceed the cost to the District of providing that service.
 - c. The fee or charge schedule shall not exceed 5 years.
 - d. The fee schedule must provide for automatic adjustments based on increases or decreases in the wholesale charges for water and for inflation.

- (2) Optional Step – The District Board can adopt a Resolution of Intention that includes: the proposed new rate structure, (ii) sets the date and time for the public hearing, (iii) sets the form of notice that will be sent (iv) directs staff to mail the notice of the public hearing, and (v) adopts procedures for the tabulation and acceptance of protests.

- (3) At least 45 days before the scheduled public hearing, the District must mail written notice of the proposed fee schedule to the record owner of each parcel (“Notice”). The Notice must include:
 - a. the 5-year schedule showing the fee or charge proposed for each parcel.
 - b. the formula used to calculate the fee for each parcel.
 - c. the reason for the fee or charge.
 - d. the date, time, and location of a public hearing on the proposed fee or charge.
 - e. We also recommend including a statement that a “majority protest” will terminate all proceedings and that only written protests will be counted.

- (4) The District must conduct a public hearing on the proposed fee schedule at least 45 days after mailing the Notice and the District Board of Directors must consider all protests against the proposed fee.

- (5) Once the public hearing is closed, the District staff must count all written protests received and 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.

2 Water System and Services

This section describes the District's water system, water revenue fund, and components of the water budget that are considered in determining the required water rate, including capital improvement projects and assessed fees.

2.1 Description of Existing Facilities

The District's water system consists of a Surface Water Treatment Plant (SWTP) and a groundwater well (Well No. 1). Raw surface water is pumped from the California Aqueduct/San Luis Canal and treated through a series of processes known as coagulation, flocculation, sedimentation, and filtration. The treated water is then disinfected with chlorine bleach and pumped into a storage tank. Groundwater pumped from Well No. 1 is disinfected and pumped into the distribution system where it blends with the treated surface water. Treated surface water and groundwater are blended before distribution.

2.2 Facility Operations Staff Resources

The State of California requires that employees operating the surface water and groundwater facilities be certified in water treatment and distribution. The District employs a General Manager and a Chief Operator who are both certified in water treatment and water distribution system operations. Two operational employees perform field duties and assist the Chief Operator in daily duties. Two office personnel conduct administrative duties required to fiscally operate the District. The District also contracts with several professional consultants including an engineering firm, legal counsel, and auditor. These consultants assist District staff with engineering, legal, and fiscal responsibilities.

2.3 Capital Improvement Projects

Capital improvement projects (CIPs) are construction projects needed to improve the water system facilities to provide safe and reliable drinking water. The District adopted a Water Master Plan in February 2019 (2019 WMP), which prioritized CIPs needed to serve existing customers, as well as future customers through development projects. This section provides a brief overview of CIPs currently under construction, being studied and/or planned. The District's CIPs will be funded through a combination of cash reserves, grant funding, and debt services.

Mobile Home Park Water Distribution System Improvement Project

Currently, there are 316 non-metered residential connections and 2 non-metered business connections located in a large mobile home park that consists of individually owned lots. The non-metered connections are charged a flat rate for water usage. The water distribution system serving the mobile home park (MHP) is antiquated and presents challenges to District staff to operate and maintain the infrastructure and District-owned facilities located in the mobile home park. The District's staff has limited access to water valves and the water main. Water mains within the MHP owned by the District are located on private property with a very narrow 10-foot easement where landowners have built fences, sheds, gardens, private structures or improvements, and/or concrete over main water lines and corporation stops. Valves located on private property also increase the risk for cross-contamination, as security is minimal. Limited access to the water valves also increases staff response time in cases of emergency. There is only one connection to the existing MHP distribution system, which limits redundancy and results in low system pressure. Further, the material of the infrastructure is galvanized steel and/or asbestos-cement pipe. The staff is unable to detect leaks or make certain repairs on the system due to inaccessibility.

The MHP Water Distribution System Improvement project consists of relocating water main lines into the public right of way and then installing service laterals from the relocated mains and installing meters. The purpose of the project is to improve system operation and maintenance, prevent unaccounted for water losses and promote water conservation by implementing a consumption-based billing structure for the mobile homes. This will provide better access for staff for operation and maintenance of the system, without the obstruction of private structures or improvements blocking access to valves and pipes. Security will also improve as no water valves will be located on private property. Replacement of the existing water distribution system infrastructure in the mobile home park will reduce water loss due to system leaks. Additionally, the installation of water meters will allow staff to reduce labor costs for maintenance repairs, improve enforcement efforts, and enable staff to detect potential leaks in the system. Implementation of a consumption-based billing structure allows customers to become more aware of the effects of their conservation efforts. Finally adding a new connection to the main distribution system that brings water to the mobile home park will improve system pressures and redundancy.

Funding for this project has been provided in full or in part by Proposition 1 – the Water Quality, Supply and Infrastructure Improvement Act of 2014 and the Drinking Water State Revolving Fund through an agreement with the State Water Resources Control Board. California’s Drinking Water State Revolving Fund is capitalized through a variety of funding sources, including grants from the United States Environmental Protection Agency and state bond proceeds. The total cost for the project is \$4,087,069. Because this is a fully grant-funded project, there is no debt service for the cost to complete this project. The project is scheduled to be completed by the fall of 2020.

Parking Lot Improvement Project
(Administration Office Parking Lot Improvements)

The District has received an engineering estimate for improvements to be made to the Administration Office parking lot. The improvements will consist of relocating the handicap parking space, adjusting sidewalk and parking lot slopes, adding parking spaces and other improvements.

The engineer’s estimate is based on preliminary plan submittals dated January 23, 2017. Unit costs are based on local knowledge, previous project bids, coordination with contractors and recommendations provided in geotechnical reports. The construction estimate, as of January 2017, is \$56,146. This estimate does not include any administrative, engineering, or legal costs. The staff has estimated that the entire project may cost approximately \$100,000, which includes the engineering estimate. The cost of the project is included within the new user rates at \$25,000 over four years. When the new rates are effective, the annual \$25,000 budget item will be used to reimburse the District’s Unrestricted Funds account so the project can begin in the fiscal year 2020-21. Table 1 provides an overview of the estimated costs for the project and fiscal budget schedule to reimburse the District’s Unrestricted Funds account.

Table 1 - Parking Lot Improvement Cost
Santa Nella/Volta Water Quality Improvement Project

	Engineer's Estimate	\$	56,146
	Administration, Legal	\$	43,854
	Total Estimated Cost	\$	100,000
Fiscal Year			
2020-21	<i>Project begins using Unrestricted Funds</i>		
	<i>Collect \$ through User Rates and reimburse</i>		
2020-21	<i>Unrestricted Funds</i>	\$	25,000
	<i>Collect \$ through User Rates and reimburse</i>		
2021-22	<i>Unrestricted Funds</i>	\$	25,000
	<i>Collect \$ through User Rates and reimburse</i>		
2022-23	<i>Unrestricted Funds</i>	\$	25,000
	<i>Collect \$ through User Rates and reimburse</i>		
2023-24	<i>Unrestricted Funds</i>	\$	25,000

(Well No. 2, Blending Facilities Improvements and Volta Consolidation)

On April 29, 2008, the District was issued a compliance order from the State Water Resources Control Board Division of Drinking Water (DDW) for exceeding the Maximum Contaminant Level (MCL) for Total Trihalomethanes (TTHMs), a byproduct of disinfection of surface water. In January of 2009, the District applied for and was awarded grant funding for planning studies to review alternatives to address the water quality issue, and it was determined that the addition of a groundwater well source to provide additional blending with the surface water, effectively reducing TTHMs, was the most viable solution. The planning project included drilling test wells to find a groundwater source.

In July 2016, DDW recommended voluntary consolidation of the nearby Volta Community Services District (VCSD) with the District. The VCSD groundwater source reported exceedances of the Hexavalent Chromium (CR VI) MCL. Due to the size of the agency, VCSD cannot financially support an improvement project to improve its water system. During the planning phase, the District determined that a viable groundwater production well could be drilled in the Volta area, and the DDW recommended voluntary consolidation of VCSD with the District, with both agencies benefiting from the viable groundwater well source. Both agencies agreed to consolidate and planning continued.

The scope of work for the construction project includes a new well source, located near the community of Volta, and water transmission pipeline to connect to the District's existing transmission pipeline infrastructure; construction of blending facilities for blending of groundwater and surface water for the community of Santa Nella, which includes instrumentation, chlorination of groundwater and two 0.75 MG capacity storage tanks, and upgraded booster pump station. The new well source will provide treated groundwater to Volta, the scope of work includes a chlorination facility, storage tank and distribution lines to the existing VCSD system.

The proposed improvements will provide the District with an additional well source for blending groundwater with surface water to reduce TTHMs. The consolidation of VCSD with the District will provide the community of Volta with a reliable and compliant water supply.

The preliminary project cost for this project is \$8,649,961. The State proposes grant funding of \$5,000,000 to the District and \$1,890,000 grant funding for the VCSD improvements. This leaves a balance of \$1,759,961, which is a loan component of 0% interest for 30 years. The District anticipates that the annual debt service payment, over 30 years, is estimated at \$58,664 per year and payment will not be due until the fiscal year 2022-23. Therefore, the debt service payment is added to the annual budget beginning fiscal year 2022-23. Table 2 detailed the estimated project costs.

Table 2 - Santa Nella/Volta Water Quality Improvement Project Cost

Well No. 2, Blending Facilities Improvements and Volta Consolidation	
Total Estimated Project Cost	\$8,649,961
Maximum Grant Award (District)	\$5,000,000
Maximum Grant Award (VCSD)	\$1,890,000
Total Grant Funding	\$6,890,000
Loan Component - 0% for 30 years	\$1,759,961
Estimated Annual Debt Service	\$ 58,665

The District will continue to discuss grant funding options with the State to reduce the proposed debt component.

Remote Read Meter Project

The District intends to convert all manually read water meters to remote read meters in the future. The engineer’s estimate is \$350,000. District staff is currently evaluating exactly what meters need to be upgraded and/or replaced and is developing a plan to upgrade or install new meters over time using District’s water enterprise surplus to cover the cost.

Future Capital Improvement Projects

Future CIPs recommended in the 2019 WMP that are not included in this rate study are anticipated to be funded by development fees collected proponents of future development or will be reviewed in future budgeting and rate studies beyond the planning scope of this study. Table 3 summarizes the future CIPs and costs that will be included in future rate reviews.

Table 3 - Future Capital Improvement Projects

Project No.	Capital Project	Description	Estimated Cost
	Water Transmission		
W-3	Main Replacement	Replace transmission pipeline.	\$ 4,200,000
	Surface Water Treatment Plant	SWTP replacements and add package plant; effluent flow meter, hydropneumatic tank & generator	
W-4	Improvements		\$ 7,100,000
	Well No. 1 Site	Install generator and replace fencing	
W-5	Improvements		\$ 300,000
	Commercial Distribution Pipeline	Replace existing asbestos-cement distribution pipelines serving existing commercial services;	
W-7	Replacement	construct intertie across Henry Miller Rd to loop system	\$ 1,700,000

2.4 Sustainable Groundwater Management Act (SGMA) - Central Delta-Mendota Groundwater Sustainability Agency Compliance

In August 2014, the California Legislature passed comprehensive groundwater legislation creating the Sustainable Groundwater Management Act of 2014 (SGMA), which is intended “to provide local groundwater agencies with the authority and technical and financial assistance necessary to sustainably manage groundwater.” [California Water Code Section 10720(d)] SGMA anticipates that each affected groundwater basin or subbasin will be regulated separately by one or more Groundwater Sustainability Agencies (GSA). A local agency may elect to be the GSA for a basin or subbasin within its boundaries. SGMA also provides that a combination of local agencies may form a GSA through a joint powers agreement, a memorandum of agreement or other legal agreement (California Water Code Section 10723.6). The District understood that to mean that a memorandum of agreement or other legal agreement, such as a joint powers agreement, may be used to form a single multi-agency GSA.

Groundwater sustainability under SGMA is to be achieved through groundwater sustainability plans (GSP) which can be a single plan developed by one or more GSAs or multiple coordinated plans within a basin or subbasin (California Water Code Section 10727). The District service area is located in a portion of the Delta-Mendota Subbasin number 5-22.07 of the San Joaquin Valley Groundwater Basin identified in the California Department of Water Resources (DWR) Bulletin 118 (DM Subbasin), said portion being designated as the Central Delta-Mendota Region (Central DM Region). DWR has designated the entire DM Subbasin as critically over-drafted, and under SGMA, each GSA was required to assume its regulatory role by June 30, 2017, and to submit a GSP to DWR by January 31, 2020. Local agencies are authorized to contract with the State or Federal governments and agencies, other local agencies, mutual water companies or private individuals to exercise powers related to groundwater management, land use, or both, within their jurisdictional boundaries.

The District entered into an agreement with 10 other local water agencies and formed the Central Delta-Mendota Groundwater Sustainability Agency (Central DM GSA) through a joint powers agreement, acting as a separate and independent public agency and as a single GSA for the Central DM Region. The purpose of the Central DM GSA is to implement SGMA’s requirements and achieve sustainability goals provided in

SGMA by developing, adopting, submitting, implementing, enforcing, and revising a GSP for the Central Delta-Mendota Region. The GSP may be part of a broader GSP coordinated with other GSAs in the Central Delta-Mendota Subbasin, and to exercise all the power and authorities of a GSA under SGMA. The District is required to cooperate in the development of the GSP by submitting groundwater and surface water data, and other types of information to ensure the sustainability of the Delta-Mendota Subbasin. The District has an active role in the GSA and Joint Powers Authority.

The Central DM GSA has prepared a coordinated GSP and is on track to submit the GSP by the January 2020 deadline. SGMA requires annual updates of the GSP, due every April of every year, as well as a five-year update of the GSP in 2025. The Central DM GSA has been working with other GSAs to identify proposed costs to meet the SGMA requirements. The District must fund its share of costs associated with administration of the Central DM GSA and the development and updates of the GSP. Currently, the District’s cost share in the Central DM GSA is 10%. Cost-share percentages will change over time as more groundwater data is collected and analyzed resulting in a volumetric cost-share allocation. Each agency’s cost share will adjust so that those agencies that are using more groundwater bear more of the cost. The District’s share may decrease over time because the District has one active groundwater well, which will reflect a lower use of groundwater than larger agencies. The District does anticipate two additional groundwater wells to be incorporated into the water system in the future, but the cost-share should not increase, as the District is one of the smallest agencies participating in the GSA (per land acreage and number of wells).

The GSA anticipates that the volumetric cost share will be in place by 2023, and therefore, the District anticipates a lower cost-share based on the information provided above. Based on the projection that costs should decrease over time, the District has calculated the cost for SGMA compliance through the Central DM GSA over the next four years and has made it a separate budget item, not included in the user rates. The cost will be divided by each water service connection, regardless of customer class and in the future, if the revenue requirement decreases, the District can adjust the SGMA cost. Table 4 summarizes the current cost-share, the proposed cost-share for the first year, and the second-year cost adjustment for SGMA Compliance.

Table 4 - Sustainable Groundwater Management Act (SGMA) Compliance Fee

Budget Requirement	<i>Adopted</i>	<i>Proposed</i>		<i>Estimate</i>	<i>Estimate</i>
	\$ 32,285	\$ 70,000	\$ 70,000	< \$ 70,000	< \$ 70,000
Active Accounts (as of Sep 30, 2019)	664				
<i>Rate per Active Account based on annual requirements divided by number of active connections</i>	<i>Monthly Rate per Connection</i>	\$ 9.00	\$ 9.00	< \$ 9.00	< \$ 9.00

SGMA is in its infancy, and the State has several grant programs that the District has and will benefit from through the GSA. Eventually, grants will no longer be available, and all agencies will have to cover all the costs without grant assistance.

2.5 San Luis Water District Property Related Assessments

As discussed in Section 2.1, the District treats raw surface water pumped from the California Aqueduct/San Luis Canal (SLC) and blends it with groundwater before it is distributed to customers. The District service area is within the service area boundary of multiple water districts, including San Luis Water District (SLWD). Raw surface water pumped from the SLC is purchased by the District directly from SLWD.

When the San Luis Dam was constructed in the early 1960s, the state and federal governments formed a joint effort to build and manage the dam and the infrastructure to deliver water to the man-made dam and southern California. These projects are more commonly referred to as the State Water Project (SWP) and Central Valley Project (CVP). The CVP is a federal power and water management project in the state of California under the supervision of the United States Bureau of Reclamation (USBR). The SWP is a state water management project in the state of California under the supervision of the California Department of Water Resources. Water service contractors that deliver water to their customers pay capital costs for the infrastructure built to deliver the water through the SWP or CVP in the form of fees to the state and federal agencies that govern the water system.

SLWD is part of the San Luis Unit of the CVP and retains the Water Service Contract with the USBR. SLWD manages the ability of landowners within their service area to purchase the water for their own beneficial uses, whether the landowner is a farmer or municipality. The District is a SLWD customer and is subject to the fees and charges imposed by SLWD, whether it be federal pass through charges or administrative fees for the delivery of water. The District collects the funds to pay the fees through the water user rates.

SLWD's contract with the USBR is considered an "interim" contract, meaning SLWD must negotiate with the USBR, on a regular basis, the terms and conditions to purchase the water on behalf of the landowners within their water district. On December 16, 2016, the Water Infrastructure Improvements for the Nation Act (WIIN Act) was signed into law and allows a USBR water contractor, upon request, to convert the interim water contract into a permanent water contract. This means that SLWD will no longer be required to negotiate their water contract every year. The condition for converting the interim contract into a permanent contract is that SLWD must pay the balance of their capital debt of \$36 million in full.

SLWD has requested conversion of their interim contract to a permanent contract. SLWD proposes to sell bonds to pay the capital debt in a one-time lump sum payment, as required under the WIIN Act. SLWD will need to generate the revenue to pay the bond holders by imposing land-based assessments on all parcels within their service area. Conversion of the USBR contract will allow SLWD to no longer be subject to certain federal rules under the Reclamation Reform Act, experience lower water rates than those currently charged under the interim contract and have perpetual water rights to CVP water. The decision made by the SLWD Board of Directors to convert their interim contract to a permanent contract will financially impact District customers. SLWD will charge the District by acre for every parcel that has a water allocation for its portion of the capital debt repayment.

The means by which the District requests and is allocated raw surface water from SLWD, on behalf of its customers, is extremely complex. Simplified, most land within the District service area boundary is also part of the SLWD service area boundary. Each land acre within the District and SLWD boundaries has a water allocation. In order for the District to provide drinking water to its customers, each landowner must

transfer their water allocation to the District. The water allocation allows the District to request and receive water deliveries from SLWD to serve water to customers.

The District will impose fees to each landowner that will be used to pay the annual assessments imposed by SLWD. The District will bill the fees on an annual basis in the month of July with a payment due date no later than August 31st in order for the District to meet the capital debt obligation. All landowners (not tenants) will be billed assessment fees as show in Table 5. The fees will cover stand-by charges, contract compliance capital debt and contract compliance fees imposed by SLWD to the District. The assessment includes administration fees for District staff billing efforts related to the assessments.

Table 5 - SLWD Assessment Revenue Requirements and Proposed Fees

	<i>Projected Revenue Requirements</i>			
	2020-21	2021-22	2022-23	2023-24
Annual Revenue Requirements				
Stand By Charges	\$ 7,860	\$ 8,127	\$ 8,404	\$ 8,689
USBR Contract Conversion Capital Debt	\$ 75,178	\$ 75,178	\$ 75,178	\$ 75,178
SLWD Contract Compliance Fee	\$ 4,074	\$ 4,213	\$ 4,356	\$ 4,504
SNCWD Administration Fee	\$ 5,699	\$ 5,893	\$ 6,093	\$ 6,300
Total Assessment Revenue Requirement	\$ 92,811	\$ 93,411	\$ 94,031	\$ 94,671
Proposed Fees				
Per land acre				
Stand By Charges Per land acre (\$/year)	\$ 4.70	\$ 4.86	\$ 5.03	\$ 5.20
USBR Contract Conversion Capital Debt	\$ 63.49	\$ 63.49	\$ 63.49	\$ 63.49
SLWD Contract Compliance Fee	\$ 3.44	\$ 3.56	\$ 3.68	\$ 3.80
Per Parcel				
SNCWD Administration Fee	\$ 7.88	\$ 8.15	\$ 8.42	\$ 8.71

3 Water Rate Analysis

The current District rate structure charges a user rate per service connection for the supply, treatment, storage, and distribution of drinking water. The District must determine equitable costs for each service connection to provide the water service. The District reviews historical costs and projects future costs for all expenses required to purchase, pump, treat, store, disinfect, and distribute drinking water to each customer. Wages, benefits, supplies, repairs, maintenance, regulatory fees, insurance costs, engineering, legal and auditing fees, and any other costs, including debt service and interest payments are calculated. A budget is then prepared and projected for four to five years. This section discusses the methodology to determine the fixed and variable rates for each customer class for the next four years.

3.1 Customer Base

The District has established three classes for the customer base: Metered Homes, Non-Metered Mobile Home Park, and Commercial. After completion of the MHP Water Distribution System Improvement project, all water service connections within District boundaries will be metered and there will only be two customer classes: Residential (mobile home park included) and Commercial. This study provides rate projections for the two classes.

3.2 Methodology

The District uses a fixed and variable cost method to determine water user rates. Fixed costs are generally comprised of capital and operating costs that remain relatively unchanged throughout the fiscal year. Variable costs consist of expenses such as raw water purchase, treatment chemicals, energy, fuel, and plant maintenance. These costs change based on total water usage/demand. The community of Santa Nella is unique in that it has a large number of residential customers in comparison to the number of businesses (598 residential dwellings compared to 40 businesses). However, the commercial businesses use almost as much water as both the mobile home park and metered residential combined. Also, some of the commercial businesses have multiple meter connections, which include separate irrigation meters.

To determine the percentage of water usage between the customer classes, the District considered metered water usage and estimated water usage for non-metered connections, which is comprised of approximately 263 residential mobile home customers and two commercial customers.

The District uses the US Bureau of Labor Statistics (BLS) Consumer Price Index (CPI) for water and wastewater services to determine a percentage inflation rate, according to the service provided and the current year of service. According to the BLS:

“Various indexes have been devised to measure different aspects of inflation. Inflation has been defined as a process of continuously rising prices or, equivalently, of a continuously falling value of money. The CPI measures inflation as experienced by consumers in their day-to-day living expenses; the Producer Price Index (PPI) measures inflation at earlier stages of the production process; the International Price Program (IPP) measures inflation for imports and exports; the Employment Cost Index (ECI) measures inflation in the labor market; and the Gross Domestic Product (GDP) Deflator measures inflation experienced by both consumers themselves as well as governments and other institutions providing goods and services to consumers. There are also specialized measures, such as measures of interest rates.

The "best" measure of inflation depends on the intended use of the data. The CPI is generally the best measure for adjusting payments to consumers when the intent is to allow consumers to purchase at today's prices, a market basket of goods and services equivalent to one that they could purchase in an earlier period."

A 3.4% increase per year for up to four years was used to estimate future costs, revenue requirements, and user rates.

3.3 Fixed Cost

This section discusses the fixed costs associated with operating and maintaining the residential and commercial customer classes.

3.3.1 Residential

In addition to the CIPs capital costs, District staff reviewed the operational and administrative tasks associated with providing water service to the Residential class when establishing fixed costs. Generally, the fixed costs associated with residential service includes field operations and administrative effort. The mobile home park will require less operational and administrative effort because the meters being installed under the project will be remote read meters and will be automatically read via an antenna that will transmit the data to the District office. The residential homes will require more field operations effort because operations staff is required to physically read each meter to record water usage at the residential home.

3.3.2 Commercial

District staff reviewed the operational and administrative tasks associated with water services to the Commercial customer class. Generally, the fixed costs associated with field operations are higher than the residential fixed cost. Commercial meters are harder to read compared to residential meters as most commercial businesses have multiple meters in large meter vaults. Additionally, staff processes more Underground Service Alert calls where field staff must mark locations of water utilities in the field. The administrative effort for the commercial class is also generally higher, due to the variations in meter sizes and units of measurement, which require more time and expertise when entering data into the billing computer system.

3.4 Variable Cost

The variable component of costs is based on the amount of water used by each customer class. This section discusses the water usage for each customer class. Table 6 summarizes the annual water usage and volume percentage of usage for each customer class.

Table 6 - Water Usage and Percentages by Volume for Each Customer Class

Customer Class	No. of Accounts (a)	Annual Estimated Water Usage CF (b)	Fixed Costs	Variable Costs
			O&M Administrative percentage	Volume percentage
Residential				
Non-Metered Mobile Home Park	263	3,184,087	25%	23%
Metered Homes	335	5,069,003	35%	31%
<i>Sub-total</i>	598	8,253,090	60%	54%
Commercial				
5/8" - 3/4" meter	4	197,233		
1" meter	10	259,727		
1.5" meter	10	667,887		
2" meter	32	2,636,545		
3" +	9	4,370,500		
Hydrant Meters	3	19,630		
Non-Metered Commercial (c)	3	31,604		
<i>Sub-total</i>	71	8,183,126	40%	46%
District Uses				
Metered (d)		2,679,617		
Unmetered (e)		1,275,242		
Water Loss (f)		871,689		
<i>Sub-total</i>	0	4,826,548	(divided equally among the classes)	
Total	669	21,262,764	100%	100%

CF = Cubic Feet

(a) As of December 31, 2018

(b) Metered Residential and Metered Commercial for 2018. Mobile Home Park usage after estimating water loss

(c) Estimated water usage for Fire Dept, Fire Truck and Library

(d) Metered Usage for Backwash, Sewer Machine, Headworks, BVLS Irrigation, Hydrant Meters

(e) Estimated usage for Office, Water Treatment Plant, Wastewater Treatment Plant

(f) Water loss based on total known water uses less MHP usage factor 78.51% of house usage

3.5 Water Budget

The District prepares an annual budget estimating all the costs required to provide safe and reliable drinking water to the community. Once each cost is identified, a list of each expense is categorized by either fixed or variable cost.

The proposed budget includes a contingency line item for funds to cover excess costs due to repairs and maintenance (R&M) costs. In past years, the contingency budget has been very low and set at \$5,000. The goal of the District is to increase the contingency to \$50,000 per year. This rate study implements an increase in the contingency each year. If the contingency funds are not used within the fiscal year, then the funds become surplus and are kept in a separate accounting fund. The contingency fund account is such that the District Board may authorize the General Manager to move any remaining funds into unrestricted reserves for future capital improvement use.

The proposed budget also includes funding for the Parking Lot Improvement Project and the debt service payment and debt service requirement for the Well No. 2/Volta Consolidation, as discussed in Section 2. The proposed rates for FY 22/23 through 24/25 account for an additional 51 connections for new water services at the Volta community that will be consolidated with the District, as it is anticipated that the project will be in progress by then and the annual debt service payment will be in effect.

Table 7 provides a summary of the water budget and gross revenue requirements, including the SGMA Compliance fee as a separate line item.

Table 7 - Water Budget

Water Operations Fund	Approved Budget	Projected Revenue Requirements			
	2019-20	2020-21	2021-22	2022-23	2023-24
Fixed O&M Expenses					
Admin Salaries/All Benefits	\$ 196,792	\$ 203,936	\$ 217,847	\$ 227,167	\$ 237,365
Office/Admin Costs	64,105	66,309	68,343	70,446	72,620
Professional Services (Audit/Legal)	43,000	44,462	45,974	47,537	49,153
Insurance	14,923	15,430	15,955	16,497	17,058
Operations R&M (Fixed)	95,311	100,201	102,576	105,084	107,395
Contingency	5,000	10,000	50,000	50,000	50,000
Capital Project	-	25,000	25,000	25,000	25,000
Debt Service (projected)	-	-	-	58,664	58,664
Less Ad Valorem Tax Payment	<i>(42,000)</i>	<i>(42,000)</i>	<i>(43,428)</i>	<i>(44,905)</i>	<i>(46,431)</i>
<i>Sub-total Fixed O&M</i>	377,131	423,338	482,267	555,490	570,824
Variable O&M Expenses					
Office R&M	500	517	535	553	572
Professional Services (Engineer/Contract)	20,500	21,197	21,918	22,663	23,433
Operations R&M (Variable)	72,072	74,522	77,056	79,676	82,385
Utilities	52,354	55,363	57,245	59,192	61,204
Water Purchase and Delivery Fees	81,860	76,516	79,118	81,808	84,589
<i>Sub-total Variable O&M</i>	227,286	228,115	235,872	243,892	252,183
Total O&M Revenue Requirement	604,417	651,453	718,139	799,382	823,007
SGMA/GSA/GSP					
GSA Membership Fee	33,000	70,000	70,000	70,000	70,000
Gross Revenue Requirements	\$ 637,417	\$ 721,453	\$ 788,139	\$ 869,382	\$ 893,007

3.6 Fixed and Variable Costs Distribution

The District calculated the monthly fixed and variable costs by customer class, detailing the revenue requirement for each customer class by looking at the fixed cost requirements and using the water usage for the calendar year 2018 for variable cost requirements.

Tables 8 presents the proposed revenue requirements and fixed and variable cost distribution for the next four fiscal years based on Budget projections at 3.4% inflation escalation by customer class. The projections include the contingency, capital improvement projects, and anticipated debt service.

Table 8 - Proposed Revenue Requirements and Cost Distribution by Customer Class

Customer Class	FY 2020-21			FY 2021-22			FY 2022-23			FY 2023-24		
	Rev Req	Fixed Costs	Var Costs	Rev Req	Fixed Costs	Var Costs	Rev Req	Fixed Costs	Var Costs	Rev Req	Fixed Costs	Var Costs
<u>Residential</u>												
Mobile Home Park	\$158,301	\$105,835	\$ 52,466	\$174,817	\$120,567	\$ 54,251	\$194,968	\$138,873	\$ 56,095	\$200,708	\$142,706	\$ 58,002
Metered Homes	218,884	148,168	70,716	241,914	168,793	73,120	270,028	194,422	75,607	277,965	199,788	78,177
<u>Commercial</u>												
Metered Commercial	274,268	169,335	104,933	301,408	192,907	108,501	334,386	222,196	112,190	344,334	228,330	116,004
Total	651,453	423,338	228,115	718,139	482,267	235,872	799,382	555,491	243,892	823,007	570,824	252,183
<u>All Classes</u>												
SGMA/GSA/GSP	70,000	70,000	-	70,000	70,000	-	70,000	70,000	-	70,000	70,000	-
Total Budget	\$721,453	\$493,338	\$228,115	\$788,139	\$552,267	\$235,872	\$869,382	\$625,491	\$243,892	\$893,007	\$640,824	\$252,183

4 Proposed Rates

Due to increases in costs such as energy, fuel, regulatory fees, health insurance premiums, wages, contingency, capital improvement projects, future debt service, and GSA costs, the water rates must be adjusted. The District has adjusted the fixed-rate component to ensure that those fixed costs are covered. Currently, the fixed rate is not generating enough funds to cover the fixed cost, especially during drought years. The adjustment increases the fixed component and decreases the variable rate. The MHP has been on a flat rate for drinking water service. The current flat rate does not generate enough funding to cover the cost to provide drinking water to the mobile home park. Now that the mobile home park will be metered, the District rolled the mobile home park into the fixed/variable cost method.

The fixed cost for each customer class is based on the fixed revenue required and the number of customer connections. The variable cost for each customer class is based on the variable revenue required and water usage. All customer class rates must be adjusted so that each customer class pays its equitable share for the service provided. Table 9 presents the water proposed rates for each customer class. Appendix A includes an expanded rate schedule showing the percentage increase in the rate for each customer class.

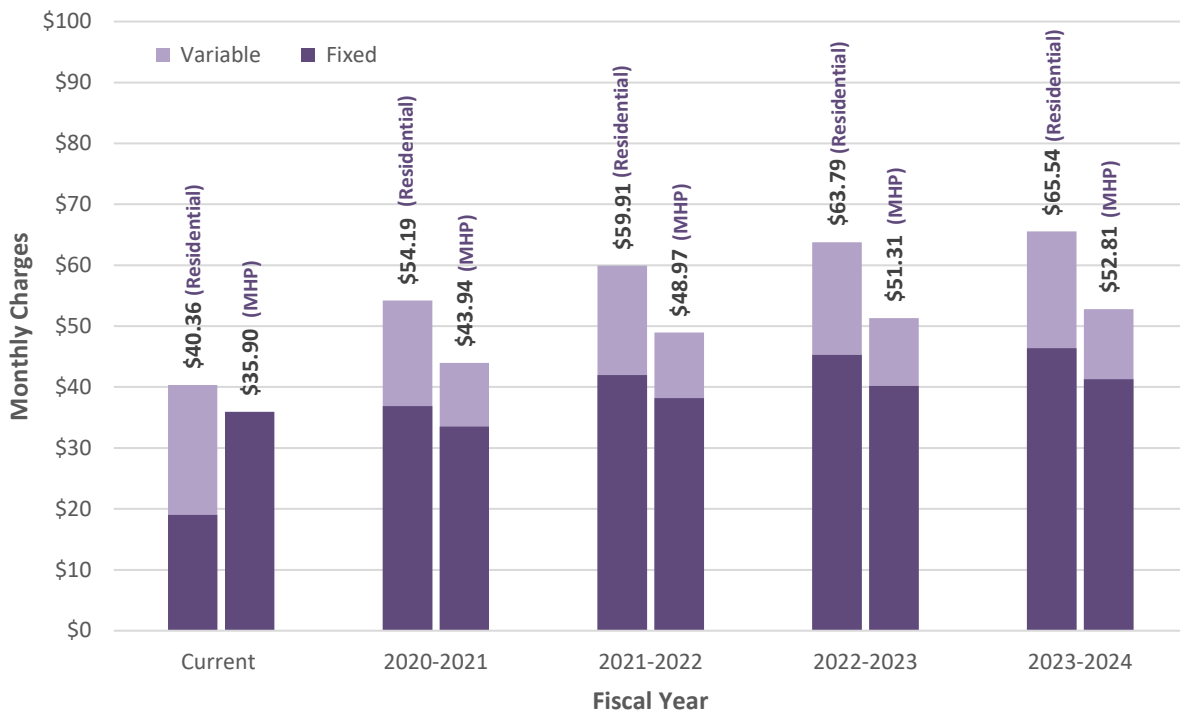
Table 9 - Proposed Rates

Customer Class	Rate (Units)	Current 2019	Four-Year Phase-In			
			2020-21	2021-22	2022-23	2023-24
<u>Residential Water Rates</u>		Residential Fixed & Variable Monthly Charges				
Mobile Homes	<i>Flat Rate (\$/mo)</i>	\$ 35.90				
Fixed	<i>Mo. Fixed Rate (\$/mo)</i>		\$ 33.54	\$ 38.24	\$ 40.18	\$ 41.30
Variable, average 610 cf month	<i>Mo. Volume Rate (\$/hcf)</i>		\$ 1.70	\$ 1.76	\$ 1.83	\$ 1.89
Metered Homes						
Fixed	<i>Mo. Fixed Rate (\$/mo)</i>	\$ 19.00	\$ 36.86	\$ 42.02	\$ 45.25	\$ 46.37
Variable, average 1,200 cf month	<i>Mo. Volume Rate (\$/hcf)</i>	\$ 1.78	\$ 1.45	\$ 1.51	\$ 1.56	\$ 1.61
<u>Commercial Water Rates</u>		Commercial Fixed & Variable Monthly Charges				
Fixed						
5/8" - 3/4" meter	<i>Mo. Fixed Rate (\$/mo)</i>	\$ 46.84	\$ 44.97	\$ 51.27	\$ 58.96	\$ 60.73
1" meter	<i>Mo. Fixed Rate (\$/mo)</i>	\$ 76.39	\$ 73.33	\$ 83.60	\$ 96.14	\$ 99.02
1.5" meter	<i>Mo. Fixed Rate (\$/mo)</i>	\$ 149.61	\$ 143.63	\$ 163.74	\$ 188.30	\$ 193.95
2" meter	<i>Mo. Fixed Rate (\$/mo)</i>	\$ 237.82	\$ 228.31	\$ 260.27	\$ 299.31	\$ 308.29
3" + meter	<i>Mo. Fixed Rate (\$/mo)</i>	\$ 517.46	\$ 496.76	\$ 566.31	\$ 651.26	\$ 670.80
Variable	<i>Mo. Volume Rate (\$/hcf)</i>	\$ 1.25	\$ 1.33	\$ 1.38	\$ 1.41	\$ 1.45
<u>SGMA/GSA/GSP</u>		All Classes - Fee for GSA Membership				
Monthly Rate Per Active Connection	<i>Mo. Fixed Rate (\$/mo)</i>	\$ -	\$ 9.00	\$ 9.00	\$ 9.00	\$ 9.00
<u>SLWD Annual Assessments</u>		Landowners - Annual Assessments				
Stand By Charges	<i>Per Land Acre (\$/year)</i>	\$ -	\$ 4.70	\$ 4.86	\$ 5.03	\$ 5.20
USBK Contract Conversion Capital Debt	<i>Per Land Acre (\$/year)</i>	\$ -	\$ 63.49	\$ 63.49	\$ 63.49	\$ 63.49
SLWD Contract Compliance Fee	<i>Per Land Acre (\$/year)</i>	\$ -	\$ 3.44	\$ 3.56	\$ 3.68	\$ 3.80
SNCWD Administration Fee	<i>Per Parcel (\$/year)</i>	\$ -	\$ 7.88	\$ 8.15	\$ 8.42	\$ 8.71

5 Summary

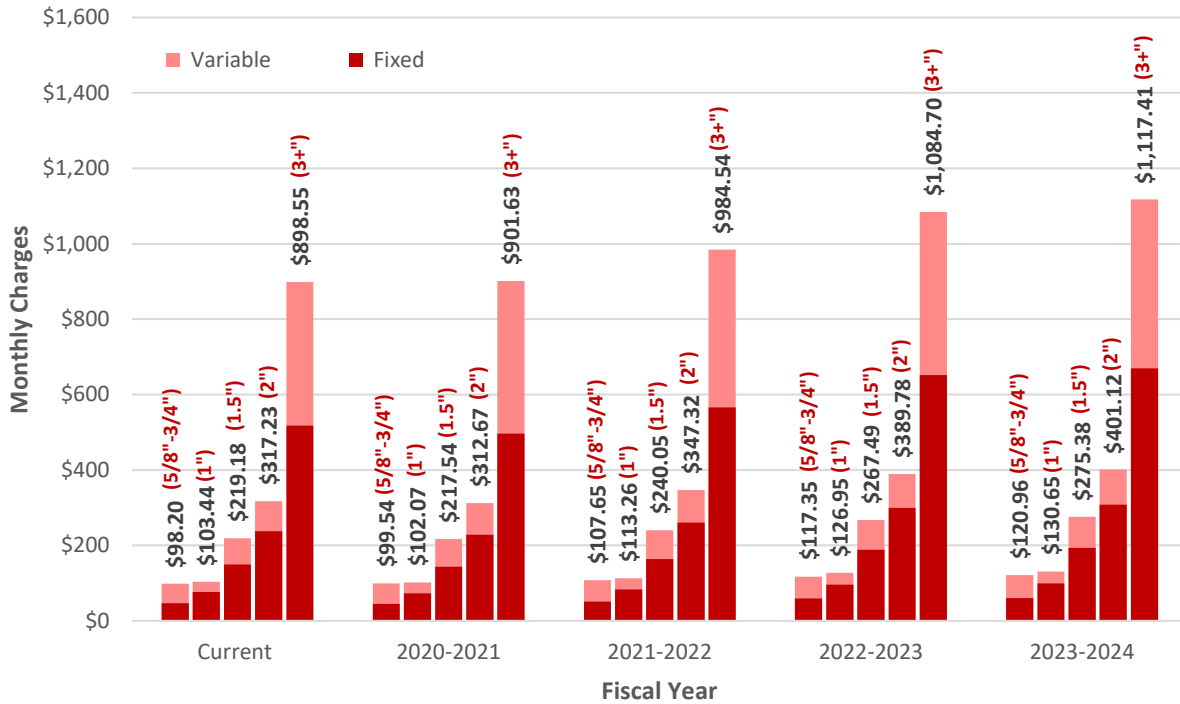
The District is seeking a four-year phase-in adjusting rates to ensure that enough revenue is generated to ensure costs to supply water are covered by the revenue of the fixed and variable water rates during normal operation years and restricted drought years. The rate structure will also promote water conservation and allow the District to provide safe and reliable drinking water. Figures 1 and 2 illustrate the estimated impacts on residential and commercial customer water bills. Figures 3 and 4 illustrate a comparison of the District current rates and the proposed four-year rate increase to agencies in the region for residential and commercial customers, respectively.

Figure 1 - Estimated Water Bill Impact for Residential Customers



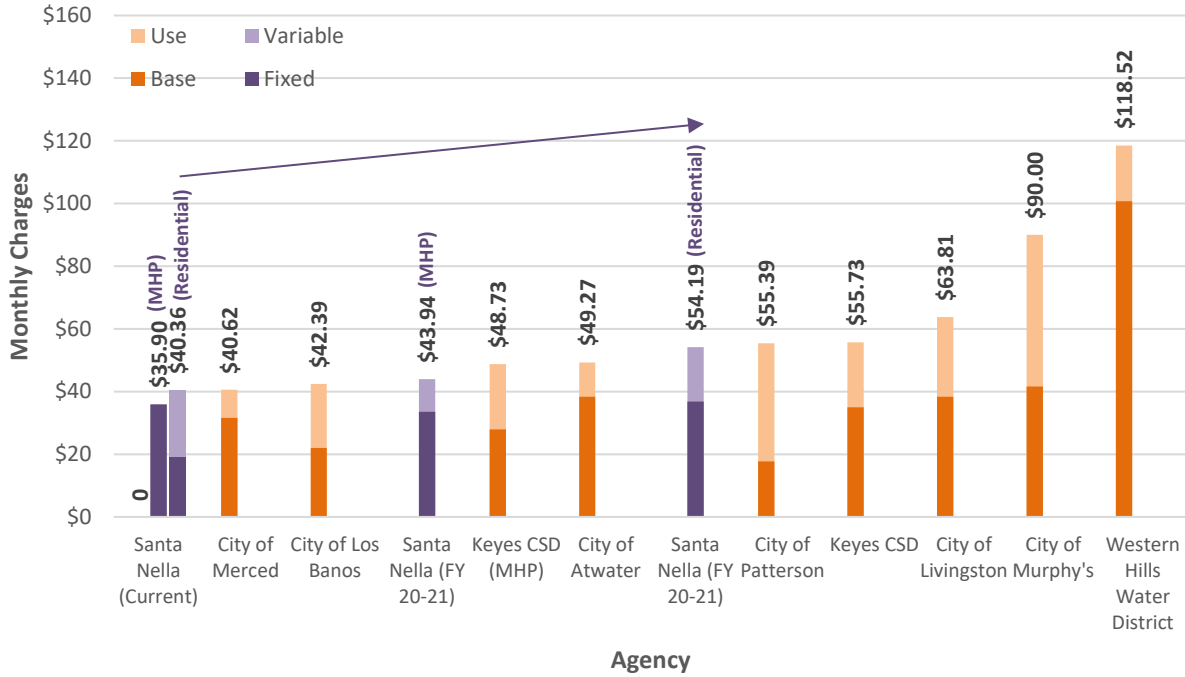
Note: Based on current average usage of 610 cubic-feet per month (4,600 gallons per month) for mobile homes and 1,200 cubic-feet per month (9,000 gallons per month) for metered homes.

Figure 2 - Estimated Water Bill Impact for a Commercial Customers



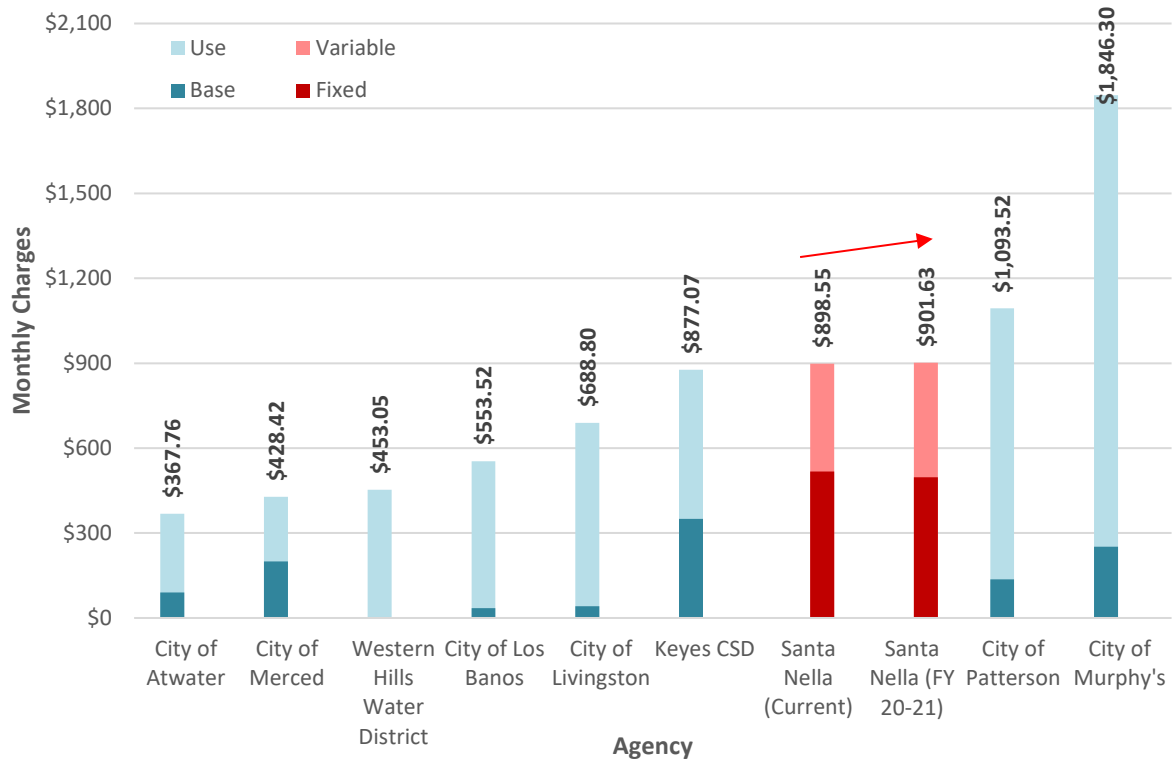
Note: Based on current average usage of 4,109 cubic-feet per month (30,737 gallons per month) for 5/8"-3/4" meter, 2,164 cubic-feet per month (16,188 gallons per month) for 1" meter, 5,566 cubic-feet per month (41,637 gallons per month) for 1.5" meter, 6,353 cubic-feet per month (47,524 gallons per month) for 2" meter, and 30,487 cubic feet per month (228,059 gallons per month) for 3"+ meter.

Figure 3 - Comparison of Regional Water Bills for Residential



Note: Based on current average usage of 610 cubic-feet per month (4,600 gallons per month) for mobile homes and 1,200 cubic-feet per month (9,000 gallons per month) for metered homes. Other agency rates are present-day values rates that may be under review or on a rate increase implementation schedule.

Figure 4 - Comparison of Regional Water Bills for 3" Commercial Water Meter



Note: Based on current average usage of 30,487 cubic-feet per month (228,059 gallons per month) for 3" commercial water meter. Other agency rates are present-day values rates that may be under review or on a rate increase implementation schedule.

Appendix A

Proposed Water Rates with Percentage Changes

Customer Class	Rate (Units)	Current 2019	Four Year Phase-In			
			2020-21	2021-22	2022-23	2023-24
Residential Water Rates		Residential Fixed & Variable Monthly Charges				
Mobile Home Park	<i>Mo. Flat Rate (\$/mo)</i>	\$ 35.90				
Metered Fixed Rate			\$ 33.54	\$ 38.24	\$ 40.18	\$ 41.30
<i>percentage adjustment</i>				12%	5%	3%
<i>monetary adjustment</i>				\$ 4.70	\$ 1.94	\$ 1.12
Metered Variable Rate	<i>(\$/hcf)</i>		\$ 1.70	\$ 1.76	\$ 1.83	\$ 1.89
<i>percentage adjustment</i>				3%	4%	3%
<i>monetary adjustment</i>			\$ 0.06	\$ 0.07	\$ 0.06	\$ 0.06
Metered Residential						
Metered Fixed Rate	<i>Mo. Fixed Rate (\$/mo)</i>	\$ 19.00	\$ 36.86	\$ 42.02	\$ 45.25	\$ 46.37
<i>percentage adjustment</i>			48%	12%	7%	2%
<i>monetary adjustment</i>			\$ 17.86	\$ 5.16	\$ 3.23	\$ 1.12
Metered Variable Rate	<i>(\$/hcf)</i>	1.78	\$ 1.45	\$ 1.51	\$ 1.56	\$ 1.61
<i>percentage adjustment</i>			-23%	4%	3%	3%
<i>monetary adjustment</i>			\$ (0.33)	\$ 0.06	\$ 0.05	\$ 0.05
Commercial Water Rates		Fixed Monthly Charges				
5/8" - 3/4" Meter	<i>Mo. Fixed Rate (\$/mo)</i>	\$ 46.84	\$ 44.97	\$ 51.27	\$ 58.96	\$ 60.73
<i>percentage adjustment</i>			-4%	12%	13%	3%
1" Meter	<i>Mo. Fixed Rate (\$/mo)</i>	\$ 76.39	\$ 73.33	\$ 83.60	\$ 96.14	\$ 99.02
<i>percentage adjustment</i>			-4%	12%	13%	3%
1.5" Meter	<i>Mo. Fixed Rate (\$/mo)</i>	\$ 149.61	\$ 143.63	\$ 163.74	\$ 188.30	\$ 193.95
<i>percentage adjustment</i>			-4%	12%	13%	3%
2" Meter	<i>Mo. Fixed Rate (\$/mo)</i>	\$ 237.82	\$ 228.31	\$ 260.27	\$ 299.31	\$ 308.29
<i>percentage adjustment</i>			-4%	12%	13%	3%
3" + Meter	<i>Mo. Vol. Chrg (\$/hcf)</i>	\$ 517.46	\$ 496.76	\$ 566.31	\$ 651.26	\$ 670.80
<i>percentage adjustment</i>			-4%	12%	13%	3%
		Variable Rates				
Metered Variable Rate	<i>(\$/hcf)</i>	\$ 1.25	\$ 1.33	\$ 1.38	\$ 1.41	\$ 1.45
<i>percentage adjustment</i>			6%	4%	2%	3%