

NOTICE OF FINANCE COMMITTEE MEETING

NOTICE IS HEREBY GIVEN that the San Lorenzo Valley Water District has called a regular meeting of the Finance Committee to be held Wednesday, **June 3, 2015 at 9:00 a.m.** at the Operations Building, 13057 Highway 9, Boulder Creek, California.

AGENDA

1. Convene Meeting/Roll Call
2. Oral Communications
This portion of the agenda is reserved for Oral Communications by the public for items which are not on the Agenda. Any person may address the Committee at this time, on any subject that lies within the jurisdiction of the Committee. Normally, presentations must not exceed three (3) minutes in length, and individuals may only speak once during Oral Communications. No actions may be taken by the Committee on any Oral Communications presented; however, the Committee may request that the matter be placed on a future agenda. Please state your name and town/city of residence at the beginning of the statement for the record.
3. New Business
Members of the public will be given the opportunity to address each scheduled item prior to Committee action. The Chairperson of the Committee may establish a time limit for members of the public to address the Committee on agenda items.
 - a. BEAR CREEK ESTATES RATE STUDY
Discussion and possible action regarding the Bear Creek Estates Rate Study.
 - b. FY1415 REVENUE COMPARISON
Discussion and possible action regarding FY 1415 revenue comparison. (attachment)
 - c. DROUGHT SURCHARGE
Discussion and possible action regarding drought surcharge
4. Old Business:

- a. 2015-16 BUDGET*
Discussion and possible action regarding the 2015-16 Budget.
(*copy of the 2015-16 Budget is available on line)
5. Informational Material: None.
6. Adjournment

In compliance with the requirements of Title II of the American Disabilities Act of 1990, the San Lorenzo Valley Water District requires that any person in need of any type of special equipment, assistance or accommodation(s) in order to communicate at the District's Public Meeting can contact the District Office at (831) 338-2153 a minimum of 72 hours prior to the scheduled meeting.

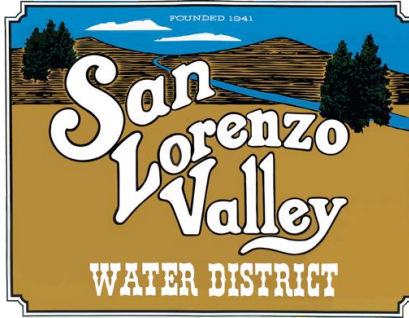
Agenda documents, including materials related to an item on this agenda submitted to the Committee after distribution of the agenda packet, are available for public inspection and may be reviewed at the office of the District Secretary, 13060 Highway 9, Boulder Creek, CA 95006 during normal business hours. Such documents may also be available on the District website at www.slvwd.com subject to staff's ability to post the documents before the meeting.

Certification of Posting

I hereby certify that on May 29, 2015, I posted a copy of the foregoing agenda in the outside display case at the District Office, 13060 Highway 9, Boulder Creek, California, said time being at least 72 hours in advance of the meeting of the Finance Committee of the San Lorenzo Valley Water District in compliance with California Government Code Section 54956.

Executed at Boulder Creek, California, on May 29, 2015.

Holly B. Morrison, District Secretary
San Lorenzo Valley Water District



REQUEST FOR PROPOSALS

TO PROVIDE:

**CONSULTING SERVICES TO THE
SAN LORNZO VALLEY WATER DISTRICT**

PROJECT TITLE:

BEAR CREEK ESTATES SANITARY SYSTEM FINANCIAL STUDY

RESPONSE DUE BEFORE 3:00 P.M.

ON

JULY 10, 2015

**San Lorenzo Valley Water District
13060 Highway 9
Boulder Creek, CA 95006
(831) 430-4625**

DRAFT

I. INTRODUCTION

The San Lorenzo Valley Water District owns and operates a wastewater collection and treatment system along Bear Creek Road, in and around the neighborhoods along Deerwood Drive, Harmon Gulch and Timberwood Road. The Bear Creek Estates Sanitary System (BCESS) system serves 41 homes.

1. System of gravity sewer pipes collecting wastewater from individual homes within the service area. Total length and size of gravity system is unknown
2. Force main delivering wastewater from a centralized collection point to a treatment plant. Size, material and length of force main are unknown.
3. One pump station.
4. One bio-treatment plant with leach field disposal

The system is operated under California Regional Water Quality Control Board Order No. 00-043.

The District currently budgets a flat \$100,000 annual operational revenue for the BCESS. Yearly operational costs fluctuate, but regularly exceed annual revenue. Historically, funds have not been adequate to properly maintain the collection system and treatment plant. Capital Improvement and replacement projects have been financially constrained and limited to emergency or mandatory work only. The wastewater enterprise fund currently has no capital reserves. The District currently has no Capital Improvement Program for BCESS.

The District desires to conduct a rate study that establishes adequate funds to properly maintain the system, build up reserves and fund necessary capital replacement projects.

District anticipates a four-month schedule for completion of this financial study. Estimated completion and Board presentation is anticipated in December 2015.

II. PROJECT SCOPE OF SERVICES

The proposed scope of required services for this project includes:

TASK 100 – PROJECT MANAGEMENT AND INFORMATION COLLECTION

Consultant shall provide overall project management including contract administration, budget and schedule tracking, kick-off and progress meetings and controls. Consultant shall provide internal quality control and quality assurance procedures.

Consultant shall propose a project schedule that meets or exceeds the timeline provided in this Request for Proposals.

Consultant shall research and review existing studies and reports regarding the age and condition of the existing capital components of the entire system and how the District has historically provided for the enterprise fund.

TASK 200 – COST OF SERVICE

Consultant shall analyze the cost characteristics for providing reliable service. Calculations used in the cost of service analysis will include administrative overhead, operations, maintenance, and replacement and enhancements of facilities to comply with new and revised regulations and ensure system reliability.

Consultant shall study available documentation and conduct sufficient field investigation to establish appropriate knowledge of the age, condition and workings of the existing system to make appropriate assumptions regarding a replacement schedule for all capital facilities. The need to fund long-term capital replacement is of critical importance to this study.

Consultant shall consider the impact of current and proposed environmental regulations on the operation and discharge requirements of the system.

Cost of service components to consider include, but are not limited to pumping, treatment, collection, operation and maintenance, administrative and overhead, replacement and capital improvements.

TASK 300 – FINANCIAL ANALYSIS

Consultant shall analyze the existing sewer enterprise's current financial status to determine appropriate reserve levels and funding mechanisms. Rates and charges resulting from the financial analysis shall ensure the District can operate the system adequately and complete projects required to ensure system reliability.

Consultant shall analyze current and historical revenue and billing data.

Consultant shall analyze and discuss the appropriateness of District's current reserve policies as they relate to the sewer enterprise fund.

Consultant shall analyze existing District functioning to propose adequate allocation of overhead between the water and sewer enterprises.

Consultant shall review and evaluate sewer utility operations of other local entities, including rate structures, to compare proposed rate structures.

TASK 400 – PROPOSED RATES

Using industry standards and accepted practices, Consultant shall develop a five year (5-year) plan of proposed rates that are appropriate, produce the desired revenues and comply with Proposition 218 as well as any other legal requirement. Other miscellaneous fees and charges that may also be appropriate to the sewer enterprise fund may also be recommended.

The consultant shall provide options with appropriate analysis for recovery of cost of services. Each option shall provide direct identification of revenues appropriate to fund operating activities, infrastructure replacement and maintenance of appropriate reserves.

TASK 500 – FINAL RATE ANALYSIS REPORT

Consultant shall prepare a final report that provides a detailed analysis of work performed and assumptions made. The report shall provide a clear written analysis of the basis upon which rates were calculated. Rates shall be based on the actual cost of service. The report shall include current rate information and recommended rates over the five year period, including methodology and supporting analysis, fees and rate comparisons.

Consultant shall demonstrate that proposed rate structures are easy to understand and administer.

Consultant shall provide a model (Excel workbook) and appropriate training for District staff to use going forward.

Consultant shall provide seven (7) hard copies (one wet signature and six copies) and a digital pdf of the final report.

Consultant shall demonstrate that any proposed rates and fees are in keeping with the District's adopted Strategic Plan.

III. PROPOSAL REQUIREMENTS

The proposal shall not exceed 15 pages excluding resumes, cover letter, dividers, front and back covers. Responses to this RFP shall be in the following order and shall include:

1. Executive Summary (2 pages maximum)

Summarize the contents of your firm's proposal in a clear and concise manner.

2. Project Description (3 pages maximum)

- i. Explain the objective of the project and how you propose to accomplish the recognized goals.
- ii. Describe the services and deliverables to be provided.
- iii. Include a statement on what makes your firm uniquely qualified.

3. Identification of Prime Consultant (1 page maximum)

- i. Legal name and address of the company.
- ii. Legal form of company (partnership, corporation).
- iii. If company is wholly owned subsidiary of a "parent company," identify the "parent company."
- iv. Name, title, address and telephone number of person to contact concerning the Response Submittal.
- v. Number of staff and the discipline/job title of each.

4. Identification of Sub Consultants, if any (1 page maximum)

- i. Legal name and address of the company.
- ii. Name, title, address and telephone number of prime contact
- iii. Number of staff and the discipline/job title of each.

5. Project Organization and Experience of the Project Team (3 pages maximum, not including resumes)

- i. Describe proposed project organization, including identification and responsibilities of key personnel, including sub-consultants. Include only one-page resumes.
- ii. Describe the experience of the Project Manager and the experience that the proposed personnel have working on past projects as a team.
- iii. Describe project management approach to the work effort, locations where work will be done, responsibilities for coordination with the District, lines of communication necessary to maintain design on schedule.
- iv. Describe a proposed schedule showing all facets of work that will meet the District's objectives and goals in a timely manor.
- v. Describe the Firm's capacity to perform the work within the time limitations, considering the firm's current and planned workload and the firm's current and planned work force.

6. Experience and Past Performance, Including Cost and Schedule Control (3 pages max / 3 projects max)

- i. Include a summary of the past experience and performance of the Project Manager on similar projects. Include the following information:
 1. Owner, contact name and phone number
 2. Project size and description
 3. Project design budget and total dollar value of completed design
 4. Budgeted project design schedule and total time to design completion
 5. Estimated construction costs and actual construction costs
- ii. Describe the firm's past experience and performance on similar projects. Include the information listed above.

7. Firm's Local Experience (1 page maximum)

Describe the firm's experience and knowledge with Sewer District Rate Studies.

8. Creative Alternatives (1 pages maximum)

Discuss any creative solutions to meet the project objectives.

9. Proposed Total Professional Fee and Fee Schedules Submitted Under Separate Sealed Cover

- i. Proposed fee shall be organized into Task 100 through 500, as discussed above, with appropriate further breakdown into subtasks.
- ii. Proposed Fee Schedule shall include an estimated timeline (Gantt Chart Format) for completion of each task and subtask.
- iii. Proposed fee shall not be the sole basis of award, but will be used to evaluate the Consultant's understanding of the Scope of Work.
- iv. Include the hourly rates of all staff that will charge directly to the project.

10. Exceptions to this RFP

The Consultant shall certify that it has fully read the RFP and takes no exceptions to this RFP including, but not limited, to the Consultant Services Agreement (attached). If the Consultant does take exception(s) to any portion of the RFP, the specific portion of the RFP to which exception is taken shall be identified and explained.

The District will require a professional liability insurance verification for coverage of not less than \$1,000,000.00.

IV. EVALUATION CRITERIA

The evaluation criteria and the respective weights that will be given to each criterion are as follows:

1. Executive Summary	10%
2. Project Description	25%
3. Identification of Consultant	5%
4. Project Organization and Experience	25%
5. Past Performance, Including Cost and Schedule Control	20%
6. Firm's Local Experience	5%
7. Creative Alternatives	5%
8. Proposed Fee	5%

V. SELECTION PROCESS

The District will enter into negotiations with the top ranked firm. At this time, the District contemplates the use of a Time and Material Not to Exceed contract for the services requested. Negotiations will cover: scope of work, contract terms and conditions, office arrangements, attendance requirements and appropriateness of the proposed fee.

After negotiating a proposed agreement that is fair and reasonable the General Manager will present the contract to the District's Board for authorization to execute a contract with the most responsive firm.

VI. SELECTION SCHEDULE

The District anticipates that the process for selection of firm and awarding of the contract will be according to the following tentative schedule:

Proposal Due Date	July 10, 2015
Interview (TBD-If Necessary)	TBD
Board of Directors Approval	August 6, 2015
Final Selection and Notification	August 7. 2015

VII. SPECIAL CONDITIONS / ATTACHMENTS

The following documents are included on the CD to provide background for the Groundwater Development Plan:

- Bear Creek Estates Wastewater Facility Discharge Permit Renewal, Order No. 00-043
- 2013 Water and Wastewater Charges Study

VIII. SUBMITTAL REQUIREMENTS

1. One (1) executed original marked "ORIGINAL" in red ink and three (3) copies of the Proposal shall be submitted. One single sealed Proposed Fee Estimate marked "FEE ESTIMATE" in red ink shall be submitted separate from the proposal. Emailed proposals will not be accepted. Submit one electronic copy of the proposal in PDF format (no CD,DVD or Thumb Drive). The Response shall be signed by an individual, partner, officer or officers authorized to execute legal documents on behalf of the Firm.
2. The Response Proposal must be received no later than **3:00 p.m.** local time, on or before **July 10, 2013** at the office of:

**San Lorenzo Valley Water District
13060 Highway 9
Boulder Creek, CA 95006**

Attn: District Secretary (Holly Morrison)

Failure to comply with the requirements of this RFP may result in disqualification. Questions regarding this RFP shall be submitted in writing to hmorrison@slvwd.com.

AGREEMENT FOR PROFESSIONAL SERVICES
by and between the
SAN LORENZO VALLEY WATER DISTRICT (District)
and
XXX (Consultant)

PREAMBLE

This agreement for the performance of professional services (“Agreement”) is made and entered into on this **XX** day of **XXXX, 2015** (“Effective Date”), by and between _____ with its principal place of business located at _____ (“Consultant”) and the San Lorenzo Valley Water District, a California County Water District, with its principal place of business located at 13060 Highway 9, Boulder Creek, CA 95006 (“District”). District and Consultant may be referred to individually as a “Party” or collectively as the “Parties” or the “Parties to this Agreement.”

RECITALS

- A.** District desires to secure professional services as described in Exhibit A, entitled “Scope of Services”; for **BEAR CREEK ESTATES SANITARY SYSTEM FINANCIAL STUDY**
- B.** Consultant represents that it possesses the professional qualifications and expertise to provide such services and
- C.** The Parties have specified herein the terms and conditions under which such services will be provided and paid for.

The Parties agree as follows:

AGREEMENT PROVISIONS

1. SCOPE OF SERVICES

Except as specified in this Agreement, Consultant shall furnish all technical and professional services, including labor, material, equipment, transportation, supervision and expertise (collectively referred to as “Services”) to satisfactorily complete the work required by District at its own risk and expense. Services to be provided to District are more fully described in Exhibit A, entitled “Scope of Services.” All of the exhibits referenced in this Agreement are attached and incorporated by this reference.

2. TERM OF AGREEMENT

Consultant shall provide the services under the requirements of this Agreement commencing upon the date of execution of this Agreement by the parties. Consultant shall complete services within the time limits set forth in Scope of Services or as mutually determined in writing by Parties.

3. RESPONSIBILITY OF CONSULTANT

Consultant shall be responsible for the quality, technical accuracy, and coordination of services furnished by it under this Agreement as outlined in Exhibit A. Consultant will endeavor to provide services in a manner consistent with the level of care and skill ordinarily exercised by other professionals providing the same service in the same locale. Consultant shall be solely responsible to District for the performance of

Consultant, and any of his or her employees, agents, subcontractors, or suppliers, under these Agreement Documents.

4. RESPONSIBILITY OF DISTRICT

- A.** District has established a budget for professional services including all costs as outlined in Exhibits A and B. The District Manager, or designee, shall be District's authorized representative and will ensure all required budget, purchase orders, service orders and any other internal documentation necessary to comply with the terms of this Agreement are properly and timely prepared in order to enable Consultant to commence and continue services according to terms of the Agreement.
- B.** On behalf of District, the District Manager, or designee, shall be District's authorized representative in the interpretation and enforcement of all work performed in connection with this Agreement. The District Manager, or designee, shall render decisions in a timely manner pertaining to documents submitted by Consultant in order to avoid unreasonable delay in the orderly and sequential progress of Consultant's services. Consultant shall promptly comply with instructions from District Manager or designee. The District Manager will ensure all required budget, purchase orders, service orders and any other internal documentation necessary to comply with the terms of this agreement are properly and timely prepared in order to enable Consultant to continue services according to the terms of this Agreement.

5. PAYMENT OF COMPENSATION

- A.** In consideration for Consultant's performance of services, District shall pay Consultant for all services rendered by Consultant pursuant to Consultant's Standard Rate Schedule, the current version of which is outlined in Exhibit B, "Services Fee Schedule." Payments made by District under this Agreement shall be the amounts charged for Services provided and billed by Consultant, subject to verification by District, pursuant to the standard rates set forth in the "Services Fee Schedule" attached as Exhibit B. Consultant may begin services prior to the effective date of this agreement at its own risk, with the understanding that, upon District approval, District may choose to compensate consultant for services performed prior to authorization by District's Board of Directors, with the limits of the District Manager's authority.
- B.** Consultant shall bill District on a monthly basis for services provided by Consultant during the preceding month, subject to verification by District. Payment to Consultant for services will be made within thirty (30) days of date of Consultant invoice.
- C.** Compensation for the services hereunder shall be capped at \$ **XX** unless changed in writing by District.

6. RIGHT TO TERMINATION

Both parties reserve the right to terminate this Agreement at any time, with or without cause, upon thirty (30) days written notice to the other party. As of the date of termination, Consultant shall immediately cease all services hereunder, except such as may be specifically approved by both Consultant and District's authorized representative. Consultant shall be entitled to compensation for all services rendered

prior to termination and for any services authorized by the authorized representative thereafter.

7. NO ASSIGNMENT OF AGREEMENT/SUCCESSORS IN INTEREST

This Agreement is a contract for professional services. District and Consultant bind themselves, their partners, successors, assigns, executors and administrators to all covenants of this Agreement. Except as otherwise set forth in this Agreement, no interest in this Agreement shall be assigned or transferred, either voluntarily or by operation of law, without the prior written approval of both parties.

8. NO AGENCY

Consultant shall not have authority, expressed or implied, to act on behalf of District as an agent, or to bind District to any obligations whatsoever, unless specifically authorized in writing by the District Manager or authorized representative.

9. NO THIRD PARTY BENEFICIARY

This Agreement shall not be construed to be an Agreement for the benefit of any third party or parties and no third party or parties shall have any claim or right of action under this Agreement for any cause whatsoever.

10. CONSULTANT IS AN INDEPENDENT CONSULTANT

It is agreed that in performing the work required under this Agreement, Consultant and any person employed by or contracted with Consultant to furnish labor and/or materials under this Agreement is neither an agent nor employee of District. Consultant has full rights to manage its employees subject to the requirements of the law.

11. CONFIDENTIALITY OF MATERIAL

All memoranda, specifications, plans, data, drawings, descriptions, documents, discussions or other information received by or for Consultant and all other written information submitted to Consultant in connection with the performance of this Agreement shall be held confidential by Consultant and shall not, without the prior written consent of District, be used for any purposes other than the performance of the services nor be disclosed to an entity not connected with performance of the services. Nothing furnished to Consultant, which is otherwise known to Consultant or becomes generally known to the public or is of public record, shall be deemed confidential.

12. RIGHT OF DISTRICT TO INSPECT RECORDS OF CONSULTANT

District, through its authorized employees, representatives or agents shall have the right during the term of this Agreement and for three (3) years from the date of final payment for goods or services provided under this Agreement, to audit the books and records of Consultant for the purpose of verifying any and all charges made by Consultant in connection with Consultant's compensation under this Agreement, including termination of Consultant. Consultant agrees to maintain sufficient books and records in accordance with generally accepted accounting principles to establish the correctness of all charges submitted to District. District shall disallow any expenses not so recorded.

Consultant shall submit to District any and all reports concerning its performance under this Agreement that may be requested by District in writing. Consultant agrees to assist

District in meeting District's reporting requirements to the State and other agencies with respect to Consultant's services hereunder.

13. CORRECTION OF SERVICES

Consultant will be given the opportunity and agrees to correct any incomplete, inaccurate or defective services at no further cost to District, when such defects are due to the negligence, errors or omissions of Consultant.

14. FORCE MAJEURE

The time for performance of services to be rendered pursuant to this Agreement may be extended because of any delays due to unforeseeable causes beyond the control and without the fault or negligence of Consultant, including, but not restricted to, acts of God or of any public enemy, acts of the government, fires, earthquakes, floods, epidemic, quarantine restrictions, riots, strikes, freight embargoes and unusually severe weather if Consultant shall, within ten (10) days of the commencement of such condition, notify the District Manager who shall thereupon ascertain the facts and extent of any necessary delay, and extend the time for performing services for period of enforced delay when and if the District Manager's determination shall be final and conclusive upon the parties to this Agreement.

15. FAIR EMPLOYMENT

Consultant shall not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, condition of physical handicap, religion, ethnic background, or marital status, in violation of state or federal law.

16. HOLD HARMLESS/INDEMNIFICATION

Consultant agrees, to the fullest extent permitted by law, to indemnify and hold District, its Board members, officers, and employees, harmless from any damage, liability or cost (including reasonable attorneys' fees and costs of defense) to the extent caused by Consultant's negligent acts, errors or omissions in the performance of professional services under this Agreement and those of his or her sub-consultants or anyone for whom Consultant is legally liable.

Consultant is not obligated to indemnify District in any manner whatsoever for District's own negligence.

17. INSURANCE REQUIREMENTS

A. Without limiting Contractor's indemnification of District, and prior to commencing any Services required under this Agreement, Consultant shall purchase and maintain in full force and effect, at its sole cost and expense, the following insurance policies with at least the indicated coverages, provisions and endorsements:

1. Commercial General Liability Policy (bodily injury and property damage):
Policy limits are subject to review, but shall in no event be less than, the following:

\$1,000,000 Each Occurrence
\$1,000,000 General Aggregate
\$1,000,000 Products/Completed Operations Aggregate

\$1,000,000 Personal Injury

2. Workers' Compensation Insurance Policy as required by statute and employer's liability with limits of at least one million dollars (\$1,000,000) policy limit Bodily Injury by disease, one million dollars (\$1,000,000) each accident/Bodily Injury and one million dollars (\$1,000,000) each employee Bodily Injury by disease.
3. Comprehensive Business Automobile Liability Insurance Policy with policy limits at minimum limit of not less than one million dollars (\$1,000,000) each accident using. Liability coverage shall apply to all owned, non-owned and hired autos.
4. Professional Liability or Errors and Omissions Insurance as appropriate shall be written on a policy form coverage specifically designed to protect against acts, errors or omissions of Consultant. Coverage shall be in an amount of not less than one million dollars (\$1,000,000) per claim/aggregate.

B. EVIDENCE OF COVERAGE

Prior to commencement of any services under this Agreement, Consultant, shall, at its sole cost and expense, purchase and maintain not less than the minimum insurance coverage with endorsements and deductibles indicated in this Agreement. Consultant shall file with District all certificates for required insurance policies for District's approval as to adequacy of insurance protection.

18. AMENDMENTS

It is mutually understood and agreed that no alteration or variation of the terms of this Agreement shall be valid unless made in writing and signed by the Parties and incorporated into this Agreement. Such changes, which are mutually agreed upon by District and Consultant, shall be incorporated in amendments to this Agreement.

19. WAIVER

No term or provision hereof shall be deemed waived and no default or breach excused, unless such waiver or consent shall be in writing and signed by the party claimed to have waived or consented to such breach. The consent by any party to, or waiver of, a breach or default by the other shall not constitute a consent to, waiver of, or excuse for, any other different or subsequent breach or default.

The failure of either party to insist upon or enforce strict conformance by the other party of any provision of this Agreement or to exercise any right under this Agreement shall not be construed as a waiver or relinquishment of such party's right unless made in writing and shall not constitute any subsequent waiver or relinquishment.

20. INTEGRATED DOCUMENT - TOTALITY OF AGREEMENT

This Agreement embodies the Agreement between District and Consultant and its terms and conditions. No other understanding, agreements, conversations or otherwise, with any officer, agent or employee of District prior to execution of this Agreement shall affect or modify any of the terms or obligations contained in any documents comprising this

Agreement. Any such verbal agreement shall be considered as unofficial information and in no way binding upon District.

Agreement Documents comprise the entire Agreement between District and Consultant concerning the work to be performed for this project. Agreement Documents are complementary; what is called for in one of the Agreement Documents is binding as if called for by all of them.

21. SEVERABILITY CLAUSE

In the event any one or more of the provisions contained herein shall, for any reason, be held invalid, illegal or unenforceable in any respect, it shall not affect the validity of the other provisions, which shall remain in full force and effect.

If any part of this agreement is for any reason held to be excessively broad as to time, duration, geographical scope, activity or subject, it will be construed, by limiting or reducing it, so as to be enforceable to the extent reasonably necessary for the protection of the parties.

22. NOTICES

All notices to the Parties shall, unless otherwise requested in writing, be sent to District addressed as follows:

Brian C. Lee
District Manager
San Lorenzo Valley Water District
13060 Highway 9
Boulder Creek, CA 95006

And to Consultant addressed as follows:

XXX

23. STATUTES AND LAW GOVERNING AGREEMENT

This Agreement shall be governed and construed in accordance with the statutes and laws of the State of California.

24. WAIVER OF CONSEQUENTIAL DAMAGES

District and Consultant mutually agree to waive all claims of consequential damages arising from disputes, claims, or other matters relating to this Agreement.

25. DISPUTE RESOLUTION

A. Unless otherwise mutually agreed to by the Parties, any controversies between Consultant and District regarding the construction or application of this Agreement, and claims arising out of this agreement or its breach, shall be submitted to mediation within thirty (30) days of the written request of one Party after the service of that request on the other Party.

- B. The Parties may agree on one mediator. If they cannot agree on one mediator, the Party demanding mediation shall request that the Superior Court, State of California, County of Santa Cruz appoint a mediator. The mediation meeting shall not exceed one day or eight (8) hours. The Parties may agree to extend the time allowed for mediation under this Agreement.
- C. The costs of mediation shall be borne by the Parties equally.
- D. Mediation under this section is a condition precedent to filing an action in any court. In the event any legal action or proceeding is commenced to interpret or enforce the terms of, or obligations arising out of this Agreement, or to recover damages for the breach thereof, the Party prevailing in any such action or proceeding shall be entitled to recover from the non-prevailing Party all reasonable attorneys' fees, costs and expenses incurred by the prevailing Party.

26. VENUE

In the event that suit shall be brought by either Party, the Parties agree that the venue shall be exclusively vested in the state courts of the State of California, County of Santa Cruz, or where otherwise appropriate, exclusively in the United States District Court, Northern District of California, San Jose.

27. SIGNATURES

The individuals executing this Agreement represent and warrant that they have the right, power, legal capacity and authority to enter into and to execute this Agreement on behalf of the respective legal entities of Consultant and District.

The Parties acknowledge and accept the terms and conditions of this Agreement as evidenced by the following signatures of their duly authorized representatives. It is the intent of the Parties that this Agreement shall become operative on the Effective Date.

SAN LORENZO VALLEY WATER DISTRICT,

Brian C. Lee
District Manager
San Lorenzo Valley Water District

XXX

Approved as to form:

Marc G. Hynes,
District Counsel



California Regional Water Quality Control Board Central Coast Region



Gray Davis
Governor

Winston H. Hickox
Secretary for
Environmental
Protection

Internet Address: <http://www.swrcb.ca.gov/~rvqcb3>
81 Higuera Street, Suite 200, San Luis Obispo, California 93401-5427
Phone (805) 549-3147 • FAX (805) 543-0397

July 25, 2000

RECEIVED

COPY JUL 28 2000
SAN LORENZO VALLEY
WATER DISTRICT

Mr. James Mueller
San Lorenzo Valley Water District
13060 Highway 9
Boulder Creek, CA 95006

Dear Mr. Mueller:

RENEWAL OF BEAR CREEK ESTATES WASTEWATER FACILITY, SANTA CRUZ COUNTY, ORDER NO. 00-043

Enclosed is an updated copy of Waste Discharge Requirements Order No. 00-043, for Bear Creek Estates Wastewater Facility, Santa Cruz County. This Order was adopted by the Board at July 14, 2000 meeting.

If you have any questions or comments please call Howard Kolb at 805/549-3331 or Chris Adair 805/542-4629 of my staff.

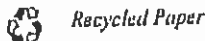
542-5022-1200-1111
849 3761
Sincerely,

Madly E Hageman
FK Roger W. Briggs
Executive Officer

Enclosure

s:/northern/howard/permits/wdr/san lorenzo valley water dist. bear creek estates/final renewal bear creek
Discharger File: San Lorenzo Valley Water District Bear Creek Estates

California Environmental Protection Agency





**CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
CUSTOMER SERVICE SURVEY**

One of Cal/EPA's objectives is to provide superior levels of customer service. Your feedback telling us what is going well and what needs improvement is essential to our success in our efforts to better serve you. Please take a moment to respond to the following questions.

Winston H. Hickox, Secretary for Environmental Protection

SERVICE PROVIDER: Regional Water Quality Control Board (San Luis Obispo)

What was the nature of your contact with us? (Please check only one box)

- General Information
 Problem Resolution
 Technical Assistance
 Permitting/Licensing Assistance
 Registration Assistance
 Other: _____

STATEMENTS	Check (✓) As Appropriate			
	Strongly Agree	Agree	Disagree	Strongly Disagree
Staff was courteous and helpful.				
Staff provided complete, accurate information to you.				
A timely response was provided.				
My overall experience was positive.				
<i>Please complete the section below if your contact with us involved permitting/licensing/registration assistance.</i>				
The regulations were understandable.				
The application instructions were understandable.				
The permit/license/registration terms and conditions were understandable.				

◇ Please indicate any staff person you would like to commend: _____
Name(s)

◇ Comments:

◇ If you feel we fell short in meeting your service expectations, please describe the situation, including name of the staff person involved and the date the incident occurred.

◇ As a result of your experience with us, what service-related improvements can you recommend?

☐ Please fold this survey in thirds, staple/tape, and mail. Postage will be paid by Cal/EPA.

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
81 Higuera Street, Suite 200
San Luis Obispo, California 93401-5427

WASTE DISCHARGE REQUIREMENTS ORDER NO. 00-043
Waste Discharger Identification No. 3 440107001

FOR
SAN LORENZO VALLEY WATER DISTRICT,
BEAR CREEK ESTATES WASTEWATER TREATMENT FACILITY,
SANTA CRUZ COUNTY

The California Regional Water Quality Control Board, Central Coast Region (hereinafter called the Board) finds that:

SITE OWNER AND LOCATION

1. On January 27, 2000, James A. Mueller, San Lorenzo Valley Water District (SLVWD) District Manager, filed a Report of Waste Discharge. The report was filed on behalf of Bear Creek Estates Wastewater Treatment Facility for authorization to continue discharging treated domestic wastewater within the San Lorenzo River sub-basin.
2. San Lorenzo Valley Water District (hereafter Discharger), 13060 Highway 9, Boulder Creek, owns and operates a wastewater treatment facility. The facility includes collection lines and a septic-tank/leachfield system. It is located in Santa Cruz County along Bear Creek Road approximately 2 1/2 miles northeast of the community of Boulder Creek as shown on Attachment "A" of this Order.

PURPOSE OF ORDER

3. The primary objectives of this order are to: 1) Permit the discharge of treated domestic wastewater; 2) Review and revise discharge limits; and 3) Review and revise a discharge monitoring program to evaluate the impact to water quality.

SITE/FACILITY DESCRIPTION

Discharge Type

4. The facility is designed to treat and dispose domestic wastewater from the Bear Creek Estates Subdivision, Units 3, 4, and 5.

Design and Current Capacity

5. The facility treatment system consists of two single-chambered septic tanks in series, each having a liquid volume of approximately 16,800 gallons (total capacity of approximately 33,600 gpd).
6. Septic tank effluent is alternately discharged among five leachfields.
7. The facility is designed to treat an average dry weather flow of 12,000 gallons per day gpd and a peak wet weather flow of 32,500 gpd.
8. The system treats and disposes up to 16,500 gallons-per-day (gpd) of domestic wastewater.

Geology

9. The leachfield disposal area is located on approximately 2.1 acres of sloping (5-30%) topography consisting of silty/clay soils underlain by siltstone and sandstone.

Surface and Groundwater

10. Bear Creek, a tributary to San Lorenzo River, flows around the eastern portion of the disposal area. The edge of the leachfield disposal area is over 100 feet from the creek.

11. Depth to ground water was measured during wet weather at a depth of 12 feet and generally migrates in a southerly direction. Ground water in the vicinity of the discharge has the following average concentrations based on results of ground water samples collected from March 1986 to September 1994:

Constituent	Concentration
Total dissolved solids	552 mg/l
Sodium	102 mg/l
Chloride	31 mg/l
Total nitrogen	3.4 mg/l
Nitrate as NO ₃	1.8 mg/l

Ground water samples collected from December 1991 to December 1999 have the following average concentrations:

Constituent	Concentration
Total dissolved solids	503 mg/l
Sodium	95 mg/l
Chloride	36 mg/l
Total nitrogen	7.4 mg/l
Nitrate as NO ₃	1.4 mg/l

12. Storm water flows over the leachfield area and into Bear Creek. Because the flow is less than one million gpd, the facility is not required to have a storm water pollution prevention plan.

Monitoring and Reporting Program (MRP)

The MRP requires effluent monitoring, ground water monitoring, receiving water monitoring, leachfield/seep monitoring, and system performance monitoring.

BASIN PLAN

13. The Water Quality Control Plan, Central Coastal Basin (Basin Plan), was adopted by the Board on November 17, 1989, and approved by

the State Water Resources Control Board on August 16, 1990. The Regional Board approved amendments of the Plan on February 11, 1994 and September 8, 1994. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of State waters. BP

14. Present and anticipated beneficial uses of Bear Creek that could be affected by the discharge include: BP

- a. Domestic and municipal supply;
- b. Agricultural supply;
- c. Ground water recharge;
- d. Industrial service supply;
- e. Water contact recreation;
- f. Non-contact water recreation;
- g. Wildlife habitat;
- h. Cold fresh-water habitat;
- i. Fish migration;
- j. Fish spawning
- k. Preservation of Biological Habitats of Special Significance;
- l. Rare, Threatened, or Endangered Species;
- m. Fresh Water Replenishment and,
- n. Commercial and Sport Fishing.

15. Present and anticipated uses of ground in the vicinity of the discharge include: BP

- a. Domestic supply;
- b. Agricultural supply;
- c. Industrial process supply; and,
- d. Industrial service supply.

16. The San Lorenzo Wastewater Management Plan (WWMP), adopted by Santa Cruz County Board of Supervisors, was approved by the Regional Board on April 5, 1995 as Resolution 95-04. The WWMP includes findings and recommendations resulting from investigation of elevated nitrate levels in surface water and groundwater in the San Lorenzo River watershed. The WWMP recommends the Regional Board require nitrogen control measures in the issuance of new or revised waste discharge requirements. The WWMP's

goal is for at least 50 % reduction in nitrogen from onsite disposal systems. ^{BP}

- 17. This order requires 50 % reduction of nitrogen in effluent, consistent with Resolution No. 95-04. ^{BP}
- 18. The surface water quality objectives specified in the Basin Plan for the San Lorenzo River above Bear Creek, are: ^{BP}

Analyte	Value	Units
Total Dissolved Solids	400	mg/l
Sodium	50	mg/l
Chloride	60	mg/l
Boron	0.2	mg/l
Sulfate	80	mg/l

- 19. The range of median ground water quality objectives in the San Lorenzo Sub-Basin, as specified in the Basin Plan, are reported as follows: ^{BP}

Analyte	Range	Units
Total Dissolved Solids	100-250	mg/l
Sodium	10-20	mg/l
Chloride	20-30	mg/l
Nitrate (as N)	1-5	mg/l
Sulfate	10-50	mg/l

CEQA

- 20. These waste discharge requirements are for an existing facility and are exempt from provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) in accordance with Section 15301, Chapter 3, Title 14, of the California Code of Regulations.

EXISTING ORDERS AND GENERAL FINDINGS

- 21. The discharge has been regulated by Waste Discharge Requirements Order No. 95-09, adopted by the Board on March 10, 1995. The discharge from Bear Creek Estates has been regulated by the Board since February 15, 1963.
- 22. Discharge of waste is a privilege, not a right,

and authorization to discharge is conditional upon the discharge complying with provisions of Division 7 of the California Water Code and any more stringent effluent limitations necessary to implement water quality control plans, to protect beneficial uses, and to prevent nuisance. Compliance with this Order should assure this and mitigate any potential adverse changes in water quality due to the discharge.

- 23. On March 28, 2000, the Board notified the Discharger and interested agencies and persons of its intent to adopt waste discharge requirements for the discharge and has provided them with a copy of the proposed Order and an opportunity to submit written views and comments.
- 24. In a public hearing on July 14, 2000, the Regional Board heard and considered all comments pertaining to the discharge and found this Order consistent with the above findings.

IT IS HEREBY ORDERED, pursuant to authority in Section 13263 of the California Water Code, that San Lorenzo Valley Water District, its agents, successors, and assigns, may discharge wastewater at Bear Creek Estates Wastewater Treatment Facility providing compliance is maintained with the following:

[Note: Other prohibitions and conditions, definitions, and the method of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated January, 1984. Applicable paragraphs are referenced in paragraph E.3. of this Order.

Throughout the Order superscripts (^{BP}) are provided to indicate requirements taken from the Basin Plan. Requirements not referenced are based on staff's professional judgment.]

PROHIBITIONS

- 1. Discharge of wastewater to the treatment system from other than Bear Creek Estates

Units 3, 4, and 5, is prohibited.

2. Discharge of wastewater is prohibited outside of the leachfield disposal area shown on Attachment "A".
3. Discharge of wastewater within 100 feet of Bear Creek is prohibited.
4. Wastewater on the soil surface of the leachfield disposal area is prohibited.
5. Bypass of the collection and treatment systems and discharge of untreated or partially treated wastes directly to the leachfield disposal area is prohibited.

SPECIFICATIONS

Effluent Limitations

1. Daily flow averaged over each month shall not exceed 16,500 gallons.
2. Effluent discharged to the leachfield shall not have a pH less than 6.5 or greater than 8.3^{BP}.

Receiving Water Limitations

3. The discharge shall not cause a statistically significant increase in fecal coliform concentration in Bear Creek. Compliance is evaluated by statistically comparing fecal coliform concentrations in creek samples collected upstream and downstream of the leachfield disposal area.

Ground Water Limitations

4. The discharge shall not cause a statistically significant increase of mineral constituent (total dissolved solids, sodium, chloride, and nitrate) concentrations in the ground water. This is determined by statistical analysis of water quality data from the disposal area's monitoring wells.
5. The discharge shall not cause ground water to exceed concentrations of chemical constituents limits specified in Title 22, Chapter 15, Article

4, Section 64435, of the California Code of Regulations as listed below ^{BP}.

Constituents	Maximum Contaminant Level (mg/l)
Nitrate (as NO ₃)	45

System Operation Specifications

6. The wastewater discharge shall be rotated among the five leaching areas at least once every nine months.
7. High water alarms, readily audible or visible to maintenance personnel, shall be installed at each raw wastewater pumping station.
8. Stand-by power or portable pumps shall be available for use when wastewater-pumping facilities fail.
9. The Discharger currently has an onsite septic system. To comply with the San Lorenzo Wastewater Management Plan, this system shall be modified to reduce nitrogen levels by a minimum of 50%. The Discharger will comply with the timeline listed below for system construction:

Task	Completion Date
Completion of extended treatment system design	1/1/2002
Installation of extended treatment system	7/1/2003
Submit a technical report detailing optimal system performance	1/1/2004

Solids/Solid Waste Control

10. Solids accumulation in each septic tank shall be measured semi-annually and the appropriate tank cleaned when it appears (a) the bottom of the scum layer will be within 4" of the bottom of the outlet device before the next scheduled inspection or (b) the sludge level will be within 10" of the outlet device before the next scheduled inspection.
11. Solids cleaned from tanks shall be disposed of at an approved septage receiving facility.

Stormwater Control

12. Extraneous surface drainage shall be diverted away from the treatment system and leachfield disposal area.

Inflow/Infiltration Control

13. The Discharger shall develop and implement an Infiltration/Inflow and Spill Prevention Program (Program). The Program shall be reviewed and updated as necessary by every five years.
- A. The Program shall be developed in accordance with good engineering practices and shall address the following objectives:
- identify infiltration and inflow sources that may affect treatment facility operation or possibly result in overflow or exceed pump station capacity; and,
 - identify, assign, and implement spill prevention measures and collection system management practices to ensure overflows and contribution of pollutants or incompatible wastes to Discharger's treatment system are minimized.
- B. The District shall make a copy of the Program available upon request to a representative of the Regional Board.
- C. The Program shall provide a description of the collection and transport system, measures used to ensure proper operation, and other

information necessary to determine compliance with these requirements. The Program shall include, at a minimum, the following items:

- A map showing: collection system lines greater than 12 inches, pump stations, standby power facilities, surface water bodies (including discharge point(s) where pump station overflows may occur), storm drain inlets, and date of last revision.
- A narrative description of the following:
 - Line Flushing and Cleaning: Describe available equipment and projected schedule necessary to clean and flush entire system every two years, and assigned staff. Describe coordination with area plumbers to address introduction of incompatible wastes (e.g., root balls, construction debris, etc.) during lateral cleaning and efforts to abate introduction of material into the system, which might cause system backup.
 - Visual System Inspection: Describe visual inspection methods (e.g., televising lines), replacement schedules, frequency, collection system length and assigned staff. Describe results and detail problem areas found. Inspection records shall be retained for five years.
 - Inflow & Infiltration: Describe current and five year projected investigation methods (e.g., smoke testing), frequency, results, and efforts to reduce storm water inflows and sewer line ex-filtration. Inspection records shall be retained for five years. Preventive Repair and Replacement: Describe a projected schedule to eliminate sewage conveyance systems determined or projected to be structurally compromised. List each project or reach of conveyance to be replaced separately along with proposed start and estimated completion dates.

- iv. Pump Station Maintenance: Describe each pump station, location, flow monitoring (wet and dry weather), and the previous year's operational problems and overflows.
- v. Alternate Power Supply for Pump Station Operation: Describe alternate power supply for each pump station within the member entity's system.

D. Fiscal Resources: The Program shall provide a description of fiscal resources necessary to ensure system operation. The Program shall include, at a minimum, the following items:

- a. Fee Structure: Quantification of current and five year projected sewer assessment fees necessary to implement the Program.
- b. Available Fiscal Resources: Actual and five year projected budget expenses for staffing, operation and replacement of the collection system, including a description of a capital improvement or sinking fund to provide funding for item E.e., below.

E. Personnel and Training: The Program shall provide a description of staffing available to ensure system operation. The Program shall include, at a minimum, the following items:

- a. Personnel: Identify specific individuals (and job titles) who are responsible for developing, implementing, and revising the Program. Provide an organizational chart of all staff, position, duties, and training received during the past year. Identify managers and provide a list of contacts with associated phone numbers.
- b. Training: List the frequency of training, qualification of each employee. Periodic dates for training shall be identified.

. Planning and Reporting: The Program shall

provide a description of planning efforts and reporting of system operation. The Program shall include, at a minimum, the following items:

- a. Spill Response: Describe a plan, identify employees responsible and duties necessary to implement your response to spills. Identify posting, notification, and spill estimation efforts used.
- b. Annual Reporting: List spills or system problems during the previous year, cleanups, amounts, location, and efforts to ensure similar spills or problems do not reoccur. A tracking or follow-up procedure shall be used to ensure appropriate response has been taken. Inspections and maintenance activities shall be documented and recorded.
- c. Offsite and Onsite Spill Alarms: Describe the current or proposed alarm system (or why unnecessary), central information location, staffing and response times for detecting spills from the system.
- d. Wet Season Manhole Inspections: Describe or propose frequency to conduct inspections to detect line blockage during wet season flows to avoid system overflows, staffing, and available and projected equipment to ensure safe and effective inspections.
- e. Capital Improvement - Describe a current and projected work plan.
- f. Five Year Planning - Describe projected planning efforts.
- g. 20 Year Planning - Describe long term planning efforts.

G. The District shall provide an annual report, due January 30th of each year, describing program development and permit compliance over the previous twelve months. Report shall be of

sufficient content as to enable the Regional Board to determine compliance with requirements.

PROVISIONS

1. Order No. 95-09, "Waste Discharge Requirements for San Lorenzo Valley Water District, Bear Creek Estates, Santa Cruz County" adopted by the Board on March 10, 1995 is hereby rescinded.
2. Discharger shall comply with "Monitoring and Reporting Program No. 00-043", and any amendments thereto, as specified by the Executive Officer.
3. The Discharger shall comply with all items of the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated January, 1984; except Item Nos. A.8. and A11.
4. Pursuant to Title 23, Division 3, Chapter 9, of the California Code of Regulations, the Discharger must submit a written report to the Executive Officer not later than January 1, 2009, addressing:
 - a. Whether there will be changes in the continuity, character, location, or volume of the discharge; and,
 - b. Whether, in their opinion, there is any portion of the Order that is incorrect, obsolete, or otherwise in need of revision.

I, Roger W. Briggs, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on July 14, 2000.

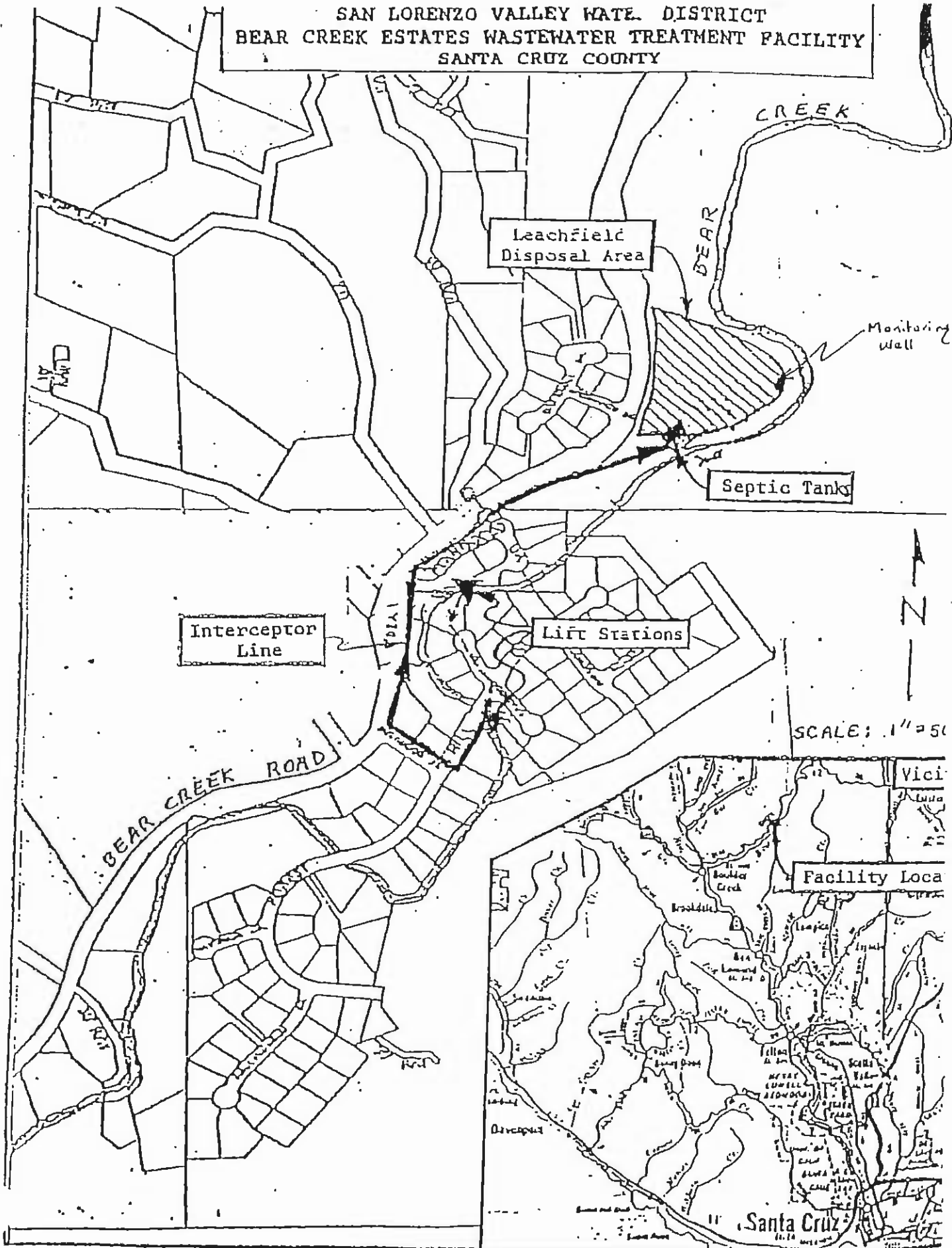

for EXECUTIVE OFFICER

HEK/SLR/Permits/Bear Creek/00-043 WDR

Task: 121-01

File: Discharger file; San Lorenzo Valley WD, Bear Creek Estates WWF

SAN LORENZO VALLEY WATE. DISTRICT
BEAR CREEK ESTATES WASTEWATER TREATMENT FACILITY
SANTA CRUZ COUNTY



STATE OF CALIFORNIA
 CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
 CENTRAL COAST REGION
 81 Higuera Street, Suite 200
 San Luis Obispo, CA 93401-5427

MONITORING AND REPORTING PROGRAM NO. 00-043
 FOR
 SAN LORENZO VALLEY WATER DISTRICT
 BEAR CREEK ESTATES WASTEWATER TREATMENT FACILITY
 SANTA CRUZ COUNTY

INFLUENT MONITORING¹

Representative influent samples shall be collected before treatment and analyzed for the following:

Parameter	Units	Type of Sample	Minimum Measuring Frequency
BOD	mg/l	Grab	Monthly
pH	"	"	"
Organic Nitrogen (N)	"	"	* Twice per month
Nitrate (N)	"	"	"
Nitrite (N)	"	"	"
Ammonia (N)	"	"	"
Total dissolved solids	"	"	Quarterly
Total suspended solids	"	"	"

(N) – All nitrogen data shall be reported as nitrogen.

*Staff requires monitoring twice per month for the Nitrogen series (Organic Nitrogen, Nitrate, Nitrite, and Ammonia) for a minimum of 15 months. After 15 months Discharger shall submit a report analyzing the nitrogen removal efficiency of the wastewater treatment plant. Regional Board staff will evaluate the report to determine the need and frequency for continued nitrogen monitoring.

¹ Influent monitoring shall begin after installation of enhanced wastewater treatment system. The enhanced wastewater treatment system shall be installed by July 1, 2003.

EFFLUENT MONITORING

Representative effluent samples shall be collected prior to leachfield disposal and analyzed for the following:

Parameter	Units	Type of Sample	Minimum Measuring Frequency
Flow to Leachfield	Gallons per day	Metered	Monthly
BOD	mg/l	Grab	"
pH	"	"	"
Organic Nitrogen (N)	"	"	* Twice per month ²
Nitrate (N)	"	"	"
Nitrite (N)	"	"	"
Ammonia (N)	"	"	"
Total suspended solids	"	"	Quarterly
Total dissolved solids	"	"	"
Sodium	"	"	"
Chloride	"	"	"

(N) – All nitrogen data shall be reported as nitrogen.

*Staff requires monitoring twice per month for the Nitrogen series (Organic Nitrogen, Nitrate, Nitrite, and Ammonia) for a minimum of 15 months. After 15 months Discharger shall submit a report analyzing the nitrogen removal efficiency of the wastewater treatment plant. Regional Board staff will evaluate the report to determine the need and frequency for continued nitrogen monitoring.

² Effluent nitrogen monitoring shall be conducted quarterly until the installation of enhanced wastewater treatment system. The additional effluent nitrogen monitoring shall commence once the enhanced wastewater treatment system is installed or July 1, 2003, which ever comes first.

SEPTIC TANK MONITORING

Each septic tank shall be opened and measured for the following items:

Measurement	Units	Type of Measurement	Minimum Measuring Frequency
Distance of scum layer from bottom of outlet device	Inches	Staff gauge	Semi-Annually (June & Dec.)
Distance of sludge layer from bottom of outlet device	Inches	Staff gauge	Semi-Annually (June & Dec.)

Septic tanks shall be pumped as necessary to ensure proper performance and protection of the leachfield. In the event of a leachfield failure or impending failure, the Executive Officer and the County Environmental Health Department shall be notified immediately. In the event of failure, the area shall be posted to prevent public contact with domestic wastewater.

GROUND WATER MONITORING

The Discharger shall install one monitoring well upgradient and two wells downgradient of the leachfield disposal area. Prior to the installation of monitoring wells, Discharger shall submit a report to the Executive Officer discussing the proposed locations, monitoring well depths, and the technical justification of the proposal. The report shall include an estimated direction of groundwater flow and depth, to accurately position up gradient and down gradient wells. Reports detailing groundwater monitoring well installation and flow must be prepared by a registered professional engineer or hydrogeologist or equivalent professional knowledgeable in hydrogeology and ground water monitoring. The wells shall be installed by January 1, 2001.

The Discharger shall sample monitoring wells in accordance with the following schedule:

Constituent	Units	Type of Sample	Minimum Sampling and Analyzing Frequency
Total Dissolved Solids	mg/l	Grab	Semi-annually (June & Dec)
Sodium	"	"	"
Chloride	"	"	"
Organic Nitrogen (N)	"	"	"
Nitrate (N)	"	"	"
Nitrite (N)	"	"	"
Ammonia (N)	"	"	"
pH	"	"	"

BEAR CREEK MONITORING

Discharger shall establish two Bear Creek monitoring stations to determine impact of discharge. One station shall be located 100 feet upstream of the leachfield disposal area. The second station shall be located 100 feet downstream of the disposal area. Creek samples from these stations shall be collected and analyzed according to the following:

Constltuent	Units	Type of Sample	Minimum Sampling and Analyzing Frequency
Fecal coliform	MPN/100 ml	Grab	Monthly*
Enterococci	"	"	"
Nitrate as N	mg/l	"	"
Total dissolved solids	"	"	"

*Monthly samples shall be collected during the 1st working day of the month. After one year of creek sampling (twelve samples) the Discharger may provide an analysis of coliform monitoring data to determine if a significant change has occurred due to the discharge. If no significant change has occurred, the Discharger may request a reduction in creek monitoring subject to Executive Officer approval.

DISPOSAL AREA INSPECTION

Monthly inspections shall be made of the leachfield disposal area for evidence of surfacing effluent. During the inspection, the level of effluent in each leachfield trench shall be recorded. Notes shall be kept of observations and shall be summarized in the Quarterly Monitoring Reports. In the event of a leachfield failure or impending failure, the Executive Officer and the County Environmental Health Department shall be notified immediately. In the event of failure, the area shall be posted to prevent public contact with domestic wastewater. Repairs shall be made as quickly as possible. To assure compliance with discharge specifications the discharger shall describe which leachfield is in use and when the leachfield was last rotated.

Monthly inspections shall be made of seep areas (along Bear Creek) for evidence of surfacing effluent. Notes shall be kept of observations and shall be summarized in the Quarterly Monitoring Reports. In the event of a surfacing effluent, the Executive Officer and the County Environmental Health Department shall be notified immediately. In the event of failure, the area shall be posted to prevent public contact with domestic wastewater. Repairs shall be made as quickly as possible.

REPORTING

Monthly sampling and inspection results shall be reported quarterly by the 1st day of February, May, August, and November. Semi-annual sampling results shall be submitted with the January and July quarterly reports.

The quarterly reports shall also include a summary of sewage collection or treatment or disposal systems spill(s) during the reporting quarter. At a minimum, the following information shall be reported:

July 14, 2000

1. Location, volume, date, and time of sewage spill, and the number of times spill has occurred at this location within the last five years.
2. Corrective action(s) taken to stop and mitigate spill and prevent future spills.

If there is no spill during the reporting quarter, a "no sewage spill" statement shall be included in the quarterly report.

All data (weekly, monthly, and semi-annual) shall be submitted to the Board in both hard copy and electronic format. The electronic data submission shall conform to criteria approved by the Central Coast Regional Water Quality Control Board Executive Officer.

ORDERED BY *Madley E. Hagman*
P/E: Executive Officer

July 14, 2000
Date

HEK/SLR/Permits/Bear Creek/00-043 MRP
Task: 121-01
File: Discharger file; San Lorenzo Valley WD, Bear Creek Estates WWF



FINAL

Water and Wastewater Charges Study

Prepared for
San Lorenzo Valley Water District, California
March 2013

**MUNICIPAL
FINANCIAL
SERVICES**

871 Coronado Center Drive, Suite 200
Henderson, Nevada 89052

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Table of Contents

List of Figures	v
List of Tables	vi
List of Abbreviations	vii
Executive Summary	ES-1
Water System Description.....	ES-1
Wastewater System Description.....	ES-1
Recommended Water Charges and Projected Revenues from Water Charges	ES-2
Recommended Wastewater Charges.....	ES-3
1. Introduction.....	1-1
1.1 Overview of Utility Rate Setting Process.....	1-1
1.2 Rate-Making Objectives	1-2
1.3 Rates and User Accounts	1-3
1.4 Basis for Current Rates.....	1-3
1.5 Recent Evaluations of Rates	1-4
1.5.1 2007 Long Term Financial Plan.....	1-4
1.5.2 2008 Water Rates Update	1-4
1.5.3 Water Rates 2005 - 2013.....	1-4
2. User Characteristics	2-1
2.1 Historic and Projected Water Use	2-1
2.2 Historic and Projected Number and Type of Meters.....	2-2
2.3 Evaluation of Use by Tier and Customer Class.....	2-3
2.3.1 Four-Tier Rate Structure	2-3
2.3.2 Decline in Average Water Use and Distribution of Water Use Among Tiers.....	2-4
2.3.3 Average Quantity Charge for Each Customer Class.....	2-5
3. Water Rates	3-1
3.1 Water Operating Revenues and Expenditures	3-1
3.2 Water System Capital Project Expenditures and Source of Funds	3-2
3.3 Water Enterprise Cash Flow	3-3
3.4 Debt Service Coverage	3-4
3.5 Reserve Fund Policy.....	3-5
3.6 Revenue from Water Charges	3-6
3.7 Evaluation of Optional Tier Structure Changes	3-8
3.7.1 Option 1–Flat Water Rate for Six Customer Classes.....	3-8
3.7.2 Option 2–Lower Residential Tiers.....	3-9
3.7.3 Option 3–Adjust Tiers for Dwelling Units for Multiple Family and Private Mutuals ...	3-11
3.7.4 Option 4–Lower Residential Tiers for Multiple Family and Private Mutuals	3-12
3.7.5 Option 5–Four-Tier Rate Structure	3-13

- 3.8 Fiscal Impact of Optional Tier Structure Changes..... 3-14
 - 3.8.1 Changes in Revenues from Quantity Charges.....3-14
 - 3.8.2 Average Quantity Charges Using Updated Rate Structure3-15
 - 3.8.3 Bimonthly Bills Using Updated Rate Structure.....3-16
- 3.9 Current and Recommended Water Rates3-17
- 3.10 Single Family Bills and Survey..... 3-18
- 4. Wastewater Rates 4-1
 - 4.1 Wastewater Operating Revenues and Expenditures 4-1
 - 4.2 Wastewater Enterprise Cash Flow4-2
 - 4.3 Wastewater Charges..... 4-3
- 5. Findings and Recommendations..... 5-1
 - 5.1 Findings 5-1
 - 5.2 Recommendations..... 5-1
- 6. Public Review and Board Action 6-1
- 7. Limitations 7-1
- Appendix A: Monthly Water Use - 2010, 2011 and 2012 and Meters as of October 2012.....A
- Appendix B: Projected Water Use and Meters B
- Appendix C: Revenues by Customer Class and Tier for 2010, 2011 and 2012 C
- Appendix D: Revenue from Water Rates, FY13 – FY18 D

List of Figures

Figure ES-1. Annual Projected Revenues from Basic and Quantity Charges	ES-3
Figure 1-1. Overview of Rate Setting Analytical Steps.....	1-1
Figure 1-1. Water Rates, 2005 - 2013	1-4
Figure 2-1. Water Use by Tier and Customer Class, 100 cubic feet.....	2-1
Figure 2-2. Projected Water Use by Tier, 100 cubic feet.....	2-1
Figure 2-3. Meters by Customer Class, February 2013	2-2
Figure 2-4. Water Use by Tier and Customer Class as a Percent of Total Use	2-3
Figure 3-1. Water Fund Cash Flow, Debt Service Coverage and % Increase in Single Family Bills.....	3-3
Figure 3-2. Annual Projected Revenues from Basic and Quantity Charges	3-7
Figure 3-3. Lower Residential Tiers, 100 cf in Each Tier.....	3-9
Figure 3-4. Lower Residential Tiers, % Use in Each Tier.....	3-9
Figure 3-5. Single Family Bimonthly Water Bills Survey	3-19
Figure 4-1. Wastewater Enterprise Cash Flow and % Increase in Single Family Bills	4-2
Figure 4-2. Wastewater Single Family Bills 1995 - 2018.....	4-3

List of Tables

Table ES-1. Current and Recommended Basic Charges	ES-2
Table ES-2. Current and Recommended Quantity Charges	ES-2
Table ES-3. Current and Recommended Wastewater Charges	ES-3
Table 1-1. Water Meter Sizing Standards	1-3
Table 2-1. Projected Number of Water Meters by Type.....	2-2
Table 2-2. Water Use Per Tier for FY13 and Comparison of FY8 and FY13 Average Water Use	2-4
Table 2-3. Water Use Revenues by Tier and Average Quantity Charge per Customer Class	2-5
Table 3-1. Budgeted and Projected Operating Expenditures.....	3-1
Table 3-2. Capital Project Expenditures and Source of Funds.....	3-2
Table 3-3. Water Enterprise Cash Flow	3-3
Table 3-4. Debt Service Coverage Evaluation	3-4
Table 3-5. Reserve Fund Target Levels	3-5
Table 3-6. Summary of Revenue from Water Rates	3-6
Table 3-7. Flat Water Rate for Six Customer Classes.....	3-8
Table 3-8. Impact of Lower Residential Tiers on Residential Water Use and Revenues	3-10
Table 3-9. Impact of Tier Adjustment for Dwelling Units and Lower Residential Tiers on Multiple Family and Private Mutuals Water Use and Revenues	3-11
Table 3-10. Calculation of a Tier 4 Rate for a Four-Tier Rate Structure.....	3-13
Table 3-11. Revenue Impact of Optional Tier Structure Changes on Each Customer Class	3-14
Table 3-12. Water Use Revenues by Tier and Average Quantity Charge per Customer Class.....	3-15
Table 3-13. Impact of Optional Tier Structure Changes on Bimonthly Water Bills	3-16
Table 3-14. Current and Recommended Basic Charges.....	3-17
Table 3-15. Current and Recommended Quantity Charges	3-17
Table 3-16. Single Family Average Water Use and Bimonthly Bills Using Current Rate Structure.....	3-18
Table 3-17. Single Family Average Water Use and Bimonthly Bills Using All Updated Rate Structure Options	3-18
Table 4-1. Budgeted and Projected Operating Expenditures.....	4-1
Table 4-2. Wastewater Enterprise Cash Flow	4-2
Table 4-3. Current and Recommended Wastewater Charges	4-3

List of Abbreviations

BOD	Biochemical Oxygen Demand
Ccf	Hundred Cubic Feet (equal to ~ 748.1 gallons)
CCI	Construction Cost Index
CIP	Capital improvement program
District	San Lorenzo Valley Water District
FY	Fiscal year (July 1 to June 30)
ENR	Engineering News Record
FY 14	July 1, 2013 to June 30, 2014
gpd	gallons per Day
mgd	million gallons per day
NPDES	National Pollutant Discharge Elimination System
OMWC	Olympia Mutual Water Company
O&M	Operation and maintenance
SLVWD	San Lorenzo Valley Water District
TSS	Total Suspended Solids

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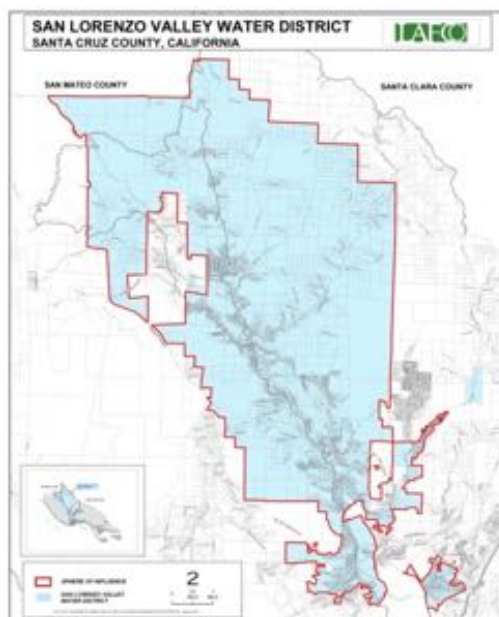
Executive Summary

The precursor to the San Lorenzo Valley Water District (SLVWD or District) was formed in 1941 pursuant to provisions in the California Water Code. The District is located in the mountains of Northern Santa Cruz County in the community of Boulder Creek. It was created to develop a water supply for domestic requirements as well as for fire protection and recreational facilities in the San Lorenzo Valley. The District contains approximately 60 square miles and serves approximately 7,300 water customers and 55 sewer customers. The District is governed by a five person Board of Directors elected to four year terms by registered voters throughout the District's boundaries.

The District has two proprietary funds – the Water Enterprise Fund and the Wastewater Enterprise Fund. The objective of this study is to develop rates that adequately provide for utility operations, capital costs, reserves, and bonded debt, while minimizing the impact on users as much as is reasonably possible.

Water System Description

The District supplies water to the communities of Boulder Creek, Brookdale, Ben Lomond, Zayante, Scotts Valley, Manana Woods and Felton.



The District relies on six surface water sources in the upper watershed, primarily during the wet season, and on several groundwater sources, which tap the Santa Margarita Sandstone and the Lompico aquifers, primarily in the dry season.

The District owns approximately 1,800 acres serving as watershed for its surface water intakes and wells.

The District has four separate water systems: the Northern, the Southern, Felton, and Mañana Woods. Felton is served by surface and spring water. The Northern system is served by both surface water and groundwater. The Southern system and Mañana Woods are currently served only by groundwater.

Key elements of the District's water production, treatment and distribution system are: 1) 8 groundwater wells and pumps with peak capacity of 1.25 million gallons per day (mgd); 2) Surface Water Treatment Plant with peak capacity of 1.5 mgd; 3) 150 miles of water lines, 4) approximately

2000 level indicators, alarms, switches as part of the Supervisory, Control and Data Acquisition (SCADA) system; and 5) the Administrative Headquarters Building.

Wastewater System Description

The District supplies wastewater collection and treatment services to the community of Bear Creek Estates.

Recommended Water Charges and Projected Revenues from Water Charges

Current and FY14 – FY18 recommended quantity charges and basic charges are listed in the tables below. The recommended quantity charges for each rate structure (the current structure and an updated structure using a combination of tier rate structure options) are shown in a table separate from the basic charges. Note that the quantity charges for the updated tier rate structure are projected to produce approximately \$163,000 less (two percent) over the five year period than the quantity charges for the current tier rate structure.

Table ES-1. Current and Recommended Basic Charges

Basic Charges, \$/2 months	Current	Recommended				
		FY14	FY15	FY16	FY17	FY18
Annual Increase, %		13%	13%	9%	9%	9%
5/8-inch	\$49.73	\$56.19	\$63.49	\$69.20	\$75.43	\$82.22
5/8A-inch	\$82.90	\$93.68	\$106.00	\$116.00	\$126.00	\$137.00
5/8B-inch	\$166.92	\$189.00	\$214.00	\$233.00	\$254.00	\$277.00
5/8C-inch	\$265.68	\$300.00	\$339.00	\$370.00	\$403.00	\$439.00
3/4-inch	\$49.73	\$56.19	\$63.49	\$69.20	\$75.43	\$82.22
3/4A-inch	\$82.90	\$93.68	\$106.00	\$116.00	\$126.00	\$137.00
1-inch	\$82.90	\$93.68	\$106.00	\$116.00	\$126.00	\$137.00
1A-inch	\$166.92	\$189.00	\$214.00	\$233.00	\$254.00	\$277.00
1B-inch	\$265.68	\$300.00	\$339.00	\$370.00	\$403.00	\$439.00
1F-inch	\$49.73	\$56.19	\$63.49	\$69.20	\$75.43	\$82.22
1-1/2-inch	\$166.92	\$189.00	\$214.00	\$233.00	\$254.00	\$277.00
1-1/2A-inch	\$265.68	\$300.00	\$339.00	\$370.00	\$403.00	\$439.00
1-1/2C-inch	\$829.76	\$938.00	\$1,060.00	\$1,155.00	\$1,259.00	\$1,372.00
1-1/2F-inch	\$82.90	\$93.68	\$106.00	\$116.00	\$126.00	\$137.00
1-1/2G-inch	\$49.73	\$56.19	\$63.49	\$69.20	\$75.43	\$82.22
1-1/2S-inch	\$531.36	\$600.00	\$678.00	\$739.00	\$806.00	\$879.00
2-inch	\$265.68	\$300.00	\$339.00	\$370.00	\$403.00	\$439.00
2A-inch	\$498.62	\$563.00	\$636.00	\$693.00	\$755.00	\$823.00
2G/L-inch	\$82.90	\$93.68	\$106.00	\$116.00	\$126.00	\$137.00
3-inch	\$498.62	\$563.00	\$636.00	\$693.00	\$755.00	\$823.00
4-inch	\$829.76	\$938.00	\$1,060.00	\$1,155.00	\$1,259.00	\$1,372.00

Table ES-2. Current and Recommended Quantity Charges

Current Rate Structure	Current	Recommended				
		FY14	FY15	FY16	FY17	FY18
Annual Increase, %		13%	13%	8%	8%	8%
First 10 units	\$2.71	\$3.06	\$3.46	\$3.74	\$4.04	\$4.36
11 - 40 units	\$3.54	\$4.00	\$4.52	\$4.88	\$5.27	\$5.69
41 - 100 units	\$4.24	\$4.79	\$5.41	\$5.84	\$6.31	\$6.81
101 - 200 units	\$4.59	\$5.19	\$5.86	\$6.33	\$6.84	\$7.39
Over 200 units	\$5.00	\$5.65	\$6.38	\$6.89	\$7.44	\$8.04
Updated Rate Structure, All Options						
Annual Increase, %		16%	13%	8%	8%	8%
First 8 units	\$2.71	\$3.14	\$3.55	\$3.83	\$4.14	\$4.47
9 - 30 units	\$3.54	\$4.11	\$4.64	\$5.01	\$5.41	\$5.84
31 - 100 units	\$4.24	\$4.93	\$5.57	\$6.02	\$6.50	\$7.02
Over 100 units	na	\$5.45	\$6.16	\$6.65	\$7.18	\$7.76
Flat Rate	na	\$3.84	\$4.34	\$4.69	\$5.07	\$5.48

The recommended water charges are projected to increase revenues by approximately \$9.2 million over the next five fiscal years, FY14 – FY18. The annual amount of revenues from basic and quantity charges, and the cumulative revenues from increases in the water charges, are shown in the figure below.

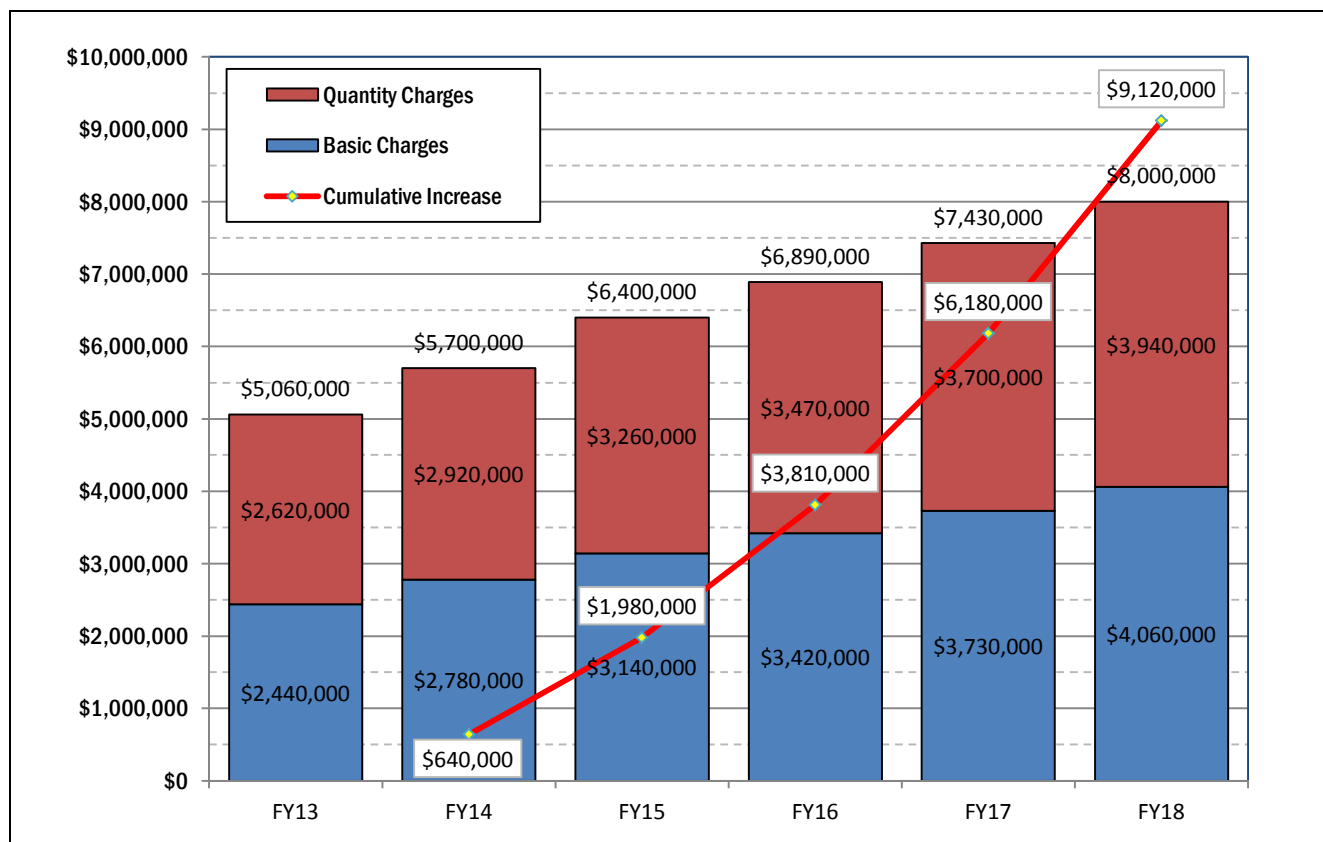


Figure ES-1. Annual Projected Revenues from Basic and Quantity Charges

Recommended Wastewater Charges

The District’s current and recommended wastewater charges are shown in the table below.

Table ES-3. Current and Recommended Wastewater Charges						
Wastewater Charges	Current	Recommended				
		FY14	FY15	FY16	FY17	FY18
Annual Increase, %		15%	15%	15%	15%	3%
Service Charge, \$/2 months	\$298	\$343	\$394	\$453	\$521	\$537

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Section 1

Introduction

The District's meter and quantity rates (for the water utility) and sewer rates (for the wastewater utility) are intended to recover revenues sufficient to adequately fund utility operations, maintenance, and capital replacement expenditures, and meet debt service obligations, while keeping rates as competitive as possible and maintaining a prudent level of reserves.

1.1 Overview of Utility Rate Setting Process

Rate studies classically have three categories of technical analysis – the development of revenue required from rates, the allocation of costs among functional cost categories (cost-of-service analysis) and the design of a rate structure. An overview of the rate-setting analytical steps is shown in Figure 1-1.

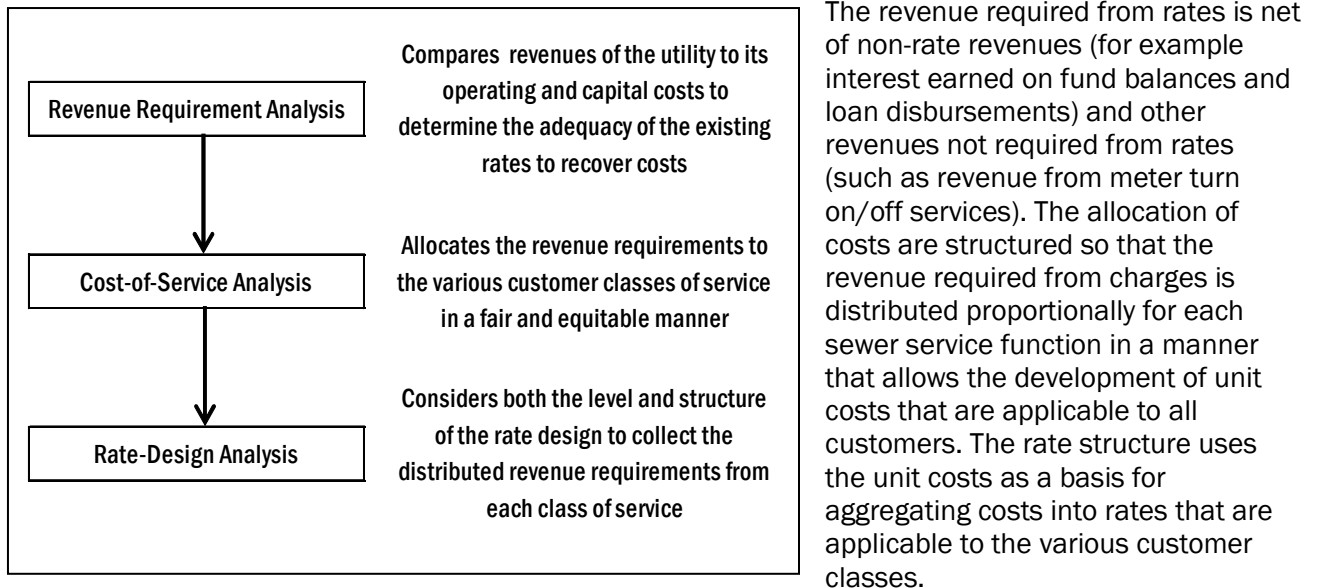


Figure 1-1. Overview of Rate Setting Analytical Steps

This rate study includes only the revenue requirement analysis and rate design analysis steps. The cost-of-service analysis step was not conducted. The cost-of-service design incorporated in the current rates is retained.

1.2 Rate-Making Objectives

There are numerous rate-making objectives that must be considered when developing rates and rate structures.

Revenue sufficiency. Generate sufficient revenue to fund operating costs, capital costs and bonded debt, and maintain adequate reserves.

Revenue stability. Recover revenue from fixed and variable charges that will cover fixed and variable costs (barring water shortages when rationing may be required).

Conservation signal. Reward customer for efficient water use and discourage its waste.

Administrative ease. Enable easy implementation and ongoing administration, including monitoring and updating.

Affordability. Be as affordable as possible while maintaining the utilities sound financial position and credit rating.

Customer acceptance. Be as simple as possible to facilitate customer understanding and acceptance.

Fairness. Provide for each customer class to pay its proportionate share of the required revenue in compliance with legal rate-making requirements.

Economic development. Rates must be competitive with local jurisdictions to retain and attract economic development.

Consideration of water intensive industries and users. Recognize that certain industries and users comprise a critical component of the local and regional community and their constant water demand patterns should be accommodated in the rate structure, not penalized.



1.3 Rates and User Accounts

The District has separate rates and rate structures for its water utility and sewer utility. The District’s current water and wastewater rates are shown below in the sidebar.

BI-MONTHLY BASIC		RATES	
Meter Size	Basic Charge	1 unit of water = 100 Cubic Feet 100 Cubic Feet = 748 Gallons	
5/8	49.73	First 10 units = 2.71 a unit	
5/8A	82.90	11 - 40 units = 3.54	
5/8B	166.92	41 - 100 units = 4.24	
5/8C	265.68	101 - 200 units = 4.59	
3/4	49.73	Over 200 units = 5.00	
3/4A	82.90		
1	82.90		
1A	166.92		
1B	265.68		
1F	49.73		
1K	49.73		
1.5	166.92		
1.5A	265.68		
1.5C	829.76		
1.5F	82.90		
1.5G	49.73		
1.5S	531.36		
2	265.68		
2A	498.62		
2G	82.90		
2H	49.73		
2L	82.90		
3	498.62		
4	829.76		
Surplus Water	49.73		
Sewer	298.00		
The above charges do not include any water usage.			
		METER CONNECTION FEES	
		Meter Size	Charge
		5/8	4966.00
		3/4	4966.00
		1	9932.00
		1.5	19,864.00
		2	39,728.00
		INSTALLATION DEPOSIT	
		5/8 or 3/4	2500.00
		1	2500.00
		Meter Drop In Charges	
		5/8	90.00
		3/4	110.00
		1	155.00
		Backflows	500.00
		Deposit	75.00
		Establishment Charge	20.00
		Copies	.15
		Special Bill (in advance)	20.00
		Meter Test (in advance)	15.00
		1"	17.50

Each water account has one or more meters and each meter is billed for metered water use at the rates shown (except fire service accounts which are not billed for water use).

The District has 11 categories of user accounts.

- Single Family
- Multiple Family
- Commercial
- Institutional
- Landscape
- Other
- Vacant
- Fire Service
- Holding Accounts
- Private Mutuals (Redwood Christian Park, Wildwood Mutual, Wildwood Woodlands, and Forrest Springs)
- Surplus

The meter size assigned to an account is based on the maximum number of dwelling units served. The table below lists the maximum number of Residential Dwelling Units served for each meter size.

Meter Size	Maximum Number of Residential Dwelling Units Served
5/8-inch or 3/4-inch	1
1-inch	2 to 6
1½-inch	7 to 21
2-inch	22 to 38
3-inch	39 to 80
4-inch	81 to 200

1.4 Basis for Current Rates

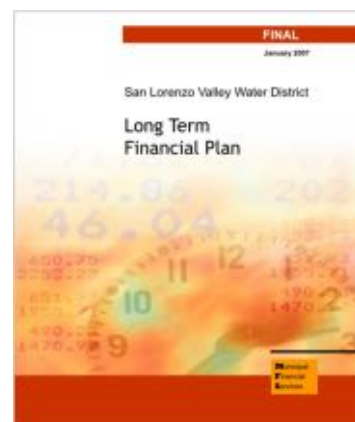
The current rates are based on escalation of previous rates. The escalation method for setting rates has been in use for over 10 years.

1.5 Recent Evaluations of Rates

The District conducted two formal evaluations of water and wastewater rates during the past eight years. Those studies and the rates during 2005 – 2013 are summarized in this section.

1.5.1 2007 Long Term Financial Plan

In January 2007 the District completed a Long Term Financial Plan for its water and wastewater utilities. The District had not yet incorporated the Felton community into its service area. The Plan evaluated growth in customer accounts, water sales, and operating and capital expenditures over a 50 year period (2005 – 2055) and the impact on reserves. The long term financial plan unified the many separate planning efforts typically conducted by a water enterprise or sewer enterprise. On July 2, 2007, the District increased its water rates 11 percent. On June 1, 2008 wastewater rates were increased to \$240 per year.



1.5.2 2008 Water Rates Update

On September 5th 2008, the District assumed ownership and operation of the Felton water system. The District was also exploring the issuance of additional debt. Water rates were updated to evaluate the impact of the addition of the Felton community and the impact of the issuance of additional debt. As a result, the District raised the water quantity charges in 2009, 2010 and 2011 by 15%, 10% and 5%, respectively. The water meter charges were increased by 12%, 8% and 10%, respectively, over the same three years. Wastewater rates were increased to \$270 per year in 2010 and to \$298 per year in 2011.

1.5.3 Water Rates 2005 - 2013

Water rates implemented by the District from 2005 – 2013 are listed in the table below. Only the meter charge for a 5/8-inch meter is shown; charges for other meter sizes are omitted for clarity.

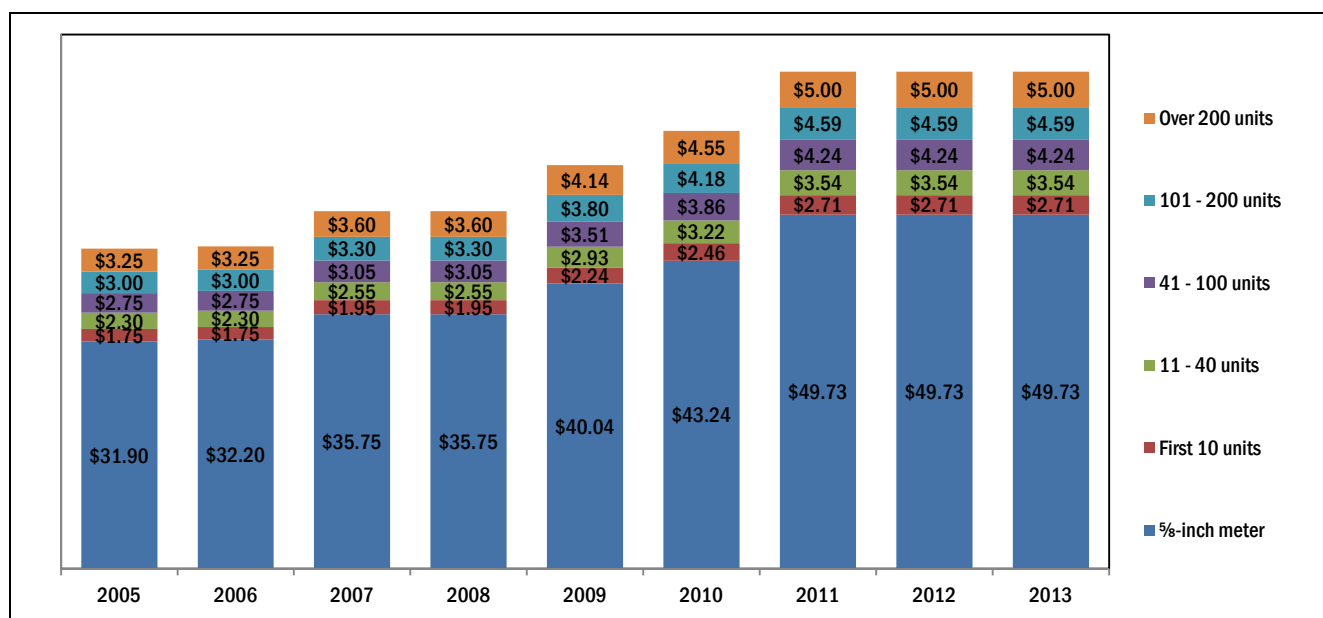


Figure 1-1. Water Rates, 2005 - 2013

Section 2

User Characteristics

The purpose of this section is to summarize the identification of residential and nonresidential users and their corresponding water use characteristics.

2.1 Historic and Projected Water Use

Water use by tier and customer class for calendar years 2010, 2011 and 2012 are shown in Figure 2-1 in units of 100 cubic feet (cf). Figure 2-2 shows projected usage (in 100 cf). For the purpose of projecting water use for FY13 onward, the average of calendar years 2010 and 2011 is used as a starting point for FY13 water use. Water use for FY14 onward includes approximately 4,500 100 cf per year for accounts annexed from the Olympia Mutual Water Company. Monthly water use data for 2010-2012 by customer class and tier is included in Appendix A. Projected water use calculations are included in Appendix B.

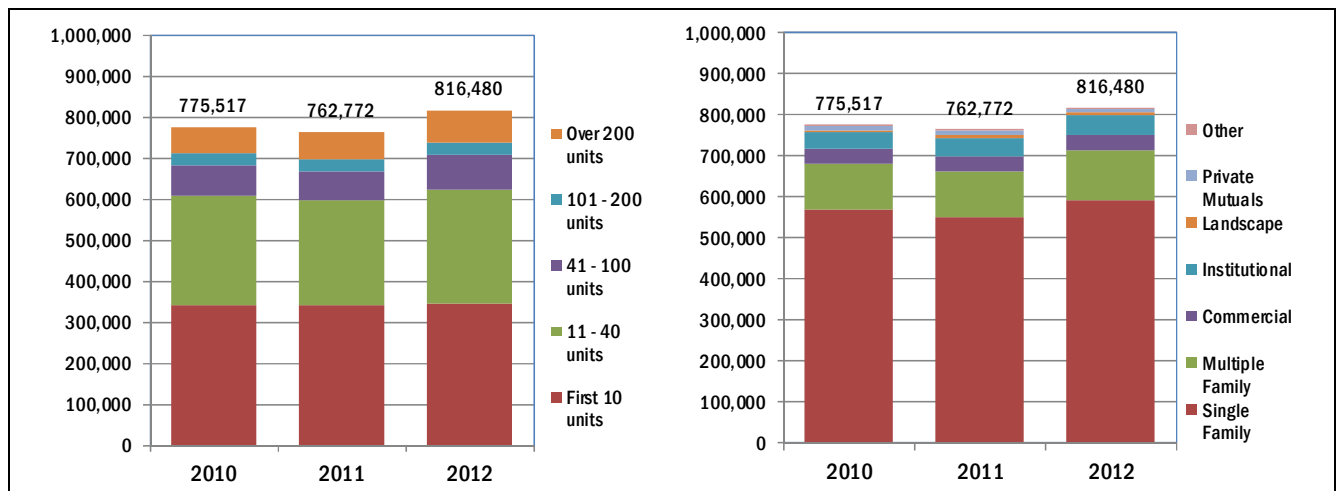


Figure 2-1. Water Use by Tier and Customer Class, 100 cubic feet

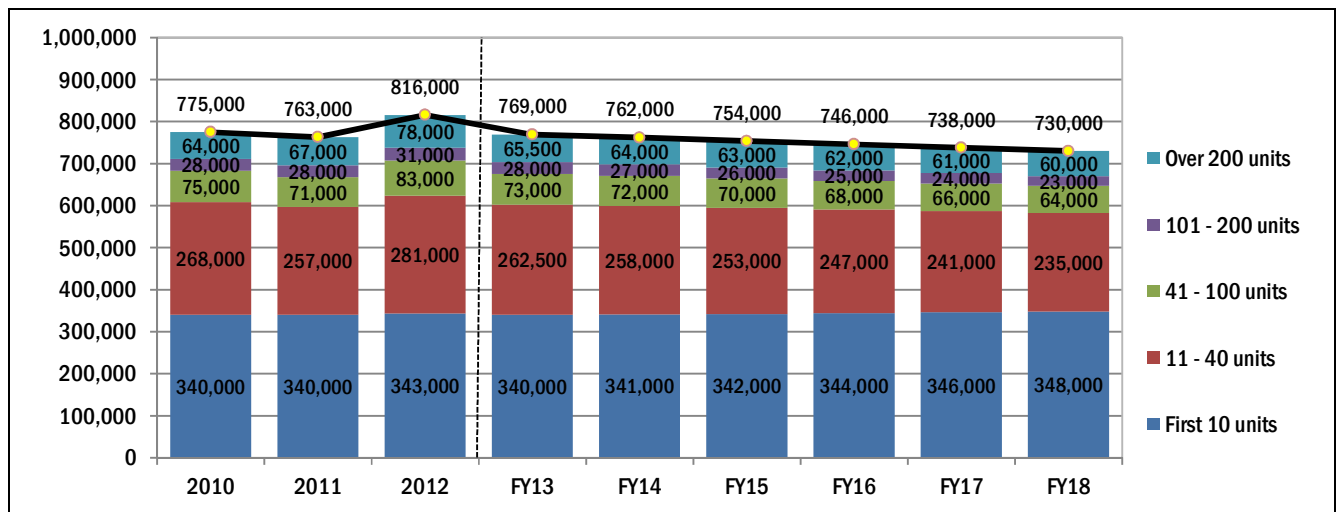


Figure 2-2. Projected Water Use by Tier, 100 cubic feet

2.2 Historic and Projected Number and Type of Meters

The number of water meters by customer class as of February 2013 is shown below in Figure 2-3. Table 2-1 shows projected number of meters by size and type. The number of meters by type and size as of February 2013 is used as the basis for FY13 estimates. Annexation of the Olympia Mutual Water Company is expected to add 51 accounts in FY14 (another 2 accounts incidental to the annexation are included, for a total of 53 accounts). All accounts are assumed to be 5/8-inch meter connections. Fire service meters are excluded from the totals as they do not pay the bimonthly meter charge. Detailed February 2013 meter data showing meters by size, type and customer class is included in Appendix A. Calculations of the projected number of meters are included in Appendix B.

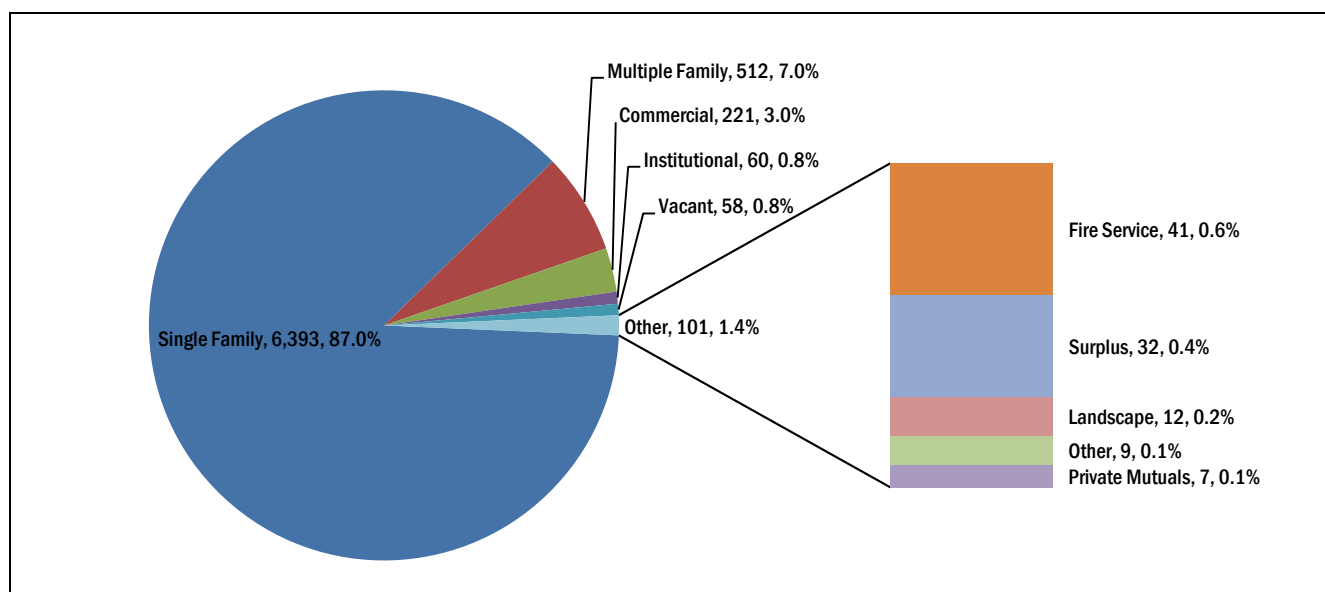


Figure 2-3. Meters by Customer Class, February 2013

Table 2-1. Projected Number of Water Meters by Type

Meter Size	FY13	FY14	FY15	FY16	FY17	FY18
5/8 *	6,095	6,148	6,148	6,148	6,148	6,148
5/8A	417	417	417	417	417	417
5/8B	10	10	10	10	10	10
5/8C	1	1	1	1	1	1
3/4	405	405	405	405	405	405
3/4A	4	4	4	4	4	4
1	84	84	84	84	84	84
1A	87	87	87	87	87	87
1B	1	1	1	1	1	1
1F/K	115	115	115	115	115	115
1-1/2	23	23	23	23	23	23
1-1/2A	2	2	2	2	2	2
1-1/2C	0	0	0	0	0	0
1-1/2F	2	2	2	2	2	2
1-1/2G	1	1	1	1	1	1
1-1/2S	1	1	1	1	1	1
2	32	32	32	32	32	32
2A	1	1	1	1	1	1
2G/L	2	2	2	2	2	2
3	3	3	3	3	3	3
4	1	1	1	1	1	1
Total	7,287	7,340	7,340	7,340	7,340	7,340

2.3 Evaluation of Use by Tier and Customer Class

Water use by tier and customer class for calendar years 2010, 2011 and 2012 are shown below in Figure 2-4 as a percent of the total for each year.

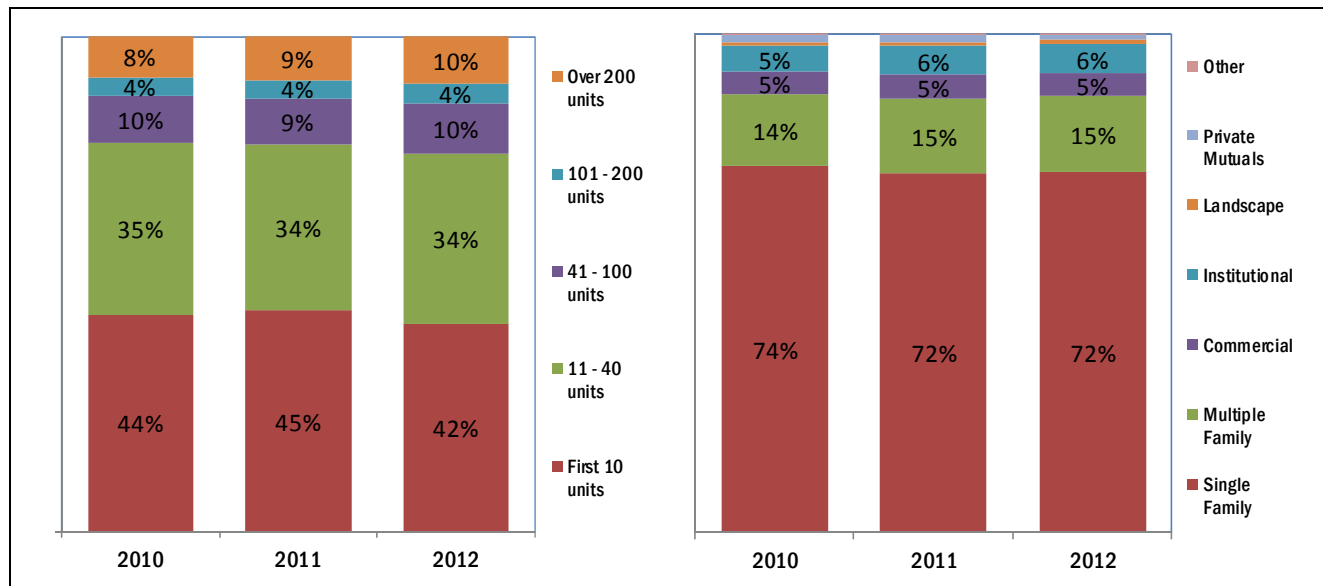


Figure 2-4. Water Use by Tier and Customer Class as a Percent of Total Use

2.3.1 Four-Tier Rate Structure

As shown in the left hand figure in Figure 2-4, the percent of total water use in Tiers 3, 4 and 5 varied between 22 and 24 percent during the three years. The percent of total water use in Tier 4 was constant at 4 percent during the three years.

The small amount of water use in the top three tiers and the minimal amount of water use in Tier 4 provides the basis for our recommendation of combining Tier 4 and Tier 5 into a single tier and charging the weighted average water rate for the two tiers. The new top tier would be for water use “Over 100 units.” The change would be revenue neutral with the current tier structure. As a result of the change, some customer bills would decrease and some would increase depending on the weighting of their water use in each tier.

2.3.2 Decline in Average Water Use and Distribution of Water Use Among Tiers

Water use has declined significantly since the prior rate evaluation in 2008. Based on data available during the time of the 2008 evaluation (FY8), average bimonthly water use per account was 21 100 cf. Average bimonthly water use for single family accounts was 17.9 100 cf. Based on projected FY13 water use (which is the average of 2010 and 2011 use), the decline in water use among all customers since FY8 is approximately 17 percent. The calculation of average bimonthly water use is shown below in Table 2-2.

The same rate structure for water use applies to all customer class. As shown below in Table 2-2, within the single family customer class, 53 percent of water use is in Tier 1 and 90 percent of all water use is in the first two tiers. No other customer class has a similar pattern of water use distribution among the tiers (except the combined classes of Surplus, Other and Vacant which have very few accounts).

As a result of the radically different water use patterns among customer classes combined with a rate structure that promotes water conservation for the single family customer class, the revenues from quantity charges for each customer class are distributed in radically different patterns.

Table 2-2. Water Use Per Tier for FY13 and Comparison of FY8 and FY13 Average Water Use

	Single Family	Multiple Family	Commercial	Institutional	Landscape	Private Mutuals	Surplus, Other, Vacant	FY13 Projected Total
Water Sales, 100 cf								
First 10 units	299,414	27,676	9,537	2,492	416	350	395	340,280
11 - 40 units	208,265	34,617	12,777	4,836	754	1,023	310	262,581
41 - 100 units	42,168	12,810	8,705	6,643	805	1,767	79	72,976
101 - 200 units	7,384	5,823	4,117	7,941	578	2,421	4	28,267
Over 200 units	2,919	31,204	1,426	19,889	3,400	6,206	0	65,042
Total	560,150	112,129	36,561	41,800	5,952	11,766	788	769,145
Percent of Total	73%	15%	5%	5%	1%	2%	0.1%	100%
Water Sales, %								
First 10 units	53%	25%	26%	6%	7%	3%	50%	44%
11 - 40 units	37%	31%	35%	12%	13%	9%	39%	34%
41 - 100 units	8%	11%	24%	16%	14%	15%	10%	9%
101 - 200 units	1%	5%	11%	19%	10%	21%	1%	4%
Over 200 units	1%	28%	4%	48%	57%	53%	0%	8%
Total	100%	100%	100%	100%	100%	100%	100%	100%
Average Bimonthly Use, 100 cf								
Meters	6,393	512	221	60	12	7	99	7,304
Bimonthly Use, 100 cf								
FY13 Projected	14.6	37	28	116	83	280	1.3	18
FY8 (Prior Study)	17.9	46	39	163	134	341	1.4	21
% change from FY8	-18%	-20%	-29%	-29%	-38%	-18%	-6%	-17%

2.3.3 Average Quantity Charge for Each Customer Class

Because the revenues from quantity charges for each customer class are distributed in radically different patterns, the average quantity charge for each customer class varies significantly. The average quantity charge for each customer class varies from a low of \$3.17 per 100 cf for the Single Family customer class to highs of \$4.51 per 100 cf for the Landscape customer class and \$4.61 per 100 cf for the Private Mutual customer class. Calculations of the average quantity charge for each customer class are shown below in Table 2-3. Revenues by customer class and tier for 2010, 2011 and 2012 used in the calculation of the FY13 projected total are shown in Appendix C.

Table 2-3. Water Use Revenues by Tier and Average Quantity Charge per Customer Class

	Single Family	Multiple Family	Commercial	Institutional	Landscape	Private Mutuals	Surplus, Other, Vacant	FY13 Projected Total
Water Sales Revenue								
First 10 units	\$811,412	\$75,002	\$25,845	\$6,753	\$1,126	\$949	\$1,070	\$922,157
11 - 40 units	\$737,258	\$122,544	\$45,229	\$17,119	\$2,669	\$3,620	\$1,097	\$929,537
41 - 100 units	\$178,792	\$54,312	\$36,909	\$28,164	\$3,413	\$7,492	\$333	\$309,416
101 - 200 units	\$33,893	\$26,728	\$18,895	\$36,447	\$2,653	\$11,110	\$18	\$129,743
Over 200 units	\$14,593	\$156,018	\$7,130	\$99,445	\$16,998	\$31,028	\$0	\$325,210
Total	\$1,775,947	\$434,603	\$134,008	\$187,929	\$26,859	\$54,198	\$2,519	\$2,616,064
Percent of Total	68%	17%	5%	7%	1%	2%	0.1%	100%
Water Sales Revenue, %								
First 10 units	46%	17%	19%	4%	4%	2%	42%	35%
11 - 40 units	42%	28%	34%	9%	10%	7%	44%	36%
41 - 100 units	10%	12%	28%	15%	13%	14%	13%	12%
101 - 200 units	2%	6%	14%	19%	10%	20%	1%	5%
Over 200 units	1%	36%	5%	53%	63%	57%	0%	12%
Total	100%	100%	100%	100%	100%	100%	100%	100%
Average Quantity Charge, \$/100 cf								
Customer Classes								
Total Quantity Charge Revenue	\$1,775,947	\$434,603	\$134,008	\$187,929	\$26,859	\$54,198	\$2,519	\$2,616,064
Average Water Use, FY13 Projected	560,150	112,129	36,561	41,800	5,952	11,766	788	769,145
Average Quantity Charge	\$3.17	\$3.88	\$3.67	\$4.50	\$4.51	\$4.61	\$3.20	\$3.40

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Section 3

Water Rates

Revenue, expenditures, reserve levels, water rates, and debt coverage for the water utility are summarized in this section.

3.1 Water Operating Revenues and Expenditures

Budgeted and projected operating revenues and expenditures are shown in the table below. Revenues (except revenues from water fees) and expenditures for FY13 are from the District's budget. Projected revenues and expenditures are based on annual escalation rates provided by the District.

Table 3-1. Budgeted and Projected Operating Expenditures

Item	FY13	FY14	FY15	FY16	FY17	FY18
Non-restricted Revenues [1]						
4101 Water Charges for Service	\$5,058,467	\$5,699,884	\$6,399,558	\$6,897,271	\$7,432,051	\$8,007,812
4209 Property Taxes	\$470,000	\$470,000	\$470,000	\$470,000	\$470,000	\$470,000
4308 Charges and Penalties	\$58,000	\$58,000	\$58,000	\$58,000	\$58,000	\$58,000
4314 Meter Sales	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
4319 Lease Fees	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
4320 Miscellaneous	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
4446 Johnson Property Rentals	\$9,600	\$9,600	\$9,600	\$9,600	\$9,600	\$9,600
Total Non-restricted Revenues	\$5,641,067	\$6,282,484	\$6,982,158	\$7,479,871	\$8,014,651	\$8,590,412
Restricted Revenues [2]						
4429 Sale of Surplus Property	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
4449 Reimbursement for Manana Woods O&M	\$50,000	\$0	\$0	\$0	\$0	\$0
4454 Transfer in From Capital Reserve Fund	\$535,000	\$0	\$0	\$0	\$0	\$0
Total Restricted Revenues	\$588,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Operating Expenses [3]						
Personnel	\$2,827,035	\$2,911,846	\$2,999,201	\$3,089,177	\$3,181,853	\$3,277,308
Materials & Services	\$1,337,000	\$1,377,110	\$1,418,423	\$1,460,976	\$1,504,805	\$1,549,949
Capital R&R	\$1,290,200	\$1,290,200	\$1,290,200	\$1,290,200	\$1,290,200	\$1,290,200
Total Operating Expenditures	\$5,454,235	\$5,579,156	\$5,707,825	\$5,840,353	\$5,976,858	\$6,117,458
Summary						
Non-restricted Revenues	\$5,641,067	\$6,282,484	\$6,982,158	\$7,479,871	\$8,014,651	\$8,590,412
Restricted Revenues	\$588,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Total Revenues	\$6,229,067	\$6,285,484	\$6,985,158	\$7,482,871	\$8,017,651	\$8,593,412
Operating Expenditures	\$5,454,235	\$5,579,156	\$5,707,825	\$5,840,353	\$5,976,858	\$6,117,458
Net Income / (Shortfall)	\$774,832	\$706,328	\$1,277,334	\$1,642,518	\$2,040,793	\$2,475,955
Notes:						
1	Water Charges for Service are summarized in Table 3-6. Revenues for other Non-restricted items were provided by the District.					
2	Revenues from the Restricted revenue categories were provided by the District.					
3	Personnel and Materials & Services expenditures for FY13 are from the District's budget. Values for FY14 onward are escalated as shown below:					
		<u>FY14</u>	<u>FY15</u>	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>
	Personnel	3%	3%	3%	3%	3%
	Materials & Services	3%	3%	3%	3%	3%
Debt Service and Capital Repair and Refurbishment (R&R) expenditures were provided by the District.						

3.2 Water System Capital Project Expenditures and Source of Funds

The District's projected Capital Project expenditures are shown in the table below. The source of funds for each Project is also shown. The Capital Project expenditures shown in the table exclude capital expenditures for renewal and replacement which are part of Operating expenditures.

The District's Capital Project expenditures are for three projects:

Capital Improvement Program Projects. The District's CIP identifies fifty-five proposed projects with an aggregate value of \$27,500,000.¹

Campus Development Project. Consolidates the operations of three existing SLVWD facilities on one site. This includes combining five contiguous parcels, remodeling an existing commercial building for a new administration building and adding a new annex, constructing a new operations building, and developing associated parking and storage areas.²

Olympia Annexation and Distribution System Project. Expands SLVWD's service boundary to absorb the existing Olympia Mutual Water Company service area and associated water distribution system improvements. SLVWD proposes to expand and annex its current service boundary by approximately 35.3 acres, which includes the service area of OMWC and four additional parcels. The proposed annexation area is located within SLVWD's Sphere of Influence. The proposed annexation will allow SLVWD to move forward with the OMWC consolidation project and associated water system improvements. The consolidation of the OMWC and SLVWD eliminates OMWC as a separate water system. SLVWD proposes to provide new and replacement water distribution main lines and required appurtenances such as isolation valves and fire hydrants in order to connect the OMWC service area to the existing SLVWD water distribution system in the nearby area.³

Table 3-2. Capital Project Expenditures and Source of Funds

Item	FY13	FY14	FY15	FY16	FY17	FY18
Capital Project Expenditures						
Prop 50 Grant Projects	\$400,000	\$1,000,000	\$3,000,000	\$1,000,000	\$0	\$0
Campus Development Project	\$350,000	\$0	\$4,000,000	\$2,000,000	\$0	\$0
Olympia Mutual Annexation	\$10,000	\$0	\$0	\$0	\$0	\$0
Total Capital Project Expenditures	\$760,000	\$1,000,000	\$7,000,000	\$3,000,000	\$0	\$0
Debt Service [1]						
Current	\$1,004,353	\$1,009,483	\$1,004,308	\$999,108	\$896,508	\$896,508
Campus Development			\$464,989	\$464,989	\$464,989	\$464,989
Olympia Mutual Annexation		\$67,356	\$67,356	\$67,356	\$67,356	\$67,356
Total Debt Service	\$1,004,353	\$1,076,839	\$1,536,653	\$1,531,453	\$1,428,853	\$1,428,853
Loan Disbursement						
Debt Service, Campus Development			\$6,000,000			
Olympia Mutual Annexation						
Total Loan Disbursement	\$0	\$0	\$6,000,000	\$0	\$0	\$0
Notes:						
1 Debt service payments are calculated as shown:	Biannual Rate	Number of Payments	Capital Expenditure	Issuance Cost & Reserve	Principal Amount	Biannual Payment
Campus Development Project	2.000%	40	\$6,000,000	\$360,000	\$6,360,000	\$232,495
Olympia Mutual Annexation	1.125%	40			\$1,080,000	\$33,678

¹ 2010 Capital Improvement Program.

² Initial Study/Mitigated Negative Declaration for the San Lorenzo Valley Water District's Campus Development Project dated November 2010.

³ Initial Study/Mitigated Negative Declaration for the San Lorenzo Valley Water District's Olympia Annexation and Distribution System Project dated February 2012.

3.3 Water Enterprise Cash Flow

Cash flow is shown in the table and figure below. The development of revenues from water charges is described in a subsequent Section 3.6 of the report.

Table 3-3. Water Enterprise Cash Flow							
Item	FY13	FY14	FY15	FY16	FY17	FY18	Five Years FY14 - FY18
Beginning Balance, July 1 [1]	\$8,598,514	\$7,808,993	\$6,555,617	\$5,361,854	\$2,526,537	\$3,163,742	
Revenues							
Non-restricted Revenues							
Water Charges for Service	\$5,058,467	\$5,699,884	\$6,399,558	\$6,897,271	\$7,432,051	\$8,007,812	\$34,436,577
All Other	\$582,600	\$582,600	\$582,600	\$582,600	\$582,600	\$582,600	\$2,913,000
Restricted Revenues	\$588,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$15,000
Total Revenues	\$6,229,067	\$6,285,484	\$6,985,158	\$7,482,871	\$8,017,651	\$8,593,412	\$37,364,577
Operating Expenditures	\$5,454,235	\$5,579,156	\$5,707,825	\$5,840,353	\$5,976,858	\$6,117,458	\$29,221,650
Debt Service	\$1,004,353	\$1,076,839	\$1,536,653	\$1,531,453	\$1,428,853	\$1,428,853	\$7,002,651
Capital Project Expenditures							
Capital Project Expenditures	\$760,000	\$1,000,000	\$7,000,000	\$3,000,000	\$0	\$0	\$11,000,000
Loan Disbursements	\$0	\$0	(\$6,000,000)	\$0	\$0	\$0	(\$6,000,000)
Total Debt Service and Capital Projects	\$760,000	\$1,000,000	\$1,000,000	\$3,000,000	\$0	\$0	\$5,000,000
Interest Earnings [2]	\$200,000	\$117,135	\$65,556	\$53,619	\$25,265	\$31,637	\$293,212
Ending Balance	\$7,808,993	\$6,555,617	\$5,361,854	\$2,526,537	\$3,163,742	\$4,242,481	

Notes:

- The Beginning Balance for FY13 is based on Unrestricted Net Assets from page 33 of the Financial Statements and Supplementary Information June 30, 2012 and 2011.
- Interest Earnings for FY13 are updated from the District's budget amount to reflect a steady decrease in yield in rates on investment.

Values for FY14 onward are the previous years' ending balance times the interest rates shown below provided by the District.

	<u>FY14</u>	<u>FY15</u>	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>
	1.5%	1.0%	1.0%	1.0%	1.0%

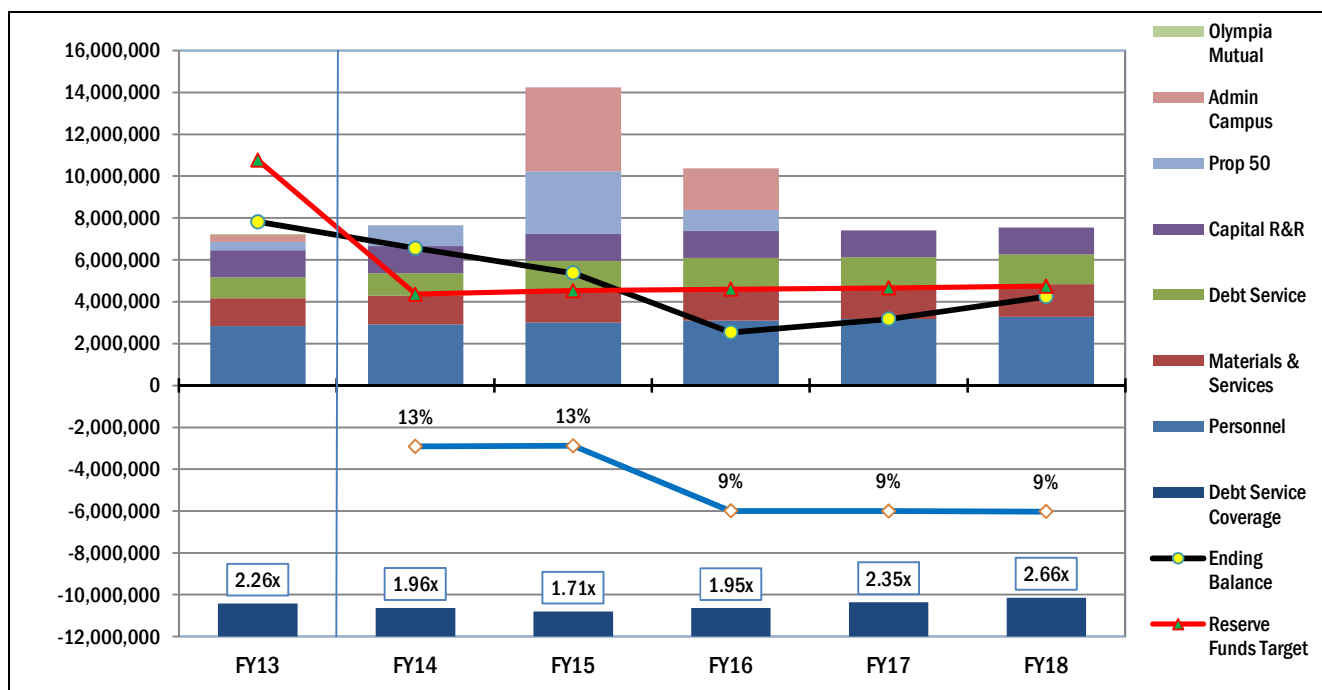


Figure 3-1. Water Fund Cash Flow, Debt Service Coverage and % Increase in Single Family Bills

3.4 Debt Service Coverage

Issuers of public enterprise revenue bonds generally covenant in the bond resolution or indenture to establish rates and charges for the products or services provided by the enterprise in a manner sufficient to provide revenues to pay such amounts and to provide coverage.

Projected coverage ratios and the dollar amount over or under the coverage requirement for a coverage test with Net Revenues equal to 125 percent of the estimated debt service is shown below in Table 3-4.

Table 3-4. Debt Service Coverage Evaluation						
	FY13	FY14	FY15	FY16	FY17	FY18
Debt Service						
Current	\$1,004,353	\$1,009,483	\$1,004,308	\$999,108	\$896,508	\$896,508
Campus Development	\$0	\$0	\$464,989	\$464,989	\$464,989	\$464,989
Olympia Mutual Annexation	\$0	\$67,356	\$67,356	\$67,356	\$67,356	\$67,356
Total Debt Service	\$1,004,353	\$1,076,839	\$1,536,653	\$1,531,453	\$1,428,853	\$1,428,853
Coverage Ratio Required	1.25 x	1.25 x	1.25 x	1.25 x	1.25 x	1.25 x
Net Revenue Required *	\$1,255,441	\$1,346,049	\$1,920,816	\$1,914,316	\$1,786,066	\$1,786,066
<i>* Net revenue required equals 1.25x times the principal and interest due in the next fiscal year.</i>						
Gross Revenue **						
Non-restricted Revenues	\$5,641,067	\$6,282,484	\$6,982,158	\$7,479,871	\$8,014,651	\$8,590,412
Restricted Revenues	\$588,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Interest on Fund Balance	\$200,000	\$117,135	\$65,556	\$53,619	\$25,265	\$31,637
Total Gross Revenue	\$6,429,067	\$6,402,619	\$7,050,715	\$7,536,490	\$8,042,916	\$8,625,050
<i>** Gross revenue equals revenue from charges for services of the Enterprise which include rates, capacity charges, interest on the fund balance and other operating revenue.</i>						
Net Revenue from Rates ***						
Gross Revenue	\$6,429,067	\$6,402,619	\$7,050,715	\$7,536,490	\$8,042,916	\$8,625,050
Less Operating Expenses						
Personnel	\$2,827,035	\$2,911,846	\$2,999,201	\$3,089,177	\$3,181,853	\$3,277,308
Materials & Services	\$1,337,000	\$1,377,110	\$1,418,423	\$1,460,976	\$1,504,805	\$1,549,949
Net Revenue from Rates	\$2,265,032	\$2,113,663	\$2,633,090	\$2,986,336	\$3,356,258	\$3,797,792
<i>*** Net revenue equals gross revenue less O&M expenditures.</i>						
Evaluation of Covenant Performance						
Net Revenue from Rates	\$2,265,032	\$2,113,663	\$2,633,090	\$2,986,336	\$3,356,258	\$3,797,792
Net Revenue Required	\$1,255,441	\$1,346,049	\$1,920,816	\$1,914,316	\$1,786,066	\$1,786,066
Amount Over/(Under) Requirement	\$1,009,591	\$767,615	\$712,273	\$1,072,020	\$1,570,192	\$2,011,726
Calculated Coverage Ratio	2.26 x	1.96 x	1.71 x	1.95 x	2.35 x	2.66 x

3.5 Reserve Fund Policy

The District adopted a *San Lorenzo Valley Water District Reserve Fund Policy* on January 15, 2009 in Resolution No. 17 (08-09). The Introduction in the *Reserve Fund Policy* reads as follows:

“San Lorenzo Valley Water District recognizes the importance of adopted policies relative to reserves and reserve funds. Written adopted financial policies relative to designated reserves

<u>RESERVE FUND</u>	<u>TARGET LEVEL</u>
Working Capital Reserve Fund.	\$ 750,000
Emergency Reserve Fund.	\$1,000,000
Watershed Property Asset Reserve Fund.	\$6,500,000
Capital Replacement/System Improvement Reserve Fund	\$1,250,000
Equipment Replacement Reserve Fund.	\$ 350,000
Rate Stabilization Reserve Fund	\$ 350,000
Sick/Annual Leave Liability Reserve Fund.	\$ 300,000

and reserve funds have many benefits, and represents a critical element of sound fiscal management. Reserves and reserve funds are prudent fiscal management tools, which are a cornerstone of long-term financial planning. A written and adopted Reserve Fund Policy provides for and facilitates attainment of program and financial goals relative to the prudent accumulation and management of designated reserves and reserve funds. This Reserve Fund Policy was developed to clearly identify specific designated reserves and

reserve funds. It is the intent of this Reserve Fund Policy to clearly identify both reserve fund categories and purposes, and set target levels for reserves that are consistent with the District’s mission statement, the uniqueness of the District, and the philosophy of the District’s Board of Directors. This policy shall be known and may be cited as the San Lorenzo Valley Water District Reserve Fund Policy.”

Projected reserve fund levels based on the *Reserve Fund Policy* are shown in the table below.

Table 3-5. Reserve Fund Target Levels

Reserve Component	Type	Minimum or	Calculated	FY13	FY14	FY15	FY16	FY17	FY18
Working Capital Reserve Fund	non-restricted	\$750,000	2 months of O&M expenditures	\$861,000	\$883,000	\$981,000	\$1,002,000	\$1,008,000	\$1,031,000
Emergency Reserve Fund	restricted	\$1,000,000	board directive	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Watershed Property Asset Reserve Fund	restricted	\$6,500,000	board directive	\$6,500,000	\$0	\$0	\$0	\$0	\$0
Capital Replacement/System Improvement	restricted	\$1,250,000	board directive	\$1,250,000	\$1,250,000	\$1,250,000	\$1,250,000	\$1,250,000	\$1,250,000
Equipment Replacement Reserve Fund	restricted	\$350,000	board directive	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000
Rate Stabilization Reserve Fund	restricted	\$350,000	10% of water fee revenues	\$506,000	\$570,000	\$640,000	\$690,000	\$743,000	\$801,000
Sick/Annual Leave Liability Reserve Fund	restricted	\$300,000	board directive	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000
Total Reserve Fund Target		\$10,500,000		\$10,767,000	\$4,353,000	\$4,521,000	\$4,592,000	\$4,651,000	\$4,732,000

3.6 Revenue from Water Charges

In order to generate revenues that adequately provide for utility operations, capital renewal and replacement costs, capital project costs, reserves, and bonded debt, rates need to be raised to generate approximately \$3 million per year in additional revenue by FY18. The recommended water charges are projected to increase revenues by approximately \$9.2 million over the next five fiscal years, FY14 – FY18. Concurrent with generating additional revenue from rates, the District will reduce its cash reserves from approximately \$8.5 million (as of July 1, 2012) to \$4 million at the end of FY18. The amount of revenue projected from water rates is summarized below in Table 3-6. Detailed calculations of revenue from charges are shown in Appendix D.

Table 3-6. Summary of Revenue from Water Rates

Item	FY13	FY14	FY15	FY16	FY17	FY18	Five Years FY14 - FY18
Annual Fee Increases							
Basic Charges	0%	13%	13%	9%	9%	9%	
Quantity Charges	0%	13%	13%	8%	8%	8%	
Revenue from Fees							
Basic Charges	\$2,442,467	\$2,777,884	\$3,139,558	\$3,423,271	\$3,730,051	\$4,064,812	\$17,135,577
Quantity Charges	\$2,616,000	\$2,922,000	\$3,260,000	\$3,474,000	\$3,702,000	\$3,943,000	\$17,301,000
Total	\$5,058,467	\$5,699,884	\$6,399,558	\$6,897,271	\$7,432,051	\$8,007,812	\$34,436,577
Percent of Total							
Basic Charges	48%	49%	49%	50%	50%	51%	50%
Quantity Charges	52%	51%	51%	50%	50%	49%	50%
Revenue Increases							
Annual	<i>FY13 base</i>						
Basic Charges	\$2,442,467	\$335,418	\$697,092	\$980,805	\$1,287,584	\$1,622,346	
Quantity Charges	\$2,616,000	\$306,000	\$644,000	\$858,000	\$1,086,000	\$1,327,000	
Total	\$5,058,467	\$641,418	\$1,341,092	\$1,838,805	\$2,373,584	\$2,949,346	
Cumulative							
Basic Charges		\$335,418	\$1,032,510	\$2,013,314	\$3,300,899	\$4,923,244	
Quantity Charges		\$306,000	\$950,000	\$1,808,000	\$2,894,000	\$4,221,000	
Total		\$641,418	\$1,982,510	\$3,821,314	\$6,194,899	\$9,144,244	

The annual amount of revenues from basic and quantity charges, and the cumulative revenues from increases in the water charges, are shown in the figure below.

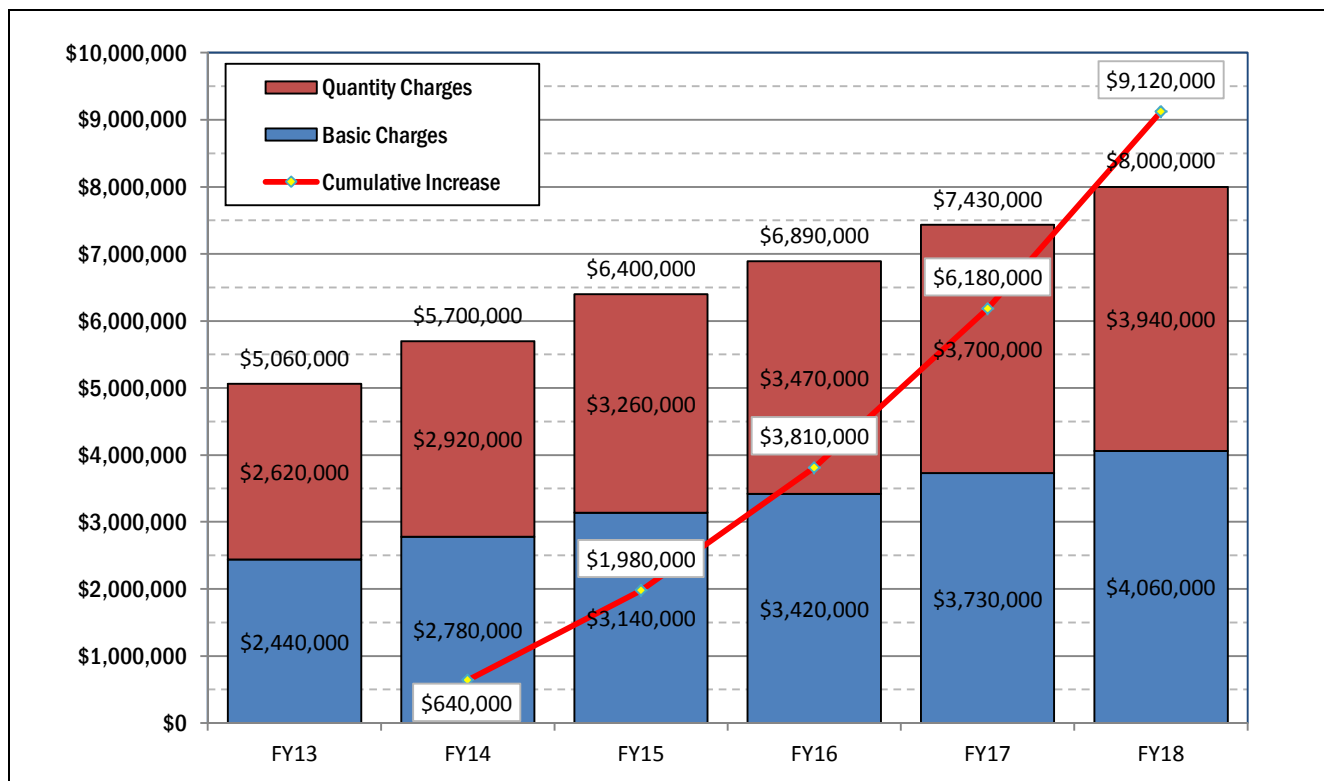


Figure 3-2. Annual Projected Revenues from Basic and Quantity Charges

3.7 Evaluation of Optional Tier Structure Changes

Five optional changes to the tiered rate structure are presented in this section. The changes are first evaluated individually. Then, the cumulative impact of the changes on the rate structure is evaluated. Finally, rates based on the current rate structure and the revised rate structure are compared after applying the recommended percent increase in rates.

3.7.1 Option 1—Flat Water Rate for Six Customer Classes

Many water purveyors charge nonresidential customer classes a flat rate for all water use while using a tiered water rate structure for residential customer classes. The current water rate structure was updated to evaluate the impact of using a flat rate for all water use for six, nonresidential customer classes – Commercial, Institutional, Landscape, Surplus, Other and Vacant. These six customer classes comprise approximately 11 percent of all water use. The update calculation, using projected FY13 water use, is shown in the table below. The updated rate structure with the flat rate is designed to be revenue neutral with the current rate structure. The difference in revenue from rates for the updated and current rate structure is \$175 which is 0.01% of the total revenue.

Table 3-7. Flat Water Rate for Six Customer Classes

	Single Family	Multiple Family	Commercial	Institutional	Landscape	Private Mutuels	Surplus, Other, Vacant	Projected FY13 Total
Water Sales Revenue								
First 10 units	\$832,371	\$76,939	\$32,426	\$8,473	\$1,413	\$973	\$1,343	\$953,938
11 - 40 units	\$758,085	\$126,006	\$43,440	\$16,442	\$2,564	\$3,722	\$1,054	\$951,312
41 - 100 units	\$183,852	\$55,849	\$29,597	\$22,585	\$2,737	\$7,704	\$267	\$302,591
101 - 200 units	\$34,852	\$27,485	\$13,996	\$26,998	\$1,965	\$11,425	\$14	\$116,734
Over 200 units	\$15,001	\$160,386	\$4,848	\$67,623	\$11,558	\$31,896	\$0	\$291,313
Total	\$1,824,162	\$446,665	\$124,307	\$142,120	\$20,237	\$55,720	\$2,678	\$2,615,888
Percent of Total	70%	17%	5%	5%	1%	2%	0.1%	100%
Water Rates, \$/100 cf								
	<i>current</i>	Current Tiered Rates Increased by 2.75% to remain revenue neutral Using Flat Rate equal to Average Rate.						
First 10 units	\$2.71	\$2.78	\$2.78	\$3.40	\$3.40	\$3.40	\$2.78	\$3.40
11 - 40 units	\$3.54	\$3.64	\$3.64	\$3.40	\$3.40	\$3.40	\$3.64	\$3.40
41 - 100 units	\$4.24	\$4.36	\$4.36	\$3.40	\$3.40	\$3.40	\$4.36	\$3.40
101 - 200 units	\$4.59	\$4.72	\$4.72	\$3.40	\$3.40	\$3.40	\$4.72	\$3.40
Over 200 units	\$5.00	\$5.14	\$5.14	\$3.40	\$3.40	\$3.40	\$5.14	\$3.40
Revenues Using Average Quantity Charge								
	Single Family	Multiple Family	Commercial	Institutional	Landscape	Private Mutuels	Surplus, Other, Vacant	Projected FY13 Total
Before Assignment of Flat Rates								
Total Quantity Charge Revenue	\$1,775,947	\$434,603	\$134,008	\$187,929	\$26,859	\$54,198	\$2,519	\$2,616,064
Average Water Use, 100 cf	560,150	112,129	36,561	41,800	5,952	11,766	788	769,145
Average Quantity Charge, \$/100 cf	\$3.17	\$3.88	\$3.67	\$4.50	\$4.51	\$4.61	\$3.20	\$3.40
After Assignment of Flat Rates								
Total Quantity Charge Revenue	\$1,824,162	\$446,665	\$124,307	\$142,120	\$20,237	\$55,720	\$2,678	\$2,615,888
Average Water Use, 100 cf	560,150	112,129	36,561	41,800	5,952	11,766	788	769,145
Average Quantity Charge, \$/100 cf	\$3.26	\$3.98	\$3.40	\$3.40	\$3.40	\$4.74	\$3.40	\$3.40
Difference	\$48,214	\$12,062	(\$9,701)	(\$45,809)	(\$6,622)	\$1,522	\$158	(\$175)

Note that the average price of water for all use is \$3.40 per 100 cf. The average price is used as a flat rate for the six, nonresidential customer classes. Because the average rate for all water use is less than the current average rate for the Commercial (\$3.67 per 100 cf), Institutional (\$4.50 per 100 cf), and Landscape (\$4.51 per 100 cf) customer classes, the tiered rates for Residential, Multiple Family and Private Mutual are increased in order to maintain total revenues from water rates of approximately \$2,616,000. The percent increase in tiered rates is 2.75 percent. The result is a rate structure that is

revenue neutral with the current rate structure (within \$175) and more equitable for nonresidential customers.

3.7.2 Option 2—Lower Residential Tiers

The tiers for Residential customer classes were evaluated. Actual water use data for 2010 and 2011 and projected water use data for FY13 were used in the evaluation. The evaluation suggests the current lowest tier may be decreased to include the first 8 units instead of the first 10 units. The second tier would be adjusted to 9-30 units (the next 22 units) instead of 11-40 units (the next 30 units) and the third tier would be adjusted from 41-100 units (the next 60 units) to 31-100 units (the next 70 units). Tier 4 and Tier 5 remain the same. The amounts of water in each tier for the current water rate structure and revised water rate structure for the Residential customer class are shown in the figures below (the Tier 5 water use labels and % water use labels are not shown for clarity).

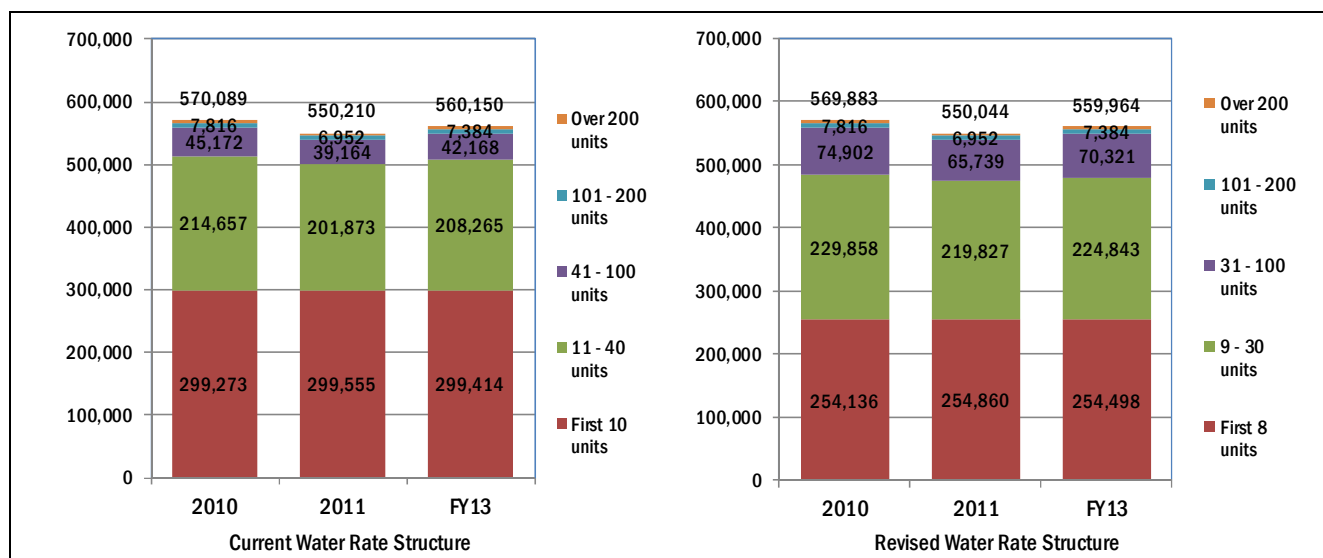


Figure 3-3. Lower Residential Tiers, 100 cf in Each Tier

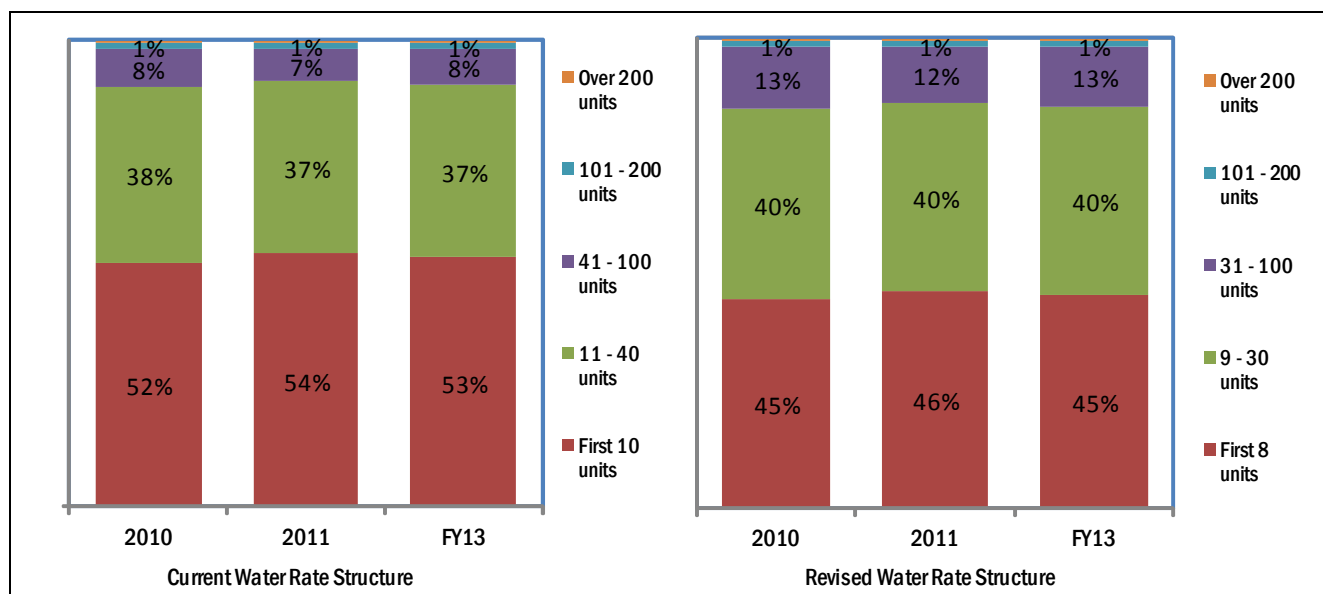


Figure 3-4. Lower Residential Tiers, % Use in Each Tier

The impact on revenues from quantity charges using the revised water rate structure for the Residential customer class is summarized in the table below. As a result of lowering the number of units in Tier 1 (from 10 to 8) and Tier 2 (from 30 to 22) more water is priced at higher tier prices and more revenue is generated from the same amount of water sales (note that the difference in water use of 186 units is due to slight changes in the source data used to evaluate the water use in each tier).

Table 3-8. Impact of Lower Residential Tiers on Residential Water Use and Revenues

Current Rate Structure			Updated Rate Structure			Difference	
Tier	Units in Tier	Sales 100 cf	Tier	Units in Tier	Sales 100 cf	100 cf	Percent
First 10 units	10	299,414	First 8 units	8	254,498	(44,916)	-15%
11 - 40 units	30	208,265	9 - 30 units	22	224,843	16,578	8%
41 - 100 units	60	42,168	31 - 100 units	70	70,321	28,153	67%
101 - 200 units	100	7,384	101 - 200 units	100	7,384	0	0%
Over 200 units	no limit	2,919	Over 200 units	no limit	2,919	0	0%
Total		560,150	Total		559,964	(186)	0%

Current Rate Structure			Updated Rate Structure			Difference	
Tier	Units in Tier	Revenue Dollars	Tier	Units in Tier	Revenue Dollars	Dollars	Percent
First 10 units	10	\$811,412	First 8 units	8	\$689,690	(\$121,722)	-15%
11 - 40 units	30	\$737,258	9 - 30 units	22	\$795,942	\$58,684	8%
41 - 100 units	60	\$178,792	31 - 100 units	70	\$298,159	\$119,367	67%
101 - 200 units	100	\$33,893	101 - 200 units	100	\$33,893	\$0	0%
Over 200 units	no limit	\$14,593	Over 200 units	no limit	\$14,593	\$0	0%
Total		\$1,775,947	Total		\$1,832,276	\$56,329	3%

The impact of the revised water rate structure on the Residential customer class is an increase in revenues of approximately 3 percent.

3.7.3 Option 3–Adjust Tiers for Dwelling Units for Multiple Family and Private Mutuals

This section evaluates two separate adjustments for the Multiple Family and Private Mutual customer classes – 1) adjustment of tiers based on the number of dwelling units served by a meter; and 2) lowering of tiers as was illustrated in the previous section for the Residential customer class. The first adjustment will lower revenues from water rates; the second adjustment will slightly increase revenue from water rates (as was the case for the Residential customer class). The table below shows the current rate structure for Multiple Family and Private Mutuals customer classes on the left hand side, with and without adjustment of tiers based on the number of dwelling units. The same amount of water use (within a fraction of a percent) is used on the right hand side of the table with a rate structure with lower Residential tiers.

Table 3-9. Impact of Tier Adjustment for Dwelling Units and Lower Residential Tiers on Multiple Family and Private Mutuals Water Use and Revenues									
	Current Tiers				Lower Residential Tiers				
	Multiple Family		Private Mutuals		Multiple Family		Private Mutuals		
	No Adjustment	Adjust Tiers for Units	No Adjustment	Adjust Tiers for Units	No Adjustment	Adjust Tiers for Units	No Adjustment	Adjust Tiers for Units	Adjust Tiers for Units
Water Sales, 100 cf					Water Sales, 100 cf				
First 10 units	27,676	59,936	350	6,289	First 8 units	22,737	50,962	280	5,472
11 - 40 units	34,617	41,690	1,023	4,374	9 - 30 units	33,332	45,023	757	4,834
41 - 100 units	12,810	8,441	1,767	886	31 - 100 units	19,034	14,081	2,103	1,512
101 - 200 units	5,823	1,478	2,421	155	101 - 200 units	5,823	1,479	2,421	159
Over 200 units	31,204	584	6,206	61	Over 200 units	31,204	584	6,479	63
Total	112,129	112,129	11,766	11,766	Total	112,129	112,129	12,039	12,039
Water Sales, %					Water Sales, %				
First 10 units	25%	53%	3%	53%	First 8 units	20%	45%	2%	45%
11 - 40 units	31%	37%	9%	37%	9 - 30 units	30%	40%	6%	40%
41 - 100 units	11%	8%	15%	8%	31 - 100 units	17%	13%	17%	13%
101 - 200 units	5%	1%	21%	1%	101 - 200 units	5%	1%	20%	1%
Over 200 units	28%	1%	53%	1%	Over 200 units	28%	1%	54%	1%
Total	100%	100%	100%	100%	Total	100%	100%	100%	100%
Water Rates, \$/100 cf					Water Rates, \$/100 cf				
First 10 units	\$2.71	\$2.71	\$2.71	\$2.71	First 8 units	\$2.71	\$2.71	\$2.71	\$2.71
11 - 40 units	\$3.54	\$3.54	\$3.54	\$3.54	9 - 30 units	\$3.54	\$3.54	\$3.54	\$3.54
41 - 100 units	\$4.24	\$4.24	\$4.24	\$4.24	31 - 100 units	\$4.24	\$4.24	\$4.24	\$4.24
101 - 200 units	\$4.59	\$4.59	\$4.59	\$4.59	101 - 200 units	\$4.59	\$4.59	\$4.59	\$4.59
Over 200 units	\$5.00	\$5.00	\$5.00	\$5.00	Over 200 units	\$5.00	\$5.00	\$5.00	\$5.00
Revenue					Revenue				
First 10 units	\$75,002	\$162,426	\$949	\$17,043	First 8 units	\$61,616	\$138,106	\$759	\$14,828
11 - 40 units	\$122,544	\$147,582	\$3,620	\$15,486	9 - 30 units	\$117,995	\$159,382	\$2,680	\$17,112
41 - 100 units	\$54,312	\$35,790	\$7,492	\$3,755	31 - 100 units	\$80,704	\$59,704	\$8,915	\$6,410
101 - 200 units	\$26,728	\$6,785	\$11,110	\$712	101 - 200 units	\$26,728	\$6,787	\$11,110	\$729
Over 200 units	\$156,018	\$2,921	\$31,028	\$307	Over 200 units	\$156,018	\$2,922	\$32,395	\$314
Total	\$434,603	\$355,504	\$54,198	\$37,302	Total	\$443,060	\$366,901	\$55,858	\$39,393
<i>reduction in revenue ></i>		(\$79,100)		(\$16,895)	<i>reduction in revenue ></i>		(\$76,159)		(\$16,465)
					<i>difference in revenue due to changes in tiers ></i>		\$2,941		\$430

With both the current rate structure and the updated rate structure, the adjustment of tiers based on the number of dwelling units results in less revenue from the Multiple Family customer class for both the current rate structure (a decrease of \$79,100) and updated rate structure (a decrease of \$76,200). A similar loss of revenues is evident for the Private Mutuals customer class for the current rate structure (a decrease of \$16,900) and updated rate structure (a decrease of \$16,500).

3.7.4 Option 4–Lower Residential Tiers for Multiple Family and Private Mutuals

Isolation of the impact of the updated rate structure (lower Residential tiers) separate from the impact of adjustment of tiers based on the number of dwelling units is done by subtracting the revenue value for the updated rate structure from the revenue value for the current rate structure. For example, the Multiple Family customer class has a decrease in revenue of \$76,200 for the updated rate structure and a decrease in revenue of \$79,100 for the current rate structure. The difference, a positive \$2,900, is the slight increase in revenue from using lower Residential tiers. The difference for the Private Mutuals customer class is approximately \$400.

3.7.5 Option 5–Four-Tier Rate Structure

The small amount of water use in the top three tiers and the minimal amount of water use in Tier 4 provides the basis for our recommendation of combining Tier 4 and Tier 5 into a single tier and charging the weighted average water rate for the two tiers. The new top tier would be for water use “Over 100 units.” The change would be revenue neutral with the current tier structure. As a result of the change, some customer bills would decrease and some would increase depending on the weighting of their water use in each tier.

Calculation of a Tier 4 rate for a four-tier rate structure is shown in the table below for both the current rates and rates based on all other optional updates. Note that only three customer classes would have tiered water rates (Residential, Multiple Family and Private Mutuals) and the amount of water priced in Tiers 3 and 4 for the updated rate structure is approximately 12 percent of water sales. In the current water rate structure approximately 22 percent of the water is priced in Tiers 3, 4 and 5.

Table 3-10. Calculation of a Tier 4 Rate for a Four-Tier Rate Structure

Water Fees	Projected				
	FY14	FY15	FY16	FY17	FY18
Current Rate Structure					
Water Use, 100 cf					
101 - 200 units	28,000	27,000	26,000	25,000	24,000
Over 200 units	65,500	64,000	63,000	62,000	61,000
Total	93,500	91,000	89,000	87,000	85,000
Water Rate, \$/100 cf					
101 - 200 units	\$5.19	\$5.86	\$6.33	\$6.84	\$7.39
Over 200 units	\$5.65	\$6.38	\$6.89	\$7.44	\$8.04
Revenue					
101 - 200 units	\$145,320	\$158,220	\$164,580	\$171,000	\$177,360
Over 200 units	\$370,075	\$408,320	\$434,070	\$461,280	\$490,440
Total	\$515,395	\$566,540	\$598,650	\$632,280	\$667,800
Combined Tier 4 and Tier 5					
Revenue	\$515,395	\$566,540	\$598,650	\$632,280	\$667,800
Water Use, 100 cf	93,500	91,000	89,000	87,000	85,000
Tier 4 Over 100 Units	\$5.51	\$6.23	\$6.73	\$7.27	\$7.86
Updated Rate Structure					
Water Use, 100 cf					
101 - 200 units	9,000	9,000	9,000	9,000	9,000
Over 200 units	3,000	3,000	3,000	3,000	3,000
Total	12,000	12,000	12,000	12,000	12,000
Water Rate, \$/100 cf					
101 - 200 units	\$5.33	\$6.02	\$6.50	\$7.02	\$7.58
Over 200 units	\$5.81	\$6.57	\$7.10	\$7.67	\$8.28
Revenue					
101 - 200 units	\$47,970	\$54,180	\$58,500	\$63,180	\$68,220
Over 200 units	\$17,430	\$19,710	\$21,300	\$23,010	\$24,840
Total	\$65,400	\$73,890	\$79,800	\$86,190	\$93,060
Combined Tier 4 and Tier 5					
Revenue	\$65,400	\$73,890	\$79,800	\$86,190	\$93,060
Water Use, 100 cf	12,000	12,000	12,000	12,000	12,000
Tier 4 Over 100 Units	\$5.45	\$6.16	\$6.65	\$7.18	\$7.76
Summary for Combined Tier 4 and Tier 5 (Over 100 Units)					
Current Rate Structure	\$5.51	\$6.23	\$6.73	\$7.27	\$7.86
Updated Rate Structure	\$5.45	\$6.16	\$6.65	\$7.18	\$7.76

3.8 Fiscal Impact of Optional Tier Structure Changes

The fiscal impact for each of the five optional tier structure changes is presented in three different ways – 1) changes in revenues from quantity charges recovered from each customer class; 2) changes in the average price of water for each customer class; and 3) changes in sample bimonthly bills using the current rate structure and an FY14 rate structure that includes rate increases and adjusted quantity charges using the five optional tier structure changes.

3.8.1 Changes in Revenues from Quantity Charges

The fiscal impact for each of the five optional tier structure changes is itemized in the table below using projected revenue from quantity charges for FY13 of approximately \$2,616,000. The summary shows the projected total revenues in each tier for each customer class using the current rate structure and the revenue impact for each of the optional tier structure changes. Note that the change to flat rates for six customer classes and the combination of Tier 4 and Tier 5 rates are both revenue neutral on a system wide basis but shift revenues between customer classes (flat rates) and between customers within a customer class (combination of Tier 4 and Tier 5). Options 2, 3 and 4 are not revenue neutral and, taken together, result in a net loss in revenue of approximately \$36,000. It is recommended that Option 2, Option 3 and Option 4 be implemented jointly or not at all to minimize the fiscal impact on a system wide basis.

Table 3-11. Revenue Impact of Optional Tier Structure Changes on Each Customer Class

Revenues from Current Tier Rate Structure	Single Family	Multiple Family	Commercial	Institutional	Landscape	Private Mutuals	Surplus, Other, Vacant	FY13 Projected Total
Water Sales Revenue								
First 10 units	\$811,412	\$75,002	\$25,845	\$6,753	\$1,126	\$949	\$1,070	\$922,157
11 - 40 units	\$737,258	\$122,544	\$45,229	\$17,119	\$2,669	\$3,620	\$1,097	\$929,537
41 - 100 units	\$178,792	\$54,312	\$36,909	\$28,164	\$3,413	\$7,492	\$333	\$309,416
101 - 200 units	\$33,893	\$26,728	\$18,895	\$36,447	\$2,653	\$11,110	\$18	\$129,743
Over 200 units	\$14,593	\$156,018	\$7,130	\$99,445	\$16,998	\$31,028	\$0	\$325,210
Total	\$1,775,947	\$434,603	\$134,008	\$187,929	\$26,859	\$54,198	\$2,519	\$2,616,064
		\$443,060	-\$434,603					
Summary of Rate Structure Options								
1 Flat Rate for C, I, L, S, O and V	\$48,214	\$12,062	(\$9,701)	(\$45,809)	(\$6,622)	\$1,522	\$158	(\$175)
2 Tiers Adjusted for Units for MF and PM								
Multiple Family		(\$79,100)						(\$79,100)
Private Mutuals						(\$16,895)		(\$16,895)
Total								(\$95,995)
3 Change Tiers 1, 2 and 3 for Residential	\$56,329							\$56,329
4 Option 2 with Option 3 Tiers for MF and PM								
Multiple Family		\$2,941						\$2,941
Private Mutuals						\$430		\$430
Total								\$3,371
5 Combine Tiers 4 and 5	\$0	\$0				\$0		\$0
Total All Options	\$104,543	(\$64,098)	(\$9,701)	(\$45,809)	(\$6,622)	(\$14,943)	\$158	(\$36,471)
% Change from Current	6%	-15%	-7%	-24%	-25%	-28%	6%	-1%

The net impact of the five optional tier structure changes will result in percent increases in water bills for users in the Residential customer class that are greater than average as approximately \$105,000 is shifted from the nonresidential customer classes (except the Surplus, Other and Vacant customer classes) to the Residential customer class. The same shift of revenues to the Residential customer class is, of course, a shift in revenues from the nonresidential customer classes. Nonresidential customers with water use greater than the typical Residential customer should experience percent increases in water bills that are less than average for the system.

3.8.2 Average Quantity Charges Using Updated Rate Structure

The evaluation of the average quantity charge for each customer class using the current rate structure was presented in Section 2.3.3. The average quantity charge for each customer class using the updated rate structure is shown in the table below. For comparison, the table includes a summary of the average quantity charges using the current rate structure.

The FY13 projected average quantity charge for all customer classes combined decreases from \$3.40 per unit using the current rate structure to \$3.35 per unit using the updated rate structure because the updated rate structure is projected to bring in less revenue (approximately \$36,000 less).

The variation from the average quantity charge among all customer classes is lower for the updated rate structure and varies from +\$0.05 to -\$0.08. The variation from the average quantity charge among all customer classes for the current rate structure varies from +\$1.21 to -\$0.23.

Table 3-12. Water Use Revenues by Tier and Average Quantity Charge per Customer Class

	Single Family	Multiple Family	Commercial	Institutional	Landscape	Private Mutuals	Surplus, Other, Vacant	FY13 Projected Total
Water Sales Revenue								
First 8 units	\$707,504	\$138,106				\$14,828		\$860,438
9 - 30 units	\$818,427	\$159,382				\$17,112		\$994,921
31 - 100 units	\$306,597	\$59,704				\$6,410		\$372,712
Over 100 units	\$49,854	\$9,985				\$1,072		\$60,911
Flat Rate			\$124,307	\$142,120	\$20,237		\$2,678	\$289,342
Total	\$1,882,382	\$367,177	\$124,307	\$142,120	\$20,237	\$39,423	\$2,678	\$2,578,324
Percent of Total	73%	14%	5%	6%	1%	2%	0.1%	100%
Water Sales Revenue, %								
First 8 units	38%	38%	0%	0%	0%	38%	0%	33%
9 - 30 units	43%	43%	0%	0%	0%	43%	0%	39%
31 - 100 units	16%	16%	0%	0%	0%	16%	0%	14%
Over 100 units	3%	3%	0%	0%	0%	3%	0%	2%
Flat Rate	0%	0%	100%	100%	100%	0%	100%	11%
Total	100%	100%	100%	100%	100%	100%	100%	100%
Average Quantity Charge, \$/100 cf								
Customer Classes								
Total Quantity Charge Revenue	\$1,882,382	\$367,177	\$124,307	\$142,120	\$20,237	\$39,423	\$2,678	\$2,578,324
Average Water Use, FY13 Projected	560,150	112,129	36,561	41,800	5,952	11,766	788	769,145
Average Quantity Charge	\$3.36	\$3.27	\$3.40	\$3.40	\$3.40	\$3.35	\$3.40	\$3.35
Current Rate Structure, FY 13 Projected								
Total Quantity Charge Revenue	\$1,775,947	\$434,603	\$134,008	\$187,929	\$26,859	\$54,198	\$2,519	\$2,616,064
Average Water Use, FY13 Projected	560,150	112,129	36,561	41,800	5,952	11,766	788	769,145
Average Quantity Charge	\$3.17	\$3.88	\$3.67	\$4.50	\$4.51	\$4.61	\$3.20	\$3.40

3.8.3 Bimonthly Bills Using Updated Rate Structure

A summary of the impact of the optional tier structure changes on water bills for six customer classes is shown in the table below. The impact is assessed by comparing bimonthly bills based on the current rates and rate structure versus rates for FY14 using the updated rate structure.

Table 3-13. Impact of Optional Tier Structure Changes on Bimonthly Water Bills															
	Residential		Multiple Family		Commercial			Institutional			Landscape			Private Mutuals	
	Avg Use	High Use	Avg Use	High Use	Low Use	Avg Use	High Use	Low Use	Avg Use	High Use	Low Use	Avg Use	High Use	Small	Large
Current Rates															
Dwelling Units	1	1	2	6	1	1	1	1	1	1	1	1	1	4	12
Meter Size	%	%	%A	2	¾	¾	¾	1	2	3	%	1	2	%A	1-½S
Meter Charge	\$49.73	\$49.73	\$82.90	\$265.68	\$82.90	\$82.90	\$82.90	\$82.90	\$265.68	\$498.62	\$49.73	\$82.90	\$265.68	\$82.90	\$531.36
Quantity Charge															
Water Use, 100 cf	14	28	28	84	28	150	250	100	150	300	50	150	250	56	168
First 10 units	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
11 - 40 units	4	18	18	30	18	30	30	30	30	30	40	30	30	30	30
41 - 100 units				44		60	60	60	60	60	60	60	60	16	60
101 - 200 units						50	100		50	100		50	100		68
Over 200 units							50			100			50		
Rate, \$/100 cf															
First 10 units	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71	\$2.71
11 - 40 units	\$3.54	\$3.54	\$3.54	\$3.54	\$3.54	\$3.54	\$3.54	\$3.54	\$3.54	\$3.54	\$3.54	\$3.54	\$3.54	\$3.54	\$3.54
41 - 100 units	\$4.24	\$4.24	\$4.24	\$4.24	\$4.24	\$4.24	\$4.24	\$4.24	\$4.24	\$4.24	\$4.24	\$4.24	\$4.24	\$4.24	\$4.24
101 - 200 units	\$4.59	\$4.59	\$4.59	\$4.59	\$4.59	\$4.59	\$4.59	\$4.59	\$4.59	\$4.59	\$4.59	\$4.59	\$4.59	\$4.59	\$4.59
Over 200 units	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00
Charge	\$41.26	\$90.82	\$90.82	\$319.86	\$90.82	\$617.20	\$1,097	\$387.70	\$617.20	\$1,347	\$168.70	\$617.20	\$1,097	\$201.14	\$699.82
Bimonthly Bill	\$90.99	\$140.55	\$173.72	\$585.54	\$173.72	\$700.10	\$1,180	\$470.60	\$882.88	\$1,845	\$218.43	\$700.10	\$1,362	\$284.04	\$1,231.18
FY14 Rates, All Options															
Dwelling Units	1	1	2	2	1	1	1	1	1	1	1	1	1	2	2
Meter Charge	\$56.19	\$56.19	\$93.68	\$300.00	\$93.68	\$93.68	\$93.68	\$93.68	\$300.00	\$563.00	\$56.19	\$93.68	\$300.00	\$93.68	\$600.00
Quantity Charge															
Water Use, 100 cf	14	28	28	84	28	150	250	100	150	300	50	150	250	56	168
First 8 units	8	8	16	84										32	96
9 - 30 units	6	20	12											24	72
31 - 100 units															
Over 100 units															
Flat Charge															
					28	150	250	100	150	300	50	150	250		
Rate, \$/100 cf															
First 8 units	\$3.14	\$3.14	\$3.14	\$3.14										\$3.14	\$3.14
9 - 30 units	\$4.11	\$4.11	\$4.11	\$4.11										\$4.11	\$4.11
31 - 100 units	\$4.93	\$4.93	\$4.93	\$4.93										\$4.93	\$4.93
Over 100 units	\$5.45	\$5.45	\$5.45	\$5.45										\$5.45	\$5.45
Flat Charge					\$3.84	\$3.84	\$3.84	\$3.84	\$3.84	\$3.84	\$3.84	\$3.84	\$3.84		
Charge	\$49.78	\$107.32	\$99.56	\$263.76	\$107.52	\$576.00	\$960	\$384.00	\$576.00	\$1,152	\$192.00	\$576.00	\$960	\$199.12	\$597.36
Bimonthly Bill	\$105.97	\$163.51	\$193.24	\$563.76	\$201.20	\$669.68	\$1,054	\$477.68	\$876.00	\$1,715	\$248.19	\$669.68	\$1,260	\$292.80	\$1,197.36
Increase in Bills															
Dollars	\$14.98	\$22.96	\$19.52	-\$21.78	\$27.48	-\$30.42	-\$126	\$7.08	-\$6.88	-\$130	\$29.76	-\$30.42	-\$102	\$8.76	-\$33.82
Percent	16%	16%	11%	-4%	16%	-4%	-11%	2%	-1%	-7%	14%	-4%	-8%	3%	-3%
Percent Increase in Rates															
Basic Charges	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%
Quantity Charges	varies	varies	varies	varies	varies	varies	varies	varies	varies	varies	varies	varies	varies	varies	varies

3.9 Current and Recommended Water Rates

Current and FY14 – FY18 recommended quantity charges and basic charges are listed in the tables below. The recommended quantity charges for each rate structure (the current structure and an updated structure using all five options) are shown in a table separate from the basic charges.

Table 3-14. Current and Recommended Basic Charges						
	Current	Recommended				
		FY14	FY15	FY16	FY17	FY18
Basic Charges, \$/2 months						
Annual Increase, %		13%	13%	9%	9%	9%
5/8-inch	\$49.73	\$56.19	\$63.49	\$69.20	\$75.43	\$82.22
5/8A-inch	\$82.90	\$93.68	\$106.00	\$116.00	\$126.00	\$137.00
5/8B-inch	\$166.92	\$189.00	\$214.00	\$233.00	\$254.00	\$277.00
5/8C-inch	\$265.68	\$300.00	\$339.00	\$370.00	\$403.00	\$439.00
3/4-inch	\$49.73	\$56.19	\$63.49	\$69.20	\$75.43	\$82.22
3/4A-inch	\$82.90	\$93.68	\$106.00	\$116.00	\$126.00	\$137.00
1-inch	\$82.90	\$93.68	\$106.00	\$116.00	\$126.00	\$137.00
1A-inch	\$166.92	\$189.00	\$214.00	\$233.00	\$254.00	\$277.00
1B-inch	\$265.68	\$300.00	\$339.00	\$370.00	\$403.00	\$439.00
1F-inch	\$49.73	\$56.19	\$63.49	\$69.20	\$75.43	\$82.22
1-1/2-inch	\$166.92	\$189.00	\$214.00	\$233.00	\$254.00	\$277.00
1-1/2A-inch	\$265.68	\$300.00	\$339.00	\$370.00	\$403.00	\$439.00
1-1/2C-inch	\$829.76	\$938.00	\$1,060.00	\$1,155.00	\$1,259.00	\$1,372.00
1-1/2F-inch	\$82.90	\$93.68	\$106.00	\$116.00	\$126.00	\$137.00
1-1/2G-inch	\$49.73	\$56.19	\$63.49	\$69.20	\$75.43	\$82.22
1-1/2S-inch	\$531.36	\$600.00	\$678.00	\$739.00	\$806.00	\$879.00
2-inch	\$265.68	\$300.00	\$339.00	\$370.00	\$403.00	\$439.00
2A-inch	\$498.62	\$563.00	\$636.00	\$693.00	\$755.00	\$823.00
2G/L-inch	\$82.90	\$93.68	\$106.00	\$116.00	\$126.00	\$137.00
3-inch	\$498.62	\$563.00	\$636.00	\$693.00	\$755.00	\$823.00
4-inch	\$829.76	\$938.00	\$1,060.00	\$1,155.00	\$1,259.00	\$1,372.00

Table 3-15. Current and Recommended Quantity Charges						
	Current	Recommended				
		FY14	FY15	FY16	FY17	FY18
Current Rate Structure						
Annual Increase, %		13%	13%	8%	8%	8%
First 10 units	\$2.71	\$3.06	\$3.46	\$3.74	\$4.04	\$4.36
11 - 40 units	\$3.54	\$4.00	\$4.52	\$4.88	\$5.27	\$5.69
41 - 100 units	\$4.24	\$4.79	\$5.41	\$5.84	\$6.31	\$6.81
101 - 200 units	\$4.59	\$5.19	\$5.86	\$6.33	\$6.84	\$7.39
Over 200 units	\$5.00	\$5.65	\$6.38	\$6.89	\$7.44	\$8.04
Updated Rate Structure, All Options						
Annual Increase, %		16%	13%	8%	8%	8%
First 8 units	\$2.71	\$3.14	\$3.55	\$3.83	\$4.14	\$4.47
9 - 30 units	\$3.54	\$4.11	\$4.64	\$5.01	\$5.41	\$5.84
31 - 100 units	\$4.24	\$4.93	\$5.57	\$6.02	\$6.50	\$7.02
Over 100 units	na	\$5.45	\$6.16	\$6.65	\$7.18	\$7.76
Flat Rate	na	\$3.84	\$4.34	\$4.69	\$5.07	\$5.48

3.10 Single Family Bills and Survey

Calculation of the average Single Family bimonthly water bill is shown in the tables below. The top table shows the bills using the current rate structure. The lower table shows bills using the updated rate structure for all options.

Table 3-16. Single Family Average Water Use and Bimonthly Bills Using Current Rate Structure

	Current	FY14	FY15	FY16	FY17	FY18
Average Bimonthly Use						
Water Use, 100 cf	560,150	554,548	549,003	543,512	538,077	532,697
Accounts	6,393	6,446	6,446	6,446	6,446	6,446
Average Use						
100 cf/month	14.6	14.3	14.2	14.1	13.9	13.8
gallons per day	180	176	175	173	171	169
Bimonthly Bill						
Meter Charge	\$49.73	\$56.19	\$63.49	\$69.20	\$75.43	\$82.22
Quantity Charge						
Water Use, 100 cf	14	14	14	14	14	14
First 10 units	10	10	10	10	10	10
11 - 40 units	4	4	4	4	4	4
Rate, \$/100 cf						
First 10 units	\$2.71	\$3.06	\$3.46	\$3.74	\$4.04	\$4.36
11 - 40 units	\$3.54	\$4.00	\$4.52	\$4.88	\$5.27	\$5.69
Charge	\$41.26	\$46.60	\$52.68	\$56.92	\$61.48	\$66.36
Bimonthly Bill	\$90.99	\$102.79	\$116.17	\$126.12	\$136.91	\$148.58
Increase						
Dollars		\$11.80	\$13.38	\$9.95	\$10.79	\$11.67
Percent		13%	13%	9%	9%	9%

Table 3-17. Single Family Average Water Use and Bimonthly Bills Using All Updated Rate Structure Options

	Current	FY14	FY15	FY16	FY17	FY18
Average Bimonthly Use						
Water Use, 100 cf	560,150	554,548	549,003	543,512	538,077	532,697
Accounts	6,393	6,446	6,446	6,446	6,446	6,446
Average Use						
100 cf/month	14.6	14.3	14.2	14.1	13.9	13.8
gallons per day	180	176	175	173	171	169
Bimonthly Bill						
Meter Charge	\$49.73	\$56.19	\$63.49	\$69.20	\$75.43	\$82.22
Quantity Charge						
Water Use, 100 cf	14	14	14	14	14	14
First 8 units	10	8	8	8	8	8
9 - 30 units	4	6	6	6	6	6
Rate, \$/100 cf						
First 8 units	\$2.71	\$3.14	\$3.55	\$3.83	\$4.14	\$4.47
9 - 30 units	\$3.54	\$4.11	\$4.64	\$5.01	\$5.41	\$5.84
Charge	\$41.26	\$49.78	\$56.24	\$60.70	\$65.58	\$70.80
Bimonthly Bill	\$90.99	\$105.97	\$119.73	\$129.90	\$141.01	\$153.02
Increase						
Dollars		\$14.98	\$13.76	\$10.17	\$11.11	\$12.01
Percent		16%	13%	8%	9%	9%

Comparison of current water bills and water bills based on the two sets of FY14 recommended rates with those of other municipalities is shown in Figure 3-5.

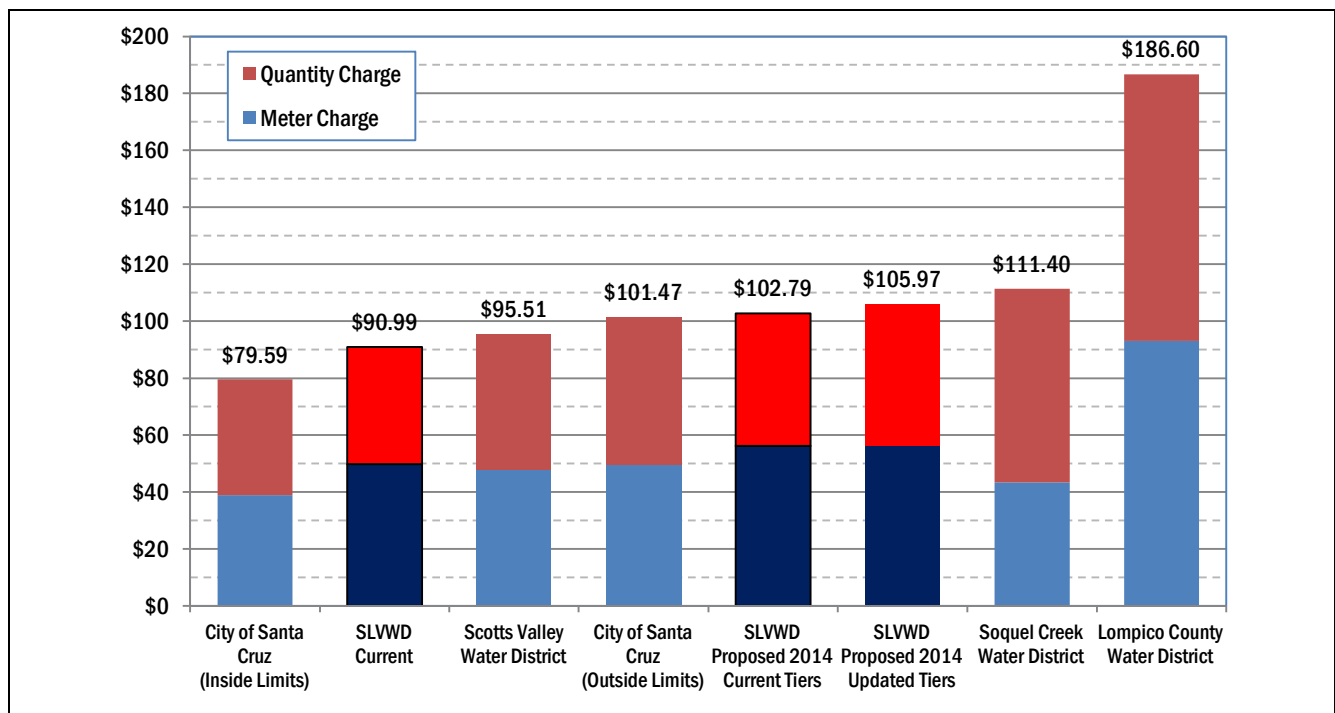


Figure 3-5. Single Family Bimonthly Water Bills Survey

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Section 4

Wastewater Rates

Revenue, expenditures, reserve levels, water rates, and debt coverage for the wastewater utility are summarized in this section.

4.1 Wastewater Operating Revenues and Expenditures

Budgeted and projected operating revenues and expenditures are shown in the table below. Revenues (except revenues from wastewater charges) and expenditures for FY13 are from the District's budget. Projected revenues and expenditures are based on annual escalation rates provided by the District.

Table 4-1. Budgeted and Projected Operating Expenditures

Item	FY13	FY14	FY15	FY16	FY17	FY18
Non-restricted Revenues [1]						
4102 Sewer Charges for Service	\$100,000	\$113,190	\$130,020	\$149,490	\$171,930	\$177,210
Total Non-restricted Revenues	\$100,000	\$113,190	\$130,020	\$149,490	\$171,930	\$177,210
Operating Expenses [2]						
Personnel	\$15,860	\$16,336	\$16,826	\$17,331	\$17,851	\$18,386
Materials & Services	\$54,950	\$56,599	\$58,296	\$60,045	\$61,847	\$63,702
Capital R&R	\$0	\$0	\$0	\$0	\$50,000	\$50,000
Total Operating Expenditures	\$70,810	\$72,934	\$75,122	\$77,376	\$129,697	\$132,088
Summary						
Non-restricted Revenues	\$100,000	\$113,190	\$130,020	\$149,490	\$171,930	\$177,210
Operating Expenditures	\$70,810	\$72,934	\$75,122	\$77,376	\$129,697	\$132,088
Net Income / (Shortfall)	\$29,190	\$40,256	\$54,898	\$72,114	\$42,233	\$45,122
Notes:						
1	Sewer Charges for Service are summarized in Table 4-2. Revenues for other Non-restricted items were provided by the District.					
2	Personnel and Materials & Services expenditures for FY13 are from the District's budget. Values for FY14 onward are escalated as shown below:					
		<u>FY14</u>	<u>FY15</u>	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>
	Personnel	3%	3%	3%	3%	3%
	Materials & Services	3%	3%	3%	3%	3%
	Capital Repair and Refurbishment (R&R) expenditures were provided by the District.					

4.2 Wastewater Enterprise Cash Flow

Cash flow for the wastewater enterprise is shown in the table and figure below.

Table 4-2. Wastewater Enterprise Cash Flow							
Item	FY13	FY14	FY15	FY16	FY17	FY18	Five Years FY14 - FY18
Beginning Balance, July 1 [1]	-\$214,603	-\$185,413	-\$145,157	-\$90,260	-\$18,146	\$24,087	
Revenues							
Non-restricted Revenues							
Wastewater Charges [2]	\$100,000	\$113,190	\$130,020	\$149,490	\$171,930	\$177,210	\$741,840
Total Revenues	\$100,000	\$113,190	\$130,020	\$149,490	\$171,930	\$177,210	\$741,840
Operating Expenditures	\$70,810	\$72,934	\$75,122	\$77,376	\$129,697	\$132,088	\$487,218
Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Project Expenditures	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interest Earnings [3]	\$0	\$0	\$0	\$0	\$0	\$241	\$241
Ending Balance	-\$185,413	-\$145,157	-\$90,260	-\$18,146	\$24,087	\$69,450	

Notes:

- The Beginning Balance for FY13 based on Unrestricted Net Assets from page 33 of the Financial Statements and Supplementary Information June 30, 2012 and 2011.
- Revenues from Wastewater Charges are calculated based on the number of users and rates shown below:

	<u>FY13</u>	<u>FY14</u>	<u>FY15</u>	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>
number of users >		55	55	55	55	55
wastewater rate, \$/2 months >	\$298	\$343	\$394	\$453	\$521	\$537
		15%	15%	15%	15%	3%
revenue >		\$113,190	\$130,020	\$149,490	\$171,930	\$177,210
- Interest Earnings for FY13 are updated from the District's budget amount to reflect a steady decrease in yield in rates on investment. Values for FY14 onward are the previous years' ending balance times the interest rates shown below provided by the District.

	<u>FY14</u>	<u>FY15</u>	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>
	1.5%	1.0%	1.0%	1.0%	1.0%

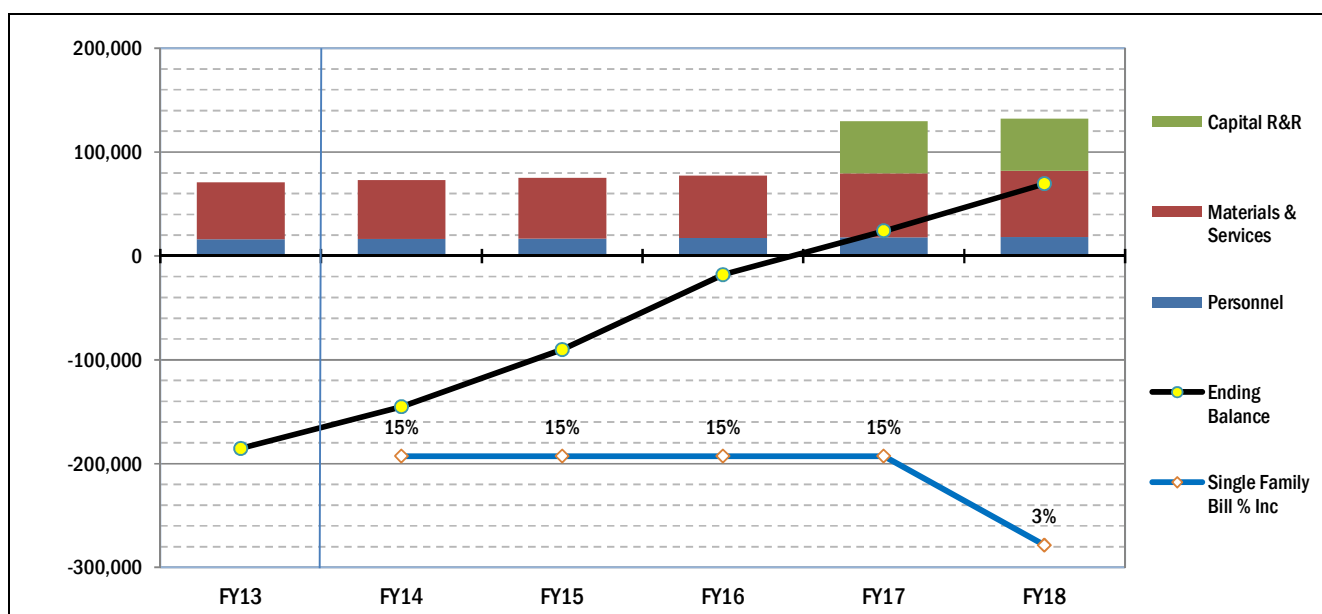


Figure 4-1. Wastewater Enterprise Cash Flow and % Increase in Single Family Bills

4.3 Wastewater Charges

Current and recommended wastewater charges are listed in the table below.

Table 4-3. Current and Recommended Wastewater Charges						
Wastewater Charges	Current	Recommended				
		FY14	FY15	FY16	FY17	FY18
Annual Increase, %		15%	15%	15%	15%	3%
Service Charge, \$/2 months	\$298	\$343	\$394	\$453	\$521	\$537

Past and current wastewater bimonthly charges from 1995 - 2013 and recommended for 2014 - 2018 are shown in the table below. The compound annual increase in charges for the 19 years, 1995 - 2013, is 8.4 percent. The compound annual increase in charges for the 24 years, 1995 - 2018 increases to 9.3 percent when the five years of recommended rate increases are included.

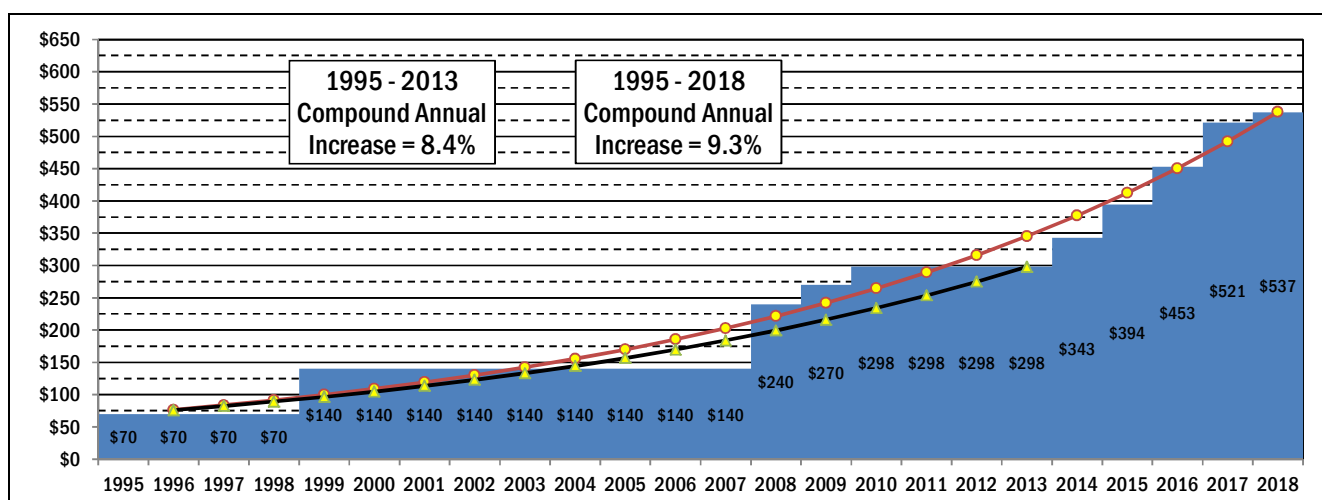


Figure 4-2. Wastewater Single Family Bills 1995 - 2018

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Section 5

Findings and Recommendations

5.1 Findings

Based on our evaluation of the District's finances, charges and customer water use data we have developed the following findings:

- Projected FY14 – FY18 operating expenditures are approximately \$29.2 million.
- Projected FY14 – FY18 capital expenditures are approximately \$11.0 million.
- Projected FY14 – FY18 debt service expenditures are approximately \$7.0 million.
- Projected FY14 – FY18 loan disbursements are approximately \$6.0 million.
- Projected FY14 – FY 18 revenue required from water charges is \$34.4 million.
- Projected FY14 – FY 18 revenue from water charges with no increase in charges is \$24.9 million.
- Annual increases in charges of 13 percent for FY14 and FY15, and approximately 9 percent in FY16, FY17 and FY18 should generate an additional \$9.1 million in revenue.
- The current tier rate structure may be made more equitable, acceptable and fair, without compromising revenue sufficiency or revenue stability, by adjusting tier unit amounts, tier prices and incorporating adjustment of tier unit amounts for multiple family residential and private mutual customer classes.

5.2 Recommendations

The following recommendations are offered regarding the District's water and wastewater service charges:

Recommendation 1. Adopt the projected water charges for the updated tier rate structure for FY14 – FY18, effective July 1 of each Fiscal Year.

Recommendation 2. Amend the water tiers structure to replace the “200 Units and Over” tier with a “100 Units and Over” tier and eliminate the “101 – 200 Units” tier.

Recommendation 3. Amend the water tiers structure as follows: a) replace the “First 10 units” tier with a “First 8 units” tier; b) replace the “11 - 40 units” tier with a “9 - 30 units” tier; and c) replace the “41 - 100 units” tier with a “31 - 100 units” tier.

Recommendation 4. Apply a flat rate (which represents the average price of water) for all water use to customers in the Commercial, Institutional and Landscape customer classes.

Recommendation 5. Adjust the tier unit amounts for multiple family residential and private mutual customer classes for the number of dwelling units served by the meter.

Recommendation 6. Adopt the projected wastewater rates for FY14 – FY18, effective July 1 of each Fiscal Year.

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Section 6

Public Review and Board Action

A summary of the public review process and actions taken by the Board of Directors and the Board's Finance Committee during the course of the studies is included in this section.

Finance Committee. District staff evaluated water and wastewater rates with its Board's Finance Committee on March 1 and March 15, 2013.

Board of Directors. District staff plan presented findings and recommendations from the draft report of the water and wastewater charge study to the Board of Directors at the March 21, 2013 meeting. The Board of Directors approved the start of the notification procedure required by Proposition 218 for the adoption of rate increases.

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Section 7

Limitations

This document was prepared solely for the San Lorenzo Valley Water District in accordance with professional standards at the time the services were performed and in accordance with the contract between San Lorenzo Valley Water District and Municipal Financial Services. This document is governed by the specific scope of work authorized by San Lorenzo Valley Water District; it is not intended to be relied upon by any other party. We have relied on information or instructions provided by San Lorenzo Valley Water District and, unless otherwise expressly indicated, have made no independent investigation as to the validity, completeness, or accuracy of such information.

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Appendix A: Monthly Water Use - 2010, 2011 and 2012 and Meters as of October 2012

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Table A-1
 Water Use by Tiers and
 Customer Class, 2010-2012

USE CODE	TIER	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10
R	First 10 units	25,410	21,373	24,105	22,656	25,905	23,786	28,259	25,607	28,013	25,183	26,648	22,328
R	11 - 40 units	13,544	6,312	8,765	8,087	15,615	13,118	36,654	22,478	36,936	19,443	25,383	8,322
R	41 - 100 units	1,574	654	690	689	1,660	1,642	11,437	5,271	12,012	3,933	4,623	987
R	101 - 200 units	336	287	36	187	252	215	1,925	958	1,788	1,189	388	255
R	Over 200 units	81	136	19	62	108	83	663	500	495	368	518	138
MR	First 10 units	1,967	2,538	1,941	2,615	1,940	2,644	2,039	2,703	2,078	2,681	2,025	2,591
MR	11 - 40 units	2,090	2,339	1,796	2,859	2,184	3,285	3,358	4,122	3,465	3,746	2,713	2,578
MR	41 - 100 units	880	646	681	810	744	1,264	1,296	1,960	1,374	1,388	922	659
MR	101 - 200 units	469	183	472	246	479	465	570	756	602	520	678	229
MR	Over 200 units	3,946	11	3,186	16	4,614	76	6,502	229	6,515	35	5,129	166
C	First 10 units	911	586	934	578	955	614	1,029	663	971	650	946	609
C	11 - 40 units	1,124	657	1,033	780	1,116	902	1,498	1,021	1,400	958	1,201	765
C	41 - 100 units	618	372	656	425	837	714	1,012	910	983	599	847	422
C	101 - 200 units	305	127	283	216	345	237	885	477	491	334	211	207
C	Over 200 units	105		63	4	107	23	260	378	94	400	48	91
I	First 10 units	257	122	261	124	291	132	300	136	291	136	294	141
I	11 - 40 units	491	166	401	173	517	252	654	280	660	300	601	282
I	41 - 100 units	558	282	443	272	607	347	903	447	918	480	764	401
I	101 - 200 units	474	292	422	263	539	425	1,231	700	1,300	725	876	290
I	Over 200 units	439	102	400	33	543	606	5,057	1,769	5,723	1,386	2,430	267
L	First 10 units	35	26	27	30	38	30	44	30	40	40	38	40
L	11 - 40 units	45	7	37	37	50	48	109	60	94	89	84	52
L	41 - 100 units	44		55	32		60	71	99	84	87	74	60
L	101 - 200 units						100	72	100	25	100	4	100
L	Over 200 units						698		1,963		986		16
PM	First 10 units	30	30	30	30	30	30	30	30	30	30	30	10
PM	11 - 40 units	90	90	71	90	63	90	90	90	90	90	90	30
PM	41 - 100 units	126	180	120	180	120	180	180	180	155	180	123	36
PM	101 - 200 units	200	206	200	239	200	283	272	233	200	293	200	-2
PM	Over 200 units	73	536	292	535	196	544	474	1,529	716	1,291	358	-585
S	First 10 units	22		1		5		19		27		44	
S	11 - 40 units	6						5				27	
S	41 - 100 units												
S	101 - 200 units												
S	Over 200 units												
O	First 10 units	35		32		29		34		40		38	
O	11 - 40 units	56		51		23		57		68		55	
O	41 - 100 units	31		60				25		33		2	
O	101 - 200 units			8									
O	Over 200 units												
V	First 10 units		1			8	6	11	13	10	30	5	5
V	11 - 40 units								4		7		
V	41 - 100 units												
V	101 - 200 units												
V	Over 200 units												
TOTAL		56,372	38,261	47,571	42,268	60,120	52,899	107,025	75,696	107,721	67,677	78,417	41,490
SUMMARY BY CLASS													
R		40,945	28,762	33,615	31,681	43,540	38,844	78,938	54,814	79,244	50,116	57,560	32,030
MR		9,352	5,717	8,076	6,546	9,961	7,734	13,765	9,770	14,034	8,370	11,467	6,223
C		3,063	1,742	2,969	2,003	3,360	2,490	4,684	3,449	3,939	2,941	3,253	2,094
I		2,219	964	1,927	865	2,497	1,762	8,145	3,332	8,892	3,027	4,965	1,381
L		124	33	119	99	88	936	296	2,252	243	1,302	200	268
PM		519	1,042	713	1,074	609	1,127	1,046	2,062	1,191	1,884	801	-511
S		28	0	1	0	5	0	24	0	27	0	71	0
O		122	0	151	0	52	0	116	0	141	0	95	0
V		0	1	0	0	8	6	11	17	10	37	5	5
TOTAL		56,372	38,261	47,571	42,268	60,120	52,899	107,025	75,696	107,721	67,677	78,417	41,490
SUMMARY BY TIER													
First 10 units		28,667	24,676	27,331	26,033	29,201	27,242	31,765	29,182	31,500	28,750	30,068	25,724
11 - 40 units		17,446	9,571	12,154	12,026	19,568	17,695	42,425	28,055	42,713	24,633	30,154	12,029
41 - 100 units		3,831	2,134	2,705	2,408	3,968	4,207	14,924	8,867	15,559	6,667	7,355	2,565
101 - 200 units		1,784	1,095	1,421	1,151	1,815	1,725	4,955	3,224	4,406	3,161	2,357	1,079
Over 200 units		4,644	785	3,960	650	5,568	2,030	12,956	6,368	13,543	4,466	8,483	93
TOTAL		56,372	38,261	47,571	42,268	60,120	52,899	107,025	75,696	107,721	67,677	78,417	41,490

Table A-1
Water Use by Tiers and
Customer Class, 2010-2012

USE CODE	TIER	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
R	First 10 units	25,422	22,157	24,598	22,253	26,308	23,715	27,939	25,371	28,164	24,893	26,313	22,422
R	11 - 40 units	12,151	7,492	10,020	7,623	17,007	12,574	32,188	20,736	36,101	17,189	20,630	8,162
R	41 - 100 units	1,126	988	1,031	632	2,025	1,538	8,406	4,368	11,403	3,490	3,176	981
R	101 - 200 units	118	353	225	358	541	339	1,470	561	1,564	779	488	156
R	Over 200 units	98	54	38	229	414	65	554	137	828	98	151	
MR	First 10 units	1,963	2,564	1,935	2,581	1,947	2,638	2,021	2,715	2,011	2,668	1,976	2,571
MR	11 - 40 units	2,225	2,771	1,868	2,849	2,243	3,346	3,188	4,154	3,373	3,603	2,375	2,704
MR	41 - 100 units	758	832	664	959	734	1,354	1,269	1,928	1,371	1,410	772	944
MR	101 - 200 units	516	277	458	248	456	462	524	775	601	673	445	542
MR	Over 200 units	4,529	703	3,494	65	4,670	41	6,512	403	6,918	99	4,512	36
C	First 10 units	920	600	926	622	956	643	1,007	703	1,020	639	984	608
C	11 - 40 units	1,122	790	1,098	864	1,167	957	1,395	1,161	1,477	1,015	1,190	862
C	41 - 100 units	734	427	667	573	837	711	1,022	966	1,037	688	898	455
C	101 - 200 units	190	204	144	193	297	290	673	519	668	336	469	132
C	Over 200 units	53		21		40	35	246	415	257	185	27	
I	First 10 units	265	137	261	144	279	138	288	145	289	135	280	138
I	11 - 40 units	427	247	425	248	547	280	639	327	620	313	541	281
I	41 - 100 units	510	325	471	385	699	431	925	543	873	550	680	471
I	101 - 200 units	613	277	519	215	923	603	1,184	804	1,300	732	813	361
I	Over 200 units	992	431	605	174	1,582	594	5,366	1,648	5,973	1,584	2,023	51
L	First 10 units	21	39	30	40	40	40	40	40	32	30	30	31
L	11 - 40 units	44	62	44	50	59	97	97	95	90	60	55	43
L	41 - 100 units	5	120	46	60	60	168	67	143	95	120	60	60
L	101 - 200 units		38		100	29	110		146	94	116	22	22
L	Over 200 units				36		809		1,650		641		
PM	First 10 units	30	30	30	30	30	30	30	30	30	30	30	30
PM	11 - 40 units	90	90	85	90	86	90	90	90	90	90	90	90
PM	41 - 100 units	124	155	120	147	120	160	142	180	169	180	120	157
PM	101 - 200 units	200	165	200	125	200	200	200	245	200	221	200	161
PM	Over 200 units	263	379	126		190	777	531	2,066	530	1,085	180	325
S	First 10 units	8		5		17		27		35		30	
S	11 - 40 units							9		8		7	
S	41 - 100 units												
S	101 - 200 units												
S	Over 200 units												
O	First 10 units	30		29		29		36		40		40	
O	11 - 40 units	26		16		24		56		60		55	
O	41 - 100 units							6					
O	101 - 200 units												
O	Over 200 units												
V	First 10 units	1	2		2	2	2	6	12	7	9	3	3
V	11 - 40 units												
V	41 - 100 units												
V	101 - 200 units												
V	Over 200 units												
TOTAL		55,574	42,709	50,199	41,895	64,558	53,237	98,153	73,076	107,328	63,661	69,583	42,799
SUMMARY BY CLASS													
R		38,915	31,044	35,912	31,095	46,295	38,231	70,557	51,173	78,060	46,449	50,758	31,721
MR		9,991	7,147	8,419	6,702	10,050	7,841	13,514	9,975	14,274	8,453	10,080	6,797
C		3,019	2,021	2,856	2,252	3,297	2,636	4,343	3,764	4,459	2,863	3,568	2,057
I		2,807	1,417	2,281	1,166	4,030	2,046	8,402	3,467	9,055	3,314	4,337	1,302
L		70	259	120	286	188	1,224	204	2,074	311	967	85	156
PM		707	819	561	392	626	1,257	993	2,611	1,019	1,606	620	763
S		8	0	5	0	17	0	36	0	43	0	37	0
O		56	0	45	0	53	0	98	0	100	0	95	0
V		1	2	0	2	2	2	6	12	7	9	3	3
TOTAL		55,574	42,709	50,199	41,895	64,558	53,237	98,153	73,076	107,328	63,661	69,583	42,799
SUMMARY BY TIER													
First 10 units		28,660	25,529	27,814	25,672	29,608	27,206	31,394	29,016	31,628	28,404	29,686	25,803
11 - 40 units		16,085	11,452	13,556	11,724	21,133	17,344	37,662	26,563	41,819	22,270	24,943	12,142
41 - 100 units		3,257	2,847	2,999	2,756	4,475	4,362	11,837	8,128	14,948	6,438	5,646	3,068
101 - 200 units		1,637	1,314	1,546	1,239	2,446	2,004	4,051	3,050	4,427	2,857	2,415	1,374
Over 200 units		5,935	1,567	4,284	504	6,896	2,321	13,209	6,319	14,506	3,692	6,893	412
TOTAL		55,574	42,709	50,199	41,895	64,558	53,237	98,153	73,076	107,328	63,661	69,583	42,799

Table A-1
 Water Use by Tiers and
 Customer Class, 2010-2012

USE CODE	TIER	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12
R	First 10 units	26,131	22,686	25,187	21,602	26,169	24,539	28,452	25,239	28,211	24,754	27,225	22,066
R	11 - 40 units	15,314	8,587	12,425	6,334	15,860	16,277	38,911	21,747	37,048	18,362	25,909	7,715
R	41 - 100 units	1,987	898	1,075	575	1,401	2,600	12,985	6,100	11,950	4,005	5,505	852
R	101 - 200 units	646	355	375	263	296	110	2,300	1,112	1,652	514	817	241
R	Over 200 units	732	45	57	73	368	142	1,217	412	1,367	92	644	
MR	First 10 units	1,955	2,604	1,923	2,558	1,931	2,683	2,012	2,726	1,987	2,668	1,983	2,574
MR	11 - 40 units	2,301	2,977	1,979	2,675	2,109	3,805	3,544	4,214	3,283	3,812	2,705	2,629
MR	41 - 100 units	837	1,176	749	865	707	1,834	1,484	2,110	1,416	1,594	953	903
MR	101 - 200 units	495	427	444	260	458	822	665	862	862	565	459	239
MR	Over 200 units	5,200	160	3,900	127	4,766	437	8,726	345	8,226	125	7,128	
C	First 10 units	924	613	927	587	949	654	1,001	687	987	675	999	611
C	11 - 40 units	1,070	884	982	735	1,103	964	1,470	1,110	1,371	1,117	1,321	734
C	41 - 100 units	727	590	736	466	875	704	1,116	789	964	799	917	395
C	101 - 200 units	281	170	236	109	427	401	734	538	670	445	477	230
C	Over 200 units	40		16		35	7	281	75	78	203	28	311
I	First 10 units	266	135	269	131	275	123	293	127	294	127	294	135
I	11 - 40 units	465	276	477	232	516	296	615	302	640	306	582	313
I	41 - 100 units	547	370	541	360	561	461	898	489	900	489	792	437
I	101 - 200 units	712	253	659	293	651	700	1,274	712	1,279	716	910	406
I	Over 200 units	1,444	76	942	14	1,597	1,098	7,801	2,682	6,014	1,397	2,242	375
L	First 10 units	30	30	30	40	30	40	30	37	30	30	30	21
L	11 - 40 units	45	67	49	84	71	94	90	70	90	61	86	8
L	41 - 100 units	2	31	51	120	20	180	112	120	91	120	76	
L	101 - 200 units				92		230	17	179		124		
L	Over 200 units						1,471		1,648		743		
PM	First 10 units	30	30	30	30	30	30	30	30	30	20	30	30
PM	11 - 40 units	90	90	85	90	90	90	90	90	90	60	90	90
PM	41 - 100 units	121	158	120	142	130	178	180	180	162	120	134	86
PM	101 - 200 units	200	151	197	143	200	200	205	201	200	108	200	83
PM	Over 200 units	61	302	76	273	184	850	531	243	391	104	206	
S	First 10 units	26		12		14		25		39		51	
S	11 - 40 units	15						20		69		62	
S	41 - 100 units									69		10	
S	101 - 200 units									22			
S	Over 200 units												
O	First 10 units	36		34		39		40		37		36	
O	11 - 40 units	20		23		27		81		80		52	
O	41 - 100 units							5		6		8	
O	101 - 200 units												
O	Over 200 units												
V	First 10 units	1	3		2	2	9	4	28	8	17	2	5
V	11 - 40 units								4				
V	41 - 100 units												
V	101 - 200 units												
V	Over 200 units												
TOTAL		62,751	44,144	54,606	39,275	61,891	62,029	117,239	75,208	110,613	64,272	82,963	41,489
SUMMARY BY CLASS													
R		44,810	32,571	39,119	28,847	44,094	43,668	83,865	54,610	80,228	47,727	60,100	30,874
MR		10,788	7,344	8,995	6,485	9,971	9,581	16,431	10,257	15,774	8,764	13,228	6,345
C		3,042	2,257	2,897	1,897	3,389	2,730	4,602	3,199	4,070	3,239	3,742	2,281
I		3,434	1,110	2,888	1,030	3,600	2,678	10,881	4,312	9,127	3,035	4,820	1,666
L		77	128	130	336	121	2,015	249	2,054	211	1,078	192	29
PM		502	731	508	678	634	1,348	1,036	744	873	412	660	289
S		41	0	12	0	14	0	45	0	199	0	123	0
O		56	0	57	0	66	0	126	0	123	0	96	0
V		1	3	0	2	2	9	4	32	8	17	2	5
TOTAL		62,751	44,144	54,606	39,275	61,891	62,029	117,239	75,208	110,613	64,272	82,963	41,489
SUMMARY BY TIER													
First 10 units		29,399	26,101	28,412	24,950	29,439	28,078	31,887	28,874	31,623	28,291	30,650	25,442
11 - 40 units		19,320	12,881	16,020	10,150	19,776	21,526	44,821	27,537	42,671	23,718	30,807	11,489
41 - 100 units		4,221	3,223	3,272	2,528	3,694	5,957	16,780	9,788	15,558	7,127	8,395	2,673
101 - 200 units		2,334	1,356	1,911	1,160	2,032	2,463	5,195	3,604	4,685	2,472	2,863	1,199
Over 200 units		7,477	583	4,991	487	6,950	4,005	18,556	5,405	16,076	2,664	10,248	686
TOTAL		62,751	44,144	54,606	39,275	61,891	62,029	117,239	75,208	110,613	64,272	82,963	41,489

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Table A-2
 Water Use by Tiers and
 Customer Class, 2010-2012

USE CODE	TIER	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10
R	First 8 units	21,590	18,881	20,872	19,701	21,923	20,379	23,247	21,472	23,051	21,260	22,276	19,484
R	9 - 30 units	16,197	8,378	11,419	10,521	18,159	15,204	34,830	23,233	34,780	20,696	26,016	10,425
R	31 - 100 units	2,695	1,064	1,239	1,200	3,086	2,963	18,265	8,639	19,096	6,603	8,344	1,708
R	101 - 200 units	336	287	36	187	252	215	1,925	958	1,788	1,189	388	255
R	Over 200 units	81	136	19	62	108	83	663	500	495	368	518	138
MR	First 8 units	1,619	2,119	1,611	2,163	1,589	2,179	1,650	2,211	1,678	2,201	1,650	2,149
MR	9 - 30 units	2,058	2,420	1,866	2,834	2,210	3,163	3,087	3,785	3,144	3,507	2,630	2,627
MR	31 - 100 units	1,260	984	941	1,287	1,069	1,851	1,956	2,789	2,095	2,107	1,380	1,052
MR	101 - 200 units	469	183	472	246	479	465	570	756	602	520	678	229
MR	Over 200 units	3,946	11	3,186	16	4,614	76	6,502	229	6,515	35	5,129	166
C	First 8 units	771	500	789	489	807	518	852	550	797	542	791	518
C	9 - 30 units	995	621	973	691	1,026	787	1,332	887	1,253	841	1,099	687
C	31 - 100 units	887	494	861	603	1,075	925	1,351	1,157	1,296	824	1,104	591
C	101 - 200 units	305	127	283	216	345	237	885	477	491	334	211	207
C	Over 200 units	105		63	4	107	23	260	378	94	400	48	91
I	First 8 units	257	122	261	124	291	132	300	136	291	136	294	141
I	9 - 30 units	491	166	401	173	517	252	654	280	660	300	601	282
I	31 - 100 units	558	282	443	272	607	347	903	447	918	480	764	401
I	101 - 200 units	474	292	422	263	539	425	1,231	700	1,300	725	876	290
I	Over 200 units	439	102	400	33	543	606	5,057	1,769	5,723	1,386	2,430	267
L	First 8 units	29	23	23	25	32	24	36	24	32	32	32	32
L	9 - 30 units	41	10	31	32	48	44	87	46	74	68	66	50
L	31 - 100 units	54		65	42	8	70	101	119	112	116	98	70
L	101 - 200 units						100	72	100	25	100	4	100
L	Over 200 units						698		1,963		986		16
PM	First 8 units	24	24	24	24	24	24	24	24	24	24	24	8
PM	9 - 30 units	66	66	57	66	49	66	66	66	66	66	66	22
PM	31 - 100 units	156	210	140	210	140	210	210	210	185	210	153	46
PM	101 - 200 units	200	206	200	239	200	283	272	233	200	293	200	-2
PM	Over 200 units	73	536	292	535	196	544	474	1,529	716	1,291	358	-585
S	First 8 units	18		1		5		17		25		38	
S	9 - 30 units	10						7		2		33	
S	31 - 100 units												
S	101 - 200 units												
S	Over 200 units												
O	First 8 units	29		26		25		28		32		32	
O	9 - 30 units	52		47		27		53		66		51	
O	31 - 100 units	41		70				35		43		12	
O	101 - 200 units			8									
O	Over 200 units												
V	First 8 units		1			8	6	11	11	10	25	5	5
V	9 - 30 units								6		12		
V	31 - 100 units												
V	101 - 200 units												
V	Over 200 units												
TOTAL		56,326	38,245	47,541	42,258	60,108	52,899	107,013	75,684	107,679	67,677	78,399	41,470
SUMMARY BY CLASS													
R		40,899	28,746	33,585	31,671	43,528	38,844	78,930	54,802	79,210	50,116	57,542	32,010
MR		9,352	5,717	8,076	6,546	9,961	7,734	13,765	9,770	14,034	8,370	11,467	6,223
C		3,063	1,742	2,969	2,003	3,360	2,490	4,680	3,449	3,931	2,941	3,253	2,094
I		2,219	964	1,927	865	2,497	1,762	8,145	3,332	8,892	3,027	4,965	1,381
L		124	33	119	99	88	936	296	2,252	243	1,302	200	268
PM		519	1,042	713	1,074	609	1,127	1,046	2,062	1,191	1,884	801	-511
S		28	0	1	0	5	0	24	0	27	0	71	0
O		122	0	151	0	52	0	116	0	141	0	95	0
V		0	1	0	0	8	6	11	17	10	37	5	5
TOTAL		56,326	38,245	47,541	42,258	60,108	52,899	107,013	75,684	107,679	67,677	78,399	41,470
SUMMARY BY TIER													
First 8 units		24,337	21,670	23,607	22,526	24,704	23,262	26,165	24,428	25,940	24,220	25,142	22,337
9 - 30 units		19,910	11,661	14,794	14,317	22,036	19,516	40,116	28,303	40,045	25,490	30,562	14,093
31 - 100 units		5,651	3,034	3,759	3,614	5,985	6,366	22,821	13,361	23,745	10,340	11,855	3,868
101 - 200 units		1,784	1,095	1,421	1,151	1,815	1,725	4,955	3,224	4,406	3,161	2,357	1,079
Over 200 units		4,644	785	3,960	650	5,568	2,030	12,956	6,368	13,543	4,466	8,483	93
TOTAL		56,326	38,245	47,541	42,258	60,108	52,899	107,013	75,684	107,679	67,677	78,399	41,470

Table A-2
Water Use by Tiers and
Customer Class, 2010-2012

USE CODE	TIER	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
R	First 8 units	21,674	19,372	21,183	19,436	22,184	20,370	23,111	21,398	23,199	21,107	22,204	19,622
R	9 - 30 units	14,866	9,785	12,691	9,889	19,487	14,585	31,476	21,712	34,331	18,668	22,082	10,255
R	31 - 100 units	2,107	1,480	1,739	1,163	3,649	2,866	13,946	7,359	18,132	5,777	5,833	1,688
R	101 - 200 units	118	353	225	358	541	339	1,470	561	1,564	779	488	156
R	Over 200 units	98	54	38	229	414	65	554	137	828	98	151	
MR	First 8 units	1,606	2,115	1,602	2,127	1,603	2,175	1,636	2,218	1,635	2,181	1,620	2,136
MR	9 - 30 units	2,210	2,738	1,923	2,811	2,270	3,172	2,970	3,779	3,099	3,381	2,311	2,669
MR	31 - 100 units	1,130	1,314	942	1,451	1,051	1,991	1,872	2,800	2,021	2,119	1,192	1,414
MR	101 - 200 units	516	277	458	248	456	462	524	775	601	673	445	542
MR	Over 200 units	4,529	703	3,494	65	4,670	41	6,512	403	6,918	99	4,512	36
C	First 8 units	782	510	782	529	804	539	835	584	848	536	820	519
C	9 - 30 units	1,006	709	996	761	1,040	828	1,237	982	1,294	867	1,081	744
C	31 - 100 units	988	598	913	769	1,116	944	1,352	1,262	1,392	939	1,171	662
C	101 - 200 units	190	204	144	193	297	290	673	519	668	336	469	132
C	Over 200 units	53		21		40	35	246	415	257	185	27	
I	First 8 units	265	137	261	144	279	138	288	145	289	135	280	138
I	9 - 30 units	427	247	425	248	547	280	639	327	620	313	541	281
I	31 - 100 units	510	325	471	385	699	431	925	543	873	550	680	471
I	101 - 200 units	613	277	519	215	923	603	1,184	804	1,300	732	813	361
I	Over 200 units	992	431	605	174	1,582	594	5,366	1,648	5,973	1,584	2,023	51
L	First 8 units	17	32	24	32	32	32	32	32	26	24	24	25
L	9 - 30 units	38	49	40	48	57	75	75	73	66	46	56	39
L	31 - 100 units	15	140	56	70	70	198	97	173	125	140	5	70
L	101 - 200 units		38		100	29	110		146	94	116		22
L	Over 200 units				36		809		1,650		641		
PM	First 8 units	24	24	24	24	24	24	24	24	24	24	24	24
PM	9 - 30 units	66	66	66	66	66	66	66	66	66	66	66	66
PM	31 - 100 units	154	185	145	177	146	190	172	210	199	210	150	187
PM	101 - 200 units	200	165	200	125	200	200	200	245	200	221	200	161
PM	Over 200 units	263	379	126	547	190	777	531	2,066	530	1,085	180	325
S	First 8 units	8		5		17		25		31		28	
S	9 - 30 units							11		12		9	
S	31 - 100 units												
S	101 - 200 units												
S	Over 200 units												
O	First 8 units	26		25		25		30		32		32	
O	9 - 30 units	29		20		28		52		59		63	
O	31 - 100 units	1						16		9			
O	101 - 200 units												
O	Over 200 units												
V	First 8 units	1	2		2	2	2	6	11	7	9	3	3
V	9 - 30 units												
V	31 - 100 units												
V	101 - 200 units												
V	Over 200 units												
TOTAL		55,522	42,709	50,163	42,422	64,538	53,231	98,153	73,067	107,322	63,641	69,583	42,799
SUMMARY BY CLASS													
R		38,863	31,044	35,876	31,075	46,275	38,225	70,557	51,167	78,054	46,429	50,758	31,721
MR		9,991	7,147	8,419	6,702	10,050	7,841	13,514	9,975	14,274	8,453	10,080	6,797
C		3,019	2,021	2,856	2,252	3,297	2,636	4,343	3,762	4,459	2,863	3,568	2,057
I		2,807	1,417	2,281	1,166	4,030	2,046	8,402	3,467	9,055	3,314	4,337	1,302
L		70	259	120	286	188	1,224	204	2,074	311	967	85	156
PM		707	819	561	939	626	1,257	993	2,611	1,019	1,606	620	763
S		8	0	5	0	17	0	36	0	43	0	37	0
O		56	0	45	0	53	0	98	0	100	0	95	0
V		1	2	0	2	2	2	6	11	7	9	3	3
TOTAL		55,522	42,709	50,163	42,422	64,538	53,231	98,153	73,067	107,322	63,641	69,583	42,799
SUMMARY BY TIER													
First 8 units		24,403	22,192	23,906	22,294	24,970	23,280	25,987	24,412	26,091	24,016	25,035	22,467
9 - 30 units		18,642	13,594	16,161	13,823	23,495	19,006	36,526	26,939	39,547	23,341	26,209	14,054
31 - 100 units		4,905	4,042	4,266	4,015	6,731	6,620	18,380	12,347	22,751	9,735	9,031	4,492
101 - 200 units		1,637	1,314	1,546	1,239	2,446	2,004	4,051	3,050	4,427	2,857	2,415	1,374
Over 200 units		5,935	1,567	4,284	1,051	6,896	2,321	13,209	6,319	14,506	3,692	6,893	412
TOTAL		55,522	42,709	50,163	42,422	64,538	53,231	98,153	73,067	107,322	63,641	69,583	42,799

Table A-2
 Water Use by Tiers and
 Customer Class, 2010-2012

USE CODE	TIER	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12
R	First 8 units	22,168	19,750	21,553	19,052	22,116	20,889	23,391	21,303	23,273	20,984	22,750	19,325
R	9 - 30 units	17,792	10,858	14,933	8,532	18,530	17,875	36,403	22,195	34,845	19,590	26,521	9,793
R	31 - 100 units	3,472	1,563	2,179	927	2,784	4,652	20,554	9,588	19,091	6,547	9,467	1,515
R	101 - 200 units	646	355	375	263	296	110	2,300	1,112	1,652	514	864	241
R	Over 200 units	732	45	57	73	368	142	1,217	412	1,367	92	644	
MR	First 8 units	1,606	2,149	1,587	2,118	1,586	2,198	1,628	2,225	1,616	2,185	1,617	2,137
MR	9 - 30 units	2,242	2,894	1,986	2,667	2,136	3,502	3,184	3,790	2,995	3,533	2,630	2,636
MR	31 - 100 units	1,245	1,714	1,078	1,313	1,025	2,622	2,228	3,035	2,073	2,356	1,394	1,333
MR	101 - 200 units	495	427	444	260	458	822	665	862	862	565	459	239
MR	Over 200 units	5,200	160	3,900	127	4,766	437	8,726	345	8,226	125	7,128	
C	First 8 units	777	519	789	499	798	551	829	572	825	563	830	515
C	9 - 30 units	949	767	866	664	980	847	1,300	948	1,227	959	1,192	683
C	31 - 100 units	991	801	990	625	1,149	924	1,458	1,066	1,270	1,069	1,215	536
C	101 - 200 units	281	170	236	109	427	401	734	538	670	445	477	230
C	Over 200 units	40		16		35	7	281	75	78	203	28	311
I	First 8 units	266	135	269	131	275	123	293	127	294	127	294	135
I	9 - 30 units	465	276	477	232	516	296	615	302	640	306	582	313
I	31 - 100 units	547	370	541	360	561	461	898	489	900	489	792	437
I	101 - 200 units	712	253	659	293	651	700	1,274	712	1,279	716	910	406
I	Over 200 units	1,444	76	942	14	1,597	1,098	7,801	2,682	6,014	1,397	2,242	375
L	First 8 units	24	24	24	32	24	32	24	31	24	24	24	17
L	9 - 30 units	41	54	45	70	60	72	66	56	66	47	66	12
L	31 - 100 units	12	50	61	142	37	210	142	140	121	140	102	
L	101 - 200 units				92		230	17	179		124		
L	Over 200 units						1,471		1,648		743		
PM	First 8 units	24	24	24	24	24	24	24	24	24	16	24	24
PM	9 - 30 units	66	66	66	66	66	66	66	66	66	44	66	66
PM	31 - 100 units	151	188	145	172	160	208	210	210	192	140	164	116
PM	101 - 200 units	200	151	197	143	200	200	205	201	200	108	200	83
PM	Over 200 units	61	302	76	273	184	850	531	243	391	104	206	
S	First 8 units	24		12		14		21		33		45	
S	9 - 30 units	17						24		55		48	
S	31 - 100 units									89		30	
S	101 - 200 units									22			
S	Over 200 units												
O	First 8 units	30		28		32		32		31		30	
O	9 - 30 units	26		29		34		71		66		48	
O	31 - 100 units							23		26		18	
O	101 - 200 units												
O	Over 200 units												
V	First 8 units	1	3		2	2	9	4	26	8	17	2	5
V	9 - 30 units								6				
V	31 - 100 units												
V	101 - 200 units												
V	Over 200 units												
TOTAL		62,747	44,144	54,584	39,275	61,891	62,029	117,239	75,208	110,611	64,272	83,109	41,483
SUMMARY BY CLASS													
R		44,810	32,571	39,097	28,847	44,094	43,668	83,865	54,610	80,228	47,727	60,246	30,874
MR		10,788	7,344	8,995	6,485	9,971	9,581	16,431	10,257	15,772	8,764	13,228	6,345
C		3,038	2,257	2,897	1,897	3,389	2,730	4,602	3,199	4,070	3,239	3,742	2,275
I		3,434	1,110	2,888	1,030	3,600	2,678	10,881	4,312	9,127	3,035	4,820	1,666
L		77	128	130	336	121	2,015	249	2,054	211	1,078	192	29
PM		502	731	508	678	634	1,348	1,036	744	873	412	660	289
S		41	0	12	0	14	0	45	0	199	0	123	0
O		56	0	57	0	66	0	126	0	123	0	96	0
V		1	3	0	2	2	9	4	32	8	17	2	5
TOTAL		62,747	44,144	54,584	39,275	61,891	62,029	117,239	75,208	110,611	64,272	83,109	41,483
SUMMARY BY TIER													
First 8 units		24,920	22,604	24,286	21,858	24,871	23,826	26,246	24,308	26,128	23,916	25,616	22,158
9 - 30 units		21,598	14,915	18,402	12,231	22,322	22,658	41,729	27,363	39,960	24,479	31,153	13,503
31 - 100 units		6,418	4,686	4,994	3,539	5,716	9,077	25,513	14,528	23,762	10,741	13,182	3,937
101 - 200 units		2,334	1,356	1,911	1,160	2,032	2,463	5,195	3,604	4,685	2,472	2,910	1,199
Over 200 units		7,477	583	4,991	487	6,950	4,005	18,556	5,405	16,076	2,664	10,248	686
TOTAL		62,747	44,144	54,584	39,275	61,891	62,029	117,239	75,208	110,611	64,272	83,109	41,483

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Table A-3

Water Meters by Customer Class and Size, 2013

Meter Size	Customer Class										Total	Total Less "FS"
	Single	Multi	Comm	Inst/ Govt	Ldscp	Private	Surplus	Fire	Other	Vacant		
	Res R	Res MR	C	I	L	Mutuals PM	S	Service FS	O	V		
5/8	5,978	35	2	30	7			39	4	54	6,149	6,095
5/8A	2	400	12	1		2					417	417
5/8B		8	1			1					10	10
5/8C		1									1	1
3/4	209		163				32		1	2	407	405
3/4A		4									4	4
1		46	26	8	3				1	1	85	84
1A	86					1					87	87
1B		1									1	1
1F/K	113	2								1	116	115
1-1/2	1	5	8	8	1						23	23
1-1/2A		2									2	2
1-1/2C											0	0
1-1/2F	1			1							2	2
1-1/2G	1										1	1
1-1/2S						1					1	1
2	1	6	9	8	1	2		2	3		32	32
2A		1									1	1
2G/L	1			1							2	2
3		1		2							3	3
4				1							1	1
Total	6,393	512	221	60	12	7	32	41	9	58	7,345	7,287
% of Total	87%	7%	3%	0.8%	0.2%	0.1%	0.4%	0.6%	0.1%	0.8%	100%	

Source: "Meters in Ground by User/Size" report dated February 6, 2013.

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Appendix B: Projected Water Use and Meters

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Table B-1
 Projected Water Use by Tier, FY13 - FY18

Customer Class	2010	2011	2012	FY13	FY14	FY15	FY16	FY17	FY18
First 10 units	340,000	340,000	343,000	340,000	341,000	342,000	344,000	346,000	348,000
11 - 40 units	268,000	257,000	281,000	262,500	258,000	253,000	247,000	241,000	235,000
41 - 100 units	75,000	71,000	83,000	73,000	72,000	70,000	68,000	66,000	64,000
101 - 200 units	28,000	28,000	31,000	28,000	27,000	26,000	25,000	24,000	23,000
Over 200 units	64,000	67,000	78,000	65,500	64,000	63,000	62,000	61,000	60,000
Flat Rate									
Total	775,000	763,000	816,000	769,000	762,000	754,000	746,000	738,000	730,000
	<i>target from projected use by class ></i>			769,145	761,453	753,839	746,300	738,837	731,449
	<i>one-time increase from Olympia MWC in FY14 ></i>			14	100 cf/2mo	53	accts	4,452	100 cf/yr

Annual % Reduction	FY14	FY15	FY16	FY17	FY18
First 10 units	-0.4%	-0.4%	-0.5%	-0.5%	-0.5%
11 - 40 units	1.9%	2.1%	2.2%	2.3%	2.3%
41 - 100 units	1.9%	2.1%	2.2%	2.3%	2.3%
101 - 200 units	1.9%	2.1%	2.2%	2.3%	2.3%
Over 200 units	1.9%	2.1%	2.2%	2.3%	2.3%
Total	0.9%	1.1%	1.1%	1.1%	1.1%

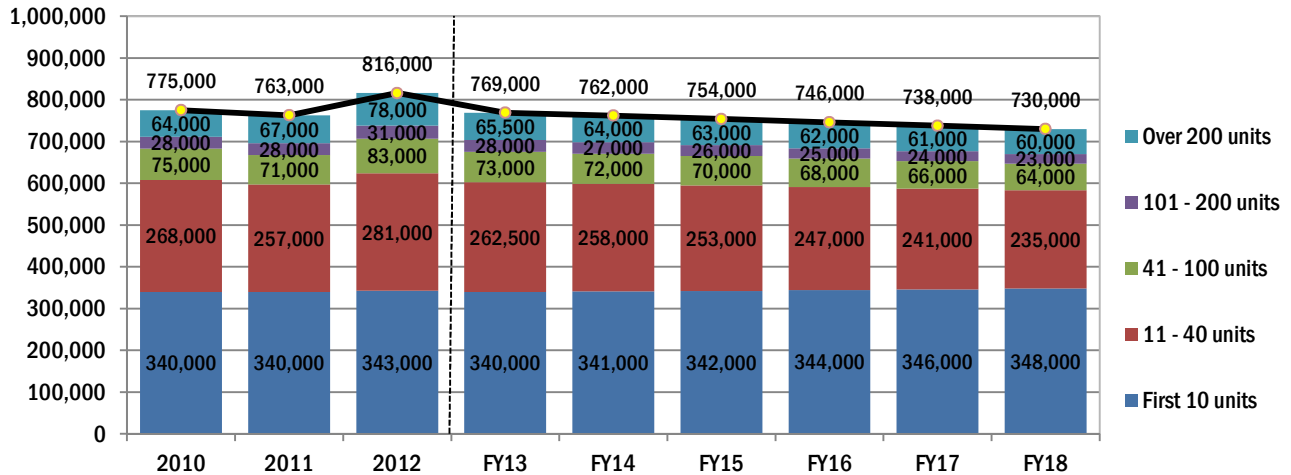


Table B-2
 Projected Water Use by Tier, FY13 - FY18

Customer Class	FY13	FY14	FY15	FY16	FY17	FY18
First 8 units	310,931	314,000	315,000	316,000	317,000	318,000
9 - 30 units	274,700	269,000	264,000	259,000	254,000	249,000
31 - 100 units	85,914	84,000	82,000	80,000	78,000	76,000
101 - 200 units	9,021	9,000	9,000	9,000	9,000	9,000
Over 200 units	3,566	3,000	3,000	3,000	3,000	3,000
Flat Rate	85,101	83,000	81,000	79,000	77,000	75,000
Total	769,000	762,000	754,000	746,000	738,000	730,000
<i>target from projected use by class ></i>	<i>769,145</i>	<i>761,453</i>	<i>753,839</i>	<i>746,300</i>	<i>738,837</i>	<i>731,449</i>
<i>one-time increase from Olympia MWC in FY14 ></i>	<i>14</i>	<i>100 cf/2mo</i>	<i>53</i>	<i>accts</i>	<i>4,452</i>	<i>100 cf/yr</i>

Annual % Reduction	FY14	FY15	FY16	FY17	FY18
First 8 units	-0.9%	-0.4%	-0.4%	-0.4%	-0.4%
9 - 30 units	1.9%	1.9%	1.9%	1.9%	2.0%
31 - 100 units	1.9%	1.9%	1.9%	1.9%	2.0%
101 - 200 units	1.9%	1.9%	1.9%	1.9%	2.0%
Over 200 units	1.9%	1.9%	1.9%	1.9%	2.0%
Flat Rate	1.9%	1.9%	1.9%	1.9%	2.0%
Total	0.9%	1.1%	1.1%	1.1%	1.1%

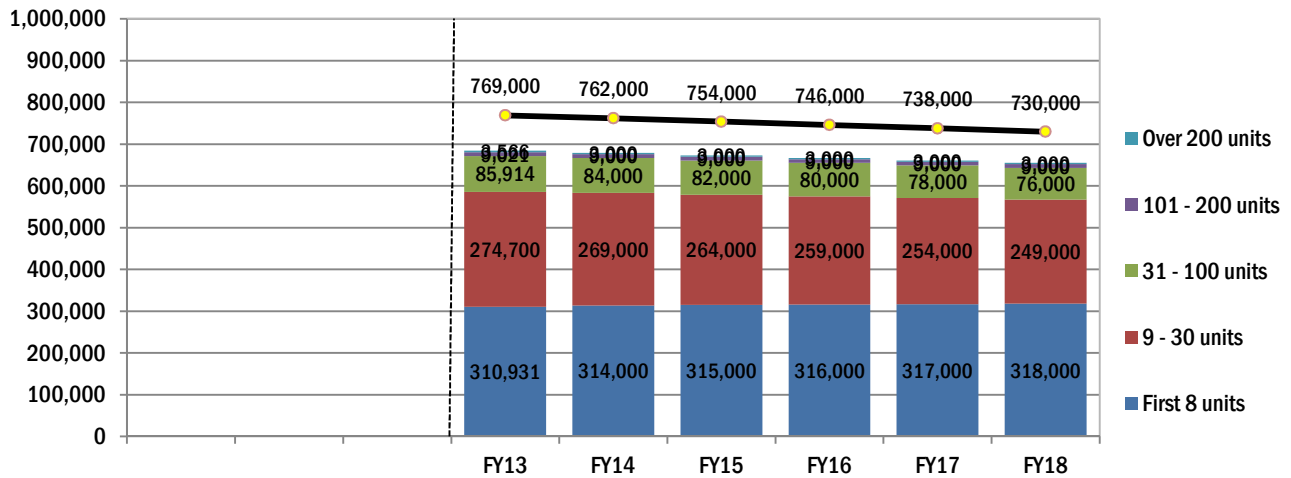


Table B-3
 Projected Number of Meters by Size and Type

Meter Size	FY13	FY14	FY15	FY16	FY17	FY18
5/8 *	6,095	6,148	6,148	6,148	6,148	6,148
5/8A	417	417	417	417	417	417
5/8B	10	10	10	10	10	10
5/8C	1	1	1	1	1	1
3/4	405	405	405	405	405	405
3/4A	4	4	4	4	4	4
1	84	84	84	84	84	84
1A	87	87	87	87	87	87
1B	1	1	1	1	1	1
1F/K	115	115	115	115	115	115
1-1/2	23	23	23	23	23	23
1-1/2A	2	2	2	2	2	2
1-1/2C	0	0	0	0	0	0
1-1/2F	2	2	2	2	2	2
1-1/2G	1	1	1	1	1	1
1-1/2S	1	1	1	1	1	1
2	32	32	32	32	32	32
2A	1	1	1	1	1	1
2G/L	2	2	2	2	2	2
3	3	3	3	3	3	3
4	1	1	1	1	1	1
Total	7,287	7,340	7,340	7,340	7,340	7,340

*Annexation of the Olympia Mutual Water Company is expected to add 51 accounts in FY14 (another 2 accounts incidental to the annexation are included, for a total of 53 accounts). All accounts are assumed to be 5/8-inch meter connections.

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Appendix C: Revenues by Customer Class and Tier for 2010, 2011 and 2012

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Appendix D: Revenue from Water Rates, FY13 – FY18

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Table D-1
Revenues from Quantity Charges
Current Rate Structure

Water Use, 100 cu ft	2010	2011	2012	FY13	FY14	FY15	FY16	FY17	FY18
First 10 units	340,139	340,420	343,146	340,000	341,000	342,000	344,000	346,000	348,000
11 - 40 units	268,469	256,693	280,716	262,500	258,000	253,000	247,000	241,000	235,000
41 - 100 units	75,190	70,761	83,216	73,000	72,000	70,000	68,000	66,000	64,000
101 - 200 units	28,173	28,360	31,274	28,000	27,000	26,000	25,000	24,000	23,000
Over 200 units	63,546	66,538	78,128	65,500	64,000	63,000	62,000	61,000	60,000
Flat Rate				0	0	0	0	0	0
Total	775,517	762,772	816,480	769,000	762,000	754,000	746,000	738,000	730,000

Water Use, % of Total	2010	2011	2012	FY13	FY14	FY15	FY16	FY17	FY18
First 10 units	44%	45%	42%	44%	45%	45%	46%	47%	48%
11 - 40 units	35%	34%	34%	34%	34%	34%	33%	33%	32%
41 - 100 units	10%	9%	10%	9%	9%	9%	9%	9%	9%
101 - 200 units	4%	4%	4%	4%	4%	3%	3%	3%	3%
Over 200 units	8%	9%	10%	9%	8%	8%	8%	8%	8%
Flat Rate	0%	0%	0%	0%	0%	0%	0%	0%	0%

Rate, \$/100 cu ft	2010	2011	2012	FY13	FY14	FY15	FY16	FY17	FY18
First 10 units	\$2.71	\$2.71	\$2.71	\$2.71	\$3.06	\$3.46	\$3.74	\$4.04	\$4.36
11 - 40 units	\$3.54	\$3.54	\$3.54	\$3.54	\$4.00	\$4.52	\$4.88	\$5.27	\$5.69
41 - 100 units	\$4.24	\$4.24	\$4.24	\$4.24	\$4.79	\$5.41	\$5.84	\$6.31	\$6.81
101 - 200 units	\$4.59	\$4.59	\$4.59	\$4.59	\$5.19	\$5.86	\$6.33	\$6.84	\$7.39
Over 200 units	\$5.00	\$5.00	\$5.00	\$5.00	\$5.65	\$6.38	\$6.89	\$7.44	\$8.04

Revenue, \$	2010	2011	2012	FY13	FY14	FY15	FY16	FY17	FY18
First 10 units	921,777	922,538	929,926	\$921,400	\$1,043,460	\$1,183,320	\$1,286,560	\$1,397,840	\$1,517,280
11 - 40 units	950,380	908,693	993,735	\$929,250	\$1,032,000	\$1,143,560	\$1,205,360	\$1,270,070	\$1,337,150
41 - 100 units	318,806	300,027	352,836	\$309,520	\$344,880	\$378,700	\$397,120	\$416,460	\$435,840
101 - 200 units	129,314	130,172	143,548	\$128,520	\$140,130	\$152,360	\$158,250	\$164,160	\$169,970
Over 200 units	317,730	332,690	390,640	\$327,500	\$361,600	\$401,940	\$427,180	\$453,840	\$482,400
Flat Rate				\$0	\$0	\$0	\$0	\$0	\$0
Total	\$2,638,000	\$2,594,000	\$2,811,000	\$2,616,000	\$2,922,000	\$3,260,000	\$3,474,000	\$3,702,000	\$3,943,000
Average Rate	\$3.40	\$3.40	\$3.44	\$3.40	\$3.83	\$4.32	\$4.66	\$5.02	\$5.40
Revenue w/No Rate Inc					\$2,616,000	\$2,616,000	\$2,616,000	\$2,616,000	\$2,616,000
Revenue from Rate Inc									
Annual					\$306,000	\$644,000	\$858,000	\$1,086,000	\$1,327,000
Cumulative					\$306,000	\$950,000	\$1,808,000	\$2,894,000	\$4,221,000

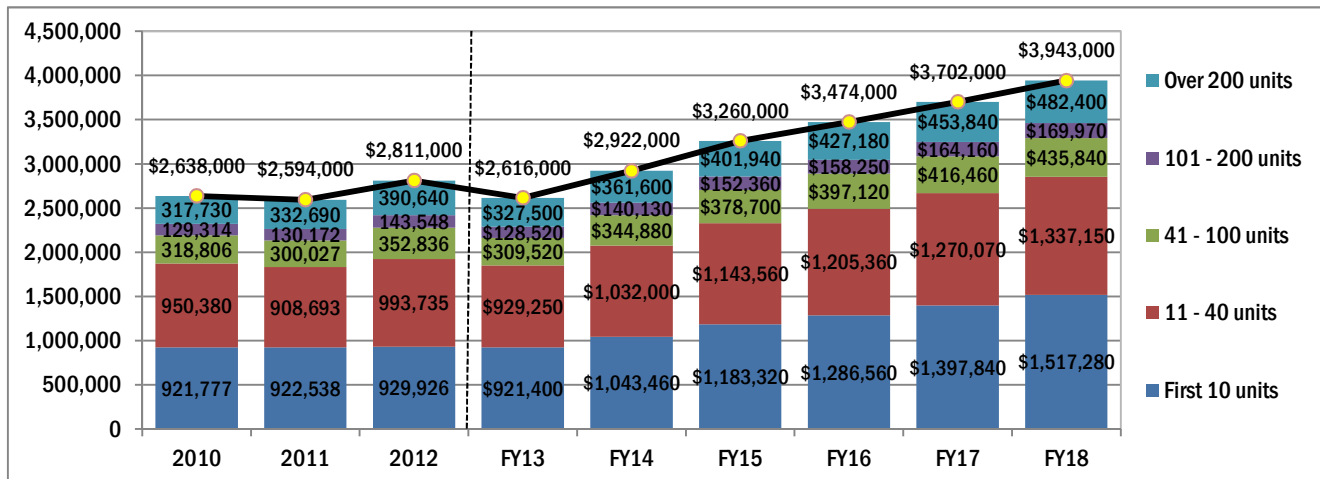


Table D-2
 Revenues from Quantity Charges
 Updated Rate Structure

Water Use, 100 cu ft	FY13	FY14	FY15	FY16	FY17	FY18
First 8 units	310,931	314,000	315,000	316,000	317,000	318,000
9 - 30 units	274,700	269,000	264,000	259,000	254,000	249,000
31 - 100 units	85,914	84,000	82,000	80,000	78,000	76,000
101 - 200 units	9,021	9,000	9,000	9,000	9,000	9,000
Over 200 units	3,566	3,000	3,000	3,000	3,000	3,000
Flat Rate	85,101	83,000	81,000	79,000	77,000	75,000
Total	769,232	762,000	754,000	746,000	738,000	730,000

Water Use, % of Total	FY13	FY14	FY15	FY16	FY17	FY18
First 8 units	40%	41%	42%	42%	43%	44%
9 - 30 units	36%	35%	35%	35%	34%	34%
31 - 100 units	11%	11%	11%	11%	11%	10%
101 - 200 units	1%	1%	1%	1%	1%	1%
Over 200 units	0%	0%	0%	0%	0%	0%
Flat Rate	11%	11%	11%	11%	10%	10%

Rate, \$/100 cu ft	FY13	FY14	FY15	FY16	FY17	FY18
First 8 units	\$2.78	\$3.14	\$3.55	\$3.83	\$4.14	\$4.47
9 - 30 units	\$3.64	\$4.11	\$4.64	\$5.01	\$5.41	\$5.84
31 - 100 units	\$4.36	\$4.93	\$5.57	\$6.02	\$6.50	\$7.02
101 - 200 units	\$4.72	\$5.33	\$6.02	\$6.50	\$7.02	\$7.58
Over 200 units	\$5.14	\$5.81	\$6.57	\$7.10	\$7.67	\$8.28
Flat Rate	\$3.40	\$3.84	\$4.34	\$4.69	\$5.07	\$5.48

Revenue, \$	FY13	FY14	FY15	FY16	FY17	FY18
First 8 units	\$864,389	\$985,960	\$1,118,250	\$1,210,280	\$1,312,380	\$1,421,460
9 - 30 units	\$999,907	\$1,105,590	\$1,224,960	\$1,297,590	\$1,374,140	\$1,454,160
31 - 100 units	\$374,583	\$414,120	\$456,740	\$481,600	\$507,000	\$533,520
101 - 200 units	\$42,581	\$47,970	\$54,180	\$58,500	\$63,180	\$68,220
Over 200 units	\$18,327	\$17,430	\$19,710	\$21,300	\$23,010	\$24,840
Flat Rate	\$289,342	\$318,720	\$351,540	\$370,510	\$390,390	\$411,000
Total	\$2,589,000	\$2,890,000	\$3,225,000	\$3,440,000	\$3,670,000	\$3,913,000
Average Rate	\$3.37	\$3.79	\$4.28	\$4.61	\$4.97	\$5.36
Over 100 Units	\$60,908	\$65,400	\$73,890	\$79,800	\$86,190	\$93,060
Revenue w/No Rate Inc		\$2,616,000	\$2,616,000	\$2,616,000	\$2,616,000	\$2,616,000
Revenue from Rate Inc						
Annual		\$274,000	\$609,000	\$824,000	\$1,054,000	\$1,297,000
Cumulative		\$274,000	\$883,000	\$1,707,000	\$2,761,000	\$4,058,000

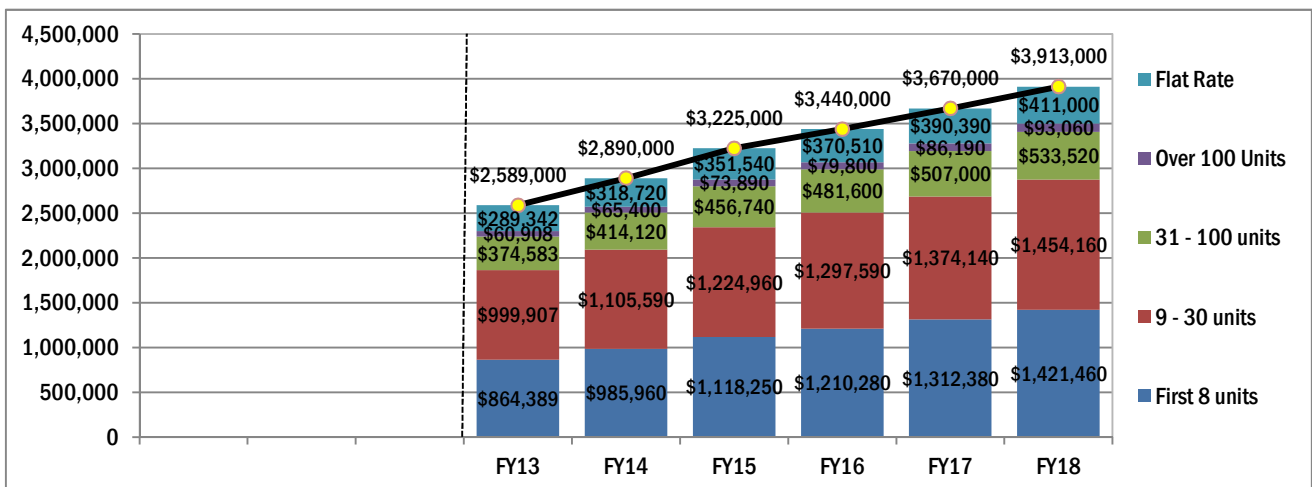


Table D-3
Revenues from Meter Charges

Meter Size	FY13	FY14	FY15	FY16	FY17	FY17
5/8	6,149	6,202	6,202	6,202	6,202	6,202
5/8A	417	417	417	417	417	417
5/8B	10	10	10	10	10	10
5/8C	1	1	1	1	1	1
3/4	407	407	407	407	407	407
3/4A	4	4	4	4	4	4
1	85	85	85	85	85	85
1A	87	87	87	87	87	87
1B	1	1	1	1	1	1
1F/K	116	116	116	116	116	116
1-1/2	23	23	23	23	23	23
1-1/2A	2	2	2	2	2	2
1-1/2C	0	0	0	0	0	0
1-1/2F	2	2	2	2	2	2
1-1/2G	1	1	1	1	1	1
1-1/2S	1	1	1	1	1	1
2	32	32	32	32	32	32
2A	1	1	1	1	1	1
2G/L	2	2	2	2	2	2
3	3	3	3	3	3	3
4	1	1	1	1	1	1
Total	7,345	7,398	7,398	7,398	7,398	7,398

*Annexation of the Olympia Mutual Water Company is expected to add 51 accounts in FY14 (another 2 accounts incidental to the annexation)

Meter Size	FY13	FY14	FY15	FY16	FY17	FY18
5/8	\$49.73	\$56.19	\$63.49	\$69.20	\$75.43	\$82.22
5/8A	\$82.90	\$93.68	\$106.00	\$116.00	\$126.00	\$137.00
5/8B	\$166.92	\$189.00	\$214.00	\$233.00	\$254.00	\$277.00
5/8C	\$265.68	\$300.00	\$339.00	\$370.00	\$403.00	\$439.00
3/4	\$49.73	\$56.19	\$63.49	\$69.20	\$75.43	\$82.22
3/4A	\$82.90	\$93.68	\$106.00	\$116.00	\$126.00	\$137.00
1	\$82.90	\$93.68	\$106.00	\$116.00	\$126.00	\$137.00
1A	\$166.92	\$189.00	\$214.00	\$233.00	\$254.00	\$277.00
1B	\$265.68	\$300.00	\$339.00	\$370.00	\$403.00	\$439.00
1F/K	\$49.73	\$56.19	\$63.49	\$69.20	\$75.43	\$82.22
1-1/2	\$166.92	\$189.00	\$214.00	\$233.00	\$254.00	\$277.00
1-1/2A	\$265.68	\$300.00	\$339.00	\$370.00	\$403.00	\$439.00
1-1/2C	\$829.76	\$938.00	\$1,060.00	\$1,155.00	\$1,259.00	\$1,372.00
1-1/2F	\$82.90	\$93.68	\$106.00	\$116.00	\$126.00	\$137.00
1-1/2G	\$49.73	\$56.19	\$63.49	\$69.20	\$75.43	\$82.22
1-1/2S	\$531.36	\$600.00	\$678.00	\$739.00	\$806.00	\$879.00
2	\$265.68	\$300.00	\$339.00	\$370.00	\$403.00	\$439.00
2A	\$498.62	\$563.00	\$636.00	\$693.00	\$755.00	\$823.00
2G/L	\$82.90	\$93.68	\$106.00	\$116.00	\$126.00	\$137.00
3	\$498.62	\$563.00	\$636.00	\$693.00	\$755.00	\$823.00
4	\$829.76	\$938.00	\$1,060.00	\$1,155.00	\$1,259.00	\$1,372.00

Meter Size	FY13	FY14	FY15	FY16	FY17	FY18
5/8	\$1,834,739	\$2,090,942	\$2,362,590	\$2,575,070	\$2,806,901	\$3,059,571
5/8A	\$207,416	\$234,387	\$265,212	\$290,232	\$315,252	\$342,774
5/8B	\$10,015	\$11,340	\$12,840	\$13,980	\$15,240	\$16,620
5/8C	\$1,594	\$1,800	\$2,034	\$2,220	\$2,418	\$2,634
3/4	\$121,441	\$137,216	\$155,043	\$168,986	\$184,200	\$200,781
3/4A	\$1,990	\$2,248	\$2,544	\$2,784	\$3,024	\$3,288
1	\$42,279	\$47,777	\$54,060	\$59,160	\$64,260	\$69,870
1A	\$87,132	\$98,658	\$111,708	\$121,626	\$132,588	\$144,594
1B	\$1,594	\$1,800	\$2,034	\$2,220	\$2,418	\$2,634
1F/K	\$34,612	\$39,108	\$44,189	\$48,163	\$52,499	\$57,225
1-1/2	\$23,035	\$26,082	\$29,532	\$32,154	\$35,052	\$38,226
1-1/2A	\$3,188	\$3,600	\$4,068	\$4,440	\$4,836	\$5,268
1-1/2C	\$0	\$0	\$0	\$0	\$0	\$0
1-1/2F	\$995	\$1,124	\$1,272	\$1,392	\$1,512	\$1,644
1-1/2G	\$298	\$337	\$381	\$415	\$453	\$493
1-1/2S	\$3,188	\$3,600	\$4,068	\$4,434	\$4,836	\$5,274
2	\$51,011	\$57,600	\$65,088	\$71,040	\$77,376	\$84,288
2A	\$2,992	\$3,378	\$3,816	\$4,158	\$4,530	\$4,938
2G/L	\$995	\$1,124	\$1,272	\$1,392	\$1,512	\$1,644
3	\$8,975	\$10,134	\$11,448	\$12,474	\$13,590	\$14,814
4	\$4,979	\$5,628	\$6,360	\$6,930	\$7,554	\$8,232
Total	\$2,442,467	\$2,777,884	\$3,139,558	\$3,423,271	\$3,730,051	\$4,064,812

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M E M O

TO: District Manager
FROM: Finance Manager

SUBJECT: FY1415 REVENUE COMPARISON

DATE: May 29, 2015

RECOMMENDATION:

It is recommended that the District Manager review and discuss in the Finance Committee meeting.

BACKGROUND:

The FY1415 budgeted revenue was based on a forecasting template. This template had incorrectly double counted the flat rate usage within the regular tiered usage. This resulted in an approximate \$400K excess usage revenue calculation.

In addition to the above, District customers were conserving more water than forecasted. This resulted in a \$225K reduction in expected revenue.

The combination of these two events is what is driving the original FY1415 revenue budget from \$5.9M down to an estimated \$5.2M.

Within this comparison, I have also included the comparison for FY1415 for what the original rate study was showing. The rate study was done before drought contingencies were known. Comparing these numbers against the estimated \$5.2M is a good place to start the analysis for how the drought contingencies have affected District revenue.

REVENUE COMPARISON FOR FY 1415

	Orig. 1415 Budget	Revised for Usage Dbl Up	Revised Incd Actuals thru Feb	Orig. Rate Study
Water Use, 100 cu ft				
Tier 1	288,580	280,240	407,465	315,000
Tier 2	255,050	241,550	171,338	264,000
Tier 3	100,050	82,040	22,107	82,000
Tier 4	52,790	13,310	2,150	12,000
Flat Rate	79,330	79,330	85,689	81,000
Total	775,800	696,470	688,749	754,000
Water Use, % of Total				
Tier 1	37.2%	40.2%	59.2%	41.8%
Tier 2	32.9%	34.7%	24.9%	35.0%
Tier 3	12.9%	11.8%	3.2%	10.9%
Tier 4	6.8%	1.9%	0.3%	1.6%
Flat Rate	10.2%	11.4%	12.4%	10.7%
Revenue, \$				
Tier 1	\$ 930,959	\$ 904,054	\$ 1,314,483	\$ 1,021,545
Tier 2	\$ 1,075,291	\$ 1,018,375	\$ 722,360	\$ 1,118,832
Tier 3	\$ 505,453	\$ 414,466	\$ 111,687	\$ 416,437
Tier 4	\$ 295,413	\$ 74,483	\$ 12,031	\$ 67,490
Flat Rate	\$ 312,084	\$ 312,084	\$ 337,099	\$ 320,315
Total Usage	\$ 3,119,000	\$ 2,723,000	\$ 2,497,660	\$ 2,944,619

Basic Fee \$ 2,740,000 \$ 2,740,000 \$ 2,740,000 \$ 2,740,000

[A] **[B]** **[C]** **[D]**
TOTAL REVENUE \$ 5,859,000 \$ 5,463,000 \$ 5,237,660 \$ 5,684,619

Due to double-up	B - A	\$ (396,000)
Due to extra conservation	C - B	\$ (225,340)
Total gap from orig. budget	C - A	\$ (621,340)
Due to conservation from study	C - D	\$ (446,959)