Fiscal Year 2017-2018

Operations & Capital Adopted Budget

Victor Valley Wastewater Reclamation Authority

Taking the Waste Out of Wastewater

Administration Office and Treatment Plant
20111 Shay Road
Victorville, CA 92394
(760) 246-8638
(760) 246-2898 Fax

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VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY
Table of Contents
Fiscal Year 2017-2018

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Section I: Introduction and Overview

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Victor Valley Wastewater Reclamation Authority
A Joint Powers Authority and Public Agency of the State of California
Administrative Offices
20111 Shay Road, Victorville, CA 92394
Telephone: (760) 246-8638
Fax: (760) 948-9897
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Budget Summary and Message from General Manager

Overview – Revenues and Expenses

VVWRA Percolation Pond

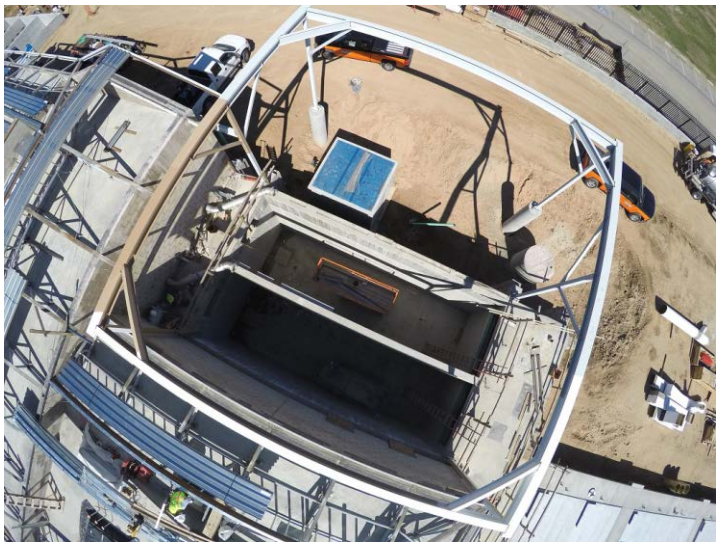
This document includes the budget information for the fiscal year 2017-2018 (hereafter referred to as FY 2018) for Victor Valley Wastewater Reclamation Authority (VVWRA). The table of contents and glossary will help you locate information.

VVWRA uses enterprise accounting to account for three divisions, (1) Operations and Maintenance Fund for daily activities, (2) Repairs and Replacements Fund for periodical repair and replacement work, and (3) Capital Fund for capital projects. VVWRA provides wastewater processing services to four member agencies; City of Victorville, Town of Apple Valley, City of Hesperia, and two areas of San Bernardino County Special Districts. Among the total operating revenue of $17.9 million budgeted for FY 2018, $13.7 million represents user fee revenue. We process wastewater, on the average, of 59% from City of Victorville, 17% from Town of Apple Valley, 18% from City of Hesperia and the remaining 6% from the two areas of San Bernardino County Special Districts. Other income includes septage processing fees; tipping fees for anaerobically digestible materials, fats, oils, and grease; sludge flow; industrial pretreatment fees; and reclaimed water sales; and high strength surcharge fees. The new high strength surcharge rates for FY 2018 are shown at page 37. In addition, we estimated $247,500 for existing facility major repairs and upgrades and the connection fee revenue of $878,900 for the construction of capital projects stated at page 34. We have budgeted the connection fee revenues conservatively for FY 2018 as we expect reduced connections to the wastewater system during FY 2018 reflecting reduced connection fees from the City of Victorville.

The FY 2018 budget includes a one-time retention receipt of $3.9 million from the Federal Emergency Management Agency (FEMA) and the California Governor's Office of Emergency Services (Cal OES) for the Upper Narrows Replacement and Emergency Projects that VVWRA did not receive during the FY 2017. For the Sub-regional Wastewater Reclamation Plants in the Town of Apple Valley and the City of

Overview – Revenues and Expenses (Continued)

Hesperia, we have budgeted $751,000 grant under Proposition 1, $404,000 under the Water Recycling grant, and $2.3 million of the Clean Water State Revolving Fund (SRF) loans from California State Water Resources Control Board. The FY 2018 total budgeted revenue including grants and loan proceeds is $22.9 million.



Apple Valley Plant - construction in progress

We have budgeted expenses of $16.2 million for operations and maintenance, $247,500 for repairs and replacements, and $4.2 million for capital projects. These expenses and expenditures exclude non-cash item, such as depreciation expense. With the total expense of $20.7 million, we predict the total budgeted surplus for FY 2018 is $2.3 million that reflects three-month test run of the two sub-regional plants. It is our challenge to achieve a balanced budget where the operating and capital revenues equal or exceed the total expenses.

Capital Projects and their Expenditures

VVWRA's capital improvement programs in the next two years (listed at pages 47 and 48) allow VVWRA to utilize cutting-edge technologies to continue providing quality wastewater treatment services to the service areas, including biogas energy projects. The anticipated capital projects can be classified into three general categories: Wastewater Treatment, Interceptor, and Energy Efficiency.

These projects are listed in the *Capital Projects and Debts at Section V* on pages 43 through 51 with the proposed funding through one or more of four sources: federal and/or California grants; SRF loans; operating cash reserve; and capital cash reserve. These capital projects are listed in the order of priority, often overlapping several categories during the year.

Wastewater Treatment and Other Construction Projects:

Hesperia Plant - the purple reclaimed water pipeline

VVWRA predicts completing the construction of both plants at the end of December 2017, so the agency's entire wastewater capacity will increase with less hydraulic load on the Hesperia and Apple Valley interceptors and will continue providing quality wastewater treatment services for the community. The plant in the City of Hesperia will provide reclaimed water to residential communities and commercial businesses along the I-15 corridor.

Capital Projects and their Expenditures (Continued)

Another facility located in the Town of Apple Valley will provide reclaimed water to the town's public parks. In addition to the SRF loan, the Apple Valley plant construction costs are funded through Title 16 grant from Bureau of Reclamation, United States Department of the Interior and grants by Propositions 1, 13, 50, and 84 of State of California.

Interceptor Projects:

The gravity interceptors transport a majority of the wastewater from the surrounding cities in the service areas to VVWRA's wastewater treatment plant. While VVWRA continues to upgrade its treatment facilities to handle the increased flow, the agency has successfully increased its flow transport capacity by completing the construction of a permanent pipeline in the vicinity of the Upper Narrows of the Mojave River to replace the temporary pipeline damaged by the 2010 federal disaster. These projects were mostly financed by FEMA and Cal OES grants and also by an SRF loan. Another interceptor that is near completion is the Nanticoke interceptor. This project will be financed through another SRF loan.

Energy Efficiency Projects:

Microgrid EnergyPod

As a result of the Phase III-A ultraviolet treatment project coming online, VVWRA has been experiencing major increases in power consumption. The agency has planned a series of energy efficiency projects in order to alleviate the high cost of power consumption. For example, VVWRA has initiated a micro-grid battery storage project during FY 2017. This project will be funded through a grant from California Energy Commission that can safe-guard the agency from unavoidably receiving low voltage electricity from Southern California Edison.

Environmental and Regulatory

VVWRA is the regional sewer service provider, and as such, the State Water Code authorizes VVWRA to implement a regional reclaimed water permit program similar to the existing Industrial Pretreatment Program. Under this Master Permit, VVWRA can be responsible for permitting and monitoring reclaimed water users, expediting the more efficient permit process rather than relying on individual permits obtained through Lahontan Regional Water Quality Control Board.

Debts – State Revolving Fund Loans

Under the circumstances where the City of Victorville (Victorville) diverts its flow of 1.7 million gallons per day and further reduces its connection fees, a solution must be reached with the close cooperation of the remaining member agencies. VVWRA must correct these fiscal issues (1) to have a sufficient cash reserve to meet the SRF loan contractual reserve obligation and (2) to comply with the SRF loan contractual repayment obligations.

Based on the comments from the member agencies regarding how to fund reserves and the discussions on the 2014 adopted Financial Plan and associated fee structure, the user fee has been adjusted over the five-

year period with the FY 2018 as the fifth year. The connection fee was also adjusted in FY 2015. The flow diversion and reduced connection fee receipts from Victorville require further consideration of how to fund the operation of the two sub-regional plants and repayments of the SRF loans. Reflecting member agencies' comments, our challenge includes **a balanced budget** where the operational expenses are covered by the user fees without relying on capital revenues, which are exclusively used for capital projects. We have created the FY 2018 budget with this goal in mind. This FY 2018 budget reflects the agency limiting the operation period of the two sub-regional plants only to a three month testing period.

Although there are no applicable legal debt limits for VVWRA to adhere to, other than the loan contractual obligation of maintaining the annual debt service amount, we are challenged with the debt repayments for the SRF loans for the Hesperia and Apple Valley facility construction.

Adding to the lost connection fee income from Victorville, a reduction of connection fee income from other member agencies and higher operation costs during the last few years, VVWRA has spread out the implementation of its vital and required capital projects as shown on pages 47 and 48.

Hesperia Plant – under construction

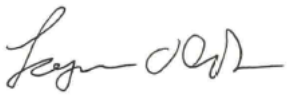
Long Term Financial Plans

The management of VVWRA seriously considers impacts of flow diversion by the City of Victorville and its 30 year notice of withdrawal from the joint venture in 2046 that Victorville announced on April 6, 2016. Under these circumstances, a new financial plan needs to be conducted and related cash flow assumptions should be revised drastically unless other measures are agreed to by the member agencies.

As the agency has not created a new five-year financial plan, this budget does not include a cash flow prediction and analysis.

Conclusion

The significant financial issue for FY 2018 is first to find a means to supplement the loss of user fee and connection fee revenues resulting from the flow diversion by the City of Victorville. Secondly, our effort is to address the lack of growth in the service areas, which was the basis underpinning the Financial Plan completed in 2014.



Logan Olds, General Manager

Victor Valley Wastewater Reclamation Authority
GFOA Distinguished Budget Presentation Award for the Fiscal Year Beginning July 1, 2016
Fiscal Year 2017-2018

Section II: Financial Structure, Policy and Process

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Victor Valley Wastewater Reclamation Authority

Governance

VVWRA is governed by a four-member Governing Board represented by an elected official of member agencies.

Board of Commissioners
As of June 30, 2017

James Kennedy, CPA

Chair

City of Victorville

Russ Blewett

Vice Chair

City of Hesperia

Jeffrey Rigney

Secretary

County of San Bernardino

Scott Nassif

Treasurer

Town of Apple Valley

Prepared by

Logan Olds, General Manager
and Finance Department

The mission of
Victor Valley Wastewater Reclamation Authority

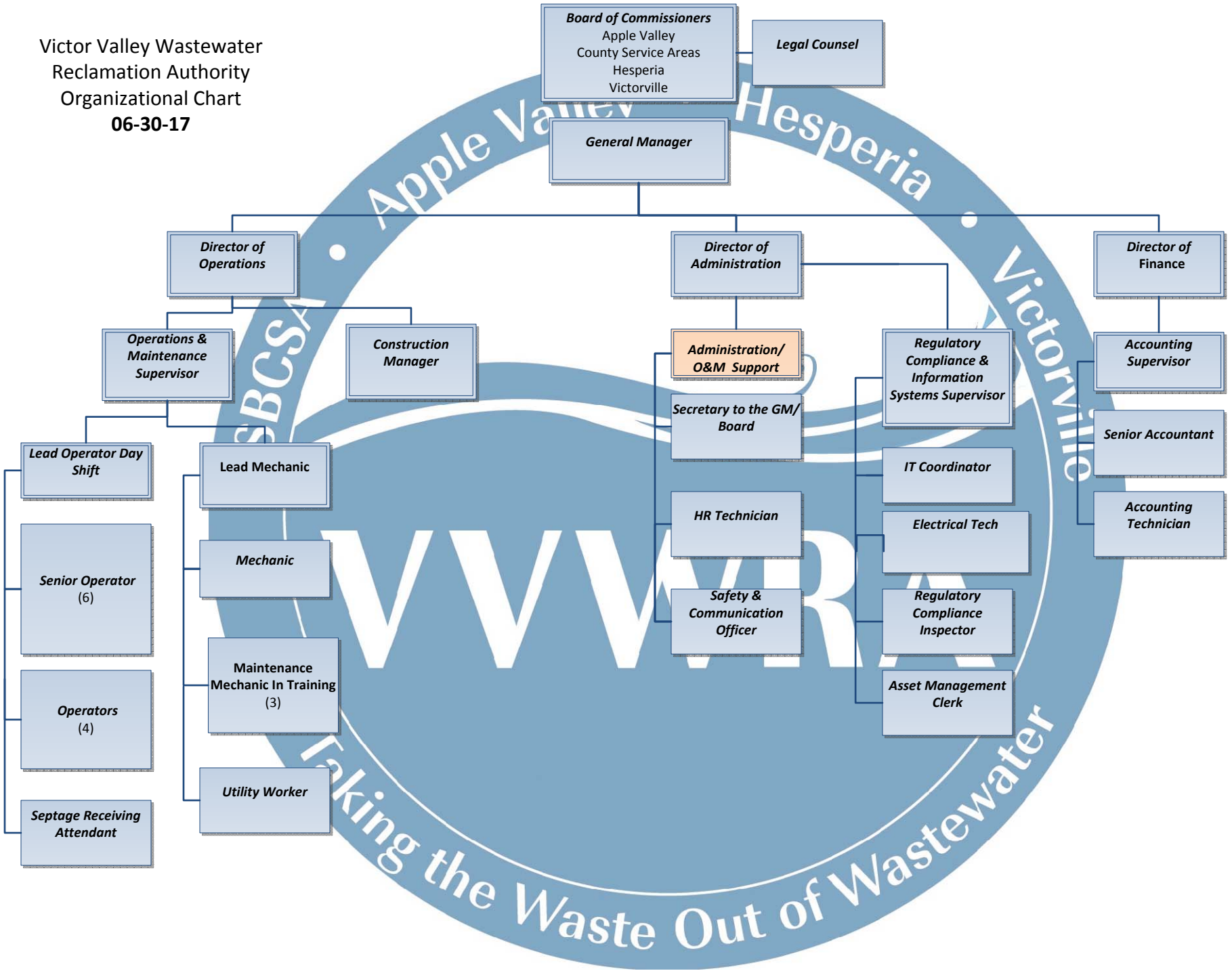
Is…
To cost-effectively provide professional, competent wastewater treatment, reclamation, recycling, and reuse,
To maintain the environment by providing clean effluent to the community,
To provide a service to our customers, and
To keep the public informed.

By…
Selecting quality employees,
Effectively communicating at all levels,
Providing effective training,
Encouraging participation in water and wastewater organizations,
Working together as a 'TEAM', and
Providing the budget for projects and personnel.

Motivated by…
Creating and maintaining a positive work environment,
Recognizing individual and group efforts, and
Providing competitive pay and benefits.

Measured by…
Meeting budgetary goals,
Meeting the standards for regulatory compliance,
The successful completion of projects,
Employee retention, and
A cooperative effort during emergencies.

Victor Valley Wastewater Reclamation Authority
Organizational Chart
06-30-17

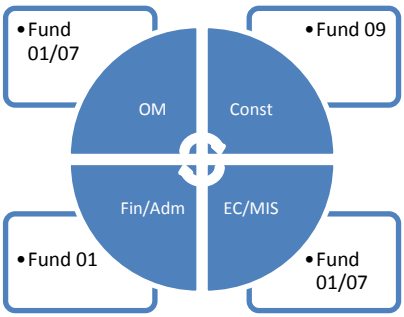


Victor Valley Wastewater Reclamation Authority
Our Organization
Fiscal Year 2017-2018

We are here to serve you.

The Board of Commissioners consists of four elected officials representing each member agency from the Town of Apple Valley, City of Hesperia, City of Victorville, and County of San Bernardino Two Service Areas.

The main function of Victor Valley Wastewater Reclamation Authority (VVWRA) is to receive wastewater from four member agencies and to process the wastewater then to discharge the cleaned water to the Mojave River. The VVWRA conducts its businesses based on an **Enterprise Accounting System** that is an accrual accounting system, similar to a regular business accounting method, by recording revenues and expenses as incurred instead of recognizing transactions when cash is received or paid. The enterprise accounting system is established based on three funds, (1) Operations and Maintenance Fund, (2) Repairs and Replacement Fund, and (3) Capital Fund. Please see how each department uses these funds as shown at the chart below. The Repairs and Replacement Fund is to show periodical repairs and replacement costs separately from normal operations and maintenance. Our main revenues are 'user fees' generated from processing (cleaning) wastewater that the member agencies send and connection fees charged to connect to the agency's system. The main distinction between the user fees and connection fees is that the user fees are associated with daily operations, while the connection fees are used for capital projects as new users will hook up to the system that may require further expansion of our infrastructure. In addition to operation expenses, we normally incur large sums of capital expenditures to improve and expand the infrastructure to fulfill member agencies' needs.



The main functions for each department are explained below. During FY 2017, the agency re-organized its departmental structure eliminating Maintenance and Laboratory departments.

- **Operations (OM)** adheres to State and Federal rules and regulations with no or minimum overflow incidences. The OM now includes the maintenance and laboratory functions, which are to perform repairs and maintenance of equipment and to enforce regulatory compliance by testing samples utilizing a third party laboratory vendor.

- **Construction (Const)** meets the member agency's expansion needs within the limited budget.

- **Environmental Compliance and Management Information System (EC/MIS)** enforces regulatory compliance including safety compliance and to maintain computer integrity.

- **Finance (Fin)** compiles and publishes award-winning Comprehensive Annual Financial Reports and annual budgets.

- **Administration (Adm)** is in charge of personnel. Both Fin and Adm are combined in the above chart as Fin/Adm.

Goals and objectives of each function

Here are goals and objectives of each function. See performance information at pages 22 through 27.

*The goal of **Operations** is to protect Victor Valley's environment and quality of life while creating reusable resources cost-effectively to the residents of the Victor Valley community.* The Operations department provides effective and efficient advanced wastewater treatment, high-quality treated effluent that complies with 100% of all local, state and Federal requirements. Consistent with VVWRA's goals, the Operations' goal is summed up to improve water quality to protect the environment, wildlife and recreational uses of the waters from the nearby Mojave River and Downstream Mojave River Basin beneficial uses. VVWRA Operations staff is a highly dedicated group. The Operations department is staffed 24 hours a day 365 days per year by 15 highly trained wastewater treatment plant operators.

*The goal of **Construction** is to manage infrastructure construction projects to ensure that the scope of work is budgeted and completed to the appropriate quality standards in a safe manner to meet the member agencies' expansion and repair needs.*

*The goal of **Maintenance** is to provide a high level of cost effective services to all customers in the service areas and all sections of the agency*. This cost effectiveness is accomplished through control of wasteful maintenance and operations practices and in the planning of all work activities. The maintenance department maintains the 300 plus acre wastewater treatment plant, in addition to two remote pump stations, vehicle fleet, portable auxiliary equipment and 40 miles of sewer pipeline. The maintenance department comprised of 7 highly skilled craftsmen who are responsible for maintaining the agency's capital assets worth of 205 million dollars, working effectively and efficiently to comply with local, state and Federal requirements.

*The goal of **Environmental Compliance and Management Information System** (EC/MIS) is to ensure that the agency is in compliance with all environmental laws, providing VVWRA with the latest technologies and support, educating the users and promoting the new technology as an integral component of VVWRA's vision.* This effort includes implementation of computerized maintenance management systems that keep track of the maintenance inventory more efficiently. The EC Department implements and enforces VVWRA's Industrial Pretreatment Program to prevent upset, interference and pass-through at the wastewater treatment facility, to ensure beneficial reuse of plant effluents and bio-solids, to protect the structure and integrity of the sewerage collection system, to ensure the safety of personnel working in the system and to protect the health and safety of the public and environment. The EC/MIS Department is staffed by skilled professionals, certified for Environmental Compliance Inspection, Collection System Maintenance, Industrial Pretreatment Plant Operation, Drinking Water Treatment and Drinking Water Distribution.

The MIS department envisions an electronic network capable of distributing voice and data technology to all VVWRA staff. In this vision, VVWRA staff becomes users of the global information network with direct access to information and resources around the world. All of our effort is dedicated to provide the operations, maintenance and administration personnel with electronic access to information and to enrich communication among them. To achieve our technological mission and materialize our vision, we are committed to employ all accessible and financially feasible technologies to support and educate all of our staff.

*The goal of **Finance** is to record approved revenues and expenses in a proper period based on the enterprise accounting and in compliance with the Commissioners-approved budget and to create the award-winning Comprehensive Annual Financial Reports.* In addition, its responsibilities include billing timely, collecting fees, establishing and monitoring internal control systems, preparing award-winning budgets and various financial reports, and administering general accounting including payroll.

*The goal of **Administration** is to ensure a fair and equitable employment selection process, as well as to maintain, administer and implement VVWRA's policies and programs.*

Victor Valley Wastewater Reclamation Authority
Budgeted Positions
Fiscal Year 2017- 2018

Department	Position	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget	2017 Budget	2018 Budget
	Administration							
Administrative	Director of Administrative Services	0	0	0	0	1	1	1
Administrative	General Manager	1	1	1	1	1	1	1
Administrative	Administrative Aide	1	1	1	1	1	1	0
Administrative	Management Technician to General Manager	0	0	0	0	0	0	0
Administrative	Secretary - GM/Board	1	1	1	1	1	1	1
Administrative	Administrative Assistant	0	0	0	0	0	0	0
Administrative	Public Information Officer	1	1	1	1	1	1	1
Finance	Director of Finance	1	1	1	1	0	1	1
Finance	Accounting Supervisor	1	1	1	1	1	1	1
Finance	Accountant I	1	1	1	1	1	1	1
Finance	Account Technician	1	1	1	1	1	1	1
Finance	Purchasing Technician	0	0	0	0	0	0	0
Finance	Fiscal Clerk	1	1	0	0	0	0	0
Human Resource	Human Resource Technician	1	1	1	1	1	1	1
Human Resource	Director of Human Resource	0	0	0	0	0	0	0
IT/Env Comp	IT Supervisor	1	1	1	1	1	0	0
IT/Env Comp	IS Coordinator	1	1	1	1	1	1	1
IT/Env Comp	IT Technician	0	0	0	0	0	1	0
IT/Env Comp	IT/Env Comp Supervisor	0	0	0	0	0	1	0
IT/Env Comp	Lead Environmental Compliance Inspector	0	1	1	1	1	0	0
IT/Env Comp	Environmental Compliance Safety Admin Aide	1	1	1	1	1	1	1
IT/Env Comp	Environmental Compliance Inspector-in-Training	1	1	1	1	1	0	0
IT/Env Comp	Environmental Compliance Inspector	0	0	0	0	0	1	1
IT/Env Comp	Environmental Compliance Supervisor	0	0	0	0	0	0	0
IT/Env Comp	EC/IT Supervisor	0	0	0	0	0	0	1
Safety	Environmental Health Safety/Risk Coordinator	0	0	0	0	0	0	0
		14	15	14	14	14	15	13
	Operations							
Operations	Director of Operations	1	1	1	1	1	1	1
Operations	Operations & Maintenance Supervisor	1	1	1	1	1	1	1
Operations	Lead Operator	1	1	1	1	1	1	1
Operations	Operator I	3	2	2	2	0	0	0
Operations	Operator II	0	0	0	0	0	0	0
Operations	Operator III	3	5	5	5	6	6	0
Operations	Operator IV	2	0	0	0	0	0	0
Operations	Operator V	0	1	1	1	0	0	0
Operations	Operator-in-Training	2	2	2	2	2	2	1
Operations	Operator	0	0	0	0	4	4	4
Operations	Senior Operator	0	0	0	0	0	0	5
Operations	Septage Receiving Attendant	0	0	0	0	1	1	1
Operations	O&M Clerk	0	0	1	1	1	1	0
Lab/Env Comp	Lab & Environmental Compliance Supervisor	1	1	1	1	1	1	0
Lab/Env Comp	Lab Tech I	0	1	2	2	1	2	0
Lab/Env Comp	Lab Tech II	1	1	0	0	1	0	0
Lab/Env Comp	Lab Tech	0	0	0	0	0	0	0
		15	16	17	17	20	20	14
	Maintenance							
Maintenance	Maintenance Supervisor	1	1	1	1	1	1	0
Maintenance	Electrical / Instrumentation Tech	3	3	2	2	2	1	0
Maintenance	Electrical / Instrumentation Tech II	0	0	0	0	0	1	0
Maintenance	Electrical / Instrumentation Tech IV	0	0	1	1	1	1	1
Maintenance	Maintenance Planner	1	1	1	1	1	1	0
Maintenance	Mechanical Tech I	1	1	1	1	1	1	0
Maintenance	Mechanical Tech III	0	2	2	2	2	2	0
Maintenance	Plant Maintenance Tech IV	3	0	0	0	0	0	0
Maintenance	Lead Mechanic	0	0	0	0	0	0	1
Maintenance	Maintenance Mechanic	0	0	0	0	0	0	1
Maintenance	Maintenance Mechanic in Training	1	1	1	1	3	3	3
Maintenance	Utility Worker I	0	0	0	0	0	0	0
Maintenance	Utility Worker II	1	1	1	1	1	1	1
		11	10	10	10	12	12	7
	Construction							
Construction	Project Construction Manager	0	0	0	0	0	0	1
Construction	Construction & Energy Efficiency Manager	1	1	1	1	1	1	0
Construction	Construction Inspector	0	0	0	0	0	0	0
		1	1	1	1	1	1	1
	Total Department	41	42	42	42	47	48	34

Notes: The FY 2016 and FY 2017 budget includes additional two positions each for two sub-regional plants and one for a septage

Operators	2	2
Maintenance in Training	2	2
Septage Receiving Attendant	1	1
	5	5

Reserve Policy

The Reserve Policy establishes fund reserve balances to maintain adequate cash reserves to comply with a debt coverage requirement for State Revolving Fund (SRF) loans from State Water Resources Control Board and to handle the possible emergency expenditures in future. The Reserve Policy consists of three types of reserves: Operations and Maintenance reserve, Repairs and Replacement reserve, and SRF loan reserve. The reserve balances are to be revised annually with adoption of the budget.

The Operations and Maintenance Reserve is funded by operating revenue and equals to 10% of the budgeted total operating expenses for the prior fiscal year. In addition, the Repairs and Replacement Reserve includes 1% of the sum of land improvements, buildings, and interceptors. The SRF loan reserve is funded by both operating and non-operating revenues in order to maintain a sufficient reserve to meet the agreement provision of maintaining one fiscal year's debt service payments.

The Operations and Maintenance Reserve is $1.08 million and the Repairs and Replacement Reserve is $1.67 million as of June 30, 2017. The SRF loan reserve for the year ending June 30, 2017 is $5.07 million.

Procurement Policy

The Procurement Policy lays the guidance for internal controls for the purchases of goods, services and capital expenditures required by VVWRA within the established limits. The policy requires two signatures on a check and a wire transfer issued based on approved purchase orders.

Supervisors are each authorized to approve expenses up to a limit of $5,000 on any one order or contract. The Construction Manager and the Department Directors are authorized to approve expenses up to a limit of $10,000 on any one order or contract. The General Manager is authorized to approve expenses up to a limit of $30,000 on any one order or contract. The VVWRA Board of Commissioners approves all expenses in excess of $30,000, except for certain recurring expenses such as utilities, process chemicals, permit fees, and other expenses as defined in the policy, and must approve all construction contract change orders. Generally, the selection of purchases of materials, supplies, equipment and contractual services having an estimated value of more than $2,000 should be considered based on a minimum of three quotes. Purchases of goods and services having an estimated value of more than $30,000 should be made through a competitive sealed bid process defined in the policy.

Almost all of our construction contracts fall in this category. Such contracts are awarded through public bids.

Investment Policy

The Investment Policy provides guidelines for the prudent investment of VVWRA's temporary idle cash with the primary objectives of safety, liquidity and yield under provisions of the California Government Code Section 53600.3. Authorized investments include California State Treasurer's Local Agency Investment Fund (LAIF); Investment Trust of California; San Bernardino County

***Investment Policy** (Continued)*

Local Agency Investment Fund; United States Treasury Bills, Notes and Bonds; insured Certificate of Deposits; and Money Market Mutual Funds.

The majority of VVWRA's investments is in LAIF and Cal TRUST.

Other Policies

Debt Coverage:
VVWRA maintains a cash reserve at least equal to the annual debt payment amount required by State Water Resources Control Board for the existing SRF loans specified as:

1. The financing agreement shall pledge the net revenue of the recipient for repayment of the proposed SRF financing agreement. This pledged revenue source shall be subject to lien and pledge as security for the obligation.

2. The recipient shall establish a restricted reserve fund, held in the recipient's fund, equal to one year's debt service prior to the construction completion date of the project. The reserve fund shall be maintained for the full term of the finance agreement and shall be subject to lien and pledge as security for the obligation.

3. The recipient shall establish rates and charges sufficient to generate net revenues of at least 1.10 times the total annual debt service.

The annual debt payment amounts for the FY 2018 is $2.63 million. As more SRF loans were added during FY 2015 for Upper Narrows Replacement, Nanticoke, and two Sub-regional projects; the annual due amount will be more than $5.00 million during peak years. See pages 49 and 50 for the detail payment information. As a special district, VVWRA is not subject to legal debt limits.

Revenues – Rate Ordinance:
VVWRA specifies fees in Fee Ordinance to meet operation needs and most of reserve requirements. The fees, such as connection fees, user charges, high strength surcharges, and septage receiving fees are posted at http://vvwra.com/index.aspx?page=69 and updated each year. The connection fees are designed to fund capital projects.

These connection and user fees were determined with several discussions with the member agencies to reflect ideas recommended by a five-year financial plan. Due to recent drastic decline in housing market in the high desert where we serve, the revenues from connection fees are not sufficient to support the capital projects. To supplement the funding of the capital projects, VVWRA has obtained federal and state grants and the SRF loans.

Overhead Allocation to Project:
VVWRA records overhead expenses such as legal counsel, engineer consulting and audit fees as administration costs that are a part of the operation expenses. The personnel costs are also allocated among departments based on the hours the employees spend. See page 36 for the personnel allocation.

Victor Valley Wastewater Reclamation Authority
Budget Preparation and Review Process
Fiscal Year 2017-2018

Basis of Budgeting

Victor Valley Wastewater Reclamation Authority (VVWRA) employs a fiscal year beginning July 1. VVWRA prepares its annual budget based on an accrual accounting method (which recognizes revenues and expenses when they incur) excluding non-cash depreciation expense but including loan proceeds and the related repayments to present the fund inflows and outflows. We have included the reconciliation of FY 2016 actual to FY 2016 Comprehensive Annual Financial Report at page 23.

Balanced Budget

A balanced budget is when VVWRA's operating revenues are equal to or exceed its operating expenses. The FY 2018 budget shows the balanced budget with a surplus for its operations and capital funds.

Budget Process

VVWRA supervisory staff inputs budgetary estimates for the following year with their departmental goals① in mind at the beginning of the budgetary process. Based on these input, the Accounting Supervisor prepares the draft budget. The senior management including the General Manager reviews the draft budget. The General Manager predicts capital project costs based on the member agency's needs. The Finance Department incorporates the data in to the draft budget.

The draft budget is presented to the External and Internal Financial Committees that consist of the member agencies for their close review. The revised draft budget is presented to the Financial Committees again to incorporate further recommendations in a proposed budget. After the revisions, the proposed budget is presented to the Board of Commissioners. Any additional comments are incorporated in to the proposed budget. Then the Financial Committee finalizes the recommendations and the Committee presents the budget to the public hearing and Board for approval.

VVWRA reviews and compares its performance to the budget at a mid-year point at around January. If any amendments are necessary, we revise the budget accordingly then present the revised budget to the Board for approval in February. The approved budgets are posted at VVWRA's website.

① Please see pages 12 and 13 for the departmental goals.

the Mojave River

Victor Valley Wastewater Reclamation Authority
Budget Preparation and Review Process
Fiscal Year 2017-2018

The following budget calendar shows our preparation and review process timeline.

Budget Calendar

VVWRA Budget Planning FYE 06/30/2015	Required By Date
Budget Kickoff Meeting	02/14/17
Update actual numbers and prepare for new budget cycle.	02/23/17
Present the budget draft at Supervisors' meeting.	03/01/17
Present the first draft budget to General Manager (GM) for review.	03/09/17
Hold a preliminary staff budget review meeting with Supervisors and GM.	03/23/17
Provide the draft changes to Accounting Supervisor.	03/30/17
Present the budget executive summary to Internal Finance Committee.	04/13/17
Finalize the draft budget.	04/20/17
Present the budget recommendations to Internal and External Finance Committee.	04/27/17
Present the second recommendations to Internal and External Finance Committee.	05/04/17
Place a public notice on local newspaper to invite public participation.	05/07/17
Circulate the budget document to the Board.	05/11/17
Board Meeting - Present the budget.	05/18/17
Board budget hearing and adoption	06/15/17
The second Board budget hearing and adoption, if needed.	06/23/17
Apply for GFOA Award for Excellence in Budget Reporting.	06/30/17

To summarize the major actions, we have:

1. Initiate the budget.
2. Prepare a draft budget based on Supervisors' input.
3. Present the draft to Internal and External Finance Committee.
4. Publish a public hearing notice on local newspaper to invite public participation.
5. Present the budget to the Board of Commissioners.
6. Propose any budget amendments, if applicable, when we review the performance and budget at around January.

Section III: Goals and Performance

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Strategic Goals and Strategies to Benefit the Communities

The goal *of Victor Valley Wastewater Reclamation Authority (VVWRA) is to provide sustainable and cost effective solutions to benefit the communities we serve.* The VVWRA serves an arid region which has historically depleted its groundwater resources. For this reason, the processed wastewater is valued for projects, such as replenishing groundwater, protecting riparian habitat, and generating power plant cooling water. The energy stored in the organic matter delivered in the wastewater can be used to provide heat and power to operate the wastewater treatment plant. Finally, the organic residual resulting from the treatment process can be beneficially reused to amend soil quality and to provide energy to a local cement manufacture, reducing greenhouse gas emissions.

Long-Term Strategies to Pay Back SRF Loans for the Sub-Regional Projects

As the construction of Sub-regional plants are scheduled to complete at the end of December 2017, VVWRA's SRF loans for these projects will become due in December 2018 (one year after the completion of the construction of the project). The Board has discussed a long-term strategy to pay back these loans timely; the consensus indicates that proper rate adjustments of user fees and connection fees for the lost income from the City of Victorville are necessary. As these loan payments affect both funds, Operations (Fund 01) and Construction (Fund 09),[1] the rate consideration involves both user fees (for the Fund 01) and connection fees (for the Fund 09). Without such a remedy, VVWRA may not be able to operate the Sub-regional plants or risk not meeting debt service obligations.

Strategic Measures to Attain the Objectives

The VVWRA strives to accomplish objectives by pursuing four fundamental rules; these rules guide staff to evaluate the needs of the member agencies.

Rule #1: Treat the wastewater to the best means possible given the resources available.

VVWRA strives to optimize the wastewater treatment process, while utilizing the resources on hand in an efficient manner.

Rule #2: Obtain the resources to do #1.

VVWRA endeavors to establish reasonable rates, repair and maintain pipelines, and construct facilities to support Rule #1.

Rule #3: Manage liability.

It is every employee's responsibility to act professionally and be mindful of safety protocols to avoid potential liabilities.

Rule #4: Do not confuse governing authority with managerial authority.

[1] Please see page 12 for the descriptions of the funds.

The VVWRA Board determines the actions the agency takes. The General Manager implements those actions.

As the staff evaluates each issue by these rules, the staff can prioritize the tasks and focus his or her energy on projects to meet the goals and objectives of VVWRA.

Marketing Strategies

The VVWRA's strategic plan incorporates integrated financial planning, successful marketing of the programs it pursues, and partnerships with a private industry.

The two driving forces behind this agency's strategic plan are community growth and regulatory requirements that determine the amount of resources required to address issues. Additionally, the industry as a whole is changing with more focus on regional watershed-based decision making.

Through a series of capital projects, the VVWRA endeavors to achieve the goal of providing sustainable and cost effective solutions to the surrounding communities. Capital projects such as Westside Plant Phase III-A, Omnivore projects, and an energy storage project allow VVWRA to improve and to expand the infrastructure at its current regional treatment facility to meet new regulatory requirements as well as to expand the plant's treatment capacity.

To expand the operations outside of this Victorville facility, the VVWRA will further its quest for sustainability by constructing additional sewer lines and Sub-regional water reclamation plants in the Town of Apple Valley and the City of Hesperia. Further, a Nanticoke gravity sewer line, approximately 16,250 feet long of 30" PVC pipe, will eliminate the Nanticoke Pump Station, directly connecting to the existing Town of Apple Valley Otoe Pump Station. These Sub-regional plants would allow VVWRA to have sufficient wastewater flow to provide reclaimed water locally and reduce sewage in our over-capacity interceptors. These plants represent the first step in preparing for the people, business, and industry that would sustain regional growth; reducing the overall load on the collection system; and providing recycled water, the valuable and increasingly important resource in this arid region. Another benefit of locating the sub-regional plants farther up the watershed in the vicinity of residential areas will result in saving of the subsequent energy costs of pumping the recycled water back to the recycled water users.

Water is no longer viewed in simplistic terms of water and wastewater. There are now designer waters produced from recycled wastewater. The production of potable water can now include biological filtration. The public is more broadly aware of the direct injection of recycled water in to groundwater. The VVWRA's strategic planning incorporates the elements of sustainability, innovation, and successful marketing.

This concept is best exemplified in the publication building of a *wastewater utility brand*, which discusses how to transition from a traditional monopolistic public utility into an agency of creativity and foresight. Also given the fiscal constraints, it is important to consider opportunities to engage private partnerships and to diversify the revenue sources for the agency.

Victor Valley Wastewater Reclamation Authority
Operations Performance Measure
Fiscal Year 2017-2018

Operations Performance

The following data shows the performance level during the last five years.

	2012	2013	2014	2015	2016
Removal Efficiency					
Biochemical Oxygen Demand	98.90%	98.90%	98.90%	98.50%	99.00%
Total Suspended Solids	99.40%	99.40%	99.20%	99.40%	99.50%
Ammonia Nitrogen	99.70%	99.12%	98.60%	98.50%	99.20%
Number of Active Basins					
Primary Treatment – Active Sedimentation Basins	6.00	6.00	6.00	6.00	6.00
Secondary Treatment – Active Aeration Basins	12.00	12.00	12.00	12.00	12.00
Wastewater Processed					
Percolation Ponds (MG)	1,408.88	2,341.36	2,303.45	1,613.97	1,889.44
Tertiary Treatment (MG)	3,377.37	2,208.64	4,414.67	3,921.47	4,820.55
Average Influent (MGD)	13.17	12.41	12.01	10.72	10.49
Total Effluent (MG)	4,786.25	4,550.00	4,416.67	3.921.47	4,820.55
Miscellaneous Operations					
Bio-solids Storage (Tons)	15,850.00	13,622.35	15,280.00	9,651.81	16,075.00
Septage Waste Received (MG)	2.15	2.83	5.35	6.54	6.82
Recycled Water Sold (MG)	5.56	29.52	284.20	214.66	160.78

Removal Efficiency: Removal efficiency refers to the average removal of biochemical oxygen demand, total suspended solids and ammonia nitrogen in the overall treatment of wastewater.

Active Basins: VVWRA utilizes sedimentation basins for primary treatment and aeration basins for secondary treatment. From calendar year 2012 to 2016, the number of sedimentation basins has remained at six (out of existing eight basins) and the number of aeration basins has remained at twelve due to the sustained wastewater flow from the member agencies.

Wastewater Processing: VVWRA uses percolation ponds for disposal of secondary effluent which allow the water to slowly seep into the soil. Tertiary treatment is the final level of treatment before the treated wastewater is discharged into the Mojave River.

Miscellaneous Operations: VVWRA operates a septage receiving facility, where the local septage haulers may dispose their waste at the facility for a fee. Recycled water is provided to neighboring American Organics and the High Desert Power Plant for cooling water.

Victor Valley Wastewater Reclamation Authority
Operations Performance Measure
Fiscal Year 2017-2018

Operations Department:

The Operations Department continued to enhance injection of external feed stocks to anaerobic digesters. The 5,883,812 gallons of anaerobically digestible materials, such as food waste, fats, oil and grease were injected to the digesters, increasing the biogas productions by 262% to generate electrical energy. It also eliminated natural gas import for power production resulting in $109,398 annual savings and annual revenue of $235,352 from tipping fees.

Under private and public partnership with Anaergia, the department continues to operate two 2G biogas-powered heat and power generators (CHP) to provide a total of 6,033,249 kWh Renewable Energy during the reporting year, utilizing biogas from anaerobic digester, making the facility 90% to 100% energy and carbon neutral (self-sustained). The facility CHP system produced electricity to power 585.5 homes for one-year based on US Energy Information Administration Statistics. In addition, 5.4 million British thermal unit (BTU) per hour heat, available from the exhaust was transferred to water that flows through the system heat exchangers to heat the anaerobic digesters eliminating the need for installation, operation and maintenance of external sources such as boilers.

Construction Department:

Depending on the cash flow and urgency needs during the FY 2018, some of the construction projects included in the FY 2018 budget may not be carried on.

The Construction Department has achieved the following progress during the year ended June 30, 2017.

	Project Name	Project Status
1	Sub-Regionals Projects, Apple Valley & Hesperia	– $65,890,000, Construction started February 2015 and will continue thru December 2017
2	Sub-Regionals Projects, Monitoring Wells	Completed February 2016
3	Upper Narrows Pipeline Replacement Project	Completed. Working on OIG audit comments
4	Upper Narrows – Alternate BNSF Crossing	Completed
5	Upper Narrows – Alternate BNSF Crossing, Phase 2	Completed
6	Yates Road Sampling Station	Completed
7	2014/2015 Manhole Rehabilitation Project	Completed
8	Digesters Biogas to Energy Project	Completed
9	Laboratory Building Replacement Project	Project put on hold until funding available
10	Drying Beds Repair and Drainage Improvements	Completed this project using VVWRA staff on beds 1, 2, and 3. Anticipate completing bed 4 this summer
11	Digesters 4 & 5 Supernatant Line	– $80,000, On hold for re-evaluation

12	Nanticoke Pump Station Bypass Sewer	– $5,700,000, Design 100%, NTP April 2016, anticipate completion July 2017
13	Shay Road Diversion Structure	Completed
14	Aeration Energy Efficiency Project	Completed
15	Desert Knolls Wash, Apple Valley Interceptor Realignment	– $500,000, Anticipate Design beginning Design September 2017 with construction complete December 2018
16	Apple Valley Odor Control	– $650,000,. Will be designed and constructed with Desert Knolls Wash project. Completion December 2018
17	North Hesperia Relief Interceptor	– On hold until evaluation of impact from completed Sub-Regionals project
18	Spring Valley Lake Relief Interceptor	– On hold until evaluation of impact from completed Sub-Regionals project
19	Ossum Wash Interceptor	– $650,000, anticipate sending to bid November 2017, anticipate completion March 2018
20	Oro Grande Crossing of Mojave River	– $5,700,000, anticipate sending to bid May 2018, anticipate completion June 2019

Apple Valley Sub-regional

Hesperia Sub-regional

Regulatory Compliance and Information Systems Department:

VVWRA Interceptor manhole rehabilitation program has completed:

Based on an interceptor condition assessment study performed in 2009 and staff recommendations from field condition reports, VVWRA completed an extensive multi-year (2012-2015) manhole rehabilitation project throughout its service areas.

The project included the replacement or rehabilitation of a total of 90 manholes or structures that were severely damaged or compromised by hydrogen sulfide corrosion located along the following interceptors:

- South Apple Valley
- North Apple Valley
- Victorville Schedule 4
- Hesperia
- Spring Valley Lake CSA 64
- Adelanto

The following is a summary of the completed project:
Total of 90 manholes or structures were rehabilitated or replaced.

- Removal and replacement of 90 damaged or corroded cast iron manhole covers and frames of varying sizes with new composite manhole covers and frames. These new manhole cover system has proven reliable, corrosion free and temper proof
- Full or partial re-coating of 60 manholes with epoxy resin
- Raising 31 manhole rims above existing grade
- Replacement of 2 concrete manholes with 2 new polymer concrete manholes

Lucity implementation:
In 2016, we achieved a significant progress in the implementation of an asset management system, Lucity.
This program has helped us see the following benefits:

1. Increased level of maintenance information.
2. Improved work and service request control.
3. Improved GIS capabilities that make sewer asset space and condition information readily available.
4. Improved overall pretreatment permit management and industry inspections.
5. Improved planning and scheduling.
6. Extend equipment life due to the implementation of over 596 scheduled repetitive preventive maintenance activities.
7. Improved equipment reliability and reduced downtime.
8. Increased capability to measure performance. The reports available now are far better than what we had in the past.
9. We are working on the inventory module which will help us optimize inventory usage and eliminate stock-out. We recognize that well-organized stockrooms can significantly improve the overall maintenance operation with accurate inventory records, using a stock locator system, stock levels, and a storeroom catalog. Information for decisions on inventory reduction will be readily available to identify parts usage, excess inventory levels, and obsolete parts.
10. Increased budget accountability.
11. Identification of potential projects for repair and replacement and capital improvement.

Operations Control Room Technology update:
The operations control room technology has been completely updated, new desktops, new monitors and new UPS batteries were installed and configured. With this technology update, the operation control is now more efficient for daily operations.
Along with this technology update, a new TV and mini desktops were installed in the lunch room which is also used for trainings and pass down[1] meetings.

Copiers Refresh from Konica Minolta:
A new lease was entered into with Konica Minolta upon the expiration of the Xerox Copiers lease, a substantial savings was realized by leasing only 2 copiers as well as increasing the efficiency of staff.

File server system update:
Implemented a new regional plant file server in the form of a direct attached storage (DAS) to increase reliability, availability and storage capacity of the organization system critical data.

Email archiver and backup server upgrade:
This upgrade helped us increase the reliability of the email system and safeguard records for years to come.

Regional Plant SCADA communication improvement project:
By implementing the use of new technology from Blackbox.com we were able to significantly increase the reliability of communication from the UV and Aqua-Diamond filters systems and decreased the number of callouts to the MIS department.

Rehabilitation of storm water pump station controls:
The storm water pump station controls at the regional plant were upgraded; new controls were installed and tested.

Laboratory Department:

- Maintained laboratory accreditation.

  After the on-site inspection on August 3, 2015 and in addition to submitting acceptable results from proficiency testing studies the laboratory was granted continued accredited status by California State Environmental Laboratory Accreditation Program until August 31, 2017.

- Maintained accurate laboratory sampling and testing.

  In preparing for the Sub-regional plants becoming operational in the near future, sampling and testing of groundwater monitoring wells were initiated for four consecutive months

[1] Pass down meetings are to “pass down” information or project status between shift workers.

starting in February 2015. Groundwater quality data generated from this baseline study will help determine future testing requirements.

Moreover, the laboratory has increased testing capacity and has increased its preventative maintenance on laboratory equipment with the increased ADM and FOG shipments.

- Updated regulatory compliance requirement reports.

The new Industrial General Permit became effective July 1, 2015. The Laboratory group was instrumental in implementing and maintaining a new Storm Water Pollution Prevention Plan for the main facility.

The Laboratory/Environmental Compliance groups continued in their efforts to streamline the evaluation process of compliance of industrial permits by adapting existing software reporting features to include analytical data and specific permit requirements.

Maintenance Department:

- ***Performing preventative maintenance on plant equipment***

1.	**UV Wiper Replacements**	$39,00.00 - complete
2.	**2G CHP #1 Head Replacements**	**$76,388.26 - complete**
3.	**Replaced Vaughn Horizontal Mixing**	**$31,402.52 - complete**
4.	**Spencer Blower Rebuild**	**$8,426.68 - complete**
5.	**MCC A/C Replacement**	**$7,020.00 - complete**
6.	**WILO Mixers Repaired/Replaced**	**$15,225.58 - complete**
7.	**South Percolation Pond Pump Fail to Safe**	**$48,177.00 – ECD June 20, 2016**
8.	**Replaced VFD for AVPS Pump #1**	**$6,165.00 - complete**
9.	**EQ Pump Motor Repair**	**$2,531.21 - complete**
10.	**DAFT #1 & #2 Rebuild**	**$95,112.00 – ECD August 2016**
11.	**Annual UV Sensor Verifications**	**$6,736.85 - complete**
12.	**2G Parasitic Load Project Parts**	**$10,096.88 - complete**
13.	**Quarterly Calibrations 3rd Party**	**$12,000.00 - complete**
14.	**UV Wiper Replacements**	**$39,00.00 - complete**
15.	**Tire Replacements & Repairs Fleet**	**$10,392.25 - complete**
16.	**A/C Repairs and Service**	**$11,430.24 - complete**
17.	**Gas Scrubber Media Change-out**	**$81,428.56 - complete**

18. Godwin Pump Rebuild	**$13,642.87 - complete**
19. Waukesha Engine Repairs/Maintenance	**$23,589.97 - complete**
20. Replacement 6" Mag Flow Meters	**$18,176.48 - complete**
21. Septage 6" Transfer Pump	**$11,358.88 - complete**
22. Tigermag Flow meter 8"	**$4,346.07 - complete**
23. Piller Parts and Service	**$7,547.45 - complete**
24. Grit Classifier Parts and Repairs	**$10,175.97 - complete**
25. Helical Skimmer Repairs	**$4,137.88 - complete**
26. Lifecon Air mask Rental/Purchase	**$15,146.52 - complete**

Finance Department:

The Finance Department has achieved its goal of presenting financial projections and results in an easy-to-understand format that has led VVWRA to win the Government Finance Officers Association awards. The awards won are:

1. Budgets: Distinguished Budget Presentation Award in the years beginning July 1, 2012 through 2016 and

2. Comprehensive Annual Financial Reports: Certificate of Achievement for Excellence in Financial Reporting for the years ended June 30, 2010 through 2016.

All the departmental goals and objectives are to pursue the agency's overall goal of serving the member agencies' needs, quantified as much as practically possible.

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Section IV: Financial Information and Trend Analyses

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Victor Valley Wastewater Reclamation Authority
Consolidated Budget Statement of All Funds
Fiscal Year 2017-2018

Our goals, objectives and strategies are transformed into numbers for the budgets with a projection for the rest of FY 2018. The consolidated budget on this page shows all functions of the entire organization. The next page 29 demonstrates a reconciliation of FY 2016 actual to CAFR for the year ended June 30, 2016. The budget on page 30 is for the Operations and Maintenance Fund, the budget on page 32 is for the Repairs and Replacements Fund, and the page 34 shows the budget for the Capital Fund.

	2016 Actual $3,004/MG	2016 Budget $3,004/MG	2017 Actual as of 4/30/2017	2017 Projected to the Year End	2017 Budget $3,274/MG	2018 Budget $3,503/MG
Operations & Maintenance Fund Revenues						
User Charges	$ 11,480,773	$ 13,157,520	$ 10,475,881	$ 12,571,057	$ 12,768,600	$ 13,661,700
Allocate Resource to Repairs and Replacements Fund	-	-	-	-	-	(247,500)
VVIWWTP Sludge	129,031	-	104,226	125,071	110,000	137,074
High Strength Waste Surcharges	36,078	12,000	18,273	21,928	20,000	25,000
ADM FOG Tipping Fee Revenue	-	-	186,866	224,239	-	205,000
Septage Receiving Facility Charges	604,958	410,000	511,539	613,847	500,000	609,000
Reclaimed Water Sales	59,265	7,000	29,648	35,578	60,000	44,000
Interest	-	-	10	12	-	-
Pretreatment Fees	54,600	40,000	46,179	55,415	45,000	51,200
Miscellaneous	(2,162)	32,100	3,199	3,839	1,100	1,250
Grant - Proposition 1	-	-	-	-	-	458,297
Grant - Water Recycling	-	-	-	-	-	246,466
	$ 12,362,543	$ 13,658,620	$ 11,375,821	$ 13,650,986	$ 13,504,700	$ 15,191,487
Other Operating Financing Sources						
SRF Loan Funding	$ -	$ -	$ -	$ -	$ -	$ 1,684,303
	$ -	$ -	$ -	$ -	$ -	$ 1,684,303
Repairs and Replacements Fund Financing Sources						
Transferred from Operations & Maintenance Fund	$ -	$ -	$ -	$ -	$ -	$ 247,500
	$ -	$ -	$ -	$ -	$ -	$ 247,500
Connection Fees	$ 1,146,089	$ 1,100,000	$ 2,266,509	$ 2,719,811	$ 700,000	$ 878,900
Interest	35,772	10,000	31,788	38,146	10,000	38,000
Grant - FEMA/Cal-OES	2,150,333	6,566,688	978,765	978,765	4,503,400	3,105,375
Grant - Water Recycling	1,714,652	-	968,635	1,162,362	1,267,000	157,577
Grant - Proposition 1	4,189,343	-	2,152,410	2,582,892	3,500,000	293,010
Grant - Proposition 84	3,000,000	-	-	-	-	-
Grant - Title 16	1,899,930	3,541,480	-	-	-	-
	$ 14,136,119	$ 11,218,168	$ 6,398,107	$ 7,481,976	$ 9,980,400	$ 4,472,862
Other Capital Financing Sources						
SRF Loan Funding	$ 23,517,063	$ 44,984,109	$ 25,637,291	$ 30,764,749	$ 44,750,140	$ 593,349
	$ 23,517,063	$ 44,984,109	$ 25,637,291	$ 30,764,749	$ 44,750,140	$ 593,349
Total Revenues and Other Financing Sources	**$ 50,015,725**	**$ 69,860,897**	**$ 43,411,219**	**$ 51,897,711**	**$ 68,235,240**	**$ 22,189,501**
Operations and Maintenance Fund Expenses						
Personnel and Benefits	$ 4,683,577	$ 4,835,651	$ 3,513,993	$ 4,216,792	$ 4,967,711	$ 4,086,603
Maintenance	1,598,924	1,807,589	970,219	1,293,625	1,833,784	2,919,360
Operations	2,343,233	2,323,091	1,382,525	1,659,028	3,190,930	3,066,985
Administration	1,709,057	1,689,643	1,447,470	1,736,963	2,057,832	2,270,884
Construction	22,085	-	108,860	130,632	-	2,389,065
	$ 10,356,876	$ 10,655,974	$ 7,423,067	$ 9,037,040	$ 12,050,257	$ 14,732,897
Emergency Expenses						
Maintenance	$ 399,105	$ 36,000	$ 68,907	$ 82,688	$ 67,000	$ -
Operations	115,537	123,260	-	-	83,000	-
FEMA Expenses	$ 514,642	$ 159,260	$ 68,907	$ 82,688	$ 150,000	$ -
Expected FEMA/Cal-OES Grants	(246,176)	(927,253)	-	-	(915,474)	(747,034)
	$ 268,466	$ (767,993)	$ 68,907	$ 82,688	$ (765,474)	$ (747,034)
Repairs and Replacements Fund Expenses						
Personnel and Benefits	$ -	$ -	$ -	$ -	$ -	$ -
Maintenance	305,377	1,215,940	440,720	528,864	808,200	242,500
Operations	16,659	136,650	-	-	20,700	-
Administration	-	24,600	-	-	-	5,000
Construction	41,996	1,625,000	49,226	65,635	-	-
	$ 364,032	$ 3,002,190	$ 489,946	$ 594,499	$ 828,900	$ 247,500
Capital Fund Expenses						
Personnel and Benefits	$ 407,267	$ 399,194	$ 305,565	$ 366,678	$ 400,477	$ 416,716
Maintenance	41,938	-	3,541	4,249	-	40,000
Operations	-	171	12,068	14,482	171	170
Administration	146,512	-	20,207	24,248	-	140,000
Construction	53,795	51,790,556	28,151,590	33,781,908	48,111,352	2,482,435
	$ 649,512	$ 52,189,921	$ 28,492,971	$ 34,191,565	$ 48,512,000	$ 3,079,321
Debt Services						
SRF Principal	$ 1,603,164	$ 1,603,164	$ 1,074,799	$ 1,825,710	$ 1,825,710	$ 2,056,359
SRF Interest	527,516	527,516	172,172	564,205	564,205	570,419
	$ 2,130,680	$ 2,130,680	$ 1,246,971	$ 2,389,915	$ 2,389,915	$ 2,626,778
Total Expenses and Debt Services	**$ 13,769,566**	**$ 67,210,772**	**$ 37,721,862**	**$ 46,295,707**	**$ 63,015,598**	**$ 19,939,462**
Total Agency Net Surplus or (Deficit)	**$ 36,246,159**	**$ 2,650,125**	**$ 5,689,357**	**$ 5,602,004**	**$ 5,219,642**	**$ 2,250,039**

Note: Please see Allocations of Personnel Expenses at page 36 and Projected Cash Allocation Per Fund at page 47.

Victor Valley Wastewater Reclamation Authority
Reconciliation from Actual to CAFR for the Year Ended June 30, 2016
Fiscal Year 2017-2018

	2016 Actual on Page 28	Reconciliation to CAFR	2016 Per CAFR
Operating Revenues			
User Charges	$ 11,480,773	$ -	$ 11,480,773
Adelanto User Charges	129,031	-	129,031
High Strength Waste Surcharges	36,078	-	36,078
Septage Receiving Facility Charges	604,958	-	604,958
Reclaimed Water Sales	59,265	-	59,265
Pretreatment Fees	54,600	-	54,600
Miscellaneous	(2,162)	-	(2,162)
	$ 12,362,543	$ -	$ 12,362,543
Capital Revenues			
Connection Fees	$ 1,146,089	$ -	$ 1,146,089
Interest	35,772	-	35,772
Grant - FEMA/Cal-OES	2,150,333	-	2,150,333
Grant - Water Recycling	1,714,652		1,714,652
Grant - Proposition 1	4,189,343		4,189,343
Grant - Proposition 84	3,000,000		3,000,000
Grant - Title 16	1,899,930	-	1,899,930
	$ 14,136,119	$ -	$ 14,136,119
Other Financing Sources			
SRF Loan Funding	$ 23,517,063	$ (23,517,063)	$ -
	$ 23,517,063	$ (23,517,063)	$ -
Total Revenues and Other Financing Sources	**$ 50,015,725**	**$ (23,517,063)**	**$ 26,498,662**
Operating Expenses			
Personnel and Benefits	$ 4,683,577	$ -	$ 4,683,577
Maintenance	1,598,924	-	1,598,924
Operations	2,343,233	-	2,343,233
Administration	1,709,057	-	1,709,057
Construction	22,085	-	22,085
	$ 10,356,876	$ -	$ 10,356,876
Emergency Expenses			
Maintenance	$ 399,105	$ -	$ 399,105
Operations	115,537	-	115,537
FEMA Expenses	$ 514,642	$ -	$ 514,642
Expected FEMA/Cal-OES Grants	(246,176)	-	(246,176)
	$ 268,466	$ -	$ 268,466
Depreciation Expense	$ -	$ 6,645,579	$ 6,645,579
Repair and Replacement Expense			
Personnel and Benefits	$ -	$ -	$ -
Maintenance	305,377	-	305,377
Operations	16,659	-	16,659
Administration	-	-	-
Construction	41,996	-	41,996
	$ 364,032	$ -	$ 364,032
Capital Expenses			
Personnel and Benefits	$ 407,267	$ -	$ 407,267
Maintenance	41,938	-	41,938
Operations	-	-	-
Administration	146,512	-	146,512
Construction	53,795	-	53,795
	$ 649,512	$ -	$ 649,512
Debt Services			
SRF Principal	$ 1,603,164	$ (1,603,164)	$ -
SRF Interest	527,516	-	527,516
	$ 2,130,680	$ (1,603,164)	$ 527,516
Total Expenses with Debt Services	**$ 13,769,566**	**$ 5,042,415**	**$ 18,811,981**
Total Net Surplus or (Deficit)	**$ 36,246,159**	**$ (28,559,478)**	**$ 7,686,681**

Victor Valley Wastewater Reclamation Authority
Budget Statement of Operations and Maintenance Fund
Fiscal Year 2017-2018

	2016 Actual $3,004/MG	2016 Budget $3,004/MG	2017 Actual as of 4/30/2017	2017 Projected to the Year End	2017 Budget $3,274/MG	2018 Budget $3,503/MG
Revenues						
User Charges	$ 11,480,773	$ 13,157,520	$ 10,475,881	$ 12,571,057	$ 12,768,600	$ 13,661,700
Allocate Resource to Repairs and Replacements Fund	-	-	-	-	-	(247,500)
VVIWWTP Sludge	129,031	-	104,226	125,071	110,000	137,074
High Strength Waste Surcharges	36,078	12,000	18,273	21,928	20,000	25,000
ADM FOG Tipping Fee Revenue	-		186,866	224,239		205,000
Septage Receiving Facility Charges	604,958	410,000	511,539	613,847	500,000	609,000
Reclaimed Water Sales	59,265	7,000	29,648	35,578	60,000	44,000
Interest	-	-	10	12	-	-
Pretreatment Fees	54,600	40,000	46,179	55,415	45,000	51,200
Miscellaneous	(2,162)	32,100	3,199	3,839	1,100	1,250
Grant - Proposition 1	-	-	-	-	-	458,297
Grant - Water Recycling	-	-	-	-	-	246,466
$	**12,362,543**	**$ 13,658,620**	**$ 11,375,821**	**$ 13,650,986**	**$ 13,504,700**	**$ 15,191,487**
Other Financing Sources						
SRF Loan Funding	**$** -	**$** -	$ -	$ -	$ -	$ 1,684,303
	$ -	$ -	$ -	$ -	$ -	$ 1,684,303
Total Operating Revenues and Other Financing Sources	**$ 12,362,543**	**$ 13,658,620**	**$ 11,375,821**	**$ 13,650,986**	**$ 13,504,700**	**$ 16,875,790**
Expenses ①						
Personnel and Benefits	$ 4,683,577	$ 4,835,651	$ 3,513,993	$ 4,216,792	$ 4,967,711	$ 4,086,603
Maintenance	1,598,924	1,807,589	970,219	1,293,625	1,833,784	2,919,360
Operations	2,343,233	2,323,091	1,382,525	1,659,028	3,190,930	3,066,985
Administration	1,709,057	1,689,643	1,447,470	1,736,963	2,057,832	2,270,884
Construction	22,085	-	108,860	130,632	-	2,389,065
	$ 10,356,876	$ 10,655,974	$ 7,423,067	$ 9,037,040	$ 12,050,257	$ 14,732,897
Emergency Expenses						
Maintenance	$ 399,105	$ 36,000	$ 68,907	$ 82,688	$ 67,000	$ -
Operations	115,537	123,260	-	-	83,000	-
FEMA OPERATING EXPENSES	$ 514,642	$ 159,260	$ 68,907	$ 82,688	$ 150,000	$ -
Expected FEMA/Cal-OES Grants	(246,176)	(927,253)	-	-	(915,474)	(747,034)
	$ 268,466	$ (767,993)	$ 68,907	$ 82,688	$ (765,474)	$ (747,034)
Debt Services						
SRF Principal	$ 500,019	$ 500,019	$ 114,582	$ 697,751	$ 697,751	$ 857,475
SRF Interest	282,085	282,085	39,603	343,588	343,588	361,138
	$ 782,104	$ 782,104	$ 154,185	$ 1,041,339	$ 1,041,339	$ 1,218,613
Total Operations & Maintenance Expenses with Debt Services	**$ 11,407,446**	**$ 10,670,085**	**$ 7,646,159**	**$ 10,161,067**	**$ 12,326,122**	**$ 15,204,476**
Operations & Maintenance Net Surplus or (Deficit)	**$ 955,097**	**$ 2,988,535**	**$ 3,729,662**	**$ 3,489,919**	**$ 1,178,578**	**$ 1,671,314**

① Please see detailed expense information at page 31.

We have predicted 3,900 million gallons (MG) of wastewater inflows to process for the FY 2018 budget. The FY 2018 inflow quantity is multiplied by the rate of $3,503 per MG. Please refer to page 36 for the personnel expenses allocated between Operations & Maintenance (O&M) and Capital Funds. The emergency projects was completed during the FY 2017. The expected FEMA and Cal OES Grant revenue $747,034 is shown as a negative number to include the 10% retention that will be awarded at the completion of the projects. As for the State Revolving Fund (SRF) loan principal and interest payments for future years, please refer to pages 49 and 50 for the SRF loan payment schedule per maturities. The O&M Fund covers the Repairs and Replacements Fund expenses. See Budget Statement of Repairs and Replacement Fund at page 32.

Victor Valley Wastewater Reclamation Authority
Operations and Maintenance Fund – Expenses Other Than Emergency Expenses
Fiscal Year 2017-2018

	2016 Actual $3,004/MG	2016 Budget $3,004/MG	2017 Actual as of 4/30/2017	2017 Projected to the Year End	2017 Budget $3,274/MG	2018 Budget $3,503/MG
Personnel Expenses Allocations ①						
Allocation to Maintenance	$ 1,221,803	$ 1,270,355	$ 916,694	$ 1,100,032	$ 1,267,716	$ 970,585
Allocation to Operations	2,239,971	2,306,437	1,413,236	1,695,884	2,009,414	1,661,723
Allocation to Administrations	1,221,803	1,258,859	1,184,063	1,420,876	1,690,581	1,454,295
	$ 4,683,577	$ 4,835,651	$ 3,513,993	$ 4,216,792	$ 4,967,711	$ 4,086,603
Maintenance Expenses						
Maintenance Equipment	$ 546,788	$ 393,650	$ 335,211	$ 446,948	$ 584,257	$ 1,110,560
Instrumentation	299,697	524,489	192,453	256,604	354,377	648,000
Total Grounds Maintenance & Landscaping	204,842	392,950	301,375	401,833	372,050	724,400
Vehicle Repairs	90,322	129,500	42,976	57,301	149,600	251,400
Interceptor Sewer Maintenance	327,324	315,500	26,468	35,291	335,500	105,500
Maintenance Safety Equipment	26,891	35,500	8,569	11,425	38,000	38,000
Misc. Maintenance Expense	103,060	16,000	63,167	84,223	-	41,500
	$ 1,598,924	$ 1,807,589	$ 970,219	$ 1,293,625	$ 1,833,784	$ 2,919,360
Operations Expenses						
Process Chemicals	$ 338,078	$ 242,892	$ 209,799	$ 251,759	$ 558,970	$ 370,540
Utilities	1,364,865	1,187,200	531,806	638,167	1,326,423	1,557,423
Trash and Sludge	106,532	131,780	85,208	102,250	124,600	148,000
Fuel and Lubricants	75,853	113,000	55,352	66,422	138,500	159,000
Lab Supplies and Services	102,902	147,040	130,507	156,608	399,813	115,100
Outside Lab Services	180,920	219,475	201,952	242,342	351,650	450,500
Safety Equipment	53,908	83,429	52,573	63,088	95,474	66,422
Custodial Services and Supplies	37,156	55,222	30,117	36,140	52,000	45,500
Equipment Rental	25,561	44,553	27,607	33,128	44,000	55,000
Uniforms	22,243	20,000	19,027	22,832	21,000	21,000
Security	6,020	18,500	5,235	6,282	18,500	18,500
Permits	24,859	60,000	33,342	40,010	60,000	60,000
Misc. Operating Expense	4,336	-	-	-	-	-
	$ 2,343,233	$ 2,323,091	$ 1,382,525	$ 1,659,028	$ 3,190,930	$ 3,066,985
Administrations Expenses						
Telephone and Communications	$ 160,596	$ 143,500	$ 172,907	$ 207,488	$ 277,220	$ 278,220
Computer Supplies	84,835	99,825	93,986	112,783	92,252	77,000
Office Supplies	88,081	111,764	44,822	53,786	122,450	109,450
Travel, Meeting, Training	132,326	168,270	70,645	84,774	199,000	188,750
Employee and Community Events	22,088	23,445	11,766	14,119	26,200	28,700
Membership, Fees, Licenses	56,695	28,564	39,051	46,861	50,855	41,705
Professional Services	219,873	477,275	180,653	216,784	561,855	729,765
Legal Services and Fees	602,798	250,000	540,442	648,530	360,000	360,000
Temporary Labor	10,337	70,000	8,356	10,027	45,000	133,294
Bond & Liability Insurance	184,894	105,000	140,114	168,137	120,000	125,000
Finance Fees	105	-	510	612	-	-
Misc. Administration Expense	26,917	-	2,324	2,789	-	-
Permit Fees	119,512	212,000	141,894	170,273	203,000	199,000
Interest Accrual	-	-	-	-	-	-
Supplemental Environmental Project Payment	-	-	-	-	-	-
	$ 1,709,057	$ 1,689,643	$ 1,447,470	$ 1,736,963	$ 2,057,832	$ 2,270,884
Construction Expenses	$ 22,085	$ -	$ 108,860	$ 130,632	$ -	$ 2,389,065
Total Operations and Maintenance Fund Expenses Before Emergency	**$ 10,356,876**	**$ 10,655,974**	**$ 7,423,067**	**$ 9,037,040**	**$ 12,050,257**	**$ 14,732,897**

① Please see Allocations of Personnel Expenses at page 36.

Victor Valley Wastewater Reclamation Authority
Budget Statement of Repairs and Replacements Fund
Fiscal Year 2017-2018

	2016 Actual $3,004/MG	2016 Budget $3,004/MG	2017 Actual as of 4/30/2017	2017 Projected to the Year End	2017 Budget $3,274/MG	2018 Budget $3,503/MG
Repairs and Replacements Financing Sources						
Transferred from Operations & Maintenance Fund	$ -	$ -	$ -	$ -	$ -	$ 247,500
	$ -	**$ -**	**$ -**	**$ -**	**$ -**	**$ 247,500**
Expenses ①						
Personnel and Benefits	$ -	$ -	$ -	$ -	$ -	$ -
Maintenance	305,377	1,215,940	440,720	528,864	808,200	242,500
Operations	16,659	136,650	-	-	20,700	-
Administration	-	24,600	-	-	-	5,000
Construction	41,996	1,625,000	49,226	65,635	-	-
	$ 364,032	$ 3,002,190	$ 489,946	$ 594,499	$ 828,900	$ 247,500
Emergency Expenses						
Maintenance	$ -	$ -	$ -	$ -	$ -	$ -
Operations	-	-	-	-	-	-
FEMA OPERATING EXPENSES	$ -	$ -	$ -	$ -	$ -	$ -
Expected FEMA/Cal-EMA Grants	-	-	-	-	-	-
	$ -	$ -	$ -	$ -	$ -	$ -
Debt Services						
SRF Principal	$ -	$ -	$ -	$ -	$ -	$ -
SRF Interest	-	-	-	-	-	-
	$ -	$ -	$ -	$ -	$ -	$ -
Total Repairs and Replacements Expenses with Debt Services	**$ 364,032**	**$ 3,002,190**	**$ 489,946**	**$ 594,499**	**$ 828,900**	**$ 247,500**
Repairs and Replacements Net Surplus or (Deficit)	**$ (364,032)**	**$ (3,002,190)**	**$ (489,946)**	**$ (594,499)**	**$ (828,900)**	**$ -**

This Repairs and Replacement (R&R) Fund has been a part of Operations and Maintenance (O&M) Fund in the past-year budget presentations. For FY 2017 and FY 2018, we have presented the R&R Fund separately, as we strongly believe that such presentation better describes the normal operations and maintenance results without skewing them with periodical high repairs and replacement costs. With the predicted beginning fund and excess O&M revenues, we estimate the positive ending balance for the R&R fund.

Victor Valley Wastewater Reclamation Authority
Repairs and Replacements Fund Expenses
Fiscal Year 2017-2018

	2016 Actual $3,004/MG	2016 Budget $3,004/MG	2017 Actual as of 4/30/2017	2017 Projected to the Year End	2017 Budget $3,274/MG	2018 Budget $3,503/MG
Personnel Expenses Allocations						
Allocation to Maintenance	$ -	$ -	$ -	$ -	$ -	$ -
Allocation to Operations	-	-	-	-	-	-
Allocation to Administrations	-	-	-	-	-	-
	$ -	$ -	$ -	$ -	$ -	$ -
Maintenance Expenses						
Maintenance Equipment	$ 194,285	$ 601,000	$ 352,042	$ 422,450	$ 476,000	$ 153,000
Instrumentation	104,534	464,940	51,285	61,542	332,200	37,000
Total Grounds Maintenance & Landscaping	-	150,000	37,393	44,872	-	32,500
Vehicle Repairs	-	-	-	-	-	-
Interceptor Sewer Maintenance	6,558	-	-	-	-	-
Maintenance Safety Equipment	-	-	-	-	-	-
Misc. Maintenance Expense	-	-	-	-	-	20,000
	$ 305,377	$ 1,215,940	$ 440,720	$ 528,864	$ 808,200	$ 242,500
Operations Expenses						
Process Chemicals	$ -	$ -	$ -	$ -	$ -	$ -
Utilities	-	-	-	-	-	-
Trash and Sludge	-	-	-	-	-	-
Fuel and Lubricants	-	-	-	-	-	-
Lab Supplies and Services	16,659	26,650	-	-	20,700	-
Outside Lab Services	-	-	-	-	-	-
Safety Equipment	-	-	-	-	-	-
Custodial Services and Supplies	-	-	-	-	-	-
Equipment Rental	-	-	-	-	-	-
Uniforms	-	-	-	-	-	-
Security	-	50,000	-	-	-	-
Permits	-	-	-	-	-	-
Misc. Operating Expense	-	60,000	-	-	-	-
	$ 16,659	$ 136,650	$ -	$ -	$ 20,700	$ -
Administrations Expenses						
Telephone and Communications	$ -	$ -	$ -	$ -	$ -	$ -
Computer Supplies	-	24,600	-	-	-	-
Office Supplies	-	-	-	-	-	5,000
Travel, Meeting, Training	-	-	-	-	-	-
Employee and Community Events	-	-	-	-	-	-
Membership, Fees, Licenses	-	-	-	-	-	-
Professional Services	-	-	-	-	-	-
Legal Services and Fees	-	-	-	-	-	-
Temporary Labor	-	-	-	-	-	-
Bond & Liability Insurance	-	-	-	-	-	-
Finance Fees	-	-	-	-	-	-
Misc. Administration Expense	-	-	-	-	-	-
Permit Fees	-	-	-	-	-	-
Rent	-	-	-	-	-	-
Supplemental Environmental Project Payment	-	-	-	-	-	-
	$ -	$ 24,600	$ -	$ -	$ -	$ 5,000
Construction Expenses	$ 41,996	$ 1,625,000	$ 49,226	$ 65,635	$ -	$ -
Total Repairs and Replacements Fund Expenses	**$ 364,032**	**$ 3,002,190**	**$ 489,946**	**$ 594,499**	**$ 828,900**	**$ 247,500**

Victor Valley Wastewater Reclamation Authority
Budget Statement of Capital Fund
Fiscal Year 2017-2018

	2016 Actual $4,000/EDU ①	2016 Budget $4,000/EDU ①	2017 Actual as of 4/30/17	2017 Projected to the Year End	2017 Budget $4,000/EDU ①	2018 Budget $4,000/EDU ①
Revenues						
Connection Fees	$ 1,146,089	$ 1,100,000	$ 2,266,509	$ 2,719,811	$ 700,000	$ 878,900
Interest	35,772	10,000	31,788	38,146	10,000	38,000
Grant - FEMA/Cal-EMA	2,150,333	6,566,688	978,765	978,765	4,503,400	3,105,375
Grant - Water Recycling	1,714,652	-	968,635	1,162,362	1,267,000	157,577
Grant - Proposition 1	4,189,343	-	2,152,410	2,582,892	3,500,000	293,010
Grant - Proposition 84	3,000,000	-	-	-	-	-
Grant - Title 16	1,899,930	3,541,480	-	-	-	-
	$ 14,136,119	$ 11,218,168	$ 6,398,107	$ 7,481,976	$ 9,980,400	$ 4,472,862
Other Financing Sources						
SRF Loan Funding	$ 23,517,063	$ 44,984,109	$ 25,637,291	$ 30,764,749	$ 44,750,140	$ 593,349
	$ 23,517,063	$ 44,984,109	$ 25,637,291	$ 30,764,749	$ 44,750,140	$ 593,349
Total Capital Revenues and Other Financing Sources	**$ 37,653,182**	**$ 56,202,277**	**$ 32,035,398**	**$ 38,246,725**	**$ 54,730,540**	**$ 5,066,211**
Expenses						
Personnel and Benefits	$ 407,267	$ 399,194	$ 305,565	$ 366,678	$ 400,477	$ 416,716
Maintenance	41,938	-	3,541	4,249	-	40,000
Operations	-	171	12,068	14,482	171	170
Administration	146,512	-	20,207	24,248	-	140,000
Construction	53,795	51,790,556	28,151,590	33,781,908	48,111,352	2,482,435 ②
	$ 649,512	$ 52,189,921	$ 28,492,971	$ 34,191,565	$ 48,512,000	$ 3,079,321
Debt Services						
SRF Principal	$ 1,103,145	$ 1,103,145	$ 960,217	$ 1,127,959	$ 1,127,959	$ 1,198,884
SRF Interest	245,431	245,431	132,569	220,617	220,617	209,281
	$ 1,348,576	$ 1,348,576	$ 1,092,786	$ 1,348,576	$ 1,348,576	$ 1,408,165
Total Capital Expenses with Debt Services	**$ 1,998,088**	**$ 53,538,497**	**$ 29,585,757**	**$ 35,540,141**	**$ 49,860,576**	**$ 4,487,486**
Capital Net Surplus or (Deficit)	**$ 35,655,094**	**$ 2,663,780**	**$ 2,449,641**	**$ 2,706,584**	**$ 4,869,964**	**$ 578,725**

① EDU = Equivalent Dwelling Unit (245 gallons/day or 20 fixture units)

Capital Projects	FY 2018 O&M Fund	FY 2018 Capital Fund
Golf Cart Recharging Station	-	15,000
Microgrid Project	-	80,000
DIMS Operations Automation	-	150,000
Hesperia Subregional	375,455	240,045
Apple Valley Subregional	2,013,610	1,287,390
Operations Building Extension	-	205,000
Desert Knolls Wash	-	240,000
Misc Projects	-	265,000
Construction Total	**2,389,065**	**2,482,435** ②

Among the various capital projects listed above, VVWRA has begun the construction of sub-regional water reclamation plants in the City of Hesperia and the Town of Apple Valley during FY 2015. The construction costs of these plants are estimated as $40.5 million and $40.3 million, respectively. These projects are funded mostly by Clean Water State Revolving Fund (SRF) loans from the California State Water Resources Control Board (SWRCB) and the remaining by Title 16 Grant from the Federal Bureau of Reclamation, by Proposition One Water Quality, Supply, and Infrastructure Improvement Act of 2014 and Proposition 84 Round Two Integrated Regional Water Management Implementation Grant from the California State Department of Water Resources, and by Propositions 13 and 50 under Water Recycling Grant Program from the SWRCB. These SRF loan repayments for the sub-regional projects will not impact the FY 2018 operations and maintenance budget but do affect FY 2019 as the loan repayment process begins one year after the completion of the plant construction. We predict the construction will complete at the end of December 2017. As explained at the page 19, the member agencies have discussed the long-term solution how to repay the SRF loans for the Sub-regional projects. With the daily loss of

1.7 million gallons of flow from the Victorville, their consensus is to have proper rate adjustment to either operate these two plants and/or pay back the loans as they become due. The FY 2018 budget is based on only the three-month test run of the Apple Valley and Hesperia plants per the Finance Committee recommendation. The real challenge is for FY 2019 when we may not be able to pay back the SRF loans for the Sub-regional projects timely without such a remedy.

Please refer to pages 50 and 51 for the SRF loan payments that impact both Operations & Maintenance (O&M) and Capital fund activities.

The long-range financial impact of these capital projects on the O&M and Capital budget is significant, as the loan repayment of principal and interest will increase from $2.6 million in FY 2018 to $5.3 million in FY 2019 and still impact the years after during the loan terms. In order to maintain the required debt payment reserve level, VVWRA has raised the user charge and connection fee rates in FY 2015. Comparatively, the connection fee will remain from FY 2015 through FY 2018. The following rates were approved by the Board of Commissioners in FY 2014. As the City of Victorville announced a portion (1.04 million gallons per day) of its flow will be diverted to its own reclamation facility and the city has stopped sending any connection fees to VVWRA, it is uncertain whether VVWRA could maintain this reserve level that could have enabled us to comply with the SWRCB's debt reserve and net revenue requirements. Although the user charge will be gradually increased by 9% per year from FY 2015 through 2017 and by 7% in FY 2018, the loss of diverted flow income and connection fee revenue may lead us to financially unsustainable condition. Without user fee and connection fee revenues as predicted in the 2014 financial plan, these rates may not be able to absorb the additional operations and maintenance costs at the water reclamation plants in future years. Although the long-term financial plan is underway, the agency does not have such plans as of issuing this budget.

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
User Charge ($/MG)	$2,528.00	$2,756.00	$3,004.00	$3,274.00	$3,503.00
Connection Fee ($/EDU)	$3,750.00	$4,000.00	$4,000.00	$4,000.00	$4,000.00

Victor Valley Wastewater Reclamation Authority
Allocations of Personnel Expenses
Fiscal Year 2017-2018

	2016 Actual $3,004/MG	2016 Budget $3,004/MG	2017 Actual as of 4/30/2017	2017 Projected to the Year End	2017 Budget $3,274/MG	2018 Budget $3,503/MG
Operations and Maintenance Salary Expenses						
Regular Salaries	$ 3,752,905	$ 3,298,868	$ 2,587,143	$ 3,104,572	$ 3,442,789	$ 2,850,355
Overtime	130,278	131,250	99,176	119,011	145,100	133,400
Call-Out Pay	44,681	33,400	50,763	60,916	49,800	66,120
Salaries Expense - Capital	(314,229)	-	(218,967)	(262,760)	-	-
	$ 3,613,635	$ 3,463,518	$ 2,518,115	$ 3,021,739	$ 3,637,689	$ 3,049,875
Operations and Maintenance Benefit Expenses						
Longevity	$ 27,029	$ 28,255	$ 27,863	$ 33,436	$ 31,984	$ 30,895
Vehicle Allowance	-	12,092	-	-	18,069	18,000
Sick Leave Buy Back	-	35,000	-	-	25,000	-
Medicare	55,896	48,087	37,430	44,916	50,134	41,504
Social Security Expense	17,262	-	17	20	-	-
PERS / Health Insurance	357,843	409,139	280,856	337,027	408,579	232,969
Dental / Vision Insurance	28,126	30,510	26,470	31,764	31,134	22,436
Workers Comp Insurance	62,568	101,143	92,901	111,481	105,376	87,133
PERS / Retirement	742,959	488,335	572,244	686,693	500,624	420,942
PERS / Retirement - GASB 68	(324,466)	-	-	-	-	-
PERS / Retirement-EUL	-	236,999	-	-	266,502	308,170
Life Insurance	16,346	17,607	10,640	12,768	18,344	15,168
Unemployment Insurance	32,707	17,658	15,728	18,874	15,134	10,948
Disability Insurance	22,315	23,290	13,205	15,846	24,265	20,064
Misc Personnel Expense	9,931	9,140	5,122	6,146	9,500	9,500
OPEB Expense	114,464	176,500	-	-	85,294	85,000
Benefits Expense - Capital	(93,038)	-	(86,598)	(103,918)	-	-
	$ 1,069,942	$ 1,633,755	$ 995,878	$ 1,195,053	$ 1,589,939	$ 1,302,729
Capital Salary and Benefits Expenses						
Salaries	$ 314,229	$ 116,137	$ 218,967	$ 262,760	$ 118,512	$ 127,607
Benefits	93,038	21,435	86,598	103,918	22,048	23,108
	$ 407,267	$ 137,572	$ 305,565	$ 366,678	$ 140,560	$ 150,715
Total Personnel Expenses	**$ 5,090,844**	**$ 5,234,845**	**$ 3,819,558**	**$ 4,583,470**	**$ 5,368,188**	**$ 4,503,319**
Allocations of Personnel Expenses						
1. Allocations to Operations and Maintenance Fund						
To Maintenance Department	$ (1,221,803)	$ (1,270,355)	$ (916,694)	$ (1,100,032)	$ (1,267,716)	$ (970,585)
To Operations Department	(2,239,971)	(2,306,437)	(1,413,236)	(1,695,884)	(2,009,414)	(1,661,723)
To Administration (other departments except Construction)	(1,221,803)	(1,258,859)	(1,184,063)	(1,420,876)	(1,690,581)	(1,454,295)
	$ (4,683,577)	$ (4,835,651)	$ (3,513,993)	$ (4,216,792)	$ (4,967,711)	$ (4,086,603)
2. Allocation To Capital Fund						
To Construction Department	$ (407,267)	$ (399,194)	$ (305,565)	$ (366,678)	$ (400,477)	$ (416,716)
Personnel Expenses After Allocations	$ -	$ -	$ -	$ -	$ -	$ -

Victor Valley Wastewater Reclamation Authority
High Strength Surcharges
Fiscal Year 2017-2018

This page shows high strength surcharge rates for FY 2018 and the calculation worksheet.

Worksheet

User Charges from Member Agencies	$ 13,661,700
Unit User Charge per MG	**$3,503.00**
Estimated Treatment Flow (MG)	3,900

	① Influent mg/l	Influent lbs/day	① Effluent mg/l	Effluent lbs/day	Removal lbs/day	Removal lbs/year	Percent of Cost	Removal Cost/lb	Unit Cost $
BOD	446.70	39,806	4.29	382	39,424	14,389,828	35.0%	$4,781,595	$0.3323
TSS	466.90	41,607	2.67	238	41,369	15,099,545	25.0%	$3,415,425	$0.2262
NH3	31.90	2,843	0.24	21	2,821	1,029,773	30.0%	$4,098,510	$3.9800
Annual Flow - MG per Day									
3,900 MG / 365 days		10.68					10.0%	$1,366,170	
							100.0%	$13,661,700	

	BOD $/lb	TSS $/lb	NH3 $/lb
Surcharge Rates:	**$0.3323**	**$0.2262**	**$3.9800**
Applied to Concentrations Above:	**200 mg/l**	**250 mg/l**	**20 mg/l**

FORMULAS

lbs/day = flow (mgd) x concentration (mg/l) x weight of water (8.34 lbs/gal)

BOD

Influent (flow mgd) x (influent mg/l) x 8.34 lbs/gal = lbs/day
Effluent (flow mgd) x (effluent mg/l) x 8.34 lbs/gal = lbs/day

TSS

Influent (flow mgd) x (influent mg/l) x 8.34 lbs/gal = lbs/day
Effluent (flow mgd) x (effluent mg/l) x 8.34 lbs/gal = lbs/day

NH3

Influent (flow mgd) x (influent mg/l) x 8.34 lbs/gal = lbs/day
Effluent (flow mgd) x (effluent mg/l) x 8.34 lbs/gal = lbs/day

REMOVAL

Per day: Influent lb/day - Effluent lb/day = Removal lbs/day
Per year: Removal lb/day x 365 = Removal lb/year

REMOVAL COST

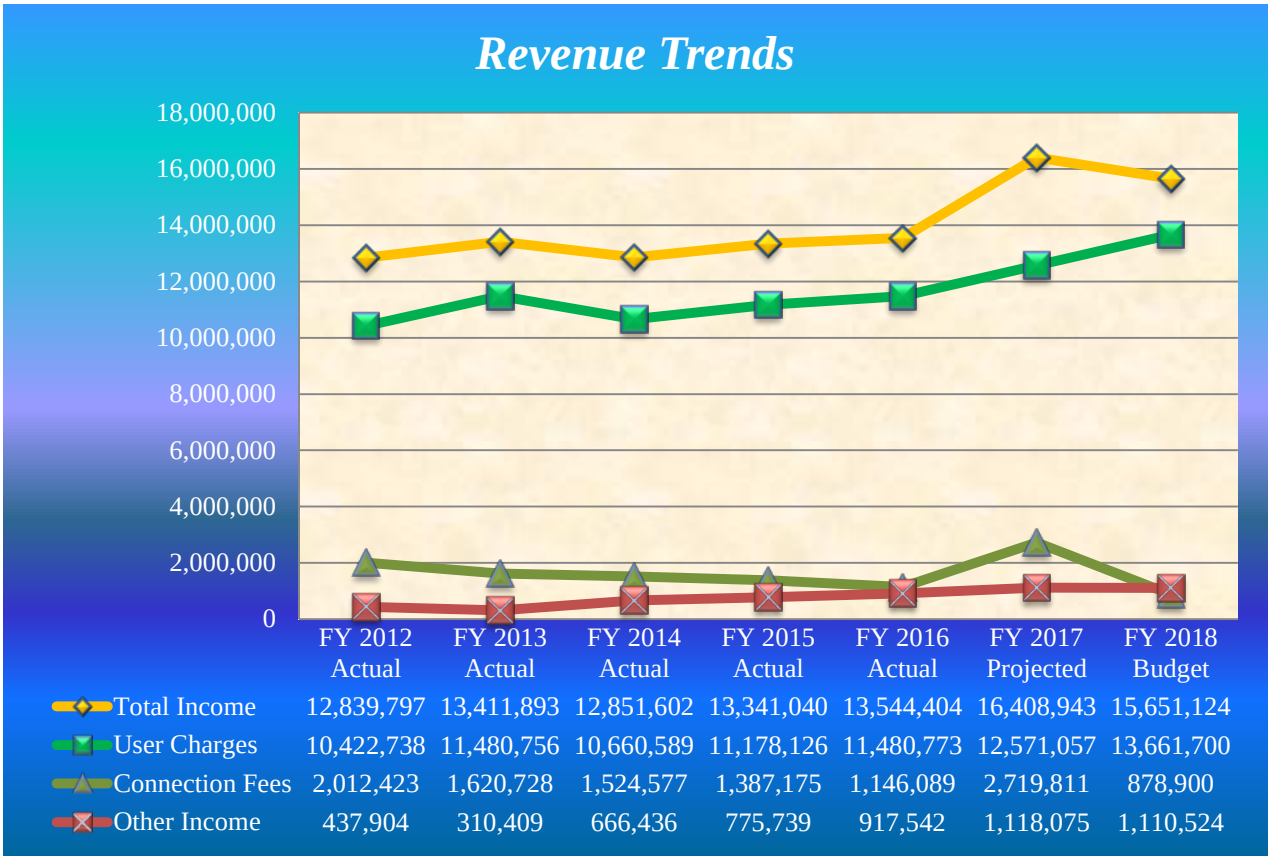
Per lb: Total user cost x 35% = Removal cost/lb
Per unit: Removal cost/lb / Removal lb/year

① From 2016 Annual Discharge Monitoring Report.

Victor Valley Wastewater Reclamation Authority
Revenue Trend Analysis
Fiscal Year 2017-2018

Revenue Analysis

Although Victor Valley Wastewater Reclamation Authority (VVWRA) has been recovering from the decrease of operating revenues since FY 2012, the 6.5% user fee rate increase at the beginning of the FY 2018 cannot absorb the lost user fee revenue from the City of Victorville (Victorville). Further, connection fee revenue is also decreased from $2.0 million in FY 2012 to $878,900 budgeted for FY 2018. These decreases reflect the Victorville's 1.04 MGD diverted wastewater flow and no connection fees from Victorville on top of the overall fewer new housing developments in the service areas. Although the overall income declines from FY 2017 to FY 2018, the revenue trend indicates an increase from $12.8 million in FY 2012 to $15.7 million in FY 2018 helped with other income, such as sludge flow and septage processing fee revenues.



	FY 2012 Actual	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Projected	FY 2018 Budget
Total Income	12,839,797	13,411,893	12,851,602	13,341,040	13,544,404	16,408,943	15,651,124
User Charges	10,422,738	11,480,756	10,660,589	11,178,126	11,480,773	12,571,057	13,661,700
Connection Fees	2,012,423	1,620,728	1,524,577	1,387,175	1,146,089	2,719,811	878,900
Other Income	437,904	310,409	666,436	775,739	917,542	1,118,075	1,110,524

Source: VVWRA FY = Fiscal Year ended June 30

Other income also includes high strength surcharges for high contents of certain chemical, reclaimed water sales from the processed water, industrial pretreatment permits charged for annual permits issued to businesses for additional loads, and interest income. Grants are excluded in this revenue analysis for the period from FY 2012 to FY 2018.

Due to an overall decrease of the net income (net position) in coming years, how to handle such a substantial decline of income is the hurdle that we have to solve in near future.

Please refer to the glossary on page 62 for the term definitions.

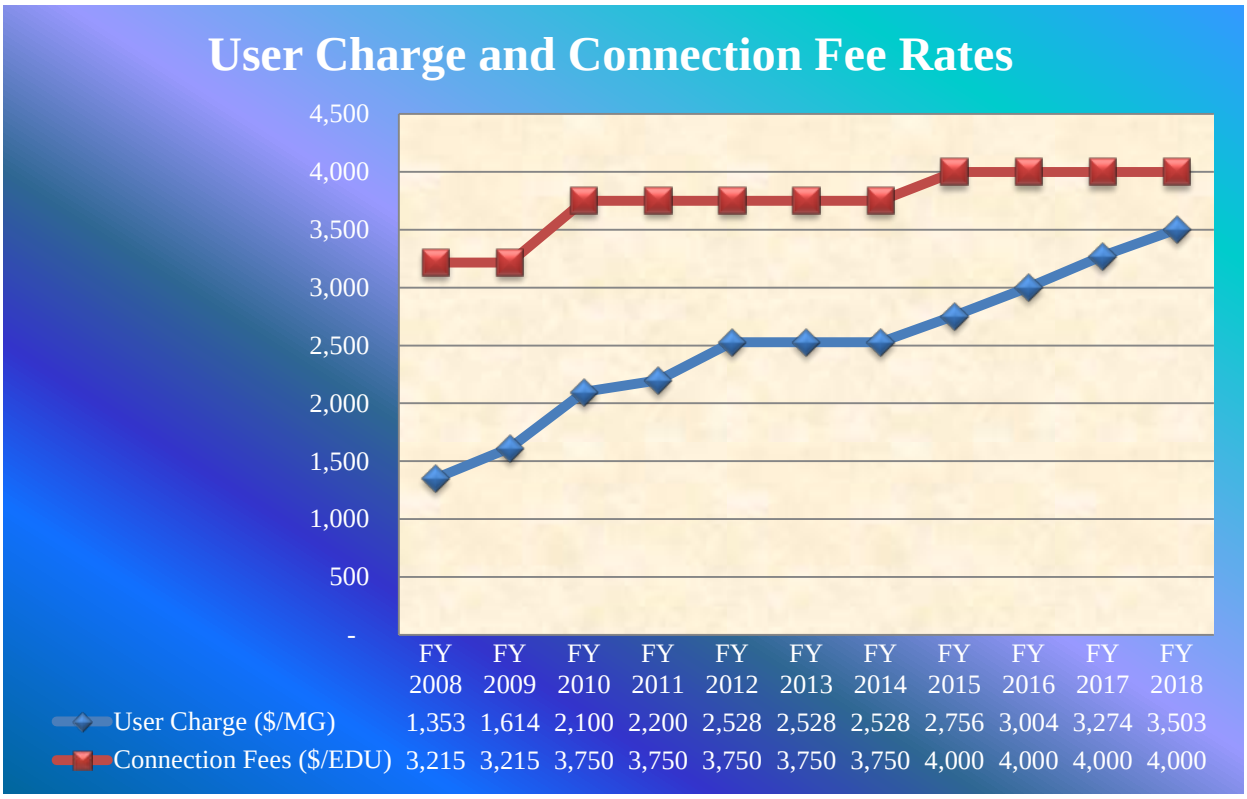
Victor Valley Wastewater Reclamation Authority
Revenue Trend Analysis
Fiscal Year 2017-2018

Revenue Analysis (Continued)

Both user charges and connection fees are determined multiplying quantity received by unit prices; multiplying the flow quantity of million gallons (MG) by the user fee rate ($3,503/MG) for the user fee revenue and by multiplying the Equivalent Dwelling Unit (EDU) by the connection fee rate ($4,000/EDU). The four member agencies determined these rates to absorb the operating and construction costs; these rates are incorporated in the revenue ordinances. The graph below shows rate changes up to FY 2018 based on the five–year financial plan.

The connection fees are calculated based on sewage quantity discharged by a single family home for a period of twenty-four hours. This single family home unit is referred to as one equivalent dwelling unit (EDU).

The Board of Commissioners reserves the right to change the rates of user charge and connection fee from time to time as necessary to fund its operations, maintenance, repairs, replacements, and expansion of the regional system.



	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
User Charge ($/MG)	1,353	1,614	2,100	2,200	2,528	2,528	2,528	2,756	3,004	3,274	3,503
Connection Fees ($/EDU)	3,215	3,215	3,750	3,750	3,750	3,750	3,750	4,000	4,000	4,000	4,000

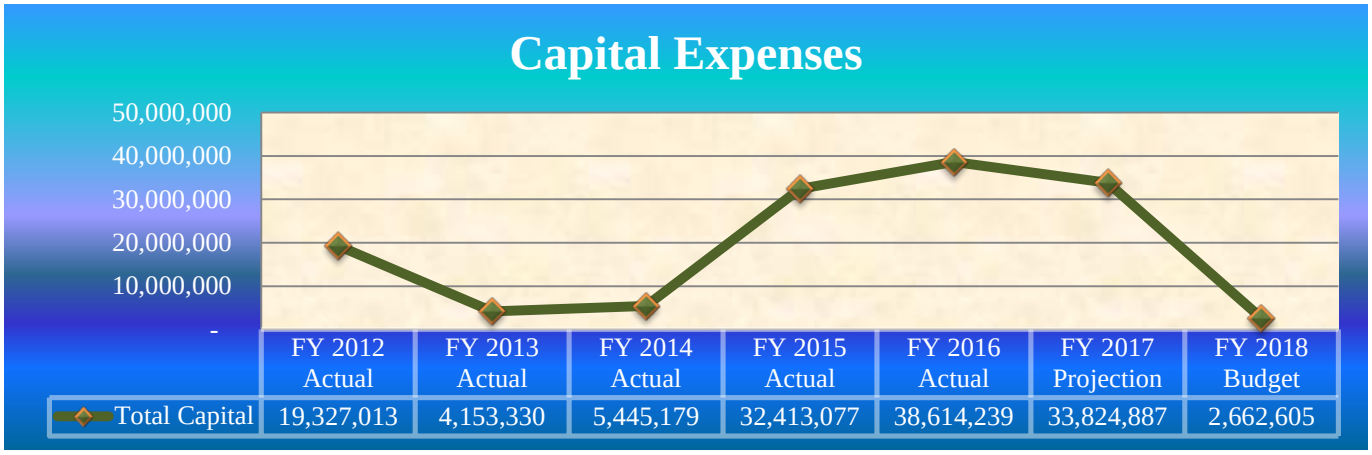
Source: VVWRA FY = Fiscal Year ended June 30

Victor Valley Wastewater Reclamation Authority
Expense Trend Analysis
Fiscal Year 2017-2018

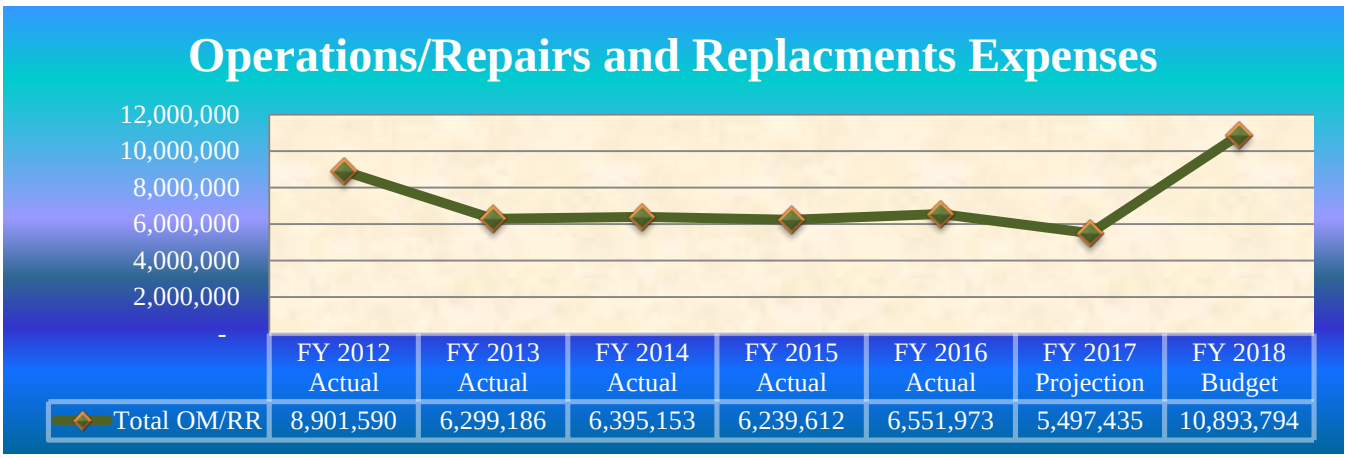
Expense Analysis

Capital Expenses: Capital expenditures have risen during FY 2012, as the FY 2012 includes the construction costs of the Mojave River emergency temporary pipeline to remedy the damaged pipeline during the December 2010 storm. The expenses below reflect the actual expenses per CAFR adjusted by adding the portion reimbursed by the grants from Federal Emergency Management Agency and California Office of Emergency Services. The capital expenditures in FY 2012 also include the construction of an ultraviolet light disinfection facility (UV system) for the regulatory compliance upgrade project called Phase III-A. The FY 2013 and FY 2014 capital expenditures came down to the level of 2011. The FY 2015 and FY 2016 include Sub-regional plant construction. We have budgeted $48.1 million for FY 2017 and $2.7 million (page 47) for FY 2018 to complete the construction of the capital projects

Operations/Repairs and Replacements Expenses: The FY 2012 operations/repairs and replacements expense reflects emergency operation costs without offsetting it by grants. These expenses continue to show the high electricity costs for the UV system during FY 2012 through FY 2018.



	FY 2012 Actual	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Projection	FY 2018 Budget
Total Capital	19,327,013	4,153,330	5,445,179	32,413,077	38,614,239	33,824,887	2,662,605



	FY 2012 Actual	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Projection	FY 2018 Budget
Total OM/RR	8,901,590	6,299,186	6,395,153	6,239,612	6,551,973	5,497,435	10,893,794

Source: VVWRA - The graphs excludes personnel costs. *FY = Fiscal Year ended June 30*

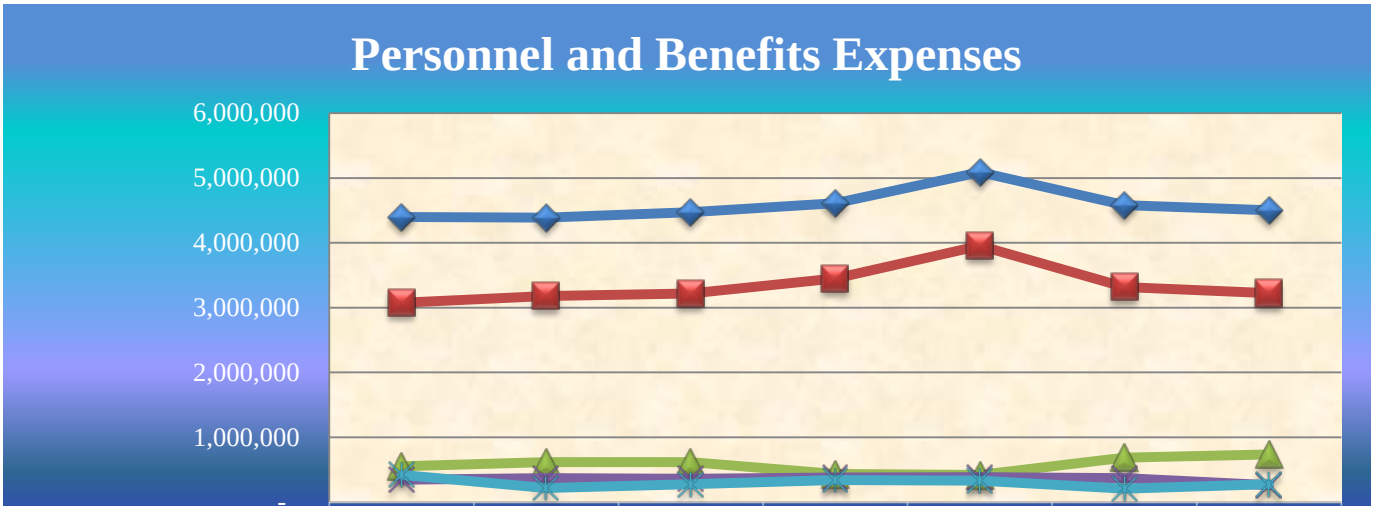
Victor Valley Wastewater Reclamation Authority
Expense Trend Analysis
Fiscal Year 2017-2018

Expense Analysis (Continued)

The personnel costs have remained stable with a slight increase over the years and a jump during FY 2016. However, the personnel costs declined in FY 2017 and FY 2018 to reflect 1/3 lay-off during FY 2017.

The health care cost has been kept at about the same level throughout the period from FY 2012 to FY 2018.

Other personnel costs include OPEB costs, Medicare, workers comp insurance, life insurance, unemployment insurance, disability insurance and miscellaneous personnel expense, such as payroll processing fees.

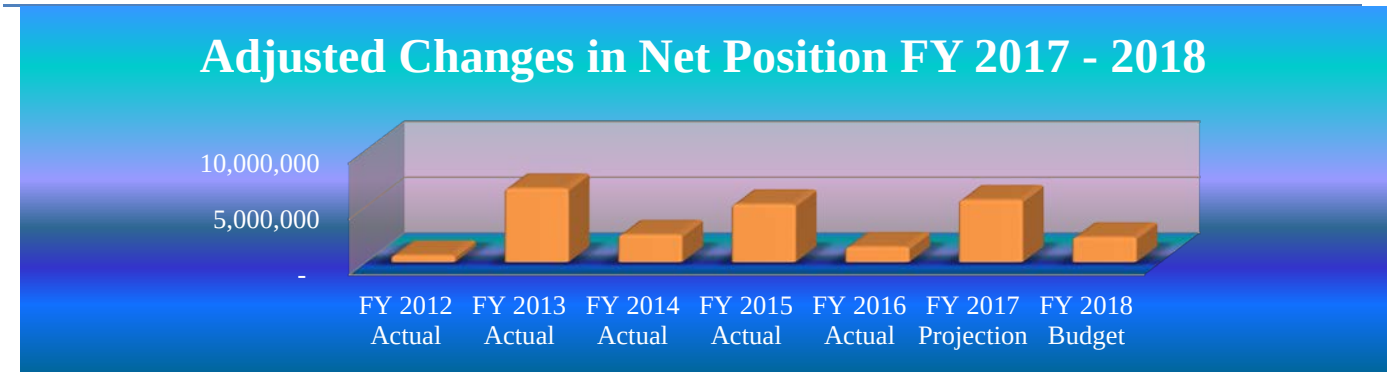


	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017 Projection	FY 2018 Budget
Total Personnel	4,398,077	4,386,713	4,475,438	4,610,514	5,090,844	4,583,470	4,503,318
Salaries and Wages	3,076,085	3,181,704	3,216,861	3,452,847	3,954,893	3,317,934	3,226,376
Retirement	553,612	619,724	616,834	433,463	418,493	686,693	737,233
Health Care	346,454	368,652	362,717	381,229	385,969	368,791	262,917
Other Personnel	421,927	216,633	279,026	342,975	331,489	210,052	276,792

Source: VVWRA. FY = Fiscal Year ended June 30

Victor Valley Wastewater Reclamation Authority
History of Changes in Net Position
Fiscal Year 2017-2018

FY = Fiscal Year	Beginning Net Position	Changes in Net Position per CAFR *=Per Budget	Ending Net Position	Grants CIP/Interest Amortization and Depreciations Expense	Adjusted Changes in Net Position	Adjusted Ending Net Position
FY 2012 Actual	104,672,999	(4,456,740)	100,216,259	5,064,886	608,146	105,281,145
FY 2013 Actual	100,216,259	520,654	100,736,913	6,124,656	6,645,310	106,861,569
FY 2014 Actual	100,736,913	(2,228,708)	98,508,205	4,699,735	2,471,027	103,207,940
FY 2015 Actual	98,508,205	21,424,125	119,932,330	(16,212,939)	5,211,186	103,719,391
FY 2016 Actual	119,932,330	7,686,678	127,619,008	(6,308,679)	1,377,999	121,310,329
FY 2017 Projection	127,619,008	5,602,004 *	133,221,012	-	5,602,004	133,221,012
FY 2018 Budget	133,221,012	2,250,039 *	135,471,051	-	2,250,039	135,471,051



Source: VVWRA *FY = Fiscal Year ended June 30*

History of changes in net position

The above graph shows 'adjusted changes in net position' whose amounts are highlighted in navy blue. VVWRA's changes in net position, or the total revenues over total expenses, has fluctuated during FY 2012 through FY 2018.. The decrease is due to the sharp decline of connection fee revenues from member agencies. The connection fee revenues are directly related to the housing market growth in the service areas as shown by a 43% decrease from $2,012,423 in FY 2012 to $1,146,089 in FY 2016. In contrast, the operating expenses have decreased by 7%, from $12,057,130① in FY 2012 to $11,174,660① in FY 2016. Grant revenues are recorded in CAFR but most of related construction costs are recorded in an asset group, excluded from an expense group. For fair comparison purpose, the above actual net positions from FY 2012 to 2016 are adjusted by adding back the grant related capitalized expenses for the Upper Narrows Replacement and Emergency projects and also adding non-cash depreciation and amortized interest expenses. The FY 2016 reflects a fewer repair-construction projects, not using the entire budgeted amount. Please see detailed discussions on capital improvement projects anticipated during FY 2018 and beyond at pages 47 and 48. The FY 2018 net position includes a one-time receipt of retention revenue from FEMA and Cal OES upon the completion of the Upper Narrows Replacement and Emergency projects.

① CAFR operating expenses without depreciation expense

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Section V: Capital Projects and Debts

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Victor Valley Wastewater Reclamation Authority
Capital Improvement Programs – Overview and Project Descriptions
Fiscal Year 2017-2018

Overview

The Capital Improvement Programs (CIP) on pages 46 start with the new and continued capital projects funded in fiscal year 2018 budget. The presented budget includes a format for the presentation of the CIP that more accurately allocates resources and prioritizes the projects in four categories. These project categories include Wastewater Treatment, Interceptor, Energy Efficiency, and Information Technology.

As we plan to complete these construction projects by the end of FY 2019, we show on page 46 FY 2018 and FY 2019 with the comparison to FY 2016 and FY 2017. The pages 47 and 48 focus on the projects, the funds, and the types of project financing. These pages summarize all the capital projects and related monthly cash flows for the projected years. Finally, the pages 49 and 50 indicate when our existing State Revolving Fund loans mature with annual payment amounts and the page 51 describes how the fund will be applied during FY 2018 and FY 2019.

The capital expenditures include the CIP's, such as construction projects that have an extended life of over five years. Generally, the capital expenditures include capital replacement projects that repair, replace or enhance existing facilities, equipment, or infrastructure, thus significantly expanding the life of or adding more capacity to the facilities that VVWRA owns.

In this budget, the term CIP is used to describe capital expenditures including projects that are in fact construction in progress. Capital expenditures for the CIP are separate from operating expenses. The operating expenses relate to the operations to provide wastewater services that are usually under $5,000 with less than one year of useful life.

To accomplish multiple goals in parallel, the prospective projects as listed on page 44 are ranked by priorities for each two categories. The level of priority of each project is determined by the individual timing of the project.

Project Descriptions

Wastewater Treatment	
1	Operations Building Extension; Replacement of obsolete laboratory and former administration building. Construction delayed due to cash flow issues associated with the Upper Narrows Emergency and completion of Phase IIIA.
2	Digesters 4 & 5 Supernatant Line; Digesters 4 & 5 currently require pumping to withdraw solids that has to be timed with influent pumping and gas production/withdrawal. Replacement with a gravity system will reduce costs and improve operational reliability.
3	Golf Cart Recharging Station; Provides a stable location to charge golf cart batteries.
4	Westside Plant Spill Containment System; Several instances have occurred which allowed partially treated wastewater to inadvertently enter the storm drain system. Not all of it was able to be returned to the headworks thus reportable spills occurred. This project will create a valve and a pipeline to redirect flows from the storm water system to the backwash basin.
5	Hesperia Subregional Water Reclamation Plant; Construction of a new water reclamation plant in the City of Hesperia.
6	Town of Apple Valley Water Reclamation Plant; Construction of a new water reclamation plant in the Town of Apple Valley.
7	Tertiary Filter Enclosure; The enclosure to reduce the amount of filter flies, dust and debris that accumulate in the tertiary filters.
8	Eastside WWTP (Serving Northern Triangle, VV-TOAV); Possible construction depending on how situations develop.
Interceptor	
9	Ossum Wash; The double barrel interceptor that crosses Ossum Wash requires lining to ensure its structural integrity.
10	Oro Grande Interceptor; The line will replace the existing Oro Grande interceptor.
11	Apple Valley Odor Control; An odor study was performed by V&A engineering in 2009. Before it could be acted upon the Upper Narrows Emergency occurred. Due to FEMA requirements it is necessary to delay all activities with this project until the Upper Narrows Interceptor Replacement Project is completed.
12	Apple Valley Interceptor Realignment, Desert Knolls Wash; San Bernardino County Flood Control intends to reconstruct desert knolls wash which will require VVWRA to realign its manholes in that area. It is anticipated that this project will coincide with the odor control project since they occur in the same vicinity.
13	North Hesperia Relief Interceptor; If the Board chooses not to pursue construction of the Hesperia Subregional then VVWRA would construct this interceptor. The minimal funds allocated would be to initiate the environmental process. The design was completed as part of a settlement agreement with RBF Engineering. Planning costs would be paid for with Capital Cash Reserves and construction with an SRF loan. If the Hesperia Subregional is constructed it is not anticipated that this project would be built within the next ten years.
14	Spring Valley Lake Relief Interceptor; If the Board chooses not to pursue construction of the Hesperia Subregional then VVWRA would construct this interceptor. The minimal funds allocated would be to initiate the environmental process. The design was completed as part of a settlement agreement with RBF Engineering. Planning costs would be paid for with Capital Cash Reserves and construction with an SRF loan. If the Hesperia Subregional is constructed it is not anticipated that this project would be built within the next ten years.

Apple Valley Sub-regional Water Reclamation Plant Project

Hesperia Sub-regional Water Reclamation Plant Project

Victor Valley Wastewater Reclamation Authority
Capital Improvement Programs - Expenditures by Projects
Fiscal Year 2017-2018

As explained at page 43, all the projects are to be completed during FY 2019. These projects are funded by one or combination of the following sources: operating cash reserve; capital cash reserve; State Revolving Fund; and federal and California grants.

Capital Improvement Programs - Expenditures by Projects

Project Title	FY 2016 Budget	FY 2017 Budget	FY 2018 Budget	FY 2019 Budget	FY 2020 Budget
Operations Building Extension	-	-	205,000	-	-
Golf Cart Recharging Station	-	-	15,000	-	-
Microgrid/Battery Storage Project	-	-	80,000	-	-
Digital Information Management System (DIMS) Operations Automation	-	-	150,000	-	-
Digesters 4 and 5 Supernatant Line	75,000	-	-	75,000	-
Drying Beds Repair and Drainage Improvements	150,000	-	-	-	-
Westside Plant Spill Containment System	-	-	265,000	-	-
Hesperia Sub-regional Water Reclamation Plant	21,684,959	21,365,176	615,500	-	-
TOAV Sub-regional Water Reclamation Plant	21,684,959	21,365,176	3,301,000	-	-
Tertiary Filter Enclosure	50,000	-	-	50,000	-
Eastside WWTP (Serving Northern Triangle, VV-TOAV)					
Total Wastewater Treatment Projects	**$ 43,644,918**	**$ 42,730,352**	**$ 4,631,500**	**$ 125,000**	**$ -**
Upper Narrows Interceptor Replacement Project	2,490,738	1,191,000	-	-	-
Nanticoke PS Bypass Sewer	5,000,000	3,990,000	-	-	-
Ossum Wash	650,000	-	-	650,000	-
Oro Grande Interceptor		-	-	5,700,000	-
Yates Road Sampling Station	84,900	-	-	-	-
Apple Valley Odor Control	100,000	100,000	-	-	-
Apple Valley Interceptor Realignment					
Desert Knolls Wash	100,000	100,000	240,000	1,080,000	-
North Hesperia Relief Interceptor	-	-	-	-	-
Spring Valley Lake Relief Interceptor	-	-	-	-	-
Shay Road Diversion Structure	75,000	-	-	-	-
Total Interceptor Projects	**$ 8,500,638**	**$ 5,381,000**	**$ 240,000**	**$ 7,430,000**	**$ -**
Aeration Energy Efficiency Project	900,000	-	-	-	-
Biogas Solids Project	500,000	-	-	-	-
Total Energy Efficiency Projects	**$ 1,400,000**	**$ -**	**$ -**	**$ -**	**$ -**
Document Management System	100,000	-	-	-	-
Total Information Technology Projects	**$ 100,000**	**$ -**	**$ -**	**$ -**	**$ -**
TOTAL	**$ 53,645,556**	**$ 48,111,352**	**$ 4,871,500**	**$ 7,555,000**	**$ -**

Victor Valley Wastewater Reclamation Authority
Capital Improvement Programs - Summary and Cash Flows
Fiscal Year 2017 - 2018

Priority	Project Number	Project Title	Project Financing	Account Code	Estimated Capital Cost Total	Estimated Capital Cost VVWRA	FY 17-18 July	August	September	October	November	December	January	February	March	April	May	June	Sum FY 17-18
Wastewater Treatment Projects																			
								Construction											
2	2	Golf Cart Recharging Station	Capital Cash Reserve	09-02-80-9000, 9999	15,000	15,000					7500	7500							15,000
											Construction								
1	3	Microgrid/Battery Storage Project	Capital Cash Reserve	09-02-620-9050, C130	80,000	80,000	20,000	20,000	20,000	20,000									80,000
							Construction												
1	4	Digital Information Management System (DIMS) Operations Automation	Capital Cash Reserve	09-03-300-9025	150,000	150,000	12,500	12500	12500	12500	12500	12500	12500	12500	12500	12500	12500	12500	150,000
							Installation/Testing/Start Up												
1	5	Operations Building Extension	Capital Cash Reserve	09-03-82-9050, C130	205,000	205,000		10,000	10,000	10,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000		205,000
								Planning/Design			Construction								
2	6	Digesters 4 and 5 Supernatant Line	Capital Cash Reserve	09-02-152-9025/9000, 9999, R132	75,000	75,000													0
1	7	Westside Plant Spill Containment System	Capital Cash Reserve	09-02-162-9025/9000, C016	265,000	265,000	10,000	10,000	10,000	15,000	40,000	100,000	40,000	40,000					265,000
							Planning/Design			Construction									
1	8	Hesperia Subregional Water Reclamation	State Revolving Fund	09-54-80-9025/9110/9040/9000, C101	41,158,000	615,500	249,000	150,000	123,500	69,000	22,000	2,000							615,500
							Construction												
1	9	TOAV Subregional Water Reclamation	State Revolving Fund	09-55-80-9025/9110/9040/9000, C102	41,052,000	3,301,000	1,212,000	894,000	493,000	466,000	89,000	147,000							3,301,000
							Construction												
2	10	Tertiary Filter Enclosure	Capital Cash Reserve	09-02-121-9000, C130	50,000	50,000													0
3	11	Eastside WWTP (Serving Northern Triangle, VV-TOAV)	State Revolving Fund	09-52-500-9000/9020/9022/9025/9030/9035/9040/9110															
		Total Wastewater Treatment Projects			**$ 83,090,000**	**$ 4,796,500**													
Interceptor Projects																			
2	12	Ossum Wash	Capital Cash Reserve	09-05-20-9000/9025, C127	650,000	650,000													0
2	13	Oro Grande Interceptor	State Revolving Fund	09-27-05-9025/9000, C126	5,700,000	5,700,000													0
1	14	Desert Knolls Wash: Interceptor, pigging station, odor control, flow monitoring, grit removal	Capital Cash Reserve	09-19-20-9025/9000, C113	1,320,000	1,320,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	240,000
							Planning/Design												
3	15	North Hesperia Relief Interceptor[3]	State Revolving Fund	09-21-20-9000															
3	16	Spring Valley Lake Relief Interceptor[3]	State Revolving Fund	09-23-20-9000															
		Total Interceptor Projects			**$ 7,670,000**	**$ 7,670,000**													
		TOTAL			**$ 90,760,000**	**$ 12,466,500**													

Total FY17-18 **$4,871,500**

Project Financing	
Capital Cash Reserve	955,000
State Revolving Fund	3,916,500
Total FY17-18	**$4,871,500**

Notes

1 Planning/Design includes Right of Way (ROW), Environmental, Design, and Legal Activities

2 SRF Financing of 6.25% VVWRA share

3 The timing of the construction of these facilities is dependent upon the decision to construct the subregionals.

Sub-total	2,850,000
Sub-total	9,616,500
Total	**$12,466,500**

Victor Valley Wastewater Reclamation Authority
Capital Improvement Programs - Summary and Cash Flows
Fiscal Year 2017 - 2018

Priority	Project Number	Project Title	Project Financing	Account Code	Estimated Capital Cost Total	Estimated Capital Cost VVWRA	FY 18-19 July	August	September	October	November	December	January	February	March	April	May	June	Sum FY 18-19
Wastewater Treatment Projects																			
2	2	Golf Cart Recharging Station	Capital Cash Reserve	09-02-80-9000, 9999	15,000	15,000													
1	3	Microgrid/Battery Storage Project	Capital Cash Reserve	09-02-620-9050, C130	80,000	80,000													
1	4	Digital Information Management System (DIMS) Operations Automation	Capital Cash Reserve	09-03-300-9025	150,000	150,000													
1	5	Operations Building Extension	Capital Cash Reserve	09-03-82-9050, C130	205,000	205,000													
2	6	Digesters 4 and 5 Supernatant Line	Capital Cash Reserve	09-02-152-9025/9000, 9999, R132	75,000	75,000		5,000 Planning/Design	5,000	35,000 Construction	30,000								75,000
1	7	Westside Plant Spill Containment System	Capital Cash Reserve	09-02-162-9025/9000, C016	265,000	265,000													
1	8	Hesperia Subregional Water Reclamation	State Revolving Fund	09-54-80-9025/9110/9040/9000, C101	41,158,000	615,500													
1	9	TOAV Subregional Water Reclamation	State Revolving Fund	09-55-80-9025/9110/9040/9000, C102	41,052,000	3,301,000													
2	10	Tertiary Filter Enclosure	Capital Cash Reserve	09-02-121-9000, C130	50,000	50,000			25,000 Construction	25,000									50,000
3	11	Eastside WWTP (Serving Northern Triangle, VV-TOAV)	State Revolving Fund	09-52-500-9000/9020/9022/9025/9030/9035/9040/9110															
		Total Wastewater Treatment Projects			**$ 83,090,000**	**$ 4,796,500**													
Interceptor Projects																			
2	12	Ossum Wash	Capital Cash Reserve	09-05-20-9000/9025, C127	650,000	650,000	325,000 Construction	325,000											650,000
2	13	Oro Grande Interceptor	State Revolving Fund	09-27-05-9025/9000, C126	5,700,000	5,700,000	475000	475000	475000	475000	475000	475000	475000	475000	475000	475000	475000	475,000	5,700,000
1	14	Desert Knolls Wash: Interceptor, pigging station, odor control, flow monitoring, grit removal	Capital Cash Reserve	09-19-20-9025/9000, C113	1,320,000	1,320,000	90,000 Construction	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	1,080,000
3	15	North Hesperia Relief Interceptor[3]	State Revolving Fund	09-21-20-9000															
3	16	Spring Valley Lake Relief Interceptor[3]	State Revolving Fund	09-23-20-9000															
		Total Interceptor Projects			**$ 7,670,000**	**$ 7,670,000**													
		TOTAL			**$ 90,760,000**	**$ 12,466,500**													

	Notes
1	Planning/Design includes Right of Way (ROW), Environmental, Design, and Legal Activities
2	SRF Financing of 6.25% VVWRA share
3	The timing of the construction of these facilities is dependent upon the decision to construct the subregionals.

Sub-total	2,850,000
Sub-total	9,616,500
Total	**$12,466,500**

Project Financing	Sum FY 18-19
Capital Cash Reserve	1,855,000
State Revolving Fund	5,700,000
Total FY 18-19	**$7,555,000**

Total FY 18-19 **$7,555,000**

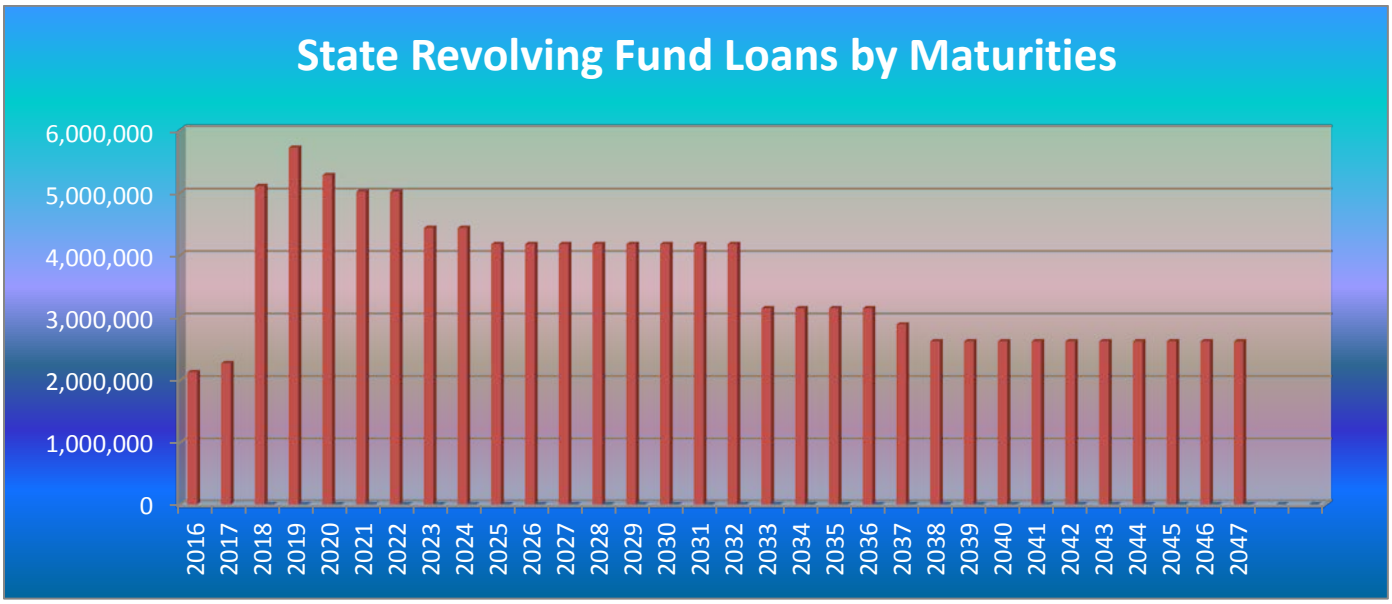
Victor Valley Wastewater Reclamation Authority
Existing State Revolving Fund Loan Payments by Maturities
Fiscal Year 2017-2018

The table below represents our debt service payments for the Clean Water State Revolving Fund (SRF) loans. In addition to $4.0 million Water Recycling grant and $9.2 million Proposition One grant, we have obtained a $27.1 million SRF loan for Apple Valley Sub-regional plant and $40.7 million SRF loan for Hesperia Sub-regional plant during FY 2015. In addition, we have added a $4,286,380 SRF loan for the Upper Narrows Pipeline Replacement Project and a $4,459,190 SRF loan for the Nanticoke Pump Station Bypass Sewer Project during FY 2016. Our debts consist of the SRF loans only, as listed below. As a special district, we are not required to maintain a legal debt limit but are required to adhere to the debt coverage clauses specified at page 16. Please also refer to page 51 for the impact of the debt repayments to the Operations & Maintenance and Capital Funds. Next page shows the annual repayments in a graph.

VVWRA Annual Debt Service

Fiscal Year	9.5 MGD Capital Improvements	11 MGD Expansion	North Apple Valley Interceptor	Phase IIIA Regulatory Upgrades	Upper Narrows Replacement	Nanticoke Bypass	Apple Valley Sub-Regional	Hesperia Sub-Regional	Total
2016	265,049	579,870	258,151	1,027,610	-	-	-	-	**2,130,680**
2017	265,049	579,870	258,151	1,027,610	143,890	-	-	-	**2,274,570**
2018	265,049	579,870	258,151	1,027,610	113,846	238,351	1,050,521	1,574,511	**5,107,909**
2019	265,049	579,870	258,151	1,027,610	697,132	270,220	1,050,521	1,574,511	**5,723,064**
2020	265,049	579,870	258,151	1,027,610	257,745	270,220	1,050,521	1,574,511	**5,283,677**
2021	-	579,870	258,151	1,027,610	257,745	270,220	1,050,521	1,574,511	**5,018,628**
2022	-	579,870	258,151	1,027,610	257,745	270,220	1,050,521	1,574,511	**5,018,628**
2023	-	-	258,151	1,027,610	257,745	270,220	1,050,521	1,574,511	**4,438,758**
2024	-	-	258,151	1,027,610	257,745	270,220	1,050,521	1,574,511	**4,438,758**
2025	-	-	-	1,027,610	257,745	270,220	1,050,521	1,574,511	**4,180,607**
2026	-	-	-	1,027,610	257,745	270,220	1,050,521	1,574,511	**4,180,607**
2027	-	-	-	1,027,610	257,745	270,220	1,050,521	1,574,511	**4,180,607**
2028	-	-	-	1,027,610	257,745	270,220	1,050,521	1,574,511	**4,180,607**
2029	-	-	-	1,027,610	257,745	270,220	1,050,521	1,574,511	**4,180,607**
2030	-	-	-	1,027,610	257,745	270,220	1,050,521	1,574,511	**4,180,607**
2031	-	-	-	1,027,610	257,745	270,220	1,050,521	1,574,511	**4,180,607**
2032	-	-	-	1,027,610	257,745	270,220	1,050,521	1,574,511	**4,180,607**
2033	-	-	-	-	257,745	270,220	1,050,521	1,574,511	**3,152,997**
2034	-	-	-	-	257,745	270,220	1,050,521	1,574,511	**3,152,997**
2035	-	-	-	-	60,393	270,220	1,050,521	1,574,511	**2,955,645**
2036	-	-	-	-	-	270,220	1,050,521	1,574,511	**2,895,252**
2037	-	-	-	-	-	270,220	1,050,521	1,574,511	**2,895,252**
2038	-	-	-	-	-	-	1,050,521	1,574,511	**2,625,032**
2039	-	-	-	-	-	-	1,050,521	1,574,511	**2,625,032**
2040	-	-	-	-	-	-	1,050,521	1,574,511	**2,625,032**
2041	-	-	-	-	-	-	1,050,521	1,574,511	**2,625,032**
2042	-	-	-	-	-	-	1,050,521	1,574,511	**2,625,032**
2043	-	-	-	-	-	-	1,050,521	1,574,511	**2,625,032**
2044	-	-	-	-	-	-	1,050,521	1,574,511	**2,625,032**
2045	-	-	-	-	-	-	1,050,521	1,574,511	**2,625,032**
2046	-	-	-	-	-	-	1,050,521	1,574,511	**2,625,032**
2047	-	-	-	-	-	-	1,050,521	1,574,511	**2,625,032**
Total	**1,325,245**	**4,059,090**	**2,323,359**	**17,469,370**	**4,881,436**	**5,372,531**	**31,515,630**	**47,235,330**	**114,181,991**

Victor Valley Wastewater Reclamation Authority
Existing State Revolving Fund Loan Payments by Maturities
Fiscal Year 2017-2018



This graph presents the annual SRF loan repayments. At peak years, the repayment amount exceeds $5 million. During FY 2018 the impact on Operations and Maintenance (O&M) Fund is $1,218,613, while the effect on Capital Fund is $1,408,165. For FY 2019, the impact on O&M Fund is $2,483,785 and effect on Capital Fund is $2,439,894. Please refer to page 51 for the detail information.

Victor Valley Wastewater Reclamation Authority
State Revolving Fund Loans for FY 2018 and FY 2019
Fiscal Year 2017-2018

Summary: VVWRA has utilized State Revolving Fund (SRF) loans through California State Water Resources Control Board to fund most capital projects. The construction of the projects below was completed except the Subregional Project as of June 30, 2018. This page shows the next two years of principal and interest repayments per Operations & Maintenance and Capital Funds.

2018	9.5 MGD Capital Improvements	11 MGD Expansion	North Apple Valley Interceptor	Phase IIIA Regulatory Upgrades	Upper Narrows Replacement Project	Nanticoke Bypass Project	2018 Total
SRF Loan Amount	$ 4,069,859	$ 11,430,726	$ 4,084,688	$ 15,717,668	$ 4,286,380	$ 4,459,190	$ 44,048,511
Annual Payment	$ 265,050	$ 579,870	$ 258,151	$ 1,027,610	$ 257,745	$ 238,351	$ 2,626,777
1. Operations	4.30%	0.00%	0.00%	75.00%	100.00%	75.00%	
Original Loan	$ 175,004	$ -	$ -	$ 11,788,251	$ 4,286,380	$ 3,344,393	
Principal	$ 10,552	$ -	$ -	$ 516,812	$ 193,498	$ 136,613	$ 857,475
Interest	$ 845	$ -	$ -	$ 253,895	$ 64,247	$ 42,151	$ 361,138
Annual Payment	$ 11,397	$ -	$ -	$ 770,707	$ 257,745	$ 178,764	$ 1,218,613
2. Capital	95.70%	100.00%	100.00%	25.00%	0.00%	25.00%	
Original Loan	$ 3,894,855	$ 11,430,726	$ 4,084,688	$ 3,929,417	$ -	$ 1,114,798	
Principal	$ 234,854	$ 529,047	$ 217,174	$ 172,271	$ -	$ 45,538	$ 1,198,884
Interest	$ 18,799	$ 50,823	$ 40,977	$ 84,632	$ -	$ 14,050	$ 209,281
Annual Payment	$ 253,653	$ 579,870	$ 258,151	$ 256,903	$ -	$ 59,588	$ 1,408,165
Total Principal	$ 245,406	$ 529,047	$ 217,174	$ 689,083	$ 193,498	$ 182,150	$ 2,056,358
Total Interest	$ 19,644	$ 50,823	$ 40,977	$ 338,527	$ 64,247	$ 56,201	$ 570,419
Annual Payment	$ 265,050	$ 579,870	$ 258,151	$ 1,027,610	$ 257,745	$ 238,351	$ 2,626,777

2019	9.5 MGD Capital Improvements	11 MGD Expansion	North Apple Valley Interceptor	Phase IIIA Regulatory Upgrades	Upper Narrows Replacement Project	Apple Valley Subregional Project	Hesperia Subregional Project	Nanticoke Bypass Project	2019 Total
SRF Loan Amount	$ 4,069,859	$ 11,430,726	$ 4,084,688	$ 15,717,668	$ 4,286,380	$ 27,129,023	$ 40,658,810	$ 4,459,190	$ 111,836,344
Annual Payment	$ 265,050	$ 579,870	$ 258,151	$ 1,027,610	$ 257,745	$ 1,050,521	$ 1,574,511	$ 270,220	$ 5,283,678
1. Operations	4.30%	0.00%	0.00%	75.00%	100.00%	61.00%	61.00%	75.00%	
Original Loan	$ 175,004	$ -	$ -	$ 11,788,251	$ 4,286,380	$ 16,548,704	$ 24,801,874	$ 3,344,393	
Principal	$ 10,827	$ -	$ -	$ 530,766	$ 197,174	$ 486,104	$ 727,394	$ 142,540	$ 2,094,805
Interest	$ 570	$ -	$ -	$ 239,942	$ 60,571	$ 154,714	$ 233,058	$ 60,125	$ 748,980
Annual Payment	$ 11,397	$ -	$ -	$ 770,708	$ 257,745	$ 640,818	$ 960,452	$ 202,665	$ 2,843,785
2. Capital	95.70%	100.00%	100.00%	25.00%	0.00%	39.00%	39.00%	25.00%	
Original Loan	$ 3,894,855	$ 11,430,726	$ 4,084,688	$ 3,929,417	$ -	$ 10,580,319	$ 15,856,936	$ 1,114,798	
Principal	$ 240,960	$ 538,835	$ 222,603	$ 176,922	$ -	$ 310,787	$ 465,055	$ 47,513	$ 2,002,675
Interest	$ 12,693	$ 41,035	$ 35,548	$ 79,981	$ -	$ 98,916	$ 149,004	$ 20,042	$ 437,219
Annual Payment	$ 253,653	$ 579,870	$ 258,151	$ 256,903	$ -	$ 409,703	$ 614,059	$ 67,555	$ 2,439,894
Total Principal	$ 251,787	$ 538,835	$ 222,603	$ 707,688	$ 197,174	$ 796,891	$ 1,192,449	$ 190,053	$ 4,097,479
Total Interest	$ 13,263	$ 41,035	$ 35,548	$ 319,922	$ 60,571	$ 253,630	$ 382,062	$ 80,167	$ 1,186,199
Annual Payment	$ 265,050	$ 579,870	$ 258,151	$ 1,027,610	$ 257,745	$ 1,050,521	$ 1,574,511	$ 270,220	$ 5,283,678

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Section VI: History and Demographics

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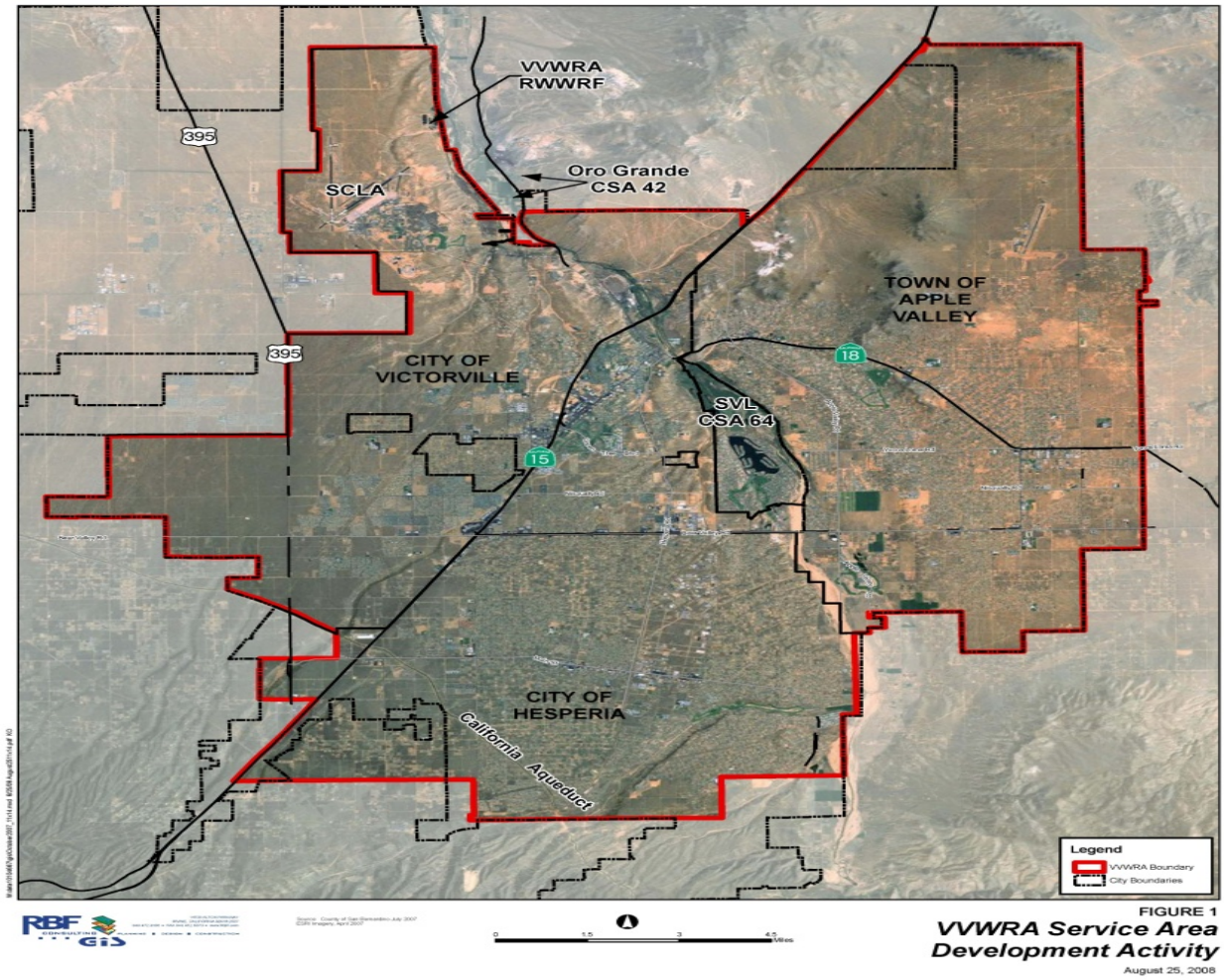
Victor Valley Wastewater Reclamation Authority
History and Demographics
Fiscal Year 2017-2018

History

Victor Valley Wastewater Reclamation Authority (VVWRA) was originally formed by the Mojave Water Agency to help meet the requirements of the federal Clean Water Act and provide wastewater treatment for the growing area. Our original treatment plant, with supporting pipelines and infrastructure, began operating in 1981, providing tertiary level treatment for up to 4.5 million gallons per day. VVWRA is now a joint powers public agency of the state of California handling 12.05 million gallons a day.

Over the years, VVWRA has completed treatment plant upgrades and several capacity increases. This regional treatment plant is currently capable of treating a portion of the flow to a tertiary level and the remaining flow to a secondary level for percolation. A majority of the highly treated wastewater is discharged into the Mojave River Basin, while a smaller quantity is sold to Victorville power plant and American Organics.



Provided by RBF Consulting, Inc.

Victor Valley Wastewater Reclamation Authority
History and Demographics
Fiscal Year 2017-2018

Governance

VVWRA is a quasi-governmental agency called a Special District of the State of California. It is not regulated by California Public Utilities Commission but governed by a Board of four Commissioners who are publicly elected for a four-year term from each member agency. Our affairs are bound by a joint powers agreement between VVWRA and member local government agencies consisting of City of Victorville, City of Hesperia, Town of Apple Valley and the County of San Bernardino Service Areas No. 42 (Oro Grande) and No. 64 (Spring Valley Lake) for the purpose of construction, operation, and maintenance of sewer collection, transmission and treatment facilities within the region. The General Manager is responsible for carrying out the policies and ordinances approved by the Board (and by the community residents) and for overseeing the day-to-day operations of VVWRA.

San Bernardino County

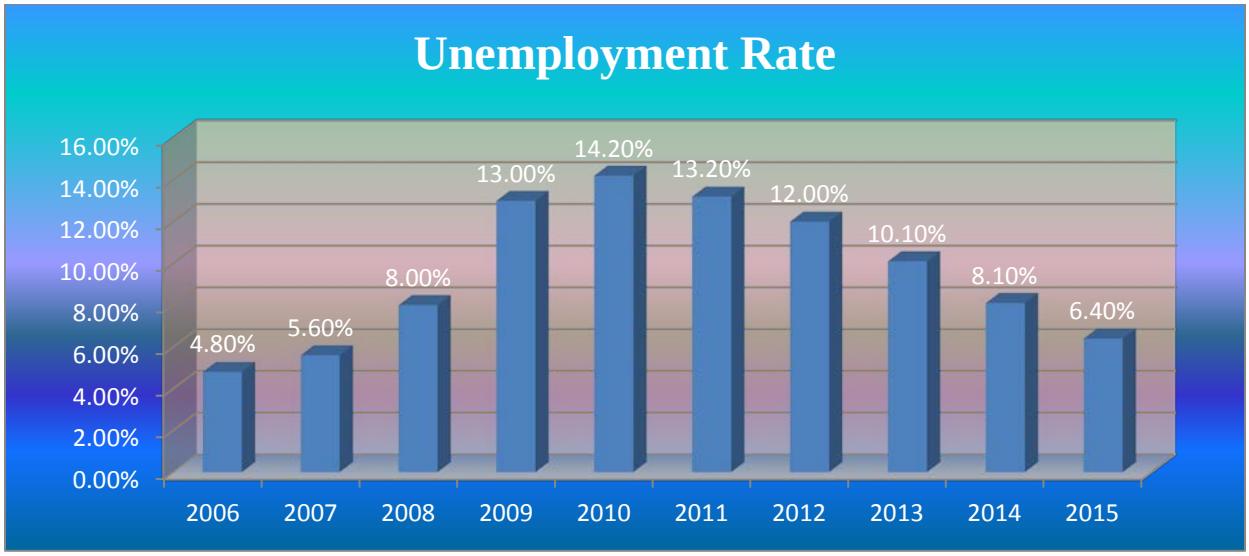
San Bernardino County is the largest county in the United States. According to the 2010 U.S. Census, the San Bernardino County has a population of 2,035,210. With an area of 20,160 square miles, the San Bernardino County is larger than the combined area of the four smallest states in the nation. Over 90% of this county is desert, while the remaining 10% is mountains and valleys that rest in the Inland Empire.

Demographics

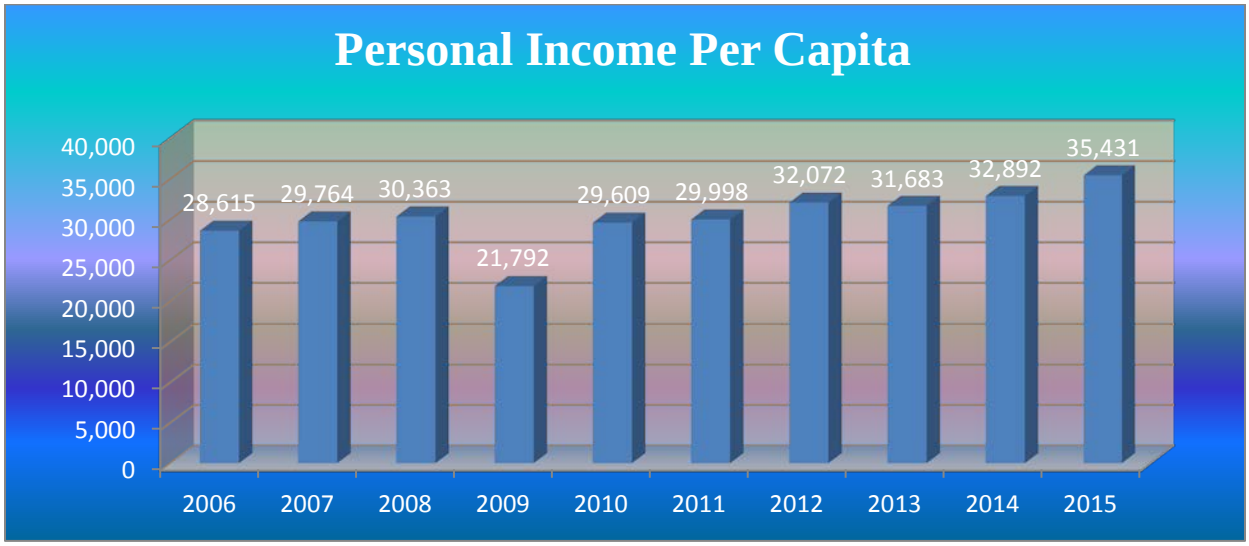
The service area has a population of 291,392 in 2015 with a slow and steady population growth from 2006 to 2015.

Unemployment in the San Bernardino County has risen from 8% in 2008 to 10.1% in 2013 due to the economic downturn that started in late 2008. The increased unemployment has also impacted the personal income per capita, which decreased from $30,363 in 2008 to $21,792 in 2009, then recovered to $32,892 in 2014.

Source: California Department of Finance and U.S. Census Bureau. Years are calendar years.



Source: State of California Employment Development Department (Data shown is for the County of San Bernardino.) Years are calendar years.



Source: State of California Employment Development Department (Data shown is for the County of San Bernardino.) Years are calendar years.

Sewer Overflow

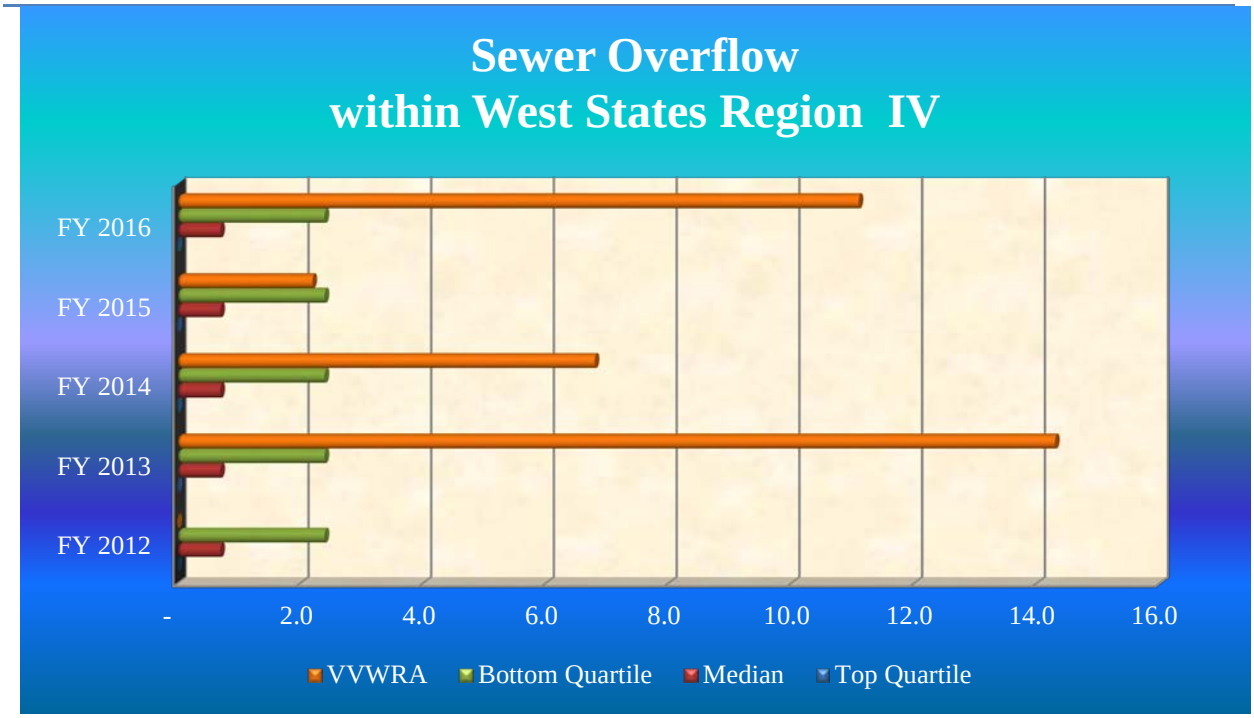
The sewer overflow rate is an indicator that tracks the condition and the effectiveness of the maintenance of the wastewater collection system.

San Bernardino County, including Upper and Lower Narrows of the Mojave River, experienced a severe rain storm during December 2010. President Obama declared this storm as a National Disaster on January 26, 2011. The flood and debris damaged pipelines that lead to an unexpectedly high sewer overflow rate of 12.2 for FY 2011. VVWRA installed an emergency temporary pipeline to divert the flow from the damaged pipeline. This rain storm caused unusual overflows including one at the "I" Avenue pipeline in the City of Hesperia. To remedy overflow in this area, VVWRA constructed the Santa Fe relief pipeline during FY 2012.

VVWRA had five reported spill at the Upper Narrows Emergency Bypass Sites during FY 2016 which resulted in a sewer overflow rate of 11.10. VVWRA has initiated the construction of a permanent interceptor during March of FY 2014 to replace the temporary bypass line.

Sewer Overflow-West States Region IV Benchmark

	Top Quartile	Median	Bottom Quartile	VVWRA
FY 2016	*Data Not Available*	0.70	2.40	11.10
FY 2015	*Data Not Available*	0.70	2.40	2.20
FY 2014	*Data Not Available*	0.70	2.40	6.80
FY 2013	*Data Not Available*	0.70	2.40	14.30
FY 2012	*Data Not Available*	0.70	2.40	0.00

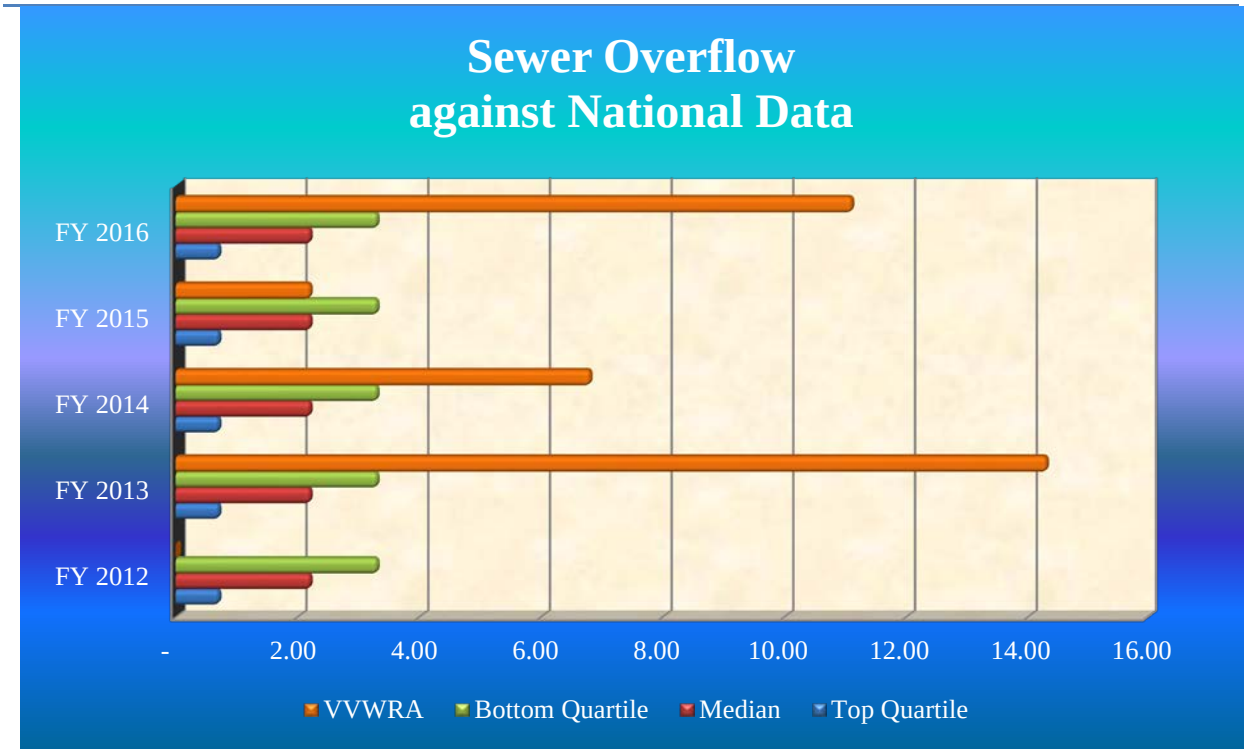


Source: 2012 American Water Works Association Benchmarking analysis *FY = Fiscal Year ended June 30*

Victor Valley Wastewater Reclamation Authority
Performance Benchmarked against Industry
Fiscal Year 2017-2018

Sewer Overflow-National Benchmark

	Top Quartile	Median	Bottom Quartile	VVWRA
FY 2016	0.70	2.20	3.30	11.10
FY 2015	0.70	2.20	3.30	2.20
FY 2014	0.70	2.20	3.30	6.80
FY 2013	0.70	2.20	3.30	14.30
FY 2012	0.70	2.20	3.30	0.00



Source: 2012 American Water Works Association Benchmarking analysis *FY = Fiscal Year ended June 30*

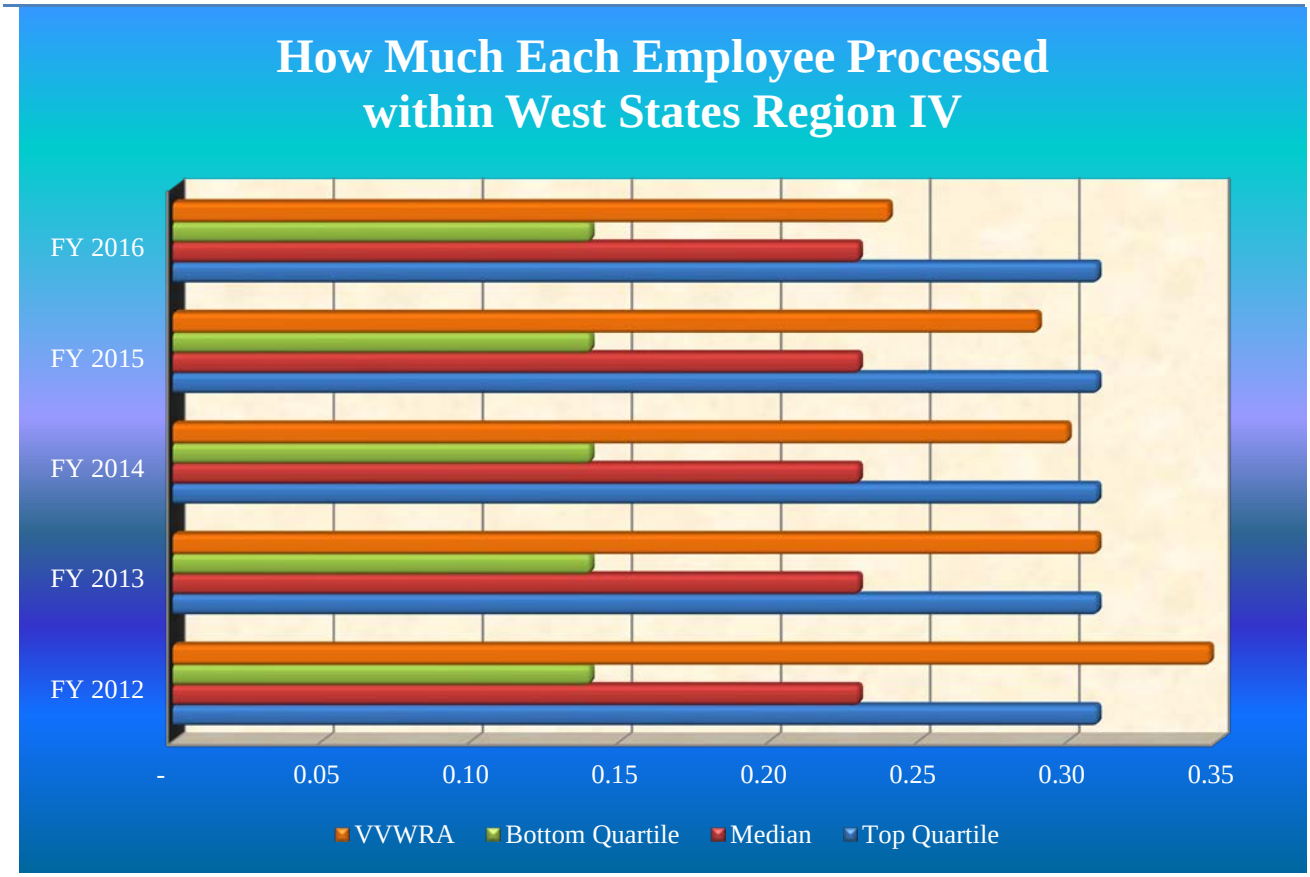
How Much Each Employee Processed

The quantity of wastewater processed by each employee has decreased from 0.35 million gallons per day (MGD) in FY 2012 to 0.24 MGD in FY 2016. This processed quantity decrease seems to come from the decrease of flow quantity itself. In fact, the FY 2012 daily flow average is 13.21 MGD (.35 MGD x 38 actual number of employees), while the FY 2016 daily flow average is 10.51 MGD (.24 MGD x 44 actual number of employees). The daily flow average was decreased by 2.70 MGD between these years.

Compared to West States Region IV, VVWRA has almost continuously remained at the top quartile during FY 2012 and FY 2013. Compared nationally, the quantity of wastewater processed by each employee has surpassed the median since FY 2012.

How Much Each Employee Processed-West States Region IV Benchmark

	Top Quartile	Median	Bottom Quartile	VVWRA
FY 2016	0.31	0.23	0.14	0.24
FY 2015	0.31	0.23	0.14	0.29
FY 2014	0.31	0.23	0.14	0.30
FY 2013	0.31	0.23	0.14	0.31
FY 2012	0.31	0.23	0.14	0.35

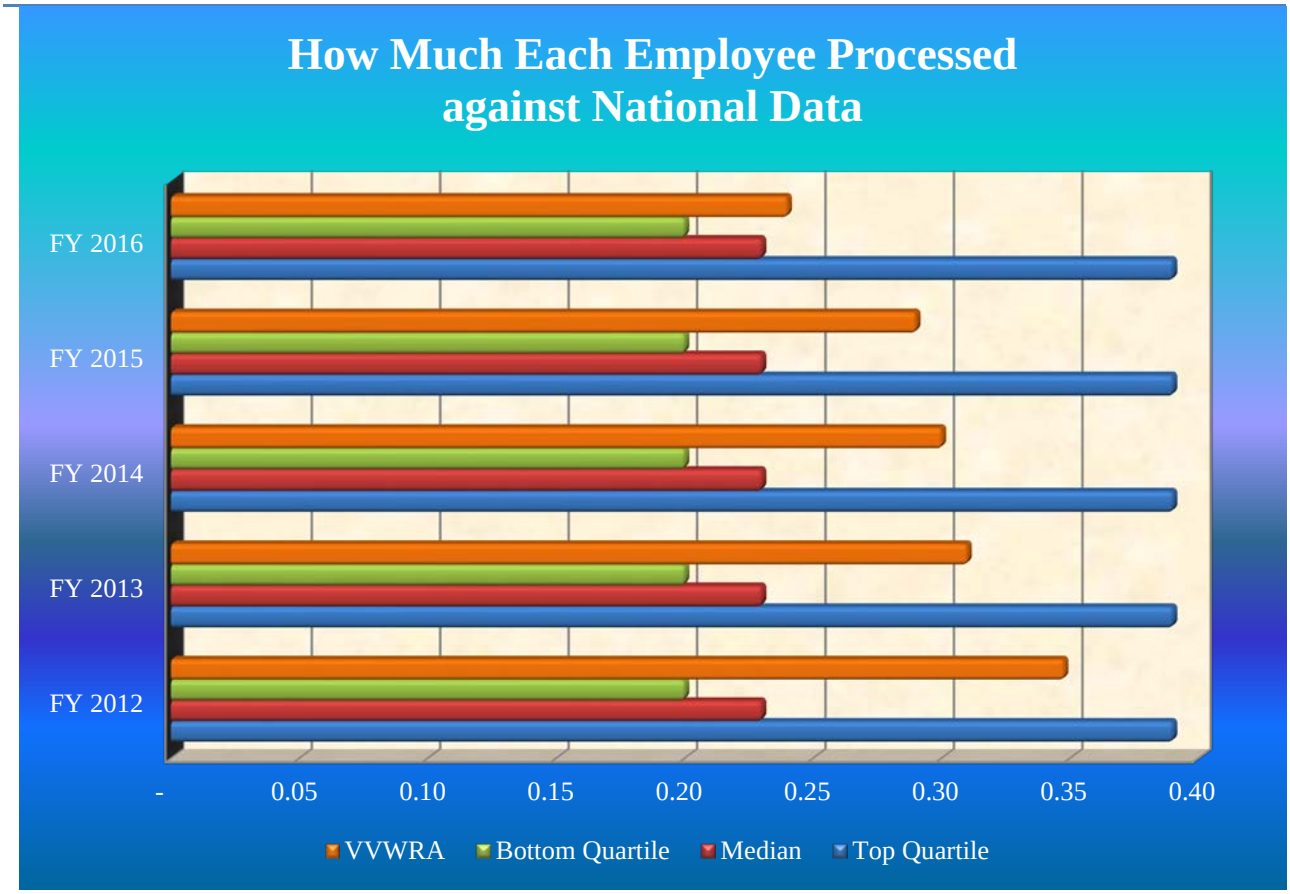


Source: 2012 American Water Works Association Benchmarking analysis *FY = Fiscal Year ended June 30*

Victor Valley Wastewater Reclamation Authority
Performance Benchmarked against Industry
Fiscal Year 2017-2018

How Much Each Employee Processed-National Benchmark

	Top Quartile	Median	Bottom Quartile	VVWRA
FY 2016	0.39	0.23	0.20	0.24
FY 2015	0.39	0.23	0.20	0.29
FY 2014	0.39	0.23	0.20	0.30
FY 2013	0.39	0.23	0.20	0.31
FY 2012	0.39	0.23	0.20	0.35



Source: 2012 American Water Works Association Benchmarking analysis *FY = Fiscal Year ended June 30*

Victor Valley Wastewater Reclamation Authority
Performance Benchmarked against Industry
Fiscal Year 2017-2018

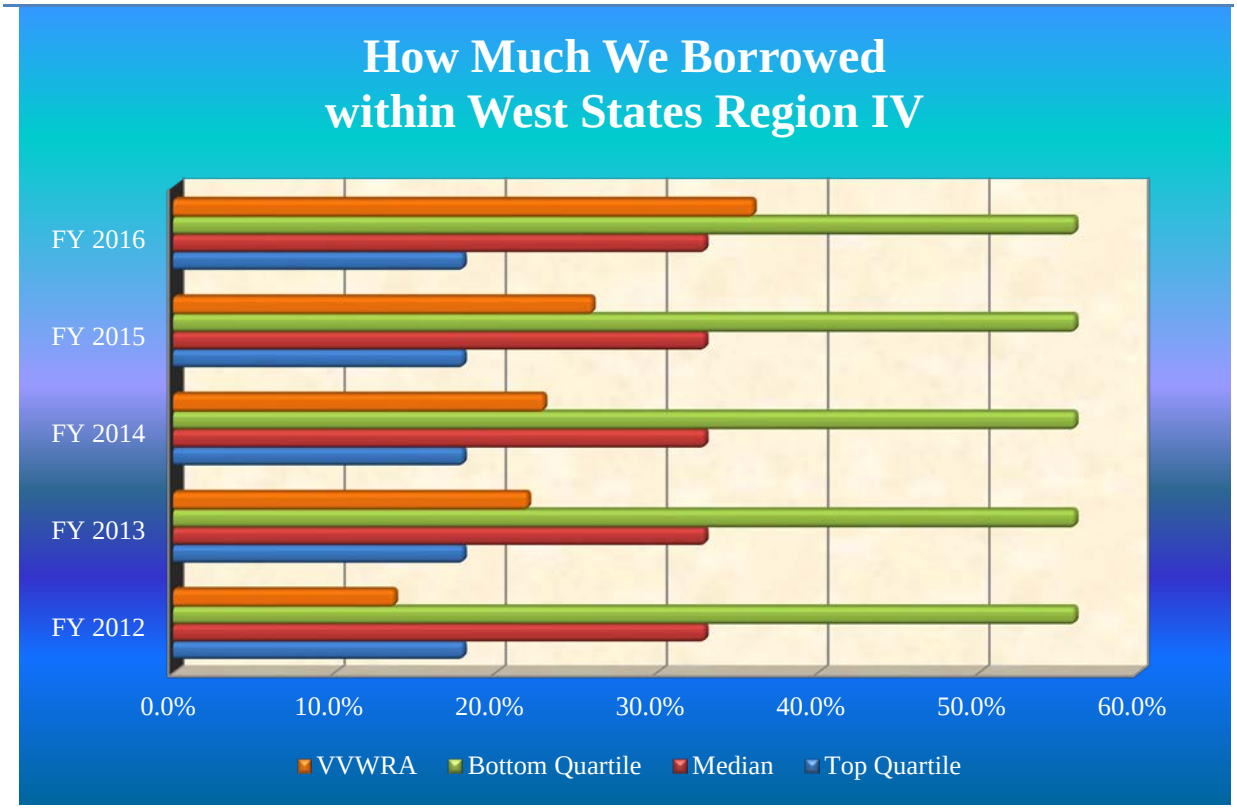
How Much We Borrowed

When you compare what you owe (liabilities) to what you have (assets), you will obtain a debt ratio. The debt ratio can be used to measure the health of a business. Lower value of debt ratio is favorable and a higher value indicates that a higher portion of the organization's assets are claimed by its creditors which means there is a higher risk in operation since the entity would find it difficult to obtain loans for new projects. VVWRA's debt ratio has increased from 13.73% in FY 2012 to 36.00% in FY 2016 due to the growth in the amount of State Revolving Fund loans for the construction projects.

VVWRA surpassed the top quartile in FY 2012 and performed better than the median quartile of the West States Region IV in later years. Compared nationally, VVWRA is ranked between median and top quartiles in FY 2012. The national data for later years is not available.

How Much We Borrowed-West States Region IV Benchmark

	Top Quartile	Median	Bottom Quartile	VVWRA
FY 2016	18.0%	33.0%	56.0%	36.00%
FY 2015	18.0%	33.0%	56.0%	26.00%
FY 2014	18.0%	33.0%	56.0%	23.00%
FY 2013	18.0%	33.0%	56.0%	22.00%
FY 2012	18.0%	33.0%	56.0%	13.73%

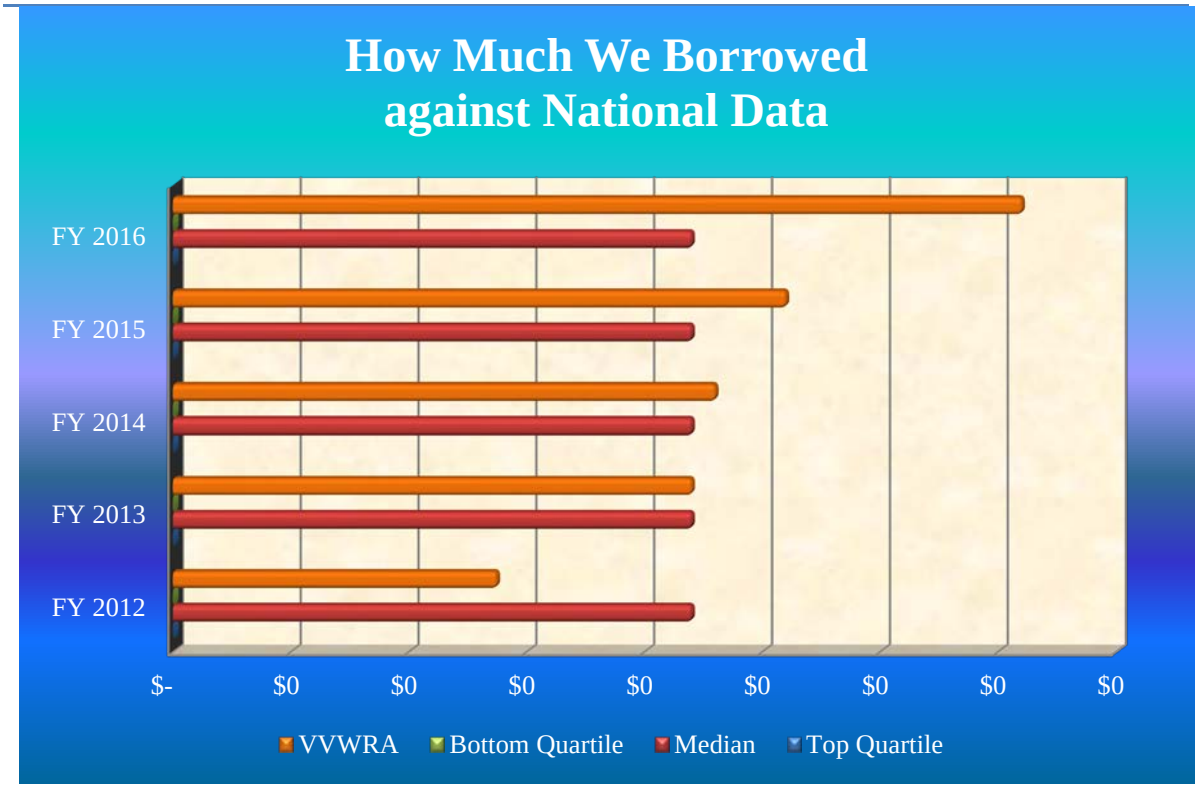


Source: 2012 American Water Works Association Benchmarking analysis *FY = Fiscal Year ended June 30*

Victor Valley Wastewater Reclamation Authority
Performance Benchmarked against Industry
Fiscal Year 2017-2018

How Much We Borrowed-National Benchmark

	Top Quartile	Median	Bottom Quartile	VVWRA
FY 2016	Data Not Available	22.0%	Data Not Available	36.00%
FY 2015	Data Not Available	22.0%	Data Not Available	26.00%
FY 2014	Data Not Available	22.0%	Data Not Available	23.00%
FY 2013	Data Not Available	22.0%	Data Not Available	22.00%
FY 2012	Data Not Available	22.0%	Data Not Available	13.73%



Source: 2012 American Water Works Association Benchmarking analysis *FY = Fiscal Year ended June 30*

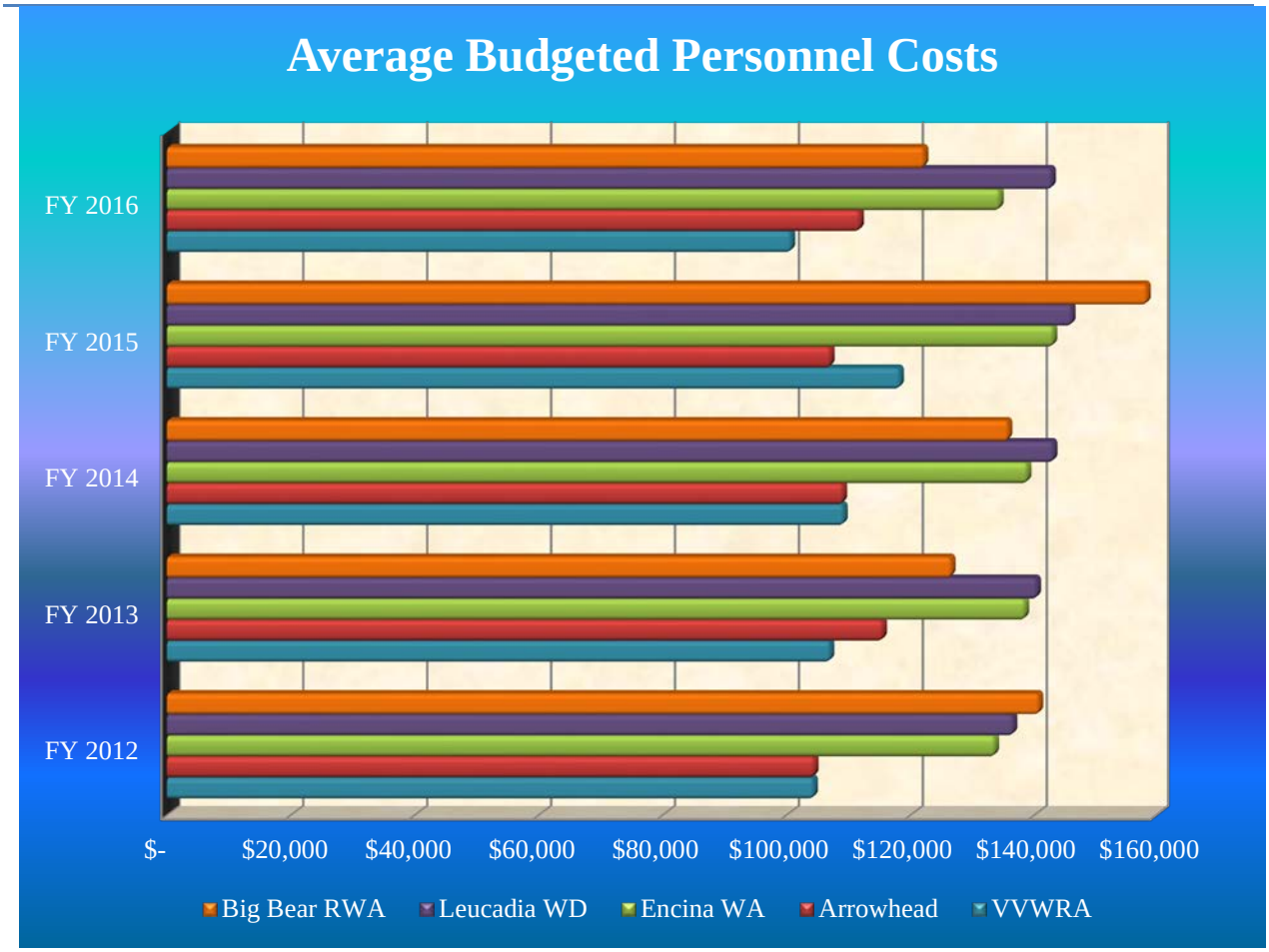
Victor Valley Wastewater Reclamation Authority
Performance Benchmarked against Industry
Fiscal Year 2017-2018

Average Budgeted Personnel Cost

Average budgeted personnel cost indicates the cost-effectiveness of an agency's overall personnel budget. Such an indicator is calculated by dividing the total budgeted personnel costs by the total budgeted number of employees for a fiscal year. VVWRA's average budgeted personnel costs have improved from median to the low end compared to other wastewater treatment agencies with similar size in the Southern California.

Average Budgeted Personnel Cost

	VVWRA	Arrowhead	Encina WA	Leucadia WD	Big Bear RWA
FY 2016	$ 100,670	$ 111,767	$ 134,317	$ 142,734	$ 122,160
FY 2015	$ 118,218	$ 107,039	$ 142,968	$ 145,960	$ 158,417
FY 2014	$ 109,157	$ 109,058	$ 138,791	$ 142,991	$ 135,720
FY 2013	$ 106,993	$ 115,469	$ 138,421	$ 140,339	$ 126,547
FY 2012	$ 104,338	$ 104,435	$ 133,566	$ 136,517	$ 140,704



Source: 2012 American Water Works Association Benchmarking analysis *FY = Fiscal Year ended June 30*

Section VII: Glossary

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Victor Valley Wastewater Reclamation Authority
Glossary
Fiscal Year 2017-2018

Glossary	
Ammonia Nitrogen	The soluble ionized and unionized ammonia nitrogen component in wastewater that can be measured using the procedure described in the current edition of "*Standard Methods for the Examination of Water and Wastewater*" published by the American Public Health Association.
Biochemical oxygen demand (BOD)	The measure of decomposable organic material in wastewater as represented by the oxygen utilized as determined by the procedure described in the current edition of "*Standard Methods for the Examination of Water and Wastewater*" published by the American Public Health Association.
Cal-OES	The California Governor's Office of Emergency Services (Cal-OES) serves the public through effective collaboration in preparing for, protecting against, responding to, recovering from, and mitigating the impacts of all hazards and threats.
Cash Basis	Revenues and expenses are recognized when cash is received or paid out.
Connection Fee	A fee paid by a new discharger for the costs of capacity in the regional wastewater system.
Effluent	The liquid outflow discharged from the Publicly Owned Treatment Works (POTW) facility or the nondomestic wastewater discharged by industrial users to the POTW.
Enterprise accounting	Uses an accrual basis of accounting method to account for the activities of a government agency that provides goods or services to the public on a fee basis.
Enterprise Accounting System	An accrual accounting system that is similar to a regular business accounting method, where revenues and expenses are recorded when they incur. VVWRA employs two funds, (1) Operations and Maintenance Fund and (2) Capital Fund. Both of the funds employ the Enterprise Accounting System.
FEMA	The Federal Emergency Management Agency (FEMA) coordinates the federal government's role in preparing for, preventing, mitigating the effects of, responding to, and recovering from all domestic disasters, whether natural or man-made, including acts of terror.
Interceptor	A pipeline that coveys wastewater from the sewer collection facilities of a Member Agency to the VVWRA's wastewater treatment facilities.
Member Agencies	The four government agencies who participate in the joint power agreement with VVWRA. They are the City of Victorville; Town of Apple Valley; Hesperia Water District; and County of San Bernardino Service Areas, #42 Oro Grande and #64 Spring Valley Lake.
MG	Million Gallons.
MGD	Million Gallons per Day.
POTW	The Publicly Owned Treatment Works is sewage treatment plants that are owned and usually operated by local government agencies.
Industrial Pretreatment	The reduction and elimination of pollutants or the alteration of the nature of pollutant properties in wastewater to a less harmful state prior to or in lieu of discharging or otherwise introducing such pollutants into the POTW.
Reclaimed Water	Water that, as a result of waste treatment, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource.
Septage	Any wastewater or sludge removed from cesspools, septic tanks, holding tanks, or chemical toilets that is trucked or hauled to the point of discharge.
SRF	State Revolving Fund.
High Strength Surcharge	An assessment, in addition to the service charge, which may be levied on those users whose waste are greater in strength than threshold concentration values established.
Total Suspended Solids	The insoluble solid matter suspended in wastewater that is separable by laboratory filtration in accordance with the procedure described in the current edition of "*Standard Methods for the Examination of Water and Wastewater*" published by the American Public Health Association.
Ultraviolet Disinfection	A non-chemical process whereby a pathogen, contained within the wastewater, is exposed to a dosage of ultraviolet radiation, resulting in the deactivation of the pathogen's DNA, such that the pathogen is unable to reproduce.
User	Any person who contributes, causes, or permits the contribution of wastewater into the POTW, including households, private residences, nonresidential users, and Member Agencies.
VVWRA	The Victor Valley Wastewater Reclamation Authority.
Wastewater	The domestic or nondomestic liquid wastes discharged from dwellings, or commercial buildings, industrial facilities, and institutions, together with any ground water, surface water, and storm water that may be present, whether treated or untreated, which is contributed into or permitted to enter the POTW.

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