



FY 2018-19 FINAL BUDGET

Board of Water and Power Commissioners

May 8, 2018

Putting Customers First 

Presentation

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- Preliminary Budget Changes
- Equity Metrics Initiatives & Customer Benefits
- Water and Power Revenue Funds
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Budget Overview

This Board of Water and Power Commissioners (Board) approved transmittal of the FY 2018-19 preliminary budget to the City Council on March 13, 2018. In accordance with the City Charter, the Final Proposed budget must be approved by May 31, 2018.

Consistent with the LADWP Strategic Plan, this Final Budget reflects continued cost controls and prioritization of resources that addresses customer-driven priorities.

While the FY 2018-19 spending proposals are below the approved five-year rate spending plan, the projected five-year average rates over the rate action period are as follows:

- Water Revenue Fund: 0.8% (6.1% vs 5.3%) higher than the rate case largely attributed to historic levels of water conservation efforts and also the delay in securitization
- Power Revenue Fund: 0.7% (4.6% vs 3.9%) higher than the rate case largely attributed to the incremental reliability cost adjustment

The Department's goals align with the Mayor's FY 2018-19 Budget Policy directive.



Budget Development Status

City Charter Section 511 (b) requires the Board to adopt an annual receipts and appropriations Budget for the Water and Power Revenue Funds prior to the beginning of each fiscal year:

- ✓ Water and Power funds must be budgeted separately
- ✓ Joint costs shown in either Water or Power fund with reimbursement from the other system
- ✓ Differs from what's used for management and planning purposes

Water and Power Revenue Funds

Highlighted Changes from Preliminary Budget

Water Revenue Fund

- Capital budget has decreased by \$37 million primarily due to scope and schedule changes to various Water Quality and Infrastructure projects. Operation and Maintenance (O&M) has slightly increased by \$3 million due to minor increases across numerous functional areas that include Infrastructure, Water Quality, Water Supply and Operating Support.

Power Revenue Fund

- Capital budget has increased by \$102 million primarily attributed to the Power System Reliability Program's (PSRP) Distribution Automation Project to improve overall reliability by installing smart devices on distribution circuits. O&M has increased by \$64 million of which \$59 million in Energy Efficiency, Solar Incentive Payments and Electric Transportation Program expenditures were reclassified from capital to O&M with the remaining net \$5 million increases attributed to various PSRP and Infrastructure O&M.
- Fuel, Purchased Power, and Other Expense has slightly increased by \$9 million due to increases in non-renewables, renewables, and other expenses.

FY 2018-19 LADWP Equity Metrics Key Spending

Equity Metrics Data Initiatives (\$ in Millions)	FY 2016-17		FY 2017-18		FY 2018-19	
	Actual		Approved	Estimated	Proposed	
Corporate Performance Office Budget	\$ 2.1	\$	3.0	\$ 2.5	\$	3.5
Workforce-Targeted Recruitment Initiative	N/A	\$	0.5	\$ 0.5	\$	1.4
Community Solar Programs						
Shared Solar Program - SSP	\$ 0.1	\$	5.3	\$ 0.6	\$	3.0
Solar Rooftops Program - SRP	\$ 2.2	\$	1.6	\$ 1.6	\$	1.9
TOTAL Community Solar Programs	\$ 2.3	\$	6.9	\$ 2.2	\$	4.9

FY 2018-19 LADWP Customer Benefits Programs

Customer Programs (\$ in Millions)	FY 2016-17		FY 2017-18		FY 2018-19	
	Actual		Approved	Estimated	Proposed	
Energy Efficiency Program	\$ 129	\$	178	\$ 178	\$	177
Electric Vehicle Program	\$ 2	\$	16	\$ 6	\$	23
Power System Incentive Program						
Solar Incentive Payments	\$ 22	\$	27	\$ 19	\$	12
Demand Response Program	2		16	7		15
TOTAL PS Incentive Program	\$ 24	\$	42	\$ 27	\$	27
Water Conservation Program	\$ 20	\$	43	\$ 24	\$	32
Notes: 1) All data based on 3/30/18 Budget Data 2) Program costs include rebates, all other direct, and indirect costs 3) Programs include O&M components						

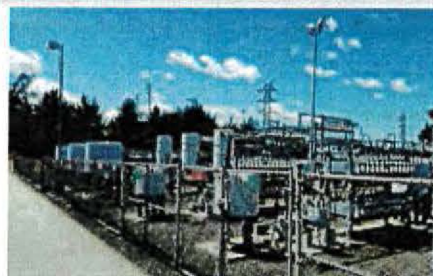
Power Revenue Fund



FY 2018-19 Strategic Power Investments

Project Highlights:

Projects	Financial Category	FY 18-19 Proposed	Project Goal Highlights
Pole Replacement Project	PSRP	\$90.7	<ul style="list-style-type: none"> As of April 1, 2018, 2,298 poles were replaced during this FY, approaching our goal of 3,000 replacements For FY18-19, the PSRP goal has been increased to a target of 3,500 poles replaced
138kV Underground Transmission Cable Replacement Project	PSRP	\$43.3	<ul style="list-style-type: none"> 5 year project replacing a total of 10-138kV underground transmission circuits with new synthetic cables, of which 2-3 circuits planned for replacement in FY 18-19 Allow for capacity of lines to be increased by 20% and eliminate 40% of splicing vaults, which will increase power system reliability
Sylmar Converter Station Filter Replacement Project	PSRP	\$16.8	<ul style="list-style-type: none"> Replace aged AC and DC harmonic filters to minimize or eliminate equipment failures and improve reliability This facility can import up to 3100 MW of renewable energy from the Pacific Northwest, and is a vital source of power for the PDCI partners which include Southern California Edison, LADWP, and the cities of Burbank, Glendale, and Pasadena
Substation Automation System	PSRP	\$18.4	<ul style="list-style-type: none"> Substation Automation System (SAS-2) Project improves control, monitoring, and data acquisition of Power System by upgrading 200 electrical facilities and AC substations Directly supports the goals of the PSRP, and improves LADWP's ability to comply with dynamic Critical Infrastructure Protection (CIP) regulatory standards and requirements



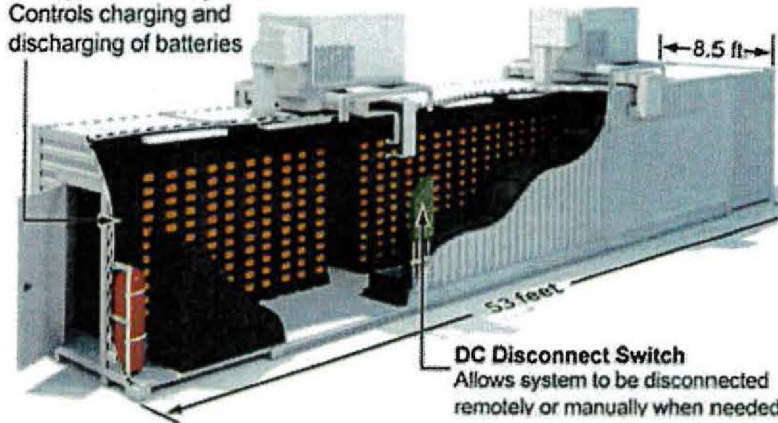
FY 2018-19 Strategic Power Investments

Project Highlights:

Projects	Financial Category	FY 18-19 Proposed	Project Goal Highlights
Design & Construct New Business Services, Lines, and Facilities	Infrastructure	\$83.9	<ul style="list-style-type: none"> Growth from new LADWP customers and upgrades to existing customers New load demands from new installations and upgrades to electrical line facilities Projects include MTA, LAX/LAMP, Lucas Museum, Port of LA, Downtown LA, and new commercial, industrial, residential developments
Battery Energy Storage Systems (BESS)	RPS/ Operating Support	\$11.5	<ul style="list-style-type: none"> 20MW Beacon BESS construction began Oct. 2017 and in-service in summer 2018 Procurement for John Ferraro Building BESS is in progress. The Los Angeles Zoo, Recreation and Park facilities and Distributed Energy Storage are in planning stage Evaluating Power Purchase Agreement options for Utility Scale Energy Storage with Solar Generation



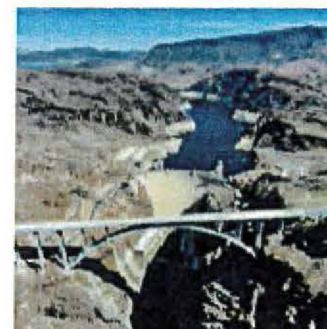
Energy Control System
Controls charging and discharging of batteries



FY 2018-19 Strategic Power Investments

Project Highlights:

Projects	Financial Category	FY 18-19 Proposed	Project Goal Highlights
Electric Vehicles	Infrastructure/Operating Support	\$23.1	<ul style="list-style-type: none"> Aims to have 10,000 commercial charging stations in the City of Los Angeles to support public, workplace, and fleet charging by 2022. Of these charging stations, 4,000 on City property. Aims to promote the electrification of medium & heavy-duty vehicles (e.g. trucks and buses)
Distribution Automation	PSRP	\$122.1	<ul style="list-style-type: none"> Improve overall reliability by installing smart devices on distribution circuits Enables outages to be quickly identified, located & responded to vs. relying on customers calls Reduces wear and tear on equipment by keeping voltages within more tolerable limits System health monitoring allows for preemptive maintenance and replacements Supports safety of crews by allowing operators greater control to isolate faults and relay information
Boulder Canyon Pumped Storage	RPS	\$5.2	<ul style="list-style-type: none"> In support of state mandated energy storage to supplement renewable power Hydro-based pumped storage is a cost effective, less impactful energy storage alternative Would enable Hoover Generating Plant to operate at a higher capacity Closed loop system may help replenish Lake Mead water supply



Power Revenue Fund: Key Expenditure Plan Summary

\$ in Millions	FY 2016-17	FY 2017-18		FY 2018-19
	Actual	Approved	Estimated	Proposed
OPERATING EXPENSE				
Non-Renewables	\$ 970	\$ 897	\$ 896	\$ 860
Renewables	470	575	572	628
Other Expenses	18	(22)	24	35
Total Fuel and Purchased Power	\$ 1,458	\$ 1,451	\$ 1,492	\$ 1,522
Operation and Maintenance	1,093	1,060	1,068	1,215
Property Tax	14	15	14	16
Depreciation & Amortization	521	668	573	655
TOTAL OPERATING EXPENSE	\$ 3,086	\$ 3,194	\$ 3,147	\$ 3,408
CITY TRANSFER	\$ 264	\$ 242	\$ 242	\$ 238
DEBT SERVICE	\$ 489	\$ 551	\$ 551	\$ 590
INCREASE IN FUND NET ASSETS	\$ 177	\$ 130	\$ 127	\$ 200
REVENUE REQUIREMENT	\$ 3,698	\$ 3,777	\$ 3,728	\$ 3,984
TOTAL CAPITAL INVESTMENT	\$ 1,130	\$ 1,393	\$ 1,287	\$ 1,533
Notes:				
1) All data based on Power Case 12 -Final FY19 Budget				
2) The annual cost associated with the Capital Investment is reflected in Debt Service and Depreciation.				

Power Revenue Fund

Financial Categories Summary

Power System Reliability Program

Replace the rapidly aging backbone and infrastructure of the Generation, Transmission, Substation, and Distribution Systems; as well as the supporting technology to maintain system reliability and improve replacement cycles

Infrastructure

Evaluates and prioritizes maintenance and replacement of major power infrastructure, including demolition of thermal units for Once-Through Cooling (OTC) regulatory compliance

Operating Support

Provide shared and joint services including customer service, fleet, purchasing, finance, IT and human resources

Energy Efficiency

Provide customers the opportunities to reduce energy reliance to achieve long term savings targets and have greater control over their bills

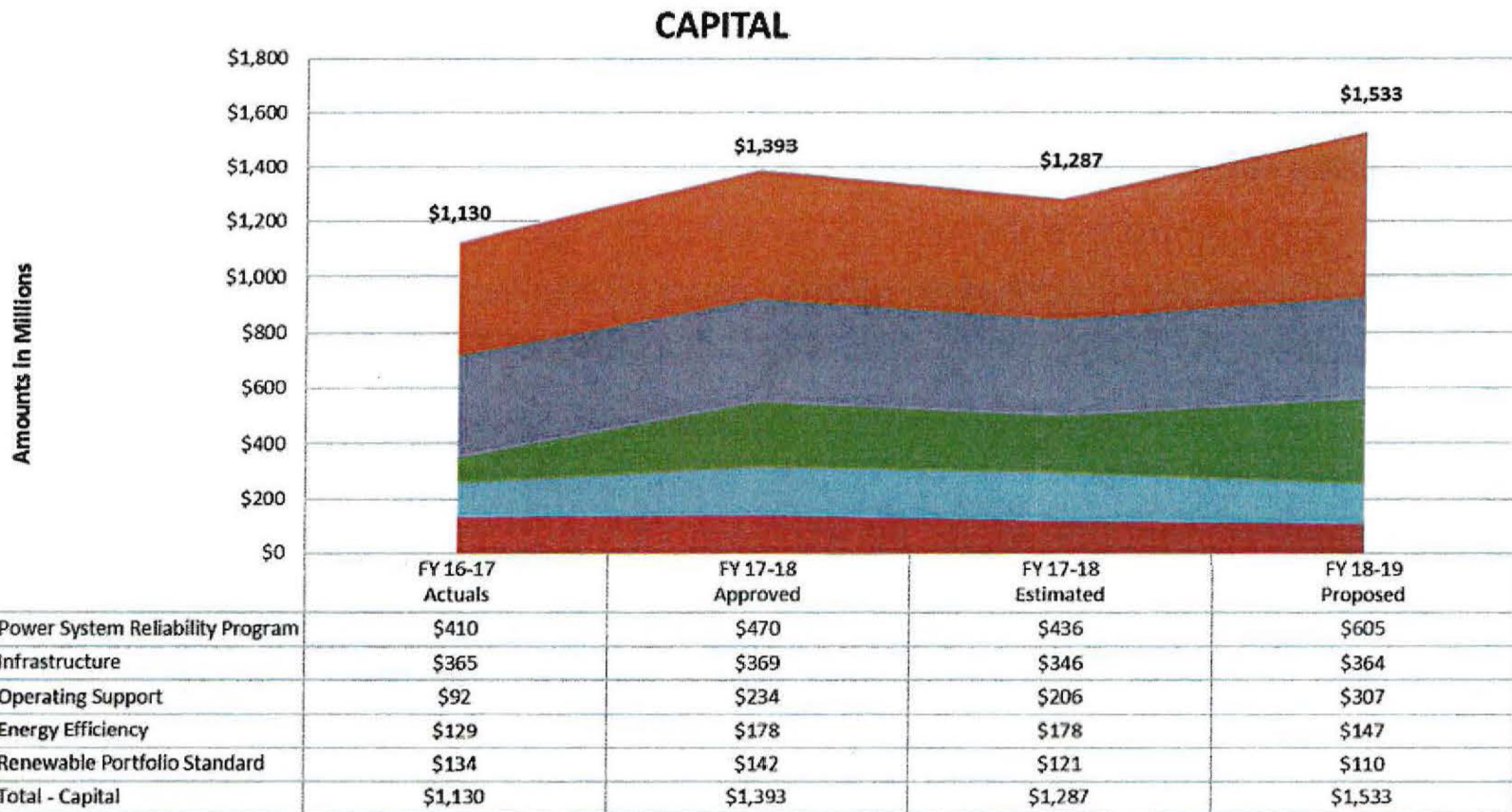
Renewable Portfolio Standard

Develop greener power resources via renewable energy and transition from coal to cleaner sustainable energy supplies



Power Revenue Fund:

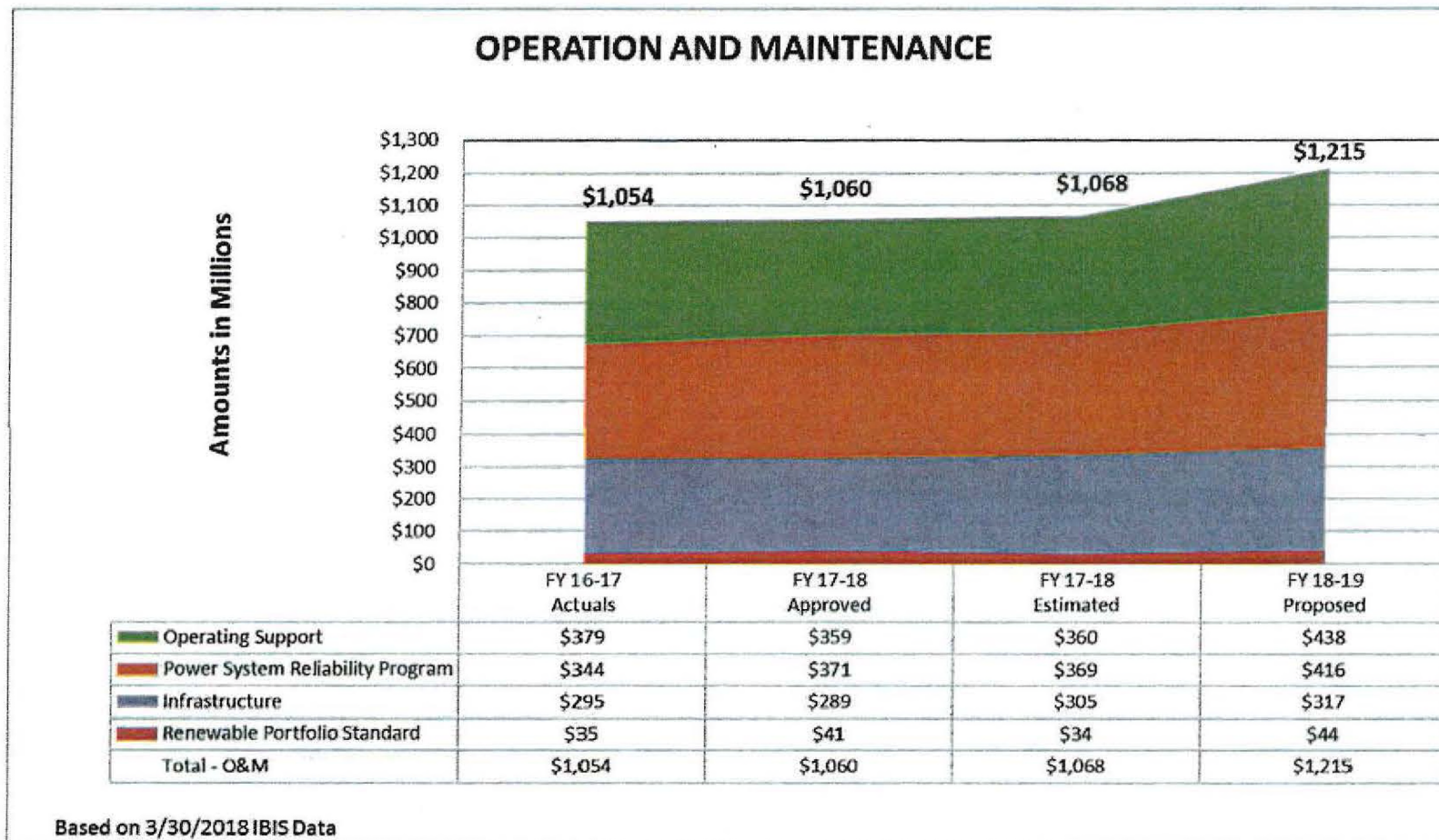
FY 2018-19: Capital Expenditures Trend



Based on 3/30/2018 IBIS data

Power Revenue Fund:

FY 2018-19: O&M Expenditures Trend

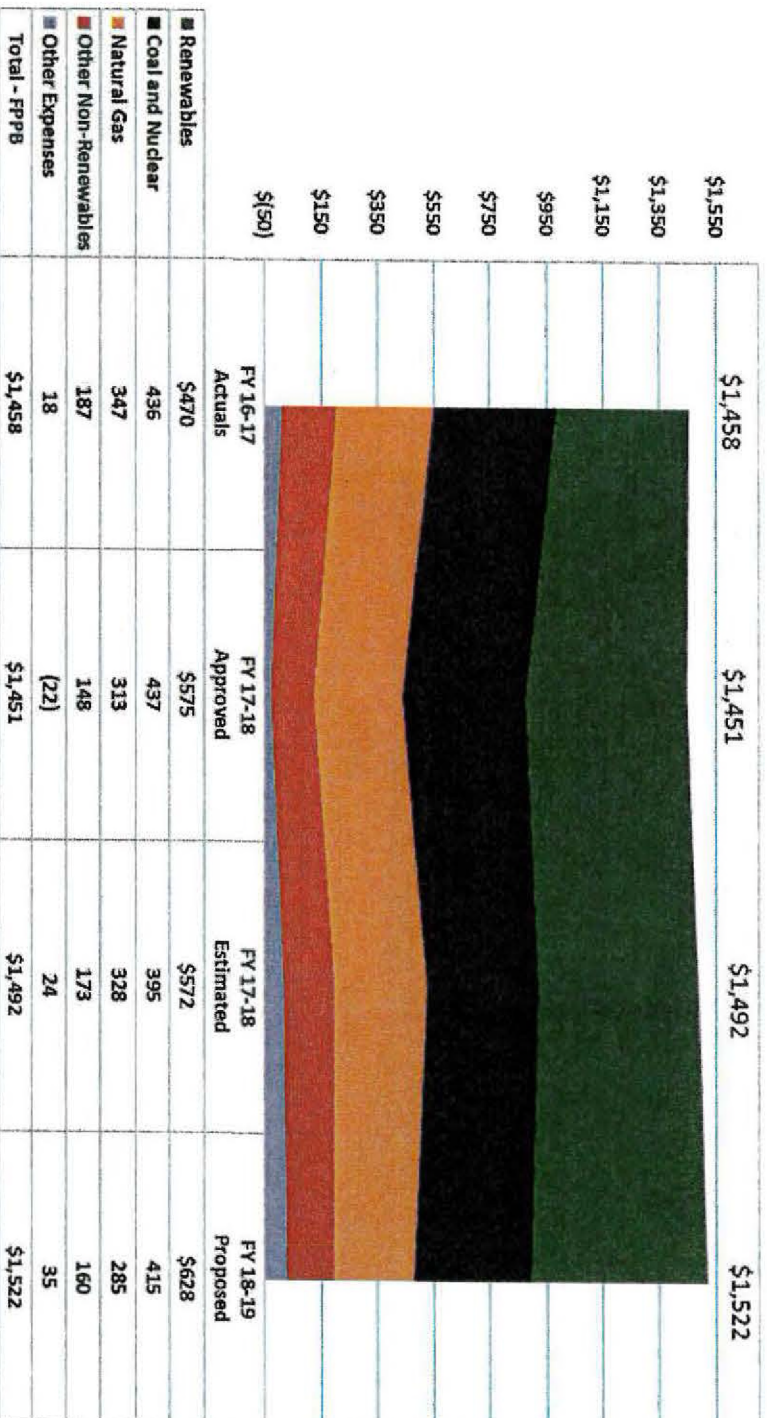


Power Revenue Fund:

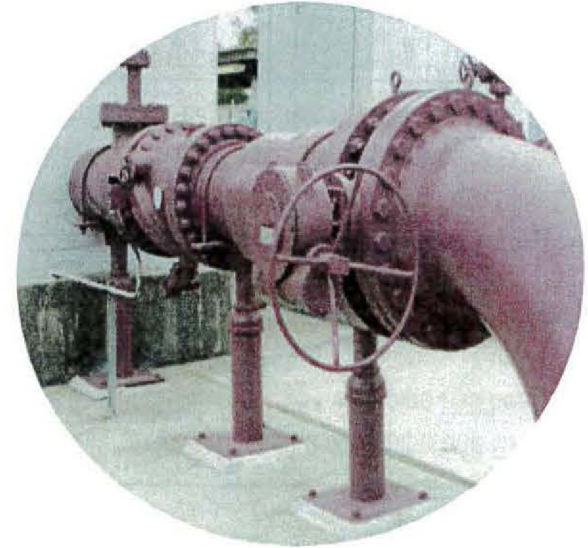
FY 2018-19: Fuel & Purchased Power Trend

FUEL AND PURCHASED POWER

Amounts in Millions



Water Revenue Fund



FY 2018-19 Strategic Water Investments: Project Highlights

Projects	Financial Category	FY 18-19 (In millions)	Project Goal Highlights
Mainline Installation Program Earthquake Resistant Pipe	Infrastructure	\$101.4M	<ul style="list-style-type: none"> Install 232,000 feet of mainline including installation of Earthquake Resistant Ductile Iron Pipe (ERDIP).
Foothill Trunk Line Unit 3	Infrastructure	\$22.5M	<ul style="list-style-type: none"> Install 16,600 feet of 54-inch welded steel pipe and ERDIP. As of April 02, 2018, 4,930 feet of 54-inch pipe has been installed. Approximately 1,000 feet of 54-inch ERDIP will be installed in FY 17/18.
North Hollywood West Remediation	Water Quality: San Fernando Basin Groundwater Clean-up	\$41.8M	<ul style="list-style-type: none"> Project to remediate contamination in the San Fernando Basin. Once completed, project will help restore the ability to use groundwater from the San Fernando Aquifer.



FY 2018-19 Strategic Water Investments: Project Highlights

Projects	Financial Category	FY 18-19 (In millions)	Project Goal Highlights
Upper Stone Canyon Reservoir WQIP	Water Quality	\$19.3M	<ul style="list-style-type: none"> Install a 700,000 square foot floating cover. To comply with the Long Term 2 Enhanced Surface Water Treatment Rule.
River Supply Conduit (RSC) 7	Water Quality: Trunk Line	\$37.9M	<ul style="list-style-type: none"> Install 13,325 feet of 78-inch diameter welded steel pipe, primarily within a tunnel.
Tujunga Spreading Grounds Enhancement Project	Water Supply: Storm Water	\$10.5M	<ul style="list-style-type: none"> Project improvements will double the storm water capture capacity of the spreading grounds. The project is expected to be completed early 2020 and cost approximately \$31M.
Headworks West Reservoir	Water Quality	\$41M	<ul style="list-style-type: none"> Provide 62 million gallons of operational storage of drinking water, bringing the total operational storage of the Headworks site to 110 million gallons. This storage replaces Silverlake & Ivanhoe reservoirs which are no longer in service to comply with the Long Term 2 Enhanced Surface Water Treatment Rule.



Water Revenue Fund: Key Expenditure Plan Summary

\$ in Millions	FY 2016-17	FY 2017-18		FY 2018-19
	Actual	Approved	Estimated	Proposed
OPERATING EXPENSE				
Purchase Water	\$ 195	\$ 114	\$ 157	\$ 136
Operating and Maintenance	492	478	480	511
Property Taxes	14	16	16	17
Depreciation & Amortization	157	183	176	192
Other Debt Issuance Expenses	1	-	1	3
TOTAL OPERATING EXPENSE	\$ 858	\$ 791	\$ 829	\$ 860
DEBT SERVICE	\$ 272	\$ 313	\$ 295	\$ 331
INCREASE IN FUND NET ASSETS	\$ 141	\$ 212	\$ 243	\$ 192
REVENUE REQUIREMENT	\$ 1,119	\$ 1,152	\$ 1,212	\$ 1,214
TOTAL CAPITAL INVESTMENT	\$ 746	\$ 861	\$ 768	\$ 891
Notes:				
1) All data based on Water FY19 Case #11				
2) The annual cost associated with the Capital Investment is reflected in Debt Service and Depreciation & Amortization.				

Water Revenue Fund

Financial Categories Summary

Water Quality

Develop the highest quality water through reservoir covers, bypasses, and trunkline replacement, and regulatory compliance

Water Infrastructure

Replace aging pipeline and infrastructure, including regulator and pumping stations; and maintain operations through in-place refurbishment of the entire Los Angeles Aqueduct system

Water Supply

Invest in recycled water, storm water, and groundwater to increase local supply and meet State conservation goals and Mayor's long-term Sustainability pLAn goal

Owens Valley Regulatory Compliance

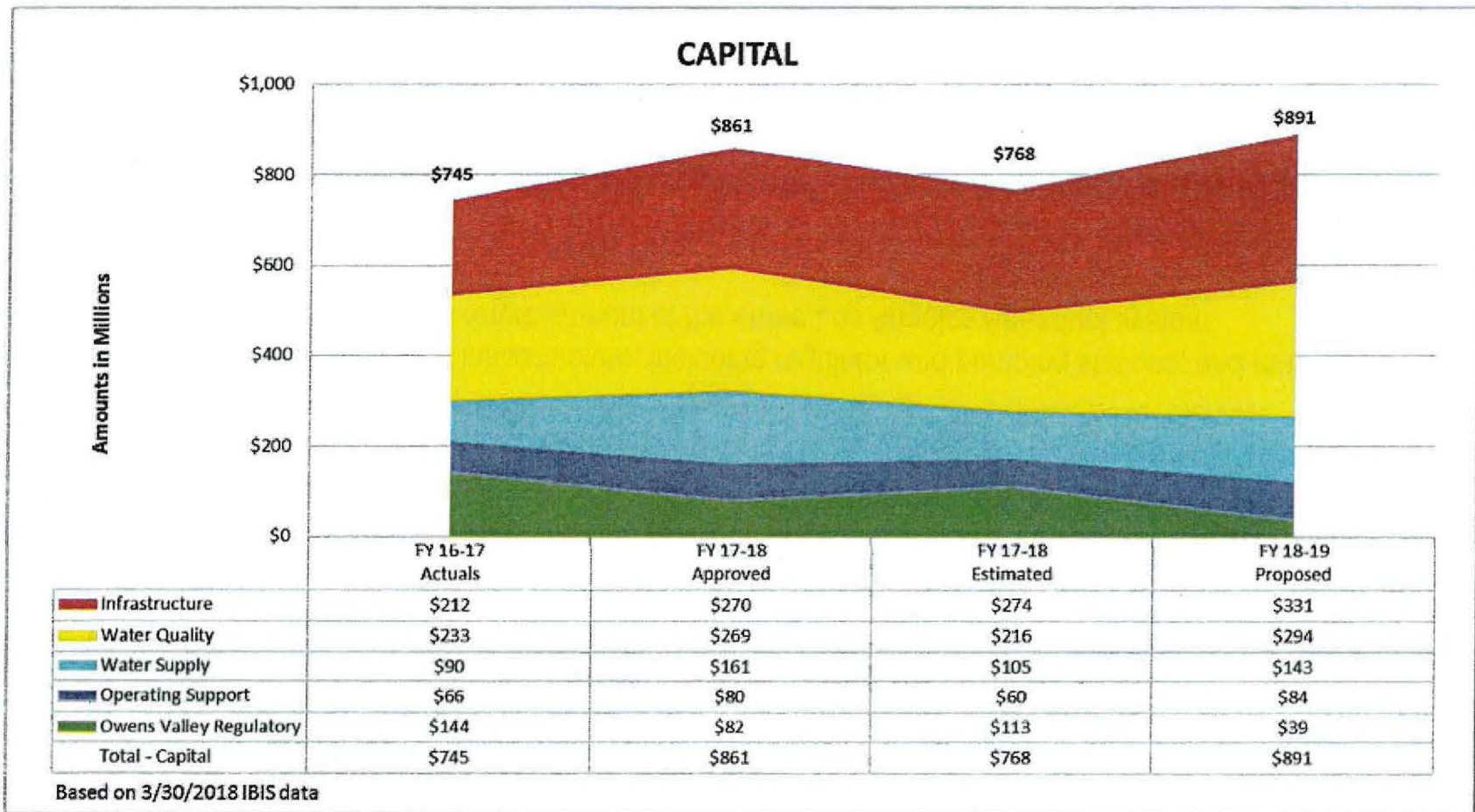
Meet air quality and other regulatory requirements in the Owens Valley

Operating Support

Provide shared and joint services including customer service, fleet, purchasing, finance, IT and human resources

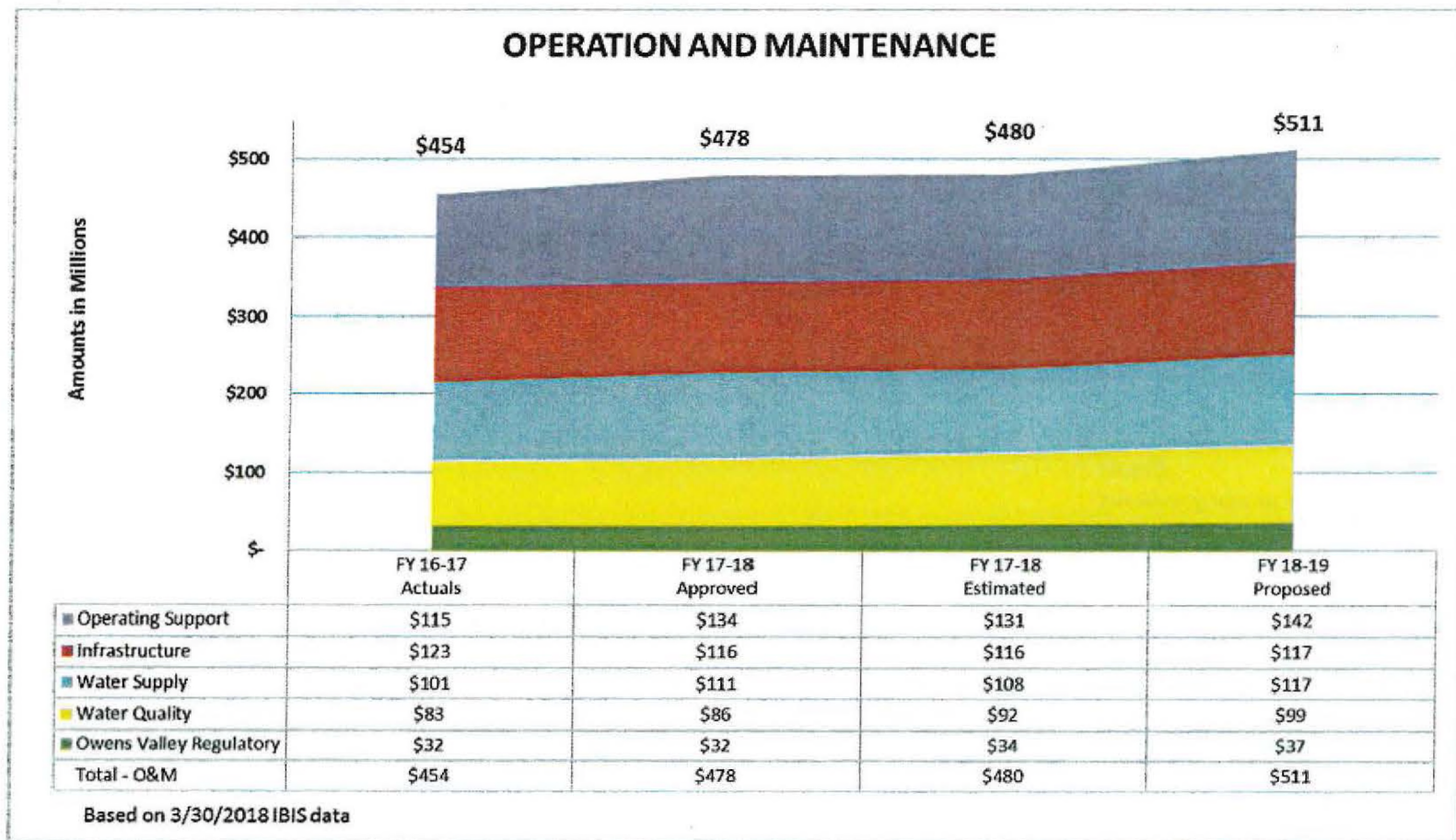
Water Revenue Fund:

FY 2018-19: Capital Expenditures Trend



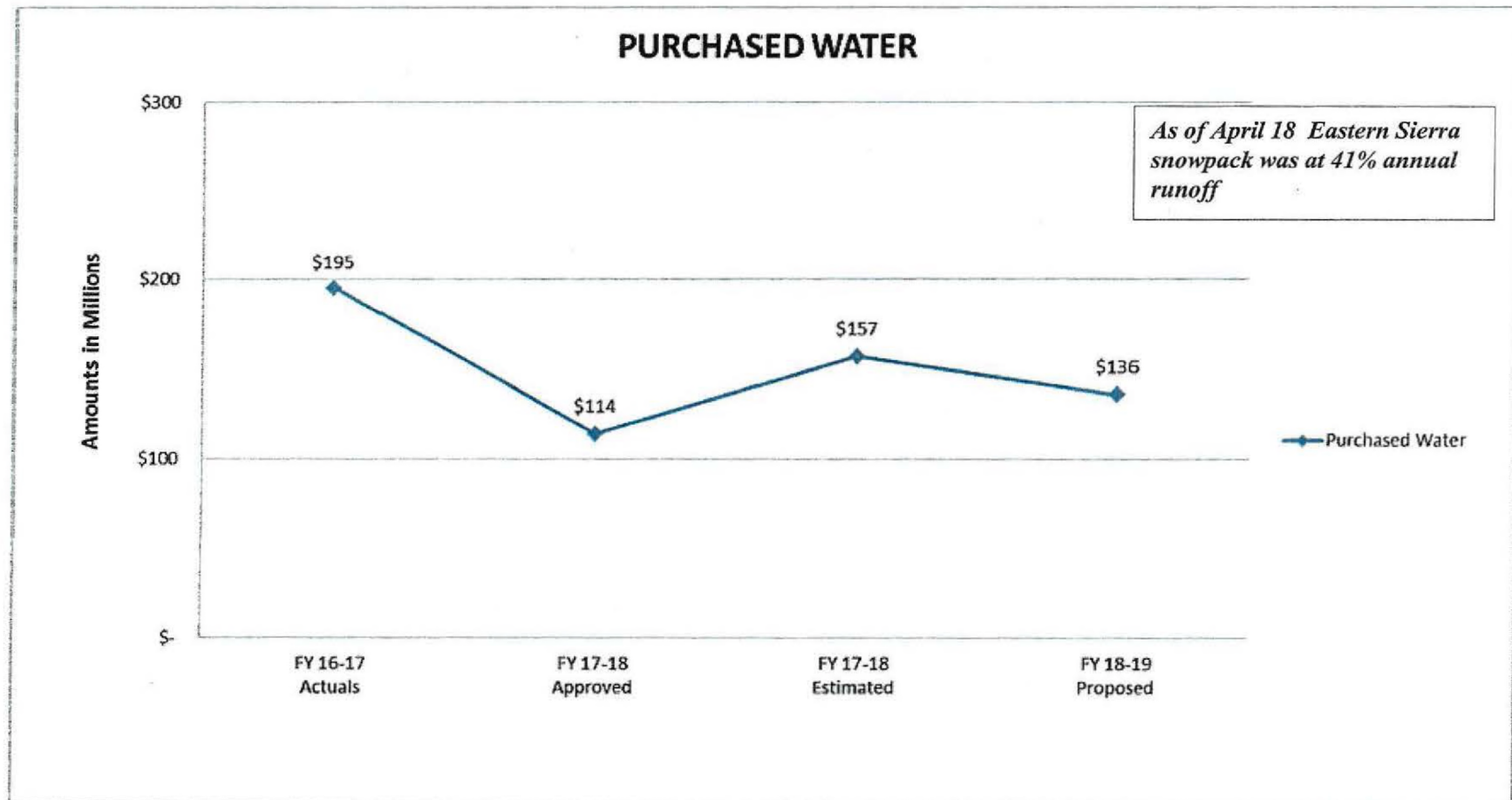
Water Revenue Fund:

FY 2018-19: O&M Expenditures Trend



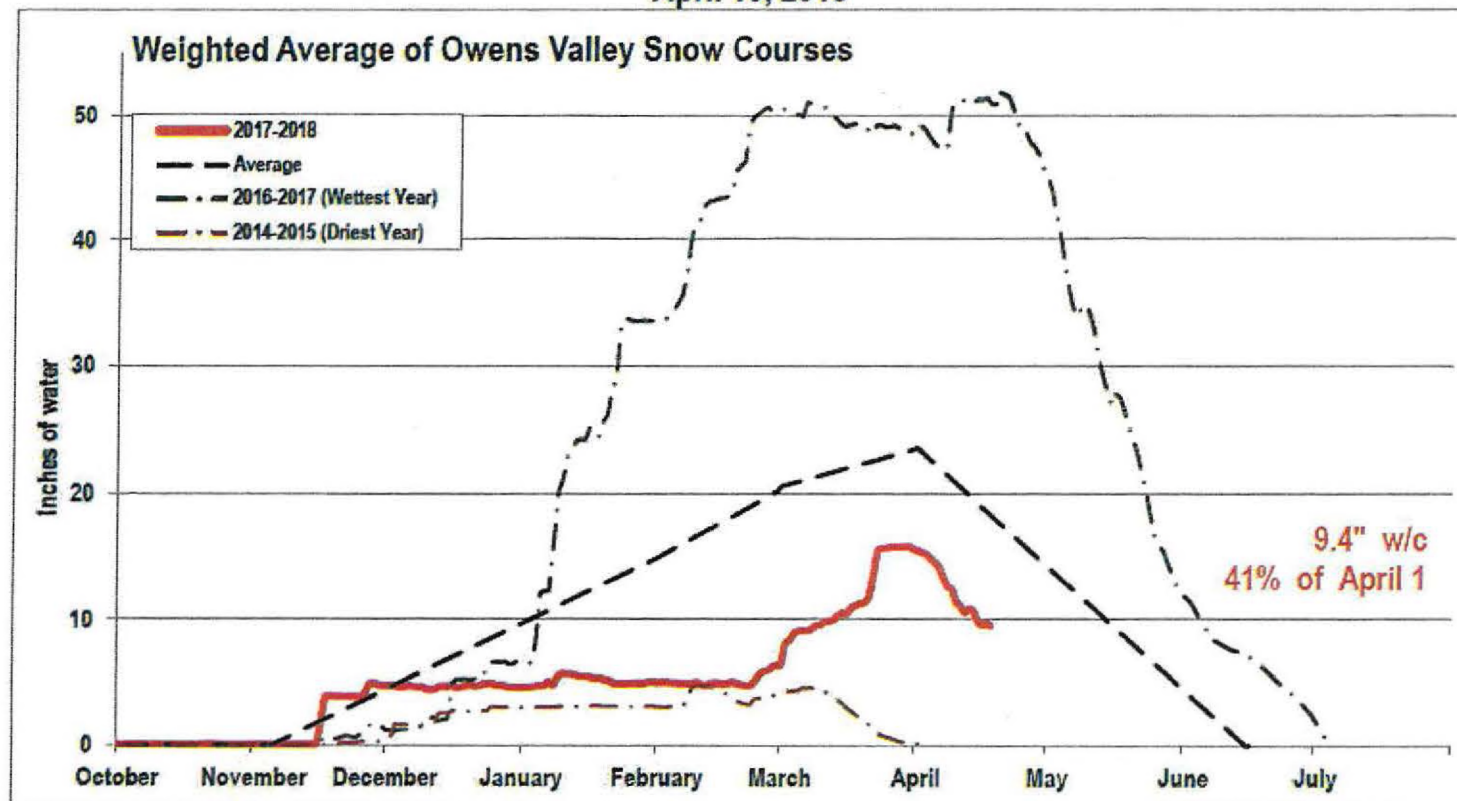
Water Revenue Fund:

FY 2018-19: Purchased Water Trend



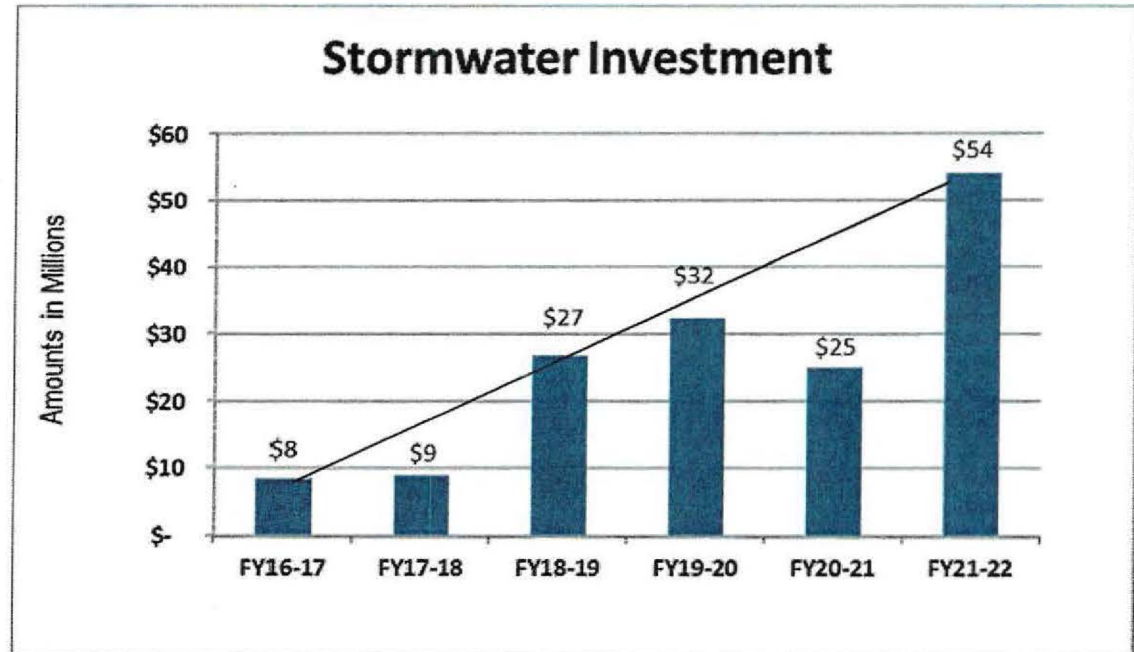
Eastern Sierras - Precipitation

EASTERN SIERRA
CURRENT PRECIPITATION CONDITIONS
April 18, 2018



Water Revenue Fund: Stormwater Investment

- Stormwater Capture investments are budgeted at approximately \$150 M over the next 5 years at an average annual amount of \$30 M – Approximately 3 1/2 times the current year investment rate.
- This schedule will increase capacity from approximately 65,000 AF to nearly 100,000 AF by 2024 and includes the Industrial Stormwater Rebate Program.
- Expenditures vary from year to year based upon the cycle of payment for projects as they move into construction.
- An accelerated schedule, advancing projects 5 years in the schedule, would impact Tier 4 rates in the order of 6% and is constrained by our partners' ability to progress work including permitting, land acquisition and contracting schedules.

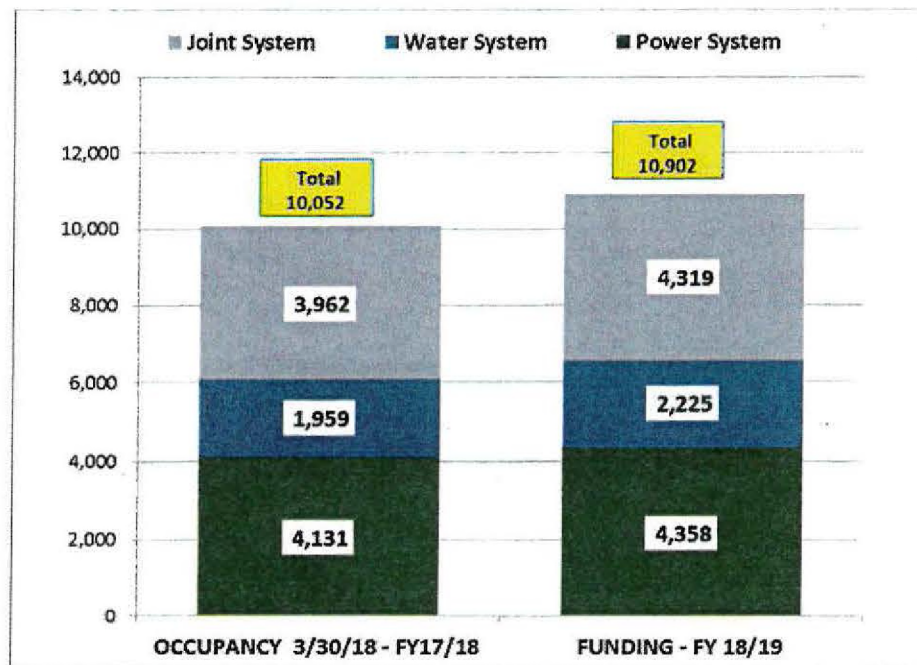


Staffing



Staffing Plan by System

FY 2018-19: Proposed Funding & APR

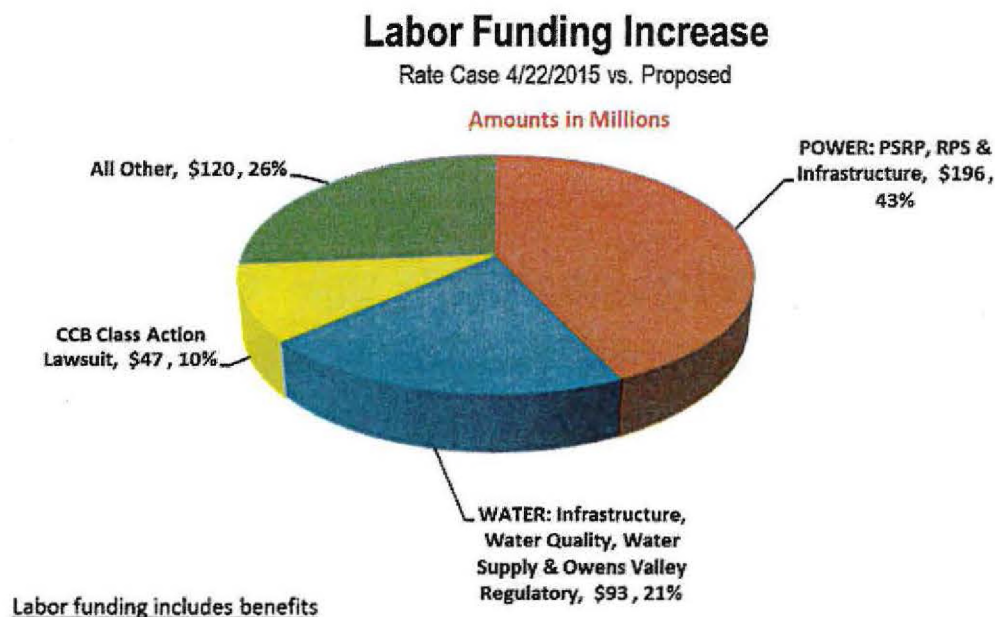


Total Budget (\$ in Millions)		Labor	Overtime	Benefits
Joint System		\$ 423.7	\$ 47.4	\$ 310.1
Water System		\$ 244.4	\$ 38.0	\$ 178.9
Power System		\$ 563.2	\$ 142.0	\$ 376.4
Total LADWP		\$ 1,231.3	\$ 227.5	\$ 865.4

- Labor funding, 850 positions, above current occupancy is allocated primarily for implementing:
 - Succession Planning – additional positions in HR
 - Water and Power Systems Programs
 - Enhancing Customer Service and Billing
 - ITS Enterprise Cyber Security, Customer Care Billing (CCB) upgrade
 - Human Resources, Financial Services and Fleet Services
 - Corporate Safety and Project Management Offices
 - Office of Sustainability
- Based on retirement eligibility criteria of Age 55 with 30 or more years of service and Age 60 with 5 or more years of service, approximately 2,238 employees or roughly 22% of the existing LADWP workforce will be eligible to retire within FY 2018-19; actual Retirement for FY 2017-18 as of March 31, 2018 is 282 employees
- Proposed change in Annual Personnel Resolution from 10,650 to 11,265 positions

Labor Funding

FY 2018-19: Proposed Changes



Compared to the rate action, the proposed labor funding for FY 18-19 is \$184 million higher than the FY17-18 incremental labor funding, resulting in a cumulative \$456 million increase primarily for:

- Power: PSRP, RPS and Infrastructure
- Water: Infrastructure, Water Quality, Water Supply and Owens Valley Regulatory
- Customer Care Billing (CCB) Class Action Lawsuit

This change has no impact on the approved rates, as various offsets in contracting services were made to maintain the target revenue requirement.

Water and Power Revenue Funds

FY 2018-19 Annual Personnel Resolution (APR)

LADWP is requesting 11,265 Authorized Positions for the fiscal year beginning July 1, 2018, as follows:

Water Revenue Fund – 3,810

- 2,309 represent Water System positions necessary for critical projects and operations, with 1,501 Joint System positions in support.

Power Revenue Fund – 7,455

- 4,762 represent Power System positions necessary for critical projects and operations, with 2,693 Joint System positions in support.

Next Steps

- Request Approval of this FY 2018-19 Budget by this Honorable Board of Water and Power Commissioners
- Forward Final Budget Board Package to the Mayor, City Council, and other relevant stakeholders no later than May 31, 2018

Budget Detail

APPENDIX

Power Revenue Fund

FY 2018-19: Budget Overview

	FY 16-17	FY 17-18		FY 18-19
	Actuals	Approved	Estimated	Proposed
Capital (in Millions)				
Power System Reliability Program	\$ 409.7	\$ 469.6	\$ 436.2	\$ 605.4
Infrastructure	365.3	368.6	345.9	363.5
Operating Support	91.6	234.3	205.8	306.6
Energy Efficiency	128.6	178.1	177.7	147.1
Renewable Portfolio Standard	134.5	142.1	121.1	110.3
Total - Capital	\$ 1,129.7	\$ 1,392.6	\$ 1,286.6	\$ 1,532.9
O&M (in Millions)				
Operating Support	\$ 379.4	\$ 359.0	\$ 360.2	\$ 437.8
Power System Reliability Program	344.3	370.8	369.1	415.9
Infrastructure	294.7	288.6	305.3	317.4
Renewable Portfolio Standard	35.1	41.4	33.5	44.0
Total - O&M	\$ 1,053.6	\$ 1,059.8	\$ 1,068.2	\$ 1,215.1
Fuel and Purchased Power (in Millions)				
Renewables	\$ 469.6	\$ 575.4	\$ 572.4	\$ 627.8
Coal and Nuclear	436.3	437.0	394.8	415.1
Natural Gas	347.3	312.6	328.3	284.6
Other Non-Renewables & Others	186.8	147.5	173.2	160.0
Other Expenses	17.7	(21.7)	23.6	34.8
Total - FPPB	\$ 1,457.8	\$ 1,451.0	\$ 1,492.3	\$ 1,522.3

Power Revenue Fund

Power System Reliability Program

	FY 16-17	FY 17-18		FY 18-19
	Actuals	Approved	Estimated	Proposed
Capital (in Millions)				
Distribution	\$ 230.5	\$ 263.6	\$ 236.1	\$ 265.2
Power System Application Technology	7.3	13.0	12.1	130.2
Substation	88.5	83.8	92.0	105.3
Transmission	77.4	91.6	80.9	84.4
Generation	6.1	17.7	15.2	20.3
Total - Capital	\$ 409.7	\$ 469.7	\$ 436.2	\$ 605.4
O&M (in Millions)				
Distribution	\$ 134.0	\$ 153.0	\$ 143.6	\$ 147.0
Apprentice and Journeyman Training	89.2	82.1	97.5	132.7
Substation	61.7	73.0	64.7	66.3
Energy Control Operations	30.7	29.1	32.4	35.6
Transmission	28.8	33.6	30.9	34.3
Total - O&M	\$ 344.3	\$ 370.8	\$ 369.1	\$ 415.9

The **Power System Reliability Program (PSRP)** is critical for the replacement of the rapidly aging backbone and infrastructure of the Generation, Transmission, Substation, and Distribution Systems. The PSRP was initiated in FY 14-15, and is the evolution of the previous Power Reliability Program to improve how funds are prioritized and the overall effectiveness of the program. This includes the replacement of Poles, Crossarms, Distribution and Substation Transformers, Cables, and Circuit Breakers, as well as incorporating new technologies such as Substation Automation and Distribution Automation.

Power Revenue Fund

Power Infrastructure

Capital (in Millions)	FY 16-17		FY 17-18		FY 18-19	
	Actuals	Approved	Estimated	Proposed		
New Business- Revenue	\$ 149.7	\$ 133.7	\$ 133.8	\$ 170.5		
Hydro/In-Basin Plants A's & B's	53.9	52.1	36.2	38.8		
Distributed Sys Reliability	34.2	31.4	27.9	33.6		
Infrastructure- Other	73.6	102.3	86.5	38.4		
Haynes Units 3-6 Demolition*	12.0	4.8	21.0	23.5		
General Facilities Improvements	7.5	16.1	7.9	23.4		
AMR Automatic Meter Reading	21.2	15.2	19.6	22.7		
Jt Own Gen A's & B's-Nucl	13.3	12.9	12.9	12.6		
Total - Capital	\$ 365.3	\$ 368.6	\$ 345.9	\$ 363.5		
O&M (in Millions)						
Hydro/In-Basin Plants O&M	\$ 144.2	\$ 142.3	\$ 152.5	\$ 156.9		
All Other Infrastructure	114.3	105.7	114.2	120.1		
Nuclear Gen Exp	36.2	40.6	38.6	40.4		
Total - O&M	\$ 294.7	\$ 288.6	\$ 305.3	\$ 317.4		

The **Power Infrastructure** evaluates and prioritizes maintenance and replacement of major power infrastructure, additions/betterments for various generation facilities including Castaic Power Plant and Haynes Generating Station, Distribution System Reliability, as well as New Business for system growth and expansion. Also included is demolition of Haynes Generating Station Units 3-6 estimated at \$23.5M – Job O9793*.

Power Revenue Fund

Energy Efficiency & Other Functions

Capital / O&M (in Millions)	FY 16-17	FY 17-18		FY 18-19
	Actuals	Approved	Estimated	Proposed
Energy Efficiency	\$ 128.6	\$ 178.1	\$ 177.7	\$ 177.1
ERP Program (Gross Project)	0.5	18.0	4.2	30.8
Total	\$ 129.0	\$ 196.0	\$ 181.8	\$ 207.9

LADWP continues to aggressively ramp up its Energy Efficiency spending in order to achieve long term savings targets as well as mitigate the short term loss of the Aliso Canyon gas storage facility. EE spending in FY 18-19 is estimated to increase about 38 percent of FY 16-17 total spend.

LADWP is prudently planning the replacement of its Financial, Human Resources and Procurement Systems. The Enterprise Resource Planning (ERP) program will address problems associated with the Department's legacy mainframe systems which are over 20 years old; lack integration; and lack appropriate reporting, and analytical capabilities. The ERP is also aimed to modernize business operating procedures, and adopt industry best practices.

Water Revenue Fund

FY 2018-19: Budget Overview

	FY 16-17	FY 17-18		FY 18-19
	Actuals	Approved	Estimated	Proposed
Capital (in Millions)				
Infrastructure	\$ 212.3	\$ 269.6	\$ 274.0	\$ 331.2
Water Quality	232.8	268.8	216.1	293.8
Water Supply	89.6	160.7	104.7	143.0
Operating Support	66.5	80.1	60.2	84.4
Owens Valley Regulatory	144.4	81.7	113.1	39.0
Total - Capital	\$ 745.5	\$ 861.1	\$ 768.0	\$ 891.4
O&M (in Millions)				
Operating Support	\$ 115.0	\$ 133.7	\$ 130.8	\$ 141.7
Infrastructure	122.9	116.1	115.8	117.1
Water Supply	100.8	110.5	107.6	116.7
Water Quality	83.0	85.9	91.7	99.3
Owens Valley Regulatory	32.2	32.1	34.0	36.6
Total - O&M	\$ 454.0	\$ 478.4	\$ 479.8	\$ 511.4
Purchased Water (in Millions)	\$ 194.7	\$ 114.2	\$ 156.6	\$ 135.7

Water Revenue Fund

Water Quality

Capital (in Millions)	FY 16-17	FY 17-18		FY 18-19
	Actuals	Approved	Estimated	Proposed
WQIP Reservoir Improvements	\$ 90.6	\$ 127.4	\$ 103.2	\$ 97.0
Groundwater Remediation & Clean-up	12.9	55.6	22.1	78.9
WQIP Trunkline Improvements	87.7	35.5	38.3	63.2
Water Treatment Improvements	14.7	21.7	24.3	32.1
Meter Replacement Program	14.3	13.2	16.1	16.2
Chloramination Station Installations	12.6	15.4	12.2	6.4
Total - Capital	\$ 232.8	\$ 268.8	\$ 216.1	\$ 293.8
O&M (in Millions)				
Distr Reservoir O&M	\$ 23.1	\$ 25.3	\$ 26.2	\$ 28.0
Distribution Treatment Opns	16.7	19.6	20.1	21.6
WQ Control	18.7	16.9	18.6	19.4
Filter Plant Opns	17.1	17.0	18.5	18.7
Water Quality Regulatory	5.5	5.4	5.9	7.7
Water Quality Ground Water	1.3	1.2	1.9	1.8
System Flushing	0.4	0.4	0.4	1.6
Community Outreach-Water	0.3	0.2	0.3	0.3
Total - O&M	\$ 83.0	\$ 85.9	\$ 91.7	\$ 99.3

Water Quality Highlights: significant accomplishment in FY17-18 includes

- Completion of Bull Creek Project
- Completion of construction for RSC 5 & 6 trunk line and tunnel in first quarter of 2018
- Completion of construction for Elysian Reservoir Cover in first quarter of 2018
- 50% construction completion for Upper Stone Canyon Reservoir WQIP
- Groundbreaking for North Hollywood West Remediation Project



Water Revenue Fund

Water Infrastructure

	FY 16-17	FY 17-18		FY 18-19
	Actuals	Approved	Estimated	Proposed
Capital (in Millions)				
Distribution Mains	\$ 84.7	\$ 111.6	\$ 105.0	\$ 125.7
Trunkline & Major Sys Connection	16.7	33.3	38.9	68.0
Services, Meters and Hydrants	49.1	42.8	48.3	55.7
Infrastructure Reservoir Improvements	24.4	20.0	24.1	20.8
Water Infrastructure-Other	6.4	15.6	11.8	18.5
Pump Stations	7.9	18.2	13.8	14.4
WSO Facilities	13.4	8.4	15.0	12.0
WSO Info Technology	7.3	14.9	11.9	11.4
WSO Capital Projects	1.4	3.2	3.4	2.6
Tools and Equipment	1.1	1.6	1.8	1.9
Total - Capital	\$ 212.3	\$ 269.6	\$ 274.0	\$ 331.2
O&M (in Millions)				
Distribution Mains O&M	\$ 41.0	\$ 40.9	\$ 39.2	\$ 37.8
Water Infrastructure-Other	30.3	24.4	26.2	26.3
Service Connection O&M	18.0	17.4	17.2	17.2
Water Information Technology	10.1	11.0	10.4	11.0
Oper Bldg & Yard O&M	8.0	7.2	7.4	8.3
Regulator Station O&M	6.4	6.5	6.7	7.8
Meters O&M	4.7	4.6	4.8	4.8
Fire Hydrant Maintenance	4.5	4.1	4.0	4.0
Total - O&M	\$ 122.9	\$ 116.1	\$ 115.8	\$ 117.1

Water Infrastructure Program :

- Water Operations Division has completed two pressure regulating stations retrofits, and is on schedule to meet and possibly exceed the annual goal by the end of the fiscal year. In addition, Water Operations Division has completed 10 pump and motor replacements, and is on track to surpass the annual goal by three.
- Water Distribution is on target to meet its mainline installation goal of 215,000 feet for the current fiscal year.



Water Revenue Fund

Water Supply

	FY 16-17		FY 17-18		FY 18-19	
	Actuals		Approved	Estimated	Proposed	
Capital (in Millions)						
Recycling & Storm Water	\$ 41.1	\$	76.8	\$ 46.1	\$	63.9
LAA Aqueduct	20.7		31.7	25.6		35.5
Water Conservation	17.5		38.0	20.0		27.7
Groundwater	10.3		14.2	13.0		15.9
Total - Capital	\$ 89.6	\$	160.7	\$ 104.7	\$	143.0
O&M (in Millions)						
Groundwater	\$ 40.3	\$	45.7	\$ 45.1	\$	50.5
LAA Aqueduct	49.7		40.0	46.0		43.9
Water Conservation	6.4		16.5	9.5		13.6
Recycling & Storm Water	4.4		8.4	7.0		8.6
Total - O&M	\$ 100.8	\$	110.5	\$ 107.6	\$	116.7

Storm Water

- The Tujunga Spreading Grounds Enhancement Project (TSG) will enhance the existing facility by combining and deepening spreading basins, installing two new intakes and rubber dam structures to optimize its operation, as well as facility fencing and landscaping upgrade.
- Once completed in late 2019, TSG will have the capacity to double its stormwater recharge amount from 8,000 to 16,000 AFY. Phase I construction is approximately 55% complete, and Phase II is schedule to begin early 2019.

Water Supply

- Secured up to \$9 million of Proposition 1 funding for the Griffith Park South Water Recycling Project.
- Executed an MOA with LASAN and WBMWD for a 1 MGD Membrane Bioreactor Facility at Hyperion.
- Water System staff is working on a MOA with LASAN and LAWA for the design of an Advanced Water Purification Facility at Hyperion to supply recycled water to LAX.
- Water System staff is preparing a RWQCB permit application and initiating public outreach to spread up to 3,500 AFY of recycled water



Water Revenue Fund

Regulatory Compliance: Owens Valley

	FY 16-17	FY 17-18		FY 18-19
Capital (in Millions)	Actuals	Approved	Estimated	Proposed
Owens Valley Dust Mitigation	\$ 13.9	\$ 32.1	\$ 42.8	\$ 26.7
Owens Lake Master Project	0.4	0.7	0.9	12.2
Supplemental Dust Control	130.1	48.9	69.3	-
Total - Capital	\$ 144.4	\$ 81.7	\$ 113.1	\$ 39.0
O&M (in Millions)				
Owens Lake O&M	\$ 29.2	\$ 29.1	\$ 31.1	\$ 33.6
Lower Owens River O&M	3.0	3.0	2.9	3.0
Total - O&M	\$ 32.2	\$ 32.1	\$ 34.0	\$ 36.6