

# Proposed Biennial Budget and Revenue Requirements, Fiscal Years 2016/17 and 2017/18; and Ten-Year Forecast

Finance & Insurance Committee  
Item 8a & 8b  
February 8, 2016



# Proposed Biennial Budget Workshop Presentation Overview

- Overview
- Major Expenditures
- Reserves
- Ten-Year Financial Forecast
- SDCWA exchange agreement set-aside
- Next Steps

# Proposed Biennial Budget

## Biennial Budget and Rates Process Has Several Objectives

- Adopt a two-year budget, covering fiscal years 2016/17 and 2017/18
- Adopt rates and charges for calendar years 2017 and 2018
- Update ten-year forecast, including the biennial period
  - Water Sales
  - Expenditures
  - Revenues



# Summary of Financial Policies

- Maintain AAA/AA+/Aa1 ratings
- Achieve/Maintain coverage ratios
  - Debt service coverage = 2.0
  - Fixed charge coverage = 1.2
- PAYGO funding
  - 60 percent per year
  - Integral to maintaining coverage targets
  - Provides financial flexibility

## Overall Rate Increases Since 2007

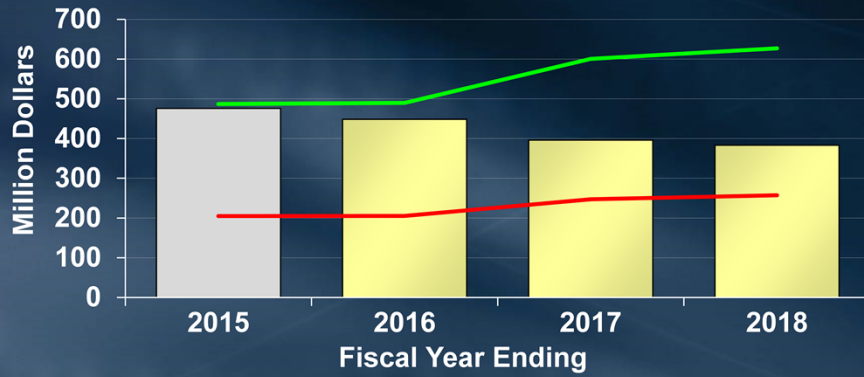


# Important Underlying Assumptions

Fiscal Year Ending	2017	2018
Overall increase January 2017 & 2018	4.0%	4.0%
Total Water Sales and Exchanges	1.70 MAF	1.70 MAF
State Water Project Allocation	50%	50%
Colorado River Aqueduct Diversions	1.01 MAF	1.04 MAF
Capital Investment Plan	\$200 M	\$200 M
PAYGO	\$120M	\$120M

# Projected Rate Increases & Financial Metrics

■ Unrestricted Reserve    — Target Reserve    — Minimum Reserve



Overall Rate Inc.	1.5%	1.5%	4.0%	4.0%
Sales, MAF	1.90	1.63	1.70	1.70
Rev. Bond Cvg	2.7	1.5	1.6	1.6
Fixed Chg Cvg	2.4	1.3	1.3	1.3
PAYGO, \$M	210	99	120	120

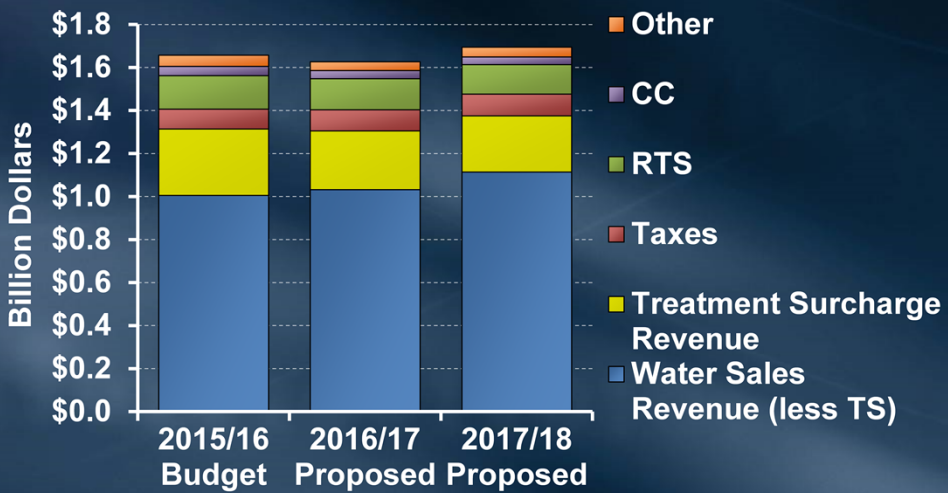
## Estimated Full Service Costs and Charges

Rate Type	2016 Approved	2017 Estimated	% Increase (Decrease)	2018 Estimated	% Increase (Decrease)
<b>Full Service Untreated Volumetric Cost (\$/AF)</b>					
Tier 1	\$594	\$666	12.1%	\$695	4.4%
Tier 2	\$728	\$760	4.4%	\$781	2.8%
<b>Full Service Treated Volumetric Cost (\$/AF)*</b>					
Tier 1	\$942	\$979	3.9%	\$1,015	3.7%
Tier 2	\$1,076	\$1,073	(0.3%)	\$1,101	2.6%
<b>RTS Charge (\$M)</b>	\$153	\$135	(11.8%)	\$140	3.7%
<b>Capacity Charge (\$M)</b>	\$43	\$34	(21.5%)	\$37	8.8%

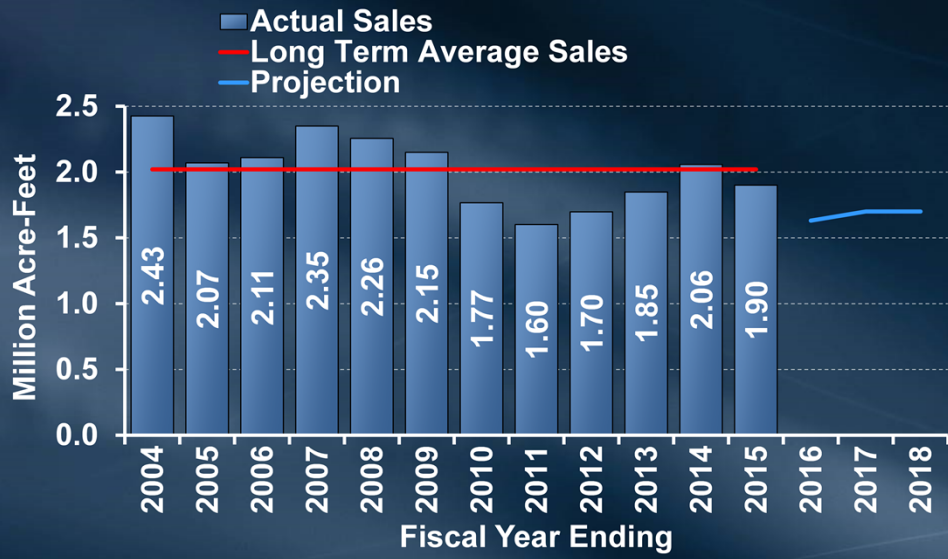
\*A proposal will be presented to the Board for consideration to address fixed cost recovery of Treatment costs which are currently only recovered through a volumetric rate.

		Rate	CFS	\$M	change, \$M	%
approved	2016	10900	3937	42.9		
budget	2017	8000	4212	33.7	(9.22)	-21.5%
budget	2018	8700	4212	36.6	2.95	8.8%

# Revenue Trend



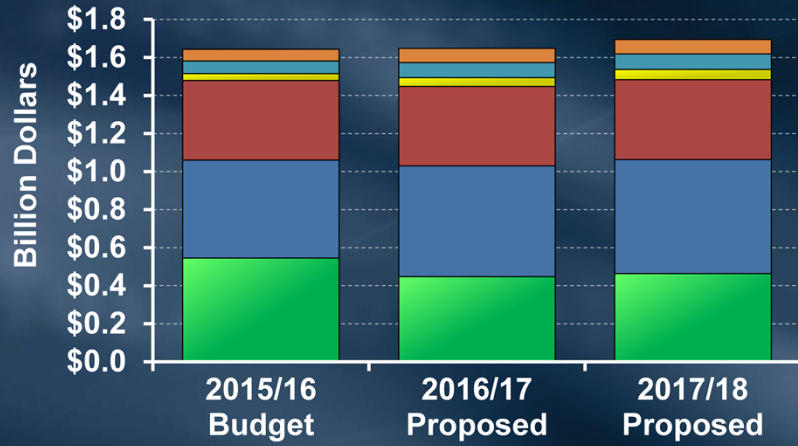
# Water Sales\*



\* Includes Exchange

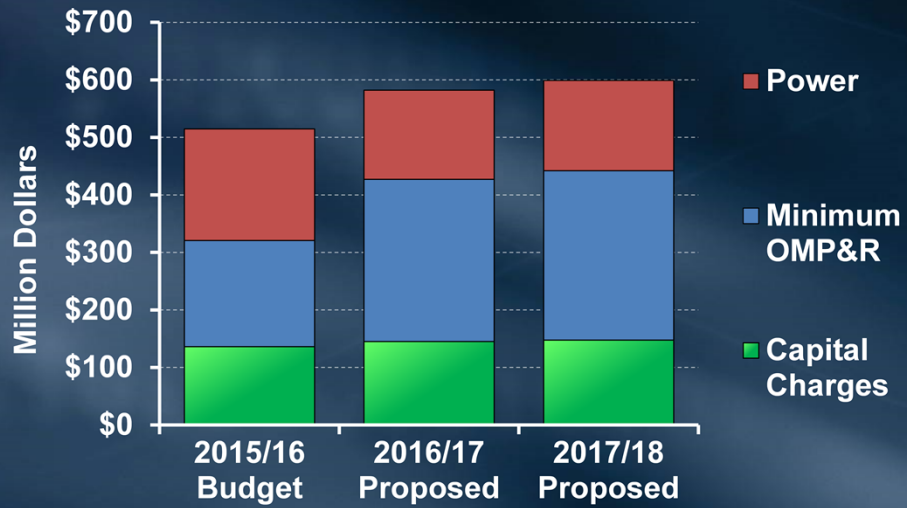
# Expenditure Trend

- Demand Management
- Colorado River Power
- State Water Contract
- Supply Programs
- O&M
- Capital Financing



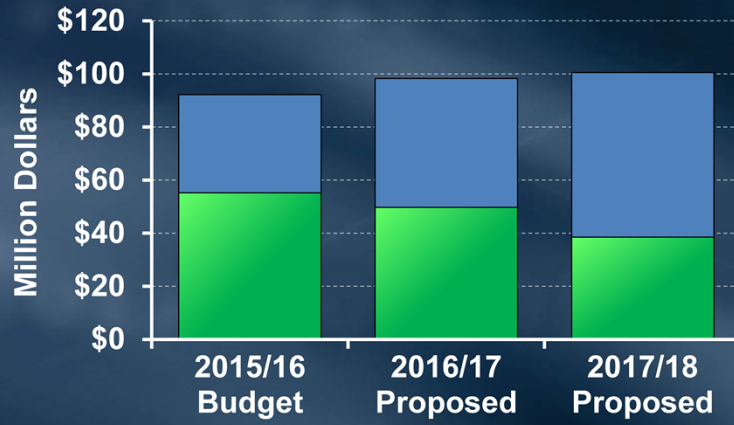


# State Water Contract

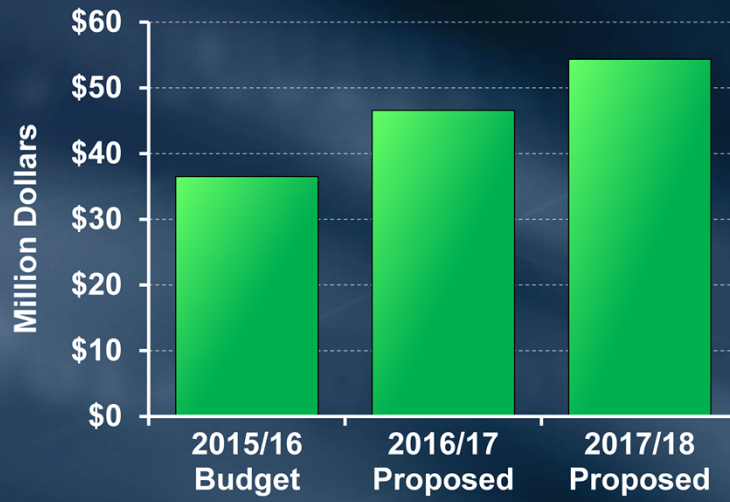


# Tax Collected

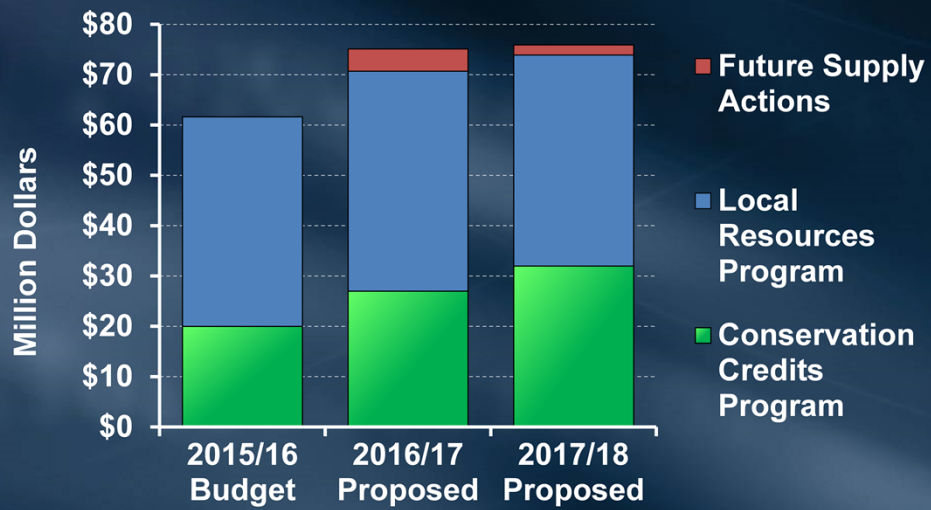
- Tax collected to fund SWC costs
- Tax collected for GO and Burns Porter bonds



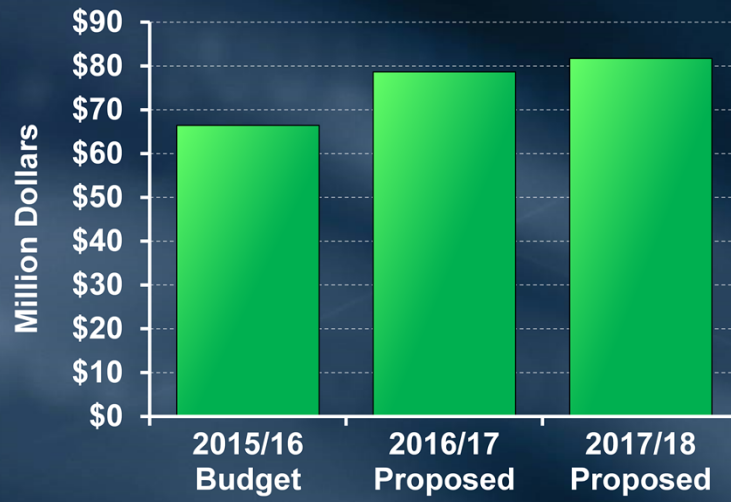
# Colorado River Aqueduct Power



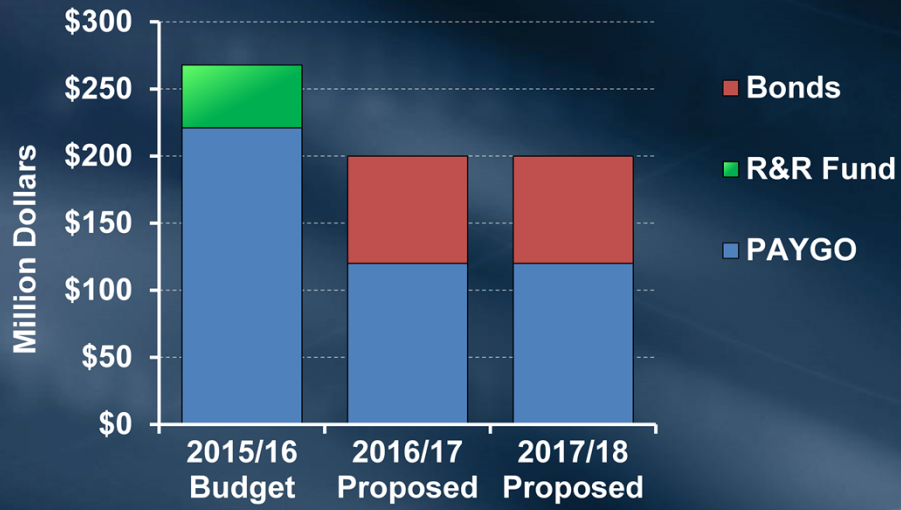
# Demand Management Programs



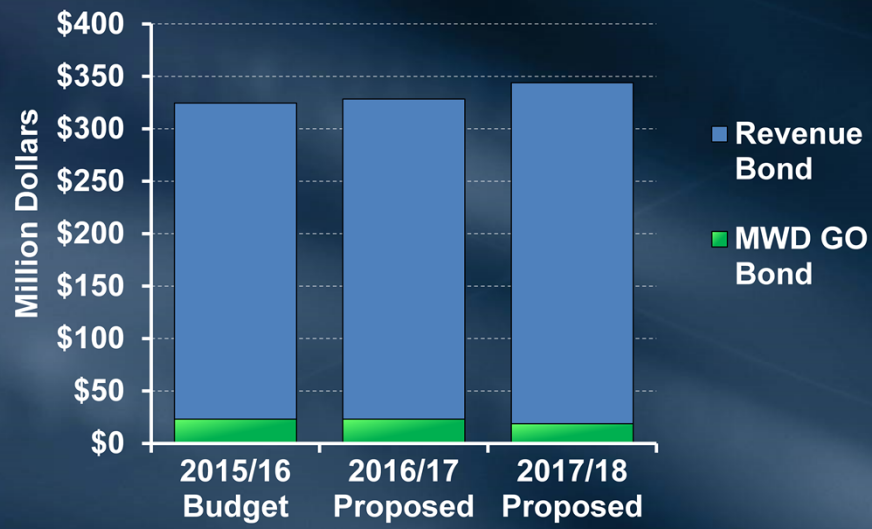
# Supply Programs



# Capital Investment Plan Funding



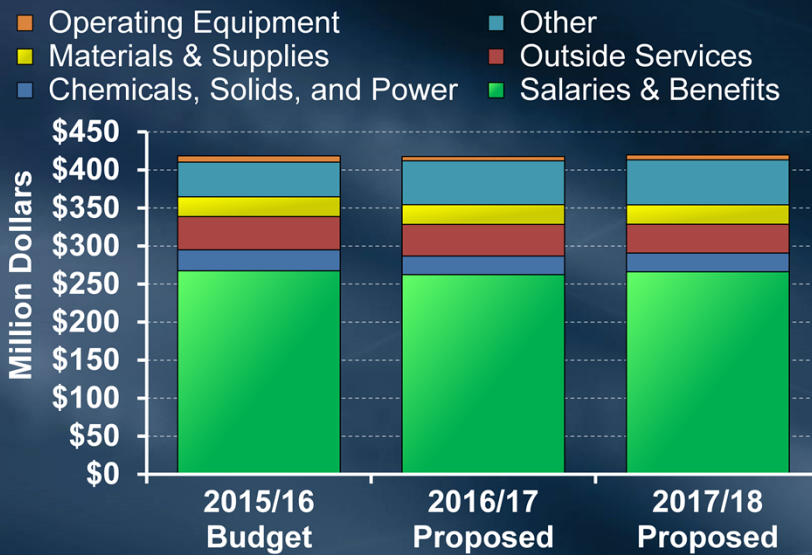
# Debt Service



# Operating Budget



# Proposed O&M Expenditure Budget



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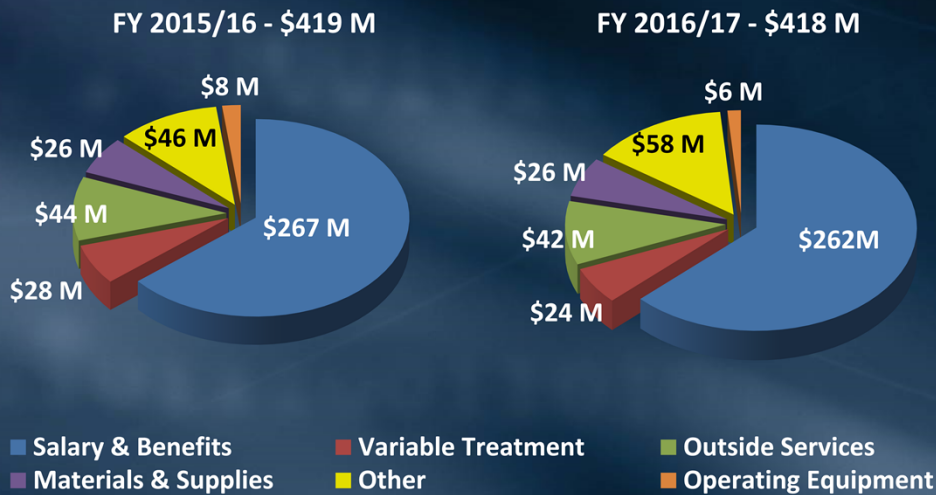
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## Message - Controlling O&M Costs, managing to flat budget

Total O&M FY Budget	2015/16	2016/17	2017/18	16/17 vs 15/16		17/18 vs 16/17	
Salaries & Benefits	267.4	262.5	266.2	(4.9)	-1.8%	3.7	1.4%
Materials & Supplies	25.8	26.0	25.4	0.2	0.8%	(0.6)	-2.3%
Treatment (Chemicals, Solids, Power)	27.6	24.3	24.6	(3.3)	-12.0%	0.3	1.2%
Outside Services	43.8	41.7	38.0	(2.1)	-4.8%	(3.7)	-8.9%
Other O&M	45.7	57.6	59.2	11.9	26.0%	1.6	2.8%
Operating Equipment	8.2	5.6	6.4	(2.6)	-31.3%	0.8	14.3%
<b>Total</b>	<b>418.5</b>	<b>417.7</b>	<b>419.8</b>	<b>(0.9)</b>	<b>-0.2%</b>	<b>2.1</b>	<b>0.5%</b>

# O&M Budget Trend



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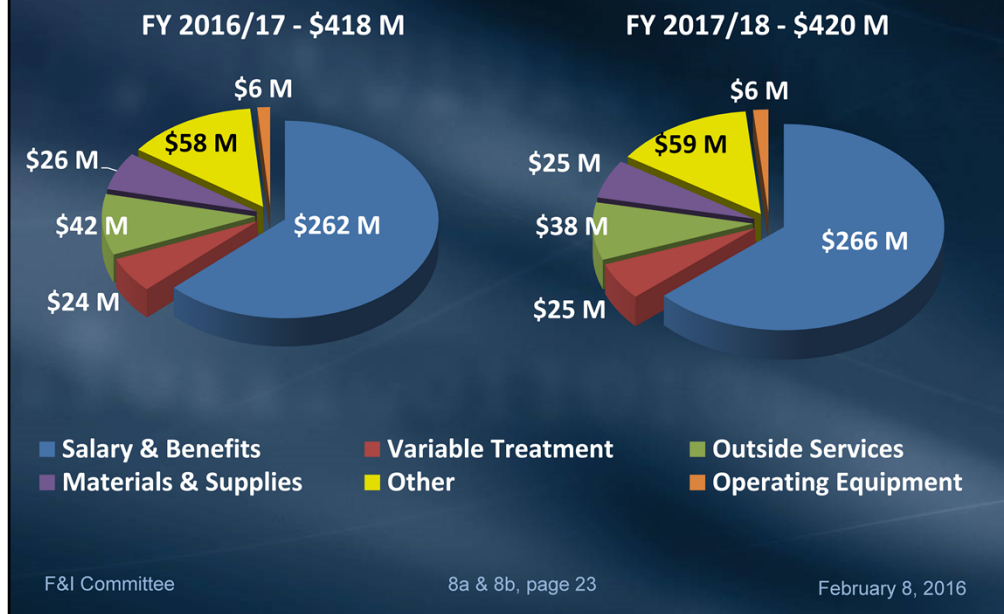
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February 8, 2016

## Message - Controlling O&M Costs, managing to flat budget

Total O&M FY Budget	2015/16	2016/17	15/16 vs 16/17	
Salaries & Benefits	267.4	262.5	(4.9)	-1.8%    unfunding positions/planning to leave positions vacant for some period; incl admin OH
Materials & Supplies	25.8	26.0	0.2	0.8%
Treatment (Chemicals, Solids, Power)	27.6	24.3	(3.3)	-12.0%    decrease in treated water sales
Outside Services	43.8	41.7	(2.1)	-4.8%    favorable security contract (\$1.5M)
Other O&M	45.7	57.6	11.9	26.0%    Tentative MOUs (\$7.6M) & property taxes for PVID land purchase (\$4.5M)
Operating Equipment	8.2	5.6	(2.6)	-31.3%    hold off on replacement of lighter duty vehicles
<b>Total</b>	<b>418.5</b>	<b>417.7</b>	<b>(0.9)</b>	<b>-0.2%</b>

# O&M Budget Trend



**Increase from 16/17 of \$2.1M - due to impact of MOUs (in other)/increase in labor additive costs  
 Message - Controlling O&M Costs, managing to flat budget ;**

Total O&M FY Budget	2016/17	2017/18	17/18 vs 16/17	
Salaries & Benefits	262.5	266.2	3.7	1.4% incrs in labor additive costs and merit incrs; S&B calculated to allow for increase at inflation rate of 2.25% overall
Materials & Supplies	26.0	25.4	(0.6)	-2.3%
Treatment (Chemicals, Solids, Power)	24.3	24.6	0.3	1.2%
Outside Services Supply Program	41.7	38.0	(3.7)	-8.9% completion of engineering support for MWD Regional Recycled Water
Other O&M	57.6	59.2	1.6	2.8% reflects MOUs (max 1.5% increase 2 <sup>nd</sup> year)
Operating Equipment	5.6	6.4	0.8	14.3% modest increase in replacement of light duty vehicles
<b>Total</b>	<b>417.7</b>	<b>419.8</b>	<b>2.1</b>	<b>0.5%</b>

# Budgeted Positions

	2015/16	2016/17	2017/18
Regular	1,885	1,886	1,886
Temporary	20	26	24
<b>Authorized Positions</b>	<b>1,905</b>	<b>1,912</b>	<b>1,910</b>
Unfunded positions/vacancy	(56)	(72)	(69)
<b>Total Funded Positions</b>	<b>1,849</b>	<b>1,840</b>	<b>1,841</b>

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Increase in 1 regular - Ethics admin analyst

Increase in Temp (6) - WSO (5) to offset peak workload and long-term employee absences, Ext Aff (1)

17/18 - Decrease in temp (2) - BT (1) & Ext Aff (1)

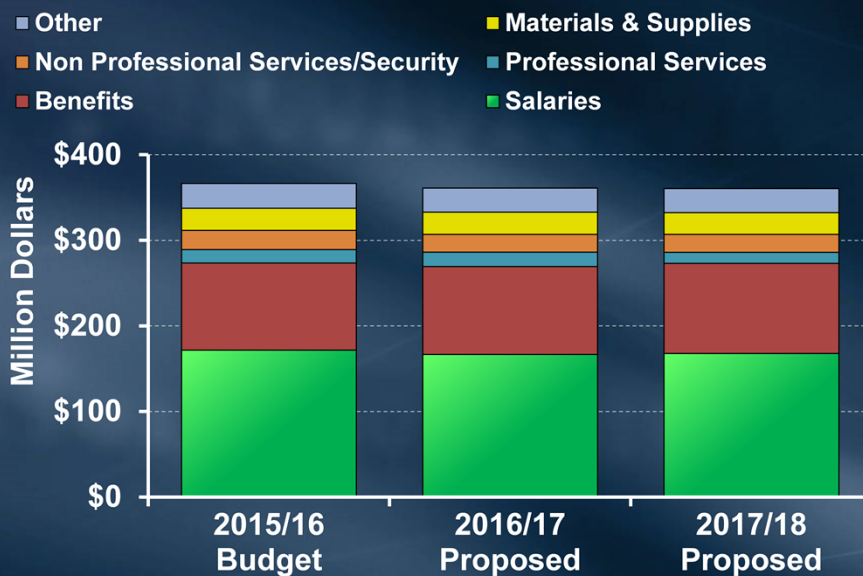
16/17 Vacancy increase +16 ; 17/18 slight decrease of 3

15/16 regular positions of 1,829 reflects 56 unfunded/vacancy, 16/17 regular positions of 1,814 reflects 72 unfunded/vacancy, & 17/18 reflects 69 unfunded/vacancy

	2015/16 Budget	2016/17 Budget	2017/18 Budget
General Manager	41	40	40 1 position eliminated
WSO	949	951	951 2 drivers to support fleet
WRM	68	68	68
Business Technology	241	239	239 1 eliminated position (Group Mgr) and 1 position trsf to HR, 9 unfunded positions and planned vacancies
Engineering	371	371	371
CFO	46	46	46 3 unfunded positions
Human Resources	41	42	42 1 position transferred in from BT for workers comp
External Affairs	48	48	48
RPDM	28	28	28
Subtotal Department	1,833	1,833	1,833
General Counsel	36	36	36
General Auditor	12	12	12
Ethics	4	5	5 1 Deputy auditor position plus reorganization
Subtotal Regular Employees	1,885	1,886	1,886
District Temporary	20	22	20
Agency Temporary	-	4	4
Subtotal Temporary Employees	20	26	24
Authorized Positions <sup>1</sup>	1,905	1,912	1,910
Unfunded/Vacancy	(56)	(72)	(69) Total 13 unfunded positions (9-BT, 3-CFO, 1-HR)
Total Employees	1,849	1,840	1,841
Total Reg less vacancy	1,829	1,814	1,817

# GM Department

# GM Department O&M Budget



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## 15/16 to 16/17

\$5.4 M decrease or 1.5%- (\$4.1M) salaries & benefits (not include MOUs); maintenance O/S (\$1.8M) offset by \$7.6M MOUs; Net \$2.2M increase

## 16/17 - \$(0.5M) decrease of 0.5% with additional \$2.6M MOUs, net \$2.2M increase

Message - Controlling O&M Costs, managing to flat budget ;

### GM w/o MOUs

\$5.4 M decrease - (\$4.2M) salaries & benefits (not include MOUs); maintenance O/S (\$1.8M) offset by \$7.6M MOUs; Net

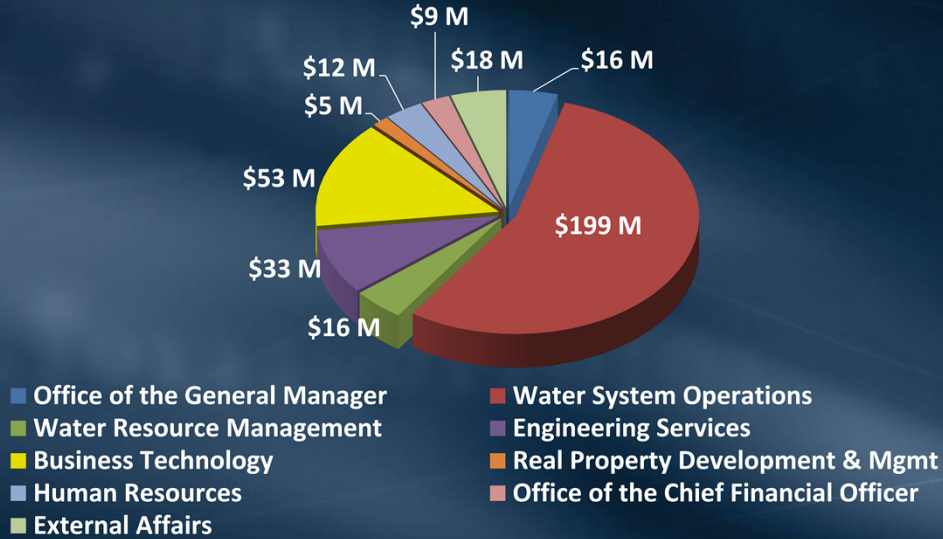
Message - Controlling O&M Costs, managing to flat budget ;

### GM w/o MOUs

	2015/16	2016/17	2017/18	16/17 vs 15/16	%	17/18 vs 16/17	%
Salaries	171.8	166.7	167.8	(5.0)	-2.9%	1.1	0.6%
Benefits	101.8	102.7	105.4	0.9	0.8%	2.7	2.7%
Professional Services	15.6	16.9	12.9	1.3	8.5%	(4.0)	-23.6%
Non Professional Services/Security	22.6	20.7	20.9	(1.8)	-8.2%	0.2	1.1%
Materials & Supplies	25.7	25.9	25.3	0.2	0.8%	(0.6)	-2.3%
Other	29.1	28.1	28.2	(1.0)	-3.3%	0.1	0.3%
<b>Total</b>	<b>366.4</b>	<b>361.0</b>	<b>360.5</b>	<b>(5.4)</b>	<b>(1.5%)</b>	<b>(0.5)</b>	<b>-0.1%</b>

# GM Department O&M Budget

FY 2016/17 - \$361 M



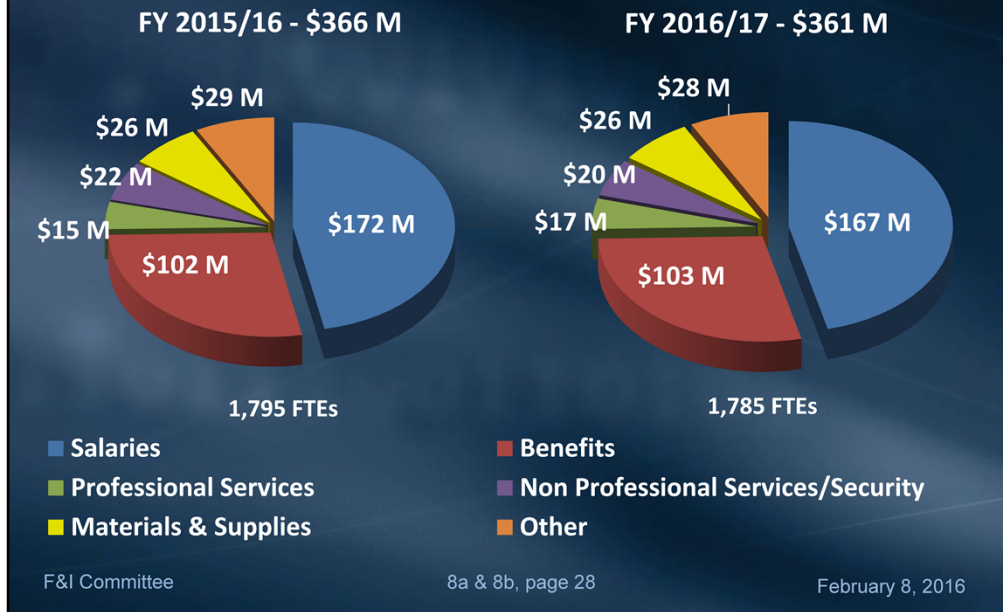
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GM	15.6	4%
WSO	199.2	55% (w/o variable treatment)
WRM	16.4	5%
ENG	32.5	9%
BT	52.9	15%
RPDM	5.3	1.5%
HR	12.3	3%
CFO	9.1	2.5%
EX	17.7	5%
	361.0	100%

# GM Department O&M Budget Trend



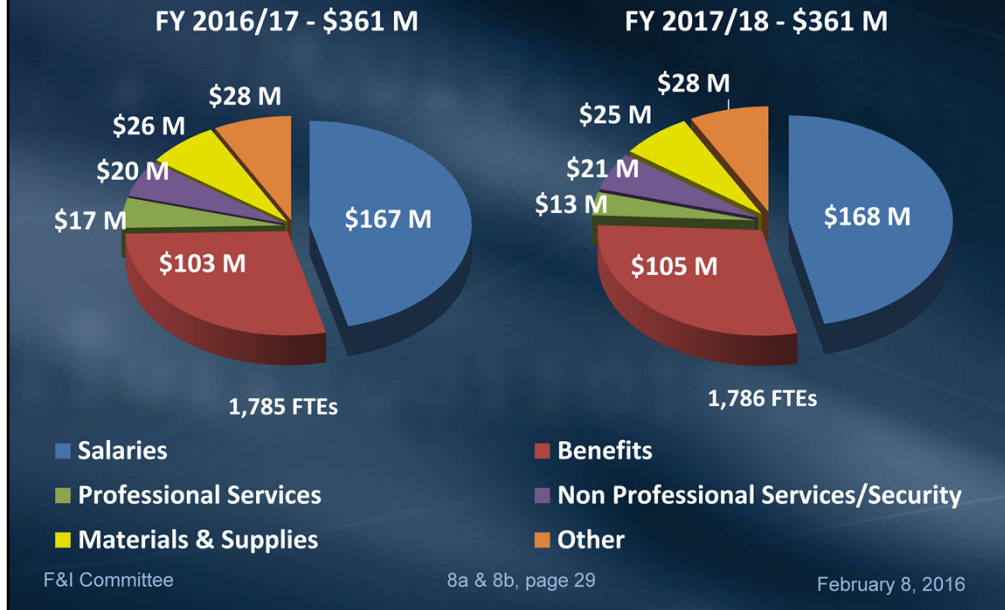
**\$5.4 M decrease or (1.5%)- (\$4.1M) salaries & benefits (not include MOUs); if offset by \$7.6M MOUs - Net \$2.2M increase**

**Message - Controlling O&M Costs, managing to flat budget;  
GM w/o MOUs**

	2015/16	2016/17	2017/18	16/17 vs 15/16	%	17/18 vs 16/17	%
Salaries	171.8	166.7	167.8	(5.0)	-2.9%	1.1	0.6%
Benefits	101.8	102.7	105.4	0.9	0.8%	2.7	2.7%
Professional Services	15.6	16.9	12.9	1.3	8.5%	(4.0)	-23.6%
Non Professional Services/Security	22.6	20.7	20.9	(1.8)	-8.2%	0.2	1.1%
Materials & Supplies	25.7	25.9	25.3	0.2	0.8%	(0.6)	-2.3%
Other	29.1	28.1	28.2	(1.0)	-3.3%	0.1	0.3%
<b>Total</b>	<b>366.4</b>	<b>361.0</b>	<b>360.5</b>	<b>(5.4)</b>	<b>(1.5%)</b>	<b>(0.5)</b>	<b>-0.1%</b>



# GM Department O&M Budget Trend



(\$0.5M) decrease or (0.1%); w/impact of MOUs - additional \$2.6M; net \$2.1M increase from 16/17

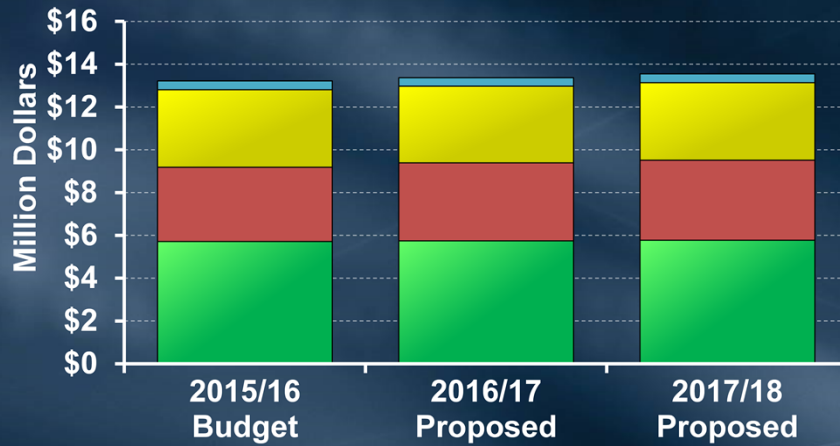
**Message - Controlling O&M Costs, managing to flat budget;  
GM w/o MOUs**

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<b>Total</b>	<b>366.4</b>	<b>361.0</b>	<b>360.5</b>	<b>(5.4)</b>	<b>(1.5%)</b>	<b>(0.5)</b>	<b>-0.1%</b>

# Legal Department

# Legal Department O&M Budget

■ Salaries   
 ■ Benefits   
 ■ Professional Services   
 ■ Other



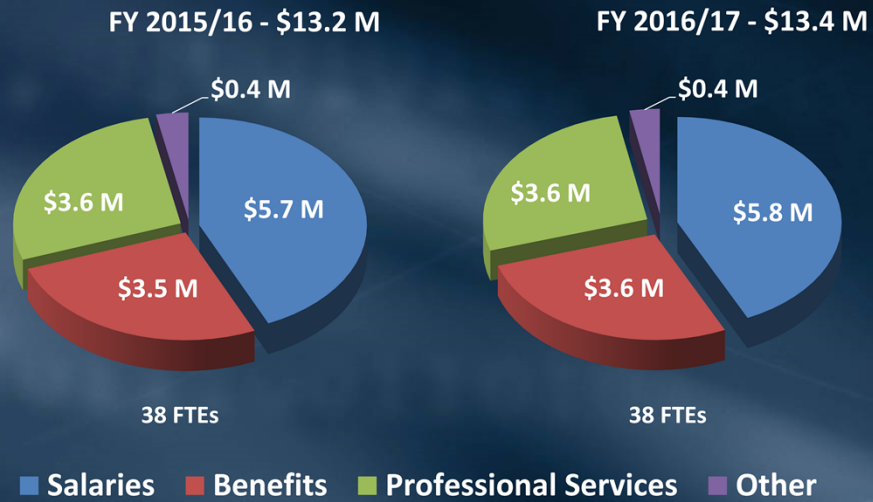
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	<b>2015/16</b>	<b>2016/17</b>	<b>2017/18</b>	<b>16/17vs 15/16</b>	<b>17/18 vs 16/17</b>
Salaries	5,721,184	5,750,144	5,783,070	28,960	32,926
Benefits	3,474,337	3,641,950	3,735,798	167,613	93,848
additive costs					increase in labor
Professional Services	3,620,000	3,588,372	3,625,000	(31,628)	36,628
Other	413,000	398,000	408,000	(15,000)	10,000
	<b>13,228,521</b>	<b>13,378,466</b>	<b>13,551,868</b>	<b>149,945</b>	<b>173,402</b>

# Legal Department O&M Budget Trend



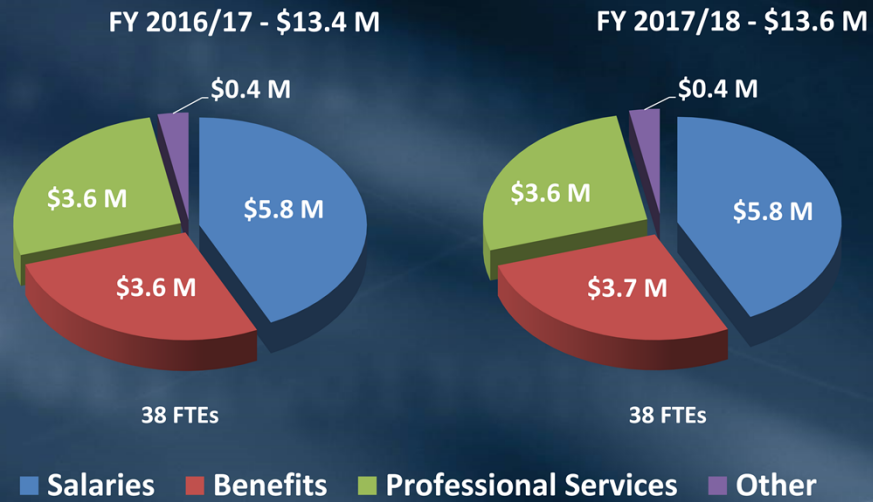
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	<b>2015/16</b>	<b>2016/17</b>	<b>2017/18</b>	<b>16/17vs 15/16</b>	<b>17/18 vs 16/17</b>	
Salaries	5,721,184	5,750,144	5,783,070	28,960	32,926	
Benefits	3,474,337	3,641,950	3,735,798	167,613	93,848	increase in labor additive costs
Professional Services	3,620,000	3,588,372	3,625,000	(31,628)	36,628	
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# Legal Department O&M Budget Trend



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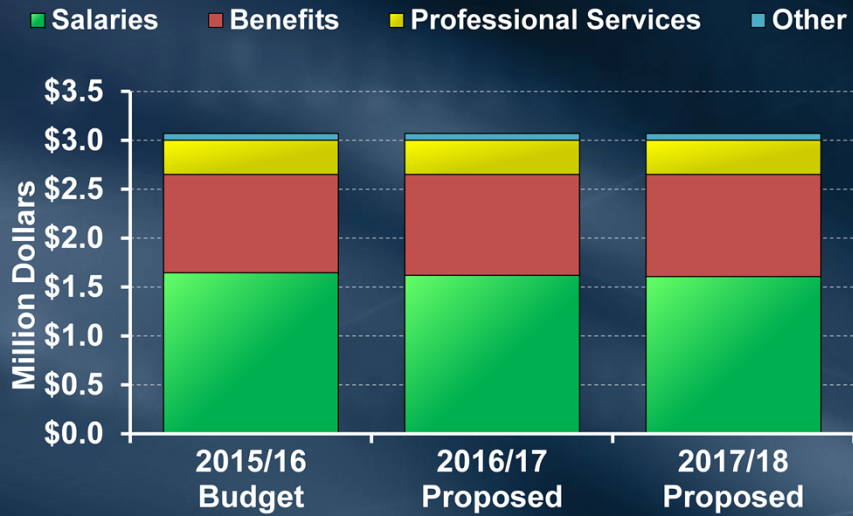
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increase in labor additive costs

# Audit Department

# Audit Department O&M Budget



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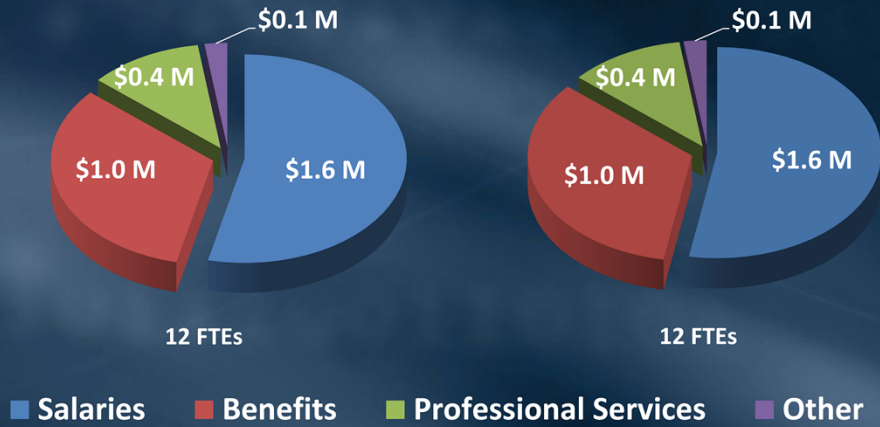
Column1	2015/16	2016/17	2017/18
Salaries	1,647,418	1,620,840	1,608,468
Benefits	1,005,090	1,031,665	1,044,057
Professional Services	350,000	350,000	350,000
Other	69,500	69,500	69,500

Training & Seminars, Materials & Supplies, Subs & Incentives

# Audit Department O&M Budget Trend

FY 2015/16 - \$3.1 M

FY 2016/17 - \$3.1 M



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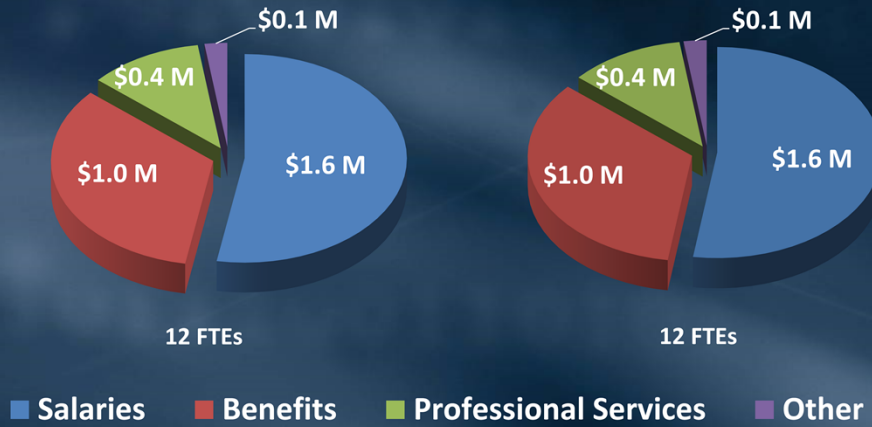
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Benefits	1,005,090	1,031,665	1,044,057	
Professional Services	350,000	350,000	350,000	
Other	69,500	69,500	69,500	Training & Seminars, Materials & Supplies, Subs & Incentives



# Audit Department O&M Budget Trend

FY 2016/17 - \$3.1 M

FY 2017/18 - \$3.1 M



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Column1	2015/16	2016/17	2017/18	
Salaries	1,647,418	1,620,840	1,608,468	
Benefits	1,005,090	1,031,665	1,044,057	
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Other	69,500	69,500	69,500	Training & Seminars, Materials & Supplies, Subs & Incentives

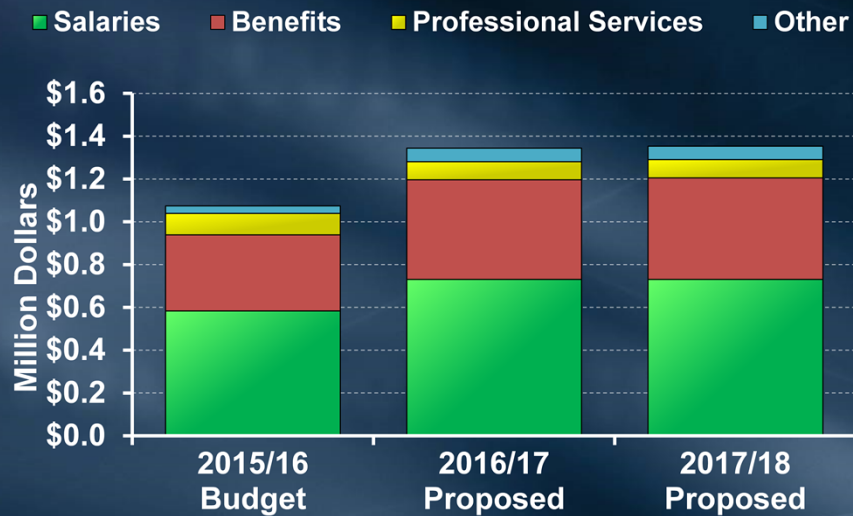
# Ethics Department

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## Ethics Department O&M Budget



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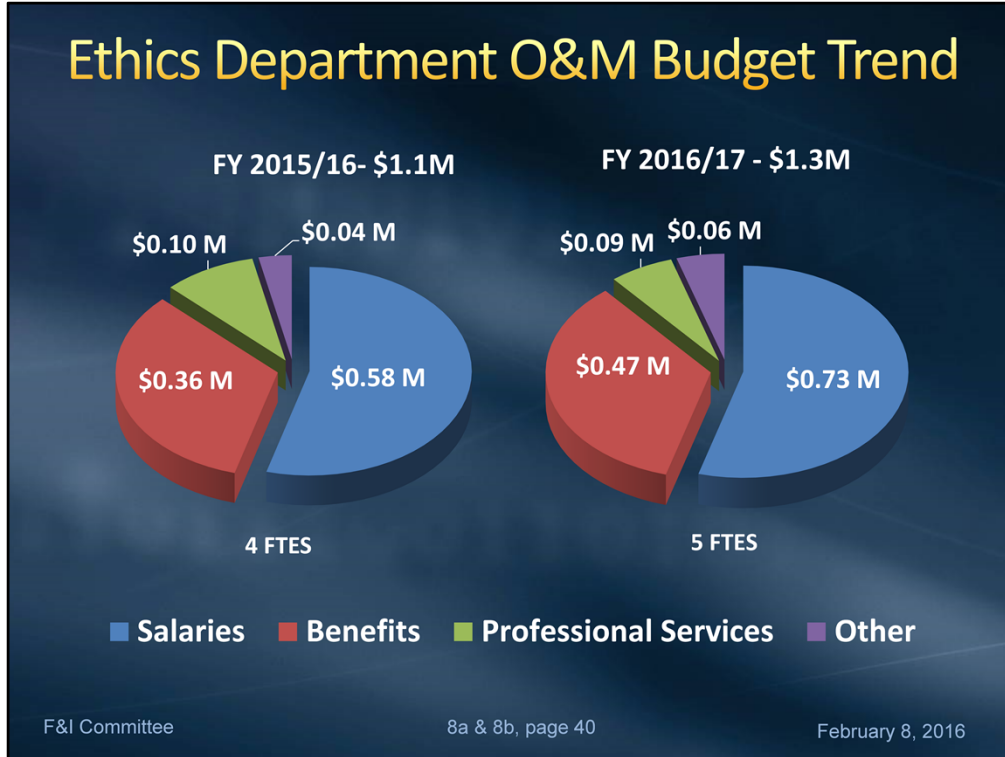
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Proposed restructuring - Deena presented Oct 27 to home committee  
 Addition admin analyst position. Policy analyst change to Assistant Ethics Officer, 2 Pr  
 Admin Analyst change to Deputy ethics analysts

Column1	2015/16	2016/17	2017/18	15/16 vs 16/17
Salaries	583,655	731,141	731,141	147,486
Benefits	356,030	465,371	474,584	109,341
Professional Services	100,000	85,000	85,000	
Other	35,500	63,100	63,100	
	1,075,185	1,344,612	1,353,825	total

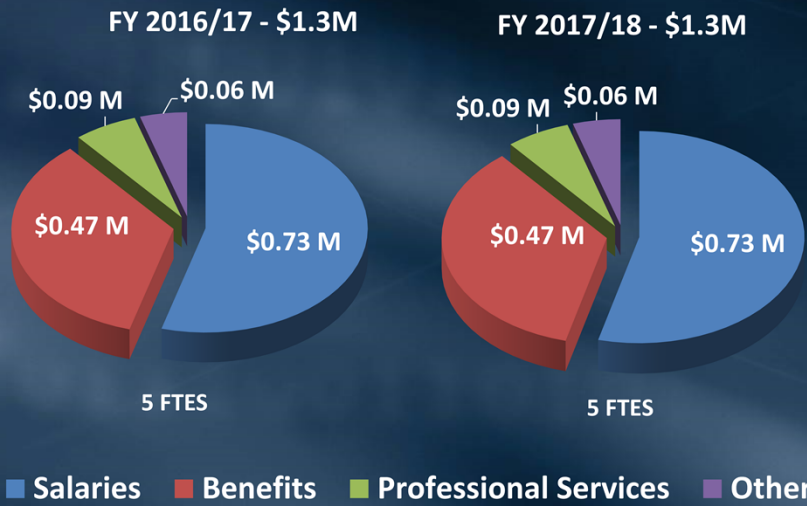
# Ethics Department O&M Budget Trend



Proposed restructuring - Deena presented Oct 27 to home committee  
 Addition admin analyst position. Policy analyst change to Assistant Ethics Officer, 2 Pr  
 Admin Analyst change to Deputy ethics analysts

Column1	2015/16	2016/17	2017/18	15/16 vs 16/17
Salaries	583,655	731,141	731,141	147,486
Benefits	356,030	465,371	474,584	109,341 total
256,827				
Professional Services	100,000	85,000	85,000	
Other	35,500	63,100	63,100	
	1,075,185	1,344,612	1,353,825	

# Ethics Department O&M Budget Trend



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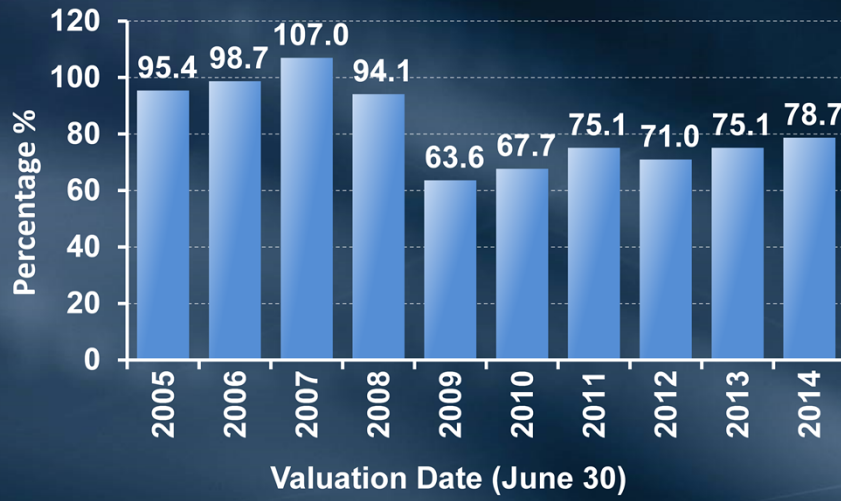
February 8, 2016

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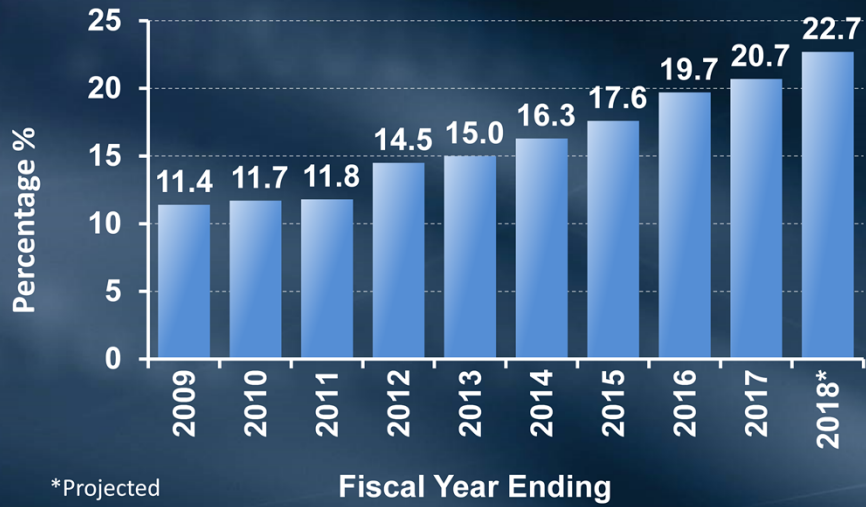
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# Pension and Other Post- Employment Benefits (OPEB)

# Pension Funded Ratio



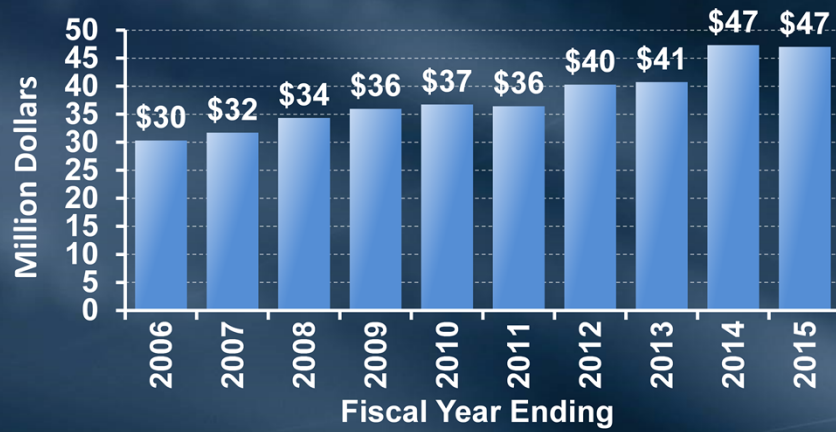
# Pension Annual Contribution Rate



\*Projected



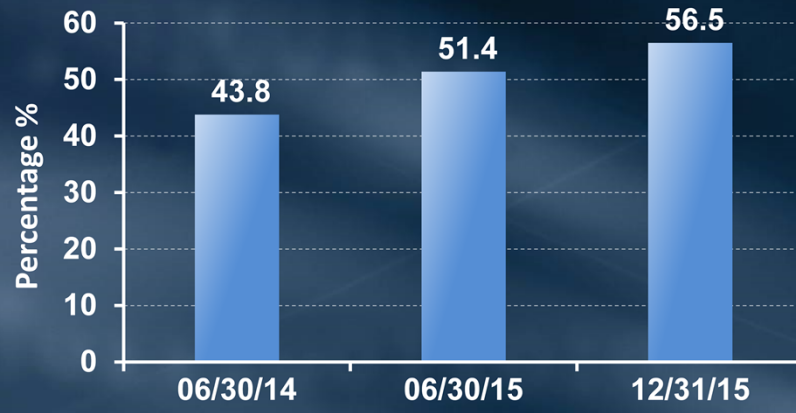
# Pension Annual Required Contribution



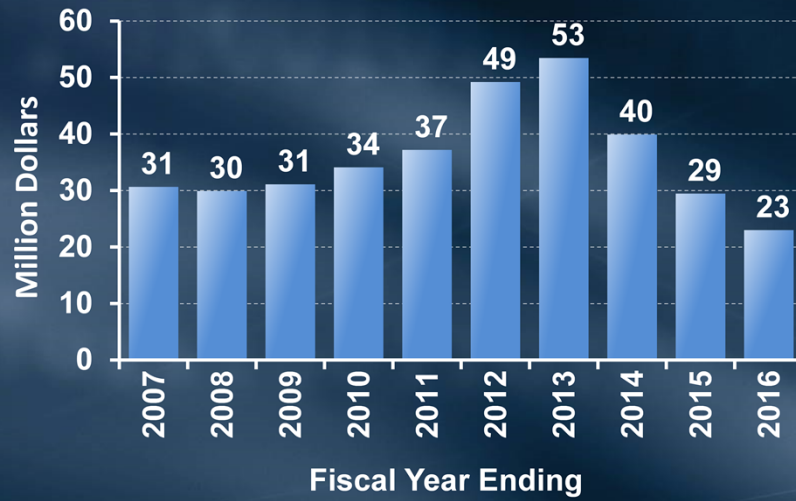
# CalPERS Actuarial Changes

- April 2013
  - Modified policy for “smoothing” investment returns. Effective fiscal 2015/16.
- February 2014
  - Modified demographic assumptions. Effective 2016/17.
- November 2015
  - Established mechanism for reducing the discount rate. Will be implemented over 21 years.

# OPEB Funded Ratio

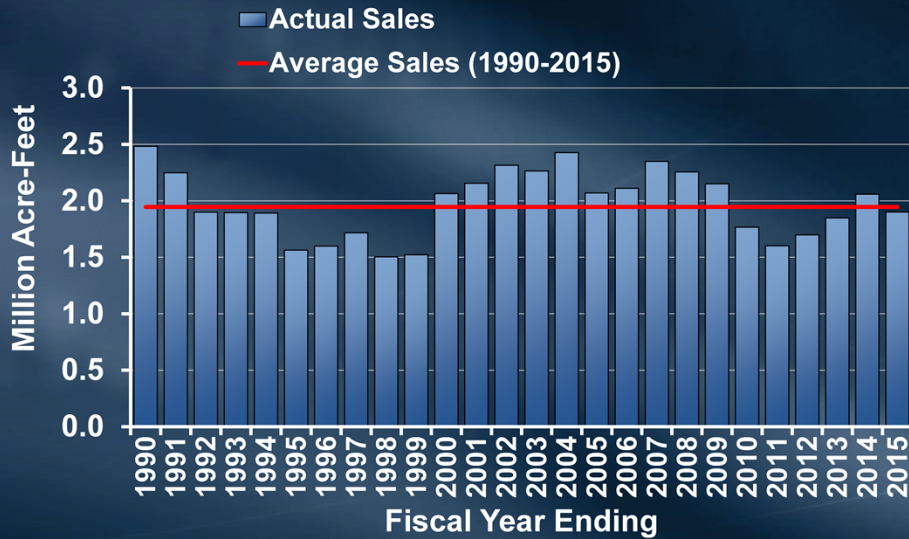


# OPEB Annual Required Contribution



# Reserves Overview

# Metropolitan's Historic Water Sales are Variable



- 87% costs fixed  
- 17% collected through fixed charges

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## Purpose of Having a Reserve Fund

Metropolitan Water Sales vary dramatically over time.

We have seen many periods with demands 20 or 25% above and below average.

Since most of our costs are fixed and most of our revenues are collected on a volumetric bases...

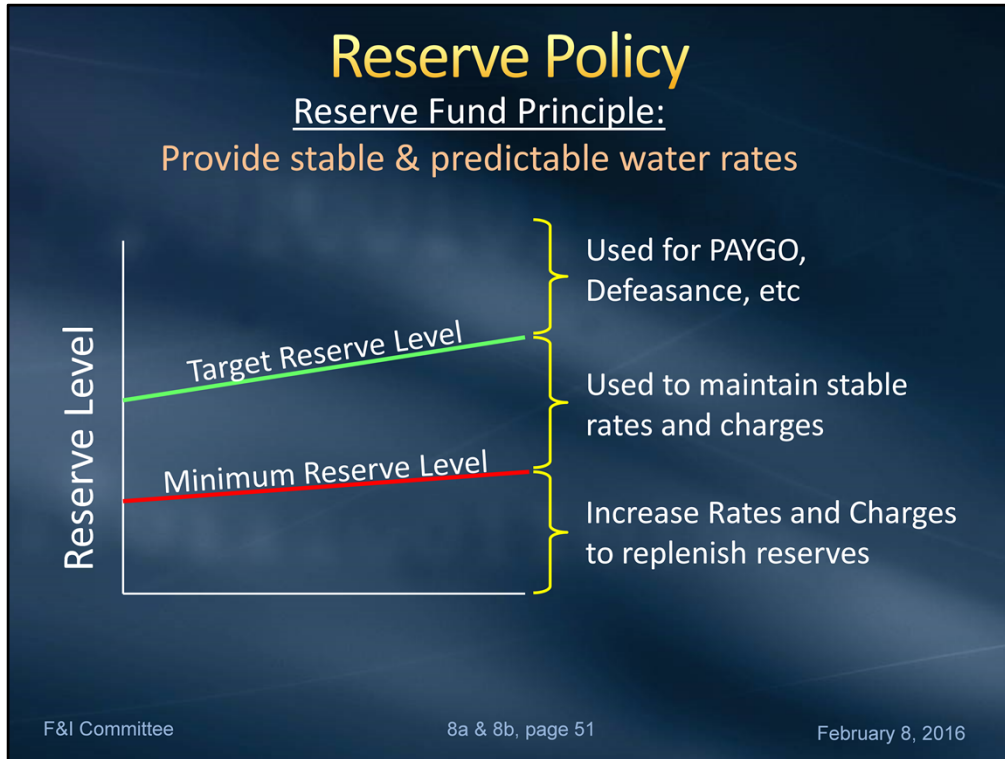
The low sales years results in a revenue shortfalls... which often extending for many years.

If MWD had no reserves, we would have to pass on those yearly shortfalls leading to rate swings from year to year as water sales changed.

To avoid these rate swing MWD adopted a Reserve Policy to provide a cushion to damper rate changes resulting from these volatile water sales.

The current Reserve Policy was adopted as part of the 1999 LRFP.

Its main mission was to Provide stable & predictable water rates



This is a Conceptual view of the Reserve Policy  
With the reserve bounded by a minimum and target reserve level.

If reserves drop below the minimum, rates and charges will need to be increased to replenish the reserves

Reserves between the minimum and the target are used to maintain stable rates and charges

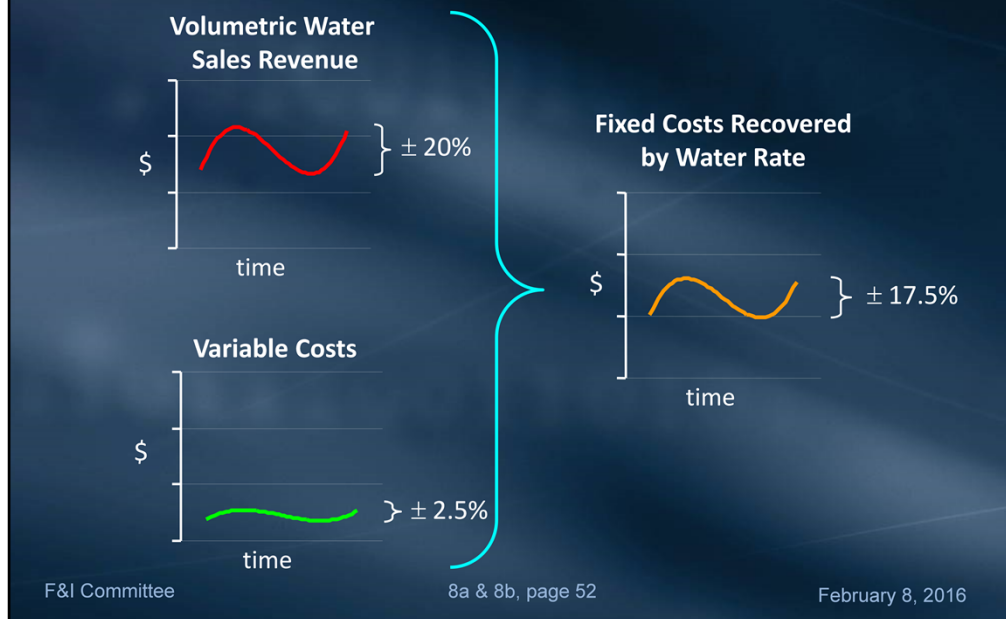
And if reserves go over the Target Reserve Level they can be used for PAYGO, Defeasance, or

Provided that the District's fixed charge coverage ratio is at or above 1.2 X, the Funds may be used for any lawful purpose as determined by the Board of Directors. ... as was done most recently with expenditures for conservation.

... So how are the minimum and target reserve amounts determined?

# Reserve Calculation

## Hydrologic Risk estimated per 1999 LRFP



So this goes back to the analyses that was done for the 1999 LRFP.

We already looked at the Water Sales Volatility

When this was looked at for the 1999 LRFP, historically water sales varied  $\pm 20\%$ .

However, when we sell less water we generally also move less water therefore saving on power costs and variable treatment costs as we ramp down out treatment plants.

So when netting out the effects of lower variable costs, the net change in revenues was determined varied  $\pm 17.5\%$  from year to year

So now lets looks at the detailed math.



# Reserve Calculation

for June 30<sup>th</sup>, 2017 in millions of dollars

	2017/18 Budget	2018/19 Forecast	2019/20 Forecast	2020/21 Forecast
Revenue Requirement	\$ 1,574	\$ 1,641	\$ 1,716	\$ 1,788
Less RTS Charge	138	142	146	152
Less Capacity Charge	35	37	39	40
Water Rate Revenue Requirements	\$ 1,402	\$ 1,463	\$ 1,532	\$ 1,596
Less Variable Costs				
Treatment Surcharge Rev Req.	265	265	263	260
SWC Variable Power Costs	153	168	189	209
CRA Power Costs	54	65	70	74
<b>Fixed Costs Recovered by Water Rate</b>	<b>930</b>	<b>965</b>	<b>1,010</b>	<b>1,053</b>
Percent Reserved	17.5%	17.5%	17.5%	17.5%
<b>Annual Amount Reserved</b>	<b>\$ 163</b>	<b>\$ 169</b>	<b>\$ 177</b>	<b>\$ 184</b>

Minimum Reserve Level =  $163 + 169 / 2$  = **\$247.2 million**

Target Reserve Level =  $163 + 169 + 177 + 184 / 2$  = **\$600.6 million**

This is the calculation for June 30<sup>th</sup> 2017.

And it estimate the impact on reserves due to a 20% drop in water sales.

On the top we start with the revenue requirements.

The revenue requirements is already net of property taxes, interest income and other miscellaneous revenues.

Next we then subtract out the fixed charges --- RTS and CC

This nets to the Water Rate Revenue Requirements. The portion of MWD costs that is to be collected from our volumetric rates.

We then subtract off Variable Costs

-- treatment, SWC variable power, and CRA power costs.

This results to the fixed costs (in millions) recovered by the Water Rate.

Now based on a 20% reduction in water sales, we say on the previous slide that this nets to a 17.5% impact in fixed costs recovered by the water rates.

So we multiply to 17.5% to determine the Annual Amount Reserved for each year.

So this is the estimated reserves impact for each year resulting from a 20% reduction in Water Sales.

Minimum Reserve Level was defined as providing 18 months of rate protection.

= so for the June 30, 2017 reserve requirements this would include the 12 months estimated for 2017/18 and half of 2018/19 for a total of 18 months.

~~The 18 months was defined as the length of time it would normally take to develop, approve, and receive revenues from a rate increase. Note that this was based on having a yearly rate cycle, not the biennial rate cycle we have now.~~

Target Reserve Level = provides an additional 2 years of rate protection for a total of 3.5 years.

One special note here is that the calculation subtracts the entire TS Rev Req – all \$265 million even though only about \$25 million is truly variable --- chemicals, power and sludge removal.

-- As a result there are no reserves held for the undercollection of the TS in a low sales year

Another way of saying this is that ...The reserves fund only includes the loss of revenues from non-treated sales.

FY2016 sales = 1.63MAF, Budget = 1.75MAF

Treatment Surcharge Stabilization Fund

FY2015 = \$8M

FY2016 est = \$0M

Water Stewardship Fund

FY2015 = \$0M

FY2016 est = \$0M

# Ten-Year Financial Forecast

# Projected Rate Increases & Financial Metrics



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
<b>Overall Rate Inc.</b>	1.5%	1.5%	4.0%	4.0%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
Sales, MAF	1.90	1.63	1.70	1.70	1.75	1.75	1.75	1.75	1.80	1.80	1.80	1.80
Rev. Bond Cvg	2.7	1.5	1.6	1.6	1.7	1.8	1.9	2.0	2.3	2.4	2.6	2.7
Fixed Chg Cvg	2.4	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5
PAYGO, \$M	210	99	120	120	120	120	120	123	127	130	133	137

\* Revenue Remainder & WRSF

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	budget	budget	
	FY2016	FY2017	
CC	43	38	(5)
RTS	156	144	(12)
Total	199	182	(17)

### FY2016 PAYGO

PAYGO - General Fund	20
PVID Land Purchase	264
R&R Fund	(160)
Resolution for Reimbursement	(25)
<b>Total PAYGO</b>	<b>99</b>

### Revenues net of taxes that pay for GO bonds

LESS O&M Costs  
 Departmental O&M  
 Other O&M  
 SWP O&M  
 CRA Power  
 Water Supply Program  
 Water Management Programs

= Net Operating Rev.

Revenue Bond Coverage  
 = Net Op Rev. / Rev. Bond Debt Service

Fixed Charges  
 = Rev. Bond Debt Service / [Rev Bond Debt Service + SWP Capital (net of Ptax)]

This slide summarized the 10 year forecast  
 Reserves are projected to decrease slightly over the 2 Budget  
 But then increase over the 10 year period.

FY2015 \$476 + 8M TSSF, \$160 R&R, \$156 WMF, \$160 Conservation set aside  
 FY2016 \$448 + nothing else  
 FY2017 \$396 -52  
 FY2018 \$383 -13  
 FY2019 \$395 +12 ← higher water sales  
 FY2020 \$397 +3

### Revenues net of taxes that pay for GO bonds

LESS operating expenditures  
 Departmental O&M, SWP O&M, CRA Power, Supply Program, Demand Mng Programs  
 = Net Operating Rev.

Revenue Bond Coverage  
 = Net Op Rev. / Rev. Bond Debt Service

In FY2017 bump Target Reserves due to:

- Increase in SWC OMP&R costs (Transportation Minimum, Delta Minimum)
- Lower fixed charges (RTS CC)

Showing first 2 years with the approved 1.5% and 1.5% overall rate increase.  
 Following the proposed 4.0% for 2017 and 2018 With 4.5% through 2026

Under that we show the estimated Sales in MAF

Revenue bond debt service coverage is one primary indicator of credit quality.

Revenue bond debt service coverage measures the amount that net operating revenues exceed or "cover" debt service payments.

MWD's rev. bond coverage is forecasted to increase back to its target of 2.0X by 2022 as a result of the cumulative 4.5%/Yr rate increases

The Fixed Charge coverage includes all fixed obligations after payment of operating expenditures. ... practically this includes the capital costs for the SWC. MWD's target of 1.2X or greater coverage is maintained over the 10 years projection.

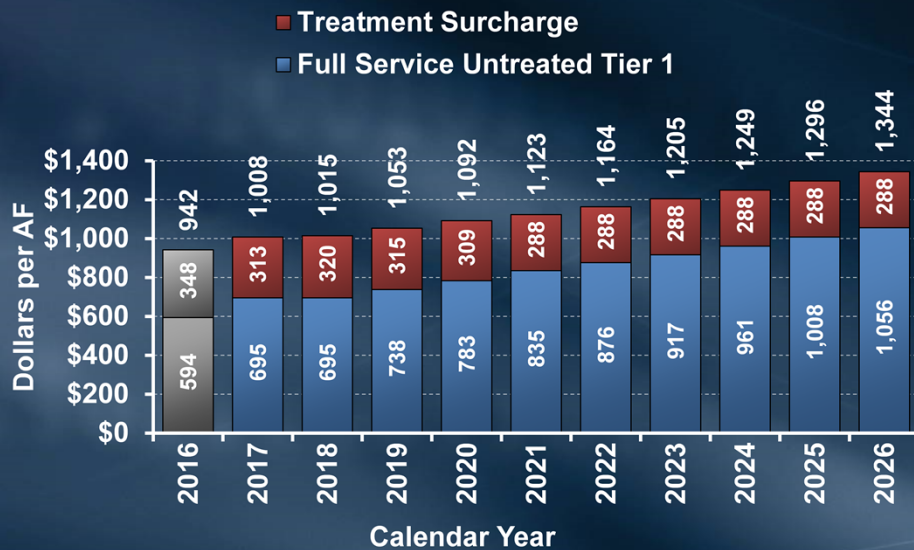
Lastly we should the level of PAYGO maintained at 60% of CIP expenditures



The 2015 IRP Update provides the basis for the water sales forecast over the 10 years. It is expected that demand for Metropolitan supplies will increase slightly over the ten-year period, from 1.70 million acre-feet in 2016/17 to 1.85 million acre-feet by 2025/26.

FY	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
T1- Firm	1.52	1.50	1.52	1.48	1.46	1.45	1.50	1.50	1.50	1.50
Exchnage	0.180	0.195	0.233	0.272	0.295	0.300	0.297	0.296	0.296	0.296
<b>Total</b>	<b>1.70</b>	<b>1.70</b>	<b>1.75</b>	<b>1.75</b>	<b>1.75</b>	<b>1.75</b>	<b>1.80</b>	<b>1.80</b>	<b>1.80</b>	<b>1.80</b>

# Projected Volumetric Rates



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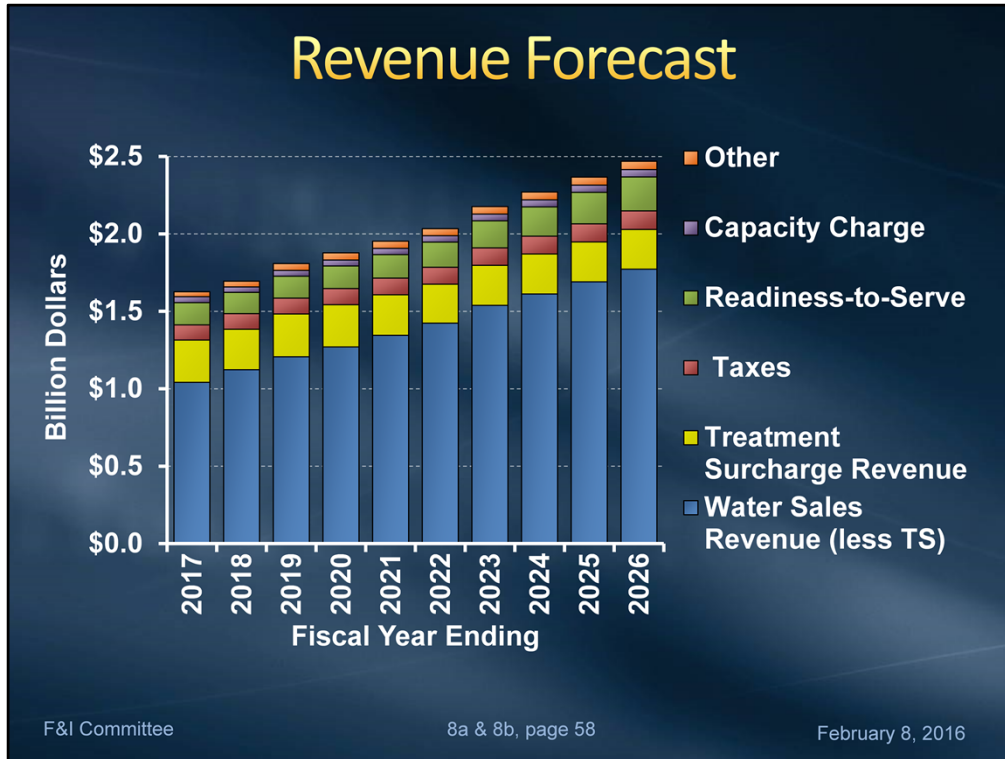
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The TS is expected to decrease to \$288/AF and then stays flat over the 10 year period for an average rate decrease of about 1.9% per year.

As bond being paid off this results in lowering capital finance costs attributed to Treatment. The Untreated Tier 1 Full Service rate is expected to increase an average of about 5.9% per year. Taken together -- The Treated Tier 1 Full Service rate is expected to increase an average of about 3.6% per year.

And the fixed charges (RTS and CC) – not on this chart – are expected to increase at an average of about 2.9%

Rates & Charges Effective January 1st	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Tier 1 Supply Rate (\$/AF)	\$156	\$201	\$209	\$214	\$226	\$238	\$245	\$250	\$261	\$273	\$285
Tier 2 Supply Rate (\$/AF)	\$290	\$295	\$295	\$295	\$295	\$295	\$295	\$295	\$295	\$295	\$295
System Access Rate (\$/AF)	\$259	\$289	\$299	\$320	\$335	\$358	\$383	\$412	\$440	\$469	\$499
Water Stewardship Rate (\$/AF)	\$41	\$52	\$55	\$59	\$60	\$61	\$61	\$62	\$62	\$62	\$62
System Power Rate (\$/AF)	\$138	\$124	\$132	\$145	\$162	\$178	\$187	\$193	\$198	\$204	\$210
Full Service Untreated Volumetric Cost (\$/AF)											
Tier 1	\$594	\$666	\$695	\$738	\$783	\$835	\$876	\$917	\$961	\$1,008	\$1,056
Tier 2	\$728	\$760	\$781	\$819	\$852	\$892	\$926	\$962	\$995	\$1,030	\$1,066
Exchange	\$438	\$465	\$486	\$524	\$557	\$597	\$631	\$667	\$700	\$735	\$771
Treatment Surcharge (\$/AF)	\$348	\$313	\$320	\$315	\$309	\$288	\$288	\$288	\$288	\$288	\$288
Full Service Treated Volumetric Cost (\$/AF)											
Tier 1	\$942	\$979	\$1,015	\$1,053	\$1,092	\$1,123	\$1,164	\$1,205	\$1,249	\$1,296	\$1,344
Tier 2	\$1,076	\$1,073	\$1,101	\$1,134	\$1,161	\$1,180	\$1,214	\$1,250	\$1,283	\$1,318	\$1,354
Untreated Exchange Cost (\$/AF)	\$438	\$465	\$486	\$524	\$557	\$597	\$631	\$667	\$700	\$735	\$771
Readiness-to-Serve Charge (\$M)	\$153	\$135	\$140	\$143	\$148	\$156	\$168	\$182	\$196	\$211	\$228
Capacity Charge (\$/cfs)	\$10,900	\$8,000	\$8,700	\$9,000	\$9,300	\$9,700	\$10,000	\$10,500	\$11,100	\$11,100	\$11,300



Total revenues are projected to increase from about \$1.6 billion in 2016/17 to \$2.5 billion in 2025/26. This increase is almost entirely attributed to increases in water rates and charges along with slightly higher projected sales of 1.8MAF.

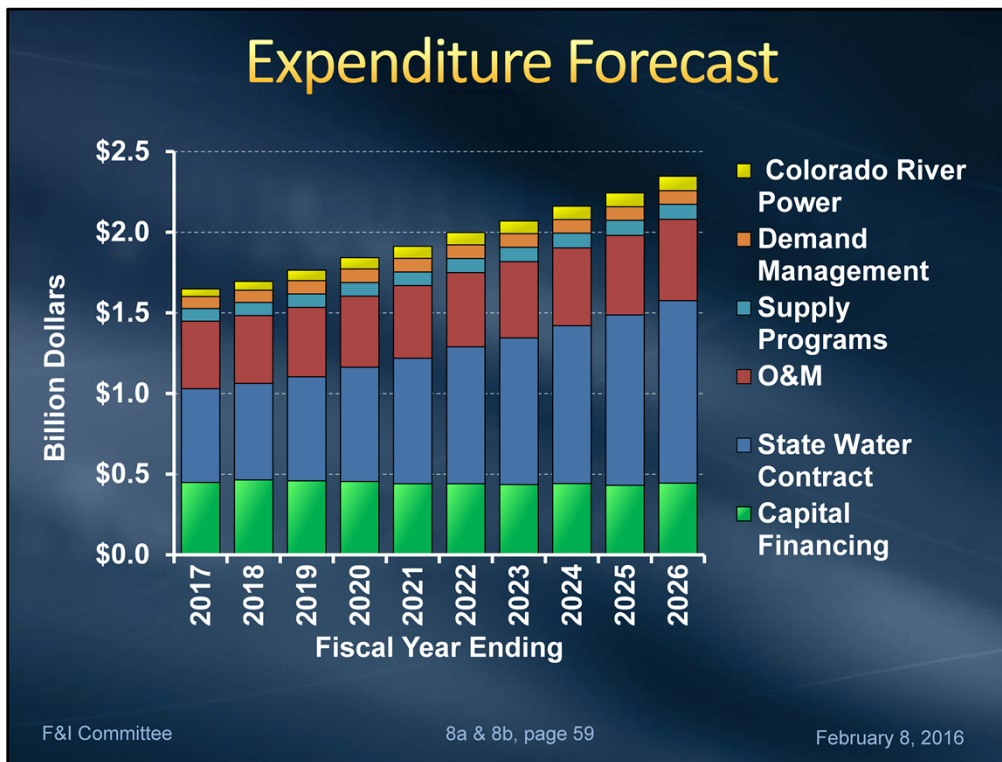
Receipts from rates and charges, which include the RTS, Capacity Charge is expected to account about 92% of total revenues.

In addition, Taxes are expected to account for about 5% of revenues as a results of maintained the ad valorem take rate at the current level of .0035 % of assessed value.  
 - 2.5% increase in Assessed valuations.

With the remaining 2% of revenues coming from Interest Income, power sales from our generation plants, leases and other misc.



# Expenditure Forecast



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Expenses are grouped into 6 major categories:

Capital financing (debt service + PAYGO)

- decreasing as bonds are being paid off and only a limited amount of new debt is issued to fund the reduced the CIP.

State Water Contract – increasing at an avg rate of 8% per year primarily due to the California Water Fix costs.  
....as can be seen on the next slide

O&M – including Salaries and Benefits, materials and supplies, variable treatment costs, outside services, operating equipment, and things like property taxes, associations dues and insurance.

- Increasing from at an average annual rate of about 2%

Supply Programs – The estimates represent expenditures for average conditions. Extreme weather conditions could drive there costs much higher or lower. This forecast includes an average increase in supply costs of 2%.

Program Name	2016/17 Budget	2017/18 Budget	2018/19 Forecast	2019/20 Forecast	2020/21 Forecast	2021/22 Forecast	2022/23 Forecast	2023/24 Forecast	2024/25 Forecast	2025/26 Forecast	Total
Central Valley Storage Programs	22.7	25.6	31.7	35.4	35.1	37.2	38.0	38.9	39.9	40.9	345.4
Palo Verde Irrigation District Program	17.4	18.0	18.4	18.8	19.3	19.7	20.1	20.6	21.1	21.6	195.1
Colorado Programs	24.3	23.6	18.7	14.8	14.7	14.9	15.2	15.5	15.8	13.9	171.5
Imperial Irrigation District/MWD Conservation Agreement	10.8	11.0	11.3	11.6	11.9	12.2	12.5	12.8	13.1	13.5	120.7
State Water Project Transfer Programs	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	18.9
In Basin Programs	1.6	1.6	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	18.2
<b>Total Supply Programs</b>	<b>78.7</b>	<b>81.7</b>	<b>83.8</b>	<b>84.4</b>	<b>84.8</b>	<b>87.8</b>	<b>89.6</b>	<b>91.6</b>	<b>93.7</b>	<b>93.7</b>	<b>869.7</b>

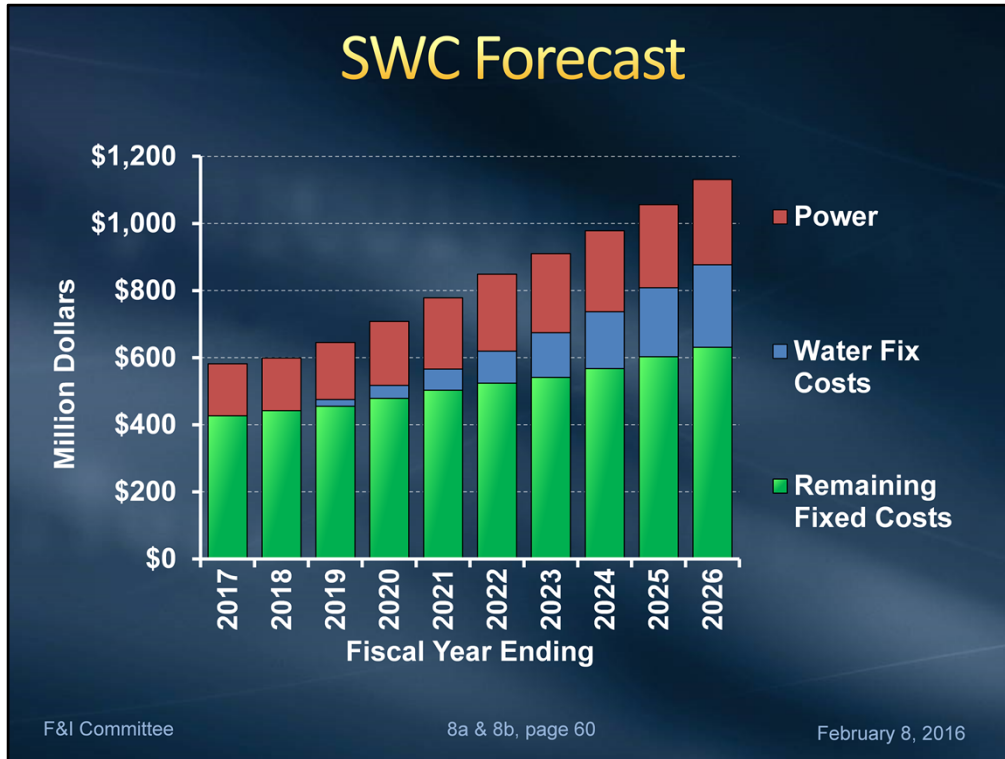
Demand management - Conservation, Local Resources Program and Foundational Actions

...will have more detail on a slide to follow

CRA Power costs are projected to increase from \$47M in FY2017 to \$90M FY2026 for an average annual rate of 8%. Power costs will vary depending on the price of electricity and system operations. Colorado River diversions are expected to average about 1.0 MAF.

--Due to the expiration of the SCE Service and Interchange Agreement, Metropolitan will be buying more supplemental power and will have exposure to market prices.





State Water Contract - including power, will increase from \$582 million in FY 2016/17 to \$1,131 million in 2015/26. SWC costs account for 35 percent of Metropolitan's expenditures in FY 2016/17, growing to 47 percent in FY 2025/26, primarily due to the California Water Fix costs.

Water supply benefits from the California Water Fix are realized outside the ten-year period of the forecast, as are operations, maintenance and energy costs. The remainder of the fixed costs is based upon information provided by the Department of Water Resources, and is associated with Transportation Capital and Minimum Operations & Maintenance, and the Delta Water Supply Capital and Minimum Operations & Maintenance. Variable SWP power costs are projected to gradually increase over the ten-year period.

#### Water Fix

- Start calendar 2018
- Complete in ~ 2032
- 15.4B capital in 2015\$, 36% contingency
- 60% SWP Contractors, 50% MWD share = 30% overall MWD share
- 40yr, 6.135%, DWR debt with 25% bond cover
- Based on Internal Draft dated July 2015, ~ same as Nov 2013 BDCP \$+

# Demand Management



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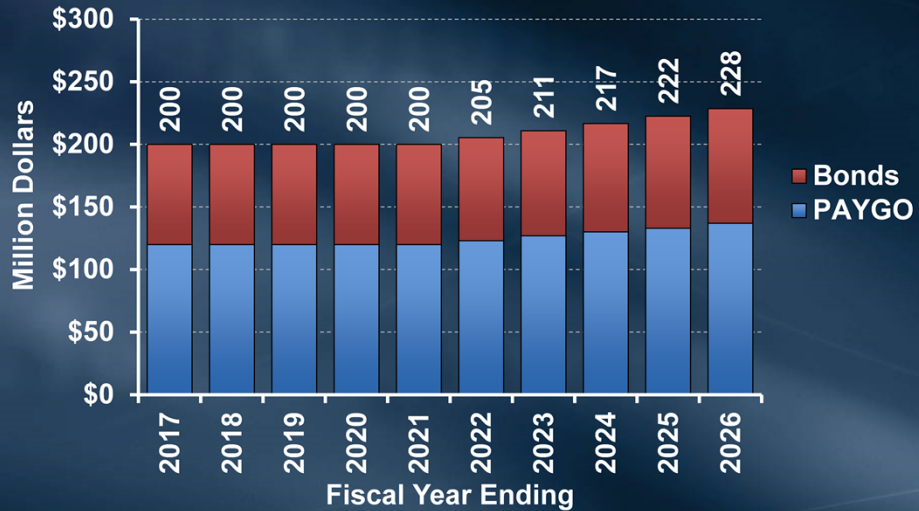
The LRP costs are projected to be fairly flat over the ten-year period at about \$45.0 million per year. As the yield from existing LRP projects receiving incentives decreases, new projects are expected to receive funding.

The CCP costs are budgeted to increase from \$27 million in FY2017 to \$38 million in FY 2019, and remain flat through the remainder of the ten-year period. These figures include vendor administration costs of about \$2M (EGIA). This program provides continued funding of residential, commercial, and outdoor conservation programs.

## Foundation Actions

- Provides funding for technical studies and pilot projects the reduce barriers to future production of recycled water, stormwater, seawater desal, and groundwater resources.
  - FY2017 \$4.4
  - FY2018 \$2
  - FY2019 \$1.9
  - FY2020 and beyond \$1.5M

# Capital Investment Plan Funding



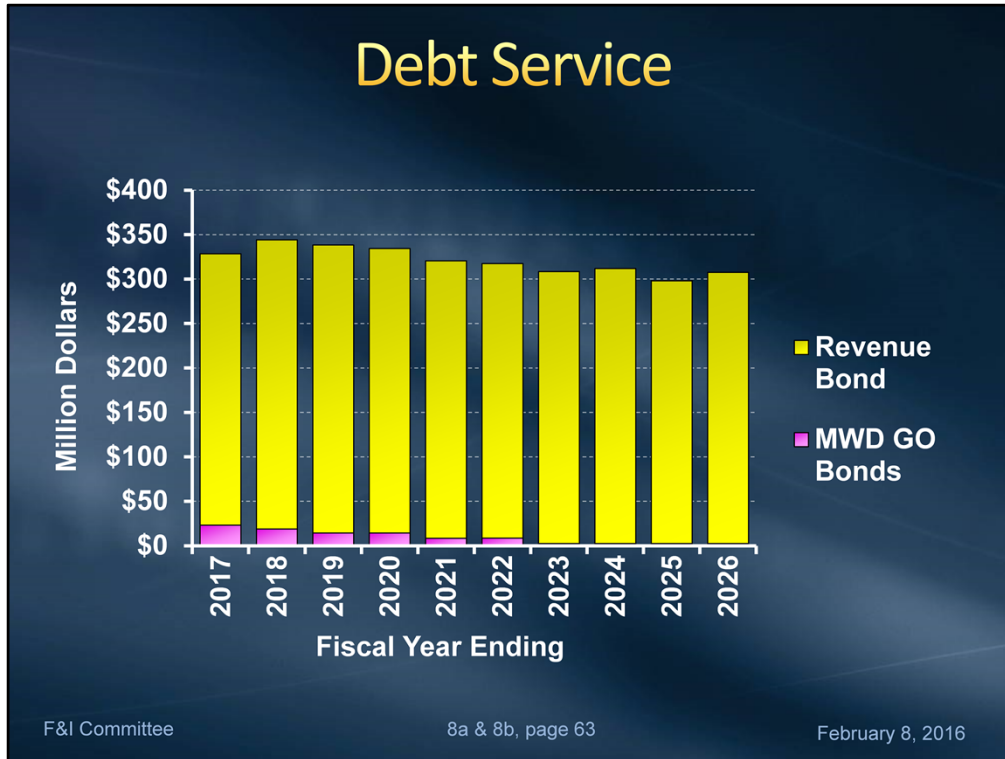
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The 10-yr projected CIP through FY2026 is estimated at \$2.1 billion. The CIP continues to reflect the deferral of facility expansion projects. The CIP focuses on projects that enhance reliability while focusing on necessary refurbishment and replacement projects.

The CIP funding is held at \$200M per year for 5 years.  
And assumes PAYGO funding of 60%



Metropolitan’s variable rate debt as a percentage of total revenue bond debt is projected to increase to 31 percent over this time period as fixed rate debt is retired and new variable rate debt is issued.

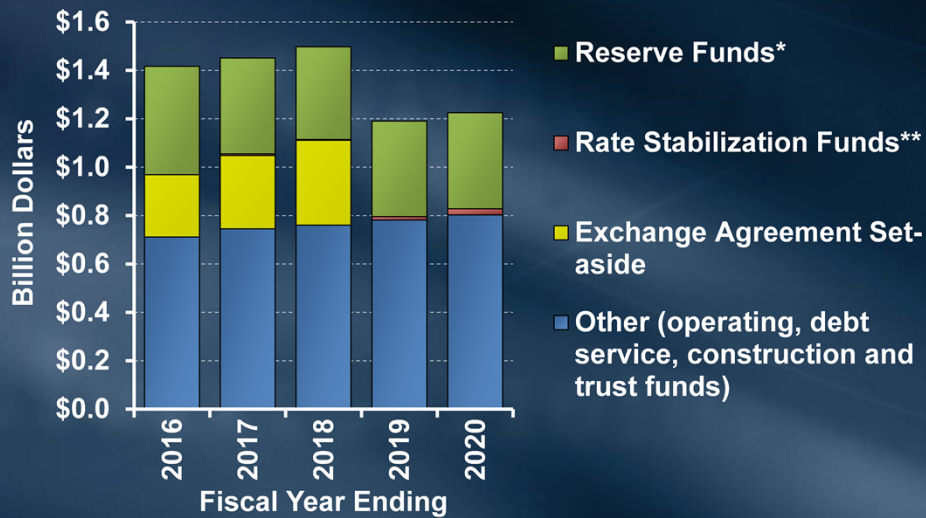
MWD GO bond debt will decrease as voter approved indebtedness matures. Total Debt Service costs are expected to decrease over the 10 yr period as a results of debt maturates outpacing new bond issues.

Total outstanding debt is estimated to decrease from about \$4.3 be \$3.6 billion by FY 2026.

	Fixed (30Yr)	Variable - Regular
2017	4.50%	0.45%
2018	4.50%	0.80%
2019	4.50%	1.20%
2020	4.50%	1.20%
2021	4.50%	1.20%
2022	4.50%	1.20%
2023	4.50%	1.20%
2024	4.50%	1.20%
2025	4.50%	1.20%
2026	4.50%	1.20%

# SDCWA Exchange Agreement Set-aside

# End of Year Fund Balances



\* Includes Water Rate Stabilization Fund and Revenue Remainder Fund

\*\* Includes Water Stewardship Fund and Treatment Surcharge Stabilization Fund

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## Next Steps

February 9, 2016	Board Action, set public hearings
February 23, 2016	Workshop #2
February 26, 2016	Notice to Legislature
March 7, 2016	F&I Committee, Workshop #3
March 8, 2016	Public Hearings
March 22, 2016	Workshop #4
April 11, 2016	F&I Committee, Approve Biennial Budget and Water Rates and Charges
April 12, 2016	Board, Approve Biennial Budget and Water Rates and Charges

