

Attachment:

- 7a FID and LID Energy Savings Calculation
- 7b Laguna Letters of support
- 7c Laguna Historic Groundwater Levels
- 7d CDPH Letter to Bakman for Wellhead Treatment
- 7e Bakman Hydrograph
- 7f Bakman Area Groundwater Contamination Plume Map
- 7g Bakman CPUC Support Letter
- 7h San Joaquin Volumetric Rate Study and Information
- 7i San Joaquin Hydrograph
- 7j San Joaquin CDPH Letter

**Fresno Irrigation District**  
**Southwest Groundwater Banking Project**  
**Groundwater Pumping Savings from Groundwater Recharge**

Annual Recharge	420	AF	
Assumed Area Benefitting from Recharge	4	square miles	
	2,560	acres	
Local Groundwater Pumping	2	AF/acre	
Annual Groundwater Pumping in Area Benefitting from Recharge	5,120	AF	
Specific Yield	0.08		
Annual Rise in Groundwater Levels	2	ft	
Pumping Cost	0.23	AF/ft	( Based on 1.8 kwh per foot of lift at \$0.13/kwh)
Assumed Period of Benefit before Recharged Water is Pumped and Used	2	years	
Energy Savings	37,800	kwh	
Greenhouse Gas Reduction	27	metric tons of CO <sub>2</sub>	(Based on $7.0555 \times 10^{-4}$ metric tons CO <sub>2</sub> / kwh from EPA Greenhouse Gas Equivalencies Calculator)

**NORTH FORK CONJUNCTIVE WATER MANAGEMENT GROUP  
4886 E. JENSEN AVENUE  
FRESNO, CA 93725**

March 12, 2013

Scott Sills  
General Manager  
Laguna Irrigation District  
5065 19 1/2 Avenue  
Riverdale, CA 93656

**Subject: Letter of Support  
Laguna Irrigation District Recharge Basin 11 Project**

Dear Mr. Sills

On behalf of the eight Irrigation Districts and Mutual Water Companies that comprise the North Fork Conjunctive Water Management Group, I would like to express our support for the proposed Recharge Basin 11 project in Laguna Irrigation District. The project was identified as part of a study performed by the North Fork Group in 2007. The site was recognized as the most promising recharge location in our area. The proposed project will recharge water that will eventually flow to and benefit almost all of the North Fork Group members. The project is an important step in addressing groundwater overdraft in the Kings Groundwater Basin and will make beneficial use of surplus floodwaters from the Kings River.

Sincerely,



Mark McKean  
Representative

**MURPHY SLOUGH ASSOCIATION**  
**P.O. BOX 683**  
**RIVERDALE, CA 93656**  
**TELEPHONE & FAX - (559) 867-3123**

February 26, 2013

Scott Sills  
Laguna Irrigation District  
5065 19 1/2 Avenue  
Riverdale, CA 93656

**Subject: Laguna Irrigation District - Recharge Basin 11 Project  
Letter of Support**

Dear Mr. Sills

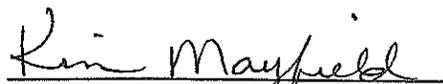
The members of the Murphy Slough Association, (Liberty Mill Race Company, Reed Ditch Company and Riverdale Irrigation District) wish to express our support for the proposed Recharge Basin No. 11 project in Laguna Irrigation District. The presentations that you, Scott Sills, gave to the Association on June 16, 2012 and February 20, 2013 regarding the project were very informative.

The proposed project will provide valuable groundwater recharge benefits to the area, as well as reduce flooding along the Kings River corridor. The proposed recharge basin will also include a connection to Murphy Slough that could directly benefit our members. The connection will allow water to be transferred from Liberty Canal to Murphy Slough, and allow for temporary regulation storage of Kings River water that could be later delivered to Murphy Slough members.

Therefore, the Murphy Slough Association, at its Regular Meeting of the Board of Directors on February 20, 2013, voted unanimously to endorse this project and recommend that the Department of Water Resources provide funding for its development.



Leonard Acquistapace, President



Kim Mayfield, Secretary

**RIVERDALE IRRIGATION DISTRICT  
P.O. BOX 683  
RIVERDALE, CA 93656  
TELEPHONE & FAX – (559) 867-3123**

March 6, 2013

Scott Sills  
Laguna Irrigation District  
5065 19 1/2 Avenue  
Riverdale, CA 93656

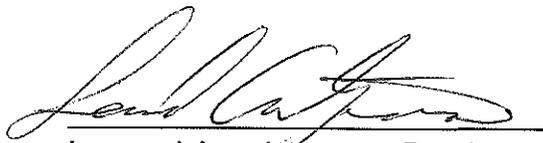
**Subject: Laguna Irrigation District - Recharge Basin 11 Project  
Letter of Financial Support**

Dear Mr. Sills,

The Riverdale Irrigation District wishes to provide their endorsement for the proposed Recharge Basin No. 11 project in Laguna Irrigation District. The project will provide much needed groundwater recharge in an area with declining groundwater levels. The project will also reduce flooding along the Kings River, increase conveyance capacity in the Liberty Canal, and provide direct benefits to the local farming community.

Riverdale Irrigation District also wishes to financially support the project due to the benefits it will have to our water users. We propose to provide financial support of up to \$500.00 if the project is funded by the Department of Water Resources.

We encourage the Department of Water Resources to fund this project due to its valuable water supply benefits to the local area.

  
Leonard Acquistapace, President

**Liberty Mill Race Co.  
P. O. Box 126  
Riverdale, Ca. 93656**

March 18, 2012

Scott Sills  
Laguna Irrigation District  
5065 19 1/2 Avenue  
Riverdale, CA 93656

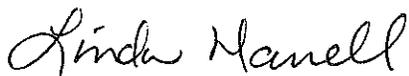
**Subject: Laguna Irrigation District - Recharge Basin 11 Project  
Letter of Financial Support**

Dear Mr. Sills

The Liberty Mill Race Co. wishes to provide their endorsement for the proposed Recharge Basin No. 11 project in Laguna Irrigation District. The project will provide much needed groundwater recharge in an area with declining groundwater levels. The project will also reduce flooding along the Kings River, increase conveyance capacity in the Liberty Canal, and provide direct benefits to the local farming community.

Liberty Mill Race Co. also wishes to financially support the project due to the benefits it will have to our water users. We propose to provide financial support of up to \$1,000.00 if the project is funded by the Department of Water Resources.

We encourage the Department of Water Resources to fund this project due to its valuable water supply benefits to the local area.



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Linda Harrell, Secretary-Treasurer

# *BURREL DITCH COMPANY*

Business Office

3899 West Davis Avenue – Riverdale, Ca 93656

559/867-3545 -- Fax 559/867-4729

*Member of Kings River Water Association*

March 7, 2013

Scott Sills  
Laguna Irrigation District  
5065 19 1/2 Avenue  
Riverdale, CA 93656

**Subject: Laguna Irrigation District - Recharge Basin 11 Project  
Letter of Financial Support**

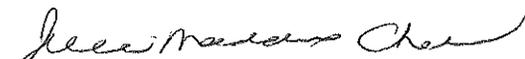
Dear Mr. Sills

The Burrel Ditch Company wishes to provide their endorsement for the proposed Recharge Basin No. 11 project in Laguna Irrigation District. The project will provide much needed groundwater recharge in an area with declining groundwater levels. The project will also reduce flooding along the Kings River, increase conveyance capacity in the Liberty Canal, and provide direct benefits to the local farming community.

Burrel Ditch Company also wishes to financially support the project due to the benefits it will have to our water users. We propose to provide financial support of up to \$500 if the project is funded by the Department of Water Resources.

We encourage the Department of Water Resources to fund this project due to its valuable water supply benefits to the local area.

Sincerely,

  
Julia Maddox Chow  
Secretary/Treasurer

**REED DITCH COMPANY  
P.O. BOX 445  
RIVERDALE, CA 93656  
TELEPHONE – (559) 866-8600  
FAX – (559) 866-8602**

March 6, 2013

Scott Sills  
Laguna Irrigation District  
5065 19 1/2 Avenue  
Riverdale, CA 93656

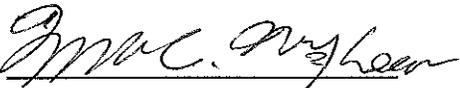
**Subject: Laguna Irrigation District - Recharge Basin 11 Project  
Letter of Financial Support**

Dear Mr. Sills

The Reed Ditch Company wishes to provide their endorsement for the proposed Recharge Basin No. 11 project in Laguna Irrigation District. The project will provide much needed groundwater recharge in an area with declining groundwater levels. The project will also reduce flooding along the Kings River, increase conveyance capacity in the Liberty Canal, and provide direct benefits to the local farming community.

Reed Ditch Company also wishes to financially support the project due to the benefits it will have to our water users. We propose to provide financial support of up to \$1,000.00 if the project is funded by the Department of Water Resources.

We encourage the Department of Water Resources to fund this project due to its valuable water supply benefits to the local area.

  
Mark C. McKean, President

**LIBERTY CANAL COMPANY**  
**P.O. Box 223**  
**RIVERDALE, CA 93656**  
**TELEPHONE & FAX (559) 867-3123**

March 11, 2013

Scott Sills  
Laguna Irrigation District  
5065 19 1/2 Avenue  
Riverdale, CA 93656

**Subject: Laguna Irrigation District - Recharge Basin 11 Project  
Letter of Support**

Dear Mr. Sills

The stockholders of Liberty Canal Company wish to express our support for the proposed Recharge Basin No. 11 project in Laguna Irrigation District. The presentation that you, Scott Sills, gave to our Company on September 13, 2012 regarding the project was very informative.

The proposed project will provide valuable groundwater recharge benefits to the area, as well as reduce flooding along the Kings River corridor. The proposed recharge basin will significantly increase groundwater recharge in the area. We will also gain more flexibility in operation of the canal so as to increase efficiency by using the project as a regulation facility. The connection of the recharge basin to Murphy Slough will also allow water to be transferred from Liberty Canal to Murphy Slough for delivery of to our stockholders that operate farms adjacent to that system.

Furthermore, as owners of Liberty Canal, our material contribution to this project is a commitment that Laguna Irrigation District be allowed the use of the Liberty Canal as the main conveyance of water to Recharge Basin No. 11.

Therefore, the Liberty Canal Company endorses this project and recommends that the Department of Water Resources provide funding for its development.

  
\_\_\_\_\_  
John Coelho, President

## LIBERTY WATER DISTRICT

286 W. Cromwell Ave.  
Fresno, California 93711

Phone (559) 449-2700  
FAX (559) 449-2715

March 15, 2013

Mr. Scott Sills  
General Manager  
Laguna Irrigation District  
5065 19 1/2 Avenue  
Riverdale, CA 93656

Subject: Letter of Support  
Laguna Irrigation District Recharge Basin 11 Project

Dear Mr. Sills

The Liberty Water District would like to express our support for the proposed Recharge Basin 11 project in Laguna Irrigation District. The project would provide valuable recharge benefits to an area with declining groundwater levels. The project is located adjacent to the southern border of Liberty Water District and will offer direct groundwater recharge benefits to many of our landowners. The project would also help to reduce flooding along the Kings River and increase local conveyance capacity in the Liberty Canal. We believe that this project will benefit the local farming community and we encourage the Department of Water Resources to provide full funding for development of the project.

If you require any additional information, please give me a call at (559) 449-2700.

Sincerely,



Kevin R. Johansen, P.E.  
Secretary/Treasurer

**Riverdale Public Utility District**

Post Office Box 248  
20896 Malsbary  
Riverdale, California, 93656

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Phone (559) 867-3838  
FAX (559) 867-3182

**DIRECTORS:**

Ernest Mendes, President  
Chad Swearingen, Vice President  
Michael McMillan, Director  
Manife Paasch, Director  
John Mendes, Director

February 20, 2013

Scott Sills  
Laguna Irrigation District  
5065 19 1/2 Avenue  
Riverdale, CA 93656

**Subject: Laguna Irrigation District - Recharge Basin 11 Project  
Letter of Support**

Dear Mr. Sills

The Riverdale Public Utility District (PUD) would like to express their support for the proposed recharge project in Laguna Irrigation District. On December 4, 2012, Scott Sills of Laguna Irrigation District and the District's consulting engineer gave a presentation on the Recharge Basin 11 project to the Riverdale PUD Board of Directors. The project will provide valuable groundwater recharge and flood control benefits to the area. The recharge of high quality Kings River water will also improve groundwater quality and in the long-term may improve groundwater conditions in the community of Riverdale. We strongly encourage the California Department of Water Resources to fund this project.

Sincerely,

RIVERDALE PUBLIC UTILITY DISTRICT

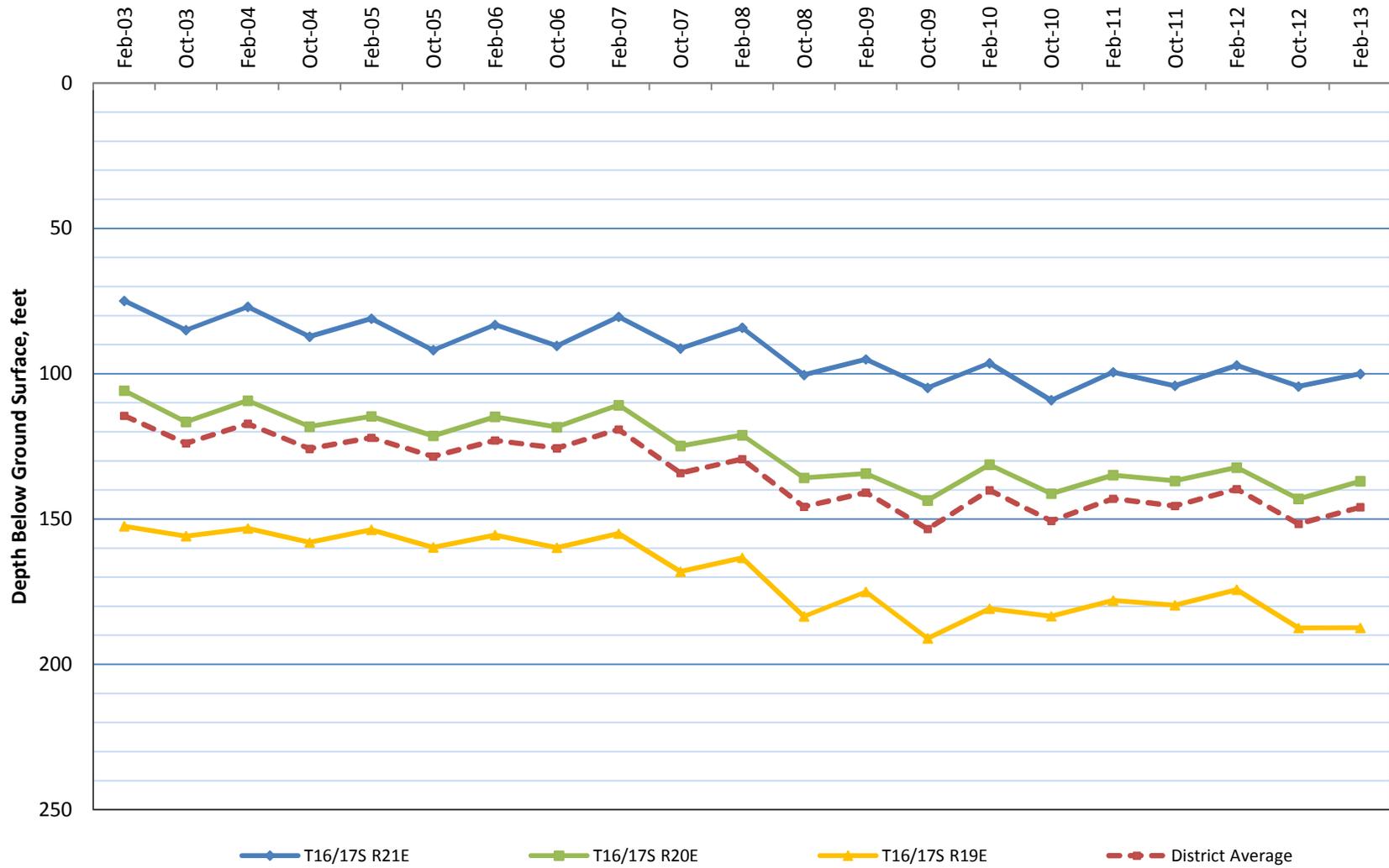
*Ronald Bass*

Ronald Bass  
District Superintendent

Copy:

Owen Kubit  
Provost & Pritchard Consulting Group  
2505 Alluvial Avenue  
Clovis, CA 93611

### Liberty Water District Average Depth to Groundwater Historical Spring & Fall Readings



R21E/R20E Chestnut Ave.

R20E/R19E Marks Ave.

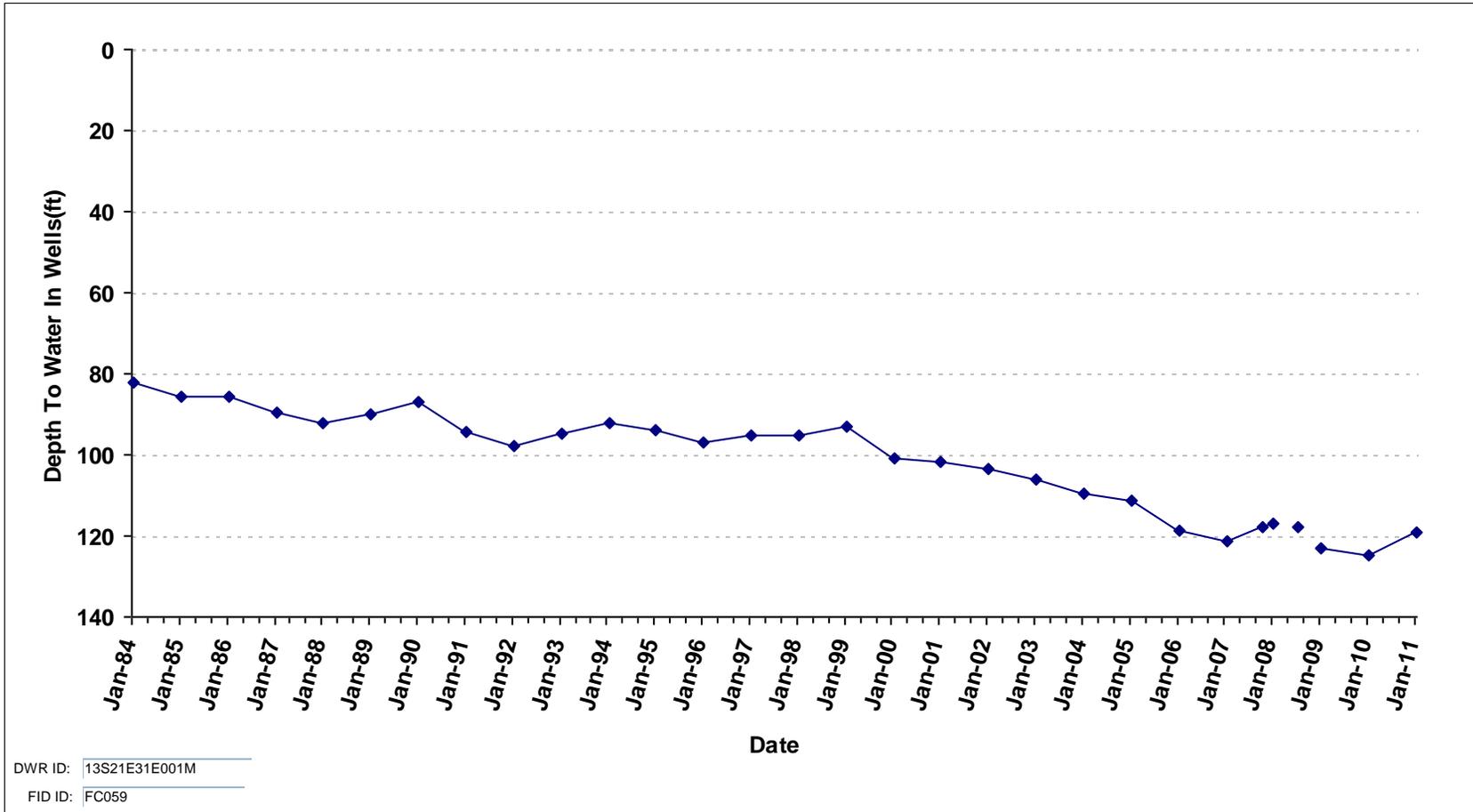
**Laguna Irrigation District**  
**Recharge Basin 11 Project**  
**Groundwater Pumping Savings from Groundwater Recharge**

Annual Recharge	2,650	AF	
Assumed Area Benefitting from Recharge	10	square miles	
	6,400	acres	
Local Groundwater Pumping	1.5	AF/acre	
Annual Groundwater Pumping in Area Benefitting from Recharge	9,600	AF	
Specific Yield	0.08		
Annual Rise in Groundwater Levels	5	ft	
Pumping Cost	0.23	AF/ft	( Based on 1.8 kwh per foot of lift at \$0.13/kwh)
Assumed Period of Benefit before Recharged Water is Pumped and Used	2	years	
Energy Savings	178,875	kwh	
Greenhouse Gas Reduction	126	metric tons of CO <sub>2</sub>	(Based on $7.0555 \times 10^{-4}$ metric tons CO <sub>2</sub> / kwh from EPA Greenhouse Gas Equivalencies Calculator)

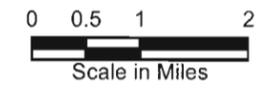
Quarterly hydrograph for well#: 13S21E31E001MX

From 1/1/1984 To 1/1/2011

**Fresno Irrigation District**  
**Depth To Groundwater Surface**



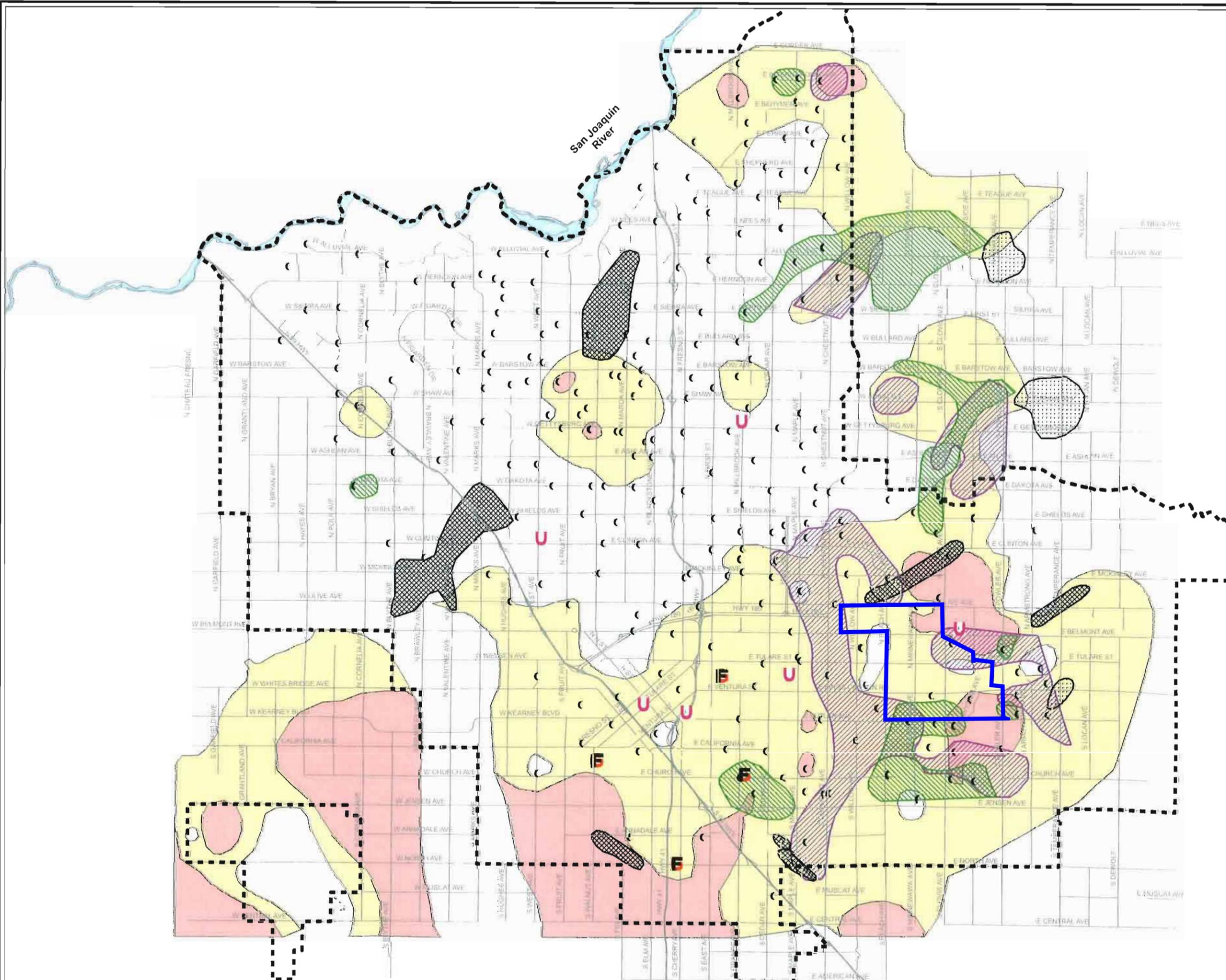
**City of Fresno  
Metropolitan Water Resources  
Management Plan Update  
REGIONAL GROUNDWATER  
CONTAMINATION**



**NOTES:**

**LEGEND:**

- City of Fresno Sphere of Influence
  - Active City Wells
  - Superfund Site (Old)
  - Gasoline Case (Old)
  - EDB Plume (Old)
  - Point Source Plume (Old)
  - DBCP Plume (> 0.1 ppb)
  - TCP Plume (> 0.01 ppb)
- Nitrates**
- Nitrate > 20 mg/L
  - Nitrate > 40 mg/L



**DRAFT**



## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



January 10, 2013

Mr. John Ohanian  
Vice-President  
Bakman Water Company  
PO BOX 7965  
Fresno CA 93747

Dear Mr. Ohanian:

This Commission's Water Action Plan, first adopted in 2005, placed water conservation on the top of the loading order as the best, lowest cost supply of new water to meet the growing needs of our water utilities. One action item we identified to meet this objective was the installation of water meters to existing flat rate services. The Plan states:

*"...The CPUC will encourage IOU water utilities to accelerate their metering programs. The CPUC will ensure timely recovery of metering equipment and installation costs and may permit dedicated surcharges for such programs."*

While the Public Utilities Code and Water Code both require full metering by 2025, the Water Action Plan supports actions by our utilities to get meters on-line sooner.

With about 80% of your connections on a flat rate, significant water savings can be achieved by Bakman Water by simply converting those connections to metered rate service. We are supportive of your efforts to obtain loan and / or grant funding for the installation of meters.

Costs incurred for meter installation not funded through grants or by loans with dedicated surcharges, may be included in Bakman's rate base for later recovery by advice letter.

Sincerely,

A handwritten signature in black ink, appearing to read "Rami Kahlon".

Rami Kahlon, Director  
Division of Water and Audits

**CITY OF SAN JOAQUIN**  
**UTILITY RATE UPDATE STUDY**  
**EXECUTIVE SUMMARY**



**JUNE 2009**

**PREPARED BY**

**YAMABE & HORN ENGINEERING, INC.**  
**2985 N. BURL AVENUE, SUITE 101**  
**FRESNO, CA 93727**

# CITY OF SAN JOAQUIN

## EXECUTIVE SUMMARY

The purpose of this report is to analyze updates to the existing sewer and water utility service rates in the City of San Joaquin. The existing rates were established by City Council Resolution 02-02 in March 2002.

The City's Wastewater Treatment Plant (WWTP) has a capacity of 0.252 million gallons per day (mgd). Monitoring of the wastewater flows to the WWTP as early as 2000 showed that the average daily flows were exceeding the WWTP's operating capacity, and were measured as high as 0.376 mgd in 2007. On June 7, 2002 (shortly after the last utility rate increase adoption), the Central Valley Regional Water Quality Control Board (Regional Water Board) issued waste discharge requirements (WDR) for the City's Wastewater Treatment Facility by adopting Order No. R5-2002-0103. The Regional Water Board also adopted Cease and Desist Order (CDO) No. R5-2002-0104 requiring the City to: 1) Cease and desist discharges of waste in violation of the new WDR limits, and 2) Develop a wastewater treatment facility expansion in accordance with the time schedule specified in the CDO. If the requirements of the CDO are not met, the City faces stiff fines from the Regional Water Board.

The City has contracted Carollo Engineers to prepare the construction contract documents for the WWTP expansion project, which will include construction of an oxidation ditch, new clarifiers, rehabilitation of an existing sewer lift station, and expansion of the current disposal pond facilities by purchasing 23 acres of adjacent property to provide for current and future wastewater storage demand. No upgrades have been made to the WWTP since 1990, due to lack of funding. The proposed improvements will expand the capacity of the Plant to 0.50 mgd, which will provide adequate operating capacity for another 15-20 years. This capacity is vital, not just to prevent hazardous sanitary sewer overflows, but also to accommodate city growth and development and provide for business expansion and attraction.

The City has filed applications with several Federal and State agencies including the United States Department of Agriculture (USDA), the California State Water Resources Control Board (SWRCB), Economic Development Administration (EDA), and others to receive grants and low interest loans to construct the facility expansion. These upgrades are planned to cost approximately \$8.1 million. The USDA is expected to provide a \$2,000,000 grant and a \$331,022 loan, with an interest rate of 4.375% and a term of 40 years. The SWRCB has approved a \$2,000,000 Small Communities Wastewater Grant and the Department of Housing and Urban Development (HUD) has established a Community Development Block Grant (CDBG) in the amount of \$1,000,000. EDA and the Environmental Protection Agency (EPA) are currently reviewing application information for grants totaling \$2,100,000 and \$485,000, respectively. The feedback from both agencies has been very favorable relative to the prospects of award to the City. The project funding summary is shown below:

<u>Funding Source</u>	<u>Amount</u>
USDA Rural Development Grant	\$ 2,000,000
USDA Rural Development Loan	\$ 331,022
SWRCB Small Communities Wastewater Grant	\$ 2,000,000
Community Development Block Grant	\$ 1,000,000
EDA Grant	\$ 2,100,000
EPA Grant	\$ 485,000
City Funds	\$ 183,978
<b>TOTAL</b>	<b>\$ 8,100,000</b>

The City's contribution will come from the Sewer Major Facilities Impact Fee fund which was set up to pay for major capital expenditures, such as this project. Although the expansion project will result in a large capital outlay, the vast majority of the funds will come through grants, as described above. Additionally, the project will help to control future energy costs, due to the construction of newer, more energy efficient machinery and equipment. Lastly, the project will have a strong environmental benefit, as the quality of the treatment plant effluent will be greatly improved.

There are no current improvements planned to the City water system, but recent accounting reviews show the City of San Joaquin operating in a deficit in the Water Fund. Therefore, the existing water rates were analyzed, in addition to the existing sewer rates, against historical, budgeted and projected expenditures from each of the Funds. These expenditures are shown for the Sewer and Water Funds in Table 1 and 2, respectively. The analysis, based on financial planning criteria, shows that rate increases for both utility services will be required. The criteria include debt service requirements for the proposed USDA loan, including principal and interest (P&I) payments, a debt service reserve (equal to 10% of the annual P&I payment), and a depreciation reserve for short-lived assets. Additionally, the target fund balances over the next 5 years were established to develop a \$50,000 capital reserve, as well as to sufficiently cover 90 days of operations and maintenance expenses. Finally, the revenue was analyzed to project a balanced budget for each fund in the last year of the study period (Fiscal Year (FY) 13/14). Based on these criteria, annual adjustments in service revenues have been prepared for multiple alternatives for each of the Utility Funds, as follows:

- **Alternative 1:** A one-time increase to utility rates, effective immediately.
- **Alternative 1A:** A one-time increase to utility rates, effective immediately (as in Alternative 1, but with a partial subsidy from the General Fund to offset the initial burden to the rate-payers, which decreases annually, and phases out in FY 11/12.
- **Alternative 2:** A stepped increase, effective immediately, which increases annually through FY 11/12.
- **Alternative 3:** A stepped increase, effective in the second half of FY 09/10, which increases every 6 months thereafter through FY 11/12.

The proposed increases to each of the Utility Funds are presented below, as well as the new rates for average residential users as of the effective date shown.

**ALTERNATIVE 1**

	<b><u>Effective Date</u></b>	<b><u>% Increase</u></b>	<b><u>Prior Rate</u></b>	<b><u>New Rate</u></b>
<b><u>Sewer Utility</u></b>	August 1, 2009	80%	\$ 20.50	\$ 36.90
<b><u>Water Utility</u></b>	August 1, 2009	72%	\$ 26.00	\$ 44.72

The Flow of Funds calculations and informational graph for Alternative 1 in the Sewer Fund are shown in Tables 3 and 4, respectively. The same information for the Water Fund is represented in Tables 5 and 6, respectively.

**ALTERNATIVE 1A**

As mentioned above, this alternative proposes a subsidy from the City of San Joaquin’s General Fund to help offset the initial cost of the rate increases to the ratepayers. Based on this scenario, the rate paid into the Sewer Fund will be as shown above in Alternative 1, but the monthly contributions per average residential account will be broken down as follows between Fiscal Years 09/10 and 11/12:

	<b><u>Effective Date</u></b>	<b><u>New Rate</u></b>	<b><u>Gen. Fund</u></b>	<b><u>Residents</u></b>
<b><u>Sewer Utility</u></b>	August 1, 2009	\$ 36.90	\$ 10.90	\$ 26.00
	June 1, 2010		\$ 5.00	\$ 31.50
	June 1, 2011		\$ 0	\$ 36.90
<b><u>Water Utility</u></b>	August 1, 2009	\$ 44.72	\$ 12.47	\$ 32.25
	June 1, 2010		\$ 6.22	\$ 38.50
	June 1, 2011		\$ 0	\$ 44.72

The Flow of Funds calculations and informational graph for Alternative 1A is the same as Alternative 1 and can be seen in the tables discussed above.

**ALTERNATIVE 2**

	<b><u>Effective Date</u></b>	<b><u>% Increase</u></b>	<b><u>Prior Rate</u></b>	<b><u>New Rate</u></b>
<b><u>Sewer Utility</u></b>	August 1, 2009	25%	\$ 20.50	\$ 25.63
	June 1, 2010	22.5%	\$ 25.63	\$ 31.40
	June 1, 2011	20%	\$ 31.40	\$ 37.68
<b><u>Water Utility</u></b>	August 1, 2009	20%	\$ 26.00	\$ 31.20
	June 1, 2010	20%	\$ 31.20	\$ 37.44
	June 1, 2011	20%	\$ 37.44	\$ 44.93

The Flow of Funds calculations and informational graph for Alternative 2 in the Sewer Fund are shown in Tables 7 and 8, respectively. The same information for the Water Fund is represented in Tables 9 and 10, respectively.

**ALTERNATIVE 3**

	<b>Effective Date</b>	<b>% Increase</b>	<b>Prior Rate</b>	<b>New Rate</b>
<b>Sewer Utility</b>	December 1, 2009	25%	\$ 20.50	\$ 25.63
	June 1, 2010	20%	\$ 25.63	\$ 30.75
	December 1, 2010	10%	\$ 30.75	\$ 33.83
	June 1, 2011	5%	\$ 33.83	\$ 35.52
	December 1, 2011	5%	\$ 35.52	\$ 37.29
<b>Water Utility</b>	December 1, 2009	15%	\$ 26.00	\$ 29.90
	June 1, 2010	15%	\$ 29.90	\$ 34.39
	December 1, 2010	10%	\$ 34.39	\$ 37.82
	June 1, 2011	10%	\$ 37.82	\$ 41.61
	December 1, 2011	7.5%	\$ 41.61	\$ 44.73

The Flow of Funds calculations and informational graph for Alternative 3 in the Sewer Fund are shown in Tables 11 and 12, respectively. The same information for the Water Fund is represented in Tables 13 and 14, respectively.

The effective dates are determined using an expected one-month billing lag between rate increase and fee collection. Rate increases are planned to be incorporated within the same current rate structure.

Affordability of utility service rates is a very important criterion to consider when analyzing any increase. A key benchmark for this analysis is suggested by the EPA, which uses 2% of the median household income (MHI) for the City for each utility, or 4% combined for both utilities. Based on the 2000 Census MHI information for the City of San Joaquin, the maximum monthly bill for either water or sewer service would be \$41.56, or \$83.12 for both bills combined. Under any alternative, the ultimate water rate will exceed this threshold, while the sewer rate will remain below it. The combined maximum ultimate bill under any alternative is \$82.61, which would be considered affordable, although very close to exceeding the affordability standard.

Comparison of the average single family residential sewer and water rates for other similar communities in the area are shown in Tables 15 and 16, respectively. The tables indicate that the ultimate proposed sewer rate would be second-highest of any of the other communities listed (under any alternative), and that the proposed water rate would be the fourth-highest (under any alternative). Please note that all calculations and comparisons of utility rates for the basis of this study are made using residential rates. When an alternative is selected, all user rate classifications will be increased by the same percentage as the residential rates.

**Table 1**  
**City of San Joaquin**  
**Sewer Utility**  
**Historical and Projected Expenditures**

Line No.	Description	2004-05*	2005-06*	2006-07*	2007-08**	2008-09**	2009-10***	2010-11***	2011-12***	2012-13***	2013-14***
1	Salaries	\$ 62,445	\$ 72,564	\$ 77,185	\$ 122,558	\$ 122,616	\$ 137,616	\$ 144,497	\$ 151,722	\$ 159,308	\$ 167,273
2	Employee Benefits	\$ 17,490	\$ 30,694	\$ 18,441	\$ 33,591	\$ 38,915	\$ 43,915	\$ 48,307	\$ 53,137	\$ 58,451	\$ 64,296
	<b>Total Personnel Cost</b>	<b>\$ 79,935</b>	<b>\$ 103,258</b>	<b>\$ 95,606</b>	<b>\$ 156,149</b>	<b>\$ 161,531</b>	<b>\$ 181,531</b>	<b>\$ 192,803</b>	<b>\$ 204,859</b>	<b>\$ 217,759</b>	<b>\$ 231,569</b>
3	Accounting Fees	\$ 4,250	\$ 4,649	\$ 3,968	\$ 5,000	\$ 4,000	\$ 4,120	\$ 4,244	\$ 4,371	\$ 4,502	\$ 4,637
4	Advertising & Promotions	\$ -	\$ -	\$ -	\$ 50	\$ 50	\$ 52	\$ 53	\$ 55	\$ 56	\$ 58
5	Continuing Education	\$ 474	\$ 1,316	\$ 1,418	\$ 2,000	\$ 1,000	\$ 1,030	\$ 1,061	\$ 1,093	\$ 1,126	\$ 1,159
6	Contract Services	250	9,320	7,825	10,000	9,500	19,322	22,731	26,743	31,463	37,014
7	Depreciation	\$ 34,631	\$ 31,472	\$ 31,304	\$ 34,000	\$ 31,000	\$ 31,930	\$ 32,888	\$ 33,875	\$ 34,891	\$ 35,937
8	Dues & Subscriptions	\$ 340	\$ 277	\$ 52	\$ 250	\$ 250	\$ 5,000	\$ 5,150	\$ 5,305	\$ 5,464	\$ 5,628
9	Engineering Fee	\$ 3,002	\$ 709	\$ 185	\$ 10,000	\$ 10,000	\$ 10,300	\$ 10,609	\$ 10,927	\$ 11,255	\$ 11,593
10	Equipment Rental	\$ -	\$ -	\$ -	\$ 500	\$ 500	\$ 515	\$ 530	\$ 546	\$ 563	\$ 580
11	Food	\$ 42	\$ 100	\$ 179	\$ 100	\$ 100	\$ 103	\$ 106	\$ 109	\$ 113	\$ 116
12	Gas, Lube & Oil	\$ 3,323	\$ 4,541	\$ 4,725	\$ 7,000	\$ 7,800	\$ 8,034	\$ 8,275	\$ 8,523	\$ 8,779	\$ 9,042
13	Insurance	\$ 8,879	\$ 10,459	\$ 10,550	\$ 12,000	\$ 14,000	\$ 14,420	\$ 14,853	\$ 15,298	\$ 15,757	\$ 16,230
14	Interest Expense	\$ 17,874	\$ 11,919	\$ 10,727	\$ 21,572	\$ 21,572	\$ -	\$ -	\$ -	\$ -	\$ -
15	Janitorial	\$ 569	\$ 2,669	\$ 555	\$ 2,500	\$ 1,000	\$ 1,030	\$ 1,061	\$ 1,093	\$ 1,126	\$ 1,159
16	Lease Payments	\$ 315	\$ 236	\$ 414	\$ 350	\$ 450	\$ 464	\$ 477	\$ 492	\$ 506	\$ 522
17	Legal Fees	\$ -	\$ -	\$ 412	\$ -	\$ 2,000	\$ 2,060	\$ 2,122	\$ 2,185	\$ 2,251	\$ 2,319
18	Miscellaneous	\$ 167	\$ -	\$ 5	\$ -	\$ 100	\$ 103	\$ 106	\$ 109	\$ 113	\$ 116
19	Office Supplies	\$ 1,397	\$ 1,682	\$ 1,240	\$ 1,500	\$ 2,000	\$ 2,060	\$ 2,122	\$ 2,185	\$ 2,251	\$ 2,319
20	Other Professional Fees	\$ 466	\$ 8,229	\$ 1,609	\$ 3,000	\$ 2,000	\$ 2,060	\$ 2,122	\$ 2,185	\$ 2,251	\$ 2,319
21	Rents	\$ 2,371	\$ 2,454	\$ 3,055	\$ 2,500	\$ 2,500	\$ 2,575	\$ 2,652	\$ 2,732	\$ 2,814	\$ 2,898
22	Repairs & Maintenance	\$ 6,786	\$ 14,259	\$ 24,360	\$ 15,000	\$ 20,000	\$ 20,600	\$ 21,218	\$ 21,855	\$ 22,510	\$ 23,185
23	Supplies	\$ 11,119	\$ 9,431	\$ 9,346	\$ 12,000	\$ 13,000	\$ 13,390	\$ 13,792	\$ 14,205	\$ 14,632	\$ 15,071
24	Telephone	\$ 4,606	\$ 4,145	\$ 4,106	\$ 4,500	\$ 4,500	\$ 4,635	\$ 4,774	\$ 4,917	\$ 5,065	\$ 5,217
25	Travel	\$ -	\$ 632	\$ -	\$ 2,000	\$ 1,000	\$ 1,030	\$ 1,061	\$ 1,093	\$ 1,126	\$ 1,159
26	Utilities	\$ 15,520	\$ 16,243	\$ 16,679	\$ 20,000	\$ 17,000	\$ 18,700	\$ 43,700	\$ 48,070	\$ 52,877	\$ 58,165
27	Improvements	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	<b>Total Other Cost</b>	<b>\$ 116,381</b>	<b>\$ 134,742</b>	<b>\$ 132,714</b>	<b>\$ 170,822</b>	<b>\$ 165,322</b>	<b>\$ 163,532</b>	<b>\$ 195,706</b>	<b>\$ 207,967</b>	<b>\$ 221,488</b>	<b>\$ 236,441</b>
28	Machinery & Equipment	\$ -	\$ 1,200	\$ -	\$ 7,900	\$ 3,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000
	<b>Total Expenditures</b>	<b>\$ 196,316</b>	<b>\$ 239,200</b>	<b>\$ 228,320</b>	<b>\$ 334,871</b>	<b>\$ 329,853</b>	<b>\$ 353,063</b>	<b>\$ 396,510</b>	<b>\$ 420,825</b>	<b>\$ 447,247</b>	<b>\$ 476,010</b>

**Notes:** 1) Salaries inflated at 5% annually  
2) Benefits inflated at 10% annually  
3) Utilities costs inflated at 10% annually  
4) All other costs inflated at 3% annually  
5) Contract Services estimated by current provider. City is examining possibility of providing these services with City staff at some time within study period.

\* Actual  
\*\* Budgeted  
\*\*\* Projected

**Table 2**  
**City of San Joaquin**  
**Water Utility**  
**Historical and Projected Expenditures**

Line No.	Description	2004-05*	2005-06*	2006-07*	2007-08**	2008-09**	2009-10***	2010-11***	2011-12***	2012-13***	2013-14***
1	Salaries	\$ 66,158	\$ 76,747	\$ 78,700	\$ 122,558	\$ 122,616	\$ 137,616	\$ 144,497	\$ 151,722	\$ 159,308	\$ 167,273
2	Employee Benefits	\$ 18,939	\$ 30,966	\$ 18,676	\$ 33,591	\$ 38,915	\$ 43,915	\$ 48,307	\$ 53,137	\$ 58,451	\$ 64,296
	<b>Total Personnel Cost</b>	<b>\$ 85,097</b>	<b>\$ 107,713</b>	<b>\$ 97,376</b>	<b>\$ 156,149</b>	<b>\$ 161,531</b>	<b>\$ 181,531</b>	<b>\$ 192,803</b>	<b>\$ 204,859</b>	<b>\$ 217,759</b>	<b>\$ 231,569</b>
3	Accounting Fees	\$ 4,250	\$ 4,649	\$ 3,968	\$ 5,000	\$ 4,000	\$ 4,120	\$ 4,244	\$ 4,371	\$ 4,502	\$ 4,637
4	Advertising & Promotions	\$ 825	\$ -	\$ -	\$ 650	\$ 650	\$ 670	\$ 690	\$ 710	\$ 732	\$ 754
5	Bank Charges	\$ 720	\$ 5	\$ 35	\$ 100	\$ 100	\$ 103	\$ 106	\$ 109	\$ 113	\$ 116
6	Continuing Education	\$ 194	\$ 1,839	\$ 1,496	\$ 1,500	\$ 1,500	\$ 1,545	\$ 1,591	\$ 1,639	\$ 1,688	\$ 1,739
7	Contract Services	\$ 16,509	\$ 7,359	\$ 5,950	\$ 10,000	\$ 8,500	\$ 19,322	\$ 22,731	\$ 26,743	\$ 31,463	\$ 37,014
8	Depreciation	\$ 14,403	\$ 11,218	\$ 12,283	\$ 10,000	\$ 10,000	\$ 10,300	\$ 10,609	\$ 10,927	\$ 11,255	\$ 11,593
9	Dues & Subscriptions	\$ 278	\$ 2,501	\$ 1,705	\$ 1,800	\$ 2,100	\$ 7,500	\$ 7,725	\$ 7,957	\$ 8,195	\$ 8,441
10	Engineering Fee	\$ 8,707	\$ 2,097	\$ 35	\$ 7,000	\$ 3,000	\$ 3,090	\$ 3,183	\$ 3,278	\$ 3,377	\$ 3,478
11	Equipment Rental	\$ 1,189	\$ -	\$ 1,250	\$ 1,000	\$ 1,000	\$ 1,030	\$ 1,061	\$ 1,093	\$ 1,126	\$ 1,159
12	Food	\$ 41	\$ 238	\$ 179	\$ 300	\$ 300	\$ 309	\$ 318	\$ 328	\$ 338	\$ 348
13	Gas, Lube & Oil	\$ 3,324	\$ 3,925	\$ 4,636	\$ 6,000	\$ 7,000	\$ 7,210	\$ 7,426	\$ 7,649	\$ 7,879	\$ 8,115
14	Insurance	\$ 8,879	\$ 10,459	\$ 10,550	\$ 12,000	\$ 13,000	\$ 13,390	\$ 13,792	\$ 14,205	\$ 14,632	\$ 15,071
15	Interest Expense	\$ 20,802	\$ 14,861	\$ 12,304	\$ 25,000	\$ 25,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
16	Janitorial	\$ 569	\$ 2,714	\$ 865	\$ 2,200	\$ 1,000	\$ 1,030	\$ 1,061	\$ 1,093	\$ 1,126	\$ 1,159
17	Lease Payments	\$ 315	\$ 236	\$ 414	\$ 350	\$ 350	\$ 361	\$ 371	\$ 382	\$ 394	\$ 406
18	Legal Fees	\$ -	\$ -	\$ 412	\$ -	\$ 2,000	\$ 2,060	\$ 2,122	\$ 2,185	\$ 2,251	\$ 2,319
19	Miscellaneous	\$ 170	\$ 10,421	\$ 105	\$ 2,000	\$ 1,000	\$ 1,030	\$ 1,061	\$ 1,093	\$ 1,126	\$ 1,159
20	Office Supplies	\$ 1,397	\$ 1,683	\$ 1,330	\$ 1,600	\$ 1,800	\$ 1,854	\$ 1,910	\$ 1,967	\$ 2,026	\$ 2,087
21	Other Professional Fees	\$ 7,980	\$ 2,337	\$ 8,078	\$ 8,000	\$ 5,000	\$ 5,150	\$ 5,305	\$ 5,464	\$ 5,628	\$ 5,796
22	Rents	\$ 2,524	\$ 2,454	\$ 3,055	\$ 3,000	\$ 3,000	\$ 3,090	\$ 3,183	\$ 3,278	\$ 3,377	\$ 3,478
23	Repairs & Maintenance	\$ 65,823	\$ 44,736	\$ 18,860	\$ 35,000	\$ 25,000	\$ 35,000	\$ 36,050	\$ 37,132	\$ 38,245	\$ 39,393
24	Supplies	\$ 14,819	\$ 16,120	\$ 15,693	\$ 15,000	\$ 18,000	\$ 18,540	\$ 19,096	\$ 19,669	\$ 20,259	\$ 20,867
25	Telephone	\$ 4,643	\$ 4,172	\$ 4,148	\$ 4,000	\$ 4,000	\$ 4,120	\$ 4,244	\$ 4,371	\$ 4,502	\$ 4,637
26	Travel	\$ -	\$ 82	\$ 200	\$ 300	\$ 300	\$ 309	\$ 318	\$ 328	\$ 338	\$ 348
27	Utilities	\$ 50,850	\$ 51,644	\$ 70,104	\$ 65,000	\$ 65,000	\$ 71,500	\$ 78,650	\$ 86,515	\$ 95,167	\$ 104,683
28	Improvements	\$ -	\$ -	\$ -	\$ 18,000	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -
29	Machinery & Equipment	\$ -	\$ 1,200	\$ -	\$ 5,000	\$ 2,500	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000
	<b>Total Other Cost</b>	<b>\$ 229,211</b>	<b>\$ 196,950</b>	<b>\$ 177,655</b>	<b>\$ 239,800</b>	<b>\$ 205,100</b>	<b>\$ 255,632</b>	<b>\$ 254,845</b>	<b>\$ 270,486</b>	<b>\$ 287,735</b>	<b>\$ 306,795</b>
	<b>Total Expenditures</b>	<b>\$ 314,308</b>	<b>\$ 304,663</b>	<b>\$ 275,031</b>	<b>\$ 395,949</b>	<b>\$ 366,631</b>	<b>\$ 437,163</b>	<b>\$ 447,649</b>	<b>\$ 475,345</b>	<b>\$ 505,493</b>	<b>\$ 538,364</b>

\* Actual

\*\* Budgeted

\*\*\* Projected

**Notes:** 1) Salaries inflated at 5% annually  
2) Benefits inflated at 10% annually  
3) Utilities costs inflated at 10% annually  
4) All other costs inflated at 3% annually  
5) Contract Services estimated by current provider. City is examining possibility of providing these services with City staff at some time within study period.

**Table 3**  
**City of San Joaquin**

**Sewer Utility**  
**Flow of Funds**  
**Alternative 1 and 1A**

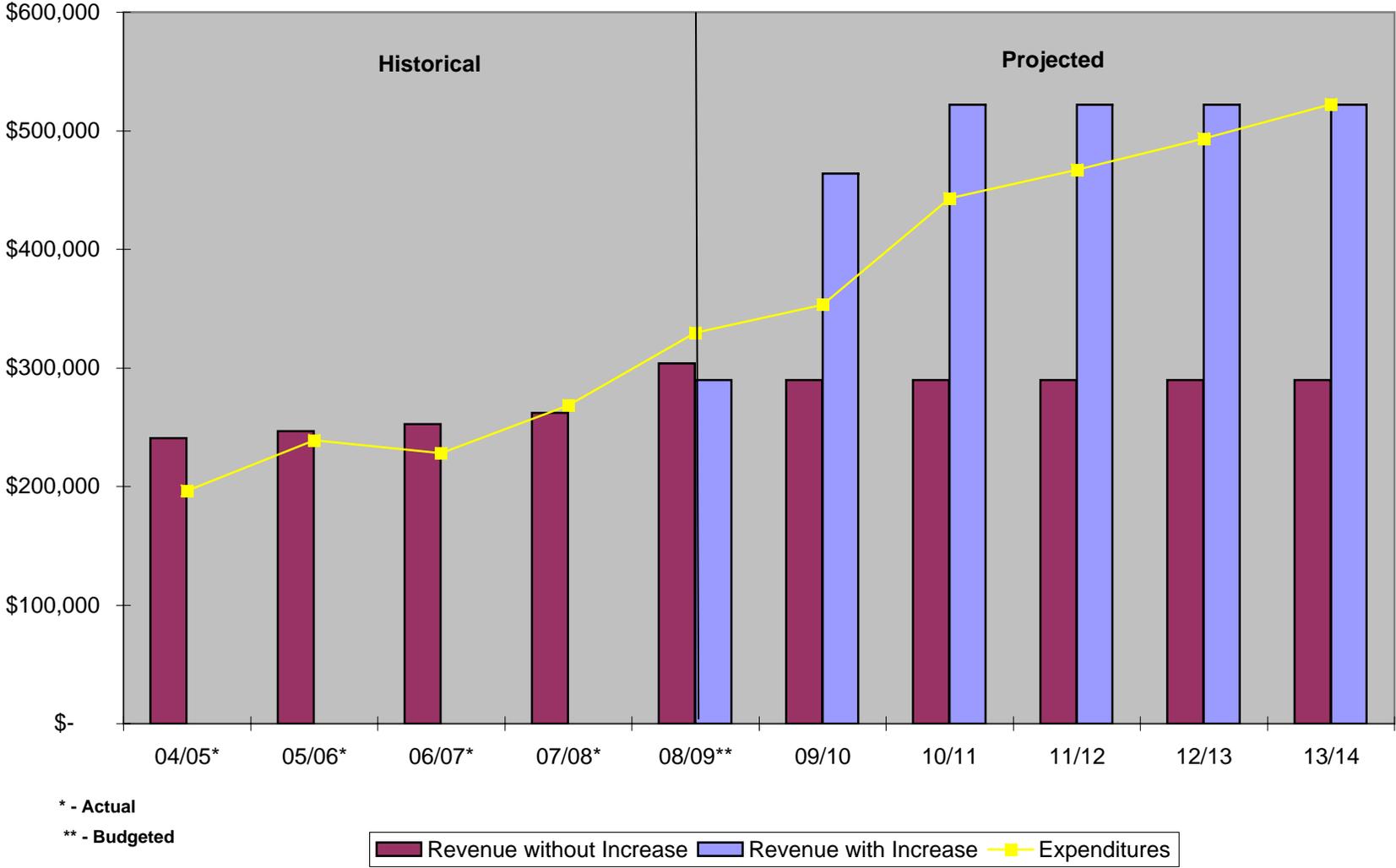
Line No.	Description	Fiscal Year					
		2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
1	Sewer Service Operating Income	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000
	Changes to Service Charges Required:						
	<u>Fiscal Year</u>						
	<u>% Increase</u>						
2	2008-09	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3	2009-10		\$ 174,000 *	\$ 232,000	\$ 232,000	\$ 232,000	\$ 232,000
4	2010-11			\$ -	\$ -	\$ -	\$ -
5	2011-12				\$ -	\$ -	\$ -
6	2012-13					\$ -	\$ -
7	Total Change in Service Charge Revenue	\$ -	\$ 174,000	\$ 232,000	\$ 232,000	\$ 232,000	\$ 232,000
8	<b>Total Sewer Service Operating Income</b>	\$ 290,000	\$ 464,000	\$ 522,000	\$ 522,000	\$ 522,000	\$ 522,000
9	Impact/Connection Fee Income	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	<b>Total Revenue</b>	\$ 290,000	\$ 464,000	\$ 522,000	\$ 522,000	\$ 522,000	\$ 522,000
	<b>Revenue Requirements</b>						
11	Operation and Maintenance Expenses	\$ (143,750)	\$ (163,532)	\$ (195,706)	\$ (207,967)	\$ (221,488)	\$ (236,441)
12	Existing Debt Service	\$ (21,572)	\$ -	\$ -	\$ -	\$ -	\$ -
13	Employee Services	\$ (161,531)	\$ (181,531)	\$ (192,803)	\$ (204,859)	\$ (217,759)	\$ (231,569)
14	Machinery & Equipment Expenditures	\$ (3,000)	\$ (8,000)	\$ (8,000)	\$ (8,000)	\$ (8,000)	\$ (8,000)
	Proposed USDA Debt Service						
15	Loan Principal & Interest	\$ -	\$ -	\$ (17,540)	\$ (17,540)	\$ (17,540)	\$ (17,540)
16	Debt Service Reserve	\$ -	\$ -	\$ (1,754)	\$ (1,754)	\$ (1,754)	\$ (1,754)
17	Depreciation Reserve for Short-Lived Assets	\$ -	\$ -	\$ (27,067)	\$ (27,067)	\$ (27,067)	\$ (27,067)
18	<b>Total Revenue Requirements</b>	\$ (329,853)	\$ (353,063)	\$ (442,870)	\$ (467,186)	\$ (493,608)	\$ (522,371)
19	<b>Net Funds</b>	\$ (39,853)	\$ 110,937	\$ 79,130	\$ 54,814	\$ 28,392	\$ (371)
20	<b>Beginning Sewer Fund Balance</b>	\$ 44,674	\$ 4,821	\$ 115,758	\$ 194,888	\$ 249,701	\$ 278,094
21	<b>Ending Sewer Fund Balance</b>	\$ 4,821	\$ 115,758	\$ 194,888	\$ 249,701	\$ 278,094	\$ 277,722
22	<b>Target Sewer Fund Balance after 5 years**</b>					\$ (109,110)	

< \$ 277,722  
**CHECK**

\* Represents 9 months of additional revenue collection.

\*\* Represents 90 days of Operation and Maintenance Expense + \$50,000 Capital Reserve

**Table 4**  
**Sewer Fund - Alternative 1 & 1A**



**Table 5**  
**City of San Joaquin**

**Water Utility**  
**Flow of Funds**  
**Alternative 1 and 1A**

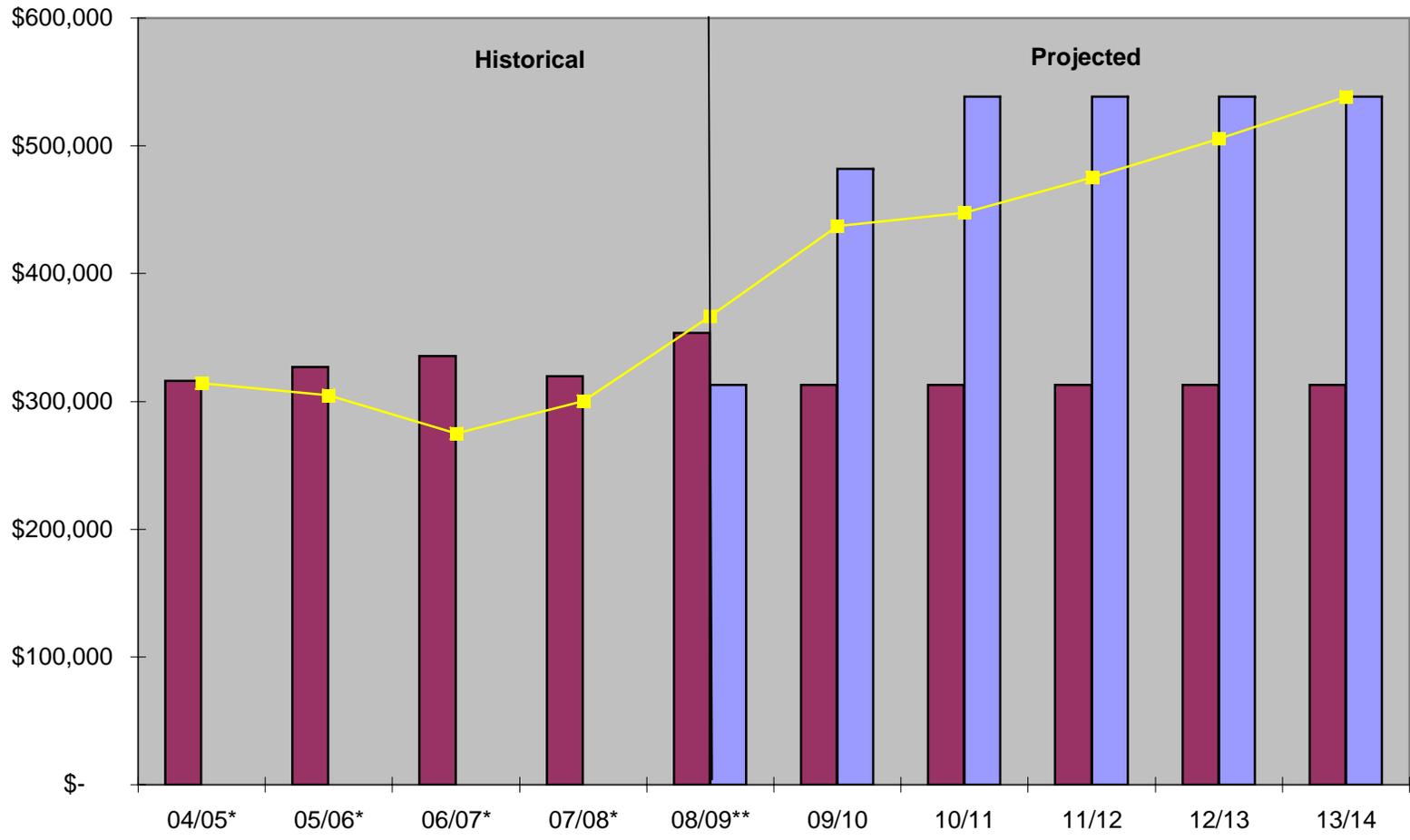
Line No.	Description	Fiscal Year					
		2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
1	Water Service Operating Income	\$ 313,000	\$ 313,000	\$ 313,000	\$ 313,000	\$ 313,000	\$ 313,000
	Changes to Service Charges Required:						
	<u>Fiscal Year</u>						
	<u>% Increase</u>						
2	2008-09	0					
3	2009-10	72					
4	2010-11	0					
5	2011-12	0					
6	2012-13	0					
7	Total Change in Service Charge Revenue	\$ -	\$ 169,020	\$ 225,360	\$ 225,360	\$ 225,360	\$ 225,360
8	<b>Total Water Service Operating Income</b>	\$ 313,000	\$ 482,020	\$ 538,360	\$ 538,360	\$ 538,360	\$ 538,360
9	Impact/Connection Fee Income	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	<b>Total Revenue</b>	\$ 313,000	\$ 482,020	\$ 538,360	\$ 538,360	\$ 538,360	\$ 538,360
	<b>Revenue Requirements</b>						
11	Operation and Maintenance Expenses	\$ (177,600)	\$ (227,632)	\$ (226,845)	\$ (242,486)	\$ (259,735)	\$ (278,795)
12	Existing Debt Service	\$ (25,000)	\$ (20,000)	\$ (20,000)	\$ (20,000)	\$ (20,000)	\$ (20,000)
13	Employee Services	\$ (161,531)	\$ (181,531)	\$ (192,803)	\$ (204,859)	\$ (217,759)	\$ (231,569)
14	Machinery & Equipment Expenditures	\$ (2,500)	\$ (8,000)	\$ (8,000)	\$ (8,000)	\$ (8,000)	\$ (8,000)
15	<b>Total Revenue Requirements</b>	\$ (366,631)	\$ (437,163)	\$ (447,649)	\$ (475,345)	\$ (505,493)	\$ (538,364)
16	<b>Net Funds</b>	\$ (53,631)	\$ 44,857	\$ 90,711	\$ 63,015	\$ 32,867	\$ (4)
17	<b>Beginning Water Fund Balance</b>	\$ 238,510	\$ 184,879	\$ 229,736	\$ 320,447	\$ 383,462	\$ 416,329
18	<b>Ending Water Fund Balance</b>	\$ 184,879	\$ 229,736	\$ 320,447	\$ 383,462	\$ 416,329	\$ 416,325
19	<b>Target Water Fund Balance after 5 years**</b>					\$ (119,699)	< \$ 416,325

\* Represents 9 months of additional revenue collection.

\*\* Represents 90 days of Operation and Maintenance Expense + \$50,000 Capital Reserve

**CHECK**

**Table 6**  
**Water Fund - Alternative 1 & 1A**



\* - Actual  
 \*\* - Budgeted

Revenue without Increase
  Revenue with Increase
  Expenditures

**Table 7**  
**City of San Joaquin**

**Sewer Utility**  
**Flow of Funds**  
**Alternative 2**

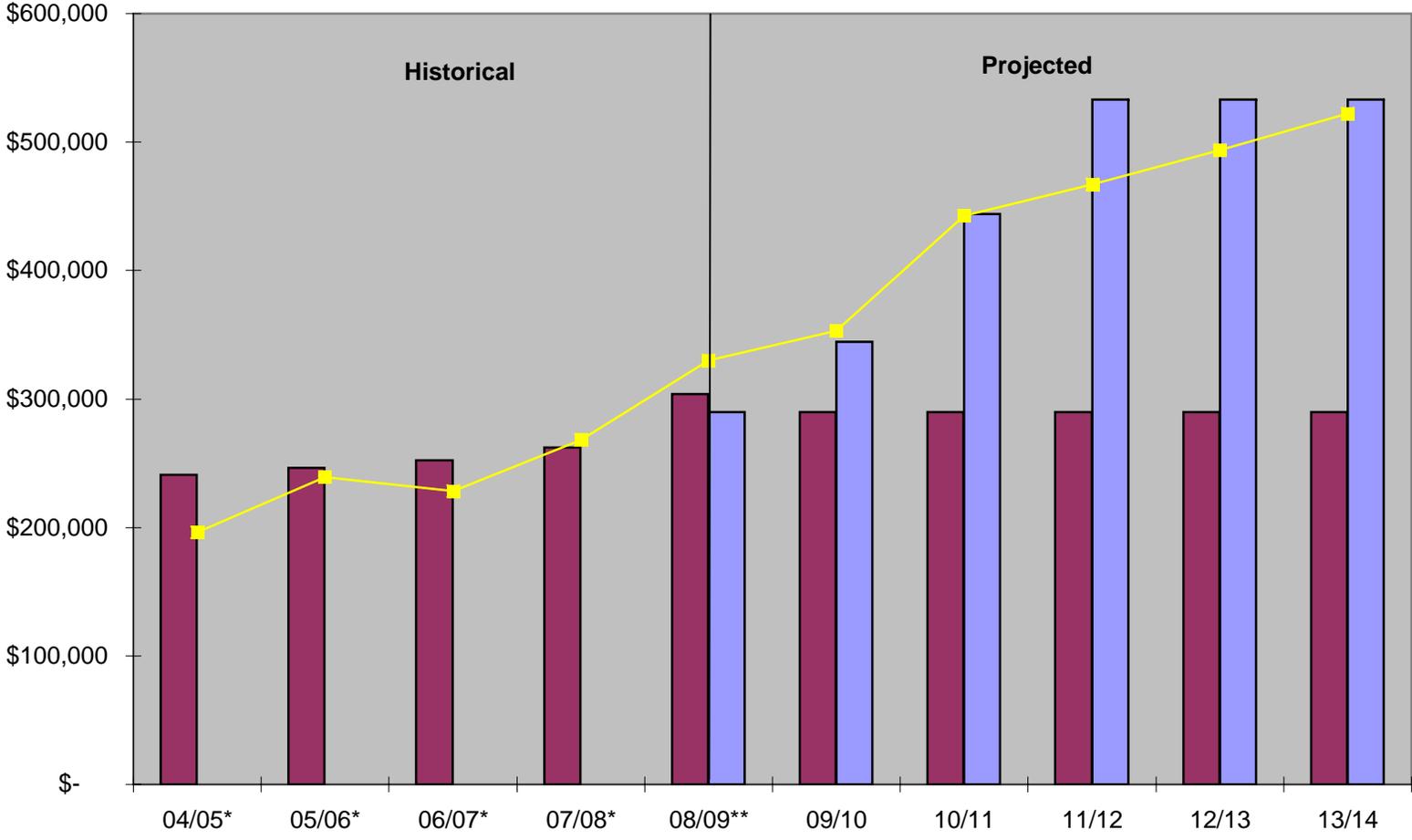
Line No.	Description	Fiscal Year					
		2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
1	Sewer Service Operating Income	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000
	Changes to Service Charges Required:						
	<u>Fiscal Year</u>						
	<u>% Increase</u>						
2	2008-09	0					
3	2009-10	25	\$ -	\$ -	\$ -	\$ -	\$ -
4	2010-11	22.5	\$ -	\$ 54,375 *	\$ 72,500	\$ 72,500	\$ 72,500
5	2011-12	20		\$ 81,563	\$ 81,563	\$ 81,563	\$ 81,563
6	2012-13	0			\$ 88,813	\$ 88,813	\$ 88,813
7	Total Change in Service Charge Revenue		\$ -	\$ 54,375	\$ 154,063	\$ 242,875	\$ 242,875
8	<b>Total Sewer Service Operating Income</b>		\$ 290,000	\$ 344,375	\$ 444,063	\$ 532,875	\$ 532,875
9	Impact/Connection Fee Income		\$ -	\$ -	\$ -	\$ -	\$ -
10	<b>Total Revenue</b>		\$ 290,000	\$ 344,375	\$ 444,063	\$ 532,875	\$ 532,875
	<b>Revenue Requirements</b>						
11	Operation and Maintenance Expenses		\$ (143,750)	\$ (163,532)	\$ (195,706)	\$ (207,967)	\$ (221,488)
12	Existing Debt Service		\$ (21,572)	\$ -	\$ -	\$ -	\$ -
13	Employee Services		\$ (161,531)	\$ (181,531)	\$ (192,803)	\$ (204,859)	\$ (217,759)
14	Machinery & Equipment Expenditures		\$ (3,000)	\$ (8,000)	\$ (8,000)	\$ (8,000)	\$ (8,000)
	Proposed USDA Debt Service						
15	Loan Principal & Interest		\$ -	\$ -	\$ (17,540)	\$ (17,540)	\$ (17,540)
16	Debt Service Reserve		\$ -	\$ -	\$ (1,754)	\$ (1,754)	\$ (1,754)
17	Depreciation Reserve for Short-Lived Assets		\$ -	\$ -	\$ (27,067)	\$ (27,067)	\$ (27,067)
18	<b>Total Revenue Requirements</b>		\$ (329,853)	\$ (353,063)	\$ (442,870)	\$ (467,186)	\$ (493,608)
19	<b>Net Funds</b>		\$ (39,853)	\$ (8,688)	\$ 1,192	\$ 65,689	\$ 39,267
20	<b>Beginning Sewer Fund Balance</b>		\$ 44,674	\$ 4,821	\$ (3,867)	\$ (2,675)	\$ 63,014
21	<b>Ending Sewer Fund Balance</b>		\$ 4,821	\$ (3,867)	\$ (2,675)	\$ 63,014	\$ 102,281
22	<b>Target Sewer Fund Balance after 5 years**</b>						\$ (109,110)

< \$ 112,785  
**CHECK**

\* Represents 9 months of additional revenue collection.

\*\* Represents 90 days of Operation and Maintenance Expense + \$50,000 Capital Reserve

**Table 8**  
**Sewer Fund - Alternative 2**



\* - Actual  
\*\* - Budgeted

Revenue without Increase
  Revenue with Increase
  Expenditures

**Table 9**  
**City of San Joaquin**

**Water Utility**  
**Flow of Funds**  
**Alternative 2**

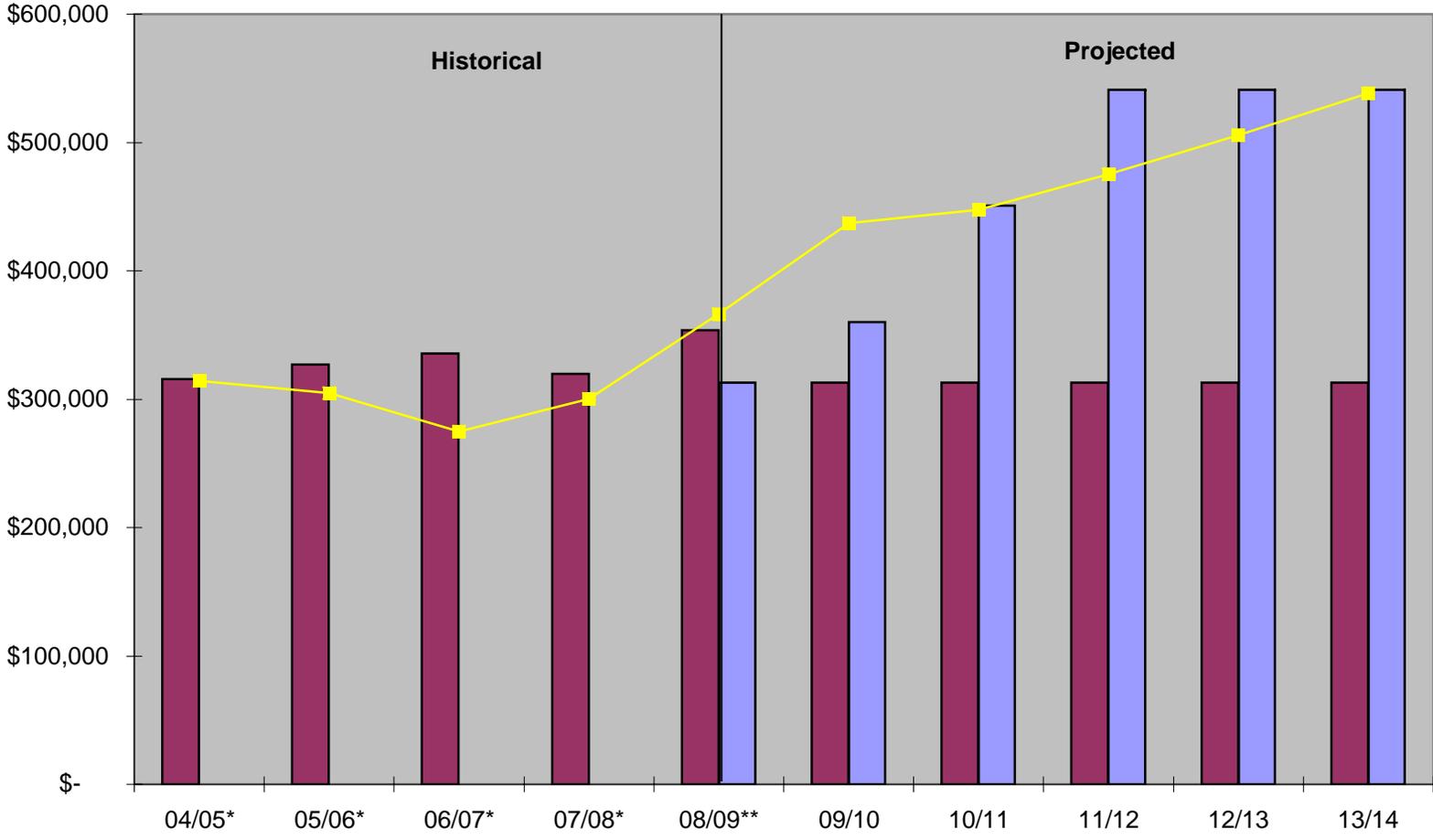
Line No.	Description	Fiscal Year					
		2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
1	Water Service Operating Income	\$ 313,000	\$ 313,000	\$ 313,000	\$ 313,000	\$ 313,000	\$ 313,000
	Changes to Service Charges Required:						
	<u>Fiscal Year</u>						
	<u>% Increase</u>						
2	2008-09	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3	2009-10		\$ 46,950 *	\$ 62,600	\$ 62,600	\$ 62,600	\$ 62,600
4	2010-11			\$ 75,120	\$ 75,120	\$ 75,120	\$ 75,120
5	2011-12				\$ 90,144	\$ 90,144	\$ 90,144
6	2012-13					\$ -	\$ -
7	Total Change in Service Charge Revenue	\$ -	\$ 46,950	\$ 137,720	\$ 227,864	\$ 227,864	\$ 227,864
8	<b>Total Water Service Operating Income</b>	\$ 313,000	\$ 359,950	\$ 450,720	\$ 540,864	\$ 540,864	\$ 540,864
9	Impact/Connection Fee Income	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	<b>Total Revenue</b>	\$ 313,000	\$ 359,950	\$ 450,720	\$ 540,864	\$ 540,864	\$ 540,864
	<b>Revenue Requirements</b>						
11	Operation and Maintenance Expenses	\$ (177,600)	\$ (227,632)	\$ (226,845)	\$ (242,486)	\$ (259,735)	\$ (278,795)
12	Existing Debt Service	\$ (25,000)	\$ (20,000)	\$ (20,000)	\$ (20,000)	\$ (20,000)	\$ (20,000)
13	Employee Services	\$ (161,531)	\$ (181,531)	\$ (192,803)	\$ (204,859)	\$ (217,759)	\$ (231,569)
14	Machinery & Equipment Expenditures	\$ (2,500)	\$ (8,000)	\$ (8,000)	\$ (8,000)	\$ (8,000)	\$ (8,000)
15	<b>Total Revenue Requirements</b>	\$ (366,631)	\$ (437,163)	\$ (447,649)	\$ (475,345)	\$ (505,493)	\$ (538,364)
16	<b>Net Funds</b>	\$ (53,631)	\$ (77,213)	\$ 3,071	\$ 65,519	\$ 35,371	\$ 2,500
17	<b>Beginning Water Fund Balance</b>	\$ 238,510	\$ 184,879	\$ 107,666	\$ 110,737	\$ 176,256	\$ 211,627
18	<b>Ending Water Fund Balance</b>	\$ 184,879	\$ 107,666	\$ 110,737	\$ 176,256	\$ 211,627	\$ 214,127
19	<b>Target Water Fund Balance after 5 years**</b>					\$ (119,699)	< \$ 214,127

\* Represents 9 months of additional revenue collection.

\*\* Represents 90 days of Operation and Maintenance Expense + \$50,000 Capital Reserve

**CHECK**

**Table 10**  
**Water Fund - Alternative 2**



\* - Actual  
\*\* - Budgeted

Revenue without Increase    Revenue with Increase    Expenditures

**Table 11**  
**City of San Joaquin**

**Sewer Utility**  
**Flow of Funds**  
**Alternative 3**

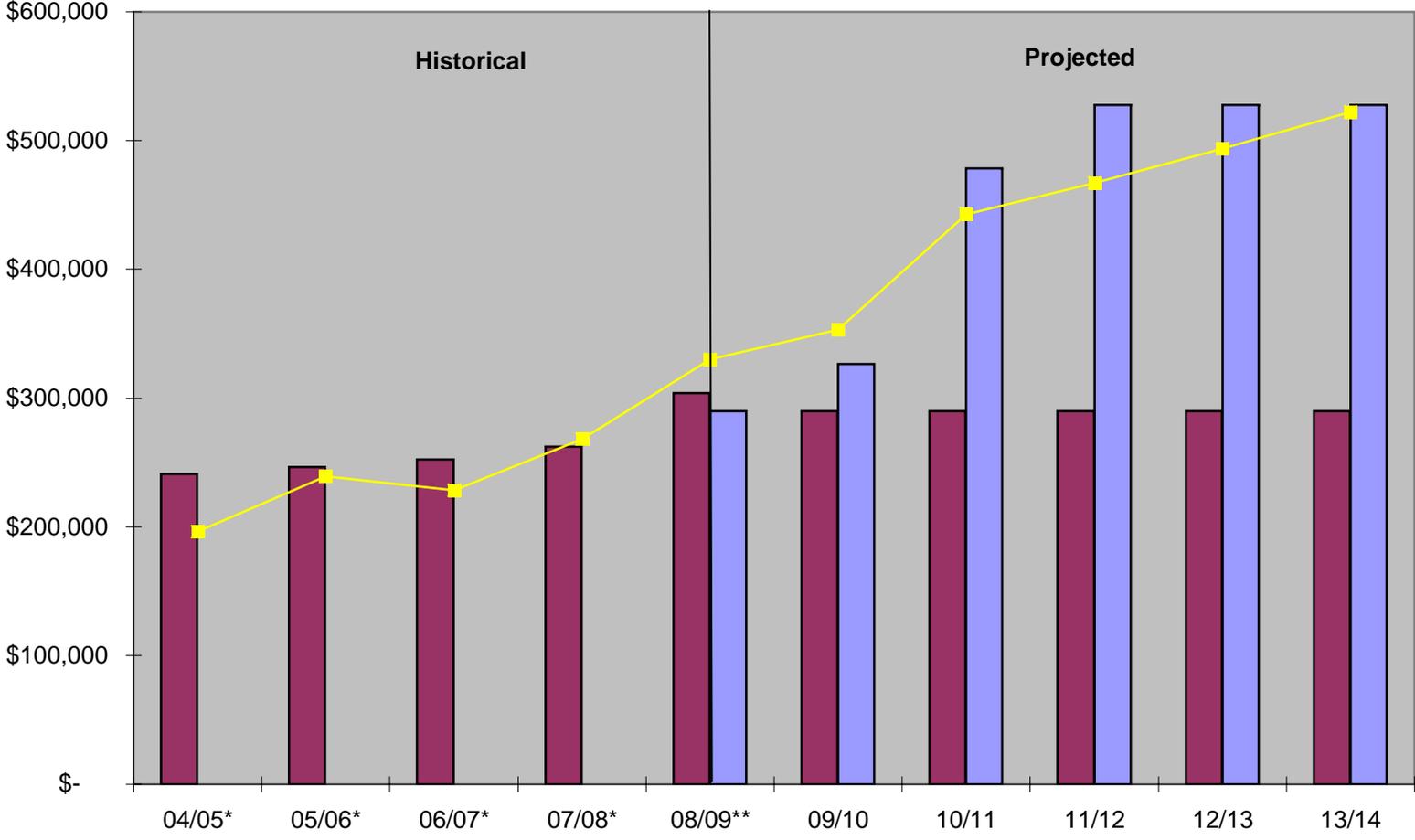
Line No.	Description	Fiscal Year					
		2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
1	Sewer Service Operating Income	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000	\$ 290,000
	Changes to Service Charges Required:						
	<u>Fiscal Year</u> <u>6 mon. term</u> <u>% Increase</u>						
2	2008-09	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3	2009-10    1st (3 mon.)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	2nd		\$ 36,250	\$ 72,500	\$ 72,500	\$ 72,500	\$ 72,500
4	2010-11    1st			\$ 72,500	\$ 72,500	\$ 72,500	\$ 72,500
	2nd			\$ 43,500	\$ 43,500	\$ 43,500	\$ 43,500
5	2011-12    1st				\$ 23,925	\$ 23,925	\$ 23,925
	2nd				\$ 25,121	\$ 25,121	\$ 25,121
6	2012-13					\$ -	\$ -
7	Total Change in Service Charge Revenue	\$ -	\$ 36,250	\$ 188,500	\$ 237,546	\$ 237,546	\$ 237,546
8	<b>Total Sewer Service Operating Income</b>	\$ 290,000	\$ 326,250	\$ 478,500	\$ 527,546	\$ 527,546	\$ 527,546
9	Impact/Connection Fee Income	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	<b>Total Revenue</b>	\$ 290,000	\$ 326,250	\$ 478,500	\$ 527,546	\$ 527,546	\$ 527,546
	<b>Revenue Requirements</b>						
11	Operation and Maintenance Expenses	\$ (143,750)	\$ (163,532)	\$ (195,706)	\$ (207,967)	\$ (221,488)	\$ (236,441)
12	Existing Debt Service	\$ (21,572)	\$ -	\$ -	\$ -	\$ -	\$ -
13	Employee Services	\$ (161,531)	\$ (181,531)	\$ (192,803)	\$ (204,859)	\$ (217,759)	\$ (231,569)
14	Machinery & Equipment Expenditures	\$ (3,000)	\$ (8,000)	\$ (8,000)	\$ (8,000)	\$ (8,000)	\$ (8,000)
	Proposed USDA Debt Service						
15	Loan Principal & Interest	\$ -	\$ -	\$ (17,540)	\$ (17,540)	\$ (17,540)	\$ (17,540)
16	Debt Service Reserve	\$ -	\$ -	\$ (1,754)	\$ (1,754)	\$ (1,754)	\$ (1,754)
17	Depreciation Reserve for Short-Lived Assets	\$ -	\$ -	\$ (27,067)	\$ (27,067)	\$ (27,067)	\$ (27,067)
18	<b>Total Revenue Requirements</b>	\$ (329,853)	\$ (353,063)	\$ (442,870)	\$ (467,186)	\$ (493,608)	\$ (522,371)
19	<b>Net Funds</b>	\$ (39,853)	\$ (26,813)	\$ 35,630	\$ 60,360	\$ 33,939	\$ 5,175
20	<b>Beginning Sewer Fund Balance</b>	\$ 44,674	\$ 4,821	\$ (21,992)	\$ 13,638	\$ 73,998	\$ 107,936
21	<b>Ending Sewer Fund Balance</b>	\$ 4,821	\$ (21,992)	\$ 13,638	\$ 73,998	\$ 107,936	\$ 113,111
22	<b>Target Sewer Fund Balance after 5 years**</b>					\$ (109,110)	\$ 113,111

**CHECK**

\* Represents 9 months of additional revenue collection.

\*\* Represents 90 days of Operation and Maintenance Expense + \$50,000 Capital Reserve

**Table 12**  
**Sewer Fund - Alternative 3**



\* - Actual

\*\* - Budgeted

Revenue without Increase
  Revenue with Increase
  Expenditures

**Table 13**  
**City of San Joaquin**

**Water Utility**  
**Flow of Funds**  
**Alternative 3**

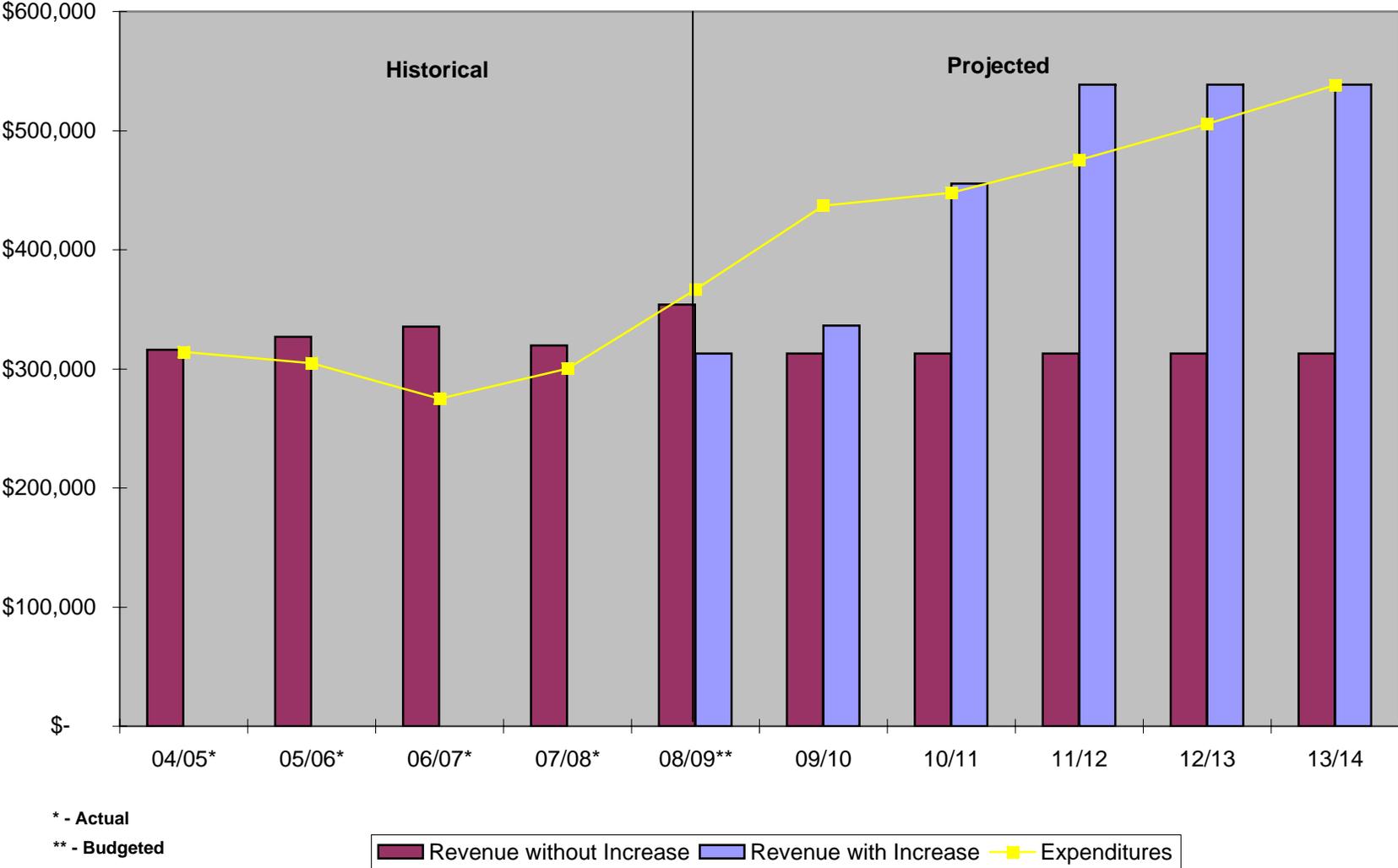
Line No.	Description	Fiscal Year					
		2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
1	Water Service Operating Income	\$ 313,000	\$ 313,000	\$ 313,000	\$ 313,000	\$ 313,000	\$ 313,000
	Changes to Service Charges Required:						
	<u>Fiscal Year</u> <u>6 mon. term</u> <u>% Increase</u>						
2	2008-09	0					
3	2009-10    1st (3 mon.)	0					
	2nd	15					
4	2010-11    1st	15					
	2nd	10					
5	2011-12    1st	10					
	2nd	7.5					
6	2012-13						
7	Total Change in Service Charge Revenue	\$ -	\$ 23,475	\$ 142,337	\$ 225,436	\$ 225,436	\$ 225,436
8	<b>Total Water Service Operating Income</b>	\$ 313,000	\$ 336,475	\$ 455,337	\$ 538,436	\$ 538,436	\$ 538,436
9	Impact/Connection Fee Income	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	<b>Total Revenue</b>	\$ 313,000	\$ 336,475	\$ 455,337	\$ 538,436	\$ 538,436	\$ 538,436
	<b>Revenue Requirements</b>						
11	Operation and Maintenance Expenses	\$ (177,600)	\$ (227,632)	\$ (226,845)	\$ (242,486)	\$ (259,735)	\$ (278,795)
12	Existing Debt Service	\$ (25,000)	\$ (20,000)	\$ (20,000)	\$ (20,000)	\$ (20,000)	\$ (20,000)
13	Employee Services	\$ (161,531)	\$ (181,531)	\$ (192,803)	\$ (204,859)	\$ (217,759)	\$ (231,569)
14	Machinery & Equipment Expenditures	\$ (2,500)	\$ (8,000)	\$ (8,000)	\$ (8,000)	\$ (8,000)	\$ (8,000)
15	<b>Total Revenue Requirements</b>	\$ (366,631)	\$ (437,163)	\$ (447,649)	\$ (475,345)	\$ (505,493)	\$ (538,364)
16	<b>Net Funds</b>	\$ (53,631)	\$ (100,688)	\$ 7,688	\$ 63,091	\$ 32,943	\$ 71
17	<b>Beginning Water Fund Balance</b>	\$ 238,510	\$ 184,879	\$ 84,191	\$ 91,879	\$ 154,970	\$ 187,912
18	<b>Ending Water Fund Balance</b>	\$ 184,879	\$ 84,191	\$ 91,879	\$ 154,970	\$ 187,912	\$ 187,984
19	<b>Target Water Fund Balance after 5 years**</b>					\$ (119,699)	< \$ 187,984

\* Represents 9 months of additional revenue collection.

\*\* Represents 90 days of Operation and Maintenance Expense + \$50,000 Capital Reserve

**CHECK**

**Table 14**  
**Water Fund - Alternative 3**



**Table 15**  
**City of San Joaquin**

**Comparison of Proposed Single Family Residential Sewer Rates with Other Local Communities in Effect as of July 2009**

<u>Community</u>	<u>Basis</u>	<u>Ultimate Rate</u>	
Firebaugh	DU	\$ 47.64	
<b><u>San Joaquin</u></b>	DU	<b>\$ 36.90</b>	<b>Alternative 1 &amp; 1A</b>
		<b>\$ 37.68</b>	<b>Alternative 2</b>
		<b>\$ 37.29</b>	<b>Alternative 3</b>
Mendota	DU	\$ 31.00	
Huron	DU	\$ 26.00	
Orange Cove	DU	\$ 24.20	
Kerman	DU	\$ 23.50	
Selma	DU	\$ 23.28	

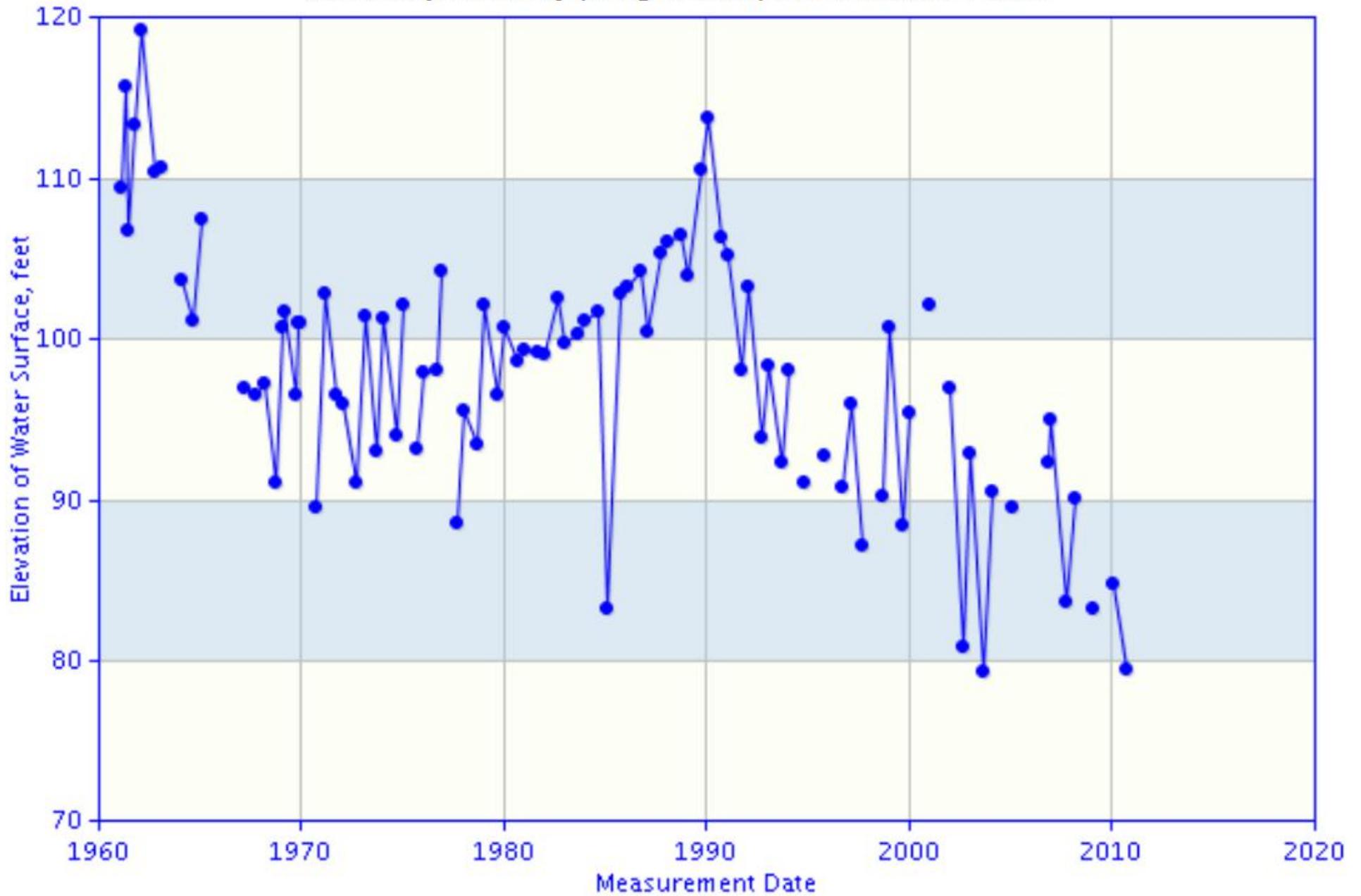
**Table 16**  
**City of San Joaquin**

**Comparison of Proposed Single Family Residential Water Rates with Other Local Communities in Effect as of July 2009**

<u>Community</u>	<u>Meter Size</u>	<u>Rate</u>	<u>Add'l Volume Charge</u>		<u>Cost at 20,400 gal</u>	
			<u>Volume (gal)</u>	<u>Charge</u>		
Firebaugh	None	\$ 45.31	None	\$ -	\$ 62.44	
	All sizes	\$ 36.74	First 12,000	\$0.00/1000 gal		
			Next 10,000	\$3.06/1000 gal		
			Next 10,000	\$3.34/1000 gal		
			Over 32,000	\$3.63/1000 gal		
Huron	3/4 in	\$ 15.15	First 8,000	\$ -	\$ 52.23	
	1 in	\$ 18.95	Over 8,000	\$3.20/1000 gal		
			First 10,000	\$ -		
			Over 10,000	\$3.20/1000 gal		
	1 1/2 in	\$ 23.70	First 12,500	\$ -		
			Over 12,500	\$3.20/1000 gal		
	2 in	\$ 33.15	First 17,500	\$ -		
			Over 17,500	\$3.20/1000 gal		
	3 in	\$ 56.85	First 30,000	\$ -		
			Over 30,000	\$3.20/1000 gal		
Mendota	3/4 in	\$ 32.40	First 12,000	\$ -	\$ 46.21	
	1 in	\$ 34.45	Over 12,000	\$1.40/1000 gal		
			First 12,000	\$ -		
			Over 12,000	\$1.40/1000 gal		
	1 1/2 in	\$ 62.64	First 12,000	\$ -		
			Over 12,000	\$1.40/1000 gal		
	2 in	\$ 84.96	First 12,000	\$ -		
			Over 12,000	\$1.40/1000 gal		
	3 in	\$ 140.22	First 12,000	\$ -		
			Over 12,000	\$1.40/1000 gal		
<u>San Joaquin</u>	None	\$ 44.72	None	\$ -	\$ 44.72	Alternative 1 & 1A
		\$ 46.80			\$ 44.93	Alternative 2
					\$ 44.73	Alternative 3
Orange Cove	None	\$ 36.50	None	\$ -	\$ 36.50	
Selma	1 in	\$ 35.21 *	None	\$ - *	\$ 35.21	
Kerman	None	\$ 24.55	None	\$ -	\$ 24.55	

\* Applies to single family residences with premises between 6001 and 10000 sq. ft.

### Groundwater Levels in Well 15S16E28A003M San Joaquin Valley (Kings Basin) Groundwater Basin





RON CHAPMAN, MD, MPH  
Director & State Health Officer

State of California—Health and Human Services Agency  
California Department of Public Health



EDMUND G. BROWN JR.  
Governor

December 18, 2012  
System No. 1010034

Stan Bulla  
Public Works Director  
City of San Joaquin  
P.O. Box 758  
San Joaquin, CA 93660

Dear Mr. Bulla:

**RE: WELL NO. 4 REACTIVATION AND 4-LOG VIRUS INACTIVATION REQUIREMENTS**

The Department of Public Health (Department) has considered City of San Joaquin water system's (Water System) request to temporarily operate Well No. 4 to meet the Water System demand during maintenance of Well No. 3 and 5 as required. Well No. 4 was inactivated in September 2010 following the detection of *E.coli* in a sample collected on September 2, 2010. Well No. 4 also had sporadic detections of total coliform and pseudomonas bacteria in the past. Therefore, the Department requires Well No. 4 be returned to service with Department's approval only when the following regulatory requirements are met:

1. Due to presence of *E.coli* in the past, the Water System should conduct a well cycle test and test the collected samples for total coliform and *E.coli* and submit the results to the Department.
2. Upon review of the well cycle test results and approval by the Department, the Water System should submit a permit application with a fee of \$258 for reactivation of Well No. 4 and addition of continuous chlorination treatment. A permit application is attached with this letter.
3. Upon approval, the Water System shall operate the disinfection treatment at all times to maintain required chlorine residual to ensure 4-log virus inactivation at all times. The required chlorine residual can either be calculated by the Department or it can be proposed by the Water System. The Department needs following information to accurately calculate the required chlorine residual to be maintained at all times in all parts in the distribution system.
  - i) A schematic showing the proposed location of the chlorine injection

- ii) Pipe sizes and approximate length of pipelines from the point of chlorine injection to the first customer
  - iii) Size of the hydropneumatic tank
  - iv) Maximum capacity of the Well No. 4 pump
4. The Water System shall only use chlorine solution that has been certified under NSF/ANSI Standard 60 for use in drinking water. The chlorine feeds pumps should be NSF/ANSI Standard 61 certified. It is recommended that the chlorination facility be housed in an enclosure.
5. The Water System shall measure the chlorine residual at the time and location of the collection of all distribution bacteriological samples, to be reported on the laboratory report.
6. Well No. 4 should be monitored monthly for total coliform and E. coli bacteria. Samples shall be analyzed by a State certified laboratory using an enumeration method approved for testing for coliforms in drinking water. Results must be reported in units of MPN/100 ml.

If you have any questions regarding this letter, please contact Sudarshan Poudyal or myself at (559) 447 3300.

Sincerely,



Betsy S. Lichti, P.E.  
Senior Sanitary Engineer, Fresno District  
SOUTHERN CALIFORNIA BRANCH  
DRINKING WATER FIELD OPERATIONS

BSL/sp

Attachment- Permit Application

**STATE OF CALIFORNIA**  
**APPLICATION**  
**FOR**  
**DOMESTIC WATER SUPPLY PERMIT**  
**FROM**

Applicant: \_\_\_\_\_  
(Enter the name of legal owner, person(s) or organization)

Address: \_\_\_\_\_

System Name: \_\_\_\_\_

System Number: \_\_\_\_\_

TO: Department of Public Health  
Southern California Branch  
Drinking Water Field Operations  
Fresno District Office  
265 W. Bullard Avenue, Suite 101  
Fresno, California, 93704



Pursuant and subject to the requirements of the California Health and Safety Code, Division 104, Part 12, Chapter 4 (California Safe Drinking Water Act), Article 7, Section 116525, relating to domestic water supply permits, application is hereby made for a domestic water supply permit to operate \_\_\_\_\_

(Applicant should state the type of system, e.g., community,

transient-noncommunity, or nontransient-noncommunity, and the proposed area of services. This application will also be used for a change in ownership application.

I (We) declare under penalty of perjury that the statements on this application and on the accompanying attachments are correct to my (our) knowledge and that I (we) are acting under authority and direction of the responsible legal entity under whose name this application is made.

By: \_\_\_\_\_ Signature

Title: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Dated: \_\_\_\_\_