

RESOLUTION 2018-002

**RESOLUTION OF THE BOARD OF DIRECTORS OF
NORTH SAN JOAQUIN WATER CONSERVATION DISTRICT
SERVING AS TRUSTEES OF IMPROVEMENT DISTRICT NO. 2
APPROVING AN ENGINEER'S REPORT FOR THE SOUTH SYSTEM
GROUNDWATER IMPROVEMENT PROJECT AND
AUTHORIZING AN ASSESSMENT BALLOT PROCEEDING
FOR A PROPOSED SPECIAL BENEFIT ASSESSMENT**

WHEREAS, the Board of Directors of the North San Joaquin Water Conservation District (Board) pursuant to Art. XIID, Section 4(b) of the California Constitution and California Government Code sections 53750 et seq. (the Proposition 218 Omnibus Implementation Act), ordered the preparation of an Engineer's Report for a proposed special benefit assessment on lands within the South System Groundwater Improvement District No. 2 (SSGID) to fund the capital and incidental costs of the South System Groundwater Improvement Project (SSGIP); and

WHEREAS, the Board has considered all information related to this matter, as presented at the public meetings of the Board, including any supporting reports by District staff and information provided by landowners within the SSGID; and

WHEREAS, the Board has carefully examined and reviewed the January 2018 Provost and Pritchard Consulting Engineers Engineer's Report for the South System Groundwater Improvement Project and proposed assessment roll attached hereto as Exhibit A; and

WHEREAS, the Board is satisfied that the Engineer's Report (1) identifies all parcels that will receive a special benefit from the SSGIP; (2) quantifies the proportional special benefit derived by each identified parcel subject to the proposed special benefit assessment in relationship to the entire cost of the SSGIP; (3) calculates the proper maximum amount of the assessment to be imposed on each identified parcel and the duration of the assessment; and (4) does not propose any assessment that exceeds the reasonable cost of the proportional special benefit that is conferred on a parcel.

THEREFORE THE BOARD OF DIRECTORS OF THE NORTH SAN JOAQUIN WATER CONSERVATION DISTRICT ACTING AS TRUSTEES FOR NSJWCD IMPROVEMENT DISTRICT NO. 2, THE SOUTH SYSTEM GROUNDWATER IMPROVEMENT DISTRICT, FINDS AND RESOLVES AS FOLLOWS:

1. The above recitals are true and correct.
2. The January 2018 Provost and Pritchard Consulting Engineers South System Groundwater Improvement Project Engineer's Report and proposed assessment roll, attached hereto as Exhibit A, is approved and accepted.
3. The district will conduct a ballot protest proceeding on the proposed special benefit assessment for SSGID No. 2, described in the Engineer's Report as required by Art.

XIIID, Section 4(b) of the California Constitution and California Government Code Section 73753.

4. There shall be a public hearing on February 26, 2018 at 2:00 pm at the Lodi Public Library.
5. The district shall retain the services of an independent elections company, MK Election Services, to (1) prepare and mail the required Notice and Ballot to each identified parcel in the proposed assessment roll included in the Engineer's Report; (2) attend the public hearing and count the returned ballots at the conclusion of the public hearing; and (3) certify the results of the ballot protest proceeding.

Moved by Director _____, seconded by Director _____, that the foregoing resolution be adopted.

Upon roll call the following vote was had:

Ayes: Directors
Noes: Directors
Absent: Directors
Abstain: Directors

The President declared the resolution passed.

I, David Simpson, Secretary of the Board of Directors of the NORTH SAN JOAQUIN WATER CONSERVATION DISTRICT, ACTING AS TRUSTEES FOR NSJWCD IMPROVEMENT DISTRICT NO. 2, THE SOUTH SYSTEM GROUNDWATER IMPROVEMENT DISTRICT, do hereby CERTIFY that the foregoing is a full, true and correct copy of a resolution duly adopted at a special meeting of said Board of Directors held the 8th day of January, 2018.

Dave Simpson, Secretary
NSJWCD Board of Directors

EXHIBIT A - ENGINEER'S REPORT

**ENGINEER'S REPORT
For NORTH SAN JOAQUIN
WATER CONSERVATION DISTRICT**

**PROPOSITION 218 PROCEDURES FOR
SOUTH SYSTEM GROUNDWATER IMPROVEMENT PROJECT**

January 2018

Prepared for:

North San Joaquin Water Conservation District

Prepared by:

Provost & Pritchard Engineering Group, Inc.
Modesto, California

Date signed: __/__/17

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ABBREVIATIONS

AF	Acre-feet
AFA.....	Acre-Feet Annually
CDFA.....	California Department of Food and Agriculture
CFS	Cubic-feet-per-second
DWR	Department of Water Resources
EBMUD.....	East Bay Municipal Utility District
GSP.....	Groundwater Sustainability Plan
NRCS	Natural Resources Conservation Service
NSJWCD or District.....	North San Joaquin Water Conservation District
O&M	Operations and Maintenance
PDA	Protest Dismissal Agreement
SGMA	Sustainable Groundwater Management Act
SSGID	South System Groundwater Improvement District
SSGIP.....	South System Groundwater Improvement Project
SWRCB	State Water Resources Control Board
USDA.....	United States Department of Agriculture
WID.....	Woodbridge Irrigation District

REPORT SUMMARY

The North San Joaquin Water Conservation District (NSJWCD) is proposing to form the South System Groundwater Improvement District (SSGID) for the purpose of funding, constructing and operating the South System Groundwater Improvement Project (SSGIP). An improvement district is a delineated area within a larger water conservation district that includes only a fraction of the lands in the entire water conservation district. The new SSGID would then levy a special benefit assessment on lands within the improvement district that will receive a benefit from the SSGIP. The monies collected from the special benefit assessment will be used to finance the capital cost of the SSGIP.

The process of establishing a special benefit assessment to pay for the capital costs of an improvement project is subject to provisions of Article XIII D of the California Constitution (commonly known as Proposition 218) and Sections 53750 through 53753.5 of the California Government Code, which implements Proposition 218. Proposition 218 was passed by the voters in November 1996 and establishes mandatory procedures that must be followed by local agencies in order to establish, or increase, a special benefit assessment on property. This report is intended to comply with the required procedure by identifying the benefitted properties, assessing the relative benefits to the properties from the SSGIP and proposing assessment rates that are proportional to the relative benefits.

The SSGIP involves replacing and modernizing the District's South Pump Station on the Mokelumne River and seven miles of pipeline and related facilities in order to deliver pressurized and non-pressurized surface water and groundwater recharge benefits to irrigated lands south of the river. The Project will be a major capital improvement for the NSJWCD and landowners in the improvement district area. NSJWCD has already received \$5.75 million in outside funding and state and federal grants for the project, but needs to raise an additional \$13 million to complete the project.

The proposed Project and this assessment proceeding are critically important to the district because:

- Under the terms of the NSJWCD's water right, NSJWCD must put its surface water to use soon or it will lose the water right. The proposed project will enable NSJWCD to put half of its water right to immediate beneficial use when the SSGIP is completed.
- NSJWCD overlies a portion of the critically overdrafted Eastern San Joaquin Groundwater Subbasin. Groundwater levels in NSJWCD have been declining an average of one foot per year, increasing costs for landowners. This trend is expected to continue unless landowners reduce groundwater pumping by using alternate surface water supplies or fallowing land.
- Pursuant to the recently enacted law called the Sustainable Groundwater Management Act (SGMA), NSJWCD must show that it can manage the groundwater basin towards sustainability or landowners may face pumping restrictions and/or state regulatory intervention. The proposed project will reduce groundwater use, improve groundwater levels and help NSJWCD reach its sustainability goal

REPORT SUMMARY

- NSJWCD has secured \$5.75 million in outside funding and grants for the project. \$4 million in state and federal grants will be lost if the landowners do not approve moving forward to fund the balance of the cost of the project.

NSJWCD proposes to establish a per-acre assessment on lands within the assessment district based upon the level of special benefit to each parcel from the SSGIP. For example, lands that can obtain water directly from the new pressurized pipeline will be assessed at a higher rate than lands that can only receive non-pressurized water from the open ditch, Pixley Slough, or Bear Creek. Further, lands that are adjacent to the lands that receive surface water will receive groundwater benefits and will be assessed for those particular benefits as well, but at an even lower rate. Lands that are not irrigated would not be assessed.

This report describes how the benefitted parcels in the proposed improvement district were identified, how the benefits for each parcel were computed, and the proposed annual assessment for each parcel. The report identifies approximately 23,000 acres of property to include in the assessment district, at different levels of benefits and proposed annual assessment amounts.

1 PURPOSE OF THE REPORT

1.1 General

The NSJWCD is proposing to form the SSGID for the purpose of collecting funds to pay for the SSGIP. NSJWCD proposes to assess lands within the District that will receive a special benefit from the SSGIP. This report is prepared in accordance with California State law to identify and describe an equitable distribution of the benefit assessments in accordance with the proportionate special benefits each assessed parcel will receive from the SSGIP.

In November 1996, the California voters approved Proposition 218, the "Right to Vote on Taxes Act", which added Article XIII D to the California Constitution. Proposition 218 imposes certain requirements relative to the imposition of property related assessments, fees and charges by local agencies such as NSJWCD. The process of establishing the SSGIP assessment must conform to provisions of Proposition 218.

Accordingly, NSJWCD must identify all parcels that will have a "special benefit" conferred upon them for which the proposed assessment will be levied. Under Proposition 218, a "special benefit" is defined as "a particular and distinct benefit over and above general benefits conferred on real property located in the district or to the public at large" Article XIII, Section 2(i) of the California Constitution.

The primary special benefits for parcels in the SSGID associated with the SSGIP assessment are the ability to receive pressurized or non-pressurized water deliveries, maximize use of surface water supplies to alleviate groundwater overdraft, development of reliable water supply and groundwater level improvement, which reduces costs for all landowners who use groundwater. Once this report and the Proposition 218 notice is approved by the NSJWCD Board of Directors, NSJWCD will commence with the procedure required by Proposition 218 by mailing notices to all affected landowners. The mailing will include: a notice and information, a summary for each landowner of their parcels subject to the proposed assessment and the proposed charge, a ballot and a return envelope. NSJWCD then must hold a public hearing on the proposed assessment no earlier than 45 days after mailing the notices. The ballots must be returned prior to, or at the opening of the public hearing. The ballots are then counted following the conclusion of the public hearing. NSJWCD cannot impose the assessment if, upon the conclusion of the hearing, ballots submitted in opposition to the assessment exceed the ballots submitted in favor of the assessment. In tabulating the ballots, the ballots shall be weighted according to the proportional financial obligation of the affected property.

Any funds collected from landowners by the assessment proposed in this report may only be used for the SSGIP and may not be used to benefit other landowners not within the identified special benefit improvement district.

1.2 Revenue Objectives

The SSGIP consists of the following parts.

- (1) South Pump Station Replacement Project
- (2) Slipline, Pressurize and Automate South System Pipeline

- (3) Facility improvements to deliver water to open channels, Bear Creek and Pixley Slough,
- (4) Additional Pumps to Pump Station as needed for build-out.

The total budget for the SSGIP is \$18.75 million. The district has received \$5.75 million in outside funding. The district needs to raise \$13 million for construction costs. The district plans to secure public financing an annual interest rate of 4.5% or less for a term of 30 years, which will require the district to make an annual payment of approximately \$860,000. NSJWCD's financial advisor has provided this information, which is attached hereto as **Appendix C**.

In order to secure the best interest rate for the project, the maximum approved assessment must be 125% of the annual debt payment, or \$1,075,000. The SSGID would levy the maximum assessment the first year. Any collected assessments that exceed the annual debt service would then be applied as a credit against the next years' required assessment. Thus, provided collections are current, the average levied assessment after the first year should be closer to the \$860,000.

A portion of the SSGIP involves conveyance of water through open channels, which will cause direct groundwater recharge through percolation. Water reaching channel users will substitute for some of channel users' well use, indirectly recharging groundwater (a.k.a "in-lieu recharge") as well. Water conveyed in open channels will first pass through the South System Pump Station and Pipeline before conveyance in channels and may be pressurized in the Pipeline. Because the benefits of direct percolation and in-lieu recharge are shared by all benefitted properties in the SSGID, the operational costs of this direct recharge and pressure imparted during delivery but not used by channel users should be shared by all benefitted properties and are properly collected as part of the assessment. NSJWCD conservatively estimates that the operational costs attributed to these direct and in-lieu recharge benefits will average less than \$142,000 per year.

NSJWCD is actively pursuing other sources of funding to pay for groundwater recharge projects, such as the proceeds of the sales of water to the City of Lodi. If other sources of funding are not available to pay for the operational costs of direct recharge and pressure not used by channel users through the South System, this cost could be included in the annual assessment. Because this \$142,000 amount is well within the cushion between the average annual assessment amount of \$860,000 and the 125% maximum approved assessment of \$1,075,000.

All of the revenue objectives outlined above are based on current engineer's cost estimates. Landowners will be asked to cast a ballot based on the maximum possible annual assessment that can be imposed over the 30-year period. If the total project cost is less than estimated or if the interest rate obtained with the financing is less than estimated, the total collected assessment each year may be lower. If the proposed assessment is approved, NSJWCD may not impose an assessment higher than the maximum approved assessment unless it prepares a new Engineer's Report and repeats the Proposition 218 procedural process.

2 DISTRICT AND SOUTH SYSTEM BACKGROUND INFORMATION

2.1 General

The NSJWCD was organized in 1948 as a water conservation district under California Water Code Division 21. The NSJWCD encompasses approximately 150,000 acres generally east of the City of Lodi, including areas within the city limits, and north and south of the Mokelumne River. NSJWCD delivers surface water to agricultural landowners and for groundwater recharge projects, as available, under State Water Resources Control Board (SWRCB) Permit #10477 through four existing pump station and delivery systems, including the South System, which is a part of the proposed project.

A board of five directors governs the NSJWCD. Each Director represents a separate geographical division and is elected to a term of four years by the qualified voters within the division. Regular Board meetings are held monthly at the Lodi Library and are generally at 2pm on the last Monday of each month.

2.2 Location

The NSJWCD is situated east and north of the City of Lodi in San Joaquin County in California. The Mokelumne River passes through the NSJWCD service area. NSJWCD overlies the Eastern San Joaquin Groundwater Sub-basin as defined in California Department of Water Resources (DWR) Bulletin 118.

A Location Map and District Boundary Map are provided as **Figure 2-1**.

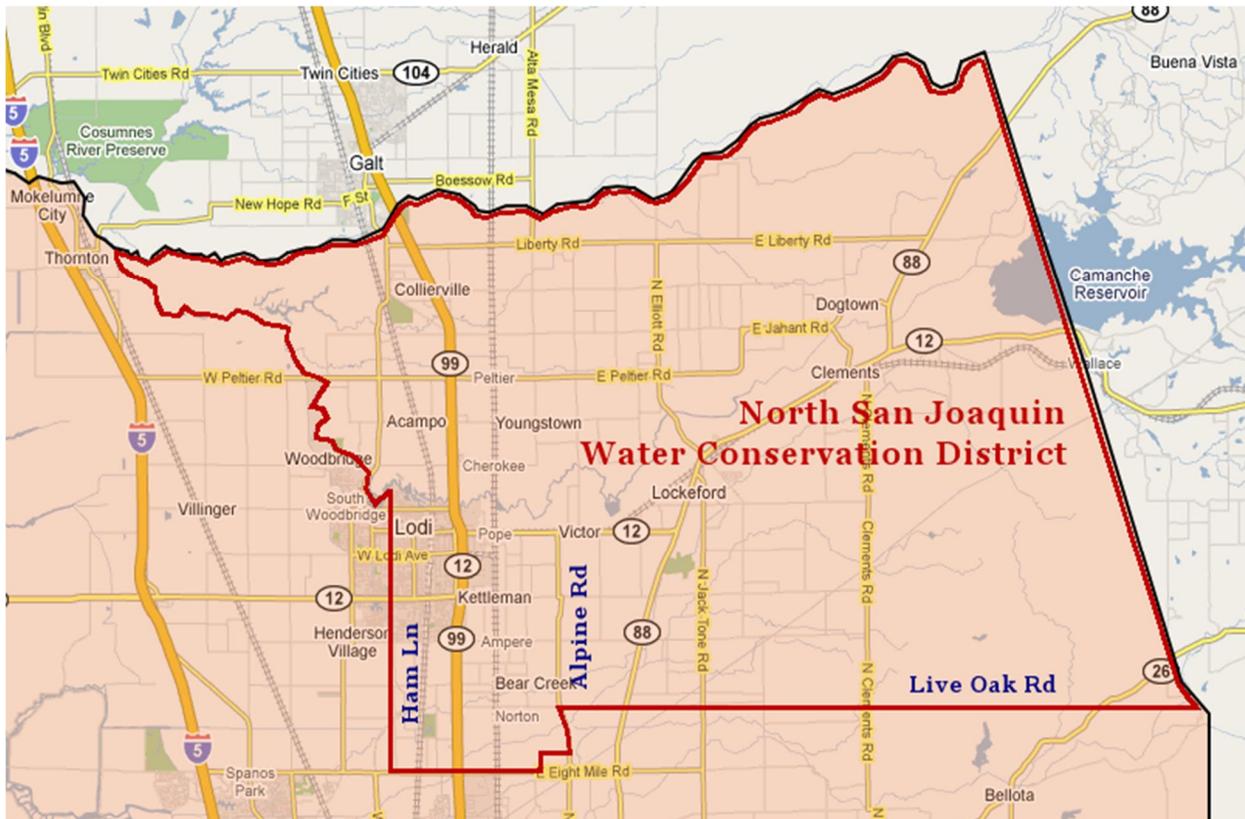


Figure 2-1 Location and District Boundary Map

2.3 History and Water Rights

The SWRCB issued Permit 10477 to NSJWCD in 1956 in Water Rights Decision 858 (D-858). Permit 10477 provides for diversion and use of 20,000 acre-feet of water per year from the Mokelumne River, in years when water is available under NSJWCD's priority of right.

Other water right holders for Mokelumne River water include Woodbridge Irrigation District, Amador County, Calaveras County, East Bay Municipal Utility District (EBMUD), and riparian and pre-1914 appropriative rights along the river. Most of these rights are senior to Permit 10477. As a result, NSJWCD receives water under its permit in only normal to wet years (about 55% of years). The most recent modeling of the water availability for Permit 10477, based on the last 80 years of hydrology, is attached hereto as **Appendix K**.

NSJWCD diversion and use of water under Permit 10477 peaked in 1973 with 9,488 AFA of diversions. Of that 9,488 AF, 8,725 AF were diverted through the South System and 763 AF were diverted through the North System. However, the lack of available water during the drought of the late 1980's and early 1990's, combined with widespread conversion to drip irrigation and the increasing cost of operating the older NSJWCD facilities, caused landowners along the North and South Systems to stop using the NSJWCD's surface water for irrigation. In recent years, diversions under Permit 10477 have been limited to about 3,000 to 5,000 AF per year off the

South System, when water is available. (See NSJCWD Monthly and Annual Diversions in Acre Feet, **Appendix J**).

2.4 Recent NSJWCD Activity and Projects

Permit 10477, like all water right permits, contains time limits to put the full amount of the permit to beneficial use. If a permit holder does not put the full amount to use in the provided time, the state can limit the amount of water that can be diverted in the future to just the amounts that have been diverted in the past. In light of the historic use of water under Permit 10477, NSJWCD filed a petition for an extension of time to put the full 20,000 AF of water available under Permit 10477 to use. In 2006, the SWRCB issued an order denying NSJWCD's petition for an extension of time to put the full 20,000 AF of water under Permit 10477 to beneficial use due to the lack of progress in NSJWCD in upgrading facilities and encouraging the use of surface water. NSJWCD and other stakeholders in San Joaquin County successfully challenged this decision and were able to convince the SWRCB to reconsider the order and give NSJWCD more time to put the water to beneficial use. (Water Right Order 2008-0016.)

In 2014 the SWRCB officially granted NSJWCD's petition for extension of time and issued an Amended Permit 10477 which requires that NSJWCD show substantial progress in putting water to use by 2025 and fully utilize the water right by 2040. (See Amended Permit 10477, **Appendix I**.) Given this history and the timeline set by the SWRCB, it is very important that NSJWCD move forward with the SSGIP.

As part of the process to extend the time to use water under Permit 10477, NSJWCD had to resolve protests that other parties had lodged at the SWRCB regarding the NSJWCD water right. East Bay Municipal Utility District (EBMUD) also had a petition for extension of time for its Camanche water right pending at the same time. EBMUD, NSJWCD, San Joaquin County and other county water interests entered into a Protest Dismissal Agreement (PDA) to resolve their respective protests in 2014. Under the terms of the PDA, EBMUD provided \$1.75 million in funding to NSJWCD for improvements to the NSJWCD South System.

As part of the PDA, EBMUD also committed to providing additional water to NSJWCD above and beyond the water available under Permit 10477 if the parties are able to establish a groundwater banking program in NSJWCD. The additional water that could be available to NSJWCD includes 3,000 to 6,000 AFA in years when water is normally not available under Permit 10477 (dry years) and up to 8,000 AFA in years when water is available under Permit 10477 (wet years). However, NSJWCD must have a groundwater banking program in place to receive this additional water. NSJWCD, EBMUD and San Joaquin County have been working on a pilot level groundwater banking program involving 1,000 AF of EBMUD water to start this process. This is called the DREAM Project. The project agreements and some permits have been obtained for the DREAM Project, but it has not started yet. The parties expect to start operating the DREAM Project in 2018.

During the last ten years NSJWCD has also been working diligently on other projects to put the water under Permit 10477 to beneficial use. These include the Cal Fed project, the Tracy Lake Groundwater Recharge Project and the City of Lodi transfer.

In 2004 the District received grant funding for the Cal-Fed pump station and groundwater recharge project. This project included installation of a new 15 cfs pump station on the north side of the Mokelumne River and related pipeline infrastructure to divert river water onto nearby bermed

fields used as groundwater recharge ponds. The project was operated in 2009, 2010, and 2011. In Fall of 2017, NSJWCD resumed operation of this system for a pilot groundwater recharge project on a 23-acre vineyard. NSJWCD is investigating funding sources to expand the groundwater recharge options using the Cal Fed diversion site, including potentially forming an improvement district on the north side of the Mokelumne River to enable landowners to fund groundwater recharge efforts that benefit their properties.

In 2011, NSJWCD was awarded a federal WaterSmart grant for the Tracy Lake Groundwater Recharge Project. This project was completed in fall of 2015 at a cost of approximately \$2.3 million and involved construction of a new 25 cfs pump station on the north side of the Mokelumne River downstream of the Woodbridge Irrigation District diversion dam. The project involves pumping river water available under Permit 10477 into a natural lake (South Tracy Lake). Some of the water that is pumped into the lake recharges the groundwater basin through percolation, or direct groundwater recharge. Most of the water that is pumped into the lake will be diverted out of the lake by adjacent landowners farming 1,310 acres of irrigated vineyards. By using the river water for irrigation, these 1,310 acres of vineyards will stop pumping a like amount of groundwater, accomplishing in-lieu groundwater recharge. The WaterSmart grant covered \$300,000 of the project cost and the balance was funded through capital cost assessments on the 1,310 acres of lands that will receive irrigation water from the project.

In 2014 NSJWCD negotiated a transfer agreement with the City of Lodi to enable the City to purchase up to 1,000 AF of water available under Permit 10477. The purchased water is diverted at Lodi Lake and treated at the City's water treatment plant for delivery to City residents and businesses in-lieu of the City having to pump groundwater to meet demand, accomplishing in-lieu groundwater recharge. About half of the City of Lodi is located within NSJWCD's boundaries. The transfer agreement is for five years and ends in 2019. The agreement can be renewed with both parties' agreement. In 2017 NSJWCD delivered 400 acre-feet of water to the City of Lodi pursuant to this agreement and generated more than \$30,000 in revenue that is helping to pay for the costs of pursuing the SSGIP.

During the last ten years NSJWCD has also analyzed the ability to rehabilitate the North and South distribution systems. Limited funds have prevented the District from moving forward with projects on these two systems to date. The \$1.75 million in PDA settlement money provided by EBMUD was a start to securing funding for the South System, but was not enough to complete a project. In 2016 two grant opportunities that seemed perfect for the South System arose and the NSJWCD Board decided to invest in the engineering studies necessary to apply for the grants.

In 2017, NSJWCD was awarded a \$1 million federal WaterSmart grant from the U.S. Bureau of Reclamation and a \$3 million Proposition 1 Agricultural Water Use Efficiency grant from California Department of Water Resources. Both of these grants provide funding for improving the NSJWCD South System pipeline so that it can deliver automated, pressurized surface water to improve water use and energy efficiency.

With the \$1.75 million in PDA funding and the \$4 million in state and federal grants, NSJWCD has \$5.75 million available for the SSGIP. The purpose of this Engineer's Report is to describe the additional funding needed to construct the SSGIP and propose a special benefit assessment on benefitted lands to collect those funds so that the project can proceed.

SECTION TWO

While the South System is NSJWCD's current focus, the NSJWCD board is continuing to investigate improvements to the North System and maximizing the use of the Cal Fed system to fully utilize Permit 10477 and accomplish groundwater recharge throughout NSJWCD.

Table 2-1 below summarizes current estimates of how NSJWCD plans to utilize the water under Permit 10477 and the additional water available to NSJWCD from EBMUD under the PDA. Modeling of water availability for Permit 10477 over the last 80 years of hydrology shows that, when water is available to NSJWCD under Permit 10477, the full 20,000 AFA is available except in rare circumstances. (See Excerpt of Appendix L from EBMUD's 2003 EIR Evaluating its Petition for Extension of Time, attached hereto as **Appendix K**). Permit 10477 requires that 5% of the water available under the right be used for fish flows. For planning purposes, NSJWCD is assuming 19,000 AFA is available under Permit 10477 in normal to wet years, plus up to 8,000 AFA of additional water from EBMUD under the PDA, for a total of 27,000 AFA. The District's agreement with the Tracy Lake landowners ensures that the first 3,000 AFA of water available under Permit 10477 is delivered to the District's existing North and South Systems, and that up to 4,000 AFA of water can be delivered to Tracy Lake, with the balance allocated by the District between various demands.

Table 2-1: Estimated Allocation of Water Use in NSJWCD Between Diversion Systems

Diversion System	Current Use (AFA)	Potential Use(AFA)	Current Source Options
North System	0	5,000+	Permit 10477
Cal-Fed	1,000	1,000+	Permit 10477
South System	3,000	10,000+	Permit 10477 and PDA water
Tracy Lake	100	4,000+	Permit 10477
City of Lodi	400	1,000	Permit 10477
TOTALS	4,500	21,000+	

SECTION TWO

2.5 NSJWCD's Water Delivery Facilities

NSJWCD has four pumping stations on the Mokelumne River: (1) The North System, located off Tretheway Road on the north side of the river (Point of Diversion 2); (2) the South System, located off Tretheway Road on the south side of the river (Point of Diversion 3); (3) the Cal-Fed/Woodbridge System, located off Woodbridge Road on the North Side of the river (Point of Diversion 4); and (4) the Tracy Lake Groundwater Recharge Project (Point of Diversion 6), located on the north side of the river, downstream of the Woodbridge Irrigation District dam, which allows for diversions from Lodi Lake to the City of Lodi, is also an approved point of diversion for NSJWCD (POD#5). Because EBMUD stores NSJWCD's permit 10477 water in Camanche Reservoir seasonally, Camanche Reservoir is denoted as POD#1. (See Figure 2-2.)

The proposed SSGIP involves the South System pump station (Point of Diversion 3) and related distribution system.

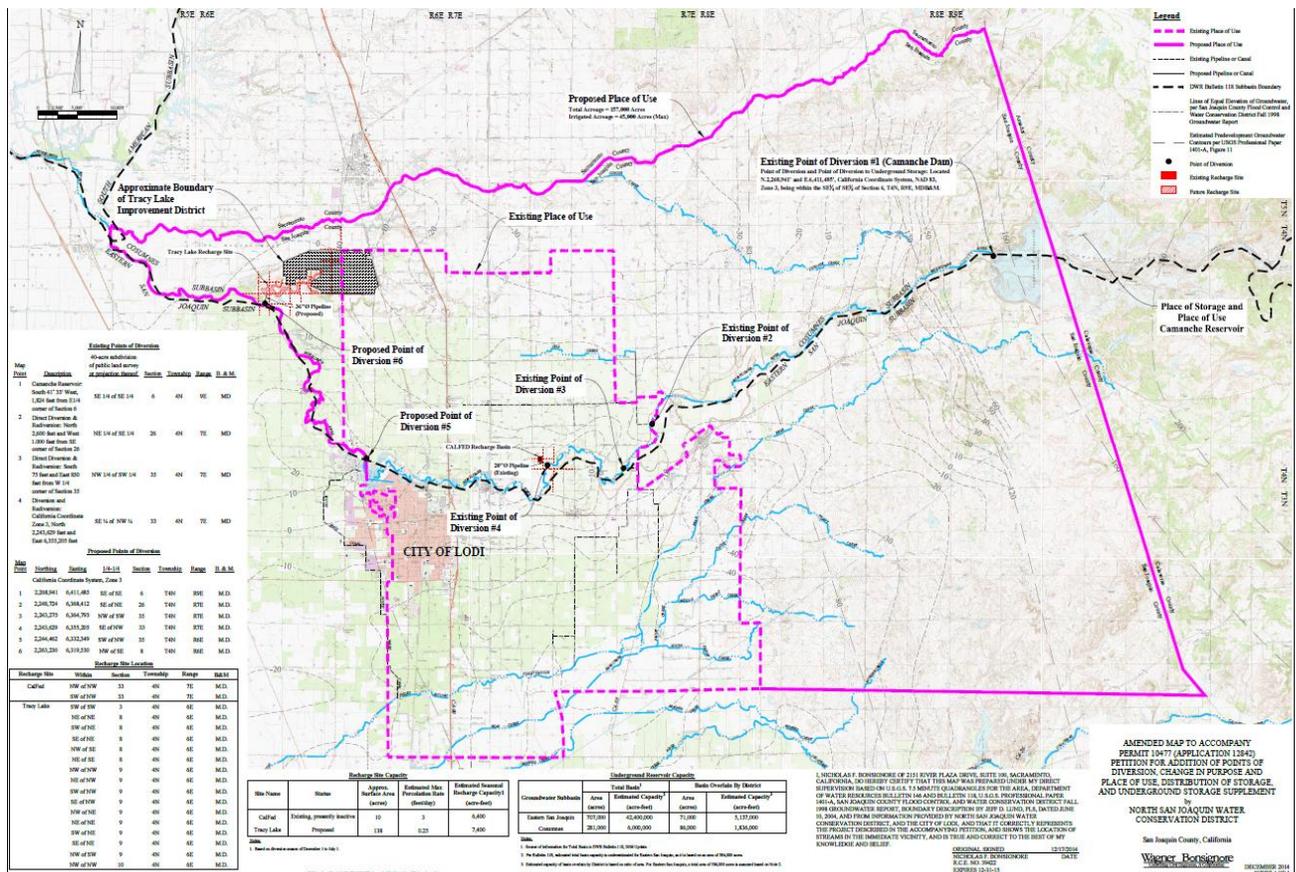


Figure 2-2 Map of NSJWCD's Water Delivery Facilities

2.5.1 Groundwater

Groundwater is found in the aquifer underlying NSJWCD. Groundwater management within NSJWCD is rooted in the conjunctive use of surface water and groundwater resources, since water supplies from these two sources are integrated to accomplish optimum utilization of each supply. NSJWCD landowners historically conjunctively used surface water supplies from the Mokelumne River with groundwater after the completion of NSJWCD's irrigation distribution system facilities in the 1960's. However, the use of surface water steadily declined as the distribution system aged and landowners converted to pressurized irrigation methods because it became increasingly expensive to operate the district's pumps and they could only provide non-pressurized water. Today, the water source for almost all irrigation of NSJWCD lands south of the Mokelumne River is groundwater.

San Joaquin County has been measuring groundwater levels at various locations within NSJWCD at least twice a year for several decades. (See **Figure 2-3**) There has been a steady decline in groundwater elevations throughout the District since NSJWCD and San Joaquin County first began recording groundwater levels. The trend towards declining groundwater elevations within NSJWCD has coincided with decreased use of surface water. In recent years, water use under permit 10477 has been limited to approximately 3,000 to 5,000 acre-feet per year. When landowners utilized surface water in the district, groundwater levels were relatively stable. Since the decline in use of surface water, groundwater levels have steadily declined at a rate of about one foot per year.

The NSJWCD overlies the Eastern San Joaquin Groundwater Subbasin (5-22.01, Bulletin 118, DWR, 2006). Groundwater pumping in the basin has long exceeded natural recharge, leading to sustained groundwater overdraft. Groundwater extractions in the basin first began exceeding annual recharge in the early 1900s; however, the State did not formally recognize the problem until 1982 when the basin was first declared as "critically overdrafted."

A number of studies have been completed over the years which estimate that annual extractions within the total Eastern San Joaquin Groundwater subbasin exceed annual recharge by anywhere from 70,000 to 200,000 acre-feet per year. The 2004 Groundwater Management Plan for the subbasin estimated annual overdraft for the subbasin at 107,000 acre-feet per year. NSJWCD's 150,000-acre jurisdictional area accounts for about 20% of the total acreage in the subbasin. About 60,000 acres of the total 150,000 acres in NSJWCD are irrigated agriculture. In 2009, an engineer's report prepared for NSJWCD estimated that current overdraft within district boundaries was about 50,000 AFA. More recent studies suggest that this amount is overstated and that annual overdraft within NSJWCD is no more than 20% of the total subbasin overdraft, or no more than 22,000 acre-feet per year.

NSJWCD is currently working with other agencies in the subbasin to closely study the overdraft issue. NSJWCD is optimistic that full use of the water available under Permit 10477 as well as water available from EBMUD under the PDA will resolve more than half of the total overdraft problem in NSJWCD.

A primary goal of NSJWCD is to maximize use of surface water available under its water right permit in order to alleviate groundwater overdraft. This goal is of particular importance in light of the SGMA Act of 2014. SGMA is new legislation which requires that all groundwater sources be actively managed to achieve sustainability goals. Local agencies, including NSJWCD, have specific timelines to complete plans to achieve sustainability. If they fail to meet the required

statutory deadlines, the state can intervene in the basin to impose regulation. If overdraft continues in NSJWCD, the risk of future pumping restrictions and/or loss of local control of the basin increases. By delivering surface water to meet existing irrigation demand, NSJWCD can reduce groundwater pumping and help the subbasin achieve its sustainability goals, reducing the likelihood of future pumping restrictions and maintaining local control of the basin.

2.5.1 Hydrogeology

NSJWCD is within the Eastern San Joaquin County Groundwater Subbasin, which is defined and described in the California Department of Water Resources (DWR) Bulletin 118 at: <http://www.water.ca.gov/groundwater/bulletin118/basindescriptions/5-22.01.pdf>,

The following stratigraphic description of the water-bearing units in the Eastern San Joaquin County Groundwater Subbasin is from DWR Bulletin 146 (1967, pp. 12-35). The water-bearing units consist of a thick sequence of continental deposits of Quaternary and Tertiary age. The generalized sequence of water-bearing sediments is shown on **Table 2-2** below.

Table 2-2 Generalized Stratigraphy of Fresh Water-Bearing Formation in Eastern San Joaquin County

Geologic Age		Stratigraphic Unit
Quaternary	Holocene	Stream channel deposits
	Holocene to Pleistocene	Victor formation
-----	Pleistocene to Pliocene	Laguna formation
--Tertiary	Pliocene to Miocene	Mehrten formation
	Miocene	Valley Springs formation

Holocene age stream channel deposits are found as thin bands along major stream courses and consist of unconsolidated gravel and coarse sand. These deposits have high permeability and provide for significant infiltration to lower formations.

The surficial material which covers the majority of the study area is the Holocene to Pleistocene age Victor formation. It consists of stream deposited unconsolidated gravel, sand, silt, and clay with a maximum thickness of 150 feet. The material grades from coarser sand and gravel in the east, to sand, silt, and clay in the center of the county. It is generally coarser grained and more permeable than underlying formations. Groundwater in this formation is unconfined over the entire county.

The Pleistocene to Pliocene age Laguna formation outcrops in the eastern part of the county and dips gently to the west. It consists of discontinuous lenses of unconsolidated to semi-consolidated sand and silt with lesser amounts of clay and gravel with a maximum thickness of 1,000 feet. This unit has moderate permeability and is generally unconfined with locally semi-confined conditions where "layers of clay are present.

The Pliocene to Miocene age Mehrten formation outcrops along the eastern border of the county, dipping to the west more steeply than overlying formations. It consists of stream-deposited, semi-consolidated to consolidated silt, sand, and gravel with a maximum thickness of 600 feet. In the central part of the county, the upper portion of this formation is finer-grained than the lower portion resulting in semi-confined to confined groundwater conditions. The unit changes to unconfined conditions in the eastern part of the county where the uppermost fine-grained material is less

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effective as a confining layer. West of Stockton, this formation contains saline groundwater. This formation contains the "black sand" reported by many well drillers in the area. The Mehrten formation has moderate to high permeability and is the oldest of the fresh groundwater aquifers in the study area.

This Miocene age unit contains marine-deposited ash, clay, sand, and gravel. It contains saline groundwater in most of the study area where the upper part of this formation is above the base of fresh groundwater.

The fresh groundwater is contained in the Mehrten formation and overlying younger units. Due to the saline nature of the groundwater in the Valley Springs formation over most of the study area, the base of the usable groundwater basin is considered to be the bottom of the Mehrten formation. The uppermost fine-grained portion of the Mehrten formation causes semi-confined to confined aquifer conditions over the central part of the county. The groundwater basin is, thus, considered a two-layer system with an upper unconfined aquifer consisting of the Victor and Laguna formations and a lower confined aquifer consisting of the Mehrten formation. In the eastern part of the study area, the older formations outcrop and the Mehrten formation becomes unconfined.¹

Water levels in selected wells in San Joaquin County are monitored by San Joaquin County Flood Control and Water Conservation District. Recent bi-annual Groundwater Reports prepared by that agency were reviewed during preparation of this report, including maps showing lines of equal elevation and depth to water in wells.

Hydrographs were also reviewed that plot available static water level readings taken in wells monitored by San Joaquin County Flood Control and Water Conservation District and other data contributors to the California Statewide Groundwater Elevation Monitoring (CASGEM) program: <http://www.water.ca.gov/groundwater/casgem/>.

Trends of long-term declining water levels in wells are apparent in most of the hydrographs, and can be seen in the following ten-year groundwater level change map.

¹ *Eastern San Joaquin County Groundwater Study, Final Report*, Brown and Caldwell Consulting Engineers, October 1985 (Paragraph 2, Page 3-10 through Paragraph 1, Page 3-12)

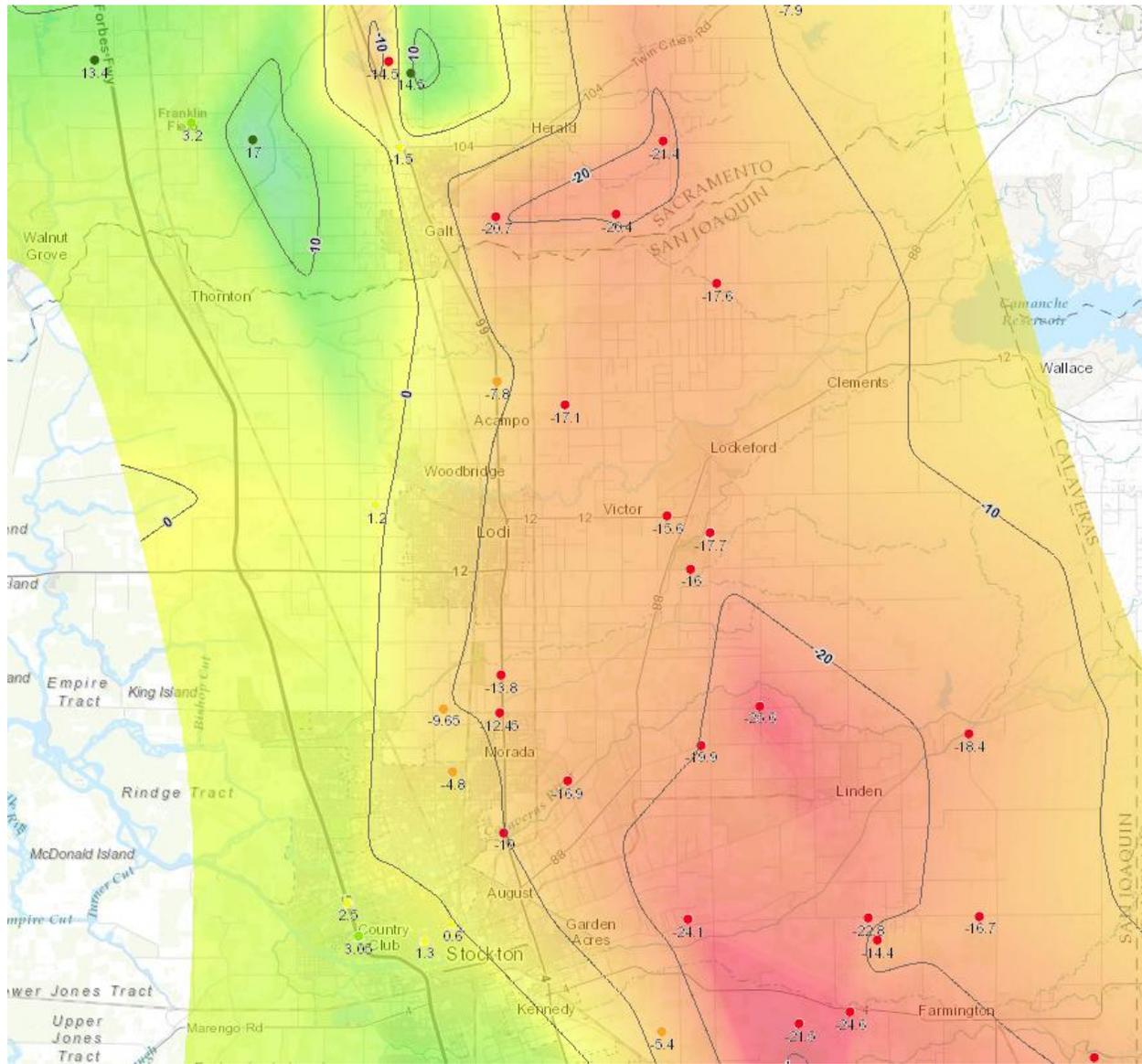


Figure 2-3 Spring 2007 - Spring 2017 Groundwater Level Change Map²

² Groundwater Information Center Interactive Map Application, DEPARTMENT OF WATER RESOURCES (last visited August 2, 2017) available at <https://gis.water.ca.gov/app/gicima/>.

2.6 Existing South System Facilities

In 1964 a group of landowners organized as the Mokelumne South Irrigation Association constructed an underground pipeline to carry irrigation water from the Mokelumne River south to Pixley and Bear Creeks. In 1966 the Association sold the pipeline and easements to NSJWCD, who then connected the pipeline to their new South System pump station on the Mokelumne River to begin surface water deliveries.

The South System currently consists of the original pump station on the Mokelumne River and the original approximately seven miles of cast-in-place concrete pipeline. The district added a modern fish screen to the pump station in the last twenty years. The pump station is equipped with 4 low-head, single-speed pumps that operate very inefficiently in comparison to modern pumps. Pumped water is conveyed into the concrete pipeline where it travels approximately seven miles south to Pixley Slough (the West Branch). The South System also includes an East Branch where water is conveyed through an open ditch that empties into Bear Creek. Farmers occasionally pump water from Pixley Slough and/or Bear Creek delivered through the South System.

On the West Branch, there are about 100 existing turn-outs tapping into the concrete pipeline. Very few of the existing turnouts are currently in use. The majority of lands along the pipeline that historically received deliveries of low head water for use in flood irrigation have converted to drip or sprinkler irrigation. Because drip or sprinkler irrigation require pressurized deliveries, many growers who formerly received low-head surface water converted their irrigation systems to be supplied with pressurized water from on-farm groundwater wells. In recent years, NSJWCD has only delivered between 3,000 and 5,000 AF of water to landowners on the South System due to the diminished demand for low-head surface water and the high cost of operating the old system.

2.7 NSJWCD Charges

NSJWCD administration and general operations are currently funded through a small percentage of County property taxes (approximately \$240,000). The property tax revenue is also used to fund the NSJWCD SGMA efforts, grant writing efforts and research and planning efforts. This report does not propose or involve any changes to the current property tax revenue source or how it is used.

NSJWCD previously created the Tracy Lake Improvement District No. 1, which imposes and collects a capital acreage assessment and an operations and maintenance acreage assessment on lands in the Tracy Lake Improvement District No. 1. These charges are used to pay for the Tracy Lake Groundwater Recharge Project. The Tracy Lake Improvement District assessments' and project are not impacted by this report or the proposed SSGIP and related assessment.

NSJWCD currently does not collect any assessments or charges from landowners to maintain or operate the South System other than charges for water when water is delivered to individual landowners who request it. The special benefit acreage assessment discussed in this report will only be used to fund the capital costs of the SSGIP and minor operational costs associated with direct recharge in the SSGIP; it will not be used to cover annual operation and maintenance (O&M) costs associated with water deliveries to individual landowners. Instead, O&M costs for water delivered to individual landowners will be recovered through water charges: specifically, a

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surface water delivery charge that will be applied to each acre-foot of surface water delivered to individual landowners who request delivery of water for irrigation.

In 2014, NSJWCD approved a surface water delivery charge, not to exceed \$101.40 per acre-foot (af) in 2018 with 3,000 af of total South System deliveries or \$78.82 per af with 6,000 af of total South System deliveries. This rate reflects the estimated high costs of operating the current inefficient system and delivering a small quantity of water.

In 2016 and 2017, NSJWCD set the surface water deliver charge at \$50.00 per acre-foot for the South System, below the maximum rate that is allowed. Once the SSGIP is constructed, NSJWCD intends to set the surface water delivery charge at a rate that enables the district to recover the O&M costs of operating the new system. Pipeline users would pay O&M including costs to lift from the river and pressurize it for delivery. Channel users would pay O&M including only costs to lift from the river for the portion they divert from channels. These O&M costs are expected to be relatively low (estimated to be less than \$50 per af for Pipeline users and less than \$20 per af for channel users) in comparison to the existing system as a result of the new variable speed pumps, updated electrical components, capability for automated operation (eliminating significant labor expense), and the larger quantity of water that will be delivered through the system each year that it operates. Because that surface water charge will be well within the maximum charge approved in the 2014 Proposition 218 proceeding for water charges, NSJWCD does not need to conduct a new proceeding for the water charges and those water charges are not addressed in this report.

This report addresses only the proposed acreage assessment to pay for the capital costs of the SSGIP.

3 PROPOSED PROJECT, SCHEDULE AND COSTS

3.1 South System Groundwater Improvement Project Components and Timeline

The NSJWCD South System Groundwater Improvement Project (SSGIP) consists of the following parts:

3.1.1 South Pump Station Replacement Project

The South Pump Station Replacement Project involves replacing the existing south system pump station with a new, modern pump station that can deliver pressurized and non-pressurized water efficiently. The pump station project has been fully designed and the district has received a construction proposal and cost from three qualified contractors to construct the pump station project in Summer/Fall 2018. The cost proposals ranged from \$2.7 million to \$3.6 million. The district is pursuing a contract with the lowest contract proposal for \$2.7 million, but including a \$500,000 contingency for conservative budgeting purposes.

The \$2.7 million construction contract will include a wet well and platform to accommodate up to four pumps, but will only include initial installation of a single 200 hp low head pump, capable of conversion to a 600 hp variable speed high head pump, in fall of 2018. Additional pumps will be added to accommodate system demands and pressure requirements as landowners hook-up and request delivery. The project budget includes an additional \$1.5 million for future pumps and related facilities.

3.1.2 Slipline/Replace, Pressurize, and Automate South System Pipeline

The existing cast in place concrete pipeline has several leaks, frozen internal valves, and is incapable of delivering pressurized water. However, the easement for the pipeline is a valuable asset of NSJWCD. NSJWCD has obtained an engineer's estimate at 30% design to slipline (or replace), pressurize, and automate deliveries from the existing pipeline. If landowners approve the proposed assessment, the next step will be to conduct a survey of the NSJWCD pipeline easement and finalize the plans for the new pipeline within the existing easement.

The current design proposes to slipline or replace the seven miles of the pipeline with HDPE pipe. Sliplining refers to the process of inserting PVC or HDPE pipe within a larger diameter pipe from access points located on the surface. Sliplining is typically much less costly than excavating the length of the pipeline, removing it, and installing a replacement. Sliplining also allows the district to utilize its existing easement. Once the pipeline has been sliplined, then it will be capable of maintaining the water pressure provided by the high-speed pumps on the redesigned South Pump Station.

In addition to receiving pressurized deliveries, each turnout on the pipeline will be operated remotely using a SCADA control system and a web-based portal for automated scheduling of deliveries to growers. Each turnout along the pipeline will be equipped with automated valves and meters wired to a Remote Telemetry Unit (RTU) which interfaces with the District's SCADA system. Once the system is operational, growers will access a District-maintained website, schedule times for irrigation, and, when the delivery is scheduled to occur, the turnout will automatically open and water will flow onto the property. Lastly, properties along the pipeline may be equipped with soil moisture sensors, weather stations, and data-loggers that will interface with

the SCADA system, allowing total water deliveries to be tailored to match soil moisture and weather conditions.

The cost estimate for the slip-lining, pressurization and automation of the pipeline is estimated at \$14 million, based on a 30% engineering design. See **Appendix B**. This cost does not include individual landowner turnouts. Landowners along the pipeline are responsible for the cost of their individual turnout facilities and meters. NSJWCD will assist landowners with design and specification for these facilities and with applying for available grant funding to pay for the turnout facilities. In 2016 NSJWCD mailed a newsletter to all landowners within 2000 feet of the pipeline, notifying them of a grant opportunity for on-farm facilities. Nineteen landowners applied for and were awarded grants from the California Department of Food and Agriculture for this purpose. NSJWCD is continuing to reach out to CDFA, USDA and NRCS to obtain information about additional grant opportunities for landowners.

3.1.2 Full Build-Out of South Pump Station and Regulation Facilities

The third part of the project is to construct any additional facilities that will be necessary to operate the South System at the maximum capacity allowed under NSJWCD's water right. Upon full build-out, the system will be capable of delivering between 10,000 to 12,000 acre-feet per year. However, operating at this capacity may require the installation of regulating basin facilities, additional variable speed pumps to be added to the pump station and improved facilities to get water into the open channel, Bear Creek and/or Pixley Slough. The estimated \$1.5 million cost of these facilities is to be raised through this benefit assessment proceeding.

3.1.3 Total Project Costs

The total estimated cost of these improvements is conservatively budgeted at \$18.75 million. NSJWCD currently has \$1.75 million in the EBMUD Settlement Fund and was awarded \$3 million in State SWEEP Grant funds and \$1 million in USBR WaterSmart Grant Funds for a total of \$5.75 million in outside funding for the project. This leaves a shortfall of \$13 million to complete the project. The detailed project budget is attached as **Appendix B**. If NSJWCD does not come up with the additional funds for this project, it will not be able to access the \$4 million in state and federal grants.

Table 3-1: SSGIP Cost and Funding Summary

Project Component	Timeline	Cost
South Pump Station Replacement Project	Design complete Bidding in progress Construct Summer/Fall 2018	\$3.25 mil
Slipline, Pressurize and Automate South System Pipeline	30% Design complete Finish Design early 2018 Bid/Construct late 2018	\$14 mil
Regulating Basin; Add additional pumps to pump station	2019-2020	\$1.5 mil
Subtotal:		\$18.75 mil
<i>Less EBMUD Settlement</i>		<i>-\$1.75 mil</i>
<i>Less WaterSmart Grant</i>		<i>-\$1 mil</i>
<i>Less SWEEP Grant</i>		<i>-\$3 mil</i>
Total		\$13 mil

**All amounts subject to change based on final detailed budget.*

4 BENEFIT DETERMINATION

4.1 General

Proposition 218 makes a distinction between general and special benefits provided by a project or service. A general benefit is defined as something that benefits the general public as a whole, such as libraries or ambulance service. A special benefit is defined as a particular benefit to specific and identifiable parcels of real property. The SSGIP will provide a special benefit to certain parcels within NSJWCD by improving the South System facilities, thereby improving delivery of surface water supplies in addition to improving the groundwater conditions and levels for irrigated lands in the SSGID. The particular benefits identified are for specific commercially irrigated properties and do not accrue to the public at large and are therefore not considered general benefits.

4.2 Determination of Lands to Assess

The first step in preparing this report was to identify the lands that will receive special benefits from the SSGIP, and therefore can properly be assessed to pay for the project. To start, we included all parcels located adjacent to the pipeline and channels that are part of the South System distribution system, and any additional parcels that landowners have informed the district will be connected to the pipeline to receive surface water. Next, we included all parcels completely within approximately two miles of the parcels that will be able to receive surface water from the channels or pipeline. We selected the two-mile distance based on our years of experience in other water districts with similar groundwater conditions. In these districts, we have observed, through measured groundwater levels, improved groundwater levels directly under lands that are used for direct and in-lieu groundwater recharge, and improved groundwater levels within two or more miles of the lands that are used for direct and in-lieu groundwater recharge. The outer boundary for the SSGID was drawn around all of these identified parcels south of the Mokelumne River (a hydraulic boundary), east of Lodi city limits, north of the NSJWCD boundary, and excluding a large area of commercial/industrial lands in the northeast, see **Figure 4-1** (MAP). The parcels that can be serviced from the pipeline are shaded purple, the parcels that can be serviced from the channels are shaded orange, and the irrigated parcels that are within two miles of the surface water user parcels are shaded in varying degrees of green.

Once the outer boundary was identified, parcels that are not currently proposed to be assessed were identified, including all non-irrigated parcels and all parcels of less than five acres that are not irrigated as part of a larger irrigated farming operation, golf course, or park. While some of these removed parcels will receive groundwater benefits from the project, even if they only rely on a domestic well, the NSJWCD board it was determined as a matter of policy that the cost of imposing and collecting an assessment on this large number of small parcels would exceed the revenue that could be collected from any such assessment. Specifically, the number of small parcels excluded exceeded the total number of parcels proposed for assessment, which would have more than doubled the administrative cost of imposing and collecting the annual assessment but only raised a few thousand dollars per year. Unirrigated parcels that are five acres or larger and capable of irrigation in the future were included in the SSGID, but their assessment was set at zero, see **Figure 4-1**. If these parcels become irrigated in the future, NSJWCD intends to adjust the assessment to the appropriate class.

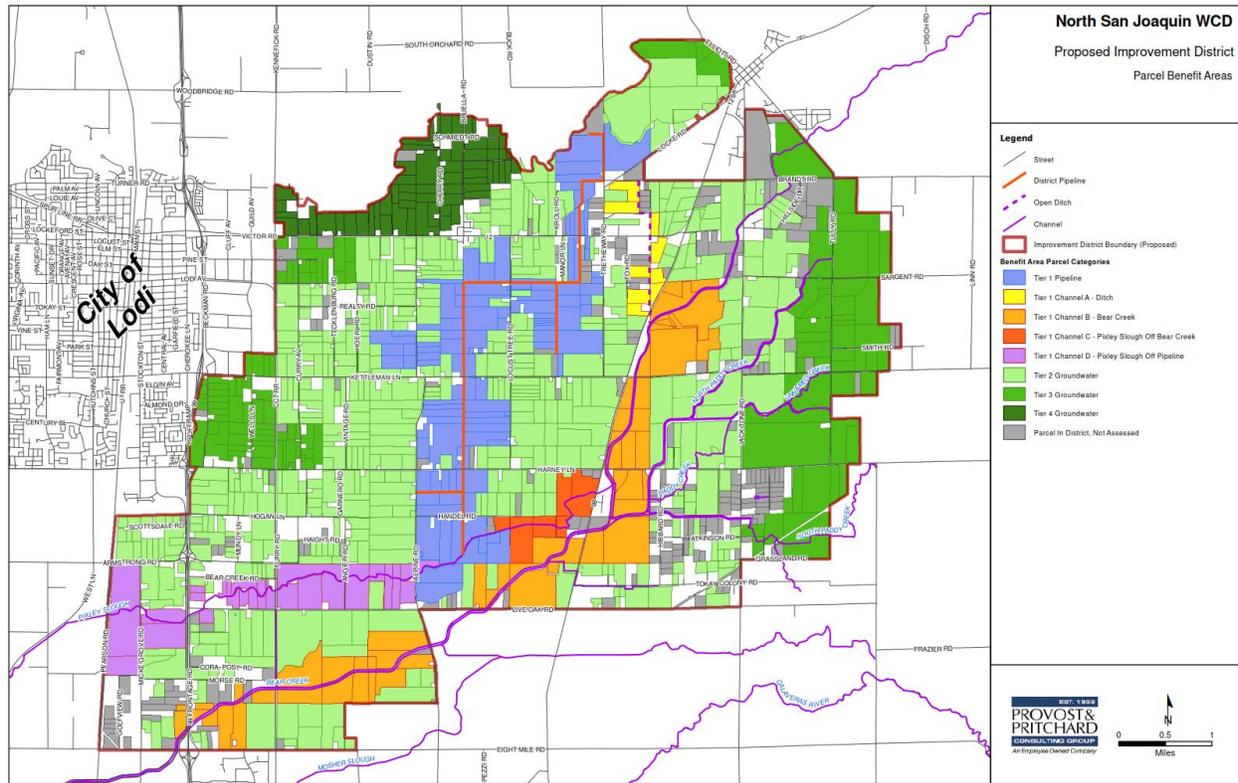


Figure 4-1 Proposed Improvement District

The following table summarizes the acreage totals for the proposed improvement district:

Table 4-1: SSGID Acreage Breakdown

Areas (Acres)	Assessment Class
22,060	Improvement District Total
2,085	Parcels Not Assessed
2,390	Tier 1 Pipeline Users
183	Tier 1 Channel Users - A
2,047	Tier 1 Channel Users - B
267	Tier 1 Channel Users - C
969	Tier 1 Channel Users - D
9,976	Groundwater Benefit Only Tier 2
3,211	Groundwater Benefit Only Tier 3
933	Groundwater Benefit Only Tier 4

4.3 Determination of Benefits

The SSGIP will provide the following special benefits to lands within the SSGID: (1) improved entitlement to Mokelumne River water supplies Groundwater Benefits, (2) Pressurized Water Benefits, and (3) Non-pressurized Water Benefits. Many references were consulted during the preparation of this Engineers Report. Many assumptions requiring engineering judgement, based on many years of experience, were made in determining Benefits. A detailed description of assumptions, including many described generally below is provided in **Appendix D**.

4.3.1 Groundwater Benefit (Applies to all lands in SSGID)

Groundwater Benefits occur for all irrigated lands within the SSGID because the project will reduce groundwater pumping in the SSGID project area, resulting in higher groundwater levels in the SSGID project area than would exist without the project. Due to the higher groundwater levels with the projects, there will be reduced lift from well water level to the surface on all post-Project groundwater use, compared to the no-project scenario, See **Appendix L**. This reduces energy costs for pumping groundwater as well as periodic pump and well deepening costs.

To define the “with Project” and “without Project” scenarios, this report conservatively assumed:

- Average irrigation demand of 2.5 af/ac/yr for irrigated lands (based on a review of crop and land use maps, well pumping records provided by some growers, and published Cal Poly Irrigation Training and Research Center crop water use estimates for the area).
- All irrigation demand is met from pumped groundwater without the Project.
- With the Project, up to 10,000 af of annual irrigation demand along the Pipeline and Channel areas is met with surface water in 50% of years, for an average of 5,000 af per year. All other irrigation demand is met with pumped groundwater.

The Groundwater Lift Reduction (feet of difference increase per year, see Illustration in **Appendix K**) is a projected future difference between well water levels with Project vs without Project. The amount of the Groundwater Lift Reduction is a calculation that uses the average surface water delivery with the Project divided by the Improvement District area, and further divided by the groundwater aquifer's specific yield. Generally, this factor represents how many feet of change observed in well water levels that correspond to one foot of water removed or added to the aquifer at the surface with no migration loss. A specific yield of 0.20 or 20% means that the addition of (or the reduced pumping of) one foot of groundwater over the Assessment District's area will result in an increase in groundwater levels by five feet.

The California Department of Water Resources Bulletin 118 has estimated that the specific yield of the Eastern San Joaquin Subbasin is between 0.10 and 0.17. A review of scientific literature for highly permeable aquifer materials such as those penetrated by wells in the Improvement District boundary suggests that the Specific Yield may be closer to 0.20. Thus, to be conservative in this report uses 0.20.

Calculations of maximum Groundwater Lift Reduction use estimated average future South System surface water delivery (in-lieu recharge) volumes (ac-ft/yr), less migration losses (assumed to be 5%) divided by Improvement District area (acres) and further divides by the aquifer's specific yield (approximately 0.20 or 20%).

To estimate energy cost savings as a result of the reduced groundwater lift benefit, this report uses PG&E \$/ac-ft/ft of lift (estimated to be \$0.237/kWh for electric wells, with an assumed average 60% well pump efficiency). Typical PG&E costs for wells in the SSGID were obtained from a Stantec energy efficiency study conducted specifically for the South System Improvement Project

To estimate the benefits associated with the reduced pump and well deepening costs attributable to the SSGIP, this report analyzed post-Project differences in how often pumps and wells will be deepened multiplied by cost per deepening event. Annualized costs, associated with pump and well deepening, were estimated based on interviews with landowners and well/pump contractors in the area.

The sample Groundwater Benefit calculation for each group of lands proposed for assessment is described in detail in **Appendix E**.

The groundwater benefits have been adjusted for parcels in different groups based on their distance from the areas that will be using surface water. Parcels along the pipeline and channels are assumed to have the maximum, or "Tier 1", groundwater benefits, calculated as described above. Parcels within one mile away from surface water use areas are assumed to have 60% of the maximum benefit, or "Tier 2". Parcels between one and two miles away are assumed to have 30% of this benefit, or "Tier 3". Parcels that are located in areas with a persistently high groundwater contour on County well water elevation maps, and very little decline in well water levels (per available hydrographs) are assumed to have an even lower benefit, or "Tier 4". Tier 4 Groundwater Benefits also are assumed to have 30% of the maximum benefit and are based on having no well/pump deepening benefit and 20-foot reduction in Groundwater Lift Benefit versus other Tiers. The 100%, 60% and 30% benefit levels for groundwater benefits were selected based on observations and experience with groundwater recharge projects in other areas of the Central Valley with similar geographic, aquifer, and well characteristics.

It is important to note that the use of surface water by the parcels along the pipeline and channels will reduce overall groundwater use in the district and in the subbasin. Thus, there is an argument that all parcels in the district will benefit from this project because the project will help the basin achieve the SGMA sustainability goal. However, it would be speculative to try to quantify a special benefit related to SGMA at this point in time for purposes of this special benefit assessment because the Groundwater Sustainability Plan (GSP) has yet to be developed. To be conservative, we attributed groundwater benefits to only those parcels within about two miles of the parcels that are using groundwater. Except as noted above, the parcels within two miles are expected to experience quantifiable improved groundwater levels, reducing pumping costs, and reduced costs of well/pump deepening and replacement. These specific groundwater benefits are discussed and quantified in more detail in **Appendix E**.

4.3.2 Pressurized Water Benefit (Applies to all lands in SSGID that can be Served by Pipeline)

Pressurized Water Benefits are based on reduced lift to the ground surface for River water versus from groundwater and the different power cost and efficiencies of groundwater wells and the new South Pump Station. All irrigated lands that can take water from the pipeline will experience pressurized water benefits.

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This report assumes a “River Lift” of approximately 15 feet versus an average “Groundwater Lift” of 96 feet. See **Appendix M**. The groundwater elevation shown in Appendix M is from “Groundwater Elevation Map covering NSJWCD Spring 2017”. Older water levels are from Sorensen and Keller Engineering studies for NSJWCD.

This report assumed increased pump efficiency and reduced pumping costs on River Lift and micro-irrigation pressurization pumping on every acre-foot of surface water (approx. 55 psi, or 127 feet of head, totaling about 247 feet of head), as follows:

Table 4-2: Energy Factors

Energy Factors	
\$0.237 /kWh Electric for Wells	\$0.21 /kWh River Pumps
60% Well Pump Efficiency	80% River Pump Effic.

Appendix F contains a detailed explanation of the estimated pressurized water benefits from the SSGIP.

4.3.3 Non-Pressurized Water Benefit (Applies to all lands in SSGID to be served by Open Ditch, Pixley Slough or Bear Creek)

The Non-Pressurized Water Benefit accounts for the reduced lift for each acre-foot of surface water used, adjusting for channel losses, and the energy savings due to the more efficient use of the new River pump. All irrigated lands that can receive surface water from the open channel, Bear Creek or Pixley Slough will experience Non-Pressurized Water Benefits. Notably, these benefits account for the additional lift that channel users must make to use surface water from the channels, thus the non-pressurized water benefit is not as large as the pressurized water benefit.

As previously mentioned, there are also two additional unique aspects of diversion of surface water from the open channels that must be accounted for. First, water pumped at the River for delivery via open channels may receive pressure (approx. 55 psi) that is not used by these lands because the pressure is lost when the water enters the open channels. Secondly, the cost of lifting water from the river that is lost in channels before delivery to channel users must be accounted for. Therefore, the benefits for all assessed lands have been reduced so that channel users won't bear those costs alone.

Second, while lands along the pipeline need only construct a turn-out off the pipeline to access surface water, lands along the channels must construct, maintain and operate much larger facilities in the channels in order to divert and use the surface water that the SSGID puts into the channels. Benefits for this category were reduced to account for the additional costs that these lands must incur to construct, maintain, and operate diversion facilities in the channels to take surface water, and re-pressurize the water. Based on field observations and landowner feedback, this issue was further refined to account for the different size and characteristics of the channels in the SSGID area so that the adjustment was different for lands along the open channel (Category A), along Bear Creek (Category B) and along Pixley Slough. Some Pixley Slough users will receive water via the open channel, part of Bear Creek, and the upper part of Pixley Slough. These users are called “Pixley Slough off Bear Creek” (Category C) users. Some Pixley Slough

users will receive water via the South System pipeline and the lower portion of Pixley Slough. These users are called “Pixley Slough off Pipeline” (Category D) users.

A detailed explanation of the Non-Pressurized water benefits is provided in **Appendix G**. A detailed explanation of the Channel User Reduction of Benefits Calculations is Provided in **Appendix H**.

4.4 Rate Proportionality

Proposition 218 specifies that assessments may not “exceed the reasonable cost of the proportional special benefit conferred on that parcel”.

Based on the above-described analysis and calculation of the special benefits for each group of parcels benefitted by the SSGIP, this report establishes rate proportionality as follows.

First, total benefits for each category of benefitted parcel are calculated by multiplying per acre benefits times area of land in each category. Second, all of the computed benefits are added together and total of benefits for all categories of parcel is determined. Third, the total assessment amount needed is divided by total of benefits for all categories of benefitted parcels to calculate a “Conversion Factor” that can be applied to the total base annual payment that the district needs to make on the public financing (\$860,000) to get the portion of the annual payment that should proportionately be paid by each category of benefitted parcels. Fourth, the proportional payment obligation for each category of parcels is calculated by multiplying per acre benefits in that category by the Conversion Factor to get the proposed base acreage assessment. Fifth, the proposed base acreage assessment is multiplied by 125% to compute the maximum acreage assessment.

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This process is reflected in the following tables:

Table 4-3: Steps 1 and 2 of Rate Proportionality Calculation

Assessment Categories	Total Benefits Per Acre	Acres	Benefits per yr
Tier 1 Pipeline	\$97.00	2,390	\$231,858.39
Tier 1 Channel - A	\$40.08	183	\$7,351.49
Tier 1 Channel - B	\$42.77	2,047	\$87,526.81
Tier 1 Channel - C	\$41.18	267	\$10,998.45
Tier 1 Channel - D	\$43.82	969	\$42,446.81
Groundwater Tier 2	\$39.79	9,976	\$396,984.45
Groundwater Tier 3	\$19.90	3211	\$63,879.24
Groundwater Tier 4	\$4.00	933	\$3,728.62

Table 4-4: Step 3 of Rate Proportionality Calculation

Conversion Factor Calculation	
Base Annual Payment	\$860,000
Total Benefits for all Categories	\$844,774.27
Conversion Factor	1.02 (\$860,000/\$844,774.27)

Table 4-5: Steps 4 and 5 of Rate Proportionality Calculation

Assessment Categories	Total Benefits Per Acre	Conversion Factor	Assessment Amount/Acre	Maximum Assessment
Tier 1 Pipeline	\$97.00	1.02	\$98.75	\$123.44
Tier 1 Channel - A	\$40.08	1.02	\$40.81	\$51.01
Tier 1 Channel - B	\$42.77	1.02	\$43.54	\$54.42
Tier 1 Channel - C	\$41.18	1.02	\$41.92	\$52.40
Tier 1 Channel - D	\$43.82	1.02	\$44.61	\$55.77
Groundwater Tier 2	\$39.79	1.02	\$40.51	\$50.64
Groundwater Tier 3	\$19.90	1.02	\$20.26	\$25.32
Groundwater Tier 4	\$4.00	1.02	\$4.07	\$5.09

This process shows that the anticipated benefits from the proposed project, based on the conservative assumptions described in this report, are over \$844,000 per year to the benefitted parcels.

As noted above, in order to obtain the best financing interest rate for the project, the district needs to have the authority to assess 125% of the amount required to make the annual financing payment and will need to assess at this maximum amount for the first year and then adjust the

SECTION FOUR

maximum downward with credits thereafter. Taking the proportional per acre assessments computed above, and accounting for this 125% financing requirement, **the maximum** assessments per benefitted parcel class would be:

Tier 1 Pipeline:	\$123.44/ac
Tier 1 Channel A	\$51.01/ac
Tier 1 Channel B	\$54.42/ac
Tier 1 Channel C	\$52.40/ac
Tier 1 Channel D	\$55.77/ac
Groundwater Tier 2:	\$50.64/ac
Groundwater Tier 3:	\$25.32/ac
Groundwater Tier 4:	\$5.09/ac

5 PROPOSED ASSESSMENT AMOUNT AND PROCESS

This section of the report addresses information required to be provided to record owners of property including the amount of assessment proposed to be imposed upon each parcel, the process for landowner input and the manner in which the assessment, if approved, will be levied.

As required by law, NSJWCD engaged a California-registered professional engineer to prepare this Engineer's Report, which identifies each parcel's special benefits and the proposed amount of the per-acre assessment for each parcel. All landowners within the proposed SSGID shall have the right to vote on the assessment through a mailed ballot.

Proposition 218 requires a 45-day mailed notice to the record owners of all lands impacted by the proposed assessment. The record owner is the owner of a parcel whose name and address appears on the last equalized secured property tax assessment roll. Notices and ballots will be mailed based on the updated 2017-2018 tax assessment roll. The district will then hold the required public hearing and tabulate the submitted ballots.

The NSJWCD Board of Directors cannot levy the assessments if the number of votes submitted in opposition to the assessment exceed those submitted in favor. Each landowner's ballot will specify the number of votes allocated to that landowner determined by the number of acres to be assessed multiplied by the dollar amount of the proposed per-acre assessment. For example, Landowner A owns a 20-acre parcel with a proposed assessment of \$40 per acre. Landowner B owns a 100-acre parcel with the same proposed \$40 per acre assessment. Landowner A will get a ballot with 80 votes (20 x \$40) and Landowner B will get a ballot with 400 votes (100 x \$40).

If a majority of the weighted votes from timely submitted ballots are cast in favor of the assessment, then the district will proceed with the financing for the project and levy the assessment on parcels starting with the November 2018 property tax bills, and described below.

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6 ASSESSMENT

If landowners approve the proposed assessments, the District will request the County of San Joaquin Assessor's Office to collect the assessments in two installments each year, as part of the county property tax bills. The district will provide the Assessor with an "Assessment Roll" by August of each year specifying the amount of the assessment to be levied on each parcel in the improvement district. A sample Assessment Roll is attached as **Appendix A**.

To prepare the Assessment Roll, the District uses the Assessor-provided tax roll and then adds a rate code for every parcel in the District in order to inform the Assessor of the assessment to include for each parcel on the tax bills.

The rate codes shown on the sample "Assessment Roll" attached to this report are:

1 = No assessment

2 = Tier 1 Pipeline (maximum of \$123.44/ac)

3= Tier 1 Channel - A (maximum of \$51.01/ac)

4= Tier 1 Channel - B (maximum of \$54.42/ac)

5= Tier 1 Channel - C (maximum of \$52.40/ac)

6= Tier 1 Channel - D (maximum of \$55.77/ac)

7= Groundwater Tier 2 (maximum of \$50.64/ac)

8= Groundwater Tier 3 (maximum of \$25.32/ac)

9 = Groundwater Tier 4 (maximum of \$5.09/ac)

The actual amount of the per acre assessment that will be imposed beginning in November 2018 would be only that amount required to meet the final financing requirement annual payment, not to exceed the maximums set forth above.

**Sample "Assessment Roll"
South System Improvement District**

APN	Acres	Owner	Assessment Category	Basic Rate Per Acre	Maximum Rate Per Acre	Basic Annual Assessment	Maximum Annual Assessment
01906025	161.10	NEVER BEND LLC	Tier 3 Groundwater	\$20.26	\$25.32	\$3,263.89	\$4,079.05
01906027	10.00	HOLDEN, EDWIN J JR & L	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
01906029	124.73	PESTANA, IRENE TR ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
04911101	8.21	VOLLBRECHT, ANNA MAY TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
04911102	9.71	MANNA, MATTHEW & MEGAN	Tier 3 Groundwater	\$20.26	\$25.32	\$196.72	\$245.86
04911103	10.00	MORIMOTO, JEAN TR ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$202.60	\$253.20
04911104	9.73	PERLEGOS, GEORGE ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$197.13	\$246.36
04911201	32.60	BARBERA, MELINDA S TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$1,320.63	\$1,650.86
04911203	37.00	MENDONCA, MANUEL & ROSE MARIE ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$1,498.87	\$1,873.68
04911304	6.00	GOMEZ, SALVADOR R & LUZ R	Tier 3 Groundwater	\$20.26	\$25.32	\$121.56	\$151.92
04911305	10.37	BOHNET, GARY C & RAYNA R	Tier 3 Groundwater	\$20.26	\$25.32	\$210.10	\$262.57
04911306	5.00	PRIMA, RICHARD C	Tier 3 Groundwater	\$20.26	\$25.32	\$101.30	\$126.60
04911307	10.46	VARGAS, KATHLEEN L TR	Tier 3 Groundwater	\$20.26	\$25.32	\$211.92	\$264.85
04911309	8.80	BOHNET, GARY C & RAYNA R	Tier 3 Groundwater	\$20.26	\$25.32	\$178.29	\$222.82
04911401	10.29	MAGDANZ, KENNETH G SR & NAOMI TR	Tier 2 Groundwater	\$40.51	\$50.64	\$416.85	\$521.09
04911405	10.30	REBHOLTZ, KATHLEEN E TR	Tier 2 Groundwater	\$40.51	\$50.64	\$417.25	\$521.59
04911406	10.29	PERLEGOS, JEFF & PANAGIOTA ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$416.85	\$521.09
04911408	8.93	MATHEWS, BROCK J & FRANSE	Tier 2 Groundwater	\$40.51	\$50.64	\$361.75	\$452.22
04911410	5.42	MAGDANZ, KENNETH G SR & NAOMI TR	Tier 2 Groundwater	\$40.51	\$50.64	\$219.56	\$274.47
04911412	8.66	HARMON, ROBERT S & FAYE A TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
04911501	9.79	FERRE, THOMAS & KAREN	Tier 2 Groundwater	\$40.51	\$50.64	\$396.59	\$495.77
04911503	5.00	MACHADO, MARIANNE E	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
04911516	5.06	DE MEO, MARY V TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
04911517	5.06	DUNCAN, RICHARD A & CONSTANCE J	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
04911602	5.40	MCCAULEY, THOMAS & GWENDOLYN	Tier 2 Groundwater	\$40.51	\$50.64	\$218.75	\$273.46
04911604	5.45	RAMSEY, STEVEN K & RHONDA R	Tier 2 Groundwater	\$40.51	\$50.64	\$220.78	\$275.99
04911619	5.24	SALVETTI, SERGIO & VALERIE TR	Tier 2 Groundwater	\$40.51	\$50.64	\$212.27	\$265.35
04911620	5.84	SPERRY, KEITH & BIANCA	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
04911625	5.38	GARCIA, RUBEN ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$217.94	\$272.44
04911705	5.00	ROBISON, JOHN G JR & KAREN	Tier 2 Groundwater	\$40.51	\$50.64	\$202.55	\$253.20
04911708	5.20	PERLEGOS, PETE C ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$210.65	\$263.33
04911709	5.87	BECHTHOLD, JANET RUTH	Tier 2 Groundwater	\$40.51	\$50.64	\$237.79	\$297.26
04911710	5.00	CASEY, CARROL A TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
04911711	5.40	PERLEGOS, PETE C ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$218.75	\$273.46
04911719	10.43	PERLEGOS, PETE C ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$422.52	\$528.18
04912003	5.07	AWHS LLC	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
04912004	14.70	SAN JOAQUIN VALLEY LAND CO III LLC	Tier 3 Groundwater	\$20.26	\$25.32	\$297.82	\$372.20
04912007	27.64	BIDDICK FAMILY VINEYARDS LLC	Tier 3 Groundwater	\$20.26	\$25.32	\$559.99	\$699.84
04912008	18.23	METTLER, BURNES R & SALLY A TR	Tier 3 Groundwater	\$20.26	\$25.32	\$369.34	\$461.58
04912009	46.31	COOK, JIMMIE TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,876.02	\$2,345.14
04912010	18.99	BAUM, NANCY I TR	Tier 2 Groundwater	\$40.51	\$50.64	\$769.28	\$961.65
04912013	23.53	MILLER, ELLIS D TR	Tier 2 Groundwater	\$40.51	\$50.64	\$953.20	\$1,191.56
04912015	8.47	METTLER, LAWRENCE & CHARLENE TR	Tier 2 Groundwater	\$40.51	\$50.64	\$343.12	\$428.92
04912016	15.00	LEWIS ENTERPRISES LTD PTP	Tier 2 Groundwater	\$40.51	\$50.64	\$607.65	\$759.60
04912021	13.38	BAUM, NANCY I TR	Tier 2 Groundwater	\$40.51	\$50.64	\$542.02	\$677.56
04912022	16.29	METTLER, BURNES R & SALLY A TR	Tier 3 Groundwater	\$20.26	\$25.32	\$330.04	\$412.46
04912023	9.95	TEESLINK, CARL ROGER TR ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$201.59	\$251.93
04912034	9.98	OAK RIDGE WINERY LLC	Tier 3 Groundwater	\$20.26	\$25.32	\$202.19	\$252.69
04912040	11.74	ROUS, CRAIG V & HOLLY A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$475.59	\$594.51
04912041	11.74	SALVESTRIN, STEVEN M & KATHLEEN M TR	Tier 2 Groundwater	\$40.51	\$50.64	\$475.59	\$594.51
04912052	14.17	THOMAS, ALBERT TR ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
04912062	20.04	METTLER FAMILY PROPERTIES LP	Tier 2 Groundwater	\$40.51	\$50.64	\$811.82	\$1,014.83
04912063	11.06	JACKSON, KENNETH LEE & MARY LOUISE TR	Tier 2 Groundwater	\$40.51	\$50.64	\$448.04	\$560.08
04912065	16.71	ALL STATE PACKERS INC	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
04912066	38.02	GOMEZ, SALVADOR R & LUZ R TR	Tier 3 Groundwater	\$20.26	\$25.32	\$770.29	\$962.67
04913003	21.92	JOHNSON, ROSS M ETAL	Tier 4 Groundwater	\$4.07	\$5.09	\$89.21	\$111.57
04913012	20.00	BARELA, SUSANNA ETAL	Tier 4 Groundwater	\$4.07	\$5.09	\$81.40	\$101.80
04913013	20.00	DHINGSA, RAJPAL TR	Tier 4 Groundwater	\$4.07	\$5.09	\$81.40	\$101.80
04913018	15.00	NIES, SCOTT C & KRIS L ETAL	Tier 4 Groundwater	\$4.07	\$5.09	\$61.05	\$76.35

APN	Acres	Owner	Assessment Category	Basic Rate Per Acre	Maximum Rate Per Acre	Basic Annual Assessment	Maximum Annual Assessment
04913019	13.46	NIES, LARRY R TR ETAL	Tier 4 Groundwater	\$4.07	\$5.09	\$54.78	\$68.51
04913044	12.43	DHINGSA, RAJPAL TR ETAL	Tier 4 Groundwater	\$4.07	\$5.09	\$50.59	\$63.27
04913046	9.17	JOHNSON, ROSS M ETAL	Tier 4 Groundwater	\$4.07	\$5.09	\$37.32	\$46.68
04913055	28.57	NIES, LARRY R & LENORE TR ETAL	Tier 4 Groundwater	\$4.07	\$5.09	\$116.28	\$145.42
04913067	0.45	NIES FARMS	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
04913068	0.32	NIES FARMS	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
04913069	0.26	NIES FARMS	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
04913076	9.63	MILLER, JAMES M TR	Tier 4 Groundwater	\$4.07	\$5.09	\$39.19	\$49.02
04913077	21.45	JOHNSON, ROSS M ETAL	Tier 4 Groundwater	\$4.07	\$5.09	\$87.30	\$109.18
04920001	6.29	HARMS, LILO E	Tier 2 Groundwater	\$40.51	\$50.64	\$254.81	\$318.53
04920003	14.80	BERNDT, RUTH V TR	Tier 2 Groundwater	\$40.51	\$50.64	\$599.55	\$749.47
04920004	14.66	BERNDT, RUTH V TR	Tier 2 Groundwater	\$40.51	\$50.64	\$593.88	\$742.38
04920005	9.76	METTLER FAMILY PROPERTIES LP	Tier 2 Groundwater	\$40.51	\$50.64	\$395.38	\$494.25
04920006	9.61	METTLER FAMILY PROPERTIES LP	Tier 2 Groundwater	\$40.51	\$50.64	\$389.30	\$486.65
04920008	19.69	BERNDT, RUTH V TR	Tier 2 Groundwater	\$40.51	\$50.64	\$797.64	\$997.10
04920010	10.17	APG & DJG CO	Tier 2 Groundwater	\$40.51	\$50.64	\$411.99	\$515.01
04920012	9.99	MEHLHAFF, KENNETH & S TRS	Tier 2 Groundwater	\$40.51	\$50.64	\$404.69	\$505.89
04920015	6.65	SALISBURY, LINDA C	Tier 2 Groundwater	\$40.51	\$50.64	\$269.39	\$336.76
04920016	6.65	SALISBURY, BRUCE W & L C	Tier 2 Groundwater	\$40.51	\$50.64	\$269.39	\$336.76
04920017	11.77	MEHLHAFF, KENNETH & SALLY TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$476.80	\$596.03
04920019	9.85	APG & DJG CO	Tier 2 Groundwater	\$40.51	\$50.64	\$399.02	\$498.80
04920020	9.40	MEHLHAFF, KENNETH & S TRS	Tier 2 Groundwater	\$40.51	\$50.64	\$380.79	\$476.02
04921003	10.49	TECKLENBURG, JON D & MARGARET ANN TR	Tier 2 Groundwater	\$40.51	\$50.64	\$424.95	\$531.21
04921004	19.02	METTLER, LAWRENCE & CHARLENE TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,878.23	\$2,347.83
04921005	10.74	METTLER, LAWRENCE & CHARLENE TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,060.58	\$1,325.75
04921006	11.84	EELLS, JASON P & KIMBERLY A TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,169.20	\$1,461.53
04921007	20.96	METTLER, LAWRENCE & CHARLENE TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$2,069.80	\$2,587.30
04921008	12.47	TECKLENBURG, JON D & MARGARET ANN TR	Tier 2 Groundwater	\$40.51	\$50.64	\$505.16	\$631.48
04921009	19.02	GARIBALDI, TODD & BARBARA TR	Tier 2 Groundwater	\$40.51	\$50.64	\$770.50	\$963.17
04921010	9.71	BARKLEY, IAN C & MICHELLE ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$393.35	\$491.71
04921011	9.78	METTLER, LAWRENCE P & CHARLENE D TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$965.78	\$1,207.24
04921012	36.46	METTLER, LAWRENCE P & CHARLENE D TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$3,600.43	\$4,500.62
04922001	9.90	SPANO, JOSEPH S & ISABELLE A L TR	Tier 2 Groundwater	\$40.51	\$50.64	\$401.05	\$501.34
04922002	9.90	WELK, PAUL JAMES TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$401.05	\$501.34
04922003	18.55	BERNDT, RUTH V TR	Tier 2 Groundwater	\$40.51	\$50.64	\$751.46	\$939.37
04922004	5.00	BACCHI, BRUCE A & CATHERINE H CHAN TR	Tier 2 Groundwater	\$40.51	\$50.64	\$202.55	\$253.20
04922005	15.40	BERNDT, RUTH V TR	Tier 2 Groundwater	\$40.51	\$50.64	\$623.85	\$779.86
04922006	9.90	PERLEGOS, JEFF ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$401.05	\$501.34
04922008	9.13	PERLEGOS, JEFF & PANAGIOTA	Tier 2 Groundwater	\$40.51	\$50.64	\$369.86	\$462.34
04922009	10.00	PERLEGOS, JEFF ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
04922010	9.40	MILLER FARMS PTP	Tier 2 Groundwater	\$40.51	\$50.64	\$380.79	\$476.02
04922012	18.80	DEL RIO, SANTIAGO M & RAMONA T TR	Tier 2 Groundwater	\$40.51	\$50.64	\$761.59	\$952.03
04922013	17.85	TECKLENBURG, JON D TR	Tier 2 Groundwater	\$40.51	\$50.64	\$723.10	\$903.92
04922019	15.84	YOUNG, MICHAEL JOHN EST ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$641.68	\$802.14
04923001	18.44	IWAMIYA, HIROSHI G & K C TR	Tier 2 Groundwater	\$40.51	\$50.64	\$747.00	\$933.80
04923002	9.98	CURRY PARKWAY LP	Tier 2 Groundwater	\$40.51	\$50.64	\$404.29	\$505.39
04923003	9.98	ROTE, PAUL L & DELIA TR	Tier 2 Groundwater	\$40.51	\$50.64	\$404.29	\$505.39
04923004	19.46	PERLEGOS, GUST & MARY ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$788.32	\$985.45
04923006	9.05	NOMA, LELAND & JANET	Tier 2 Groundwater	\$40.51	\$50.64	\$366.62	\$458.29
04923007	8.17	DIEKMAN, RICHARD D & RUTH W TR	Tier 2 Groundwater	\$40.51	\$50.64	\$330.97	\$413.73
04923011	16.82	DELTA PACKING CO OF LODI INC	Tier 2 Groundwater	\$40.51	\$50.64	\$681.38	\$851.76
04923012	15.67	SHERGILL, PAUL S & MAROOP K TR	Tier 2 Groundwater	\$40.51	\$50.64	\$634.79	\$793.53
04923014	12.36	WIEDERRICH, NORTON & ADRIENNE TR	Tier 2 Groundwater	\$40.51	\$50.64	\$500.70	\$625.91
04923016	7.62	NAHIGIAN, JOHN S & LYNDA	Tier 2 Groundwater	\$40.51	\$50.64	\$308.69	\$385.88
04923017	14.85	OTANI, FRANCES LF EST	Tier 2 Groundwater	\$40.51	\$50.64	\$601.57	\$752.00
04931044	10.00	JUNGEBLUT, ROSEMARY TR ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$202.60	\$253.20
04931045	10.00	JUNGEBLUT, DUANE M & ARLENE J TR	Tier 3 Groundwater	\$20.26	\$25.32	\$202.60	\$253.20
04931046	18.88	NICKEL, STEVEN K & LAURA M TR ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$382.51	\$478.04

APN	Acres	Owner	Assessment Category	Basic Rate Per Acre	Maximum Rate Per Acre	Basic Annual Assessment	Maximum Annual Assessment
04931048	13.10	ANAGNOS, POPI TR	Tier 3 Groundwater	\$20.26	\$25.32	\$265.41	\$331.69
05102004	19.11	JUNGEBLUT, DUANE M & ARLENE J TR ETAL	Tier 4 Groundwater	\$4.07	\$5.09	\$77.78	\$97.27
05102009	19.09	SCHMIEDT, SUSAN M TR	Tier 4 Groundwater	\$4.07	\$5.09	\$77.70	\$97.17
05102011	19.70	METTLER, BRUCE A TR	Tier 4 Groundwater	\$4.07	\$5.09	\$80.18	\$100.27
05102013	10.00	SCHMIEDT, SUSAN M TR	Tier 4 Groundwater	\$4.07	\$5.09	\$40.70	\$50.90
05102015	5.00	BOKISCH, MARKUS A & ELIZABETH TR	Tier 4 Groundwater	\$4.07	\$5.09	\$20.35	\$25.45
05102021	16.37	METTLER, BRUCE A TR	Tier 4 Groundwater	\$4.07	\$5.09	\$66.63	\$83.32
05102022	18.44	DUE, ALBERT V & GAIL M TR ETAL	Tier 4 Groundwater	\$4.07	\$5.09	\$75.05	\$93.86
05102025	19.08	MEHLHAFF, KENNETH W T & SALLY A TR ETAL	Tier 4 Groundwater	\$4.07	\$5.09	\$77.66	\$97.12
05102036	17.94	FLINN, THOMAS R TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05102037	12.93	LEDBETTER, JOHN K & EDYTH G TR	Tier 4 Groundwater	\$4.07	\$5.09	\$52.63	\$65.81
05102038	11.58	DIXON, MICHAEL W & THERESA L TR	Tier 4 Groundwater	\$4.07	\$5.09	\$47.13	\$58.94
05102041	55.72	METTLER, BRUCE A	Tier 4 Groundwater	\$4.07	\$5.09	\$226.78	\$283.61
05102044	17.38	METTLER, BRUCE A TR	Tier 4 Groundwater	\$4.07	\$5.09	\$70.74	\$88.46
05102045	7.12	KOTH, ARTHUR R & MARY L TR	Tier 4 Groundwater	\$4.07	\$5.09	\$28.98	\$36.24
05102047	6.10	KOTH, ARTHUR R & MARY L TR	Tier 4 Groundwater	\$4.07	\$5.09	\$24.83	\$31.05
05107002	16.00	STONUM SCHAFFER VINEYARDS & WINERY INC	Tier 2 Groundwater	\$40.51	\$50.64	\$648.16	\$810.24
05107003	12.98	R & R SCHATZ PROPERTIES INC	Tier 2 Groundwater	\$40.51	\$50.64	\$525.82	\$657.31
05107007	30.00	SCHATZ, RODNEY J & RAETTA M TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,215.30	\$1,519.20
05107008	30.00	R & R SCHATZ PROPERTIES INC	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$2,962.50	\$3,703.20
05107009	10.00	KNOWLES, CASE W TR	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
05107010	10.00	GASH, JOHN D III TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
05107020	45.50	R & R SCHATZ PROPERTIES INC	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$4,493.13	\$5,616.52
05107022	15.00	METTLER, ADAM PHILLIP & ALYSON MARIE TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,481.25	\$1,851.60
05107023	25.00	METTLER, LAWRENCE P & CHARLENE D TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$2,468.75	\$3,086.00
05107025	16.89	METTLER, LAWRENCE & CHARLENE TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,667.89	\$2,084.90
05107030	5.00	ANAGNOS, JAMES J & A	Tier 2 Groundwater	\$40.51	\$50.64	\$202.55	\$253.20
05107031	17.90	DELTA PACKING CO	Tier 2 Groundwater	\$40.51	\$50.64	\$725.13	\$906.46
05107033	10.02	ANAGNOS, JAMES J	Tier 2 Groundwater	\$40.51	\$50.64	\$405.91	\$507.41
05107036	7.82	LEWIS, CHARLES & BEULAH TR	Tier 2 Groundwater	\$40.51	\$50.64	\$316.79	\$396.00
05107037	7.58	METTLER, LAWRENCE P & CHARLENE D TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$748.53	\$935.68
05107038	10.00	METTLER, LAWRENCE P & CHARLENE D TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$987.50	\$1,234.40
05107039	12.42	METTLER, LAWRENCE P & CHARLENE D TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,226.48	\$1,533.12
05107040	10.00	METTLER, LAWRENCE P & CHARLENE D TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$987.50	\$1,234.40
05111003	17.94	DAIRY VINEYARD LLC	Tier 4 Groundwater	\$4.07	\$5.09	\$73.02	\$91.31
05111004	10.00	MCCAY, MICHAEL J	Tier 4 Groundwater	\$4.07	\$5.09	\$40.70	\$50.90
05111005	10.00	SCHMIDT, ROY E & DONNA JEAN TR	Tier 4 Groundwater	\$4.07	\$5.09	\$40.70	\$50.90
05111008	35.90	HASBUN, MARVEL A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,454.31	\$1,817.98
05111009	20.00	HASBUN, MARVEL A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$810.20	\$1,012.80
05111012	10.00	TEEPLE, CYNTHIA M & PATRICIA D	Tier 4 Groundwater	\$4.07	\$5.09	\$40.70	\$50.90
05111013	10.00	LEWIS RANCHES LLC	Tier 4 Groundwater	\$4.07	\$5.09	\$40.70	\$50.90
05111014	10.00	LEWIS RANCHES LLC	Tier 4 Groundwater	\$4.07	\$5.09	\$40.70	\$50.90
05111015	10.00	SCHMIDT, ROY E & DONNA JEAN TR	Tier 4 Groundwater	\$4.07	\$5.09	\$40.70	\$50.90
05111018	20.00	KNOLL, DELMER D	Tier 4 Groundwater	\$4.07	\$5.09	\$81.40	\$101.80
05111023	12.69	RAUSER, KERWIN L & JEAN E TR	Tier 4 Groundwater	\$4.07	\$5.09	\$51.65	\$64.59
05111029	9.96	SCHMIERER, KENNETH R & LORENA TR	Tier 4 Groundwater	\$4.07	\$5.09	\$40.54	\$50.70
05111047	5.58	BEDROCK WINE CO	Tier 4 Groundwater	\$4.07	\$5.09	\$22.71	\$28.40
05111051	13.19	FUJINAKA, STEVE H & BARBARA A TR	Tier 4 Groundwater	\$4.07	\$5.09	\$53.68	\$67.14
05111052	6.97	LASKEY, HOLLACE G	Tier 4 Groundwater	\$4.07	\$5.09	\$28.37	\$35.48
05111059	18.00	PASSALACQUA, TEGAN & OLIVIA D	Tier 4 Groundwater	\$4.07	\$5.09	\$73.26	\$91.62
05111064	15.24	SCHMIDT, ROY E & DONNA JEAN TR	Tier 4 Groundwater	\$4.07	\$5.09	\$62.03	\$77.57
05111065	15.24	SCHMIERER, KENNETH R & LORENA J TR	Tier 4 Groundwater	\$4.07	\$5.09	\$62.03	\$77.57
05112002	14.32	SPORLEDER, BRAD & MARTI	Tier 4 Groundwater	\$4.07	\$5.09	\$58.28	\$72.89
05112007	12.26	BROWN, JONATHAN & CONSTANCE TR ETL	Tier 2 Groundwater	\$40.51	\$50.64	\$496.65	\$620.85
05112009	12.71	KNOLL, DELMAR D ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$514.88	\$643.63
05112012	24.15	METTLER, JERRY D & KAY D TR	Tier 2 Groundwater	\$40.51	\$50.64	\$978.32	\$1,222.96
05112013	14.32	LEWIS ENTERPRISES LTD PTP	Tier 2 Groundwater	\$40.51	\$50.64	\$580.10	\$725.16
05112015	14.31	LEWIS ENTERPRISES LTD PTP	Tier 2 Groundwater	\$40.51	\$50.64	\$579.70	\$724.66

APN	Acres	Owner	Assessment Category	Basic Rate Per Acre	Maximum Rate Per Acre	Basic Annual Assessment	Maximum Annual Assessment
05112022	13.79	ELKINS, CARL A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$558.63	\$698.33
05112034	24.44	E C WATTS INC	Tier 2 Groundwater	\$40.51	\$50.64	\$990.06	\$1,237.64
05112036	6.89	SHI, JIAN YING ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$279.11	\$348.91
05112042	15.00	HANDEL, HARLEY TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,481.25	\$1,851.60
05112043	51.84	KAUTZ, KURT & SANDRA	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$5,119.20	\$6,399.13
05112045	23.28	REYES, JOSE LAZARO & GLORIA S TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$2,298.90	\$2,873.68
05112046	38.45	KNOLL, DELMAR D & MARYLUE J EST	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$3,796.94	\$4,746.27
05112047	7.18	KNOLL, DELMAR D & MARYLUE J EST	Tier 2 Groundwater	\$40.51	\$50.64	\$290.86	\$363.60
05112053	6.56	LEWIS, CHARLES A & BEULAH D TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05112054	6.05	KNOLL, LANE D ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$245.09	\$306.37
05112056	14.57	KNOLL, CHRISTOPHER W & DIANE B TR	Tier 2 Groundwater	\$40.51	\$50.64	\$590.23	\$737.82
05112057	14.57	WALKER, ELLA KNOLL TR	Tier 2 Groundwater	\$40.51	\$50.64	\$590.23	\$737.82
05112058	10.00	PHILLIPS, DARRELL & PATRICIA TR	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
05112060	12.99	GERLONES, GREGORY P & JEANETTE M	Tier 2 Groundwater	\$40.51	\$50.64	\$526.22	\$657.81
05112062	7.54	SHI, JIAN YING ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$305.45	\$381.83
05112067	14.10	METTLER, BRUCE A TR	Tier 4 Groundwater	\$4.07	\$5.09	\$57.39	\$71.77
05112073	52.13	ELKINS, CARL A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$2,111.79	\$2,639.86
05112077	5.35	ZAREFAKIS, DEMETRIOS	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05112078	8.35	ABELDT, PHILIP J & CAMILLE J	Tier 2 Groundwater	\$40.51	\$50.64	\$338.26	\$422.84
05112079	29.03	BERNDT, RUTH V TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,176.01	\$1,470.08
05112085	42.03	HASBUN, MARVEL A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,702.64	\$2,128.40
05112087	5.40	CALONE, SHARON ALLEY TR	Tier 2 Groundwater	\$40.51	\$50.64	\$218.75	\$273.46
05112088	40.91	SMITH, DANA C & LINDA L TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,657.26	\$2,071.68
05112092	6.97	BLOMGREN, GARY J & MARY ANN TR	Tier 2 Groundwater	\$40.51	\$50.64	\$282.35	\$352.96
05112093	17.54	MCARTY, JAMES A TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$710.55	\$888.23
05112094	25.06	HANDEL, HARLEY TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,015.18	\$1,269.04
05113003	9.00	STOLTMAN, JAMES P & TRACY L	Tier 2 Groundwater	\$40.51	\$50.64	\$364.59	\$455.76
05113008	5.50	HEISER, DOUGLAS LEE TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$222.81	\$278.52
05113014	8.11	BRYAN, MARK L & LORI M	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05113015	9.65	KING, NEIL T & DOLORES R TR ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05113016	28.97	H & M VINEYARDS LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$1,173.57	\$1,467.04
05113017	13.90	NIES, LARRY R & LENORE M TR	Tier 2 Groundwater	\$40.51	\$50.64	\$563.09	\$703.90
05113019	9.33	COX, RANDALL EARL & JEANETTE MARIE TR	Tier 2 Groundwater	\$40.51	\$50.64	\$377.96	\$472.47
05113020	14.24	H & M VINEYARDS LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$576.86	\$721.11
05113021	39.24	BIDDICK FAMILY VINEYARDS LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$1,589.61	\$1,987.11
05113031	19.62	BODNER, LARRY G & GLORIA E	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,937.48	\$2,421.89
05113032	19.62	GAYALDO, FRANK A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$794.81	\$993.56
05113035	10.29	KNOLL, HARLIN D & JOANN G TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,016.14	\$1,270.20
05113036	14.71	KNOLL, HARLIN D TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,452.61	\$1,815.80
05113037	19.07	KETCHERSIDE, WANDA R TR	Tier 2 Groundwater	\$40.51	\$50.64	\$772.53	\$965.70
05113041	1.16	METTLER, JERRY D & KAY D TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$114.55	\$143.19
05113043	24.07	BUHARI FAMILY LP	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$2,376.91	\$2,971.20
05113047	41.50	STOEBNER, PATSY R TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$4,098.13	\$5,122.76
05113051	19.03	DECKER, JAMES B & BARBARA J TR	Tier 2 Groundwater	\$40.51	\$50.64	\$770.91	\$963.68
05113052	11.73	KAPINIARIS, KOSTA F & DIMITRA	Tier 2 Groundwater	\$40.51	\$50.64	\$475.18	\$594.01
05113053	5.67	GOEHRING, BENJAMIN R & SHIRLEY L TR	Tier 2 Groundwater	\$40.51	\$50.64	\$229.69	\$287.13
05113054	19.01	MEHLHAFF, KENNETH W & SALLY A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$770.10	\$962.67
05113056	58.42	TKH LLC	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$5,768.98	\$7,211.36
05113057	10.00	TKH LLC	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$987.50	\$1,234.40
05113058	10.00	TKH LLC	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$987.50	\$1,234.40
05113059	2.00	GOEHRING, BENJAMIN R & SHIRLEY TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$197.50	\$246.88
05113061	32.00	GOEHRING, BENJAMIN R & SHIRLEY L TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$3,160.00	\$3,950.08
05113064	2.00	GOEHRING, BENJAMIN R & SHIRLEY L TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$197.50	\$246.88
05113065	34.77	METTLER, LAWRENCE P & CHARLENE D TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$3,433.54	\$4,292.01
05113069	9.88	METTLER, CAROL L	Tier 2 Groundwater	\$40.51	\$50.64	\$400.24	\$500.32
05113070	10.12	SPANOS, NICKOLAS H JR & DOLORES	Tier 2 Groundwater	\$40.51	\$50.64	\$409.96	\$512.48
05113071	9.08	SPANOS, NICKOLAS H JR & DOLORES	Tier 2 Groundwater	\$40.51	\$50.64	\$367.83	\$459.81
05113073	20.00	POWERS, KATHLEEN A TR ETAL	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,975.00	\$2,468.80

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05113074	11.83	POWERS, KATHLEEN A TR ETAL	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,168.21	\$1,460.30
05113076	44.07	METTLER, JERRY D & KAY D TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$4,351.91	\$5,440.00
05113077	9.02	J & J VINEYARDS LLC	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$890.73	\$1,113.43
05113078	3.90	J & J VINEYARDS LLC	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$385.13	\$481.42
05113079	3.90	J & J VINEYARDS LLC	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$385.13	\$481.42
05113080	3.90	J & J VINEYARDS LLC	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$385.13	\$481.42
05113081	7.79	J & J VINEYARDS LLC	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$769.26	\$961.60
05114003	20.02	BECHTHOLD, WILLIAM E & LEONORA	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,976.98	\$2,471.27
05114007	7.73	LANG, JAMES & MELISSA	Tier 2 Groundwater	\$40.51	\$50.64	\$313.14	\$391.45
05114007	7.73	LANG, JAMES & MELISSA	Tier 2 Groundwater	\$40.51	\$50.64	\$313.14	\$391.45
05114022	5.03	HIRASUNA, DELPHINE NAOMI ETAL	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$496.71	\$620.90
05114023	5.03	MILLER, LARRY D & ANTIONETTE TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$496.71	\$620.90
05114026	10.07	TSAPPIS, ANTHONY & SUE ANN TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05114029	5.05	TSAPPIS, ANTHONY & SUE ANN TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05114030	5.05	MORENO, JON GILBERT & PATRICIA MARIE TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05114035	18.49	KLINKER BRICK WINERY INC	Tier 2 Groundwater	\$40.51	\$50.64	\$749.03	\$936.33
05114039	19.07	BECHTHOLD, WILLIAM EDWIN	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,883.16	\$2,354.00
05114043	5.00	COOK, BILL A JR & ROBIN C TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05114044	5.00	SEABOURN, SCOTT R & STEPHANIE A TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05114057	5.07	VASQUEZ, RAYMOND & BETTY	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05114058	3.86	MANNA, MATTHEW M TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$381.18	\$476.48
05114059	4.04	MANNA, MATTHEW M TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$398.95	\$498.70
05115002	13.68	FERRERO, MICHAEL F	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,350.90	\$1,688.66
05115006	20.02	VON ASPERN, JO ANN ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$811.01	\$1,013.81
05115009	5.99	BRADFORD, JOHN & CAROL ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05115011	8.13	FELIX, ANTONIO & AURORA TR ETL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05115014	6.59	LEPELLEY, HAROLD & CARYL TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05115018	6.76	BECHTHOLD, WILLIAM EDWIN	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$667.55	\$834.45
05115022	9.57	BERNDT, JEFFREY D	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$945.04	\$1,181.32
05115023	20.86	SWINNEY, DONNA BAINES TR	Tier 2 Groundwater	\$40.51	\$50.64	\$845.04	\$1,056.35
05115025	5.49	HORN, JIMMY D & PENNIE A	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05115037	5.76	BECHTHOLD, WILLIAM E & LEONORA L	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$568.80	\$711.01
05115039	5.71	GAMA, RIGOBERTO	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05115040	16.92	HAMMER, ROBERT J	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,670.85	\$2,088.60
05115042	12.69	HORN, ROBERT K & CHARLENE M TR	Tier 2 Groundwater	\$40.51	\$50.64	\$514.07	\$642.62
05115058	11.37	MANNA, MICHAEL L & LISA R TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,122.79	\$1,403.51
05115059	7.78	KALAFATIS, STANLEY A & EFFIE TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$768.28	\$960.36
05115061	9.32	KALAFATIS, STANLEY A & EFFIE TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$920.35	\$1,150.46
05116001	10.00	LOCKE RANCH INC	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
05116002	144.72	LOCKE RANCH INC	Tier 2 Groundwater	\$40.51	\$50.64	\$5,862.61	\$7,328.62
05116003	106.92	R & R SCHATZ PROPERTIES INC	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$10,558.35	\$13,198.20
05116011	45.42	SCHATZ, RODNEY R & GAYLA L TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$4,485.23	\$5,606.64
05116012	71.15	SCHATZ, RODNEY J & RAETTA M	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$7,026.06	\$8,782.76
05116013	43.53	PETERSON, JAMES KARL ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05116017	25.05	FERRERO, MICHAEL F	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$2,473.69	\$3,092.17
05116024	19.49	FWS CONSTRUCTION PTP	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05118002	27.46	VON ASPERN, JO ANN ETAL	Tier 1 Channel A	\$40.81	\$51.01	\$1,120.64	\$1,400.73
05118017	30.00	VON ASPERN, JO ANN ETAL	Tier 1 Channel A	\$40.81	\$51.01	\$1,224.30	\$1,530.30
05118023	5.01	WITCOMBE, JAMES B & JEANNE E TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05118024	5.01	HALLORAN, JAMES D & VALERIE H TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05118025	5.00	ZAMARRIPA, DANIEL O & DEBORAH G	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05118026	5.00	LLOYD, MICAH DAVID	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05118044	14.77	ESTES, RONALD JAMES TR	Tier 2 Groundwater	\$40.51	\$50.64	\$598.33	\$747.95
05118045	1.89	EDISON PARK VINEYARDS LLC	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05119002	5.05	WHEATLEY, GEORGE D TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05119003	9.27	ARISHIN, MICHAEL W & DYNA T TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05119011	9.85	LANGUERAND, JACQUES & C ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05119012	19.70	MILLER, LARRY D & ANTIONETTE TR	Tier 1 Channel A	\$40.81	\$51.01	\$803.96	\$1,004.90

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05119013	9.68	FINK, ALAN J	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05119017	7.79	POLENSKI, RANDALL & ELIZABETH	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05119030	9.85	SINGH, MAHENDRA & SAMA KAUR TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05119043	19.29	SMITH, DARYL T & LORI TR	Tier 2 Groundwater	\$40.51	\$50.64	\$781.44	\$976.85
05120001	20.00	BUHARI FAMILY LP	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,975.00	\$2,468.80
05120002	19.97	BUHARI FAMILY LP	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,972.04	\$2,465.10
05120006	5.15	VENGLEY, HEATHER LEA	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05120008	25.00	CAFFESE, ANGELO & ROSEELLYN	Tier 1 Channel A	\$40.81	\$51.01	\$1,020.25	\$1,275.25
05120013	10.00	SHERMAN, TINO & CELESTINA TR	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
05120014	19.37	ALBERTO, JOSEPH G & DONNA J TR	Tier 2 Groundwater	\$40.51	\$50.64	\$784.68	\$980.90
05120017	7.68	VAN DER HEIDEN, ALBERTUS J	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05120018	23.44	GRAHAM, RITA F TR	Tier 2 Groundwater	\$40.51	\$50.64	\$949.55	\$1,187.00
05120019	5.59	GOULART, RAYMOND J	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05120022	22.00	COOPER OUT WEST INC	Tier 1 Channel B	\$43.54	\$54.42	\$957.88	\$1,197.24
05120025	45.10	D & E HAYES FAM PARTNERHSHIP LP	Tier 2 Groundwater	\$40.51	\$50.64	\$1,827.00	\$2,283.86
05120026	25.47	D & E HAYES FAMILY PTP LP	Tier 2 Groundwater	\$40.51	\$50.64	\$1,031.79	\$1,289.80
05120032	9.81	CHURCHILL, WILLIAM T & AUDREY TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$968.74	\$1,210.95
05120033	80.00	VIRAMONTES, RAFAEL ETAL	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$7,900.00	\$9,875.20
05120035	40.50	BUHARI FAMILY LP	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$3,999.38	\$4,999.32
05120036	20.00	BUHARI FAMILY LP	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,975.00	\$2,468.80
05120048	10.93	MARINO, LAWRENCE & BETTY J TR	Tier 2 Groundwater	\$40.51	\$50.64	\$442.77	\$553.50
05120051	11.94	GOMEZ, MARGARITO & SILVIA TR	Tier 2 Groundwater	\$40.51	\$50.64	\$483.69	\$604.64
05120052	8.17	BUHARI FAMILY LP ETAL	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$806.79	\$1,008.50
05120053	8.24	WAIT, JOHN D & ALAYNE TR	Tier 2 Groundwater	\$40.51	\$50.64	\$333.80	\$417.27
05120055	36.09	FERREIRA, WILLIAM ALLEN TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,462.01	\$1,827.60
05120058	9.51	BUHARI FAMILY LP	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$939.11	\$1,173.91
05120059	9.58	PETERSON, KARLA ANN TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05120064	9.74	SAVIG, RANDOLPH D TR	Tier 2 Groundwater	\$40.51	\$50.64	\$394.57	\$493.23
05120066	10.84	HATTERLE LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$439.13	\$548.94
05120068	15.10	ALVES, GEORGE E JR & CAROL TR	Tier 1 Channel A	\$40.81	\$51.01	\$616.23	\$770.25
05120069	66.91	DARLINGTON LP	Tier 2 Groundwater	\$40.51	\$50.64	\$2,710.52	\$3,388.32
05121023	19.00	LOCKE RANCH INC	Tier 2 Groundwater	\$40.51	\$50.64	\$769.69	\$962.16
05121024	17.66	LOCKE, CHRISTOPHER J & CHRISTY TR	Tier 3 Groundwater	\$20.26	\$25.32	\$357.79	\$447.15
05121034	102.00	LOCKE RANCH INC ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$4,132.02	\$5,165.28
05121035	11.86	LOCKE RANCH INC	Tier 2 Groundwater	\$40.51	\$50.64	\$480.45	\$600.59
05121037	73.96	LOCKE RANCH INC ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$1,498.43	\$1,872.67
05121076	50.13	LOCKE, CHRISTOPHER J & CHRISTY TR	Tier 3 Groundwater	\$20.26	\$25.32	\$1,015.63	\$1,269.29
05125002	16.97	RUKAVINA, FRANK & MARGARET ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$687.45	\$859.36
05125003	8.00	KOTAJARVI, STEVEN I & SARAH L	Tier 2 Groundwater	\$40.51	\$50.64	\$324.08	\$405.12
05125004	34.79	KOTAJARVI, STEVEN & SARAH L	Tier 2 Groundwater	\$40.51	\$50.64	\$1,409.34	\$1,761.77
05125005	10.76	KNITTEL, ELVA ESTATE	Tier 2 Groundwater	\$40.51	\$50.64	\$435.89	\$544.89
05125006	14.69	SINGH, GURPREET	Tier 2 Groundwater	\$40.51	\$50.64	\$595.09	\$743.90
05125008	7.00	HOWARD, CHARLES A	Tier 2 Groundwater	\$40.51	\$50.64	\$283.57	\$354.48
05125009	14.81	MANN, JERRY & SEVILLA TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05125011	19.77	SPANOS, NICKOLAS H JR & DOLORES	Tier 2 Groundwater	\$40.51	\$50.64	\$800.88	\$1,001.15
05125014	91.96	CAFFESE, ROBERT A & KIMBERLY TR	Tier 2 Groundwater	\$40.51	\$50.64	\$3,725.30	\$4,656.85
05125017	7.38	RIDDLE, SCOTT A & JODY A	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05125024	8.11	BOSWELL, YVONNE A	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05125025	8.84	HORTON, DARRELL & MARGO	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05125026	10.00	WINCHESTER, STEVE E & BONNIE L	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05125034	13.81	MOORE SANTANDER, MARTIN	Tier 2 Groundwater	\$40.51	\$50.64	\$559.44	\$699.34
05125035	11.55	ALI, ABDUL & LATTEFA	Tier 2 Groundwater	\$40.51	\$50.64	\$467.89	\$584.89
05125040	12.28	SOLARI, GEORGE P ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$497.46	\$621.86
05125042	8.77	SOLARI, GEORGE P ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$355.27	\$444.11
05125043	10.60	SHERILL, JAGJIT & PARAMJIT	Tier 2 Groundwater	\$40.51	\$50.64	\$429.41	\$536.78
05125044	10.60	BORRA, LUCILLE C TR	Tier 2 Groundwater	\$40.51	\$50.64	\$429.41	\$536.78
05125045	15.00	MARTENS, JOHN & PATTI TR	Tier 1 Channel A	\$40.81	\$51.01	\$612.15	\$765.15
05125048	25.03	HARRIS, HUNTER K	Tier 2 Groundwater	\$40.51	\$50.64	\$1,013.97	\$1,267.52

APN	Acres	Owner	Assessment Category	Basic Rate Per Acre	Maximum Rate Per Acre	Basic Annual Assessment	Maximum Annual Assessment
05125049	15.00	HARRIS, R KIRK	Tier 2 Groundwater	\$40.51	\$50.64	\$607.65	\$759.60
05125050	5.00	ANDRADE, RALPH JR TR	Tier 2 Groundwater	\$40.51	\$50.64	\$202.55	\$253.20
05125053	5.00	WONG, RAYMOND TR ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05125056	22.00	BAL, AMARJIT S TR	Tier 1 Channel A	\$40.81	\$51.01	\$897.82	\$1,122.22
05125057	14.52	KRAMER, KENNETH L & BRENDA K TR	Tier 1 Channel A	\$40.81	\$51.01	\$592.56	\$740.67
05125062	17.49	FRECHETTE, BRADLEY & DESSA L	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05125064	45.75	COOK, BILL A JR TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$1,853.33	\$2,316.78
05125066	17.84	HARRIS, HUNTER K	Tier 2 Groundwater	\$40.51	\$50.64	\$722.70	\$903.42
05125071	28.05	PILKINGTON, BRYAN C TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05125072	21.91	EDISON PARK VINEYARDS LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$887.57	\$1,109.52
05125073	16.28	SPANOS, NICK JR & DOLORES J	Tier 2 Groundwater	\$40.51	\$50.64	\$659.50	\$824.42
05125074	19.68	SPANOS, NICK JR & DOLORES J	Tier 2 Groundwater	\$40.51	\$50.64	\$797.24	\$996.60
05125075	12.31	GOEHRING, DEANNA C TR ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05126004	33.49	LAUTENSCHLAGER, BARBARA G TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,356.68	\$1,695.93
05126006	39.11	BAKER, MICHAEL W TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$1,584.35	\$1,980.53
05126007	9.40	BAKER, JOHN D TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$380.79	\$476.02
05126010	8.81	ULREY, MARK P & KIM E	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05126012	10.00	BAKER, JOHN DAVID TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
05126013	19.60	ALLEN, LAWRENCE & SUSAN TR	Tier 2 Groundwater	\$40.51	\$50.64	\$794.00	\$992.54
05126019	147.14	COOPER OUT WEST INC	Tier 1 Channel B	\$43.54	\$54.42	\$6,406.48	\$8,007.36
05126022	9.61	PACIFIC GAS &, ELECTRIC CO	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05126025	14.64	BISLA, BRIJ DEV SINGH & SURRENDER K TR	Tier 1 Channel A	\$40.81	\$51.01	\$597.46	\$746.79
05126030	40.42	COOK, BILL A JR & ROBIN C TR	Tier 1 Channel B	\$43.54	\$54.42	\$1,759.89	\$2,199.66
05126031	39.11	COOK, BILL A & ROBIN C TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,584.35	\$1,980.53
05126032	50.40	SINGH, INDER PAUL & KULDIP	Tier 1 Channel B	\$43.54	\$54.42	\$2,194.42	\$2,742.77
05126033	179.07	WATERLOO GOLF CLUB INC	Tier 1 Channel B	\$43.54	\$54.42	\$7,796.71	\$9,744.99
05129001	128.79	LOCKE RANCH INC ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$5,217.28	\$6,521.93
05129002	9.94	LOCKE RANCH INC ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$402.67	\$503.36
05129007	18.90	LOCKE RANCH INC ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$765.64	\$957.10
05129008	9.00	SECO PROPERTIES INC	Tier 2 Groundwater	\$40.51	\$50.64	\$364.59	\$455.76
05129033	35.39	R & R SCHATZ PROPERTIES INC	Tier 2 Groundwater	\$40.51	\$50.64	\$1,433.65	\$1,792.15
05130001	10.63	LOCKE RANCH INC	Tier 2 Groundwater	\$40.51	\$50.64	\$430.62	\$538.30
05135006	17.30	ANAGNOS, JOHN A	Tier 4 Groundwater	\$4.07	\$5.09	\$70.41	\$88.06
05135007	16.71	ANAGNOS, JOHN A	Tier 4 Groundwater	\$4.07	\$5.09	\$68.01	\$85.05
05135009	10.00	GOEHRING, JOHN C TR	Tier 4 Groundwater	\$4.07	\$5.09	\$40.70	\$50.90
05135010	31.61	GOEHRING, JOHN C TR	Tier 4 Groundwater	\$4.07	\$5.09	\$128.65	\$160.89
05135016	9.80	METTLER, BRUCE A TR	Tier 4 Groundwater	\$4.07	\$5.09	\$39.89	\$49.88
05135017	9.92	METTLER, BRUCE A TR	Tier 4 Groundwater	\$4.07	\$5.09	\$40.37	\$50.49
05135018	9.92	BERGHOLD, JOSEPH P & KAY B TR	Tier 4 Groundwater	\$4.07	\$5.09	\$40.37	\$50.49
05135019	17.90	BERGHOLD, JOSEPH P & KAY B TR	Tier 4 Groundwater	\$4.07	\$5.09	\$72.85	\$91.11
05135024	13.47	NIES, KURTIS ANTHONY	Tier 4 Groundwater	\$4.07	\$5.09	\$54.82	\$68.56
05135025	11.90	NIES, LARRY R & LENORE M TR	Tier 4 Groundwater	\$4.07	\$5.09	\$48.43	\$60.57
05136001	14.80	METTLER, BRUCE A TR	Tier 4 Groundwater	\$4.07	\$5.09	\$60.24	\$75.33
05136002	15.23	METTLER, BRUCE A TR	Tier 4 Groundwater	\$4.07	\$5.09	\$61.99	\$77.52
05136003	33.35	BERGHOLD, JOSEPH P & KAY B TR	Tier 4 Groundwater	\$4.07	\$5.09	\$135.73	\$169.75
05136004	17.89	BERGHOLD, JOSEPH P & KAY B TR	Tier 4 Groundwater	\$4.07	\$5.09	\$72.81	\$91.06
05136007	16.70	METTLER, BRUCE A	Tier 4 Groundwater	\$4.07	\$5.09	\$67.97	\$85.00
05136008	19.00	METTLER, BRUCE A	Tier 4 Groundwater	\$4.07	\$5.09	\$77.33	\$96.71
05136009	9.80	METTLER, BRUCE A	Tier 4 Groundwater	\$4.07	\$5.09	\$39.89	\$49.88
05136010	12.83	METTLER, BRUCE A TR	Tier 4 Groundwater	\$4.07	\$5.09	\$52.22	\$65.30
05136016	12.29	R LAWSON ENTERPRISES LLC	Tier 4 Groundwater	\$4.07	\$5.09	\$50.02	\$62.56
05137001	9.79	LEWIS ENTERPRISES LTD PTP	Tier 2 Groundwater	\$40.51	\$50.64	\$396.59	\$495.77
05137002	27.60	LEWIS ENTERPRISES LTD PTP	Tier 2 Groundwater	\$40.51	\$50.64	\$1,118.08	\$1,397.66
05137003	9.56	BERNDT, RUTH V TR	Tier 2 Groundwater	\$40.51	\$50.64	\$387.28	\$484.12
05137004	9.14	LEWIS, CHARLES A & BEULAH D TR	Tier 2 Groundwater	\$40.51	\$50.64	\$370.26	\$462.85
05137005	8.43	LEWIS ENTERPRISES LTD PTP	Tier 2 Groundwater	\$40.51	\$50.64	\$341.50	\$426.90
05137010	7.82	LEWIS, CHARLES A & BEULAH D TR	Tier 2 Groundwater	\$40.51	\$50.64	\$316.79	\$396.00
05137013	7.57	APG & DJG CO	Tier 2 Groundwater	\$40.51	\$50.64	\$306.66	\$383.34

APN	Acres	Owner	Assessment Category	Basic Rate Per Acre	Maximum Rate Per Acre	Basic Annual Assessment	Maximum Annual Assessment
05137015	12.30	LEWIS ENTERPRISES LTD PTP	Tier 2 Groundwater	\$40.51	\$50.64	\$498.27	\$622.87
05137016	16.51	LEWIS ENTERPRISES LTD PTP	Tier 2 Groundwater	\$40.51	\$50.64	\$668.82	\$836.07
05137017	13.00	LEWIS, CHARLES A & BEULAH D TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,283.75	\$1,604.72
05137020	17.44	LEWIS ENTERPRISES LTD PTP	Tier 2 Groundwater	\$40.51	\$50.64	\$706.49	\$883.16
05138001	0.60	LEWIS ENTERPRISES LTD PTP	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05303001	19.97	COLLINE, RAYMOND E II TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$808.98	\$1,011.28
05303004	11.97	COLLINE, RAYMOND E II TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$484.90	\$606.16
05303009	10.00	YEAGER, GREG D & EILEEN	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05303010	79.70	ANAYA, MIGUEL A ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$1,614.72	\$2,018.00
05303015	26.83	GUEVARA, JULIE	Tier 2 Groundwater	\$40.51	\$50.64	\$1,086.88	\$1,358.67
05303026	19.99	HOFFMAN, ROBERT A & KARA M ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05303031	5.28	OBERMILLER, LAWRENCE & MARNA	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05303037	20.00	RONALD E HAYNES ENTERPRISE	Tier 3 Groundwater	\$20.26	\$25.32	\$405.20	\$506.40
05303039	53.00	LOCKEFORD COMM, SERVICES DIST	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05303045	10.00	MATHESON, ROBERT B TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05303046	22.30	PLH LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$903.37	\$1,129.27
05303048	13.93	JORDAN, CLAY & CHERYL TR	Tier 2 Groundwater	\$40.51	\$50.64	\$564.30	\$705.42
05303051	20.00	LOCKEFORD, COMM SERV DIST	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05303057	13.39	LOCKEFORD COMMUNITY SERVICE DIST	Tier 2 Groundwater	\$40.51	\$50.64	\$542.43	\$678.07
05303058	116.01	LOCKEFORD COMMUNITY SERVICE DIST	Tier 2 Groundwater	\$40.51	\$50.64	\$4,699.57	\$5,874.75
05304004	116.26	NASCIMENTO, JOHN L & LYRAE ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$4,709.69	\$5,887.41
05304006	33.88	VALINOTI, DAN & BARBARA	Tier 3 Groundwater	\$20.26	\$25.32	\$686.41	\$857.84
05304008	24.68	COOPER OUT WEST INC	Tier 3 Groundwater	\$20.26	\$25.32	\$500.02	\$624.90
05304009	39.29	COOPER OUT WEST INC	Tier 3 Groundwater	\$20.26	\$25.32	\$796.02	\$994.82
05304010	19.68	COOPER OUT WEST INC	Tier 3 Groundwater	\$20.26	\$25.32	\$398.72	\$498.30
05304013	38.64	NASCIMENTO, JOHN L & LYRAE ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$1,565.31	\$1,956.73
05304014	5.30	NASCIMENTO, JOHN L & LYRAE ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$214.70	\$268.39
05304018	24.79	MCVICKER, WILLIAM MAXWELL JR & LIA L TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05304019	10.13	HOUSTON, DANNY RAY JR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05304020	9.50	GENGLER, DANIEL J & DEEANN	Tier 3 Groundwater	\$20.26	\$25.32	\$192.47	\$240.54
05304024	5.00	MCCARTY, JOEL B & ELIZABETH A	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05304026	5.00	FAKHOURI, GEORGE & MARLENE TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05304027	10.02	VANG, CHIA LY & LIA ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$405.91	\$507.41
05304028	8.35	OXFORD, SHANNON & G	Tier 2 Groundwater	\$40.51	\$50.64	\$338.26	\$422.84
05304029	5.00	GIROUARD, JULIAN W & CHARLOTTE	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05304030	5.00	OXFORD, SHANNON R & GAYLE L	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05304033	6.78	WARMERDAM, GERARD & JAMI E	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05304035	57.22	PROPLANT LLC	Tier 3 Groundwater	\$20.26	\$25.32	\$1,159.28	\$1,448.81
05304036	8.02	WILBUR, SKIP J & KARI L	Tier 3 Groundwater	\$20.26	\$25.32	\$162.49	\$203.07
05304039	68.67	WARMERDAM DAIRY PTP	Tier 2 Groundwater	\$40.51	\$50.64	\$2,781.82	\$3,477.45
05304040	43.65	WARMERDAM DAIRY PTP ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$1,768.26	\$2,210.44
05304041	12.72	PLH LLC ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05304042	16.82	PLH LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$681.38	\$851.76
05304044	36.63	COOPER OUT WEST INC	Tier 3 Groundwater	\$20.26	\$25.32	\$742.12	\$927.47
05305001	108.72	DHALIWAL VINEYARDS ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$4,404.25	\$5,505.58
05305002	145.67	CLEARBROOK PARTNERSHIP	Tier 3 Groundwater	\$20.26	\$25.32	\$2,951.27	\$3,688.36
05306001	70.96	ZABALLOS, GILBERT P & GRETCHEN E TR ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$1,437.65	\$1,796.71
05306004	299.02	ZABALLOS, GILBERT P & GRETCHEN E TR ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$6,058.15	\$7,571.19
05307001	60.32	L6 LAGORIO LAND COMPANY	Tier 3 Groundwater	\$20.26	\$25.32	\$1,222.08	\$1,527.30
05307003	60.00	LOCKEFORD COMMUNITY SERV DIST	Tier 3 Groundwater	\$20.26	\$25.32	\$1,215.60	\$1,519.20
05307006	40.00	SARGENT ESTATES LLC	Tier 3 Groundwater	\$20.26	\$25.32	\$810.40	\$1,012.80
05307007	39.64	SARGENT ESTATES LLC	Tier 3 Groundwater	\$20.26	\$25.32	\$803.11	\$1,003.68
05307008	118.81	SARGENT ESTATES LLC	Tier 3 Groundwater	\$20.26	\$25.32	\$2,407.09	\$3,008.27
05308001	38.78	CANEPA, FRANK A & BARBARA L TR	Tier 3 Groundwater	\$20.26	\$25.32	\$785.68	\$981.91
05308002	59.07	DISCH, ROBERT W & BETTY J TR	Tier 3 Groundwater	\$20.26	\$25.32	\$1,196.76	\$1,495.65
05308003	9.85	WHITEMAN, LEO C & D F	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05308004	9.84	H4 PROPERTIES LP	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05308013	19.39	NIXON, STANLEY A & JEANNE L TR	Tier 3 Groundwater	\$20.26	\$25.32	\$392.84	\$490.95

APN	Acres	Owner	Assessment Category	Basic Rate Per Acre	Maximum Rate Per Acre	Basic Annual Assessment	Maximum Annual Assessment
05308017	19.10	DEL CASTILLO, MARCIANO & BERTHA	Tier 3 Groundwater	\$20.26	\$25.32	\$386.97	\$483.61
05308018	19.10	DEL CASTILLO, EDDIE & ARASELI	Tier 3 Groundwater	\$20.26	\$25.32	\$386.97	\$483.61
05308019	19.38	NIXON, STANLEY A & JEANNE L TR	Tier 3 Groundwater	\$20.26	\$25.32	\$392.64	\$490.70
05308020	19.38	BUSALACCHI, DWIGHT J & SHARON A TR	Tier 3 Groundwater	\$20.26	\$25.32	\$392.64	\$490.70
05309015	39.05	GUERRERO, PATRICIA	Tier 3 Groundwater	\$20.26	\$25.32	\$791.15	\$988.75
05309021	9.84	MIER, JORGE P	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05309022	29.76	TSAI, MEI LIANG M TR	Tier 3 Groundwater	\$20.26	\$25.32	\$602.94	\$753.52
05309023	59.00	NESTOR ENTERPRISES LLC	Tier 3 Groundwater	\$20.26	\$25.32	\$1,195.34	\$1,493.88
05309024	39.46	RIDER, RICHARD A & BEVERLY A TR	Tier 3 Groundwater	\$20.26	\$25.32	\$799.46	\$999.13
05311006	8.20	WALKER, WAYNE A & CHERYL A TR	Tier 3 Groundwater	\$20.26	\$25.32	\$166.13	\$207.62
05311007	8.53	DRURY, NORRIS W TR	Tier 3 Groundwater	\$20.26	\$25.32	\$172.82	\$215.98
05311008	31.73	DE MARCO, ANTOINETTE R EST	Tier 3 Groundwater	\$20.26	\$25.32	\$642.85	\$803.40
05311012	38.71	BELLUOMINI, GERALD A & JANE E TR	Tier 3 Groundwater	\$20.26	\$25.32	\$784.26	\$980.14
05311013	71.29	DISCH, ROBERT W & BETTY J TR	Tier 3 Groundwater	\$20.26	\$25.32	\$1,444.34	\$1,805.06
05324002	10.61	MORENO, MICHAEL R TR	Tier 2 Groundwater	\$40.51	\$50.64	\$429.81	\$537.29
05324003	10.58	LIU, ROGER & TERRFENEY T	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05324004	10.00	MISE, OVELIA	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
05324005	10.01	GOODMILLS FAMILY WINERY LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$405.51	\$506.91
05324006	10.00	HOLLAND, JAMES R & TERESA TR	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
05324007	10.00	HUBBART, GARRETT & JANA	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
05324009	10.24	PESAVENTO, KENNETH M & JENNIFER J	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05324010	14.92	REALON, REYNALDO & MARYSOL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05325001	10.03	HOLCK, WILLIAM D & JANET L TR	Tier 2 Groundwater	\$40.51	\$50.64	\$406.32	\$507.92
05325002	10.07	HOPSON, WILLIAM K & CYNTHIA M TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05325003	10.09	MEZA, JESUS E & ESTHELA	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05325004	10.29	BICKFORD, PAUL H & HEATHER A TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05325005	10.68	BAKER, JO ANN SLATES ANDERSON TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05325006	10.18	METTLER, LARRY P & CHARLENE D TR	Tier 2 Groundwater	\$40.51	\$50.64	\$412.39	\$515.52
05325007	10.09	FOWLER, STEVEN & I	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05811015	10.77	DEL CASTILLO, JAIME & ZULLEMA	Tier 2 Groundwater	\$40.51	\$50.64	\$436.29	\$545.39
05811016	8.91	SCHOCK, ROBERT V & DIANE M TR	Tier 2 Groundwater	\$40.51	\$50.64	\$360.94	\$451.20
05811017	9.70	NITTA, GORDON YASUHIKO & TATSUKO ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$392.95	\$491.21
05811020	8.16	SHERGILL, HARBHAJAN S & DEVINDER K	Tier 2 Groundwater	\$40.51	\$50.64	\$330.56	\$413.22
05811022	5.02	HERRERA, JOSE R & DEBRA	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05811029	6.49	DIEDE FARMS LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$262.91	\$328.65
05811031	5.95	DEL CASTILLO, MARCIANO & BERTHA	Tier 2 Groundwater	\$40.51	\$50.64	\$241.03	\$301.31
05811032	5.95	REESE, STEVEN A	Tier 2 Groundwater	\$40.51	\$50.64	\$241.03	\$301.31
05811033	8.44	LERNER, KYLE & JORJA	Tier 2 Groundwater	\$40.51	\$50.64	\$341.90	\$427.40
05811035	5.44	LERNER, KYLE & JORJA	Tier 2 Groundwater	\$40.51	\$50.64	\$220.37	\$275.48
05811042	7.81	JOHAL, DALBIR	Tier 2 Groundwater	\$40.51	\$50.64	\$316.38	\$395.50
05811044	25.48	TSUTSUMI, DIANE Y ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$1,032.19	\$1,290.31
05811045	10.73	TSUTSUMI HOLMES LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$434.67	\$543.37
05811052	33.52	DIEDE FARMS LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$1,357.90	\$1,697.45
05811053	9.00	DIEDE FARMS LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$364.59	\$455.76
05812010	9.00	KESZLER, IRENE O TR	Tier 2 Groundwater	\$40.51	\$50.64	\$364.59	\$455.76
05812013	10.29	KESZLER, IRENE O TR	Tier 2 Groundwater	\$40.51	\$50.64	\$416.85	\$521.09
05812014	10.30	KESZLER, IRENE O TR	Tier 2 Groundwater	\$40.51	\$50.64	\$417.25	\$521.59
05812016	9.27	KESZLER, IRENE O TR	Tier 2 Groundwater	\$40.51	\$50.64	\$375.53	\$469.43
05910002	208.53	SAN JOAQUIN, COUNTY OF	Tier 1 Channel D	\$44.61	\$55.77	\$9,302.52	\$11,629.72
05910011	38.05	KAUTZ, KURT & SANDRA	Tier 1 Channel D	\$44.61	\$55.77	\$1,697.41	\$2,122.05
05910012	82.00	KAUTZ, KURT & SANDRA	Tier 1 Channel D	\$44.61	\$55.77	\$3,658.02	\$4,573.14
05910026	7.68	KAUTZ, KURT & SANDRA	Tier 1 Channel D	\$44.61	\$55.77	\$342.60	\$428.31
05910036	26.05	ARMSTRONG & MICKE FARMS LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$1,055.29	\$1,319.17
05910039	5.87	DANIEL, GARY R TR	Tier 2 Groundwater	\$40.51	\$50.64	\$237.79	\$297.26
05910041	32.89	ARMSTRONG & MICKE FARMS LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$1,332.37	\$1,665.55
05910042	45.01	PUCCINELLI, GIUSEPPE & GRACE TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,823.36	\$2,279.31
05910046	16.18	ARMSTRONG & MICKE FARMS LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$655.45	\$819.36
05911001	39.86	LIND, MARTHA J ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$1,614.73	\$2,018.51

APN	Acres	Owner	Assessment Category	Basic Rate Per Acre	Maximum Rate Per Acre	Basic Annual Assessment	Maximum Annual Assessment
05911004	40.14	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$1,626.07	\$2,032.69
05911005	40.14	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$1,626.07	\$2,032.69
05911008	37.35	GOLDEN BEAR RANCH PROPERTIES LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$1,513.05	\$1,891.40
05913006	6.76	TARDITI, SHELLEY	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05913007	5.22	FEHLING, CLARENCE H SR & ANITA I TR	Tier 2 Groundwater	\$40.51	\$50.64	\$211.46	\$264.34
05913008	10.00	BARLET, KEVIN CHRISTOPHER & JILLIAN O	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05913010	14.56	GOTELLI, PATRICK J & VICTORIA L ETAL	Tier 1 Channel D	\$44.61	\$55.77	\$649.52	\$812.01
05913011	19.30	FEHLING, CLARENCE H SR & ANITA I TR	Tier 2 Groundwater	\$40.51	\$50.64	\$781.84	\$977.35
05913015	10.90	QUASCHNICK, MARGARET O TR	Tier 2 Groundwater	\$40.51	\$50.64	\$441.56	\$551.98
05913016	19.17	QUASCHNICK, MICHAEL R & PATRICIA A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$776.58	\$970.77
05913019	7.80	QUASCHNICK, MARGARET O TR	Tier 2 Groundwater	\$40.51	\$50.64	\$315.98	\$394.99
05913020	24.97	QUASCHNICK, MARGARET O TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,011.53	\$1,264.48
05914002	67.02	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$2,714.98	\$3,393.89
05914009	7.73	DELASAU, THOMAS G	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05914016	15.85	JOHNSON, WILFRED GALEN & GLORIA JEAN TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05914017	28.00	KAUTZ, KURT & SANDRA	Tier 1 Channel B	\$43.54	\$54.42	\$1,219.12	\$1,523.76
05914020	20.00	AFTIAS, NICOLAOS & KIRIAKI TR	Tier 2 Groundwater	\$40.51	\$50.64	\$810.20	\$1,012.80
05914022	20.00	COSTAMAGNA, E B ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$810.20	\$1,012.80
05914035	14.51	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$587.80	\$734.79
05914036	19.00	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$769.69	\$962.16
05914037	16.26	HUSSAIN, ASHRAF	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05914049	7.87	LODUCA, ANGELO J & SHARON K TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05914050	7.61	LODUCA, FRANK P JR & MARIA L TR	Tier 2 Groundwater	\$40.51	\$50.64	\$308.28	\$385.37
05914054	11.67	LODUCA, FRANK P JR & MARIA L TR	Tier 2 Groundwater	\$40.51	\$50.64	\$472.75	\$590.97
05914057	10.00	CARRASCO, MARIO & J ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05914058	10.00	BEDI, AMARJIT & SWARANJIT	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05914062	11.60	SCHWARTZ, GERALD & DEBORAH TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05920003	49.40	SAN JOAQUIN, COUNTY OF	Tier 1 Channel D	\$44.61	\$55.77	\$2,203.73	\$2,755.04
05920006	14.65	STADEROLI, JOHN TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05921006	9.58	SELLERS, DAVID E TR ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05921023	7.90	STOCKTON CITY OF	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05921030	6.22	INEZS PARTNERS LP	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05921047	9.10	IMAAAN PROPERTIES LLC	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05921048	5.47	SPEARE, STANTON W & DIANA M	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05921049	5.60	WARNEKE, WALTER V & JEANETTE	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05921050	5.71	GALLI, ELAINE SPEARE	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05921051	6.63	GALLI, ELAINE SPEARE	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05926001	10.09	CITADEL BROADCASTING COMPANY	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05926009	41.42	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$1,677.92	\$2,097.51
05926010	15.87	TARDITI RENTALS LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$642.89	\$803.66
05926015	9.86	BENNETT, FRED SHALER TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$399.43	\$499.31
05926033	11.25	LODI MOTORCYCLE CLUB	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05926037	19.12	TARDITI, TERRY M TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$774.55	\$968.24
05926038	20.96	KHAN, ZAMAN ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05926045	14.01	NGUYEN, DAN V & XUAN T ETAL	Tier 1 Channel B	\$43.54	\$54.42	\$610.00	\$762.42
05926048	14.19	PHAN, KHOA VAN ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05926052	21.24	LEFFLER FAMILY PARTNERSHIP	Tier 1 Channel B	\$43.54	\$54.42	\$924.79	\$1,155.88
05926054	7.86	KHAN, ZAMAN ETAL	Tier 1 Channel B	\$43.54	\$54.42	\$342.22	\$427.74
05926056	10.29	KHAN, ZAMAN ETAL	Tier 1 Channel B	\$43.54	\$54.42	\$448.03	\$559.98
05926060	8.75	WING, MARIE E	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05926061	5.75	CHEN, CHIN-HSUEH H	Tier 2 Groundwater	\$40.51	\$50.64	\$232.93	\$291.18
05926064	9.56	GATES, MARTIN & DIANE M TR	Tier 2 Groundwater	\$40.51	\$50.64	\$387.28	\$484.12
05926065	5.79	LINDSTROM, ROBERT & J TRS	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05926070	104.00	LEFFLER FAMILY PARTNERS	Tier 2 Groundwater	\$40.51	\$50.64	\$4,213.04	\$5,266.56
05926072	14.99	ANDERS, COREY & ELISA OROSCO	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
05926078	8.03	HEAD, ARTHUR E & NIKKI L TR	Tier 2 Groundwater	\$40.51	\$50.64	\$325.30	\$406.64
05926083	14.78	HARVEST BIBLE CHURCH INC	Tier 1 Channel B	\$43.54	\$54.42	\$643.52	\$804.33
05926084	47.76	FERREIRA, JOHN D & SANDRA M TR ETAL	Tier 1 Channel B	\$43.54	\$54.42	\$2,079.47	\$2,599.10

APN	Acres	Owner	Assessment Category	Basic Rate Per Acre	Maximum Rate Per Acre	Basic Annual Assessment	Maximum Annual Assessment
05926086	46.60	FERREIRA, JOHN D & SANDRA M TR ETAL	Tier 1 Channel B	\$43.54	\$54.42	\$2,028.96	\$2,535.97
06102003	2.69	BECKMAN, MARCIA A TR ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$54.50	\$68.11
06102004	6.00	BECKMAN, MARCIA A TR	Tier 3 Groundwater	\$20.26	\$25.32	\$121.56	\$151.92
06102005	3.56	BECKMAN, MARCIA A TR	Tier 3 Groundwater	\$20.26	\$25.32	\$72.13	\$90.14
06102006	3.87	BECKMAN, MARCIA A TR	Tier 3 Groundwater	\$20.26	\$25.32	\$78.41	\$97.99
06102007	6.11	ANAGNOS, JOHN A	Tier 3 Groundwater	\$20.26	\$25.32	\$123.79	\$154.71
06102008	6.32	ISLAMIC CEMETERY OF CAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06102010	9.86	MANNA, MICHAEL L & LISA R TR	Tier 3 Groundwater	\$20.26	\$25.32	\$199.76	\$249.66
06102011	9.86	MANNA, MICHAEL L & LISA R TR	Tier 3 Groundwater	\$20.26	\$25.32	\$199.76	\$249.66
06102012	9.85	IRWIN, J CHARLES TR ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$199.56	\$249.40
06102013	9.05	FUKUNAGA, RITSUYE TR	Tier 3 Groundwater	\$20.26	\$25.32	\$183.35	\$229.15
06102014	9.85	MANNA, MICHAEL L & LISA R TR	Tier 3 Groundwater	\$20.26	\$25.32	\$199.56	\$249.40
06102015	8.81	HOFFMAN, LORENE N TR ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$178.49	\$223.07
06102022	7.73	CHEROKEE, MEMORIAL PARK	Tier 3 Groundwater	\$20.26	\$25.32	\$156.61	\$195.72
06103003	10.00	PERLEGOS, GEORGIA ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$202.60	\$253.20
06103004	27.00	BECKMAN, WILLIAM TROY TR	Tier 3 Groundwater	\$20.26	\$25.32	\$547.02	\$683.64
06103013	19.40	JUNGBLUT, DUANE M & A TRS	Tier 3 Groundwater	\$20.26	\$25.32	\$393.04	\$491.21
06103016	9.83	NICKEL, ESTHER I TR ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$199.16	\$248.90
06103017	9.83	NICKEL, STEVE K & LAURA M TR ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$199.16	\$248.90
06103018	9.83	NICKEL, ESTHER I TR ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$199.16	\$248.90
06103019	9.83	NICKEL, ESTHER I TR ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$199.16	\$248.90
06103020	19.11	NICKEL, ESTHER I TR ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$387.17	\$483.87
06103024	9.52	HALE, JAMES P & SANDRA M TR	Tier 3 Groundwater	\$20.26	\$25.32	\$192.88	\$241.05
06103026	19.67	BECKMAN, WILLIAM TROY TR	Tier 3 Groundwater	\$20.26	\$25.32	\$398.51	\$498.04
06103035	7.65	WOODBIDGE GARDENS INC	Tier 3 Groundwater	\$20.26	\$25.32	\$154.99	\$193.70
06103037	7.14	TECKLENBURG, JON D TR	Tier 3 Groundwater	\$20.26	\$25.32	\$144.66	\$180.78
06103041	19.92	EBC FARMS LLC	Tier 3 Groundwater	\$20.26	\$25.32	\$403.58	\$504.37
06103048	9.65	CHEROKEE MEMORIAL PARK	Tier 3 Groundwater	\$20.26	\$25.32	\$195.51	\$244.34
06103052	23.02	WOODBIDGE GARDENS INC	Tier 3 Groundwater	\$20.26	\$25.32	\$466.39	\$582.87
06103055	27.15	CHEROKEE MEMORIAL PARK	Tier 3 Groundwater	\$20.26	\$25.32	\$550.06	\$687.44
06103056	0.32	WOODBIDGE GARDENS INC	Tier 3 Groundwater	\$20.26	\$25.32	\$6.48	\$8.10
06103057	8.40	PERLEGOS, GEORGIA ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$170.18	\$212.69
06103059	18.15	HALE, JAMES P & SANDRA M TR	Tier 3 Groundwater	\$20.26	\$25.32	\$367.72	\$459.56
06103064	0.15	TECKLENBURG, JON D TR	Tier 3 Groundwater	\$20.26	\$25.32	\$2.99	\$3.74
06103066	13.70	BLINCOE, JANET STEWART	Tier 3 Groundwater	\$20.26	\$25.32	\$277.56	\$346.88
06103068	16.45	TECKLENBURG, JON D TR	Tier 3 Groundwater	\$20.26	\$25.32	\$333.28	\$416.51
06103069	0.15	TECKLENBURG, LEE E ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$2.99	\$3.74
06103071	51.18	CHEROKEE MEMORIAL PARK INC	Tier 3 Groundwater	\$20.26	\$25.32	\$1,036.91	\$1,295.88
06104023	1.53	WOODBIDGE GARDENS INC	Tier 3 Groundwater	\$20.26	\$25.32	\$31.00	\$38.74
06104028	6.00	KIRBY, DEENA TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06104029	18.82	KAUTZ, KURT & SANDRA	Tier 3 Groundwater	\$20.26	\$25.32	\$381.29	\$476.52
06104033	3.68	WOODBIDGE GARDENS INC	Tier 3 Groundwater	\$20.26	\$25.32	\$74.56	\$93.18
06105007	10.00	JUNGBLUT, DUANE M & A TRS	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
06105008	10.33	EELLS, JASON P & KIMBERLY A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$418.47	\$523.11
06105009	9.24	EELLS, JASON P & KIMBERLY A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$374.31	\$467.91
06106010	17.00	STARR, CHARLES E IV & SANDRA L TR	Tier 2 Groundwater	\$40.51	\$50.64	\$688.67	\$860.88
06106012	5.37	BASSETT, SAMUEL TAYLOR TR	Tier 2 Groundwater	\$40.51	\$50.64	\$217.54	\$271.94
06106013	6.36	JOHAL, DALBIR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06106017	5.00	GATTO, LEROY J	Tier 2 Groundwater	\$40.51	\$50.64	\$202.55	\$253.20
06106019	12.22	COLOR SPOT NURSERIES INC	Tier 2 Groundwater	\$40.51	\$50.64	\$495.03	\$618.82
06106021	5.87	COLOR SPOT NURSERIES INC	Tier 2 Groundwater	\$40.51	\$50.64	\$237.79	\$297.26
06106022	17.71	COLOR SPOT NURSERIES INC	Tier 2 Groundwater	\$40.51	\$50.64	\$717.43	\$896.83
06107001	33.04	ROMAN CATHOLIC WELFARE CORP STKN	Tier 2 Groundwater	\$40.51	\$50.64	\$1,338.45	\$1,673.15
06107002	8.99	ROMAN CATHOLIC WELFARE CORP STKN	Tier 2 Groundwater	\$40.51	\$50.64	\$364.18	\$455.25
06107003	29.44	ROMAN CATHOLIC WELFARE CORP STKN	Tier 2 Groundwater	\$40.51	\$50.64	\$1,192.61	\$1,490.84
06107005	30.71	DELTA PACKING CO	Tier 2 Groundwater	\$40.51	\$50.64	\$1,244.06	\$1,555.15
06107006	13.24	FELKINS, JEANETTE L TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$536.35	\$670.47
06107011	9.82	ROBERT L & CAROLYN W REYNOLDS FAM LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$397.81	\$497.28

APN	Acres	Owner	Assessment Category	Basic Rate Per Acre	Maximum Rate Per Acre	Basic Annual Assessment	Maximum Annual Assessment
06107012	10.67	SCHMIDT, FREDERICK D TR	Tier 2 Groundwater	\$40.51	\$50.64	\$432.24	\$540.33
06107013	16.19	ROBERT L & CAROLYN W REYNOLDS FAM LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$655.86	\$819.86
06107014	23.92	ROBERT L & CAROLYN W REYNOLDS FAM LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$969.00	\$1,211.31
06107015	29.82	JJR RANCH LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$1,208.01	\$1,510.08
06107016	38.99	REYNOLDS RANCHES PTP	Tier 2 Groundwater	\$40.51	\$50.64	\$1,579.48	\$1,974.45
06107021	20.44	LIEBELT, LEROY TR	Tier 2 Groundwater	\$40.51	\$50.64	\$828.02	\$1,035.08
06107024	14.51	LIEBELT, LEROY M TR	Tier 2 Groundwater	\$40.51	\$50.64	\$587.80	\$734.79
06108006	6.42	SINGH MANGAT, CHIRANJEEV & K	Tier 2 Groundwater	\$40.51	\$50.64	\$260.07	\$325.11
06108007	7.08	TIWANA, AMRITPAL S	Tier 2 Groundwater	\$40.51	\$50.64	\$286.81	\$358.53
06108008	7.48	TIWANA, AMRITPAL S ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$303.01	\$378.79
06108011	44.44	HOGAN RANCH	Tier 2 Groundwater	\$40.51	\$50.64	\$1,800.26	\$2,250.44
06108016	7.38	VILLA CEREZOS LLC	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06108018	7.76	ELKINS, CARL A TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$314.36	\$392.97
06108020	8.77	TIWANA, AMRITPAL S	Tier 2 Groundwater	\$40.51	\$50.64	\$355.27	\$444.11
06108021	5.00	HENRY, JAMES A & CATHERINE L	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06108022	5.28	JENNINGS, MICHAEL R SR & BEVERLY	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06109001	7.65	CASTAGNO, PRIMO TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$309.90	\$387.40
06109017	8.12	KAUTZ, JOHN FREDRICK TR	Tier 1 Channel D	\$44.61	\$55.77	\$362.23	\$452.85
06109019	9.24	SANCHEZ, JOB & ELENA	Tier 2 Groundwater	\$40.51	\$50.64	\$374.31	\$467.91
06109041	9.23	KAUTZ, KURT & SANDRA	Tier 1 Channel D	\$44.61	\$55.77	\$411.75	\$514.76
06109042	9.23	KAUTZ, KURT & SANDRA	Tier 1 Channel D	\$44.61	\$55.77	\$411.75	\$514.76
06109043	8.80	MCCLLOUD, BRIAN J	Tier 2 Groundwater	\$40.51	\$50.64	\$356.49	\$445.63
06110001	20.00	RIDDLESBERGER, WILFORD & JOAN TR	Tier 2 Groundwater	\$40.51	\$50.64	\$810.20	\$1,012.80
06110002	5.00	RIDDLESBERGER, WILFORD & JOAN TR	Tier 2 Groundwater	\$40.51	\$50.64	\$202.55	\$253.20
06110003	5.00	KESZLER, IRENE O TR	Tier 2 Groundwater	\$40.51	\$50.64	\$202.55	\$253.20
06110004	5.00	KESZLER, IRENE O TR	Tier 2 Groundwater	\$40.51	\$50.64	\$202.55	\$253.20
06110005	10.00	KESZLER, IRENE O TR	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
06110017	5.12	KAUTZ, JOHN FREDRICK TR	Tier 1 Channel D	\$44.61	\$55.77	\$228.40	\$285.54
06110022	11.42	KAUTZ, JOAN MARIE	Tier 1 Channel D	\$44.61	\$55.77	\$509.45	\$636.89
06110026	1.78	KAUTZ, JOHN H & GAIL E TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06110027	10.24	KAUTZ, KURT & SANDRA	Tier 1 Channel D	\$44.61	\$55.77	\$456.81	\$571.08
06110032	13.10	KAUTZ, JOAN MARIE	Tier 1 Channel D	\$44.61	\$55.77	\$584.39	\$730.59
06110035	20.44	KAUTZ, JOHN H & GAIL E TR	Tier 1 Channel D	\$44.61	\$55.77	\$911.83	\$1,139.94
06110036	14.13	KAUTZ, JOHN H & GAIL E TR	Tier 1 Channel D	\$44.61	\$55.77	\$630.34	\$788.03
06110037	10.00	KAUTZ, JOHN H & GAIL E TR	Tier 1 Channel D	\$44.61	\$55.77	\$446.10	\$557.70
06110038	14.02	KAUTZ, JOHN H & GAIL E TR	Tier 1 Channel D	\$44.61	\$55.77	\$625.43	\$781.90
06112030	5.00	FITZPATRICK, PATRICK W & K M TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06112031	5.00	BENTZ, ROGER & JACKIE	Tier 2 Groundwater	\$40.51	\$50.64	\$202.55	\$253.20
06112039	7.66	JOHNSON, ROLLAND & NORMA TR	Tier 2 Groundwater	\$40.51	\$50.64	\$310.31	\$387.90
06112049	5.02	HOUSTON, JENNIFER D	Tier 2 Groundwater	\$40.51	\$50.64	\$203.36	\$254.21
06112054	5.00	CRUSOS, ERNEST J & LORENE J	Tier 2 Groundwater	\$40.51	\$50.64	\$202.55	\$253.20
06112055	5.00	BETHARDS, GROVER C III & SHARRON J ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06113103	5.35	OCONNOR, JAY S & KATHLEEN M TR	Tier 3 Groundwater	\$20.26	\$25.32	\$108.39	\$135.46
06113108	10.16	JUNGBLUT, ROSEMARY TR ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$205.84	\$257.25
06113113	12.85	METTLER, BURNES R TR	Tier 3 Groundwater	\$20.26	\$25.32	\$260.34	\$325.36
06113114	6.13	METTLER, BURNES R & SALLY A TR	Tier 3 Groundwater	\$20.26	\$25.32	\$124.19	\$155.21
06113115	5.92	REISWIG, DANNY & MELODY	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06113117	32.25	PERLEGOS, GEORGE ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$1,306.45	\$1,633.14
06113119	7.75	GAYDON, STERLING & SUSAN P	Tier 3 Groundwater	\$20.26	\$25.32	\$157.02	\$196.23
06113120	6.97	METTLER, BURNES R & SALLY A TR	Tier 3 Groundwater	\$20.26	\$25.32	\$141.21	\$176.48
06113122	18.26	METTLER, BURNES R & SALLY A TR	Tier 3 Groundwater	\$20.26	\$25.32	\$369.95	\$462.34
06113123	3.11	METTLER, BARRY & SHAWNEE S	Tier 3 Groundwater	\$20.26	\$25.32	\$63.01	\$78.75
06113201	9.63	GOMEZ, MARGARITO & SILVIA TR	Tier 2 Groundwater	\$40.51	\$50.64	\$390.11	\$487.66
06113208	40.00	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$1,620.40	\$2,025.60
06113209	5.30	SHAW, MATTHEW DAVID	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06113210	7.20	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$291.67	\$364.61
06113211	11.75	NICKEL, STEVEN K & LAURA M TR	Tier 2 Groundwater	\$40.51	\$50.64	\$475.99	\$595.02
06113226	9.84	BERTOLUCCI, JOSEPH V & REBECCA L	Tier 2 Groundwater	\$40.51	\$50.64	\$398.62	\$498.30

APN	Acres	Owner	Assessment Category	Basic Rate Per Acre	Maximum Rate Per Acre	Basic Annual Assessment	Maximum Annual Assessment
06113227	9.99	PERLEGOS, JEFF ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$404.69	\$505.89
06113231	13.17	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$533.52	\$666.93
06113232	20.00	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$810.20	\$1,012.80
06113236	27.26	PERLEGOS, GEORGE ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$552.29	\$690.22
06113243	18.47	SHIMOZAKI, KAZUKO TR	Tier 2 Groundwater	\$40.51	\$50.64	\$748.22	\$935.32
06113246	9.44	NOMA, LELAND D	Tier 3 Groundwater	\$20.26	\$25.32	\$191.25	\$239.02
06113252	29.71	THOMPSON, JAMES J TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$1,203.55	\$1,504.51
06113253	9.65	THOMPSON, JAMES J TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$390.92	\$488.68
06113257	7.68	NOMA, LELAND DAN & JANET	Tier 3 Groundwater	\$20.26	\$25.32	\$155.60	\$194.46
06113258	2.01	NOMA, LELAND DAN & JANET	Tier 3 Groundwater	\$20.26	\$25.32	\$40.72	\$50.89
06113261	16.96	NOMA, LELAND D & JANET F	Tier 3 Groundwater	\$20.26	\$25.32	\$343.61	\$429.43
06113265	9.85	POWERS, KATHLEEN A TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$399.02	\$498.80
06113266	5.00	POWERS, KATHLEEN A TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$202.55	\$253.20
06113302	15.00	MIKAWA, KEN	Tier 2 Groundwater	\$40.51	\$50.64	\$607.65	\$759.60
06113303	10.00	MASON RITZMAN, PROP CORP	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
06113304	10.00	BAKER, FLOYD A & LINDA C TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
06113305	19.70	TAUNTON, IONE V TR	Tier 2 Groundwater	\$40.51	\$50.64	\$798.05	\$997.61
06113306	19.70	POWERS, KATHLEEN A TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$798.05	\$997.61
06113308	13.00	JONSSON, BRUCE T	Tier 2 Groundwater	\$40.51	\$50.64	\$526.63	\$658.32
06113309	9.40	LIBERATO, MICHAEL V & DONNA C	Tier 2 Groundwater	\$40.51	\$50.64	\$380.79	\$476.02
06113310	10.00	FUKUNAGA, YUKIYE TR	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
06113311	10.00	KENDALL, BETTY JOE TR	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
06113312	10.00	JOHNSON, MARGARET B TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
06113314	11.25	JOHNSON, MARGARET B TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$455.74	\$569.70
06113315	16.97	THOMPSON, DONN L & ARLENE	Tier 2 Groundwater	\$40.51	\$50.64	\$687.45	\$859.36
06113319	32.65	J & M FARMS	Tier 2 Groundwater	\$40.51	\$50.64	\$1,322.65	\$1,653.40
06113320	11.21	WIEDERRICH, JAMES L & JANICE TR	Tier 2 Groundwater	\$40.51	\$50.64	\$454.12	\$567.67
06113327	15.00	HALE, JAMES P & SANDRA M TR	Tier 2 Groundwater	\$40.51	\$50.64	\$607.65	\$759.60
06113328	24.74	METTLER, LAWRENCE P & CHARLENE D TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,002.22	\$1,252.83
06113329	27.83	METTLER, LAWRENCE & CHARLENE TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,127.39	\$1,409.31
06113330	40.44	J & M FARMS	Tier 2 Groundwater	\$40.51	\$50.64	\$1,638.22	\$2,047.88
06113331	12.46	PICAZO, ALFONSO & MARTHA TR	Tier 2 Groundwater	\$40.51	\$50.64	\$504.75	\$630.97
06113332	14.43	SIMPSON, DAVID R & SANDRA A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$584.56	\$730.74
06113333	12.36	SIMPSON, DAVID R & SANDRA A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$500.70	\$625.91
06113334	39.40	METTLER, ADAM PHILLIP & ALYSON MARIE TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,596.09	\$1,995.22
06113335	38.26	METTLER, DAVID T & ALYSSA M TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,549.91	\$1,937.49
06113338	41.49	WIEDERRICH, NORTON & ADRIENNE TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$1,680.76	\$2,101.05
06113339	18.00	WIEDERRICH, NORTON & ADRIENNE TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$729.18	\$911.52
06114001	7.00	CANEPA, JEFF & ALLISON	Tier 2 Groundwater	\$40.51	\$50.64	\$283.57	\$354.48
06114002	29.51	F & L COSTA FAMILY LP	Tier 2 Groundwater	\$40.51	\$50.64	\$1,195.45	\$1,494.39
06114003	17.48	DASSO, ANDREW & MARGARET TR	Tier 2 Groundwater	\$40.51	\$50.64	\$708.11	\$885.19
06114004	33.06	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$1,339.26	\$1,674.16
06114005	7.55	DART, DAVID & HELEN	Tier 2 Groundwater	\$40.51	\$50.64	\$305.85	\$382.33
06114013	10.25	BATCH, ROBERT R II & AMBER N	Tier 2 Groundwater	\$40.51	\$50.64	\$415.23	\$519.06
06114016	8.36	WILLIAMS, LUTHER & MARJORIE TR	Tier 2 Groundwater	\$40.51	\$50.64	\$338.66	\$423.35
06114017	10.52	QUASCHNICK, JAMES A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$426.17	\$532.73
06114018	9.25	QUASCHNICK, JAMES A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$374.72	\$468.42
06114023	23.28	RAYNOR, CHARLES W TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$943.07	\$1,178.90
06114024	10.00	KAIDA, RODNEY KAY ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
06114026	13.47	BATTH, JAGMOHAN S & PRABHJOT TR	Tier 2 Groundwater	\$40.51	\$50.64	\$545.67	\$682.12
06114027	13.83	NOMA, LELAND D & JANET F	Tier 2 Groundwater	\$40.51	\$50.64	\$560.25	\$700.35
06114028	35.62	NOMA, LELAND D	Tier 2 Groundwater	\$40.51	\$50.64	\$1,442.97	\$1,803.80
06114032	16.45	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$666.39	\$833.03
06114037	19.92	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$806.96	\$1,008.75
06114045	20.02	NOMA, LELAND D & JANET F	Tier 2 Groundwater	\$40.51	\$50.64	\$811.01	\$1,013.81
06114047	60.76	ALVIN & P J GOTELLI FAM LP ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$2,461.39	\$3,076.89
06114048	50.00	BECKMAN, WILLIAM TROY TR	Tier 2 Groundwater	\$40.51	\$50.64	\$2,025.50	\$2,532.00
06114049	50.00	BECKMAN, WILLIAM TROY TR	Tier 2 Groundwater	\$40.51	\$50.64	\$2,025.50	\$2,532.00

APN	Acres	Owner	Assessment Category	Basic Rate Per Acre	Maximum Rate Per Acre	Basic Annual Assessment	Maximum Annual Assessment
06114054	34.70	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$1,405.70	\$1,757.21
06114060	16.85	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$682.59	\$853.28
06114063	17.05	CAFFESE, ROBERT A & KIMBERLY TR	Tier 2 Groundwater	\$40.51	\$50.64	\$690.70	\$863.41
06114066	37.47	NOMA, LELAND & JANET	Tier 2 Groundwater	\$40.51	\$50.64	\$1,517.91	\$1,897.48
06114067	38.10	METTLER, BURNES R & SALLY A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,543.43	\$1,929.38
06114069	37.59	GRUNSKY, TIMOTHY J & LYNN M TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,522.77	\$1,903.56
06114072	14.64	QUASCHNICK, JAMES A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$593.07	\$741.37
06114073	17.09	PAUL, DALLAS C JR TR	Tier 2 Groundwater	\$40.51	\$50.64	\$692.32	\$865.44
06114074	2.75	PAUL, DALLAS C JR TR	Tier 2 Groundwater	\$40.51	\$50.64	\$111.40	\$139.26
06114075	13.08	RHINEHART, LARRIE L TR	Tier 2 Groundwater	\$40.51	\$50.64	\$529.87	\$662.37
06114076	13.49	METCALF, ARNOLD E & PATRICIA TR	Tier 2 Groundwater	\$40.51	\$50.64	\$546.48	\$683.13
06114077	13.49	HANDEL, GLENN H & PAULA J TR	Tier 2 Groundwater	\$40.51	\$50.64	\$546.48	\$683.13
06115004	9.62	FASSI, FRANK W TR	Tier 2 Groundwater	\$40.51	\$50.64	\$389.71	\$487.16
06115013	7.36	DURSTON, DAVID & SHELBA	Tier 2 Groundwater	\$40.51	\$50.64	\$298.15	\$372.71
06115014	19.79	GOLDSTONE LAND CO LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$801.69	\$1,002.17
06115026	5.00	HARR, HELEN TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06115038	5.95	SLD HOLDINGS LLC	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06115039	6.33	BELLATO, THOMAS L	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06115040	6.33	RINGROSE, KRISTINA A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$256.43	\$320.55
06115041	6.33	BRIGGS, SHARON A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$256.43	\$320.55
06115042	6.33	BATCH, JOHN & MELISSA	Tier 2 Groundwater	\$40.51	\$50.64	\$256.43	\$320.55
06115043	6.33	STROTE, JOYCE CAROL	Tier 2 Groundwater	\$40.51	\$50.64	\$256.43	\$320.55
06115044	6.33	HEDRICK, DELPHINE	Tier 2 Groundwater	\$40.51	\$50.64	\$256.43	\$320.55
06115045	6.31	BRUNSKILL, STEPHEN	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06116002	38.50	KAUTZ, KURT & SANDRA	Tier 1 Channel D	\$44.61	\$55.77	\$1,717.49	\$2,147.15
06116005	60.00	OYE, RONALD T & MICHIKO Y TR	Tier 1 Channel D	\$44.61	\$55.77	\$2,676.60	\$3,346.20
06116006	57.02	KAUTZ, KURT & SANDRA	Tier 1 Channel D	\$44.61	\$55.77	\$2,543.66	\$3,180.01
06116009	79.66	KAUTZ, KURT & SANDRA	Tier 1 Channel D	\$44.61	\$55.77	\$3,553.63	\$4,442.64
06116011	26.69	KAUTZ, KURT & SANDRA	Tier 1 Channel D	\$44.61	\$55.77	\$1,190.64	\$1,488.50
06116012	26.69	KAUTZ, KURT & SANDRA	Tier 1 Channel D	\$44.61	\$55.77	\$1,190.64	\$1,488.50
06116013	17.27	SCHALLBERGER, LOUIE D & H TR ETL	Tier 1 Channel D	\$44.61	\$55.77	\$770.41	\$963.15
06116021	21.13	KAUTZ, KURT & SANDRA	Tier 1 Channel D	\$44.61	\$55.77	\$942.61	\$1,178.42
06116022	32.24	SILVA, ANTONIO M & NAOMI ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$1,306.04	\$1,632.63
06116026	72.74	GOLDSTONE LAND CO LLC	Tier 1 Channel D	\$44.61	\$55.77	\$3,244.93	\$4,056.71
06116029	26.31	FURCHNER, GERALD A ETAL	Tier 1 Channel D	\$44.61	\$55.77	\$1,173.69	\$1,467.31
06301006	10.84	EAST BAY M U D, LAND DIVISION	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06302010	39.17	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$1,586.78	\$1,983.57
06302011	78.38	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$3,175.17	\$3,969.16
06302012	40.00	KAUTZ, KURT & SANDRA	Tier 2 Groundwater	\$40.51	\$50.64	\$1,620.40	\$2,025.60
06302015	159.30	CAFFESE, ROBERT A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$6,453.24	\$8,066.95
06303001	143.17	CAFFESE, ROBERT A TR	Tier 1 Channel B	\$43.54	\$54.42	\$6,233.62	\$7,791.31
06303004	50.24	LEFFLER FAMILY PARTNERSHIP	Tier 1 Channel B	\$43.54	\$54.42	\$2,187.45	\$2,734.06
06303006	9.88	COTTA, & FERREIRA	Tier 2 Groundwater	\$40.51	\$50.64	\$400.24	\$500.32
06303010	40.00	ORIGONE LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$1,620.40	\$2,025.60
06303011	38.69	LEFFLER FAMILY PARTNERS	Tier 2 Groundwater	\$40.51	\$50.64	\$1,567.33	\$1,959.26
06303014	5.89	DANIEL, DELORES TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06303015	55.50	ORIGONE & ORIGONE PTP	Tier 2 Groundwater	\$40.51	\$50.64	\$2,248.31	\$2,810.52
06303017	59.88	IRALOS ENTERPRISES LP ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$2,425.74	\$3,032.32
06303018	16.53	SOLARI PROPERTIES LP ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$669.63	\$837.08
06303020	7.58	MOZNETT, ALLEN EDWARD & CARLA ANN TR	Tier 2 Groundwater	\$40.51	\$50.64	\$307.07	\$383.85
06303022	55.66	FIRPO, CARLO TR	Tier 1 Channel B	\$43.54	\$54.42	\$2,423.44	\$3,029.02
06303023	55.27	HANEY, JOY L TR	Tier 1 Channel B	\$43.54	\$54.42	\$2,406.46	\$3,007.79
06304001	35.03	PODESTA, JOHN & KATHLEEN TR	Tier 1 Channel B	\$43.54	\$54.42	\$1,525.21	\$1,906.33
06304003	20.00	SOLARI PROPERTIES LP ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$810.20	\$1,012.80
06304015	43.98	SOLARI PROPERTIES LP ETAL	Tier 1 Channel B	\$43.54	\$54.42	\$1,914.89	\$2,393.39
06304016	24.76	LEFFLER, WILBER JR TR	Tier 1 Channel B	\$43.54	\$54.42	\$1,078.05	\$1,347.44
06304022	5.33	SINCLAIR, JOHN W & PEGGY J TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06304024	18.50	SOLARI PROPERTIES LP ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$749.44	\$936.84

APN	Acres	Owner	Assessment Category	Basic Rate Per Acre	Maximum Rate Per Acre	Basic Annual Assessment	Maximum Annual Assessment
06304025	69.50	CORTOPASSI FARMS INC	Tier 2 Groundwater	\$40.51	\$50.64	\$2,815.45	\$3,519.48
06304026	1.50	CORTOPASSI, DEAN A TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06304029	30.81	CARLSON, ROBERT R ETAL	Tier 1 Channel B	\$43.54	\$54.42	\$1,341.47	\$1,676.68
06305012	5.00	SCHALLBERGER, LOUIE D & H TR ETL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06305013	6.47	FOWLER, ELIZABETH E TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06305033	78.83	PODESTA, JOHN & KATHLEEN ANN TR	Tier 1 Channel B	\$43.54	\$54.42	\$3,432.26	\$4,289.93
06305034	83.12	VIGNOLO, JOHN D JR TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$3,367.19	\$4,209.20
06305049	5.50	CLOSE, TERRENCE E SR & CYNTHIA	Tier 2 Groundwater	\$40.51	\$50.64	\$222.81	\$278.52
06305055	8.57	GUTHRIE, KATHLEEN M	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06305062	57.14	KAUTZ, KURT & SANDRA	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$5,642.58	\$7,053.36
06305063	52.89	KAUTZ, KURT & SANDRA	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$5,222.89	\$6,528.74
06305064	17.33	VAN STEYN, PETE & LYDIA TR	Tier 1 Channel D	\$44.61	\$55.77	\$773.09	\$966.49
06306004	22.12	HANDEL, ERIC D	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$2,184.35	\$2,730.49
06306007	12.00	HECKENLAIBLE, JULIA B TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,185.00	\$1,481.28
06306008	12.00	LERNER, KYLE & JORJA	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,185.00	\$1,481.28
06306010	21.18	NITTA, DOROTHY S TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$2,091.53	\$2,614.46
06306011	20.49	TRIFIRO, JOSEPH S & OLIVIA M TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$2,023.39	\$2,529.29
06306022	36.38	NICOLAOU, BILL TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$3,592.53	\$4,490.75
06306026	64.03	MMG LLC	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$6,322.96	\$7,903.86
06306027	2.01	MMG LLC	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$198.49	\$248.11
06306028	2.00	MMG LLC	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$197.50	\$246.88
06306031	15.75	HECKENLAIBLE, JULIA B TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,555.31	\$1,944.18
06306032	38.82	GRUNSKY, TIMOTHY J & LYNN M TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$3,833.48	\$4,791.94
06306036	35.56	GRUNSKY, TIMOTHY J & LYNN M TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$3,511.55	\$4,389.53
06306037	11.57	METTLER FAMILY PROPERTIES LP	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,142.54	\$1,428.20
06307015	19.62	HUTCHINS, DARYL L & TANIA A ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$794.81	\$993.56
06307020	13.00	JOHN & VARENE TERESI FAMILY LP	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,283.75	\$1,604.72
06307021	15.00	REGLA, ROBIN TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,481.25	\$1,851.60
06307022	20.07	DOI, STEVEN Y	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,981.91	\$2,477.44
06307036	13.56	POWERS, KATHLEEN A TR ETAL	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,339.05	\$1,673.85
06307038	5.20	PAULAT, ROBERT E & ROSANNE K TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06307042	7.50	CIPPONERI, VITO J & DARIA	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06307047	5.05	JOHN & VARENE TERESI FAMILY LP	Tier 2 Groundwater	\$40.51	\$50.64	\$204.58	\$255.73
06307048	5.11	TERESI, JOHN & V A TRS	Tier 2 Groundwater	\$40.51	\$50.64	\$207.01	\$258.77
06307049	5.24	JOHN & VARENE TERESI FAMILY LP	Tier 2 Groundwater	\$40.51	\$50.64	\$212.27	\$265.35
06307053	12.85	BABIN, ELIZABETH V	Tier 2 Groundwater	\$40.51	\$50.64	\$520.55	\$650.72
06307059	9.84	GOLDEN BEAR RANCH PROPERTIES LL	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$971.70	\$1,214.65
06307061	20.07	PETERSEN, JOSEPH P & JEANNETTE TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,981.91	\$2,477.44
06307062	11.77	PETERSEN, JOSEPH P & JEANNETTE TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,162.29	\$1,452.89
06307063	17.31	PETERSEN, JOSEPH P & JEANNETTE TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,709.36	\$2,136.75
06307065	83.97	GOLDEN BEAR RANCH PROPERTIES LLC	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$8,292.04	\$10,365.26
06308002	20.00	WOODRUFF, BARBARA L ETAL	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,975.00	\$2,468.80
06308004	19.55	WATTS, E C INC	Tier 2 Groundwater	\$40.51	\$50.64	\$791.97	\$990.01
06308013	10.00	SILVA, ANTHONY F JR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06308014	12.78	KENDALL, MURIAH	Tier 2 Groundwater	\$40.51	\$50.64	\$517.72	\$647.18
06308015	5.20	LAFEVER, MARSHALL TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06308018	20.00	SILVA, TONY JR	Tier 2 Groundwater	\$40.51	\$50.64	\$810.20	\$1,012.80
06308021	17.25	HOFFMAN, LUTHER L TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$698.80	\$873.54
06308023	19.10	C & T MURPHY PARTNERS LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$773.74	\$967.22
06308024	20.00	METTLER, BRADLEY L	Tier 2 Groundwater	\$40.51	\$50.64	\$810.20	\$1,012.80
06308033	35.87	METTLER, KEITH H ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$1,453.09	\$1,816.46
06308037	37.05	GRUNSKY, JACKSON M & MARISA J TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$3,658.69	\$4,573.45
06308039	9.90	METTLER, BRADLEY L	Tier 2 Groundwater	\$40.51	\$50.64	\$401.05	\$501.34
06308040	9.90	METTLER, BRAD L TR	Tier 2 Groundwater	\$40.51	\$50.64	\$401.05	\$501.34
06308041	10.00	RAVETTI, JOHN & KAREN	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$987.50	\$1,234.40
06308043	32.43	KAUTZ, KURT & SANDRA	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$3,202.46	\$4,003.16
06308046	20.00	TAMURA, JAMES T & JOCELYN	Tier 2 Groundwater	\$40.51	\$50.64	\$810.20	\$1,012.80
06308049	40.43	METTLER, KATHLEEN V TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$3,992.46	\$4,990.68

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06308050	17.71	DAVIS, NANCY L	Tier 2 Groundwater	\$40.51	\$50.64	\$717.43	\$896.83
06308051	22.37	METTLER, KEITH H ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$906.21	\$1,132.82
06308052	10.08	METTLER, KEITH H ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$408.34	\$510.45
06309005	9.99	CAPPER, JOSHUA ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06309006	16.49	HENDERSON, WANDA L TR	Tier 1 Channel C	\$41.92	\$52.40	\$691.26	\$864.08
06309009	10.03	HOGUE, JEFFREY & MYRA	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$990.46	\$1,238.10
06309013	43.00	KAUTZ, KURT & SANDRA	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$4,246.25	\$5,307.92
06309014	17.33	BUCKENHAM, MICHAEL A & NANCY L	Tier 1 Channel C	\$41.92	\$52.40	\$726.47	\$908.09
06309015	62.67	CORTOPASSI PARTNERS LP	Tier 1 Channel C	\$41.92	\$52.40	\$2,627.13	\$3,283.91
06310001	40.00	SCHALLBERGER, J.A & M.J TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,620.40	\$2,025.60
06310005	22.16	VALINOTI, RONALD L & SHARON L TR	Tier 2 Groundwater	\$40.51	\$50.64	\$897.70	\$1,122.18
06310006	22.16	CORTOPASSI PARTNERS LP	Tier 1 Channel B	\$43.54	\$54.42	\$964.85	\$1,205.95
06310009	10.00	ABDALLAH, EMAD	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06310017	15.89	CORTOPASSI PARTNERS LP	Tier 1 Channel B	\$43.54	\$54.42	\$691.85	\$864.73
06310018	19.00	CORTOPASSI PARTNERS LP	Tier 1 Channel B	\$43.54	\$54.42	\$827.26	\$1,033.98
06310020	38.14	VALINOTI, RONALD L & SHARON L TR	Tier 1 Channel B	\$43.54	\$54.42	\$1,660.62	\$2,075.58
06310026	131.97	COCOA FARMS LP	Tier 1 Channel B	\$43.54	\$54.42	\$5,745.97	\$7,181.81
06313002	10.00	CORTOPASSI PARTNERS LP	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40
06313010	47.37	COCOA FARMS LP	Tier 2 Groundwater	\$40.51	\$50.64	\$1,918.96	\$2,398.82
06314001	15.30	NUTTING, DAVID & DARLENE	Tier 1 Channel C	\$41.92	\$52.40	\$641.38	\$801.72
06314004	20.53	CORTOPASSI PARTNERS LP	Tier 1 Channel C	\$41.92	\$52.40	\$860.62	\$1,075.77
06314006	16.95	C&T MURPHY PARTNERS LLC	Tier 1 Channel C	\$41.92	\$52.40	\$710.54	\$888.18
06314007	11.49	VICTOR TREATMENT CENTERS INC	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06314009	8.38	VICTOR TREATMENT CENTERS INC	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06315003	9.81	SUTHERLAND, SCOTT & DEBERA L	Tier 2 Groundwater	\$40.51	\$50.64	\$397.40	\$496.78
06315004	9.81	SUTHERLAND, SCOTT & DEBERA	Tier 2 Groundwater	\$40.51	\$50.64	\$397.40	\$496.78
06315006	9.41	HANDEL, ERIC D	Tier 2 Groundwater	\$40.51	\$50.64	\$381.20	\$476.52
06315007	9.81	MOSKITO, JOHNNY C & ALEJANDRINA	Tier 2 Groundwater	\$40.51	\$50.64	\$397.40	\$496.78
06315008	16.00	MCCALMON, JOHN H	Tier 2 Groundwater	\$40.51	\$50.64	\$648.16	\$810.24
06315009	8.00	SIGGIA, VINCENT & DENESE	Tier 2 Groundwater	\$40.51	\$50.64	\$324.08	\$405.12
06315010	8.00	TAMURA, JAMES T & JOCELYN	Tier 2 Groundwater	\$40.51	\$50.64	\$324.08	\$405.12
06315011	7.99	LANGE, MARK H	Tier 2 Groundwater	\$40.51	\$50.64	\$323.67	\$404.61
06315012	8.03	DENTONI, DANIEL J & LISA J TR	Tier 2 Groundwater	\$40.51	\$50.64	\$325.30	\$406.64
06315013	10.30	PANAGAKOS, NICK & ANNA TR	Tier 2 Groundwater	\$40.51	\$50.64	\$417.25	\$521.59
06315014	15.68	HERCHE, JOEL & MARTINE	Tier 2 Groundwater	\$40.51	\$50.64	\$635.20	\$794.04
06315016	20.00	PANAGAKOS, NICK & ANNA TR	Tier 2 Groundwater	\$40.51	\$50.64	\$810.20	\$1,012.80
06315017	20.00	KHUNKHUN, DAVINDER SINGH	Tier 2 Groundwater	\$40.51	\$50.64	\$810.20	\$1,012.80
06315020	22.00	AZEVEDO, GRACE C TR	Tier 2 Groundwater	\$40.51	\$50.64	\$891.22	\$1,114.08
06315026	20.00	METTLER, ROGER O & KARIN C TR	Tier 2 Groundwater	\$40.51	\$50.64	\$810.20	\$1,012.80
06315027	20.00	METTLER, JERRY & RONDA TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$810.20	\$1,012.80
06315028	18.08	HARTZELL, ROBERT P TR	Tier 2 Groundwater	\$40.51	\$50.64	\$732.42	\$915.57
06315030	8.31	MURRAY, JAMES E & DEBRA L TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06315031	8.31	BUCKENHAM, COREY & KRISTIN V	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$820.61	\$1,025.79
06315035	30.00	HECKENLAIBLE, JULIA B TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$2,962.50	\$3,703.20
06315036	20.00	JENNER, JAMES H & LORI A TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,975.00	\$2,468.80
06315038	39.69	METTLER, JERRY & RONDA TR ETAL	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$3,919.39	\$4,899.33
06315039	20.00	POWELL, JEAN	Tier 2 Groundwater	\$40.51	\$50.64	\$810.20	\$1,012.80
06315040	20.00	BEITH, RICHARD TR	Tier 2 Groundwater	\$40.51	\$50.64	\$810.20	\$1,012.80
06315041	19.54	C & T MURPHY PARTNERS LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$791.57	\$989.51
06315042	19.54	UHLICH, DAVID & BARBARA	Tier 2 Groundwater	\$40.51	\$50.64	\$791.57	\$989.51
06315044	19.94	WOEHL, MARK G & LOUISE	Tier 2 Groundwater	\$40.51	\$50.64	\$807.77	\$1,009.76
06315046	11.96	CULBERTSON, CLYDE C & MARALYN TR	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,181.05	\$1,476.34
06315047	37.50	QUASCHNICK, HAROLD & L TRS	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$3,703.13	\$4,629.00
06315050	18.30	METTLER, JERRY & RONDA TR ETAL	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,807.13	\$2,258.95
06315051	1.52	METTLER, RONALD H & KATHERINE S TR ETAL	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$150.10	\$187.63
06315056	54.23	OMEGA VINEYARDS PTP	Tier 2 Groundwater	\$40.51	\$50.64	\$2,196.86	\$2,746.21
06315058	19.77	POWERS, KATHLEEN A TR ETAL	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,952.29	\$2,440.41
06315062	10.00	ROWLEY, DAVID E & BETTY	Tier 2 Groundwater	\$40.51	\$50.64	\$405.10	\$506.40

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06315065	19.27	POWERS, KATHY NIES TR ETAL	Irrigated Tier 1 Pipeline	\$98.75	\$123.44	\$1,902.91	\$2,378.69
06316002	9.82	UTLEY, FLOYD W & J D	Tier 2 Groundwater	\$40.51	\$50.64	\$397.81	\$497.28
06316003	7.54	UTLEY, FLOYD W & J D	Tier 2 Groundwater	\$40.51	\$50.64	\$305.45	\$381.83
06316005	19.71	QUASCHNICK, HAROLD & L TRS	Tier 2 Groundwater	\$40.51	\$50.64	\$798.45	\$998.11
06316006	19.71	BENDER, ROBERT E & NANETTE S TR	Tier 2 Groundwater	\$40.51	\$50.64	\$798.45	\$998.11
06316007	60.48	KHALEESI LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$2,450.04	\$3,062.71
06316010	61.17	MUNRO, JIM D TR ETAL	Tier 1 Channel B	\$43.54	\$54.42	\$2,663.34	\$3,328.87
06316017	50.36	VIRAMONTES, JOSE C	Tier 2 Groundwater	\$40.51	\$50.64	\$2,040.08	\$2,550.23
06316018	26.30	AHL, DALE L & SHARON Y TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,065.41	\$1,331.83
06316022	5.36	ESPINOSA, ANTHONY & MICHELLE R	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06316026	8.00	SERPA, NORA	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06316030	39.08	MORALES, JOSE A & MARIA R	Tier 2 Groundwater	\$40.51	\$50.64	\$1,583.13	\$1,979.01
06316031	37.51	OMEGA VINEYARDS PTP	Tier 2 Groundwater	\$40.51	\$50.64	\$1,519.53	\$1,899.51
06316032	45.35	GOEHRING, DAVID E	Tier 2 Groundwater	\$40.51	\$50.64	\$1,837.13	\$2,296.52
06316033	45.40	GRADY, JAMES J JR & ELIZABETH M TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,839.15	\$2,299.06
06316034	58.90	VIRAMONTES, JOSE C	Tier 1 Channel B	\$43.54	\$54.42	\$2,564.51	\$3,205.34
06316035	39.46	WEK EIGHTY EIGHT RANCH LLC	Tier 1 Channel B	\$43.54	\$54.42	\$1,718.09	\$2,147.41
06316036	39.43	WEK EIGHTY EIGHT RANCH LLC	Tier 1 Channel B	\$43.54	\$54.42	\$1,716.78	\$2,145.78
06316037	39.36	WEK EIGHTY EIGHT RANCH LLC	Tier 1 Channel B	\$43.54	\$54.42	\$1,713.73	\$2,141.97
06318003	36.56	MALIK, GHAUS MOHAMMED TR	Tier 1 Channel C	\$41.92	\$52.40	\$1,532.60	\$1,915.74
06318004	5.56	TSIFOURDARIS, SPIROS & ARISTEA	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06318009	16.08	WILSON, JAMES R & KRYSTAL S	Tier 1 Channel B	\$43.54	\$54.42	\$700.12	\$875.07
06318010	44.24	MANDUJANO, JOEL TR	Tier 1 Channel B	\$43.54	\$54.42	\$1,926.21	\$2,407.54
06318017	57.19	SIEVERS, JACK K & DENISE E TR	Tier 1 Channel B	\$43.54	\$54.42	\$2,490.05	\$3,112.28
06318022	15.33	COOPER, STEPHEN ERIC & MAY	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06318024	47.85	KATZAKIAN, PETER G & EMILY K TR ETAL	Tier 1 Channel B	\$43.54	\$54.42	\$2,083.39	\$2,604.00
06318025	157.07	KATZAKIAN, PETER G & EMILY K TR ETAL	Tier 1 Channel B	\$43.54	\$54.42	\$6,838.83	\$8,547.75
06318026	97.83	CORTOPASSI PARTNERS LP	Tier 1 Channel B	\$43.54	\$54.42	\$4,259.52	\$5,323.91
06318027	4.79	HIEB, KATHRYN A	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06318028	38.98	HIEB, KATHRYN A	Tier 1 Channel C	\$41.92	\$52.40	\$1,634.04	\$2,042.55
06318030	13.58	VIRAMONTES, RAFAEL B	Tier 1 Channel B	\$43.54	\$54.42	\$591.27	\$739.02
06318031	42.27	C & T MURPHY PARTNERS LLC	Tier 1 Channel C	\$41.92	\$52.40	\$1,771.96	\$2,214.95
06318032	5.00	C & T MURPHY PARTNERS LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$202.55	\$253.20
06319014	19.10	POTTS, NANCY L TR	Tier 2 Groundwater	\$40.51	\$50.64	\$773.74	\$967.22
06319017	20.08	SMITH, LAREY TR	Tier 2 Groundwater	\$40.51	\$50.64	\$813.44	\$1,016.85
06319019	38.23	BUCHER, ANNA K TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,548.70	\$1,935.97
06319025	11.30	ALI, SADIK ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06319046	5.36	PILCHER, TIMOTHY & KAREN TR	Tier 2 Groundwater	\$40.51	\$50.64	\$217.13	\$271.43
06319051	20.22	MCGEE, BILLY J & M TRS	Tier 2 Groundwater	\$40.51	\$50.64	\$819.11	\$1,023.94
06319052	5.36	LOPEZ, JESUS & TERESA C	Tier 2 Groundwater	\$40.51	\$50.64	\$217.13	\$271.43
06319058	6.59	SPHAR, MICHAEL J & MONICA A	Tier 2 Groundwater	\$40.51	\$50.64	\$266.96	\$333.72
06319060	4.86	SMITH, LAREY E & DEANNA D TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06319066	4.56	BUCHER, LOUIS J	Tier 2 Groundwater	\$40.51	\$50.64	\$184.73	\$230.92
06319067	4.47	BUCHER, LOUIS J	Tier 2 Groundwater	\$40.51	\$50.64	\$181.08	\$226.36
06319069	4.56	BUCHER, LOUIS J	Tier 2 Groundwater	\$40.51	\$50.64	\$184.73	\$230.92
06321006	39.40	BUCHER, ANNA K TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,596.09	\$1,995.22
06321012	9.70	CAMPOY, STEVEN L & C A	Tier 2 Groundwater	\$40.51	\$50.64	\$392.95	\$491.21
06321015	10.12	NAHAS, GEORGE M & MARY	Tier 2 Groundwater	\$40.51	\$50.64	\$409.96	\$512.48
06321016	10.37	NAHAS, GEORGE M & MARY LYNN	Tier 2 Groundwater	\$40.51	\$50.64	\$420.09	\$525.14
06321017	9.18	TACK, TIMOTHY F ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$371.88	\$464.88
06321027	8.02	NAHAS, GEORGE M & MARY	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06322017	5.00	PERRY, JUSTIN & REBECCA	Tier 2 Groundwater	\$40.51	\$50.64	\$202.55	\$253.20
06322021	5.00	BUCHANAN, CELESTE TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06322022	5.00	NEDEROSTEK, JAMES M & INGEBORG M C TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06322023	9.20	GOEHRING, ARDEN L & DEBORA D TR	Tier 2 Groundwater	\$40.51	\$50.64	\$372.69	\$465.89
06323001	5.01	WARMERDAM, GERARDUS & JANNEKE TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06323004	5.01	CARVALHO, PHYLLIS MARIE TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06323013	10.00	RITCHIE, JOHN H TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00

APN	Acres	Owner	Assessment Category	Basic Rate Per Acre	Maximum Rate Per Acre	Basic Annual Assessment	Maximum Annual Assessment
06323015	5.00	CRANDALL, MICHAEL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06323020	6.59	HYDE, MILTON T & L M	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06323023	10.02	JONES, CAMERON D & MONICA TR	Tier 2 Groundwater	\$40.51	\$50.64	\$405.91	\$507.41
06323027	5.01	WILSON, RICHARD G & DEBRA G	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06323028	5.01	LEE, JERRY S	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06323029	12.72	TYA LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$515.29	\$644.14
06323037	5.00	MUDALIAR, GANESHWARAN & ISABEL M TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06323038	5.00	MALL, SIEGFRIED & CLAUDIA M TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06323039	5.37	MALL, SIEGFRIED & CLAUDIA M TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06324003	5.01	MCLEOD, KENNETH A & SHARON K TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06324010	11.43	CHAVES, FRANK S & L S	Tier 2 Groundwater	\$40.51	\$50.64	\$463.03	\$578.82
06324011	10.02	KRANTZ, JERRY D & L	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06324013	5.01	SINGH, MANJIT & PARMJIT TR ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06324014	5.01	MEDINA, RUBEN P & MARIA G TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06324017	5.00	CHEAS, TOM & VANARY	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06324018	5.01	ALFORD, EUGENE E TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06324029	5.01	CHAVES, FRANCISCO & LAURINDA	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06324030	10.02	CHAVES, FRANK S & L S	Tier 2 Groundwater	\$40.51	\$50.64	\$405.91	\$507.41
06324032	6.27	LARSON, ERIC C & LINDY A	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06324039	5.01	CHAVES, FRANK & LAURINDA S	Tier 2 Groundwater	\$40.51	\$50.64	\$202.96	\$253.71
06324040	5.01	CHAVES, FRANK & LAURINDA S	Tier 2 Groundwater	\$40.51	\$50.64	\$202.96	\$253.71
06324041	10.02	CHAVES, FRANK & L S	Tier 2 Groundwater	\$40.51	\$50.64	\$405.91	\$507.41
06325001	75.88	CHAVES, FRANCISCO S & LAURINDA S	Tier 2 Groundwater	\$40.51	\$50.64	\$3,073.90	\$3,842.56
06325004	42.62	KHALEESI LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$1,726.54	\$2,158.28
06325008	13.96	GALLAGHER, PATRICK E TR	Tier 2 Groundwater	\$40.51	\$50.64	\$565.52	\$706.93
06325010	32.97	MACHADO, DINA C TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,335.61	\$1,669.60
06325011	73.80	MACHADO, DINA C TR	Tier 2 Groundwater	\$40.51	\$50.64	\$2,989.64	\$3,737.23
06325016	51.07	CHAVES, FRANCISCO S & LAURINDA	Tier 2 Groundwater	\$40.51	\$50.64	\$2,068.85	\$2,586.18
06325019	10.06	SHERMAN, TINO & CELESTINA TR	Tier 2 Groundwater	\$40.51	\$50.64	\$407.53	\$509.44
06325020	10.76	BERBIERS, LOUISE A TR	Tier 2 Groundwater	\$40.51	\$50.64	\$435.89	\$544.89
06325021	13.08	SATTLER, STEVEN W & ZINA L	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06325022	13.88	DAY, DOUGLAS O & SHEILA D	Tier 2 Groundwater	\$40.51	\$50.64	\$562.28	\$702.88
06325023	46.99	MORALES, JOSE A & MARIA R	Tier 2 Groundwater	\$40.51	\$50.64	\$1,903.56	\$2,379.57
06325032	99.00	E & L LAND GROUP	Tier 2 Groundwater	\$40.51	\$50.64	\$4,010.49	\$5,013.36
06325033	39.06	NEVER BEND LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$1,582.32	\$1,978.00
06325034	35.94	NEVER BEND LLC	Tier 2 Groundwater	\$40.51	\$50.64	\$1,455.93	\$1,820.00
06325035	5.00	MOULES, MELVIN & MARIA M TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06325036	29.70	MOULES, MELVIN & MARIA MADALENA TR	Tier 2 Groundwater	\$40.51	\$50.64	\$1,203.15	\$1,504.01
06326006	5.32	SIVILS, WILLIAM EDGAR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06326008	5.00	RIOS, ALBERTO & MARGARET TR ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06326010	11.04	MEDINA, ELIAS & MARIA TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06326012	5.00	CLARK, REX & RUTH ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06326013	5.00	HUNG, WAYNE	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06326014	80.37	CHAVES, FRANK & LAURINDA S	Tier 2 Groundwater	\$40.51	\$50.64	\$3,255.79	\$4,069.94
06326016	17.31	GALLAGHER, PATRICK E TR	Tier 2 Groundwater	\$40.51	\$50.64	\$701.23	\$876.58
06326017	5.10	GALLAGHER, PATRICK E TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06326018	5.10	GALLAGHER, PATRICK E TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06326019	10.26	GALLAGHER, ROY & DEBBIE TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06327003	9.91	RODGERS, ELMER TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06327004	10.18	POPE, WILLIAM III & M	Tier 2 Groundwater	\$40.51	\$50.64	\$412.39	\$515.52
06327013	7.59	MYERS, JAMES H & B A	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06327014	10.04	THOMAS, INEZ D TR	Tier 2 Groundwater	\$40.51	\$50.64	\$406.72	\$508.43
06327018	5.00	ROMO, ALFONSO & FAUSTINA	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06327025	19.95	GARIBALDI, JOHN ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$808.17	\$1,010.27
06327042	6.54	LEE, ANDREW & KRISTEN	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06327045	5.06	GRAVES, LYNN & CAROL K	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06327046	5.10	SANCHEZ, MICHAEL & JENNIFER	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06327054	9.85	REYES, JULIA	Tier 2 Groundwater	\$40.51	\$50.64	\$399.02	\$498.80

APN	Acres	Owner	Assessment Category	Basic Rate Per Acre	Maximum Rate Per Acre	Basic Annual Assessment	Maximum Annual Assessment
06327056	19.98	HORN, WILLIAM & EVA ETAL	Tier 3 Groundwater	\$20.26	\$25.32	\$404.79	\$505.89
06327060	17.16	PETERSON, DONNA LYNN ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06327061	6.90	WHITMORE, RONALD T & BARBARA J	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06327066	17.23	COSTA, FRANK N & DONNA TR	Tier 3 Groundwater	\$20.26	\$25.32	\$349.08	\$436.26
06327071	5.00	NERI, ENRIQUE E & MARIA D	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06327073	5.57	BLAGG, TYLER S & AMY A	Tier 2 Groundwater	\$40.51	\$50.64	\$225.64	\$282.06
06327076	5.00	DARRAH, SEAN	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06327077	5.00	ROJAS, BRANDON ALFONSO	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06327078	5.23	ULRICH, DONALD D & TONI D	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06327081	5.01	MIAN, IJAZ UL HAQ & RAFAQAT SULTANA	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06327082	6.69	RUYLE, DALE LEE & TARA LEE	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06327083	5.00	NOGARE, GERALDINE M TR ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$202.55	\$253.20
06327084	5.00	NOGARE, GERALDINE M ETAL	Tier 2 Groundwater	\$40.51	\$50.64	\$202.55	\$253.20
06328004	10.50	PHAM, DINH Q ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06328022	5.00	CHANEY, TEX R & HELEN C ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06328023	22.49	CACHO, ALVIN C & ROSELINDA R	Tier 2 Groundwater	\$40.51	\$50.64	\$911.07	\$1,138.89
06328024	5.80	FREEMAN, STEVE J & KAREN M	Tier 2 Groundwater	\$40.51	\$50.64	\$234.96	\$293.71
06328025	5.00	WILLIAMS, ROY C & NATALIE J TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502006	5.00	MUNSON, DAVID J & DONNA R	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502007	5.00	LEWIS, CRAIG R & KRISTINA	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502009	5.00	OHLS, ROBERT BLAINE	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502010	5.00	HNESLEY, ROBERT E & CATHY M TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502011	5.00	MUZZY, SHARON	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502012	5.00	SMITH, KATHRYN	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502013	5.00	SMITH, KATHRYN RUTH	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502014	5.00	REEVES, HUBERT D & NORMA D TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502015	5.00	WINTER, CLARENCE ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502016	8.00	GREEN, LONNY RAY ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502018	7.01	PINA, ELIZABETH	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502019	5.00	STIPE, RAMONA A ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502020	5.00	HEWITT, JOHN T JR & J L	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502021	5.00	NIELSON, RICHARD A & MICHELLE M TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502022	5.00	SHELTON, LEONARD & LINDA	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502023	5.00	GOYETTE, DERALD G TR ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502028	5.00	NOEL, THOMAS E & PATRICIA L TR	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502029	5.00	NOVETZKE, ARTHUR W JR TR ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502030	5.00	RODRIGUEZ, LUCIO LOPEZ ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502031	5.00	SHANKEL, ARRON	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502032	5.00	MALDONADO, JAIME	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06502033	5.00	VIDAURI, SAUL & VERONICA	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06503002	10.00	GOMEZ, MIRIAM KARINA	Tier 3 Groundwater	\$20.26	\$25.32	\$202.60	\$253.20
06503003	30.00	SAN JOAQUIN, COUNTY OF	Tier 3 Groundwater	\$20.26	\$25.32	\$607.80	\$759.60
06503006	94.07	SAN JOAQUIN, COUNTY OF	Tier 3 Groundwater	\$20.26	\$25.32	\$1,905.86	\$2,381.85
06503008	30.59	SAN JOAQUIN, COUNTY OF	Tier 3 Groundwater	\$20.26	\$25.32	\$619.75	\$774.54
06503009	123.42	SAN JOAQUIN, COUNTY OF	Tier 3 Groundwater	\$20.26	\$25.32	\$2,500.49	\$3,124.99
06504001	23.92	GOLDEN TRUMPETS	Tier 3 Groundwater	\$20.26	\$25.32	\$484.62	\$605.65
06504002	20.51	SAWYER, HAROLD M & B L	Tier 3 Groundwater	\$20.26	\$25.32	\$415.53	\$519.31
06525001	42.11	COSTA, FRANK N & DONNA TR	Tier 3 Groundwater	\$20.26	\$25.32	\$853.15	\$1,066.23
06525007	7.15	DE LATORRE, ROBERT LF EST	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00
06525008	5.69	PRIETO, ANA MARIA DE LATORRE ETAL	Parcel Not Assessed	\$0.00	\$0.00	\$0.00	\$0.00

Budget for
South System Groundwater
Improvement Project

SOUTH SYSTEM GROUNDWATER IMPROVEMENT PROJECT - BUDGET

PUMP STATION - 2018				
Budget Item Description	Computation		Rate	Total Cost
	Unit	Quantity		
Demolition	1	LS	\$ 38,500.00	\$ 38,500.00
Grading	1	LS	\$ 49,500.00	\$ 49,500.00
Shoring/Dewatering	1	LS	\$ 490,000.00	\$ 490,000.00
Structure Excavation/Backfill	1	LS	\$ 33,000.00	\$ 33,000.00
Construct Concrete Wet Well	1	LS	\$ 299,000.00	\$ 299,000.00
Furnish/Install 1 200 hp low head pump/Mechanical Piping	1	LS	\$ 295,000.00	\$ 295,000.00
Furnish/Install 36" HDPE Discharge Piping	1	LS	\$ 516,000.00	\$ 516,000.00
Electrical	1	LS	\$ 793,000.00	\$ 793,000.00
Steel Decking and Railing	1	LS	\$ 125,000.00	\$ 125,000.00
<i>Subtotal</i>				\$ 2,639,000.00
Contingency -25%				\$ 659,750.00
TOTAL				\$ 3,298,750.00

Source: Arnaudo Construction Proposal for Contract dated October 14, 2017

PIPELINE - 2018-2019				
Budget Item Description	Computation		Rate	Total Cost
	Unit	Quantity		
Supplies / Materials				\$ 5,735,970.00
PVC Spur line	LS	1	\$500,000.00	\$ 500,000.00
Entry Shafts	ea	13	\$ 60,000.00	\$ 780,000.00
Exit Shafts	ea	13	\$ 30,000.00	\$ 390,000.00
Liner Pipe				
19.5" OD DR 25 FPVC	ft	7170	\$ 35.00	\$ 250,950.00
25.8" OD DR 25 FPVC	ft	2240	\$ 60.00	\$ 134,400.00
32" OD DR 25 FPVC	ft	8474	\$ 95.00	\$ 805,030.00
38.3" OD DR 25 FPVC	ft	17830	\$ 145.00	\$ 2,585,350.00
38.3" OD DR 25 FPVC	ft	1312	\$ 145.00	\$ 190,240.00
SCADA/District Network Equipment/Install	Ea	1	\$ 100,000.00	\$ 100,000.00
Construction Costs				\$ 4,100,146.19
Mobilize and Demobilize	LS	1	\$ 100,000.00	\$ 100,000.00
Host Pipe Cleaning	ft	37009	\$ 7.00	\$ 259,063.00
Liner Installation				
19.5" OD DR 25 FPVC	ft	7271	\$ 40.00	\$ 290,840.00
25.8" OD DR 25 FPVC	ft	2233	\$ 40.00	\$ 89,320.00
32" OD DR 25 FPVC	ft	8639	\$ 40.00	\$ 345,560.00
38.3" OD DR 25 FPVC	ft	17592	\$ 40.00	\$ 703,680.00

38.3" OD DR 25 FPVC	ft	1274	\$ 40.00	\$ 50,960.00
Liner Proofing	ft	37009	\$ 15.00	\$ 555,135.00
Liner Grouting				
19.5" OD DR 25 FPVC	ft	7271	\$ 17.83	\$ 129,618.80
25.8" OD DR 25 FPVC	ft	2233	\$ 19.07	\$ 42,593.87
32" OD DR 25 FPVC	ft	8639	\$ 20.29	\$ 175,296.44
38.3" OD DR 25 FPVC	ft	17592	\$ 21.10	\$ 371,241.62
38.3" OD DR 25 FPVC	ft	1274	\$ 38.56	\$ 49,120.55
Surface Restoration	LS	1	\$ 100,000.00	\$ 100,000.00
Pipeline appurtenances (vents, etc)	ea	1	10% pipeline cost	\$ 837,716.93
Contingency for Material and Construction Costs (25% of Material and Construction Cost)		25%		\$ 2,459,029.05
Total Hard Construction Costs				\$ 12,295,145.24
Soft Construction Costs (17% of Total Hard Construction Costs)		15%		\$ 1,844,271.79
Engineering		7%		\$ 860,660.17
Construction Management		8%		\$ 983,611.62
Total Construction Costs				\$ 14,139,417.03
Other Costs				\$ 169,673.00
Environmental		0.5%		\$ 70,697.09
Project Management and Reporting		0.70%		\$ 98,975.92
Total Direct Costs				\$ 14,309,090.03

Source: Stantec Engineering 2017 30% Design Plans and Specifications Budget

ADDITIONAL PUMPS AND FACILITIES FOR FULL BUILD OUT				
Budget Item Description	Computation		Rate	Total Cost
	Unit	Quantity		
Add second VFD pump	fab	1	\$ 500,000.00	\$ 500,000.00
Convert 200 HP pump motor to 600HP	fab	1	\$ 45,000.00	\$ 45,000.00
Upgrade electrical at pump for pressure delivery	LS	1	\$ 245,000.00	\$ 245,000.00
Regulating Basins	LS	1	\$ 250,000.00	\$ 250,000.00
Facilities to improve delivery to channels	LS	1	\$ 200,000.00	\$ 100,000.00
TOTAL				\$ 1,140,000.00

Source: Provost and Pritchard Engineers, KSN, NSJWCD

TOTAL SSGIP BUDGET:	\$ 18,747,840.03
EBMUD Settlement Fund	\$ (1,750,000.00)
SWEEP Grant	\$ (3,000,000.00)
WaterSmart Grant	\$ (1,000,000.00)
Balance to Fund:	\$ 12,997,840.03

Public Financing Debt Service Estimate

SOURCES AND USES OF FUNDS

North San Joaquin Water Conservation District
Bond Debt Service Estimate for Engineer's Report

Dated Date 04/01/2018
 Delivery Date 04/01/2018

Sources:

Bond Proceeds:	
Par Amount	14,930,000.00
Net Original Issue Discount	-532,890.55
	<u>14,397,109.45</u>

Uses:

Project Fund Deposits:	
Project Fund	13,000,000.00
Other Fund Deposits:	
Debt Service Reserve Fund	858,782.76
Capitalized Interest Fund	<u>192,860.92</u>
	1,051,643.68
Delivery Date Expenses:	
Cost of Issuance	269,000.00
Underwriter's Discount	<u>74,650.00</u>
	343,650.00
Other Uses of Funds:	
Additional Proceeds	1,815.77
	<u>14,397,109.45</u>

Notes:

1. Assumes assessment level set at 125% of expected debt service and 'A' credit rating from S&P.
2. Includes interest rate cushion of 0.50% versus current market.
3. Includes funding (capitalizing) 4 months interest to cover first bond payment on 8/1/2018 (prior to assessments being enrolled / collected).

BOND DEBT SERVICE

North San Joaquin Water Conservation District
Bond Debt Service Estimate for Engineer's Report

Period Ending	Principal	Coupon	Interest	Debt Service
08/01/2018			192,860.92	192,860.92
08/01/2019	280,000	3.000%	578,582.76	858,582.76
08/01/2020	285,000	4.000%	570,182.76	855,182.76
08/01/2021	300,000	4.000%	558,782.76	858,782.76
08/01/2022	310,000	4.000%	546,782.76	856,782.76
08/01/2023	320,000	4.000%	534,382.76	854,382.76
08/01/2024	335,000	4.000%	521,582.76	856,582.76
08/01/2025	350,000	4.000%	508,182.76	858,182.76
08/01/2026	360,000	4.000%	494,182.76	854,182.76
08/01/2027	375,000	4.000%	479,782.76	854,782.76
08/01/2028	390,000	4.000%	464,782.76	854,782.76
08/01/2029	405,000	4.000%	449,182.76	854,182.76
08/01/2030	425,000	4.000%	432,982.76	857,982.76
08/01/2031	440,000	4.000%	415,982.76	855,982.76
08/01/2032	460,000	3.000%	398,382.76	858,382.76
08/01/2033	470,000	3.000%	384,582.76	854,582.76
08/01/2034	485,000	3.000%	370,482.76	855,482.76
08/01/2035	500,000	3.125%	355,932.76	855,932.76
08/01/2036	515,000	3.125%	340,307.76	855,307.76
08/01/2037	530,000	3.250%	324,214.00	854,214.00
08/01/2038	550,000	3.250%	306,989.00	856,989.00
08/01/2039	565,000	4.000%	289,114.00	854,114.00
08/01/2040	590,000	4.000%	266,514.00	856,514.00
08/01/2041	615,000	4.130%	242,914.00	857,914.00
08/01/2042	640,000	4.130%	217,514.50	857,514.50
08/01/2043	665,000	4.130%	191,082.50	856,082.50
08/01/2044	690,000	4.340%	163,618.00	853,618.00
08/01/2045	720,000	4.340%	133,672.00	853,672.00
08/01/2046	755,000	4.340%	102,424.00	857,424.00
08/01/2047	785,000	4.340%	69,657.00	854,657.00
08/01/2048	820,000	4.340%	35,588.00	855,588.00
	14,930,000		10,941,226.60	25,871,226.60

Notes:

1. Assumes assessment level set at 125% of expected debt service and 'A' credit rating from S&P.
2. Includes interest rate cushion of 0.50% versus current market.
3. Includes funding (capitalizing) 4 months interest to cover first bond payment on 8/1/2018 (prior to assessments being enrolled / collected).

NET DEBT SERVICE

North San Joaquin Water Conservation District
Bond Debt Service Estimate for Engineer's Report

Period Ending	Total Debt Service	Debt Service Reserve Fund	Capitalized Interest Fund	Net Debt Service
08/01/2018	192,860.92		192,860.92	
08/01/2019	858,582.76			858,582.76
08/01/2020	855,182.76			855,182.76
08/01/2021	858,782.76			858,782.76
08/01/2022	856,782.76			856,782.76
08/01/2023	854,382.76			854,382.76
08/01/2024	856,582.76			856,582.76
08/01/2025	858,182.76			858,182.76
08/01/2026	854,182.76			854,182.76
08/01/2027	854,782.76			854,782.76
08/01/2028	854,782.76			854,782.76
08/01/2029	854,182.76			854,182.76
08/01/2030	857,982.76			857,982.76
08/01/2031	855,982.76			855,982.76
08/01/2032	858,382.76			858,382.76
08/01/2033	854,582.76			854,582.76
08/01/2034	855,482.76			855,482.76
08/01/2035	855,932.76			855,932.76
08/01/2036	855,307.76			855,307.76
08/01/2037	854,214.00			854,214.00
08/01/2038	856,989.00			856,989.00
08/01/2039	854,114.00			854,114.00
08/01/2040	856,514.00			856,514.00
08/01/2041	857,914.00			857,914.00
08/01/2042	857,514.50			857,514.50
08/01/2043	856,082.50			856,082.50
08/01/2044	853,618.00			853,618.00
08/01/2045	853,672.00			853,672.00
08/01/2046	857,424.00			857,424.00
08/01/2047	854,657.00			854,657.00
08/01/2048	855,588.00	858,782.76		-3,194.76
	25,871,226.60	858,782.76	192,860.92	24,819,582.92

Notes:

1. Assumes assessment level set at 125% of expected debt service and 'A' credit rating from S&P.
2. Includes interest rate cushion of 0.50% versus current market.
3. Includes funding (capitalizing) 4 months interest to cover first bond payment on 8/1/2018 (prior to assessments being enrolled / collected).

COST OF ISSUANCE

North San Joaquin Water Conservation District
Bond Debt Service Estimate for Engineer's Report

Cost of Issuance	\$/1000	Amount
Bond Counsel	5.02344	75,000.00
Municipal Advisor	2.47823	37,000.00
District Staff / Legal	2.00938	30,000.00
Engineer's Fee	3.34896	50,000.00
Credit Rating	2.00938	30,000.00
Trustee	0.26792	4,000.00
Printing	0.20094	3,000.00
Miscellaneous / Contingency	2.67917	40,000.00
	18.01741	269,000.00

Notes:

1. Assumes assessment level set at 125% of expected debt service and 'A' credit rating from S&P.
2. Includes interest rate cushion of 0.50% versus current market.
3. Includes funding (capitalizing) 4 months interest to cover first bond payment on 8/1/2018 (prior to assessments being enrolled / collected).

BOND SUMMARY STATISTICS

North San Joaquin Water Conservation District
Bond Debt Service Estimate for Engineer's Report

Dated Date	04/01/2018
Delivery Date	04/01/2018
First Coupon	08/01/2018
Last Maturity	08/01/2048
Arbitrage Yield	4.224008%
True Interest Cost (TIC)	4.265948%
Net Interest Cost (NIC)	4.178180%
All-In TIC	4.422245%
Average Coupon	3.958380%
Average Life (years)	18.514
Duration of Issue (years)	12.449
Par Amount	14,930,000.00
Bond Proceeds	14,397,109.45
Total Interest	10,941,226.60
Net Interest	11,548,767.15
Total Debt Service	25,871,226.60
Maximum Annual Debt Service	858,782.76
Average Annual Debt Service	852,897.58
Underwriter's Fees (per \$1000)	
Average Takedown	
Other Fee	5.000000
Total Underwriter's Discount	5.000000
Bid Price	95.930740

Bond Component	Par Value	Price	Average Coupon	Average Life	PV of 1 bp change
Bond Component	9,240,000.00	96.618	3.559%	13.257	8,461.20
Term Bond Due 2043	1,920,000.00	96.275	4.130%	24.359	2,785.50
Term Bond Due 2047	3,770,000.00	96.050	4.340%	28.420	5,775.90
	14,930,000.00			18.514	17,022.60

	TIC	All-In TIC	Arbitrage Yield
Par Value	14,930,000.00	14,930,000.00	14,930,000.00
+ Accrued Interest			
+ Premium (Discount)	-532,890.55	-532,890.55	-532,890.55
- Underwriter's Discount	-74,650.00	-74,650.00	
- Cost of Issuance Expense		-269,000.00	
- Other Amounts			
Target Value	14,322,459.45	14,053,459.45	14,397,109.45
Target Date	04/01/2018	04/01/2018	04/01/2018
Yield	4.265948%	4.422245%	4.224008%

Notes:

1. Assumes assessment level set at 125% of expected debt service and 'A' credit rating from S&P.
2. Includes interest rate cushion of 0.50% versus current market.
3. Includes funding (capitalizing) 4 months interest to cover first bond payment on 8/1/2018 (prior to assessments being enrolled / collected).

BOND PRICING

North San Joaquin Water Conservation District
Bond Debt Service Estimate for Engineer's Report

Dated Date	04/01/2018	
Delivery Date	04/01/2018	
First Coupon	08/01/2018	
Par Amount	14,930,000.00	
Original Issue Discount	-532,890.55	
	<hr/>	
Production	14,397,109.45	96.430740%
Underwriter's Discount	-74,650.00	-0.500000%
	<hr/>	
Purchase Price	14,322,459.45	95.930740%
Accrued Interest		
	<hr/>	
Net Proceeds	14,322,459.45	

Notes:

1. Assumes assessment level set at 125% of expected debt service and 'A' credit rating from S&P.
 2. Includes interest rate cushion of 0.50% versus current market.
 3. Includes funding (capitalizing) 4 months interest to cover first bond payment on 8/1/2018 (prior to assessments being enrolled / collected).
-

Assumptions

Appendix D

Assumptions Made for North San Joaquin Water Conservation District

South System Improvement Project Engineer's Report

The following assumptions were made for purposes of the analysis in this report. These assumptions are intentionally conservative and may not reflect actual operational conditions.

River Water Available to the South System

Without Project, River Water would be used by neither Pipeline Users nor Channel Users due to the poor condition of the South System pump station and pipeline, high Water Charge versus cost of pumping wells, and likely eventual loss of Mokelumne River right if not used.

With the Project, Maximum Available would be 10,000 to 12,000 (af) per year in years that water is available. This report conservatively assumes a Maximum Available of 10,000 acre-feet (af) in any given year, and Average Available would be 5,000 af per year, based on North San Joaquin Water Conservation District's (District) Permit 10477 permit priority, allocation of water right to various points of diversion and limits of water right and fish screen capacity at South Pump Station. Pipeline Users would use no more than 35% of the available River Water and 65% would be delivered to the Channels with 30% channel losses and based on Provost & Pritchard Engineering Group (P&P) engineers' review of proportions of water demand expected.

Without Project Well Water Levels

Average Pumping Water Levels in 2017 equal 96 feet, based on an average Standing Water Level of 86 feet. These values were calculated from available well water level hydrographs using Spring 2017 Standing Water Level readings within the Improvement District boundary, plus Drawdown of 10 feet (based on input from landowners and driller/pump company staff) (Simpson, Purviance). Note the Spring readings are conservative, as irrigation season Pumping Water Levels are typically deeper.

Without the Project, the Average Drop in Well Water Levels would continue at 1.0 feet per year based on average observed past 20 year trends calculated using previously mentioned hydrographs.

Operation and Maintenance (O&M) Cost to Pump Groundwater are calculated using Energy Factors described below, based on input from landowners and Stantec presentation supporting NSJWCD SWEEP grant application, and increases as well water levels drop based on other assumptions and calculations (Stantec).

Well Deepening

Without Project, cost per each well that must be deepened to overcome declining Well Water Levels is \$100,000 each, based an estimate of typical well deepening cost in the Improvement District area obtained from Dan Purviance of Purviance Drillers from Linden (Purviance), and confirmed by another local well driller (Gross).

Without Project, the frequency that a typical well must be deepened to overcome declining Well Water Levels is 50 years, based an estimate of frequency observed in the Improvement District area made by Dan Purviance, confirmed by Gross.

Pump Deepening

Without Project, cost per each pump that must be “deepened” (removed, inspected, repaired or replaced and re-installed deeper in the well, sometimes with motor and/or power supply changes) to overcome declining Well Water Levels is \$3,000 each, based on an estimate of typical pump deepening cost in the Improvement District area obtained from Dan Purviance, confirmed by Gross.

Without Project, the frequency that a typical pump must be deepened to overcome declining Well Water Levels is 25 years, based on an estimate of frequency observed in the Improvement District area made by Dan Purviance, confirmed by Gross.

River Lift

River Lift with the Project is 15 feet. This is the head the South System pump station must overcome to lift River water to the average Pipeline User if no pressure was required for micro-irrigation. It is approximately equal to the difference in elevation between the average water surface in the River and ground surface at the start of the Pipeline plus minor losses in the River pump and discharge piping. P&P engineers estimated this using James F. Sorenson Consulting Engineers’ land surface cross sections through the Improvement District for vertical lift and added typical pump head losses for low-head lift pumps from other similar rivers (James).

Channel Lift

Channel Lift with the Project is 12 feet. This is the average head the Channel Users’ pumps must overcome to lift water to ground surface without pressure. It is approximately equal to the difference in elevation between the average water surface in a channel when River water is delivered and the Channel Users’ field surface plus minor losses in the pump and discharge piping. P&P engineers estimated this based on visual field reviews of the channels for vertical lift plus typical pump head losses for low-head lift pumps from other similar channels.

Pipeline Pressure

Pipeline Pressure of 55 pounds per square inch (psi) is the average required additional pressure head the South System pump station will need provide in addition to River Lift in order to provide pressurized water to Pipeline Users upstream of their filter stations so that their micro-irrigation systems operate properly. This is based on P&P engineers' observation of typical pressure requirements upstream of micro-irrigation filter stations in San Joaquin County.

Channel Losses

Channel Losses are expected to average 30 percent of all water pumped at the South System pump station for channel users to calculate water lost in channels (via seepage, evaporation, and transpiration of vegetation in the channels) before delivery. This is based on P&P Engineers' experience reviewing water delivery records from water agencies that deliver Kings, Kaweah, and/or San Joaquin River water via constructed and improved natural earthen channels of similar length, cross sections, and soil conditions.

Annual Payment

An Average Annual Payment of \$860,000 to retire debt for South System Project capital repayment is based on the District's financial advisor's estimate.

Channel User Improvements

Channel Users would spend a Total Cost of \$2,731,000 of their own money as part of the overall South System Project in order to improve channels and pumping from channels to supply irrigation systems that currently are supplied from wells. Total Cost was estimated by P&P engineers after field reviews of the channels and adjacent lands, their existing infrastructure, and conditions.

P&P engineers' estimates included costs for various components of Channel Users' improvements and distributed costs of the components to the four groups of Channel Users: Ditch Users, Bear Creek Users, Pixley Slough Users off Bear Creek, and Pixley Sough Users off the Pipeline.

Channel Users' improvement costs were assumed to be financed at an annual interest rate of 3.5% for a period of 30 years, based on typical financing terms for irrigation improvements by farm credit organizations in San Joaquin County.

Costs of Channel Users' improvements per acre were deducted from Benefits before calculating assessments for Channel Users.

Energy Factors

Well pumps were assumed to be driven by electric motors supplied with power by Pacific Gas & Electric Company (PG&E) at an average overall power cost (including customer, meter, demand, and energy charges) of \$0.237 per kilowatt hour (kWh). This is based on power bill information collected by the District for South System Improvement Project grant application purposes and summarized in a presentation to the North San Joaquin Water Conservation District Board of Directors from Stantec (Grant, Stantec). This figure is conservative, as PG&E has raised its rates since that memo was published, and proposes to raise them further.

Overall Pump Efficiency (OPE) of average well used for irrigation is 60%, which is 5% higher than Stantec used in its presentation (Stantec). Again, a conservative assumption.

South System pump station pumps are assumed to have 80% OPE and 10% lower average power cost versus the cost for wells (\$0.21 per kWh). This is because district operated and maintained pumps typically are more efficient (due to larger size and more frequent repairs) and operate at better load factor (spreads demand charges better). P&P engineers estimated this conservatively based on experience in comparing pump efficiency (from pump tests) and power costs (from power bills) of other agricultural water agencies (Tranquility Irrigation District, Berrenda Mesa Water District, and Arvin-Edison Water Storage District) on pumps serving water distribution systems and on-farm well pumps.

Non-power Operation and Maintenance Cost Factors

Costs to operate and maintain on-farm wells in addition to PG&E power costs are assumed to add 20% to the PG&E costs of pumping wells.

Costs to operate and maintain South System pump station pumps in addition to PG&E power costs are assumed to add 20% to the PG&E costs of pumping River water for Pipeline and Channel Users.

P&P Engineers added these factors based on their experience in estimating operation and maintenance costs for irrigation wells and district distribution pumps in other areas of the San Joaquin Valley.

Groundwater Benefits Factors

Tier Factors applied to Groundwater Benefit calculations (Tier 1 - 100%, Tier 2 - 60%, Tier 3 and 4 - 30%) adjust Groundwater Benefit calculations to recognize that a "mounding effect" has been found in operating groundwater recharge projects in similar geologic conditions (Kern Water Bank and Arvin-Edison Water Storage District's Sycamore Spreading Works in particular) with well water levels rising over time in that

approximate distance distribution. Furthermore, twenty feet (20 ft) is deducted from Tier 4 Without Project Well Water Levels, as recent San Joaquin County well water level records and elevation contour maps have 20 ft higher levels versus average in the Improvement District.

Five percent (5%) of Pipeline Users' water use (which is in-lieu recharge) and 5% of Channel Users delivered water (in-lieu recharge) and channel losses (mostly direct recharge) are assumed to migrate outside of the Improvement District boundary over time and are thus deducted while calculating Groundwater Benefits before Tier Factors are applied. This factor correlates to the migration factor set for "the Dream Project" and is 1% higher than the Kern Water Banks' 4% migration loss factor. The Kern Water Banks' migration loss factor was estimated by the California Department of Water Resources during pre-project studies.

Economic Factors

Project Life is assumed to be 50 years, based on the useful lives observed by P&P for agricultural water agency distribution systems built since the 1960's in the San Joaquin Valley with the same types of components proposed for the Project.

The Time Value of Money (used in economic formulas that annualize annually increasing Groundwater Benefits) was assumed to be 3.5%, based on a review of rates of return of the State's Local Agency Investment Funds (LAIF) in recent years.

Geologic Parameters

Specific Yield (inverse of the rate of well water level rise observed when one af of water is recharged in an aquifer below a one-acre area with no migration loss) is 0.20 or 20% (one af causes 5 foot rise). This is consistent with hydrology text book references for aquifers with high sand and gravel content ((Linsley p.183), as described in geology references for Project area). This is conservative as California Department of Water Resources studies suggest Specific Yield of the San Joaquin County groundwater basin has 0.07 to 0.15 factor (Nakagawa).

South System Water Charges

South System Water Charges utilize the previously described Energy and non-PG&E Operation and Maintenance Cost assumptions to calculate costs per acre-foot.

It should be noted that Channel Users' Water Charges are assumed to only include payment for costs to lift water they receive from the River into the Pipeline, and not costs to pressurize water delivered into channels nor for lifting water lost in channels. All other costs (pressurizing water delivered to channels and for lifting water from the

River that is lost in channels) are collected by per acre assessments to all assessed parcels in the Improvement District boundary.

Irrigation and Cultural Water Use

Average amount of water used by assessed properties in the Improvement District for irrigation and cultural practices is assumed to be 2.5 af/acre. This is based upon well water use estimates prepared by Stantec for grant applications after collecting information from Pipeline Users, and confirmed by P&P's review of a GIS cropping data source covering the Improvement District plus Cal Poly Irrigation Training and Research Center estimates of California crop water use for Climate Zone 12 (Improvement District is in Zone 12) (National, Irrigation).

of Active Irrigation Wells per ¼ Section

Four (4) active wells per quarter section were estimated as typical for the Improvement District by P&P engineers, based on a review of recent aerial photographs covering the Improvement District (wells can be seen). This number was validated by feedback from landowners.

Groundwater Benefits

Appendix E

Groundwater Benefits Calculations

North San Joaquin Water Conservation District

South System Improvement Project Engineer's Report

The following formulas were used to calculate the Tier 1 Groundwater Benefit. These calculations were repeated for Tiers 2, 3, and 4 and multiplied by their respective Groundwater Benefit Factors (0.60, 0.30, and 0.30). See Appendix K Groundwater Lift Reduction Illustration and Appendix L River Lift Benefit Illustration for detailed Illustration of benefits of reduced pumping levels.

Increasingly Reduced Cost of Pumping Groundwater (Tiers 1-4)

Well Lifting Costs Before Project (Cost of PG&E Power)

$$\frac{\text{Groundwater Pumping Level} \times 0.237 \frac{\$}{\text{Kw-hr}} \times 1.027}{\text{Pump Efficiency}}$$

Groundwater Pumping Level: 96

Pump Efficiency: 60%

$$\frac{96 \times 0.237 \frac{\$}{\text{Kw-hr}} \times 1.027}{0.60} = \$38.94$$

Non-PG&E O&M Cost

Well Lifting Cost Before Project \times 20%

$$\$38.94 \times 0.20 = \$7.79$$

Total cost per AF per Foot of lift

$$\frac{\text{Well Lifting Costs Before Project} + \text{Non PG\&E O\&M Cost}}{\text{Groundwater Pumping Level}}$$

$$\frac{\$38.94 + \$7.79}{96} = \$0.49$$

Improved Well Pumping Level Average

$$\frac{\text{Average Water Available} - \text{Migration Loss}}{\left(\frac{\text{Total Acres}}{\text{Specific Yield}}\right)}$$

<i>Average Water Available:</i>	<i>5,000 AF</i>
<i>Migration Loss:</i>	<i>5%</i>
<i>Total Acres:</i>	<i>22,060</i>
<i>Specific Yield:</i>	<i>20%</i>

$$\frac{5,000 - (5,000 \times 0.05)}{\left(\frac{22,060}{0.20}\right)} = \mathbf{1.08 \text{ ft/yr}}$$

Increasingly Reduced Cost of Pumping Groundwater

*(Total Cost Per AF per Foot of Lift × Improved Well Pumping Level Average)**

$$(\$0.49 \times 1.08) = \mathbf{\$0.52}$$

Annualized = \$13.32

**Benefit increases on an annual basis, annualized with economic formulas to get equivalent annual cost from annual increasing benefit.*

Reduced (Halted) Pump Deepening Cost (Tiers 1-3)

Pump Deepening Costs per Acre per Year Before Project

$$\frac{\text{(Number of Wells per Quarter Section} \times \text{Cost to Deepen Well)}}{\left(\frac{\text{Frequency of Deepening}}{160 \text{ Acres per Quarter Section}}\right)}$$

Number of wells per Quarter Section: 4

Cost to Deepen Well: \$3,000

Frequency of Deepening: 25 Years

$$\frac{(4 \times 3,000)}{\left(\frac{25}{160}\right)} = \mathbf{\$3.00}$$

Reduced (Halted) Well Deepening Cost (Tiers 1-3)

Well Deepening Costs per Acre per Year Before Project

$$\frac{(\text{Number of Wells per Quarter Section} \times \text{Cost to Drill Well})}{\left(\frac{\text{Frequency of Drilling New Well}}{160 \text{ Acres per Quarter Section}}\right)}$$

Number of wells per Quarter Section: 4

Cost to Drill Well: \$100,000

Frequency of Deepening: 50 Years

$$\frac{(4 \times 100,000)}{\left(\frac{50}{160}\right)} = \mathbf{\$50.00}$$

Total Groundwater Benefit

*(Increasingly Reduced Cost of Pumping Groundwater
+ Reduced Pump Deepening Cost + Reduced Well Deepening Cost)*

$$(\$13.32 + \$3.00 + \$50.00) = \mathbf{\$66.32}$$

Summary Table

Groundwater Benefit (GWB, all lands in Improvement District)	Tier 1	Tier 2	Tier 3	Tier 4	per acre
1. Increasingly Reduced cost of pumping groundwater	\$ 0.52	\$ 0.31	\$ 0.16	\$ 0.16	per year
2. Reduced (halted) pump deepening cost	\$13.32	\$7.99	\$4.00	\$4.00	annualized
3. Reduced (halted) well deepening cost	\$50.00	\$30.00	\$15.00	\$0.00	annual
Total Groundwater Benefit	\$66.32	\$39.79	\$19.90	\$4.00	annual

Pressurized Water Benefits

Appendix F

Pressurized Water Benefits Calculations

North San Joaquin Water Conservation District

South System Improvement Project Engineer's Report

The following formulas were used to calculate the Tier 1 Pipeline Users Pressurized Water Benefit. See Appendix L River Lift Benefit Illustration for detailed illustration of Reduced (River vs Well) Lift benefit.

Reduced (River vs Well) lift

$$\frac{(\text{Well-River Pumping Level}) \times \text{AF Pressurized Water} \times \text{Well Lifting Costs Before Project}}{\text{Tier 1 Pipeline Total Acreage}}$$

Groundwater Pumping Level:	96
River Pumping Level:	15
AF Pressurized Water:	1,750
Well Lift Cost Before Project:	\$0.49/AF
Tier 1 Total Acreage:	2,390

$$\frac{(96 - 15) \times 1,750 \times \$0.49}{2,390} = \$28.87$$

Note: AF Pressurized Water is calculated from percentage of average total water available to Pipeline Users

More Efficient River Lift

$$\frac{\text{AF Pressurized Water} \times \text{River Lift} \times (\text{Well Pumping Cost} - \text{River Pumping Cost})}{\text{Tier 1 Pipeline Total Acreage}}$$

AF Pressurized Water:	1,750
River Lift:	15
Well Lift Cost Before Project:	\$0.49/AF
River Lift Cost Post Project	\$0.33/AF

$$\frac{1,750 \times 15 \times (\$0.49 - \$0.33)}{2,390} = \$1.75$$

More Efficient Boost

$$\frac{(\text{PreProject Boosting Cost} - \text{PostProject Boosting Cost}) \times \text{AF Pressurized Water}}{\text{Tier 1 Pipeline Total Acreage}}$$

PreProject Boosting Cost: \$0.25

PostProject Boosting Cost : \$0.19

AF Pressurized Water: 1,750

Tier 1 Total Acreage: 2,390

$$\frac{(\$0.25 - \$0.19) \times 1,750}{2,390} = \mathbf{\$0.05}$$

PreProject Boosting Cost and PostProject Boosting Cost are based on Energy Factors assumptions described in Assumptions Appendix

Total Pressurized Water Benefit

(Reduced (River vs Well) Lift + More Efficient River Lift + More Efficient Boost)

$$(\$28.87 + \$1.75 + \$0.05) = \mathbf{\$30.66}$$

Summary Table

Pressurized Water Benefit (PWB, all lands served by pipeline)		per acre
Reduced (River vs Well) Lift	\$28.87	per year
More Efficient River Lift	\$1.75	per year
More Efficient Boost	\$0.05	per year
Total Pressurized Water Benefit	\$30.66	per year

Non-Pressurized Water Benefits

Appendix G

Non-Pressurized Water Benefit Calculations

North San Joaquin Water Conservation District

South System Improvement Project Engineer's Report

The following formulas were used to calculate the Tier 1 Channel Users Non-Pressurized Water Benefit. See Appendix L River Lift Benefit Illustration for detailed Illustration of benefits of reduced pumping levels

Reduced (Channel vs Well) lift

$$\frac{\text{Delivered Channel Water} \times (\text{Well-Channel Pumping Level}) \times \text{River Water Pumping Cost}}{\text{Tier 1 Channel Total Acreage}}$$

Delivered Channel Water: 2,275

Well Pumping Level: 96

Channel Pumping Level: 12

River Water Pumping Cost: \$0.33

Tier 1 Channel Total Acreage: 3,466

$$\frac{2,275 \times (96 - 12) \times \$0.33}{3,466} = \mathbf{\$18.07}$$

Note: Delivered Channel Water = Total Water Available x % Available to Channel Users x (1 - % Channel Losses)

More Efficient River Lift

$$\frac{\text{AF Delivered to Channels} \times \text{Channel Lift} \times (\text{Well Pumping Cost} - \text{River Pumping Cost})}{\text{Tier 1 Channel Total Acreage}}$$

Delivered Channel Water: 2,275

Channel Pumping Level: 12

Well Pumping Cost: \$0.49

River Water Pumping Cost: \$0.33

Tier 1 Channel Total Acreage: 3,466

$$\frac{2,275 \times 12 \times (\$0.49 - \$0.33)}{3,466} = \mathbf{\$1.25}$$

Total Non-Pressurized Water Benefit

(Reduced (Channel vs Well) Lift + More Efficient River Lift)

$$(\$18.07 + \$1.25) = \$\mathbf{19.32}$$

Summary Table

Non-pressurized Water Benefit (NPWB, all lands served by open channel)		per acre
Reduced (Channel vs Well) Lift	\$18.07	
More Efficient River Lift	\$1.25	per year
Total NonPressurized Water Benefit	\$19.32	per year

Channel User Reduction of Benefits

Appendix H

Channel User Reduction of Benefits Calculations

North San Joaquin Water Conservation District

South System Improvement Project Engineer's Report

The following formulas were used to calculate the Tier 1 Channel User Infrastructure Costs that Reduce the Benefit Assessment. Costs for improvement to the channel and channel infrastructure were estimated and distributed proportionately according to parcels benefiting from the infrastructure.

Infrastructure Costs that Reduce Benefit Assessment for Channel Users

Annual Payment for Total Acreage per Tier

$$P = \frac{r \times (PV)}{1 - (1+r)^{-n}}$$

<i>Channel User Class</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
<i>PV (Present Value):</i>	\$153,672	\$1,613,891	\$218,437	\$745,000
<i>r (Interest Rate):</i>	3.5%			
<i>n (Number of Years):</i>	30			

Channel Users A

$$P = \frac{0.035 \times (\$153,672)}{1 - (1 + 0.035)^{-30}} = \$8,355.37$$

Channel Users B

$$P = \frac{0.035 \times (\$1,613,891)}{1 - (1 + 0.035)^{-30}} = \$87,749.40$$

Channel Users C

$$P = \frac{0.035 \times (\$218,437)}{1 - (1 + 0.035)^{-30}} = \$11,876.70$$

Channel Users D

$$P = \frac{0.035 \times (\$745,000)}{1 - (1 + 0.035)^{-30}} = \$40,506.64$$

Cost Per Acre

$$\frac{\text{Annual Payment}}{\text{Total Acreage}}$$

Channel Users A

$$\frac{\$8,355.37}{183} = \$44.56$$

Channel Users B

$$\frac{\$87,749.40}{2,047} = \$42.88$$

Channel Users C

$$\frac{\$11,876.70}{267} = \$44.47$$

Channel Users D

$$\frac{\$40,506.64}{969} = \$41.82$$

Summary Table

Infrastructure Costs that Reduce Benefit Assessment for Channel Users		per acre
Tier 1 Channel Users - A	(\$45.56)	per year
Tier 1 Channel Users - B	(\$42.88)	per year
Tier 1 Channel Users - C	(\$44.47)	per year
Tier 1 Channel Users - D	(\$41.82)	per year

**Amended and Restated
Permit 10477 (2014)**



STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD

DIVISION OF WATER RIGHTS

RIGHT TO DIVERT AND USE WATER

APPLICATION 12842

PERMIT 10477

Right Holder: North San Joaquin Water Conservation District
P.O. Box E
Victor, CA 95253

The State Water Resources Control Board (State Water Board) authorizes the diversion and use of water by the right holder (Permittee or District) in accordance with the limitations and conditions herein SUBJECT TO PRIOR RIGHTS. The priority of this right dates from **December 2, 1948**. This right is issued in accordance with the State Water Board delegation of authority to the Deputy Director for Water Rights (Resolution 2012-0029) and the Deputy Director for Water Rights (Deputy Director) redelegation of authority dated July 6, 2012. This right supercedes any previously issued right on **Application 12842**.

The Deputy Director finds that: (a) the change will not operate to the injury of any lawful user of water; (b) good cause has been shown for the change; (c) the petition does not constitute the initiation of a new right; and (d) the State Water Board has made the required findings pursuant to the California Environmental Quality Act (CEQA) or the project is exempt from CEQA.

The Deputy Director also finds that: (a) due diligence has been exercised; (b) failure to comply with previous time requirements has been occasioned by obstacles which could not be reasonably avoided; and (c) satisfactory progress will be made if an extension is granted.

The State Water Board has complied with its independent obligation to consider the effect of the proposed change on public trust resources and to protect those resources where feasible. (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419 [189 Cal.Rptr. 346, 658 P.2d 709].)

Right holder is hereby granted a right to divert and use water as follows:

1. Source of water: (1)(2)(3)(4)(5)(6) **Mokelumne River**

tributary to: **San Joaquin River**

within the County of **San Joaquin**

2a. Location of point of diversion to storage

By California Coordinate System of 1983 in Zone 3	40-acre subdivision of public land survey or projection thereof	Section (Projected)*	Township	Range	Base and Meridian
Camanche Reservoir (1) North 2,268,941 feet and East 6,411,485 feet	SE $\frac{1}{4}$ of SE $\frac{1}{4}$	6	4N	9E	MD

2b. Locations of points of diversion, redirection of stored water released from Camanche Reservoir, and diversion to underground storage

By California Coordinate System of 1983 in Zone 3	40-acre subdivision of public land survey or projection thereof	Section (Projected)*	Township	Range	Base and Meridian
<u>North Pump</u> (2) North 2,248,724 feet and East 6,368,412 feet	SE $\frac{1}{4}$ of NE $\frac{1}{4}$	26	4N	7E	MD
<u>South Pump</u> (3) North 2,243,275 feet and East 6,364,793 feet	NW $\frac{1}{4}$ of SW $\frac{1}{4}$	35	4N	7E	MD
<u>CALFED Project</u> (4) North 2,243,629 feet and East 6,355,205 feet	SE $\frac{1}{4}$ of NW $\frac{1}{4}$	33	4N	7E	MD
<u>Tracy Lake Pump</u> (6) North 2,263,230 feet and East 6,319,530 feet	NW $\frac{1}{4}$ of SE $\frac{1}{4}$	8*	4N	6E	MD

2c. Location of point of diversion and redirection of stored water released from Camanche Reservoir

By California Coordinate System of 1983 in Zone 3	40-acre subdivision of public land survey	Section	Township	Range	Base and Meridian
<u>Woodbridge Irrigation District Dam</u> (5) North 2,244,462 feet and East 6,332,349 feet	SW $\frac{1}{4}$ of NW $\frac{1}{4}$	35	4N	6E	MD

2d. Location of place of surface storage

Location	Section	Township	Range	Base and Meridian
<u>Camanche Reservoir</u>	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, and 16	4N	9E	MD
	27, 28, 32, 33, 34, 35 and 36	5N	9E	
	4, 5, 6, 7, 8, 9, and 18	4N	10E	
	31, 32 and 33	5N	10E	

2e. Locations of places of underground storage

Location	40-acre subdivision of public land survey or projection thereof	Section (Projected)*	Township	Range	Base and Meridian
Tracy Lake	SW¹/₄ of SW¹/₄	3	4N	6E	MD
	NE¹/₄ of NE¹/₄	8*			
	S¹/₂ of NE¹/₄	8*			
	N¹/₂ of SE¹/₄	8*			
	N¹/₂	9			
	NW¹/₄ of SW¹/₄	9			
	NW¹/₄ of NW¹/₄	10			
CALFED Project	W¹/₂ of NW¹/₄	33	4N	7E	MD

3. Purpose of use	4. Place of use			
	Location	Township	Range	Base and Meridian
Recreational	Camanche Reservoir	4N-5N	9E-10E	MD
Domestic, Municipal, Industrial, Water Quality*, and Fish and Wildlife Preservation and Enhancement*	Within the North San Joaquin Water Conservation District (District) service area boundary of 157,000 gross acres within T3N, R6E-9E; T4N, R5E-9E; and T5N, R5E-9E, all within MDB&M, as shown on map.			
Irrigation	45,000 net acres within the 157,000 gross acres within the District service area boundary.			

The place of use is shown on map filed on December 17, 2014 with the State Water Board.

* Water Quality and Fish and Wildlife Preservation and Enhancement uses are only allowed under Permit 10477 as part of the CALFED groundwater recharge/conjunctive use project.

5. The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed a total combined rate of 80 cubic feet per second (cfs) by direct diversion from all pumping facilities. Direct diversion shall be limited to no more than 40 cfs at any one pumping facility to be diverted from December 1 of each year to July 1 of the succeeding year.

Diversion to storage shall be collected from December 1 of each year to July 1 of the succeeding year and be limited to a combined total of 20,000 acre-feet per annum (afa) in (a) Camanche Reservoir and (b) underground storage.

Underground storage shall be limited to combined total of 17,000 afa at a maximum diversion rate of 10 cfs at each of PODs 2, 3, 4, and 6. The water diverted at POD 4 shall not exceed 1,000 afa to be collected to underground storage.

The combined rate of direct diversion and diversion to underground storage shall not exceed 80 cfs.

The total amount of water to be taken from the source shall not exceed 20,000 acre-feet per water year of October 1 to September 30.

(0000005E)

6. No water shall be collected to storage outside of the specified season to offset evaporation and seepage losses or for any other purpose.

(0000005I)

7. Application of the water to the authorized use shall be made by December 31, 2025, except that the time for development of the water right shall be extended to December 31, 2040 upon a finding by the Executive Director of the State Water Board that the District has not applied all of the permitted water to beneficial use, but has 1) completed construction of the Tracy Lake Project and 2) applied water to beneficial use through both POD 4 (the Woodbridge Irrigation District Dam POD to Lodi) and POD 5 (the Tracy Lake POD). The District must submit evidence to Executive Director of the State Water Board confirming due diligence with the above two items by December 31, 2025.

(0000009)

8. The total area to be developed for groundwater recharge and storage shall not exceed 500 acres within the District's boundaries.

(0560900)

9. No water shall be diverted under this permit until the right holder has either constructed fish screens at points of diversion/rediversion Nos. 4, 5, and 6, or has proposed and constructed an alternative(s) to a fish screen(s). Any alternative must comply with the Department of Fish and Wildlife's (DFW) criteria and receive DFW's written approval. Right holder shall submit a copy of DFW's written approval of the plans and design calculations to the Division within 30 days from the date of the approval. Construction, operation, and maintenance of any required facility are the responsibility of the right holder. If the fish screen or any alternative is rendered inoperative for any reason, the right holder shall notify the Deputy Director immediately and shall restore the equipment to service as soon as possible.

(0000213)

10. With the exception of underground storage conducted pursuant to the North San Joaquin Pilot Recharge Project, the District must submit a conjunctive use plan to the Deputy Director prior to placing water into underground storage. The plan shall identify the proposed groundwater recharge or storage areas, the location of pumps and other facilities used for injection or percolation to storage, and the methods and points of measurement of the water diverted to and withdrawn from underground storage. The plan also must address whether and how placing water to underground storage and subsequently withdrawing the water, under Permit 10477 will prevent additional overdraft in the Eastern San Joaquin and Cosumnes groundwater subbasins and include measures to avoid any such impacts. If the Deputy Director determines that all or a portion of the plan is not acceptable, then the District must submit any modifications to the plan required by the Deputy Director within 60 days of being notified that the plan is not acceptable. Upon approval of the plan by the Deputy Director, the District shall implement the plan.

(0490900)

11. Within 180 days from the date of issuance of this amended permit, the District must provide the Division an update of the District's September 2008 plan to avoid the waste or unreasonable use of water under Permit 10477 including identifying any current and proposed conservation measures. If the Deputy Director determines that all or a portion of the plan is not acceptable, then the District must submit any modifications to the plan required by the Deputy Director within 60 days of being notified that the plan is not acceptable. Upon approval of the plan by the Deputy Director, the District shall implement the plan. The District shall provide updates of implementation of the plan upon request by the Division.

(0490700)

12. The District must submit an annual report to the Deputy Director regarding progress on groundwater management by the District in the Eastern San Joaquin and Cosumnes groundwater subbasins and any existing or proposed measures to address over-drafting within the District's boundaries. The first report is due one year from the date of this amended permit and subsequent reports are due with the annual "Progress Report by Permittee."

(0580900)

13. The District may not transfer water diverted to underground storage under Permit 10477 outside the Eastern San Joaquin and Cosumnes groundwater subbasins, as defined in the Department of Water Resources Bulletin 118, without complying with applicable State Water Board procedures and receiving any necessary approvals.

(0450900)

14. Prior to diversion of water to underground storage under this permit, the right holder shall (1) install devices to measure the quantities of water placed into underground storage and (2) install devices to measure or provide documentation of the method to be used to determine the quantity of water recovered from underground storage and placed to beneficial use. All measuring devices and the method of determining the quantity of water recovered from underground storage shall be approved by the Deputy Director prior to diversion of water at the Mokelumne River points of diversion/rediversion under this permit. All measuring devices shall be properly maintained.

The District shall report the quantity of water placed into, and recovered from, underground storage under Permit 10477 to the State Water Board with the annual "Progress Report by Permittee."

(0080117)

15. The District shall establish a method, and install and maintain appropriate devices, to measure the instantaneous rate of diversion and cumulative quantity of water diverted from each point of diversion, and the cumulative quantity of water applied to beneficial use under this permit. The District must obtain approval from the State Water Board of all devices, the method of determining the rate and amount of water diverted, and the method of determining the amount of water applied to beneficial use. Within three months of the date of this amended permit, the right holder shall submit a plan for approval by the Deputy Director that will demonstrate compliance with this term. The plan shall include as a minimum:
 - a. A description of any gages and/or monitoring devices that will be installed or have been installed.
 - b. A time schedule for the installation of these devices.
 - c. A description of activities that will be taken to ensure the continued maintenance and operation of the devices, including a schedule for inspection of the devices by the right holder.

- d. A description of the frequency of data collection, the methods for recording data, the format for reporting data to the Division, and any calculations required to develop the records.
- e. A description of the method to be used in reporting East Bay Municipal Utility District's (EBMUD) diversion of water to storage for the District's benefit under Permit 10477, and the amount of that water actually applied to beneficial use by the District.

A record of such measurements shall be maintained by the right holder, and made available to interested persons upon reasonable request. A copy of the records shall be submitted to the State Water Board with the annual "Progress Report by Permittee."

(0090900)

16. If it is determined that the as-built conditions of the project are not correctly represented by the map(s) prepared to accompany the application, the right holder shall, at their expense have the subject map(s) updated or replaced with equivalent as-built map(s). Said revision(s) or new map(s) shall be prepared by a civil engineer or land surveyor registered or licensed in the State of California and shall meet the requirements prescribed in California Code of Regulations, title 23, section 715 et seq. The revision(s) or map(s) shall be furnished upon request of the Deputy Director.

(0000030)

17. The District shall allow any water bypassed or released from Camanche Reservoir by EBMUD under permitted Application 13156 for the protection and/or enhancement of fish and wildlife to continue downstream. Nothing in this permit shall be construed as authorizing the District to appropriate said flows. The District shall report the compliance with this term with the annual "Progress Report by Permittee."

(0140800)

18. The District shall comply with the following bypass:

The District will make available five percent (identified in acre-feet) of its annual allocation of Mokelumne River water as an instream dedication for anadromous fish conservation and enhancement, or, in the case of a future amendment to the "Agreement Between the California Department of Fish and Game and the North San Joaquin Water Conservation District Related to Bypass Flows in the Mokelumne River" dated June 16, 2008 that is filed with the Board, shall comply with any increased bypass level described in the amended agreement.

(0140300)

19. The District shall submit an annual "Progress Report by Permittee" to the Division of Water Rights on forms provided by the State Water Board. Such report shall additionally include the information specified by this permit's terms.

(0580900)

20. The equivalent of the authorized continuous flow allowance for any 30-day period may be diverted in a shorter time, provided there is no interference with other rights and instream beneficial uses, and provided further that all terms and conditions protecting instream beneficial uses are observed.

(0000027)

21. This permit is subject to prior rights. The right holder is put on notice that, during some years, water will not be available for diversion during portions or all of the season authorized herein. The annual variations in

demands and hydrologic conditions in the Mokelumne River are such that, in any year of water scarcity, the season of diversion authorized herein may be reduced or completely eliminated by order of the State Water Board, made after notice to interested parties and opportunity for hearing.

(0000090)

22. No diversion is authorized by this permit when satisfaction of inbasin entitlements requires release of supplemental Project water by the Central Valley Project or the State Water Project.

- a. Inbasin entitlements are defined as all rights to divert water from streams tributary to the Sacramento-San Joaquin Delta or the Delta for use within the respective basins of origin or the Legal Delta, unavoidable natural requirements for riparian habitat and conveyance losses, and flows required by the State Water Board for maintenance of water quality and fish and wildlife. Export diversions and Project carriage water are specifically excluded from the definition of inbasin entitlements.
- b. Supplemental Project water is defined as that water imported to the basin by the projects plus water released from Project storage which is in excess of export diversions, Project carriage water, and Project inbasin deliveries.

The State Water Board shall notify the right holder of curtailment of diversion under this term after it finds that supplemental Project water has been released or will be released. The State Water Board will advise the right holder of the probability of imminent curtailment of diversion as far in advance as practicable based on anticipated requirements for supplemental Project water provided by the Project operators.

(0000091)

23. The State Water Board reserves jurisdiction over this permit to change the season of diversion to conform to later findings of the State Water Board concerning protection of beneficial uses of water in the Sacramento-San Joaquin Delta and San Francisco Bay. Any action to change the season of diversion will be taken only after notice to interested parties and opportunity for hearing.

(0000094B)

24. This permit is issued to accordance with the provisions of the Section 1462 of the Water Code for the temporary appropriation of the excess of the permitted appropriation over and above the quantity applied to beneficial use from time to time by the EBMUD under its Application 13156 and permit issued thereon provided that the project of the District shall be so constructed that it may be feasibly integrated at a later date with the project of EBMUD under Application 13156 as may be determined by the State Water Board.

(0000999)

25. Should any buried archeological materials be uncovered during project activities, such activities shall cease within 100 feet of the find. Prehistoric archeological indicators include: obsidian and chert flakes and chipped stone tools; bedrock outcrops and boulders with mortar cups; ground stone implements (grinding slabs, mortars and pestles) and locally darkened midden soils containing some of the previously listed items plus fragments of bone and fire affected stones. Historic period site indicators generally include: fragments of glass, ceramic and metal objects; milled and split lumber; and structure and feature remains such as building foundations, privy pits, wells and dumps; and old trails. The Deputy Director shall be notified of the discovery and a professional archeologist shall be retained by the right holder to evaluate the find and recommend appropriate mitigation measures. Proposed mitigation measures shall be submitted to the Deputy Director for

approval. Project-related activities shall not resume within 100 feet of the find until all approved mitigation measures have been completed to the satisfaction of the Deputy Director.

(0000215)

26. If human remains are encountered, then the right holder shall comply with Section 15064.5 (e) (1) of the CEQA Guidelines and Public Resources Code Section 7050.5. All project-related ground disturbance within 100 feet of the find shall be halted until the county coroner has been notified. If the coroner determines that the remains are Native American, the coroner will notify the Native American Heritage Commission to identify the most-likely descendants of the deceased Native Americans. Project-related ground disturbance, in the vicinity of the find, shall not resume until the process detailed under Section 15064.5 (e) has been completed and evidence of completion has been submitted to the Deputy Director.

(0450500)

THIS RIGHT IS ALSO SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

- A. Right holder is on notice that: (1) failure to timely commence or complete construction work or beneficial use of water with due diligence, (2) cessation or partial cessation of beneficial use of water, or (3) failure to observe any of the terms or conditions of this right, may be cause for the State Water Board to consider revocation (including partial revocation) of this right. (Cal. Code Regs., tit. 23, § 850.) (0000016)
- B. Right holder is on notice that when the State Water Board determines that any person is violating, or threatening to violate, any term or condition of a right, the State Water Board may issue an order to that person to cease and desist from that violation. (Wat. Code, § 1831.) (0000017)
- C. Right holder is not authorized to make any modifications to the location of diversion facilities, place of use or purposes of use, or make other changes to the project that do not conform with the terms and conditions of this right, prior to submitting a change petition and obtaining approval of the State Water Board. (0000018)
- D. Once the time to develop beneficial use of water ends under this permit, right holder is not authorized to increase diversions beyond the maximum annual amount diverted or used during the authorized development schedule prior to submitting a time extension petition and obtaining approval of the State Water Board. (0000019)
- E. The amount of water for consideration when issuing a license shall be limited to only the amount of water diverted and applied to beneficial use in compliance with the terms and conditions of this right, as determined by the State Water Board. (Wat. Code, § 1610.) (0000006)
- F. Right holder shall maintain records of the amount of water diverted and used under this right to enable the State Water Board to determine the amount of water that has been applied to beneficial use. (0000015)
- G. Right holder shall promptly submit any reports, data, or other information that may reasonably be required by the State Water Board, including but not limited to documentation of water diversion and use under this right and documentation of compliance with the terms and conditions of this right. (0000010)
- H. No water shall be diverted under this right unless right holder is operating in accordance with a compliance plan, satisfactory to the Deputy Director. Said compliance plan shall specify how right holder will comply with the terms and conditions of this right. Right holder shall comply with all reporting requirements in accordance with the schedule contained in the compliance plan. (0000070)
- I. Right holder shall grant, or secure authorization through right holder's right of access to property owned by another party, the staff of the State Water Board, and any other authorized representatives of the State Water Board the following:
 - 1. Entry upon property where water is being diverted, stored or used under a right issued by the State Water Board or where monitoring, samples and/or records must be collected under the conditions of this right;
 - 2. Access to copy any records at reasonable times that are kept under the terms and conditions of a right or other order issued by State Water Board;

3. Access to inspect at reasonable times any project covered by a right issued by the State Water Board, equipment (including monitoring and control equipment), practices, or operations regulated by or required under this right; and,
4. Access to photograph, sample, measure, and monitor at reasonable times for the purpose of ensuring compliance with a right or other order issued by State Water Board, or as otherwise authorized by the Water Code.

(0000011)

- J. This right shall not be construed as conferring right of access to any lands or facilities not owned by right holder.

(0000022)

- K. All rights are issued subject to available flows. Inasmuch as the source contains treated wastewater, imported water from another stream system, or return flow from other projects, there is no guarantee that such supply will continue.

(0000025)

- L. This right does not authorize diversion of water dedicated by other right holders under a senior right for purposes of preserving or enhancing wetlands, habitat, fish and wildlife resources, or recreation in, or on, the water. (Wat. Code, § 1707.) The Division maintains information about these dedications. It is right holders' responsibility to be aware of any dedications that may preclude diversion under this right.

(0000212)

- M. No water shall be diverted or used under this right, and no construction related to such diversion shall commence, unless right holder has obtained and is in compliance with all necessary permits or other approvals required by other agencies. If an amended right is issued, no new facilities shall be utilized, nor shall the amount of water diverted or used increase beyond the maximum amount diverted or used during the previously authorized development schedule, unless right holder has obtained and is in compliance with all necessary requirements, including but not limited to the permits and approvals listed in this term.

Within 90 days of the issuance of this right or any subsequent amendment, right holder shall prepare and submit to the Division a list of, or provide information that shows proof of attempts to solicit information regarding the need for, permits or approvals that may be required for the project. At a minimum, right holder shall provide a list or other information pertaining to whether any of the following permits or approvals are required: (1) lake or streambed alteration agreement with the Department of Fish and Wildlife (Fish & G. Code, § 1600 et seq.); (2) Department of Water Resources, Division of Safety of Dams approval (Wat. Code, § 6002); (3) Regional Water Quality Control Board Waste Discharge Requirements (Wat. Code, § 13260 et seq.); (4) U.S. Army Corps of Engineers Clean Water Act section 404 permit (33 U.S.C. § 1344); and (5) local grading permits.

Right holder shall, within 30 days of issuance of any permits, approvals or waivers, transmit copies to the Division.

(0000203)

- N. Urban water suppliers must comply with the Urban Water Management Planning Act (Wat. Code, § 10610 et seq.). An "urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually.

Agricultural water users and suppliers must comply with the Agricultural Water Management Planning Act (Act) (Water Code, § 10800 et seq.). Agricultural water users applying for a permit from the State Water Board are required to develop and implement water conservation plans in accordance with the Act. An "agricultural water supplier" means a supplier, either publicly or privately owned, supplying more than

50,000 acre-feet of water annually for agricultural purposes. An agricultural water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers.

(0000029D)

- O. Pursuant to Water Code sections 100 and 275 and the common law public trust doctrine, all rights and privileges under this right, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Board in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

The continuing authority of the State Water Board may be exercised by imposing specific requirements over and above those contained in this right with a view to eliminating waste of water and to meeting the reasonable water requirements of right holder without unreasonable draft on the source. Right holder may be required to implement a water conservation plan, features of which may include but not necessarily be limited to (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this right and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the State Water Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The continuing authority of the State Water Board also may be exercised by imposing further limitations on the diversion and use of water by right holder in order to protect public trust uses. No action will be taken pursuant to this paragraph unless the State Water Board determines, after notice to affected parties and opportunity for hearing, that such action is consistent with California Constitution, article X, section 2; is consistent with the public interest; and is necessary to preserve or restore the uses protected by the public trust.

(0000012)

- P. The quantity of water diverted under this right is subject to modification by the State Water Board if, after notice to right holder and an opportunity for hearing, the State Water Board finds that such modification is necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified pursuant to Division 7 of the Water Code. No action will be taken pursuant to this paragraph unless the State Water Board finds that (1) adequate waste discharge requirements have been prescribed and are in effect with respect to all waste discharges which have any substantial effect upon water quality in the area involved, and (2) the water quality objectives cannot be achieved solely through the control of waste discharges.

(0000013)

- Q. This right does not authorize any act which results in the taking of a candidate, threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & G. Code, § 2050 et seq.) or the federal Endangered Species Act (16 U.S.C. § 1531 et seq.). If a "take" will result from any act authorized under this right, right holder shall obtain any required authorization for an incidental take prior to construction or operation of the project. Right holder shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this right.

(0000014)

This right is issued and right holder takes it subject to the following provisions of the Water Code:

Section 1390. A permit shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code), but no longer.

Section 1392. Every permittee, if he accepts a permit, does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any permit granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any permittee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any permittee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

STATE WATER RESOURCES CONTROL BOARD

ORIGINAL SIGNED BY:
JOHN O'HAGAN FOR

*Barbara Evoy, Deputy Director
Division of Water Rights*

Dated: MAR 30 2015

**NSJWCD Annual Diversions
In Acre-Feet**

North San Joaquin Water Conservation District
 Monthly Diversions 1958 through 2013
 (Acre-Feet)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1958									23	0	0	1	24
1959	0	0	15	2	26	0	0	0	0	0	0	0	43
1960	0	0	0	0	106	185	1	148	160	0	0	0	600
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	139	275	319	443	386	272	56	0	0	1,890
1963	0	0	0	0	42	202	342	318	250	65	6	0	1,225
1964	0	0	0	0	0	268	307	307	119	0	0	0	1,001
1965	0	0	0	0	520	954	1,142	901	740	298	0	0	4,555
1966	0	0	24	624	729	1,185	1,364	1,109	451	89	0	0	5,575
1967	0	0	2	8	721	1,226	1,726	1,765	974	350	0	0	6,772
1968	0	30	41	827	1,644	1,725	1,851	1,513	742	147	0	0	8,520
1969	0	0	24	444	1,620	1,442	1,771	1,667	731	126	0	0	7,825
1970	0	0	84	1,233	1,609	1,582	1,845	1,699	847	230	0	0	9,129
1971	0	0	238	1,252	1,331	1,507	1,540	1,288	772	196	0	0	8,124
1972	0	0	735	1,481	1,594	1,590	1,748	1,592	717	0	0	0	9,457
1973	0	0	1	797	1,878	1,974	2,198	1,883	728	29	0	0	9,488
1974	0	0	33	55	1,416	1,785	1,933	1,891	993	268	0	0	8,374
1975	0	0	2	344	1,805	1,832	2,204	1,786	800	177	0	0	8,950
1976	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1978	0	0	0	19	1,015	1,599	1,788	1,082	780	431	94	0	6,808
1979	0	0	3	382	1,315	1,660	1,609	1,277	617	688	96	0	7,647
1980	0	1	0	292	944	1,514	1,594	1,223	539	832	612	1	7,552
1981	0	0	0	294	1,083	1,564	1,826	1,083	664	101	0	0	6,615
1982	0	0	0	0	721	1,430	1,590	1,104	465	26	0	0	5,336
1983	0	0	0	0	267	1,243	2,130	1,034	595	473	0	0	5,742
1984	0	0	0	544	1,158	1,550	1,637	968	822	394	25	3	7,101
1985	0	0	0	130	1,056	1,377	1,547	1,038	456	125	0	0	5,729
1986	0	0	0	91	1,022	1,400	1,659	873	682	313	0	0	6,040
1987	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	322	769	890	610	479	129	0	0	3,199
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
1995	0	0	0	0	46	540	688	772	413	184	0	0	2,643
1996	0	0	0	0	232	523	696	620	500	0	0	0	2,571
1997	0	0	0	473	514	478	654	434	347	108	0	0	3,008
1998	0	0	0	0	1	206	635	509	378	240	0	0	1,969
1999	0	0	0	30	343	530	657	496	429	289	22	2	2,798
2000	5	1	0	54	313	857	503	545	511	0	0	0	2,789
2001	0	0	0	0	13	9	8	0	0	0	0	0	30
2002	0	0	0	52	277	407	299	375	300	185	0	0	1,895
2003	0	0	0	0	9	236	788	717	690	712	0	0	3,152
2004	35	4	79	82	264	525	548	400	292	186	231	216	2,862
2005	0	0	0	0	0	558	568	465	390	206	0	0	2,187
2006	0	0	0	0	149	335	627	610	292	144	0	0	2,157
2007	0	0	0	0	0	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	60	70	0	261	425	531	369	296	225	29	0	2,266
2010	0	49	26	0	439	748	719	453	299	59	124	107	3,023
2011	218	0	12	89	238	374	644	632	504	551	149	0	3,411
2012	0	0	0	0	0	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	1	1	26	197	538	757	885	704	399	156	22	4	3,690

- Notes:
1. Pumping Plants No. 32.30L and 33.69R. Initial pumps installed September 1958.
 2. Diversions computed from EBMUD records except for 1958 through 1963, which were estimated as follows:
 - (a) Record of diversions 1958 through 1961 from State of California, Dept. of Water Resources, Bulletin No. 23-58 to No. 23-61, "Surface Water Flow."
 - (b) Year 1962 from Dept. of Water Resources unpublished data.
 - (c) Year 1963 computed from power consumption data (diversion/kilowatt hours) for Year 1962 applied to power consumption for Year 1963 to obtain diversions.

**Modeling of Water Availability
for Permit 10477**

L.2 Permit 10478 Time Extension Project Conditions, North San Joaquin Water Conservation District Allocations (acre-feet)

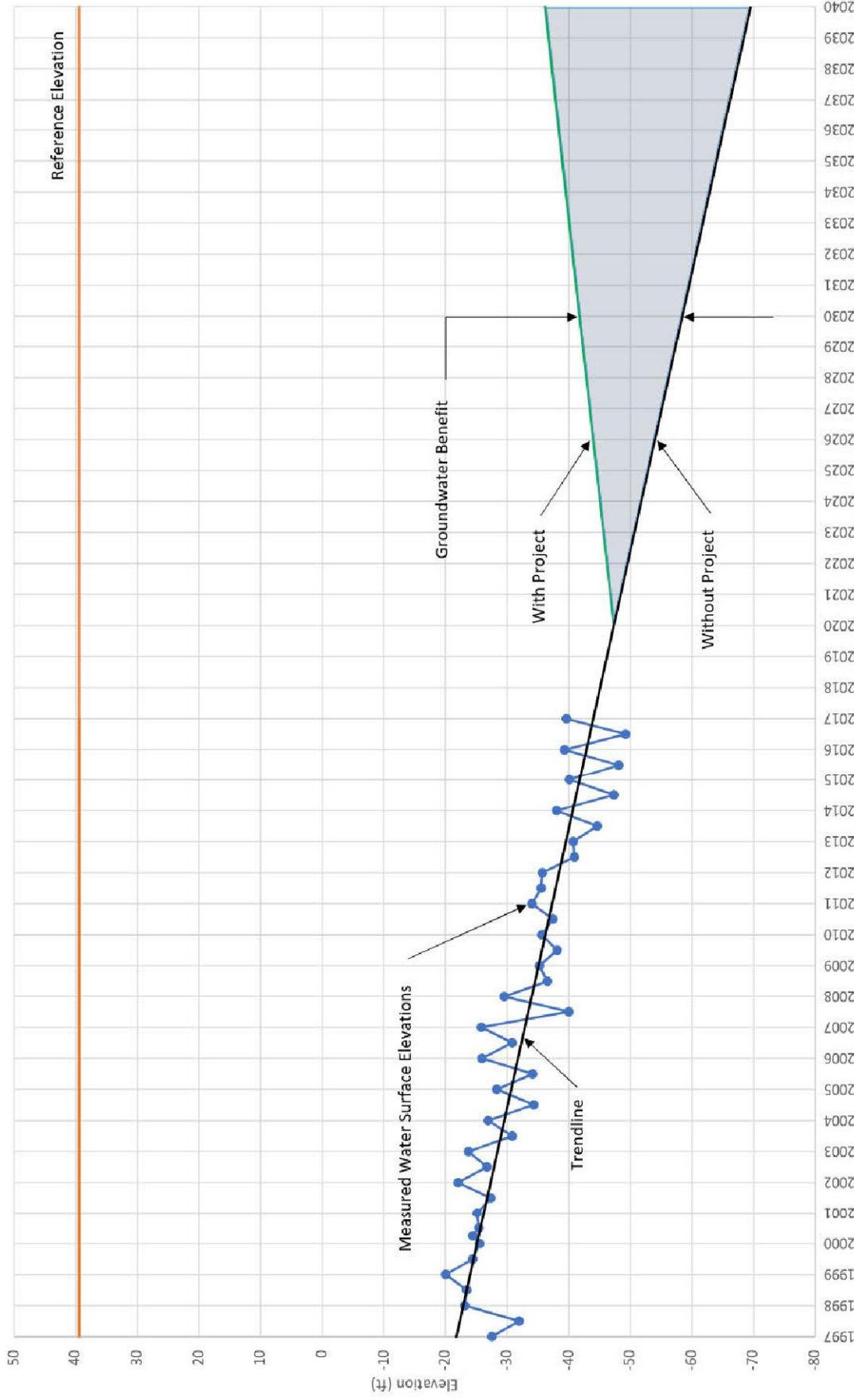
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
1921	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1922	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1923	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1924	0	0	0	0	0	0	0	0	0	0	0	0	0
1925	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1926	0	0	0	0	0	0	0	0	0	0	0	0	0
1927	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1928	0	0	0	0	2184	2955	3468	2184	1285	771	0	0	12846
1929	0	0	0	0	0	0	0	0	0	0	0	0	0
1930	0	0	0	0	0	0	0	0	0	0	0	0	0
1931	0	0	0	0	0	0	0	0	0	0	0	0	0
1932	0	0	0	0	0	0	0	0	0	0	0	0	0
1933	0	0	0	0	0	0	0	0	0	0	0	0	0
1934	0	0	0	0	0	0	0	0	0	0	0	0	0
1935	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1936	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1937	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1938	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1939	0	0	0	0	0	0	0	0	0	0	0	0	0
1940	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1941	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1942	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1943	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1944	0	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1946	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1947	0	0	0	0	0	0	0	0	0	0	0	0	0

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
1948	0	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1951	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1952	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1953	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1954	0	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1957	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1958	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1966	0	0	0	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1968	0	0	0	0	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1970	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1971	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1972	0	0	0	0	0	0	0	0	0	0	0	0	0
1973	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1974	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1975	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1976	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1978	0	0	0	0	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	0	0	0	0	0	0

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
1980	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1981	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1983	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1984	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1985	0	0	0	0	0	0	0	0	0	0	0	0	0
1986	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1987	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
1995	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1996	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1997	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1998	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
1999	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
2000	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
2001	0	0	0	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0	0	0	0	0
2003	0	0	0	0	3204	4334	5088	3204	1885	1131	0	0	18845
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
2006	0	0	0	0	3400	4600	5400	3400	2000	1200	0	0	20000
2007	0	0	0	0	0	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0	0	0	0	0	0

Groundwater Lift Reduction Illustration

Groundwater Lift Reduction Illustration



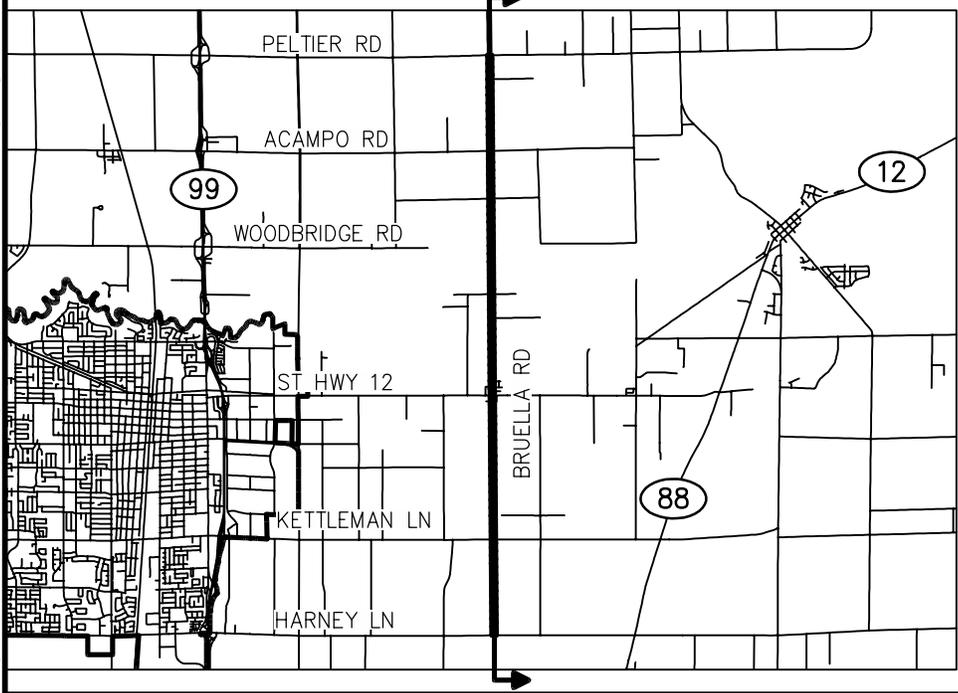
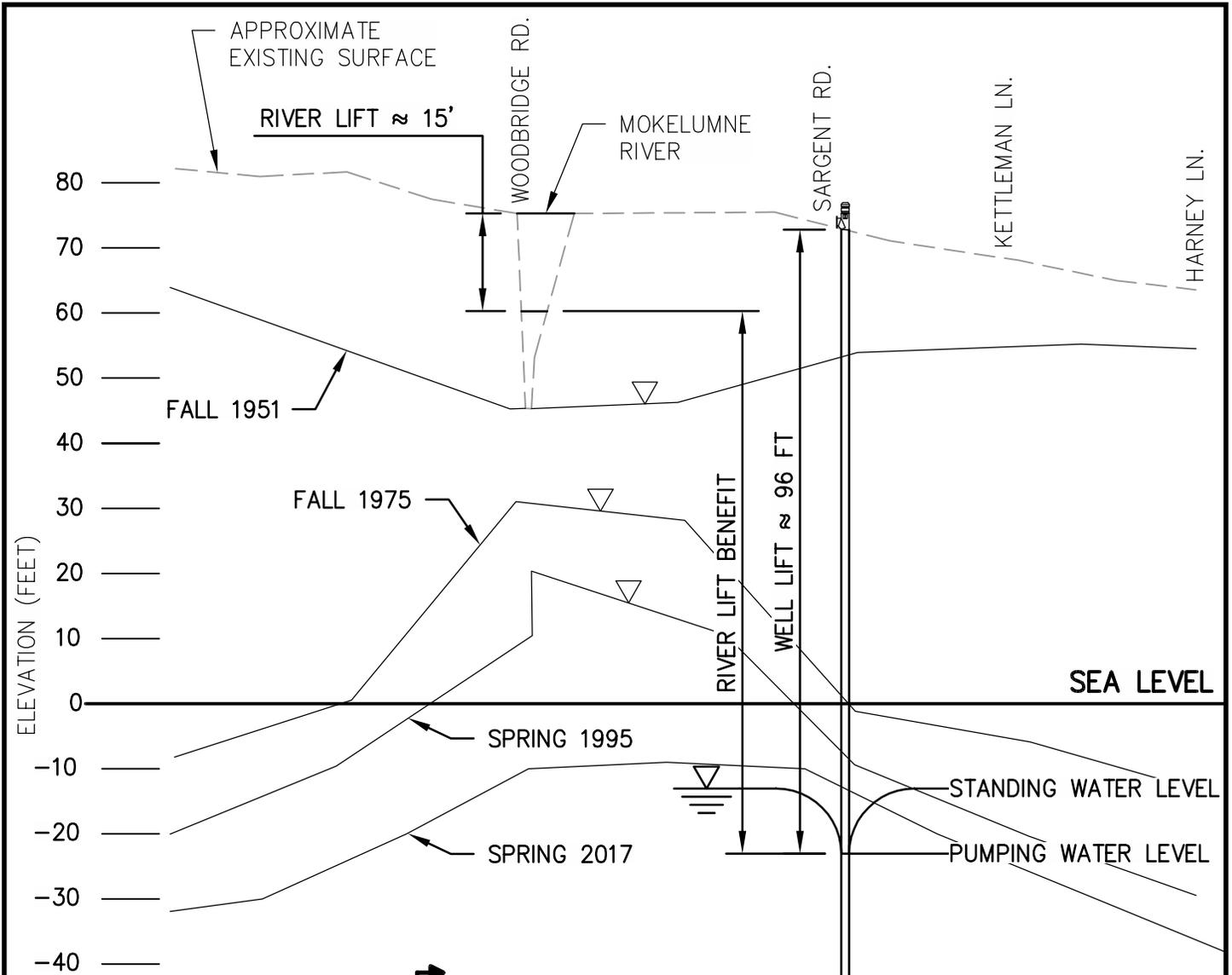
Water surface elevation data used for projection is from Well #112, SWI: 03N06E25R005M

EST. 1968
PROVOST & PRITCHARD
 CONSULTING GROUP
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APPENDIX K TO ENGINEERS REPORT
 NORTH SAN JOAQUIN WATER CONSERVATION DISTRICT
 SOUTH SYSTEM IMPROVEMENT DISTRICT
GROUNDWATER LIFT REDUCTION ILLUSTRATION

DESIGN ENGINEER:
 MIKE J. DAY
 DATE: 12/20/2017
 JOB NO: 269617001
 SHEET 1 OF 1

River Lift Benefit Illustration



12/20/2017 11:04 AM G:\north san joaquin wcd - 2696\269617001-prop 21B engineers report\DWG\EXHIBIT\1\ RIVER LIFT BENEFIT.dwg - Georgia to Velde

EST. 1968
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APPENDIX L TO ENGINEERS REPORT
 NORTH SAN JOAQUIN WATER CONSERVATION DISTRICT
 SOUTH SYSTEM IMPROVEMENT DISTRICT
RIVER LIFT BENEFIT ILLUSTRATION

DESIGN ENGINEER:
 MIKE J. DAY
 DATE: 12/20/2017
 JOB NO: 269617001
 SHEET **1** OF **1**

Works Cited

Appendix N

Works Cited

North San Joaquin Water Conservation District South System

Groundwater Improvement Project Engineer's Report

Amec Foster Wheeler Environment & Infrastructure, Inc. "1992-2012 Groundwater Flow Model and Predictive Simulation." Arvin-Edison Water Storage District, April 2015.

Brown and Caldwell Consulting Engineers. "Eastern San Joaquin County Groundwater Study." Final Report, San Joaquin County Flood Control and Water Conservation District, October 1985.

California Department of Water Resources. "San Joaquin Valley Groundwater Basin Eastern San Joaquin Subbasin." California's Groundwater, Bulletin 118, January 2006.

California Special Districts Association. "Proposition 218 Guide for Special Districts." 2013.

Doll, David. "Phytophthora Root and Crown Rot of Walnut and Almond." *The Almond Doctor*, September 28, 2009, thealmonddoctor.com/2009/09/28/phytophthora-root-and-crown-rot-of-walnut-and-almond/

East Bay Municipal Utility District. "Reservoir Water Quantity Model Results." *Permit 10478 Time Extension Project Draft Environmental Impact Report*. September 2013.

Eastern San Joaquin County Groundwater Basin Authority. "2014 IRWMP Update." California Department of Water Resources, June 2014.

Farmington Groundwater Recharge Program. "Results of Pilot-Scale Recharge Testing." September 2005.

"Grant Application." *North San Joaquin Water Conservation District South System Conveyance Improvement Project*, February 14, 2017.

Gross, Keith. Personal interview with Jennifer Spaletta. November 28, 2017.

Irrigation Training and Research Center. "ETc Table 8. Zone 12 Typical Year." *California Crop and Soil Evapotranspiration*, California Polytechnic State University, San Luis Obispo. www.itrc.org/reports/pdf/californiacrop.pdf

James F. Sorenson Consulting Civil Engineers. Various groundwater level exhibits in Lodi area. North San Joaquin Water Conservation District. 1998.

Kern Fan Monitoring Committee. "2005-2006 Kern Fan Area Operations and Monitoring Report." September 2012.

KSN Inc. Civil Engineers and Land Surveyors. "Micke Grove Groundwater Recharge Project." August 2015.

KSN Inc. Civil Engineers and Land Surveyors. "Technical Memorandum No. 1." Water Supply Investigations for Micke Grove Regional Park Groundwater Recharge Feasibility Study. March 2015.

KSN Inc. Civil Engineers and Land Surveyors. "Technical Memorandum No. 2." Engineering Analysis of Recharge Alternatives for Micke Grove Regional Park Groundwater Recharge Feasibility Study. March 2015.

KSN Inc. Civil Engineers and Land Surveyors. "Technical Memorandum No. 3." Engineering Analysis of Supply Alternatives for Micke Grove Regional Park Groundwater Recharge Feasibility Study. March 2015.

KSN Inc. Civil Engineers and Land Surveyors. "Technical Memorandum No. 4." Project Funding Opportunities Investigation for Micke Grove Regional Park Groundwater Recharge Feasibility Study. April 2015.

Linsley, Ray K., et al. *Hydrology for Engineers*. Third edition, McGraw-Hill Book Company, 1982.

Moore Biological Consultants. "Micke Grove Park Groundwater Recharge Project." KSN Inc. Civil Engineers and Land Surveyors. April 2015.

Nakagawa, Brandon W. "Eastern San Joaquin Groundwater Basin Groundwater Management Plan." Northeastern San Joaquin County Groundwater Banking Authority, September 2004.

National Agricultural Statistics Service. "CropScape—Cropland Data Layer." United States Department of Agriculture, 2007-2016, <https://nassgeodata.gmu.edu/CropScape/>

North San Joaquin Water Conservation District. "Proposed Water Rates" approved in prior Prop 218 election on Water Rates

Purviance, Dan. Phone conversation. November 30, 2017.

Simpson, David. Personal interview. November, 2017.

Stantec. "South System Improvement Project—Milestone 1: Foundational Alternatives" North San Joaquin Water Conservation District, January 30, 2017.

Stockton East Water District. "Stockton East Water District 2017 Water Rates"

San Joaquin County Flood Control and Water Conservation District. "Groundwater Report Fall 2016." San Joaquin County Department of Public Works, 2017.

San Joaquin County Flood Control and Water Conservation District. "Groundwater Report Spring 2017." San Joaquin County Department of Public Works, 2017.

Shlemon, Roy J. "The Quaternary Deltaic and Channel System in the Central Great Valley, California." *ANNALS of the Association of the American Geographers*. A. Carlton and E. Begg, Volume 61, Number 3, University of California in Davis, September 1971.

University of California Agriculture & Natural Resources. "UC Pest Management Guidelines: Grape Phylloxera." *Statewide Integrated Pest Management Program*. Regents of the University of California, April 2017.

Verdegaal, Paul S. "RE: Questions regarding temperature and Phytophthora and/or Phylloxera." Received by Mike Day, Daniel de Graaf, John Podesta, and Jennifer Spaletta, December 4, 2017.

"Water Data Library." *California Department of Water Resources*, 1 Feb. 2009, www.water.ca.gov/waterdatalibrary/

Water Resources & Information Management Engineering, Inc. "Technical Briefing: Water Rights Review." *Mokelumne River Inter-Regional Conjunctive Use Project*. California Department of Water Resources, December 2007.

Woodbridge Water Conservation District. "Woodbridge Water Conservation District 2017 Charge Rates."