Central San Joaquin Water Conservation District

Proposition 218 Rate Study

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EXECUTIVE SUMMARY

The purpose of this rate study is to review existing and propose revised groundwater extraction fees imposed on all groundwater water users and water rates for the sale of surface water within the Central San Joaquin Water Conservation District (District). It is not proposed to modify other charges the District sets by separate resolution. The District, in compliance with Proposition 218, is seeking to support the revised rates that will generate revenue to fund the future water delivery costs and charges, repayment of water charges to the U.S. Bureau of Reclamation (Bureau) for previous deliveries of surface water, and groundwater management activities associated with the District's ongoing and future groundwater sustainability efforts.

Background

All of the District overlies a portion of the Eastern San Joaquin Groundwater Subbasin (Basin) which is in a condition of critical overdrafted. This condition of "critical overdraft" has been identified by the Department of Water Resources (DWR) in Bulletin 118 (1980). Due to the critical overdraft and the need for supplemental surface water, the District was formed under the Water Conservation District Act as set forth in the California Water Code beginning section 74000.

Property Related Services

The District's water infrastructure and water management programs are intended to protect and enhance the quantity of groundwater resources in the Eastern San Joaquin Valley Groundwater Basin by increasing supplemental water supply and water conservation and reducing groundwater pumping. The District provides a supplemental surface water supply and issues a groundwater extraction fee. The supplemental surface water is funded by the District's groundwater extraction fee and the surface water rates.

Supplemental Surface Water

The District provides Supplemental Surface Water to groundwater users within the District. Supplemental Surface water includes the purchase/acquisition and distribution of surface water through existing facilities to reduce groundwater overdraft. Existing facilities utilize natural creek beds throughout the District and include Duck Creek, North and South Fork Little John's Creek, Mariposa Drain, and North and South Fork Temple Creek. These facilities and the associated projects are intended to advance the following District objectives for the benefit of all groundwater users in the District basin.

- Protect and maintain the ability of property owners District basin-wide to continue on-going groundwater extraction

- Secure the District basin water supply
- Reduce overdraft
- Promote water conservation; and
- Avoid groundwater pumping limitations that could be imposed by the District, State Water Resource Control Board, or court adjudication and order, and thereby protect and preserve the ability of all groundwater pumpers throughout the groundwater basin to continue relying on groundwater resources without regulatory limits.

Groundwater Extraction Fee

The District imposes a groundwater extraction fee provided for Water Conservation Districts under the California Water Code § 75500 et. seq. The District has the authority to levy and collect groundwater charges for furtherance of the District's "activities in the protection and augmentation of the water supplies for users within the district...." CWC § 75522 states, "The ground water charges are authorized to be levied upon the production of groundwater from all water-producing facilities, whether public or private, within the district..." Historically, the District has annually established an extraction fee imposed on all groundwater users within the District. This uniform fee is imposed on all groundwater users based upon the overall benefit to all lands within the District.

Water Users Categories

The District recovers capital, operating, and other costs for providing supplemental surface water by imposing on users and beneficiaries fees and charges based on the following user categories:

1. Surface Water Users: owners and tenants that have access to and take District Supplemental Surface Water.
2. Agricultural Groundwater Users: owners and tenants of groundwater wells that extract water from the underground.
3. Domestic Groundwater Users: owners and tenants of groundwater wells that extract water from the underground whose use is primarily domestic in nature.
4. Livestock Groundwater Users: owners and tenants of groundwater wells that extract water from the underground whose primary use is for livestock.

Summary of the Rate Setting Process

The District's rate setting process is designed to produce sufficient revenue to pay for current and projected service costs over the next five fiscal years, from FY 2016-2017 through 2020-2021 and do so in a manner that satisfies Proposition 218, Article X(2) of the California Constitution, the District enacted Water Code Sections and related legal requirements.

In California, water rates must adhere to the cost of service requirements imposed by Proposition 218 of the State Constitution. Proposition 218 requires that property-related fees and charges, including water rates, do not exceed the proportional cost of providing the service. Article X(2) of the State Constitution establishes the need to preserve the State's water supplies and discourages the wasteful or unreasonable use of water by encouraging conservation.

The cost of service allocation and corresponding rates in this Report were developed using the guidelines set forth in the California Water Code, Article X(2) and XIII D of the California Constitution and the detailed information provided by the District.

This report has focused on rate setting methodology, rate payer impacts, and other key issues. The District has found that:

1. Continue using the District's existing uniform rate structure for the 2016 rate setting process;
2. District shall review annually the charges and fees of such rate increases.
3. While revenue adjustments are necessary to continue operation and funding of the District's project, rate increases should be minimized over the proposed 5 year period in order to promote the conservation of groundwater and the taking of supplemental surface water.

The purpose of identifying the components of the rate setting process is to provide a rational basis for distributing the costs of the groundwater extraction fee and the supplemental surface water charge to each customer class in proportion to the types and levels of service received and the demands they make on these services.

Revenue Requirements

The District built its five year service charge analysis by review of the 2014-2015 budget as a baseline for projecting revenue requirements. The District budget includes expenses associated with the supplemental surface water project and delivery and general District management.

The analysis projects revenues and expenditures for the five year period from FY 2016-2017 to 2020-2021. The projected Revenue with recommended increased charges and fees does not fully fund all costs of District operation. With the proposed rates the District can develop and consider alternative financing schemes that will allow the spreading of costs over several years. The District's focus is to alleviate any financial hardships of the District while minimizing the increase in rates. Such focus does not allow capital expenditures until after the five year rate increase window.

Rates and Charges

To encourage the use of surface water and further the District's efforts to address the overdraft condition, the original charges for surface water were low. The proposed new water rates will only apply to Agricultural water users within the District, as Domestic and livestock use is approximately one half a percent of the total annual water use in the District. While the groundwater is a significant benefit to this class of customers, they have no other source of supply and their rates are higher than Agricultural users. For ease of implementation the rates proposed will only be for the Agricultural users in the District with the same rate methodology as is currently in place, continuing to be used. In other words, those lands that use surface water will not pay a groundwater extraction fee if no groundwater is used. Rates for surface water will be charged per acre-foot of water delivered to the water customer and the groundwater extraction fee will be billed on an acreage basis but calculated on an acre-foot basis assuming a demand of 2.8 acre-feet per acre. The water rate study is subject to approval of the Board of Directors after issuance of Proposition 218 notices to parcel owners who own land where it is estimated that groundwater or District surface water is available and after a public hearing on the proposed rates.

The proposed water charges are presented in Table ES- 1 - Proposed Water Rates and Fees

Table ES-1 – Proposed Water Rates and Fees

Year	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Surface Water Rate/AF	$47	$47	$47	$47	$47
Groundwater Extraction Fee/AF (Acre)	$12.50 ($35)	$12.50 ($35)	$12.50 ($35)	$12.50 ($35)	$12.50 ($35)

Table ES-1 summarizes the projected cost of service rates for the District's surface water charge and groundwater extraction fee. The proposed rates reflect the adjustments to partially recover the District's anticipated revenue requirements through FY 2020-2021. None of these projected funds will be utilized for capital expenses.

This water rate study proposes maximum water rates and fees that could be charged by the Board for 2016-2017 through 2020-2021. The actual water rate will be set by the Board from year to year and may vary based on the demand for water and the projected expenses, provided that the rates actually set for each year are not higher than the rates adopted pursuant to this Proposition 218 process.

SECTION 1 – OVERVIEW AND HISTORY OF THE DISTRICT

1.1 General Purpose

The purpose of this cost of service study is to review the costs and benefits to be derived by those parcels that are subject to groundwater extraction fees and supplemental surface water charges. Revenues from the proposed water rates and extraction fees are required to cover the costs for the delivery of surface water within the District, assist the District in its endeavor to provide sufficient water to all users in the District as required under the Sustainable Groundwater Management Act, and repay Bureau of Reclamation water charges for previous deliveries. The District requires sufficient revenue to adequately fund District operations, maintenance, capital, and ongoing basin management planning needs; and conform to all constitutional and legal requirements for water rate setting. ONLY THOSE PARCEL OWNERS WHO TAKE DELIVERY OF DISTRICT SURFACE WATER OR PUMP GROUNDWATER FOR AGRICULTURAL USE ARE SUBJECT TO THE PROPOSED RATES AND FEES AND WILL ONLY BE CHARGED IN ACCORDANCE WITH THE DISTRICT'S EXISTING POLICIES, AS ALL PARCEL OWNERS BENEFIT FROM THE DISTRICT'S ACTIONS.

The Sustainable Groundwater Management Act (SGMA) as codified in the California Water Code (CWC) which took effect on January 1, 2015, requires that critically overdrafted basins must have a Groundwater Sustainability Plan (GSP) in place by January 31, 2020. This GSP must include a governance structure and a plan that will identify how the District will achieve sustainability for the subbasin with given milestones for completion of given plan elements. Development of this plan and a method of financing the required elements is critical for local control of the subbasin. While future costs of developing and implementing a GSP are unknown at this time, this rate study and its recommendations are critical components of the District's groundwater sustainability efforts.

1.2 History of the District

The Central San Joaquin Water Conservation District (District) was formed in 1958 under provisions of the Water Conservation Act of 1931, with the purpose of conserving sources of water within the District, securing supplemental sources of water, and endeavor to provide sufficient amounts of water will be available to all users in the District in order to address the existing and on-going critically overdrafted conditions of the basin underlying the District.

District legislation states "the provision of this act are necessary because of special circumstances with the Central San Joaquin Water Conservation District. The district faces serious and unique problems arising from the depleted groundwater basin within the district. The district has been required to incur unusual and substantial

expenses for the protection and augmentation of the water supplies of the district and the charges authorized to be collected pursuant to this act are necessary to equitably finance those activities of the district." California Water Code Section 75470. In 1980, the California Department of Water Resource (DWR) declared that the Eastern San Joaquin Groundwater Basin was "critically overdrafted" and recited the need to develop facilities and use surface water to stabilize the basin. The Brown and Caldwell 1985 Eastern San Joaquin County Groundwater Study indicates groundwater levels within the District have been dropping at an average rate of 1.8 feet annually during the past 50 years.

The District was formed for the purpose of obtaining water from the then planned Folsom South Canal that would supply water stored in Auburn Dam. Securing surface water from Folsom South Canal was intended to address the issue of overdraft and thus sustainability of the groundwater basin as a long term source of water supply for the District's customers. Although a service water contract was executed by the District and US Bureau of Reclamation (USBR), supplemental surface water was not supplied as the Federal Project (Auburn Dam) was cancelled.

In the later 1970's, the District pursued a contract with the Bureau of Reclamation for the New Melones Project. In 1981, the District was given a priority water service contract. The contract was executed by the District in 1983 with the Bureau for water service from the New Melones Project on the Stanislaus River. This contract called for a firm supply of 49,000 acre-feet (AF) and additional supply of up to 31,000 AF on an interim basis to the District.

In 1993, the District issued certificates of participation in excess of $7,000,000 for construction of an internal distribution system within District boundaries for the delivery of the contracted surface water. This funding and the construction of these facilities to help stabilize the basin was made possible by the District's establishment of a groundwater charge. Facilities constructed included check dams and structures on both natural channels and conveyance channels with associated pump stations for the delivery of water throughout the District's service area. The District's policy has been to encourage the installation and operation of facilities by individual farmers for their utilization of surface water, with the District maintaining the check dams, conveyance channels, and three distribution system pump stations. To reinforce this effort of encouraging the use of surface water the original charges established were low.

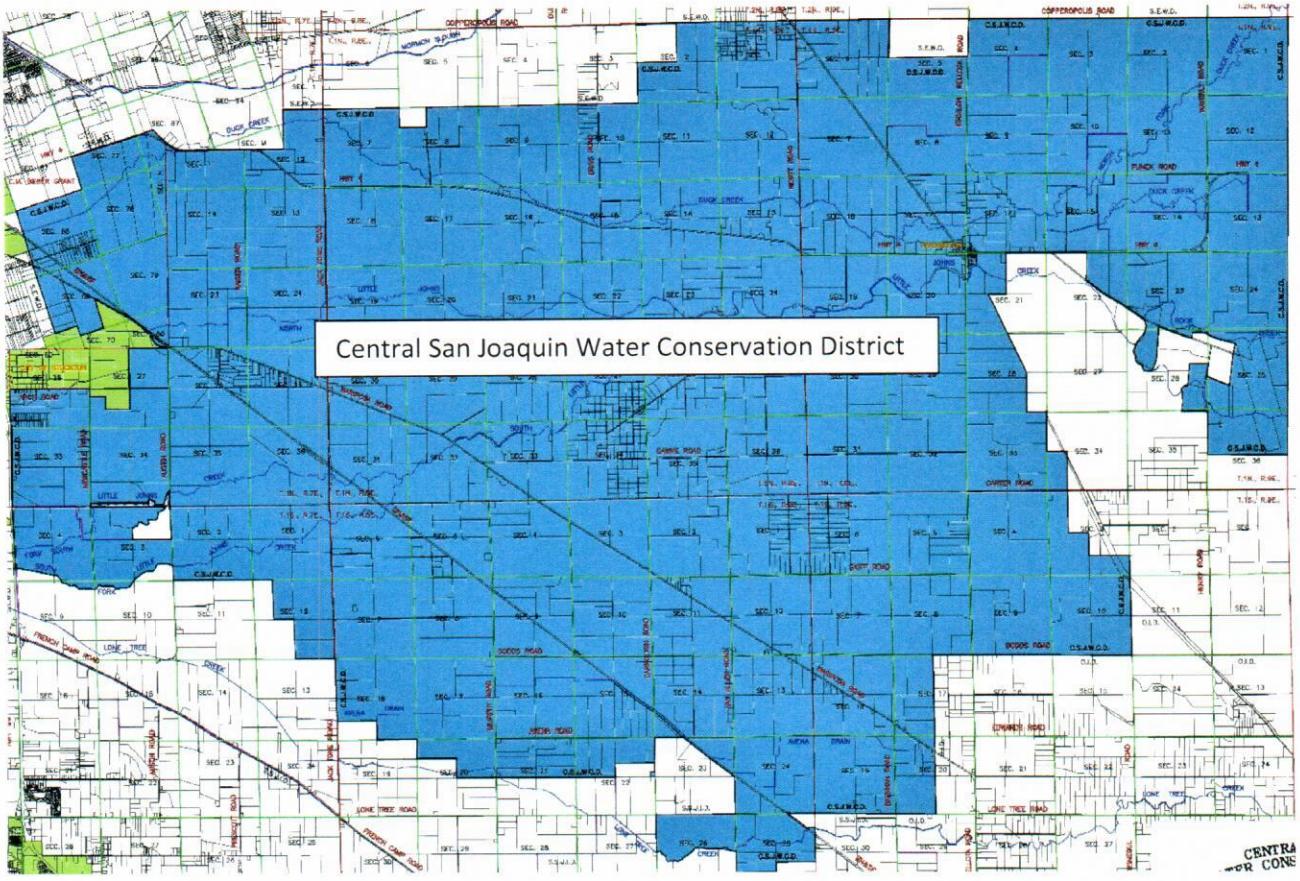
The District uses a portion of Stockton East Water District's (SEWD) New Melones Conveyance System to convey its New Melones water to Farmington Reservoir for distribution by the District. Under provisions of CWC § 1810 et. seq. using another agency's water conveyance facilities to transfer water is allowable if fair compensation is paid for that use, and the capacity used is excess or unused capacity. This method of water conveyance, using another district's water conveyance facilities, is not unique

among California Water Districts; however, it is subject to several conditions. In utilizing this provision of the CWC, the transferor of water (District) is required to pay fair compensation to the facility owner for the use of facilities. Fair compensation is further defined as reasonable charges incurred by the owner. Currently, this rate is set at $8.00 per AF but this is subject to review by the California Court of Appeals and the Superior Court of California.

The District is granted the authority by the California Water Code § 75500 et. seq., to levy and collect groundwater charges for the furtherance of the District's **"purposes in the replenishment, augmentation, and the protection of water supplies for users within the district or zone or zones thereof."** In compliance with California Water Code § 75560, the District annually produces an engineering report that details the past, present, and forecasts the future groundwater conditions within the District. Such groundwater reports have confirmed the benefit of the District's Supplemental Surface Water project on the overdrafted conditions of the basin.

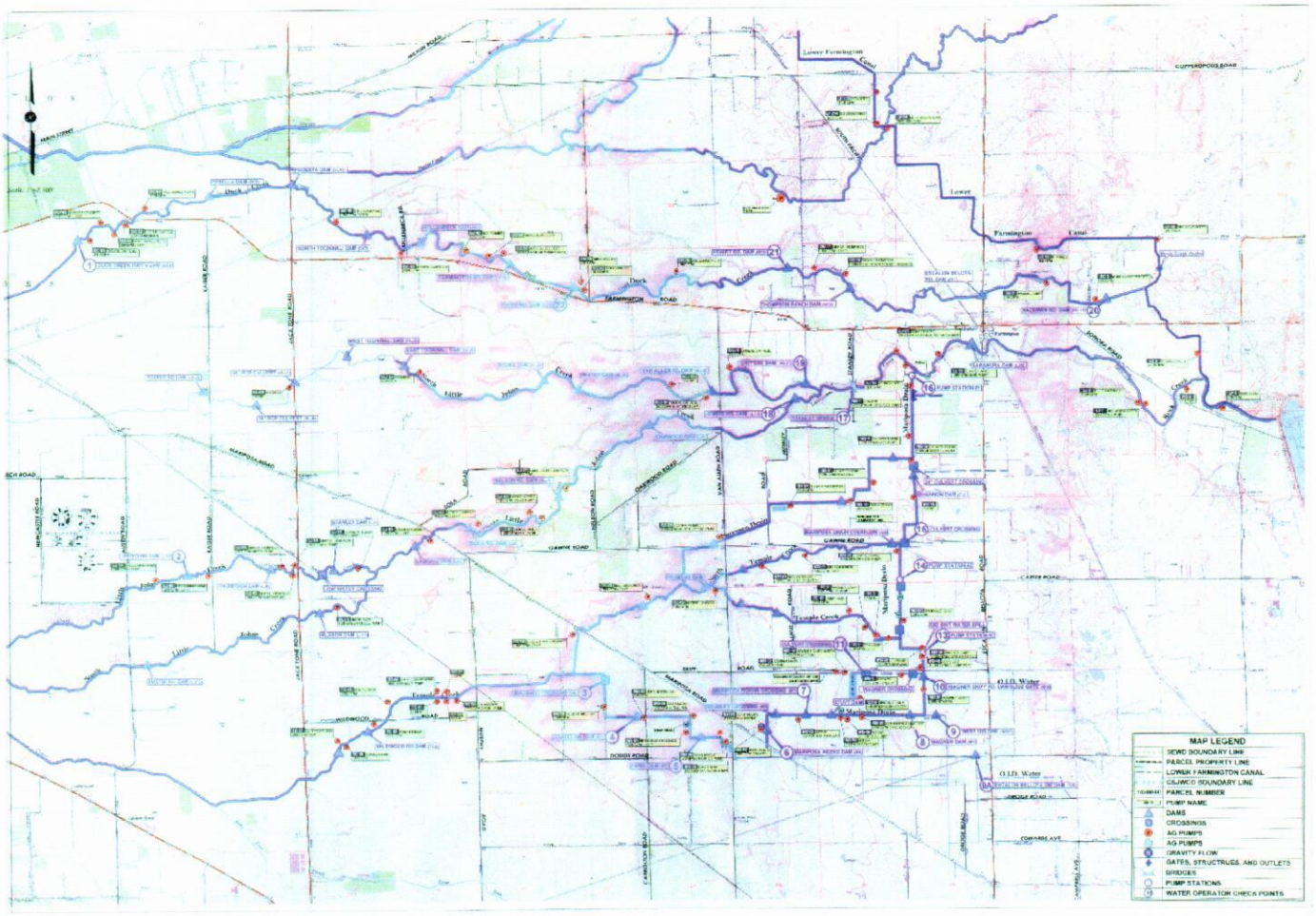
1.3 District Location and Description of Existing Distribution Facilities

The District is located in Southeast San Joaquin County and overlies a portion of the Eastern San Joaquin Valley Water Subbasin. There are approximately 71,888 acres within the District. The District is fully developed with irrigated agricultural land of approximately 58,000 acres (81% of the District). In addition, the District is comprised of a small number of domestic users and a limited number of commercial livestock enterprises.



Description of Existing Distribution Facilities

Surface water from the Stanislaus River, which is stored in New Melones Reservoir, is conveyed in that portion of Stockton East's New Melones Conveyance System that is upstream of Farmington Reservoir. Water is released from Farmington Reservoir into Rock Creek and into the Farmington Canal for diversion into Duck Creek. Those flows released into Rock Creek are then conveyed into Little John's Creek into Pump Station No. 1 where a portion of the flows are pumped into the cross canal running north south that conveys flow southerly to Pump Station No. 2 where it is lifted to continue flowing in the canal before being lifted again at Pump Station No. 3. There are a variety of diverters along Duck Creek, Littlejohn Creek, North, Middle and South Branches, all of whom divert and maintain their individual pump stations. Flows in the north-south ditch are diverted into Sorenson's Drain, North Temple Creek, Temple Creek and Mariposa Drain for diversion and use by various customers.



As conveyance of the surface water is in unlined ditches and natural water courses, there is a significant amount of conveyance loss, either due to seepage or evaporation. Based on operational experience of the District, it is estimated that the overall surface water loss from the point of diversion on the Stanislaus River to the agricultural user within the District is approximately 30 percent. Of this 30 per cent loss, it is estimated that between the point of diversion and the District Boundary, including Farmington Reservoir, the loss is both seepage and evaporation, and is approximately 10 percent of the amount diverted. Thus, there is a 20 percent loss factor for water, within District facilities, from the District Boundary or outlet from Farmington Reservoir to the grower.

As a result, conveyance losses within the District translate into a 22 percent loss of water delivered to the District Boundary at Farmington Reservoir. This is calculated by recognizing that only 90 per cent of the water diverted from the Stanislaus River is delivered to the District. Thus the 20 percent loss is within the boundaries of the District, based on the original amount diverted by the USBR, now becomes 22 per cent (20 percent divide by 90 percent) of water delivered within the District. These losses are utilized as a recharge program. The Supplemental Surface Water serves **a dual purpose in alleviating the groundwater demand through natural percolation** (seepage) and **recharge of the overdrafted aquifer**.

More specifically, during the 2014 irrigation season, it is estimated that 38,444 AF of surface water was purchased by the District. 34,600 AF (90%) of surface water diverted was delivered to the District boundary at the outlet to Farmington Reservoir. The District surface water users diverted and paid for 27,000 AF within the District. A total 7,600 AF can be credited to seepage to the groundwater basin underlying the District, a recharge of said basin. As described above, supplemental surface water used in the District can be considered in lieu recharge of the underlying basin as it replaces groundwater that is not pumped. The amount credited to seepage, 7,600 AF, is an additional source of groundwater recharge. Therefore, the total amount of surface water delivered to the District boundaries, 34,600 AF, is in effect recharge of the groundwater basin either via in-lieu or direct recharge.

1.4 Service Area

The District is comprised of one service area. Water conveyed through District canals is utilized to replenish and off-set that portion of the critically overdrafted Eastern San Joaquin Valley Subbasin underlying the District. District conveyance facilities overlie the North, Central, and Southern portions of the District. Delivered supplemental surface water benefits the groundwater aquifer underlying the entire District.

San Joaquin Valley Groundwater Basin

(Eastern San Joaquin Valley Subbasin Basin Number: 5-22-01)

The District has facilities that convey surface water, some by gravity and others by pumping associated with delivery via the cross channel; therefore, there are some cost differences associated with the delivery of surface water depending upon the location of the customer. To encourage the use of surface water and thereby provide a benefit to the subbasin, the District has determined that surface water charges shall be the same for all users within the District. As a result, the proposed rates are for all agricultural water users throughout the District.

1.5 Water Users and Demands

Total annual agricultural water use in the District is estimated to be 160,000 AF, which is supplied from both surface water deliveries and groundwater extractions.

Based on the estimated irrigated acreage within the District of 58,000 acres, the estimated average annual demand is approximately 2.8 AF/acre.

WATER USERS AND DEMANDS

As noted above the District's property related service of delivering supplemental surface water benefits all users within its service are. These services are further delineated between four user categories based on the following service attributes:

1. Surface Water Users: Includes owners and tenants that have access to the District Supplemental Surface water supply by their proximity to natural streambed within the District. Users in this category relying solely on the supplemental surface water supply pay the Surface Water rate and do not pay the groundwater extraction fee.
2. Agricultural Groundwater Users: Includes owners and tenants of groundwater wells that extract water from the ground whose use is primarily for commercial agricultural purposes. Users in this category are subject to the groundwater extraction fee.
3. Domestic Groundwater Users: Includes owners and tenants of groundwater wells that extract water from the ground whose use is primarily domestic in nature. Users in this category are subject to the groundwater extraction fee.
4. Livestock Groundwater Users: Includes owners and tenants of groundwater wells that extract water from the ground whose primary purpose is livestock. Users in this category are subject to the groundwater extraction fee.

1.5.1 Historical Surface Water Deliveries

Historical groundwater use has led to serious overdraft conditions in the Eastern San Joaquin Valley Groundwater Sub-Basin. Overdraft depletes the groundwater supply by extracting more water than is replenished or recharged.

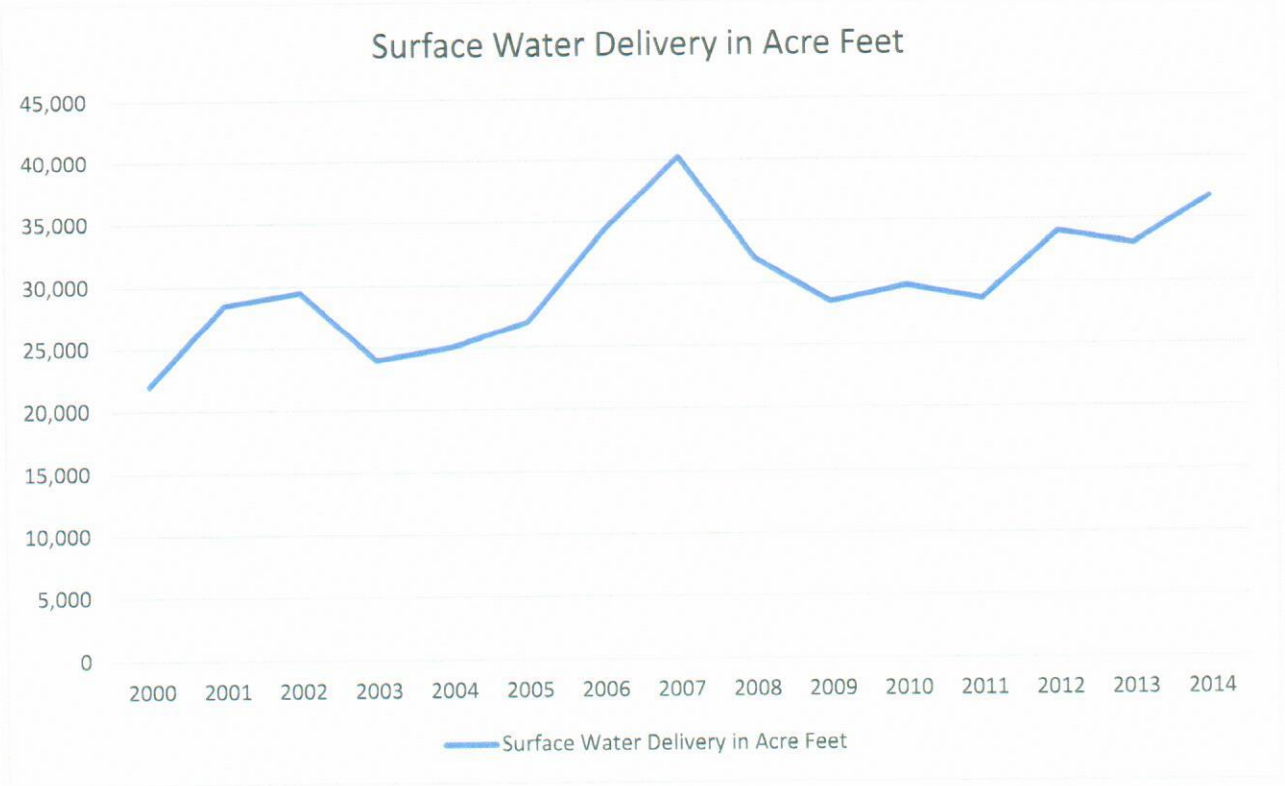
The District has determined that the most effective method to address the overdrafted basin and promote conservation is to supply supplemental surface water. The supplemental surface supply alleviates groundwater demand and recharges the system through reduced groundwater pumping and natural percolation. The benefits of the supplemental surface water program have stabilized the basin and are basin wide as noted in annual District groundwater engineer reports.

The District is aiming to:

- Protect and maintain the ability of property owners to continue on-going groundwater extraction;
- Secure the basin water supply
- Replace groundwater pumped by extractors

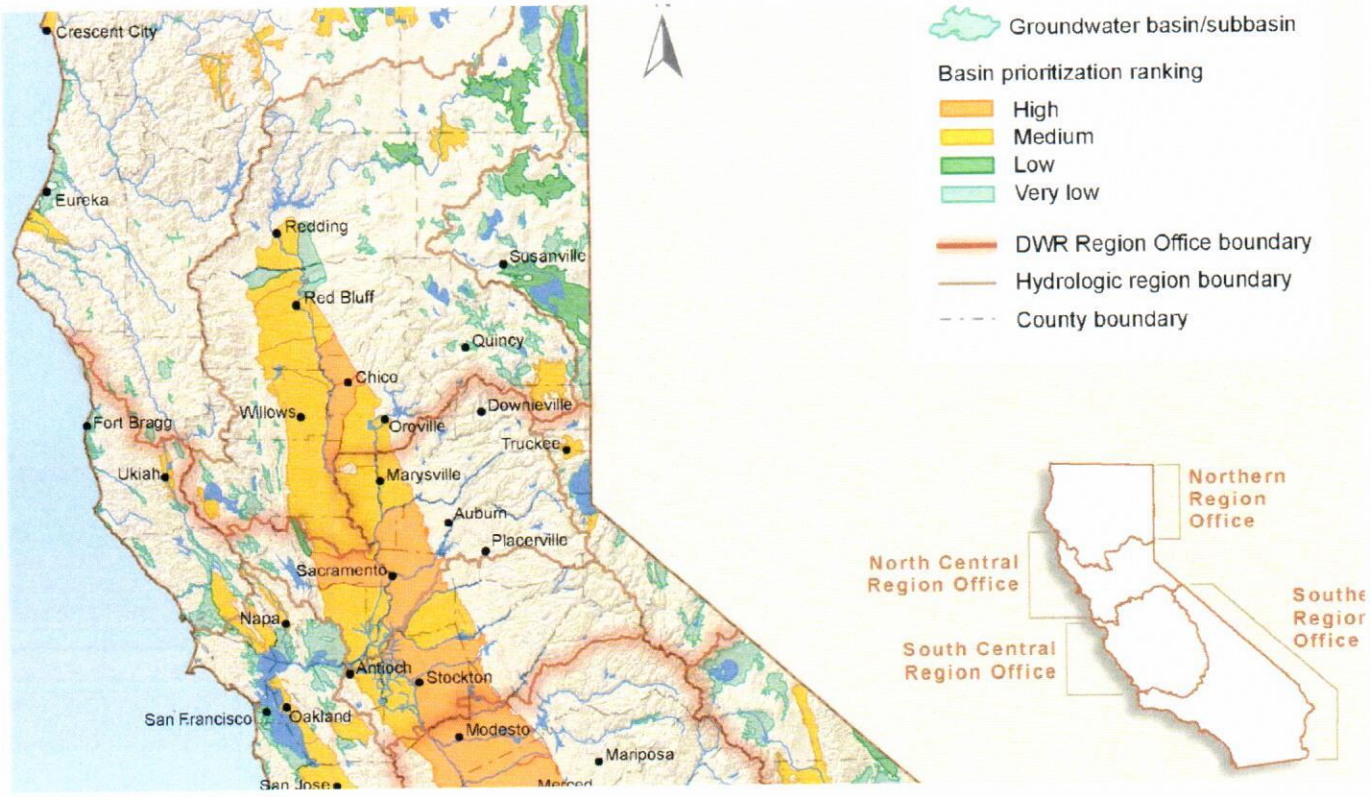
- Reduce overdraft
- Promote water conservation and
- Avoid groundwater pumping limits imposed by the District, State Water Resources Control Board, or court adjudication and order, and thereby protect and preserve the ability of all groundwater pumpers throughout the groundwater basin to continue to rely on groundwater resources without regulatory limits.

Since 1995 the District has purchased surface water from USBR and made it available to District landowners in accordance with applicable rates. As a result of the District's efforts, interest in using surface water and deliveries to landowners have increased over the years; however, while historical average annual use has been approximately 33,000 AF, with a maximum use of 40,000 AF, the District is continuing to pursue additional surface water to make it available as part of the long term plan for basin sustainability. The table below showcases the build-up of increasing demand and delivery throughout the District.

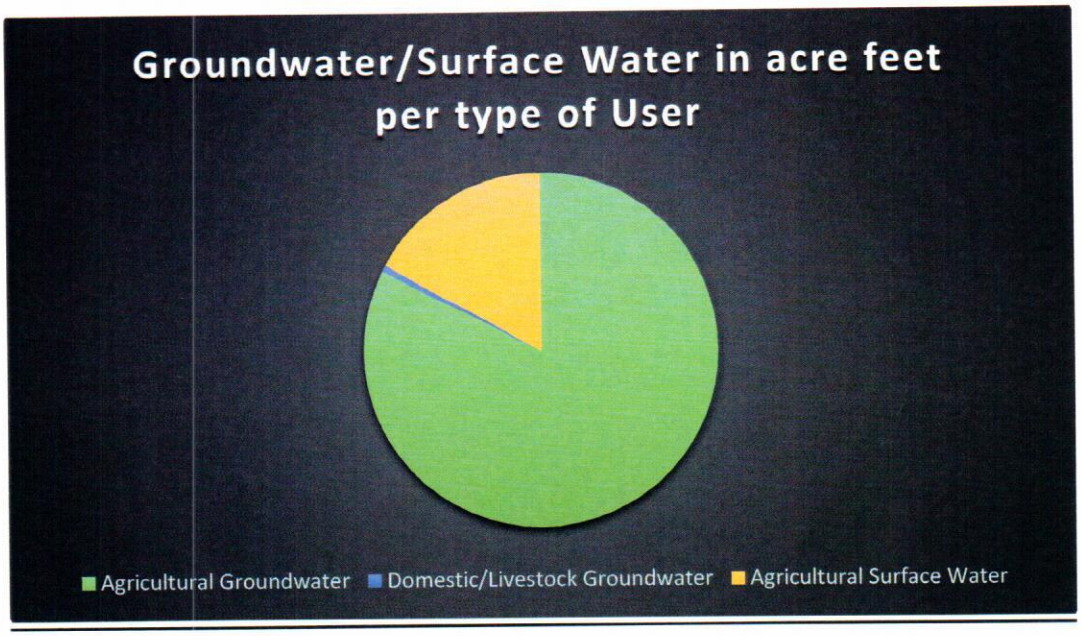


1.5.2 Historical Groundwater Consumption

The District overlies a portion of the San Joaquin River Groundwater Basin, more specifically the Eastern San Joaquin Subbasin as defined by DWR which declared in Bulletin 118 in 1980 that the basin is "critically overdrafted." The significance of the fact that the subbasin is critically overdrafted has been further reinforced by the designation of the subbasin as high priority and the associated accelerated timelines adopted in the SGMA for the development of a GMP.



It is estimated that the average annual groundwater water use within the District, exclusive of domestic use is 134,000 AF. The majority of this use is irrigated agriculture, as domestic and livestock use is estimated to be approximately 1,000 AF which represents approximately one half of one percent of groundwater used in the District.



During 2015 surface water deliveries to the District from the Bureau was zero and is anticipated to be zero in 2016. Thus the groundwater pumping increased to replace this surface water was estimated to be 160,000 AF in 2015 and will be approximately the same in 2016 if no surface water is delivered, which is currently the anticipated condition.

1.5.3 Forecasted Consumption

The District forecasted service demands in order to produce the projected rates over the next five fiscal years. Its review of historical consumption demonstrated the average annual demand of approximately 160,000 acre feet per year. (Annual Engineer's Groundwater Report). This demand may fluctuate due to wet and dry years but remains a long term historical demand. The District is fully developed for agricultural production and it is not anticipated that demands will increase or decrease over time. For this reason this report and analysis assumes 160,000 acre foot annual demand

SECTION 2 - PROPOSTION 218 REQUIREMENTS

2.1 Proposition 218

In 1996, California voters approved Proposition 218, which amended the California Constitution by adding Article XIII C and XIII D. Article XIII D, section 6 governs the imposition of property-related fees by public agencies. A public agency proposing to adopt a new or to increase an existing property-related fee must follow certain procedural requirements, including holding a public hearing and mailing notice of the protest public hearing to affected property owners. In subsequent cases interpreting Proposition 218, the courts have determined that water charges are property-related fees subject to Article XIII D, section 6, and that the required notice be sent only to record parcel owners, not tenants or customers.

The substantive requirements of Proposition 218 (Cal. Const., Article XIII D, Sec. 6) requires that new, or increased fees and charges comply with the following requirements:

(1) revenues from a property-related fee may not exceed the funds required to provide the service;
(2) revenues from the fee may not be used for any purpose other than that for which the fee was imposed;
(3) the fee may not exceed the proportional cost of the service attributable to a property;
(4) the service for which the fee is imposed must be actually used by, or immediately available to, the property owner; and
(5) a fee may not be imposed for general governmental services, such as police and fire services, or services that are available to the public at large in the same manner they are available to paying property owners.

2.2 Cost of Service and Rate Development Methodology

The District addressed each Proposition 218 requirement by employing a cost of service and rate development methodology based on the existing District rate structure.

A summary of the District's rate development methodology is as follows:

1) The District reviewed District's policies regarding reserves and debt funding
2) The District reviewed Revenue requirements for
   a. Operation and Maintenance and
   b. Capital Expenditures
   c. Past Due Water Charges
   d. Sustainable Groundwater Management Act

3) The District conducted a Cost of Service Analysis by reviewing
    a. Budget requirements for
        i. Administration,
        ii. Operations
        iii. Debt Service and
        iv. Supplemental Service Water project costs
4) The District set the Rate Structure in considering the types of users: Supplemental Surface, agricultural groundwater users, domestic groundwater users, and livestock groundwater users and their proportional cost and benefit.

Surface water rates are based upon the District's direct costs to deliver surface water (commonly referred to as "cost of service") and assumes that surface water would be "immediately available" from existing District facilities. A portion of the Groundwater Extraction Fee or charge will also be allocated to covering this direct cost as groundwater extractors benefit from surface water users not pumping groundwater. Indirect costs such as operating and administrative expenses will be covered by the District's assessment on all taxable acres and the Groundwater Extraction Fee. Groundwater Extraction Fee is charged to all nonresidential agricultural parcels that do not use surface water to meet their irrigation demands. Those parcels that use both surface water and groundwater will have their semi-annual billing adjusted to reflect their source of irrigation water in accordance with existing District Policy. Rates for the domestic users or agriculture residential parcels smaller than 5 acres will not change. Proposition 218 notices will be sent to all agriculture parcels for both the Surface Water Rates and Groundwater Extraction Fee.

The rates adopted by the District Board will be the maximum rates permissible without instituting a new Proposition 218 rate setting process. In reviewing and adopting the District's annual budget, the Board will be required to determine the specific water rates to be charged each year, which rates must not exceed the maximum rates adopted through this current process and must be based upon the then cost of service.

SECTION 3 – DISTRICT FINANCES AND BUDGET

3.1 DISTRICT REVENUE

3.1.1 Revenue Objectives

The revenue objectives of the District involve the collection of funds to fully fund the following:

1) Operation, maintenance and administrative costs;

2) The development and management of any programs required by the Sustainable Groundwater Management Act;

3) The repayment of the obligation to the USBR for historical surface water deliveries; and

4) The cost of buying and delivering surface water in those years that surface water is available.

3.1.2 Revenue Requirements

The District analyzed the revenue requirements of the District. The revenue requirement analysis has two main purposes: (1) it serves as a means to evaluate the fiscal health of the District and adequacy of current rate levels; and (2) it sets the basis for the near and long-term rate planning. The foundation of the analysis of revenues is based on relevant financial information, including existing debt service and future payments, current reserve ending fund balances, budgeted and forecasted expenses, future revenues, and other financial information.

3.1.3 Revenue Analysis

A revenue requirements analysis determines the annual system revenue necessary to be recovered through water rates and charges in order to meet the District's expected financial obligations.

The revenue requirement analysis considered the Cash Flow Test to determine whether rates are sufficient. The Cash Flow Test is one where the District must generate annual revenues adequate to meet general cash needs.

The analyzed annual cash flow of the District reveals the main funding is from the Groundwater Extraction Fee and Supplemental Surface Water Program. The current revenue rate, and that for the past 5 years, falls drastically short of the ability to continue to pay for all District obligations.

A forecast of future District obligations demonstrates the need for an annual rate increase to offset the combined impacts of increasing operating requirements, debt service, the District project and sustainable groundwater management. The District is limiting its rate-setting recommendations to the five year period from FY 2016-2017 through FY 2020-2021.

3.1.4 Annual Revenue

Principal sources of revenue for the District include water charges both surface and groundwater, property taxes and acreage charges. Under CWC § 75500 et. seq. the District has the authority to levy and collect groundwater charges for furtherance of the District's "activities in the protection and augmentation of the water supplies for users within the district...." CWC § 75522 states, "The ground water charges are authorized to be levied upon the production of groundwater from all water-producing facilities, whether public or private, within the district..."

CWC § 75590 et. seq. provides that if a groundwater charge is to be levied, "The charge shall be computed at a fixed and uniform rate per acre-foot..." with a different rate for agricultural water and "water other than agricultural..." Currently the District charges five times the agricultural rate of residential users on parcels 5 acres or less in accordance with CWC § 75594; however, this multiplier is subject to change as the "board shall determine." CWC § 75595. In calculating the agricultural residential rate, the District assumes that each parcel uses 0.5 acre-foot of water, annually. These statutes are the authority that the District uses to set and collect the Groundwater Extraction Fee.

In addition, the District is specifically named in CWC § 75470 et. seq., and given the authority to "fix and collect charges...upon each acre of taxable land within the district" and "The revenue obtained may be used for any district purpose ..." This charge is separate from the groundwater charge and based on taxable acreage with a maximum of $2.50 per acre land within the district. It is set annually, on or before the 30th of June.

As most of the District is agricultural with some rural residential uses, revenue from property taxes is limited and in 2014, the base year was approximately $10,000. By far the largest source of revenue comes from the groundwater extraction fee, and surface water sales, which in 2014 were $751,171 and $756,549, respectively. However, the cost of supplying surface water exceeded the revenue generated from the sale.

The sources of the revenue for the District are as follows:

1) Taxes
2) Annual Acre Assessment
3) Groundwater Extraction Fee

4) Surface Water Fees

3.2 DISTRICT EXPENSES

3.2.1. Annual Expenses

The District's expenses revolve around the operation and maintenance of the District project. The major expenses are as follows:

Certificates of Participation: The District was issued Certificates of Participation for construction of the internal distribution system that call for approximately a $45,000 monthly payment. These payments are made until the FY 2018-2019 However, the last year of payments are not made out the District budget but from a reserve fund. Therefore, for budgetary purposes the payments end in FY 2017-2018. Amount and date of payoff for the Bond Payments for the distribution system were developed from the District Financial Statements.

Payment of distributed Surface Water: As a condition of the District's contract with the Bureau the District must pay for surface water it has taken. The District has entered into a repayment schedule of $129,000 per month ending September 2018.

Operation and Maintenance: The District anticipates an overall increase in the operation and maintenance of the District at the rate of 2% annually. This includes cost of services and administration expenses.

Anticipated Charges for Surface Water: The District is charged for the amount of water diverted from the Stanislaus River not the amount delivered to District Customers. Total water charges include cost of water lost to seepage. The cost of water in 2016 was 38.69. It is assumed that this rate per AF will increase 2% per Water Year (WY).

Wheeling Charges: The District is required to pay a wheeling charge to Stockton East Water District for that portion of the Goodwin Tunnel used to obtain project water. It is anticipated that the wheeling rate will remain at $8 per acre foot for the 5 year period of this study.

3.2.1 Forecasting of Future Expenditures

The District's 2014-2015 budget served as the basis for forecasting future operation expenses. This budget reflects the most recent build-up of Surface Water deliveries and related District expenses. This most current representative year provides the best estimate for forecasting future expenditures.

3.3 DISTRICT BUDGET

Recently overall revenue has not meet expenses for a variety of reasons some beyond the control of the District, such as the increases in USBR charges for water. In addition, in order for the District to continue to receive surface water from USBR, it is currently having to pay past due water charges under that repayment schedule established by USBR. This repayment schedule calls for monthly payments of $129,000 till September 2018. As a result the District has had to draw on its reserves. In addition, the District is still paying off the Certificates of Participation issued in 1999, which were issued to refinance the existing debt associated with the construction of the internal distribution system that allows the District to distribute surface water as part of its sustainability efforts. The last payment for these Certificates, with a portion being paid by reserve funds is due in FY 2018-2019, as detailed in **Table 1 – Proposed O&M Budget with 33,000 AF Delivered;** thereby, eliminating this financial obligation.

It should be recognized that the Bureau's charges are based on the amount diverted from the Stanislaus River, not the amount delivered to the District's customers. Therefore, if the total cost per AF of water delivered was to include the cost for the water lost to seepage, then the cost per AF to the Agricultural customer would have to be increased approximately 30% to make up the cost difference. While the District is given some financial relief in the rates charged by Bureau, the rate for 2016 will be $38.69. It is assumed that this rate per AF will increase 2% per Water Year (WY). However, this cost per AF does not include the past due water charge which is a fixed amount not predicated upon the amount of water available or for sale to District customers, merely a negotiated payment schedule.

During WY 2015 there was no surface water available to the District, and it is anticipated it will be the same in WY 2016. While from a financial viewpoint, this may be beneficial to the District, they still must pay the past due charges to the Bureau for surface water. Thus any budget for this analysis should consider the fact that there will be no current water charges from the Bureau or Stockton East for the FY 2016 Budget Year. However, it is assumed that water will be available in WY 2017.

To simplify the budget for this analysis, the number of variables to be considered in an annual operating budget were consolidated into several general categories and an assumption made regarding the amount of surface water that will be delivered. Using the District's Financial Statements for 2013-2015 the following **Table 1 – Proposed O & M Budget with 33,000 AF Delivered** has been prepared. This budget assumes that the Administration and Operations costs for 2015 were the base case and will increase by 2% a year together with the Water Charges associated with the current purchases of water from the Bureau. Stockton East's charges will remain flat for the 5 year window shown. No contingency was included as it is assumed that the Administration and Operations Budget can be adjusted as needed to address any minor increases. Past Due Water Charges to the Bureau have monthly payments of $129,000 with the last payment due September 2018. Amount and date of payoff for the Bond

Payments for the distribution system were developed from the District Financial Statements. Water charges reflect the fact that the irrigation season and water year (WY) do not coincide with the Fiscal Year (FY) calendar. It is assumed that the irrigation season is equally divided between fiscal years and that while water is not available in WY 2016 (October 1, 2015 to September 30, 2016), water will be available in WY 2017; therefore, while there will be no water costs during July through October of 2016, but there will be costs during May through June of 2017. As a result surface water costs for USBR and SEWD are based on 16,500 AF being delivered in FY 2012016-2017 as water available in WY 2017.**Table 1 – Proposed O&M Budget with 33,000 AF Delivered**

TABLE 1

Fiscal Year (July- June)	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Admin and Operation	$560,000	$571,200	$582,624	$594,276	$606,162
Water Charges per AF					
USBR (36,667 acft @$38.69)	$709,323	$1,447,019	$1,475,960	$1,505,479	$1,535,588
SEWD (33,000 acft @ $8.00)	$132,000	$264,000	$264,000	$264,000	$264,000
Past Due Water Charges	$1,548,000	$1,548,000	$387,000		
Bond Payment	$482,350	$243,275			
Total	**$3,431,673**	**$4,073,494**	**$2,709,584**	**$2,363,755**	**$2,405,750**

1. Bond payments for calendar year 2018 are paid from Reserve funds, thus the decrease in the costs shown

No major expansions or repairs to the existing surface water distribution system is anticipated during the period of this study and therefore is not included in the expenses presented.

3.4 CURRENT DISTRICT RATES

The District has historically incurred debt to address the issues of sustainability of the groundwater basin and availability of water for all its customers. This debt is associated with the construction of surface water distribution facilities that facilitate the distribution of existing and potential future sources of additional surface water. These efforts have contributed to offsetting impacts to the groundwater basin associated with groundwater pumping. (See Annual Engineering Reports). Therefore, groundwater pumpers or customers that pay the Groundwater Extraction Fee have benefited from the distribution and use of surface water by other District customers that buy and use surface water, thereby contributing to the recharge of the basin. In addition, a portion of the 10% that is lost between the point of diversion on the Stanislaus and Farmington Reservoir goes to recharge of the subbasin outside the District boundaries, thus the subbasin benefits.

3.4.1 Surface Water Rates

The District's current rate for surface water delivery is $32.50 per AF. Bills for water use are based on either metered data or estimates of diversion based on Power bills. The cost of service per parcel for surface water includes cost of purchase from the Bureau, cost of conveyance by SEWD, cost to pump the water within the District's conveyance facilities, labor costs to maintain and manage the District's distribution facilities, etc.

3.4.2 Groundwater Extraction Fee

The Groundwater Extraction Fee for Agricultural property is currently based on a rate of $6 per AF, which is billed on an acreage charge assuming that the property uses 2.8 AF of water per acre. This equates to an acreage charge of $16.80, which is billed to each Agricultural property. Agricultural properties with a residence or structure, less than 5 acres, are considered a domestic parcel and are billed at a different rate. Currently, in accordance with the previously cited CWC sections, the rate is five times the agricultural rate of $6 per AF, but assumes water use is only 0.5 AF per parcel. This equates to an annual cost of $15 per parcel, which is not subject to change under this rate study. Residential parcels and livestock currently account for approximately one half of one percent of the total amount of groundwater used in the District thus their impact on the subbasin is minimal.

As provided in California Water Code Section 75592 that "the charge [for groundwater] shall be computed at a fixed and uniform rate per acre-foot for agricultural water, and at a fixed and uniform rate per acre-foot for all water other than agricultural water." Further, CWC Section 75596, provides that these funds not exceed those necessary to further the District's "...purposes in the replenishment, augmentation, and the protection of water supplies for users within the district or zone or zones thereof."

3.5 PROPOSITION 218 ANALYSIS

3.5.1 Assumptions

The following information was provided by the District and was relied upon for the preparation of this report:

Financial Audited Statements 2011-2012 through 2014-2015

Budgets 2011-2012 through 2014-2015

Historical Account Data

Engineers Reports 2011 through 2015

Service Area maps

These documents, including information from the District's billing system were relied upon as being accurate to prepare this service charge study.

Several assumptions were used in the allocation of cost and the development of rates. These are summarized below:

1. The District's budgets representing typical District expenses on an annual basis were used as the financial baseline to develop rates
2. Based on discussions with the District the existing capital improvement debt service is planned to be paid off in 2018.
3. The District will maintain a minimum of 90 days of operating cash reserve.

The District is comprised of one service area overlying a common groundwater basin. To encourage the use of surface water and provide a common benefit to the subbasin, the District has determined that surface water charges will be the same for all surface water users within the District. As a result, the proposed rates are for all agricultural water users throughout the District.

3.5.2 Cost of Service Analysis

The purpose of a cost-of-service analysis is to provide a rational basis for distributing the costs of the groundwater and surface water services to each customer class in proportion to the types and levels of service received and the demands they make on these services. The cost of service allocation completed in this study follows approved methodology in California Court cases established from the cost of service principles.

To conduct the cost of service analysis, the Agency identified the unique service functions provided to its water users. The revenue requirements were then allocated to the different service levels attributable to the water user groups (e.g. surface water user, domestic, agricultural, livestock).

In allocating shared costs between the types of users the District has balanced several policy objectives.

1. The property owners within the District receive an important service from the supplemental surface water program. By installing, operating, and maintaining the supplemental water project facilities, **the District protects the entire groundwater basin supply, replaces some of the groundwater pumped by extractors, reduces overdraft, and avoids stricter groundwater regulation by pumping limits – all of which serve the long-term water supply needs of the well owners throughout the basin**. As such, it is appropriate that the well owners throughout the basin pay for their equitable share of the cost of the District's supplemental surface water service by groundwater users.
2. Payment of a groundwater extraction fee on a per ace-foot basis provides an incentive, relative to the consumption of groundwater for well users to carefully and efficiently manage their use of groundwater. This also furthers the district water conservation efforts, which is the District's founding purpose.
3. Surface water users who access and utilize surface water should pay an equitable proportionate share of the costs of this service.
4. Agricultural water users whose water demands are significantly higher than that of other types of groundwater users should pay their proportionate share of the costs of this service
5. There is a strong basin wide interest in maximizing surface water deliveries because the greater the delivered surface water minimizes the pumping in the basin and enhances groundwater recharge
6. Groundwater pumpers within the District have also benefited from a reliable groundwater supply. The District efforts have stabilized the basin. This benefits all well owners within the District.

Throughout the cost of service analysis, the District equitably balanced the allocation of costs in consideration of these factors – recognizing that the purchase and use of supplemental surface water protects the overall groundwater basin in furtherance of the District's purpose, objectives, and therefore serves all the groundwater users in the basin.

District analysis determined that domestic and livestock use is minimal percentage of the overall use of groundwater within the District. Although, benefit is conferred upon domestic and livestock users, they currently receive their proportional share of the cost of service of the District project. The great majority of groundwater use is for agricultural production. Therefore any increase in the rates would primarily benefit the agricultural users, and it is determined that an equitable proportion of the increase should be placed entirely on agricultural use.

SECTION 4 –WATER RATES

4.1 Proposed Rates

It should be recognized that the CVP rate of $38.69 is applied to the volume of water diverted from the Stanislaus River, not the volume delivered to the District and does not include the other costs associated with surface water. Other costs includes Stockton East's "wheeling cost" of $8 per AF for water deliver and the past due water charges. Seepage, which accounts for the difference between the amounts diverted from the Stanislaus River and delivered to the District's customer, estimated at 30 per cent, further impacts the cost for water delivered. However, seepage within the District, 20 per cent of the amount diverted, is a direct benefit to the basin and those that extract groundwater from it, as it reduces the amount of groundwater extracted by the amount being recharged and has helped stabilize groundwater elevations; therefore, a portion of the cost associated with diverting and delivering surface water should be allocated to the Groundwater Extraction Fee.

The purpose of increasing the Surface Water Rate and Groundwater Extraction Fee is to help cover the District's costs to import surface water and other activities associated with the District's efforts to achieve a sustainable basin, with the exception of that portion associated with conveyance; however, too high a Surface Water Rate can be counterproductive as it could be a disincentive to using surface water. In considering the Groundwater Extraction Fee, is should be recognized that a missing component is the cost of pumping which is a significant cost and be should be considered when comparing the two rates. Therefore, it is proposed that the Surface Water Rate be held to the current cost of delivery only, Bureau and Stockton East, $47 per AF. Groundwater Extraction Fee should be increased to $12.50 per AF or $35 per acre. This increased fee will pay for the Surface Water lost by seepage to the groundwater basin, which is a direct benefit to the groundwater pumper. In addition, it will help retire the Past Due Water Charges, which were incurred to the benefit of all groundwater users in the Groundwater Basin. A comparison of the existing and proposed rates and fees are presented in **Table 2 – Comparison of Existing and Proposed Rates and Fees**. When reviewing these rates and fees it should be acknowledged that these costs do not include those costs incurred by the Agricultural customer to either divert and pump surface water or pump groundwater. While these costs, which are the customer's responsibility, vary from customer to customer depending upon the depth to groundwater and method of irrigation, they are part of the overall consideration when proposing rates.

Table 2 – Comparison of Existing and Proposed Rates and Fees

Rates and Fees	Current	Proposed
Surface Water Rate/AF	$ 32.50	$ 47.00
Groundwater Extraction Fee		
Per AF	$ 6.00	$ 12.50
Per Acre	$ 16.80	$ 35.00

An estimate of the revenue generated by the new rates and fees is presented in **Table 3 – Revenue from Proposed Rates and Fees.** This revenue projection assumes that surface water will be available in Fiscal Year (FY) 2017 and beyond. The District's FY ends on June 30th; therefore, it is assumed that the irrigation season will be divided equally between the two fiscal years; whereas, the water year will cover the entire irrigation season and thus overlaps into two fiscal years. For purposes of this comparison, it is assumed that the water rate will be the maximum allowable for both fiscal years. FY 2016-2017 is representative of a condition whereby water is not available during WY 2016, but is available during WY 2017. Thus, there is no revenue from surface water sales during the fall of FY 2016-2017, but there are sales during the spring, which is included in WY 2017. For FY 2017-2018, surface water sales occur in both the spring and fall, thus the increase in sales and decrease in acreage being assessed the groundwater extraction fee.

The revenue for FY 2016-2017 as presented is based on surface water sales during the spring being equal to half the historical use, and the groundwater extraction fee being split between the two acreages shown to reflect the availability and non-availability of surface water. If WY 2017 has no water then the revenue numbers for FY 2016-2017 should be adjusted to only show revenue from the Groundwater Extraction Fee for 58,000 acres, and Assessment/Property Tax. Adjustments would also have to be made to **Table 1** to eliminate the Water Charges.

Table 3 – Revenue from Proposed Rates and Fees

Fiscal Year (July – June)	2016 - 2017	2017 - 2018
Surface Water Sales (25,740 @$47.00)	$604,890.00	$1,208,780.00
Groundwater Extraction (58,000 ac @ $35.00)	$1,015,000.00	
Groundwater Extraction (48,800 ac @ $35.00)	$854,000.00	$1,708,00.00
Assessments/Property Tax	$185,000.00	$185,000.00
Total	**$2,658,890.00**	**$3,102,780.00**

While the Revenue presented in **Table 3** does not match the revenue requirements in **Table 1** until sometime in late 2019, it does demonstrate that with the rates proposed, the District can develop and consider alternative financing schemes that will allow them to spread some of the costs out over several years in an effort to equalize annual revenue and expenses. **Table 4 - Comparison of Revenue to Expenses** has been prepared to show this revenue shortfall.

Table 4 – Comparison of Revenue to Expenses

Fiscal Year (July-June)	**2016-2017**	**2017-2018**	**2018-2019**	**2019-2020**	**2020-2021**
Projected Revenue	$2,658,890	$3,102,780	$3,102,780	$3,102,780	$3,102,780
Projected Expenses	$3,431,673	$4,073,494	$2,709,584	$2,363,755	$2,405,750
Revenue Shortfall	**($772,783)**	**($970,714)**	**$393,196**	**$739,025**	**$697,030**

Upon reviewing Table 4 it should be remembered that a big decrease in expenses in FY 2016-2017, when compared to FY 2017-2018 is the fact that there are no surface water sales in WY 2016 which encompasses the beginning of FY 2016-2017; whereas, some sales are anticipated in FY 2016-2017 during WY 2017. In the years following FY 2017-2018, decreases in Projected Expenses are attributable to the retirement of the bond debt and repayment to the Bureau. The slight increase in expenses when comparing FY 2019-2020 and FY 2020-2021 is attributable to increases in Administration and Expenses, and the cost of water as shown in Table 1.