



**LIVERMORE-AMADOR VALLEY  
WATER MANAGEMENT AGENCY**

**OPERATING AND CAPITAL BUDGET**

**MODIFICATION NO. 1**

**FISCAL YEAR 2020/21**

**Approved by the LAVWMA Board November 18, 2020**

# LAVWMA FY2020/21 Budget

## LIVERMORE-AMADOR VALLEY WATER MANAGEMENT AGENCY OPERATING AND CAPITAL BUDGETS FISCAL YEAR 2020/21

### Table of Contents

EXECUTIVE SUMMARY .....	1
1.0 GENERAL.....	3
1.1 MISSION & GOALS.....	3
1.2 ORGANIZATION.....	5
2.0 OPERATING BUDGET.....	5
2.1 DESCRIPTION OF SERVICES PROVIDED.....	5
2.3 CHANGES FROM FY2019/20 BUDGET.....	15
3.0 CAPITAL BUDGET.....	15
3.1 DESCRIPTION OF BUDGET.....	15
3.2 DISCUSSION OF CAPITAL EXPENDITURES PROPOSED FOR FY2019/20.....	16
4.0 FY2020/21 MEMBER AGENCY COST SHARING & SCHEDULE.....	17
5.0 BUDGET TRENDS FY2013/14 – FY2020/21.....	17

# LAVWMA FY2020/21 Budget

## LIVERMORE-AMADOR VALLEY WATER MANAGEMENT AGENCY OPERATING AND CAPITAL BUDGETS FISCAL YEAR 2020/21 MODIFICATION NO. 1

### EXECUTIVE SUMMARY

#### OPERATING BUDGET

The proposed operating budget of \$3,345,400 is an 8.41% increase from the FY2019/20 budget. The total revenue requirement of \$11,751,500 is a 2.26% increase from the FY2019/20 budget. Debt service payments consist of \$2,438,658 for the Repair Project, \$5,567,442 for the Expansion Project for a total of \$8,406,100. It should also be noted that the DSRSD proposed budget for LAVWMA included a 4% increase for operations and maintenance. DSRSD costs are typically well below estimates such that LAVWMA's budget can be less than those projections.

The FY2019/20 Budget includes a few items that exceeded the approved budget including:

- PG&E power will be above budget based on projections for the first nine months of the year. However, low rainfall and water recycling may result in lower costs than projected.
- Monitoring/Testing will be above budget due to \$15,000 in special testing required for the renewal of the NPDES permit.
- EBDA Fixed O&M Expenses will be high due to an unbudgeted payment of \$135,708 for Other Post Employment Benefit and Pension Fund payments to get the funds to the level of 95% funded.

The total EBDA O&M budget of \$664,000 is 2.15% above last year. The increase is largely due to an increase in the NPDES permit fee and studies for the nutrient permit. LAVWMA owns 19.72 MGD of EBDA's 189.1 MGD capacity, or 10.43%. LAVWMA's fixed cost percentage has been increasing per the terms of the agreement from the original 10.43% to the current level of 18.60%. Costs for EBDA are based on fixed and variable (flow based) percentages. The flow-based percentage is currently 17.9% as compared to 17.7% last year. It is in LAVWMA's best interests to reduce both its fixed and variable costs through a combination of renegotiating the agreement, reducing flows through water recycling and flow management during wet weather. The EBDA Master Agreement has been extended through June 30, 2020. An additional extension through December 21, 2020 has already been approved by the Board and is subject to EBDA approval. EBDA has provided a term sheet for a new agreement that includes several items that are not acceptable to the member agencies. A study is currently underway to determine how much additional capacity above the 19.72 MGD will be needed over the next twenty years. EBDA costs for FY20/21 are based on the current agreement. The largest variable for a new agreement is the fixed cost percentage, which will be based on capacity needs. As an example, increasing the fixed cost percentage will cost approximately \$18,000 for each percentage point above the current 18.6%.

The proposed FY2020/21 operating budget considers projected FY2019/20 expenditures and is largely based on the detailed budget prepared by DSRSD pursuant to the Maintenance

# LAVWMA FY2020/21 Budget

Agreement, copy attached. FY2019/20 O&M expenditures are projected to be above the approved budget by approximately 6%. This is primarily due to the following: 1) PG&E power, and 2) payment to EBDA for Other Post-Employment Benefits (OPEB) and pension fund obligations. All other costs are projected to be on target budget. The proposed budget includes a modest increase in PG&E costs. The annual reconciliation process will collect any shortfall from the member agencies. Significant water recycling efforts in the service area are continuing and should increase over time, which will help to offset PG&E rate increases. Increased pumping efficiency will also help to offset rate increases. A new time of use rate structure that becomes effective in November 2020 could also prove beneficial. The MCC consultant will review the rate structure and make recommendations.

DSRSD's costs reflect a 2.75% cost of living adjustment. Other Fixed costs have been adjusted based on actual expenditures and anticipated needs for next year. Additional information is included in the remainder of the budget report.

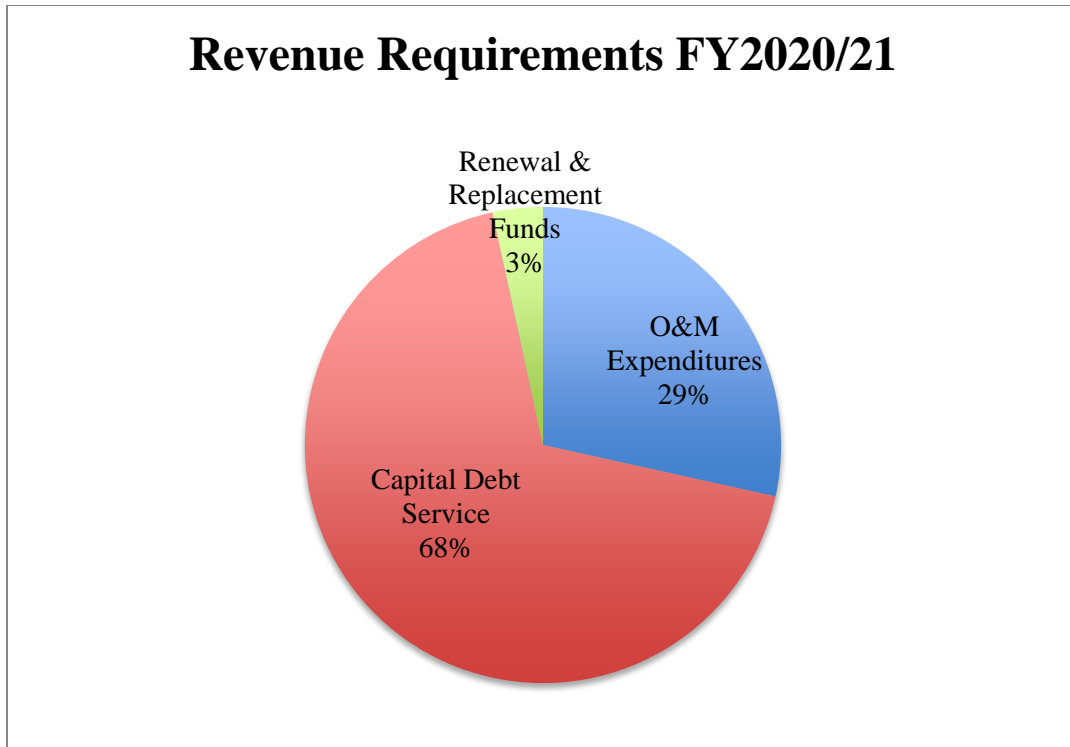
## **CAPITAL BUDGET**

The FY2019/20 capital budget was \$1,166,000, of which only \$125,000 is projected to be spent this fiscal year. Much of this is due to delays associated with COVID-19 issues, as well as hiring of new staff by DSRSD. The FY2020/21 capital budget of \$3,951,000 is for the renewal and replacement of LAVWMA and EBDA facilities and includes the rebuilding of three pumps and motors, resealing the storage basins, design improvements at the San Leandro Sample Station, drainage improvements, increased costs for replacement of the motor control centers and soft starters at the pump station, cathodic protection improvements, and pipeline inspection. All of these major projects have been recommended by DSRSD staff. Please refer to the tables below which provide descriptions and summarize the costs.

## **REVENUE REQUIREMENTS**

The FY2020/21 budget also includes the debt service (repair and expansion) for the 2011 Bonds. Although repair and expansion of the existing pipeline is a capital cost, the associated debt service is tabulated in the operating budget to assist member agencies with their rate and fee calculations. The projected debt service includes payment of principal and interest. This year's budget recommends that the annual deposit to the Joint Use Renewal Replacement Fund be continued at the \$400,000 level that was approved five years ago. Due to the increased cost of the MCC Project, the contribution should be revisited next year. Dual Use facilities are minimal and are currently adequately funded. The following pie chart illustrates the allocation of the \$11,751,500 in total revenue requirements for FY2020/21.

# LAVWMA FY2020/21 Budget



## 1.0 GENERAL

Livermore-Amador Valley Water Management Agency (LAVWMA) is a Joint Powers Agency comprised of the Cities of Livermore and Pleasanton, and Dublin San Ramon Services District (DSRSD). The City of Livermore collects and treats all City wastewater. DSRSD delivers water to the City of Dublin and the Dougherty Valley, and it collects and treats wastewater for Dublin and southern San Ramon, and treats additional wastewater under a contract with the City of Pleasanton. LAVWMA exports treated effluent from the LAVWMA Pumping Station west over the Dublin Grade, through Castro Valley, and the City of San Leandro, to a pipeline operated by the East Bay Dischargers Authority (EBDA). EBDA dechlorinates the effluent and discharges it through a deepwater outfall into San Francisco Bay. A significant portion of member agency flows are kept within their service areas for water recycling purposes.

## 1.1 Mission & Goals

### LAVWMA'S MISSION

LAVWMA's mission is to support its member agencies: Dublin San Ramon Services District, City of Pleasanton, and City of Livermore by providing cost effective operation and maintenance of all of the Agency export facilities in full compliance with federal, state, and local requirements. LAVWMA supports its member agencies in their efforts to implement comprehensive water recycling programs.

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We will complete our work primarily through consultants. We will invest in this diverse project team and promote a work ethic that recognizes and promotes teamwork and a positive work

# LAVWMA FY2020/21 Budget

environment. We will practice fairness, provide challenges, and allow freedom of communication and thought to enable team members to make meaningful contributions to LAVWMA, the industry and our community.

## Agency Goals & Objectives

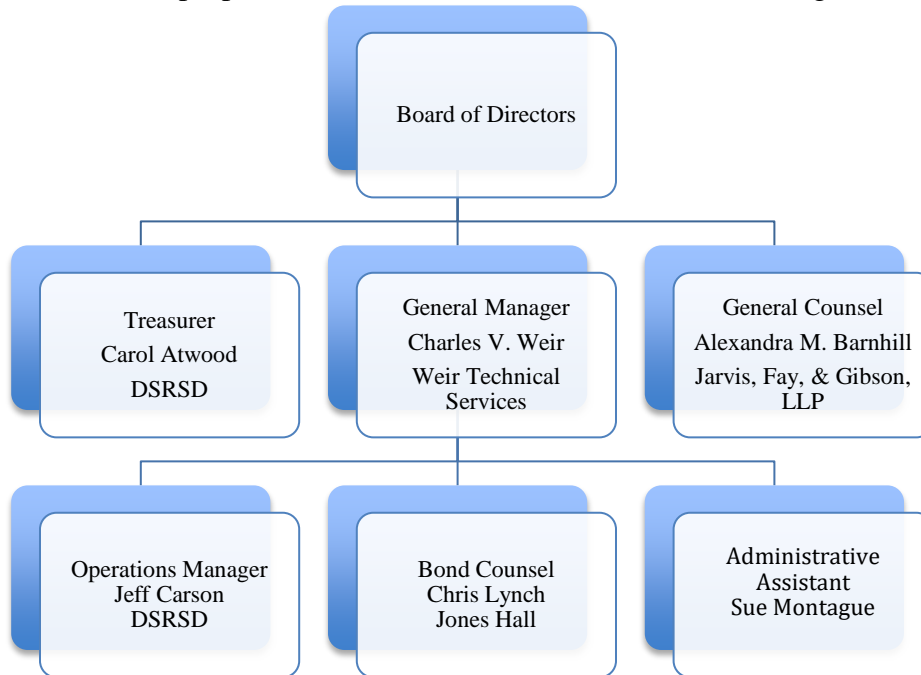
To carry out our Mission, LAVWMA will pursue the following goals:

- **Environmental Compliance.** Continue efficient operations of facilities to prevent wastewater overflows. Meet all CEQA mitigation requirements for new construction. Exceed requirements pertaining to community impacts.
- **Cost Effectiveness.** Continue to perform routine maintenance on existing facilities in a manner that promotes cost savings over the projected life of the facilities.
- **Technical Soundness.** Provide technically sound solutions that use the newest available technology without incurring excessive risk.
- **Customer Service.** Continue to comply with the 1997 Joint Exercise of Powers Agreement (JPA) and the October 2011 Sewer Service Contract with the LAVWMA member agencies.

# LAVWMA FY2020/21 Budget

## 1.2 ORGANIZATION

The LAVWMA team proposed for FY2019/20 is shown in the following chart.



## 2.0 OPERATING BUDGET

### 2.1 Description of Services Provided

The Operations and Maintenance (O&M) budget includes all costs required to operate and maintain existing LAVWMA facilities. LAVWMA's existing facilities include the sole-use and dual-use interceptors, junction structure, Export and Livermore pumping stations, storage basins, export pipeline including appurtenances, and two emergency dechlorination stations. LAVWMA's facilities are operated and maintained by DSRSD pursuant to a Maintenance Agreement initially executed in 1979.

The FY2020/21 Operating Budget on the following pages includes costs for the following: O&M Variable Costs, O&M Fixed Costs, Admin/Mgmt. Costs, Total O&M Costs, Capital Program Funding, and Total Revenue Requirements.

# LAVWMA FY2020/21 Budget

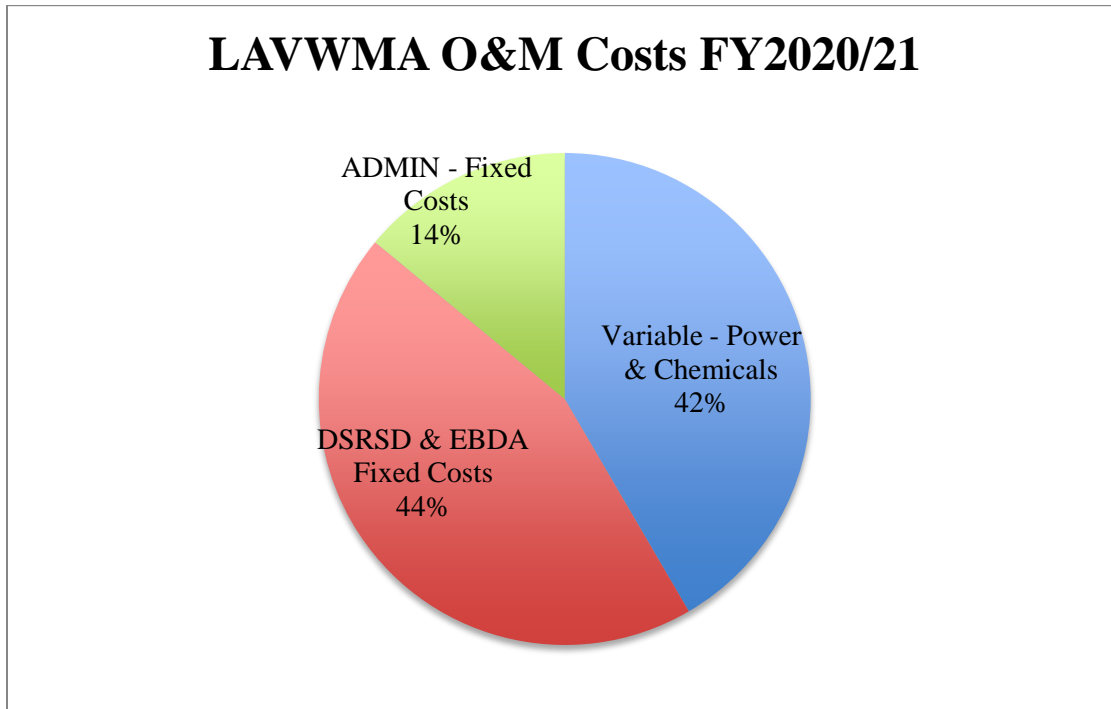
LAVWMA BUDGET FY 2020/21					
<b>FY2020/21 OPERATIONS BUDGET SUMMARY</b>					
		FY2019/20 Adopted Budget	FY2019/20 Projected Actual	FY2020/21 Proposed Budget	Change From Adopted FY2019/20
<b>OPERATIONS AND MAINTENANCE</b>					
<b>VARIABLE COSTS</b>					
	DSRSD Maintenance Agreement (Power)	\$ 1,200,000	\$ 1,256,639	\$ 1,250,000	4.17%
	EBDA O&M (See Table, Section 2.2.1)	145,000	130,082	141,000	-2.76%
	Subtotal - O&M Variable Costs	1,345,000	1,386,721	1,391,000	3.42%
<b>FIXED COSTS</b>					
	DSRSD Maintenance Agreement				
	Labor/equip	780,000	765,881	797,000	2.18%
	Materials/Supplies	50,000	32,571	50,000	0.00%
	Contractual	70,000	70,423	70,000	0.00%
	Monitoring/Testing	31,000	43,629	31,000	0.00%
	Utilities (fixed)	7,000	5,879	7,000	0.00%
	Non Routine	8,000	-	8,000	0.00%
	EBDA O&M (See Table, Section 2.2.3)	505,000	640,317	523,000	3.56%
	Subtotal - O&M Fixed Costs	1,451,000	1,558,699	1,486,000	2.41%
<b>ADMIN/MGMT</b>					
	Mgr/Treas/Counsel/Board	153,000	225,684	273,000	78.43%
	Services/Supplies/Misc	89,000	54,031	132,500	48.88%
	Permits/Insurance	48,000	46,511	62,900	31.04%
	Subtotal Admin/Mgmt	290,000	326,226	468,400	61.52%
	Subtotal All Fixed Costs	1,741,000	1,884,925	1,954,400	12.26%
	<b>TOTAL O&amp;M COSTS</b>	<b>\$ 3,086,000</b>	<b>\$ 3,271,647</b>	<b>\$ 3,345,400</b>	<b>8.41%</b>
		FY2020/21 Proposed Budget	FY2019/20 Projected Actual	FY2020/21 Proposed Budget	Change From Adopted FY2019/20
<b>CAPITAL PROGRAM FUNDING</b>					
	Replacement Fund	400,000	400,000	400,000	0.00%
	Repair Debt Service	2,438,506	2,438,506	2,438,658	0.01%
	Expansion Debt Service	5,567,094	5,567,094	5,567,442	0.01%
	SUBTOTAL	\$ 8,405,600	\$ 8,405,600	\$ 8,406,100	0.01%
<b>TOTAL REVENUE REQUIREMENTS</b>		<b>\$11,491,600</b>	<b>\$11,677,247</b>	<b>\$11,751,500</b>	<b>2.26%</b>



# LAVWMA FY2020/21 Budget

## 2.2 Operating Budget Summaries

The following pie chart depicts the allocation of operating costs:



### 2.2.1 Variable Costs – Power and Chemicals

Variable costs for power (DSRSD/EBDA) and chemicals (EBDA) are directly tied to the volume of flow that LAVWMA discharges. They total \$1,391,000 and make up approximately 42% of LAVWMA’s total operating budget. Pumping and chemical costs for FY2020/21 are projected to be 3.42% more than last year. The increase in PG&E electrical costs are not yet known as they are still negotiating with the Public Utilities Commission. The ultimate increase could be substantial as PG&E is attempting to recoup costs from a variety of recent setbacks. Increases will be partially offset by improved pumping efficiency due to the new pumps and that is reflected in the power costs. The FY2020/21 Budget is based on actual costs for the current year. The following table details the variable costs for EBDA.

Facility	Variable Cost	LAVWMA Cost, 17.89%	LAVMWA Cost, 3.12%
General Administration	\$21,500	\$3,847	-
Outfall & Forcemains	\$150,000	\$9,394 (35%)	-
Marina Dechlor Facility	\$222,000	\$39,723	-
Dechlorination Costs	\$235,000	-	\$7,337
Oro Loma Pump Station	\$420,000	\$75,152	
Bay & Effluent Monitoring	\$30,000	\$5,638	
<b>Total</b>	<b>\$843,500</b>	<b>\$133,485</b>	<b>\$7,337</b>

# LAVWMA FY2020/21 Budget

The total estimate for EBDA Variable O&M Costs is \$140,822, which has been rounded up to \$141,000 in the FY20/21 Budget.

## 2.2.2 Fixed Costs - DSRSD Maintenance Agreement

Operation and maintenance of LAVWMA facilities for FY2020/21 is estimated to require 5,881 fully burdened labor hours. This is the same as last year. Costs for these items are based on projected costs for FY2019/20 and anticipated needs for FY2020/21.

## 2.2.3 Fixed Costs - EBDA Agreement

This item covers EBDA’s fixed operational and maintenance costs that are billed to LAVWMA. It also covers costs to EBDA for various Special Projects including the Regional Monitoring Program (RMP) and LAVWMA’s share of EBDA’s permit fees. Some of these costs are shared on different percentages than LAVWMA’s fixed cost percentage in the agreement with EBDA. As an example, the RMP cost is based on the mass of four metals, copper, chromium, nickel, and selenium. LAVWMA’s share is 18.98% for a total of \$53,151. LAVWMA’s share of the permit fee (\$555,483) is based on the permitted average dry weather flows for each agency that is part of the EBDA system. LAVWMA’s share of this cost is 26.62%, or \$147,888.

LAVWMA’s share of EBDA Special Projects for FY2020/21 are less than \$5,000, which is much lower than in prior years.

LAVWMA is responsible for a portion of the forcemain system and will be billed accordingly. LAVWMA is currently responsible for 18.60% of the fixed costs for “shared” EBDA facilities. This is the maximum percentage per the existing Master Agreement. This year’s fixed cost budget is \$523,000, which is 3.56% more than last year. Total EBDA costs for variable and fixed costs for FY2020/21 are \$664,000 as compared with \$650,000 last year. The following table summarizes the Fixed and Special Projects costs for EBDA.

Facility and Total Variable Cost	Fixed Cost	LAVWMA Percent Cost	LAVMWA Estimated Cost
General Administration	\$1,233,262	18.60%	\$229,387
Outfall & Forcemains	\$31,336	6.51%	\$2,040
Marina Dechlor Facility	\$49,004	18.60%	\$9,115
Oro Loma Pump Station	\$43,920	18.60%	\$8,169
Bay & Effluent Monitoring	464,550	18.60%	\$86,406
NPDES Permit Fee	\$555,483	26.62%	\$147,888
RMP Fee	\$280,000	18.98%	\$53,151
Nutrients Fee	\$269,479	14.90%	\$40,167
Disinfection Master Plan & Contingency	\$62,246	7.28%	\$4,533
<b>Total</b>	<b>\$2,989,280</b>		<b>\$580,856</b>

# LAVWMA FY2020/21 Budget

Historically, EBDA has averaged approximately 90% of budget for the fixed costs listed above. Accordingly, \$523,000 is included in the FY20/21 Budget.

## 2.2.4 Fixed Costs - Administration & Management

This section includes general administration, program management, legal and financial services, consulting services, permits, insurance, etc. The proposed budget is \$468,400 as compared with \$290,000 last year or an increase of 44.28%. The increases are due to the following: 1) NPDES permit renewal (occurs once every five years); 2) negotiation of the new EBDA Master Agreement; 3) projected 42% increase in insurance costs; and 4) management of the long list of capital projects. The NPDES permit renewal process began last year and will continue into FY2020/21. There are also costs for consulting services for technical assistance for the permit renewal, upgrading the website, records management, and assistance in enhancing the asset management program. The website updates and records management projects have been delayed by the flooding of DSRSD's main office as well as COVID-19. The asset management program is linked to DSRSD's efforts for their own system. Asset Management made great strides this past year and will continue to be a key project this year and will have an impact on the Capital Program Funding as discussed below. Costs for travel expenses for the General Manager for two CASA Conferences and other required training for the General Manager and Administrative Assistant are included in these costs.

## 2.2.5 Capital Program Funding

This category includes the projected FY2020/21 debt service (repair and expansion) for 2011 bonds. Although repair and expansion of the existing pipeline and the EBDA capacity purchase are capital costs, the associated debt service and funding program costs are tabulated in the operating budget to assist member agencies with their rate and fee calculations. The projected debt service includes payment of both principal and interest. It is recommended that the annual \$400,000 deposit to LAVWMA's capital facilities Joint renewal replacement account be continued to help cover the \$3,951,000 cost of capital projects in FY2020/21. It is acknowledged that it may not be possible to complete all of the capital projects this fiscal year. However, it is best to get them on the list so that proper planning and scheduling can occur. Dual Use facilities are minimal and have adequate replacement funds.

The first table below lists the capital projects that will be completed by the end of FY2019/20. The second table lists all recommended projects for FY2020/21. All projects have been recommended and vetted by DSRSD staff.

<b>FY2019/20 Capital Program Expenditures</b>	
Rebuild three pumps and their associated motors	\$0
Resealing of all Three Storage Basins	\$0
San Leandro Sample Station Assessment, surge valve replacement, flow meter replacement	\$0
MCCs and soft starters	\$35,000
Road Drainage Improvements	\$0

# LAVWMA FY2020/21 Budget

Other Misc. LAVWMA Renewal/Replacements	\$90,000
Other Misc. EBDA Renewal/Replacements	\$0
CIP Planning/Management Contingency	\$0
<b>Total Expenditures</b>	<b>\$125,000</b>

<b>FY2020/21 Capital Program Expenditures</b>		
<b>Project</b>	<b>Description</b>	<b>Cost</b>
Rebuild three pumps and their associated motors.	Due to COVID-19 issues, this project has been delayed from FYE20. Bids have been received for both premium efficiency and regular efficiency pump rebuilds. Since the costs are approximately the same, premium efficiency will be used. The associated motors will also be rebuilt resulting in essentially a new pumping system. It is possible that this project may begin before the end of FYE20, but the payments will be made in FYE21.	\$216,000
Resealing of all three Storage Basins	Due to COVID-19 and staffing issues, this project is being carried over from FYE20. The basins need to be resealed approximately every ten years. GPS analysis did not show any settling. The rebar has been cut off even with the decks and the basins are ready to be sealed. The project will be combined with sealing of DSRSD's storage basins, which may result in some cost savings.	\$200,000
San Leandro Sample Station (SLSS) Design Improvements	This project has evolved from what was described for last year's budget. It also now includes the surge valve replacement included in last year's budget. EBDA agreement issues and the capacity issues study have shown that the SLSS needs significant improvement. Since it is likely that more frequent discharges to San Lorenzo Creek will be permitted under the new EBDA agreement, the control system on the SLSS needs to be as robust as possible. The SLSS station has to be designed to measure chlorine residual and monitor pH continuously. These parameters have to be measured both when effluent is going to EBDA and when effluent is dechlorinated and	\$175,000

# LAVWMA FY2020/21 Budget

FY2020/21 Capital Program Expenditures		
Project	Description	Cost
	<p>diverted to San Lorenzo Creek during wet weather events or during system testing. Composite samples of LAVWMA's effluent need to be taken when its directed to both EBDA and San Lorenzo Creek. Grab samples of LAVWMA's Effluent also need to be collected for Bacteriological analysis in both situations. The design of the SLSS is complicated by the following factors: 1) The discharge to San Lorenzo Creek wet weather outfall is rare; 2) During normal daily operations the LAVWMA pumps shut off during peak demand periods and therefore the pipeline is not full during those times; 3) The station is not staffed continuously. The goal of this project is to work with operational staff and the RWQCB to design the station to meet operational, maintenance and regulatory expectations in a manner which creates as little day to day maintenance as possible.</p>	
Pump Station Motor Control Center (MCC) and Soft Starter Upgrades	<p>In last year's budget this was described as a two-year project. COVID-19 issues have delayed the design portion of the project. DTN Engineers is under contract for the design and technical support during construction. The final Engineer's Estimate was \$2,300,000 - \$2,500,000. The original estimate was \$1,065,000. The increased costs are due to the following:</p> <ol style="list-style-type: none"> <li>1. Added two auxiliary medium voltage MCCs to handle the power factor corrections automatically.</li> <li>2. Added additional enhanced protection features to the existing main power distribution switchgear and sole sourced Eaton for all of this enhanced work. Specified Eaton to provide software configuration for the Power Quality SEER for communication with the new starters. Current starters do not have any digital</li> </ol>	\$2,500,000

# LAVWMA FY2020/21 Budget

<b>FY2020/21 Capital Program Expenditures</b>		
<b>Project</b>	<b>Description</b>	<b>Cost</b>
	<p>communication with the existing power distribution network. This will match systems at DSRSD making operation and maintenance standardization.</p> <p>3. Added motor winding insulation monitoring system as a customized feature so that staff does not have to shut down the pump to monitor the health of the motor windings. These systems monitor when pumps run or are off.</p> <p>4. Added control panel modifications to replace existing Eaton RTD modules with new RTD controllers, and also added a fiber link from the pump pad to the building control panel. Required all these RTD controllers digitally communicate back to the PLC for data monitoring and alarm.</p> <p>5. Miscellaneous items:</p> <ul style="list-style-type: none"> <li>a. Modifications of the existing doors into the electrical room.</li> <li>b. Redo the stairs at the control panel to accommodate new conduit runs.</li> <li>c. Customized switchgear dimensions to fit the existing cable/conduit terminations.</li> <li>d. Added a Storage bin for staff to store electrical parts.</li> </ul> <p>6. Added Construction Management Services to ensure proper oversight of the project. DSRSD does not have adequate staff at this time to provide internal Construction Management Services.</p>	
Road Drainage Improvements at the LAVWMA Pump Station	Included in last year's budget, this project has been delayed due to COVID-19 and staffing issues. It will be combined with similar projects for DSRSD, which may result in some cost savings. This project will improve road drainage north of the storage basins.	\$35,000

# LAVWMA FY2020/21 Budget

<b>FY2020/21 Capital Program Expenditures</b>		
<b>Project</b>	<b>Description</b>	<b>Cost</b>
Cathodic Protection Projects	<p>A survey is conducted every year on the cathodic protection system. Surveyors typically identify areas that need improvements. In recent years additional sections of pipeline have been checked resulting in significant improvements needed this year. There are eight routine projects to be completed for a total of \$23,700. In addition, there are three more complex projects that need to be completed at a total cost of \$160,000. They include 1) One of the parallel pipelines needs high resistance bond repairs as high resistance connections have been observed. This project will result in new bonding cables terminated at anew test station to be monitored in future annual surveys; 2) Livermore interceptor electrical discontinuity repairs. Two sections of this pipeline have been determined to be lacking cathodic protection, which will be installed resulting in a new test section; 3) Emergency Discharge Lateral Discontinuity Repairs. A section of this segment is without cathodic protection which needs to be installed resulting in a new test section for future surveys. All three of these projects require excavation which increases the costs.</p>	\$185,000
PLC Upgrade at the Pump Station	<p>The existing Programmable Logic Controller (PLC) at the pump station is almost 20 years old and is near the end of its useful life. It is an OPTO22 system and needs to be upgraded to Allen Bradley PLC to match the PLCs used by DSRSD. An upgrade to the OPTO22 system at the San Leandro Pump Station is already complete. This is a complex project that requires engineering design, equipment, installation, and construction support. Upon completion the system will be consistent with that of DSRSD improving operation and performance. It</p>	\$300,000

## LAVWMA FY2020/21 Budget

<b>FY2020/21 Capital Program Expenditures</b>		
<b>Project</b>	<b>Description</b>	<b>Cost</b>
	will also be helpful with managing the system under the likely terms of the new EBDA agreement. This project was recommended by the 2016 Pump Station Evaluation Report.	
Pipeline Inspection	The pipeline inspection being conducted through the Pump Station Risk Analysis and Pipeline Inspection Project will result in recommendations for additional inspection of sections of the pipelines that were not addressed through that project. The pipeline is extraordinarily complex with many siphon sections that go under major highways or are very deep underground. Inspecting these sections is difficult and will require coordination between staff and contractors. This project will allow inspection of additional sections to contribute to development of a reliable remaining useful life of the most valuable asset in the system.	\$100,000
Electrical Improvements to the Main Switchgear at the Pump Station	This project will improve the original equipment at the pump station. It includes upgrading to multi-function relays at the main service switch gear, which will require some design and interfacing with PG&E. It also includes adding time delay/remote close/trip switches for the main breakers to reduce the arc flash hazard to staff. Both of these items were recommended by the 2016 Pump Station Evaluation Report.	\$50,000
Smart Detectors on High Maintenance Air/Vac and Air Release Valves	This project would install Smart Detectors on pipeline vaults with high maintenance air/vac and air relief valves. The Smart Detectors would monitor the depth of the vault if an Air Relief Valve or Combination Valve fails or begins to leak water into the vault. The detector would recognize the level in vault is rising with water, and then send a signal/alarm to Operations which may prevent a spill to storm drains or creeks along the length of the pipelines. It will help to ensure	\$40,000



# LAVWMA FY2020/21 Budget

<b>FY2020/21 Capital Program Expenditures</b>		
<b>Project</b>	<b>Description</b>	<b>Cost</b>
	compliance with Regional Board Sanitary Sewer Overflow requirements.	
Other Misc. LAVWMA Renewal/Replacements	As needed	\$50,000
Other Misc. EBDA Renewal/Replacements	As needed	\$50,000
CIP Planning/Mgmt./Contingency	As needed	\$50,000
<b>Total Expenditures</b>		<b>\$3,951,000</b>

## 2.3 Changes from FY2019/20 Budget

FY2019/20 expenditures are projected to come in approximately 6.0% above budget due power and payment for EBDA's OPEB/Pension costs. The annual reconciliation process will resolve any over or under payments. The FY2020/21 Budget is 2.26% more than FY2019/20 in Total Revenue Requirement. Total O&M costs are 8.41% more that was budgeted last year.

## 3.0 CAPITAL BUDGET

### 3.1 Description of Budget

The Capital budget includes all costs associated with renewal and replacement of existing capitalized facilities. From 2001 to 2010 the 2001 Series A bond funds were the primary source of LAVWMA's capital expenditures. The bond funds were closed out in June 2011. As of July 2011 and for the foreseeable future the only source of capital funding will be the Renewal & Replacement Funds that have been established for Joint Use, Dual Use and Sole Use Facilities. The table below depicts the projected fund balances during FY2019/20.

<b>R &amp; R Fund Balances</b>	<b>Joint</b>	<b>Dual</b>	<b>Sole</b>	<b>Total</b>
<b>Start of year</b>	15,303,879	420,340	1,573,615	17,297,834
<b>Deposits</b>	400,000	0	0	400,000
<b>Interest Earnings</b>	450,000	7,566	28,325	485,891
<b>Proposed Expenditures</b>	(3,951,000)	(0)	(0)	(3,951,000)
<b>End of Year</b>	12,202,879	427,906	1,601,940	14,232,725

As discussed previously, it is recommended that the annual contribution to the R&R Fund be continued at the \$400,000 level. The following table for the last several years plus the estimated data for FY2018/19 and recommendations for FY2019/20 show that LAVWMA maintaining the Joint Use R&R Fund at a sustainable level since FY2010/11. Due to the increased costs for the MCC Project the annual contribution should be reviewed in the next budget.

# LAVWMA FY2020/21 Budget

<b>R&amp;R Joint Use History</b>				
<b>Fiscal Year</b>	<b>Contributions</b>	<b>Interest</b>	<b>Expenses</b>	<b>Net</b>
FY2010/11	0	84,873	(245,065)	(160,192)
FY2011/12	300,000	51,626	(411,885)	(60,259)
FY2012/13	300,000	45,064	(353,404)	(8,340)
FY2013/14	300,000	36,396	(119,955)	216,441
FY2014/15	300,000	40,479	(439,073)	(98,594)
FY2015/16	400,000	62,652	(336,712)	125,940
FY2016/17	400,000	109,563	(600,000)	(90,437)
FY2017/18	400,000	225,160	(154,000)	471,160
FY2018/19	400,000	494,626	(309,115)	585,511
FY2019/20	400,000	500,000	(125,000)	775,000
FY2020/21	400,000	450,000	(3,951,000)	(3,101,000)
<b>Total</b>	<b>3,600,000</b>	<b>2,100,439</b>	<b>(7,045,209)</b>	<b>(1,344,770)</b>

## 3.2 Discussion of Capital Expenditures Proposed for FY2019/20

The following table summarizes \$3,951,000 of anticipated FY2020/21 capital expenditures on the renewal and replacement of LAVWMA and EBDA facilities. More detailed descriptions are included in Section 2.2.5, Capital Program Funding.

<b>FY2020/21 Capital Program Expenditures</b>	
<b>*Carryover</b>	
*Rebuild three pumps and their associated motors	\$216,000
*Resealing of all Three Storage Basins	\$200,000
*San Leandro Sample Station Design Improvements	\$175,000
*MCCs and soft starters	\$2,500,000
*Road Drainage Improvements	\$35,000
Cathodic Protection Projects	\$185,000
PLC Upgrade at the Pump Station	\$300,000
Pipeline Inspection	\$100,000
Electrical Improvements to Main Switchgear	\$50,000
Smart Detectors on High Maintenance Pipeline Valves	\$40,000
Other Misc. LAVWMA Renewal/Replacements	\$50,000
Other Misc. EBDA Renewal/Replacements	\$50,000
CIP Planning / Management Contingency	\$50,000
<b>Total Expenditures</b>	<b>\$3,951,000</b>

# LAVWMA FY2020/21 Budget

## 4.0 FY2020/21 Member Agency Cost Sharing & Schedule

<b>Member Agency Costs FY2020/21</b>			
	<b>Total</b>	<b>Livermore</b>	<b>DSRSD/Pleasanton</b>
Variable O&M	\$ 1,391,000	\$ 486,850	\$ 904,150
Fixed O&M	1,929,400	580,750	1,348,650
Sole Use Fixed O&M	25,000	25,000	
<b>Total O&amp;M</b>	<b>3,345,400</b>	<b>1,092,600</b>	<b>2,252,801</b>
Replacement Fund	400,000	120,400	279,600
Repair Debt	2,438,659	974,244	1,464,414
Expansion Debt	5,567,442	1,253,788	4,313,654
EBDA Debt	-	-	-
<b>Total Capital Costs</b>	<b>8,406,100</b>	<b>2,348,432</b>	<b>6,057,669</b>
<b>Total Revenue Required</b>	<b>\$ 11,751,500</b>	<b>\$ 3,441,031</b>	<b>\$ 8,310,469</b>
Semi Annual O&M Advance	1,672,700	546,300	1,126,400
Semi Annual Replacement Fund Advance	200,000	60,200	139,800
EBDA Debt Advance, July 1	-	-	-
July 1 Bond Debt Service Advance	6,414,363	1,785,065	4,629,298
Jan 1 Bond Debt Service Advance	1,591,738	442,968	1,148,770
<b>Total July 1 Advance</b>	<b>\$ 8,287,063</b>	<b>2,391,564</b>	<b>5,895,498</b>
<b>Total January 1 Advance</b>	<b>\$ 3,464,438</b>	<b>\$ 1,049,467</b>	<b>\$ 2,414,970</b>
<b>Percentages</b>			
Variable O&M		35.00%	65.00%
Fixed O&M		30.10%	69.90%
Replacement Fund		30.10%	69.90%
Repair Debt		39.95%	60.05%
Expansion Debt		22.52%	77.48%

## 5.0 Budget Trends FY2013/14 – FY2020/21

The following charts show expense trends from FY13/14 through FY20/21. The charts show the following:

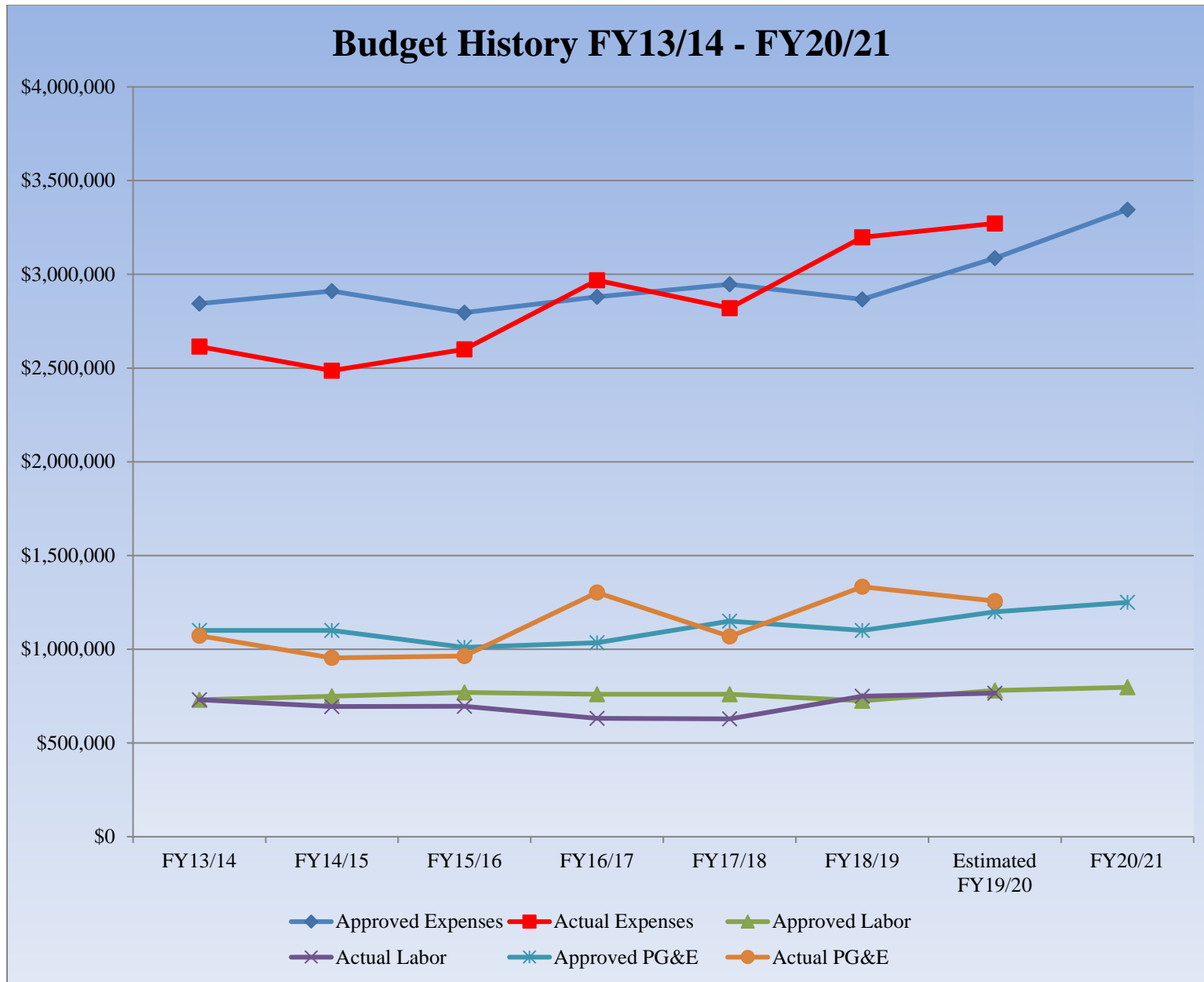
- Approved versus actual expenses for total expenses, labor costs, and PG&E power
- Estimated versus actual export flow
- Estimated versus actual cost per million gallons

Beginning with the FY2019/20 budget, these charts have been modified from previous presentations. The costs shown are total costs as in the approved budgets, which also include costs for EBDA. Previously, EBDA costs were not included. As a consequence, the cost per million gallons is going to be higher than the costs shown in DSRSD's Quarterly reports. The cost for just pumping over the Dublin Grade is approximately \$612/MG, while the full disposal cost, including EBDA costs is approximately \$749. Although flow and PG&E costs are directly

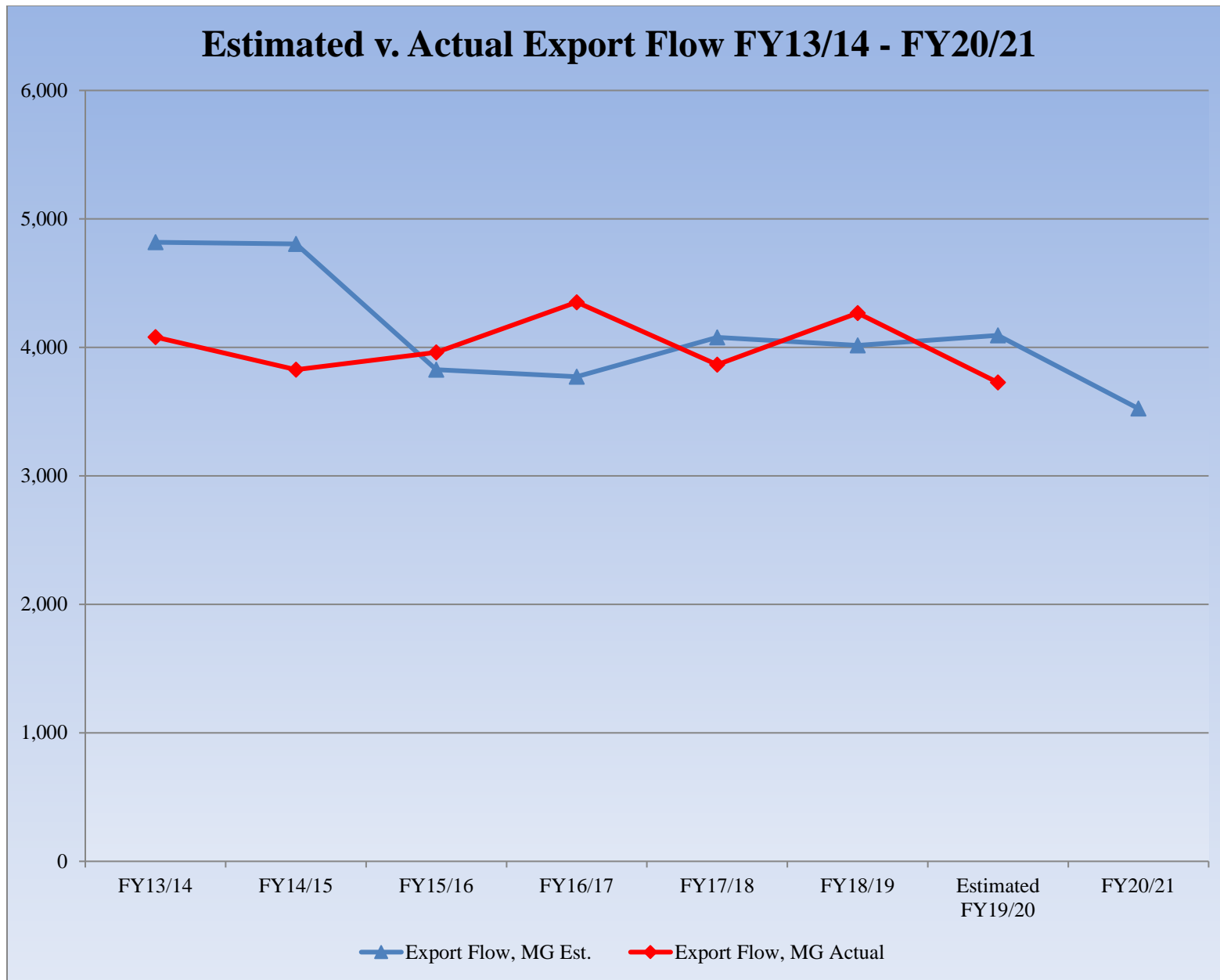
## LAVWMA FY2020/21 Budget

linked, other factors such as fixed costs for labor and equipment repair generally increase at the rate of inflation or CPI, resulting in increasing cost curves. Export flow is decreasing over time due to water recycling efforts.

# LAVWMA FY2020/21 Budget



# LAVWMA FY2020/21 Budget



# LAVWMA FY2020/21 Budget

