



***FY17 Proposed  
Capital Improvement Budget***

December 16, 2015



- ✓ MWRA continues to focus on Asset Protection and Long Term Redundancy initiatives;
- ✓ MWRA continues to reduce debt levels; and
- ✓ FY17 Proposed CIP meets the overall 5-Year spending Cap requirement.



# FY14-FY18 Capital Expenditures – Fix it First

Water  
Redundancy  
\$186.5  
27%

Asset  
Protection  
\$359.8  
53%

New Facilities  
\$80.9  
12%

Other  
\$51.5  
8%



- ✓ City Tunnel Redundancy Decision Time;
- ✓ Acceleration of pipeline projects; and
- ✓ Acceleration of Shaft 12, Shaft 2, & Winsor Power Station.



# FY17 Proposed CIP

(000s)	FY16 Final	FY17 Proposed	\$ Change	% Change	FY16 Final FY14-18	FY17 Proposed FY14-18	FY14-18 \$ Change	FY14-18 % Change
<b>Total Wastewater</b>	\$ 2,974.6	\$3,062.3	\$ 87.7	2.9%	\$ 419.3	\$ 397.5	\$ (21.8)	-5.2%
<b>Total Waterworks</b>	\$ 2,909.4	\$3,790.6	\$ 881.1	30.3%	\$ 251.3	\$ 239.4	\$ (11.9)	-4.7%
<b>Business &amp; Operations Support</b>	\$ 128.4	\$ 134.7	\$ 6.3	4.9%	\$ 40.9	\$ 41.8	\$ 0.9	2.1%
<b>Total MWRA</b>	\$ 6,012.4	\$6,987.5	\$ 975.1	16.2%	\$ 711.5	\$ 678.7	\$ (32.8)	-4.6%

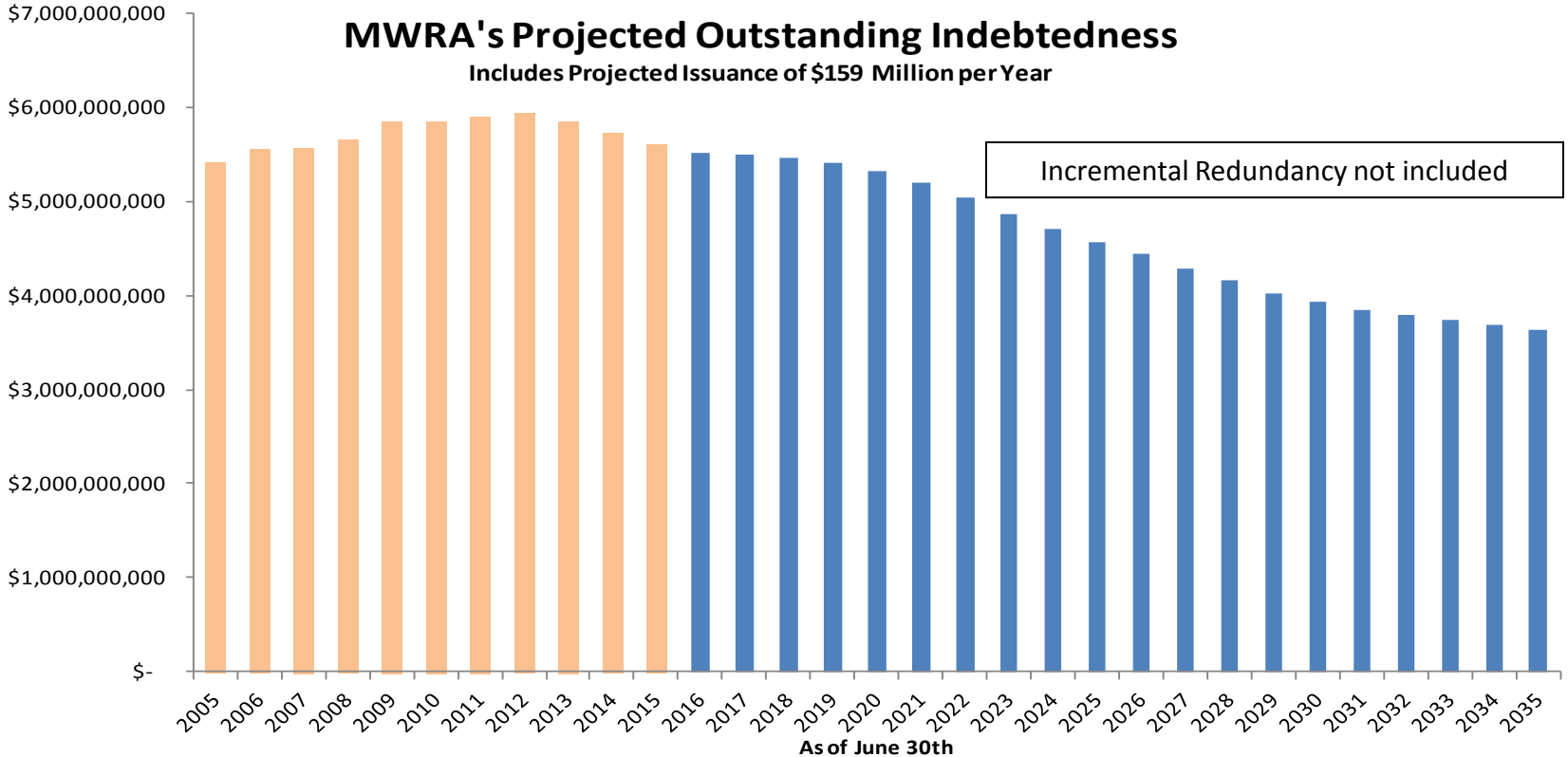


# Paying More Principal than Interest

## MWRA's Projected Outstanding Indebtedness

Includes Projected Issuance of \$159 Million per Year

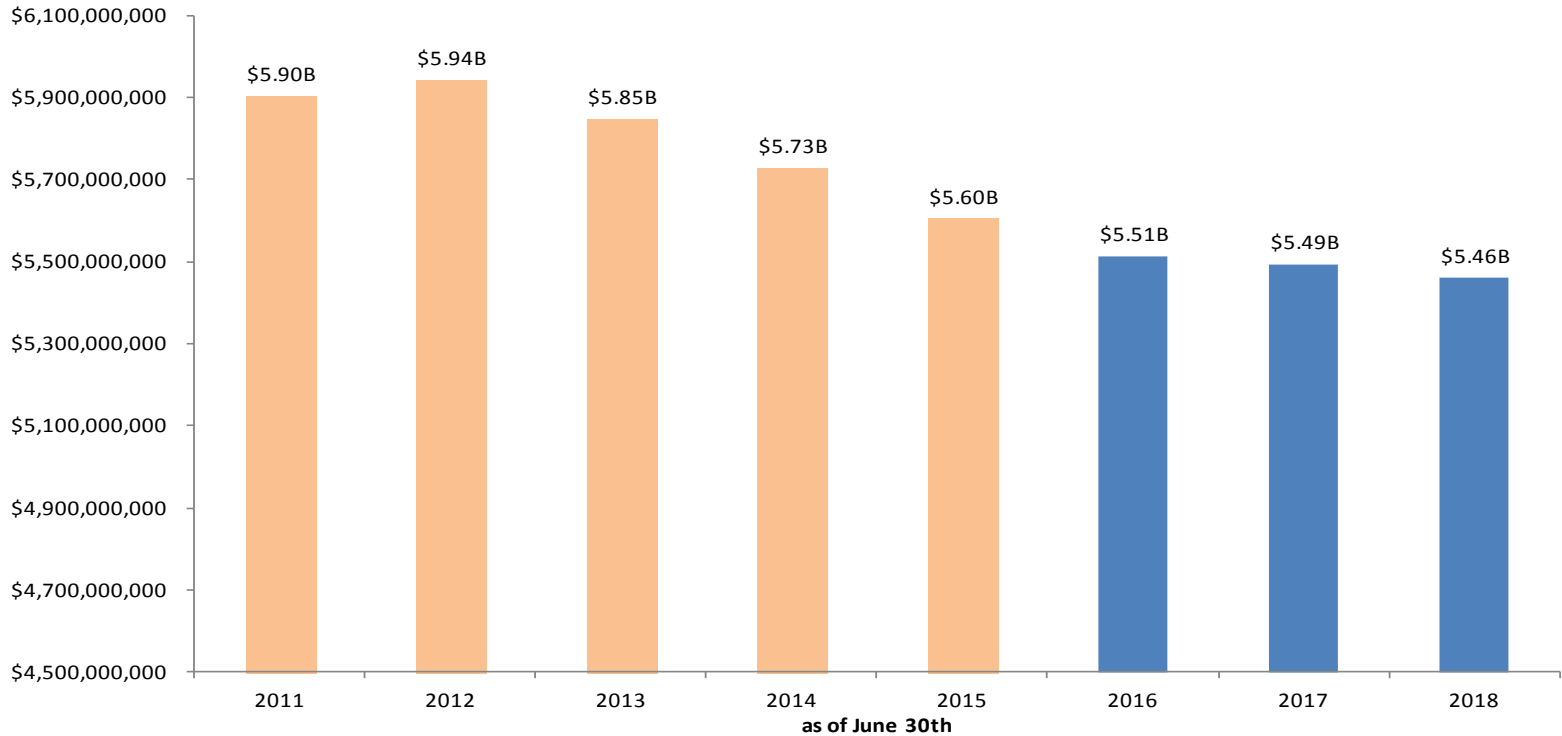
Incremental Redundancy not included





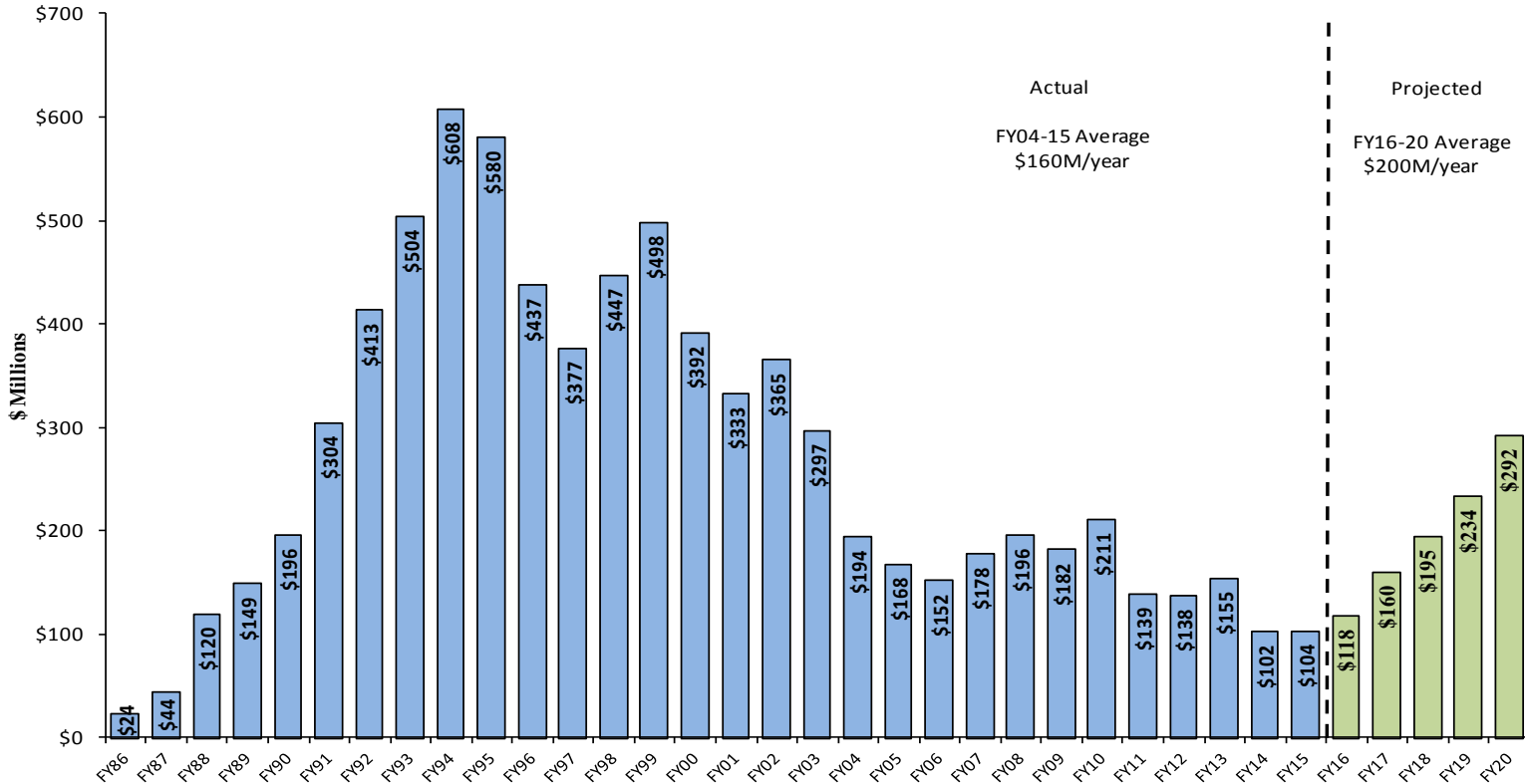
# Paying More Principal than Interest

## Reduction to MWRA Projected Debt Between FY11 and FY18





# Historic and Projected Capital Improvement Spending







# FY14-18 Base-Line Cap as Compared with FY17 Proposed Spending

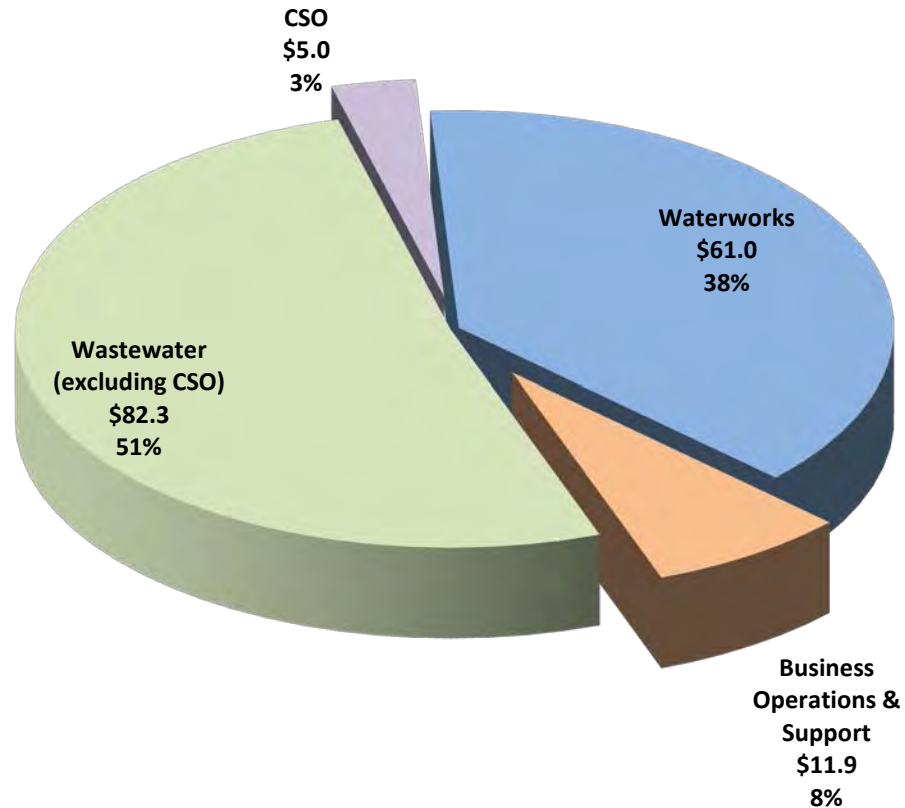
FY14-18 Base-Line Cap		FY14	FY15	FY16	FY17	FY18	Total FY14-18
	Projected Expenditures	\$142.5	\$147.6	\$149.3	\$141.8	\$136.8	\$718.0
Contingency	7.6	9.5	10.1	9.8	9.3	46.1	
Inflation on Unawarded Construction	0.8	4.2	8.4	11.1	13.5	37.9	
Less: Chicopee Valley Aqueduct Projects	(5.0)	(2.2)	(1.4)	(1.3)	(0.4)	(10.3)	
<b>FY14-18 Base-Line Cap</b>	<b>\$145.8</b>	<b>\$159.1</b>	<b>\$166.4</b>	<b>\$161.3</b>	<b>\$159.1</b>	<b>\$791.7</b>	

FY17 Proposed		FY14	FY15	FY16	FY17	FY18	Total FY14-18
	Projected Expenditures	\$102.2	\$103.6	\$118.3	\$160.1	\$194.6	\$678.7
Contingency	0.0	0.0	9.5	12.0	14.5	36.0	
Inflation on Unawarded Construction	0.0	0.0	2.1	5.3	11.1	18.5	
Less: I/I Program	0.0	(17.5)	(19.4)	(19.0)	(17.3)	(73.1)	
Less: Water Loan Program	0.0	1.4	1.4	2.0	(0.6)	4.3	
Less: Chicopee Valley Aqueduct Projects	(5.6)	(1.2)	(0.5)	(0.1)	(0.0)	(7.4)	
<b>FY17 Proposed FY14-18 Spending</b>	<b>\$96.6</b>	<b>\$86.3</b>	<b>\$111.4</b>	<b>\$160.4</b>	<b>\$202.2</b>	<b>\$656.9</b>	

FY17 Proposed vs. FY14-18 Base-Line Cap		FY14	FY15	FY16	FY17	FY18	Total FY14-18
	Projected Expenditures	(\$40.3)	(\$43.9)	(\$31.1)	\$18.3	\$57.8	(\$39.3)
Contingency	(7.6)	(9.5)	(0.6)	2.2	5.3	(10.1)	
Inflation on Unawarded Construction	(0.8)	(4.2)	(6.2)	(5.8)	(2.4)	(19.4)	
Less: I/I Program	0.0	(17.5)	(19.4)	(19.0)	(17.3)	(73.1)	
Less: Water Loan Program	0.0	1.4	1.4	2.0	(0.6)	4.3	
Less: Chicopee Valley Aqueduct Projects	(0.6)	0.9	0.9	1.2	0.4	2.9	
<b>FY14-18 Cap (\$ Change)</b>	<b>(\$49.2)</b>	<b>(\$72.7)</b>	<b>(\$54.9)</b>	<b>(\$0.9)</b>	<b>\$43.1</b>	<b>(\$134.7)</b>	



# FY17 Proposed CIP Expenditures by Major Programs for 2017





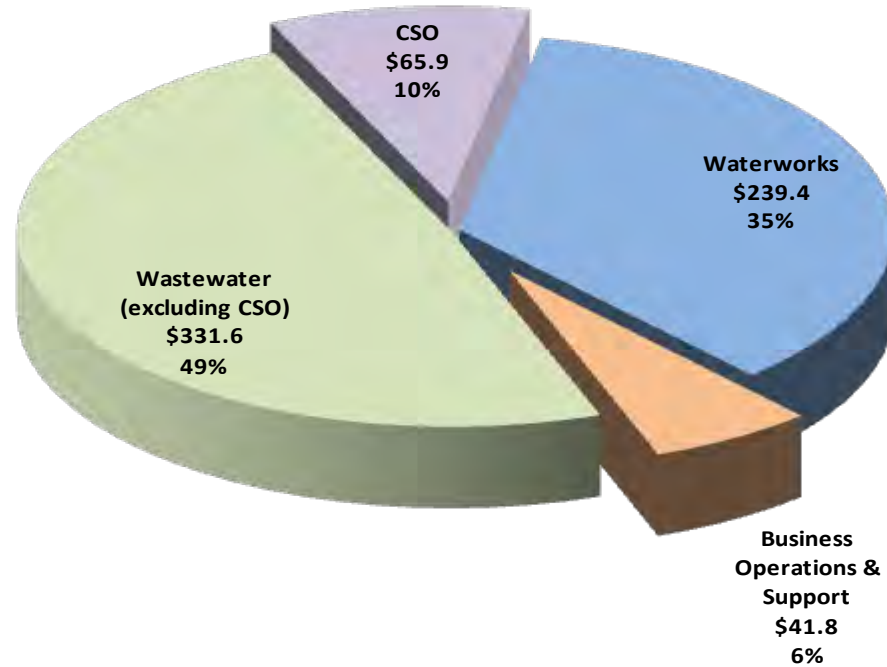
## FY17 Big Spenders

Subphases	FY17 Spending
Community Financial Assistance Programs	\$30.3
Section 89/29 Redundancy	\$16.1
Chelsea Creek Upgrade Construction	\$15.2
Wachusett Aqueduct PS Construction	\$15.0
Alewife Brook PS Construction	\$5.3
NMPS & WTF Butterfly Valve Replacement	\$4.5
<b>Top Spenders in FY17</b>	<b>\$86.3</b>
<b>Total Projected FY17 Spending</b>	<b>\$160.1</b>

The top spenders account for 54% of FY17 planned spending.



# FY14-18 Proposed CIP Expenditures by Major Programs





## FY17 Proposed CIP Expenditures by Major Initiatives

	FY09-13	FY14-18	FY19-23
Asset Protection	\$248.0	\$359.8	\$760.7
Carroll WTP	38.5	15.0	11.2
Water Redundancy	134.7	186.5	431.8
CSO	315.5	65.9	3.0
Other	88.4	51.5	-6.3
<b>Total</b>	<b>\$825.1</b>	<b>\$678.7</b>	<b>\$1,200.4</b>
<b>Asset Protection</b>	<b>30.1%</b>	<b>53.0%</b>	<b>63.4%</b>
Carroll WTP	4.7%	2.2%	0.9%
<b>Water Redundancy</b>	<b>16.3%</b>	<b>27.5%</b>	<b>36.0%</b>
CSO	38.2%	9.7%	0.2%
Other	10.7%	7.6%	-0.5%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

- Asset Protection and Redundancy are the principle drivers of future capital expenditures.



## FY17 Projected Contract Awards (\$ in millions)

Project	Subphase	NTP	FY17 Proposed
NIH Redundancy & Storage	Sec 89 & 29 Redundancy Construction Phase 2	Jul-16	\$21.4
Central Monitoring System	Waterworks SCADA/PLC Upgrades	Oct-16	\$18.5
SEH Redundancy & Storage	Redundancy Pipeline Section III Construction 2	Jul-16	\$10.8
Residuals Asset Protection	Residuals Facility Upgrade-Construction	Jul-16	\$10.0
SEH Redundancy & Storage	Redundancy Pipeline Section III Construction 3	Oct-16	\$7.4
DI Treatment Plant Asset Protection	Future Miscellaneous VFD Replacements-Construction	May-17	\$5.3
Facility Asset Protection	IR-Construction 1 Reading Extension Sewer	Mar-17	\$4.3
Applicat Improvement Program	Enterprise Content Management	Aug-16	\$4.0
<b>Top Awards for FY17</b>			\$81.6
<b>27 Contract Awards Planned for FY17</b>			\$101.7

The top awards account for over 80% of FY17 planned awards.

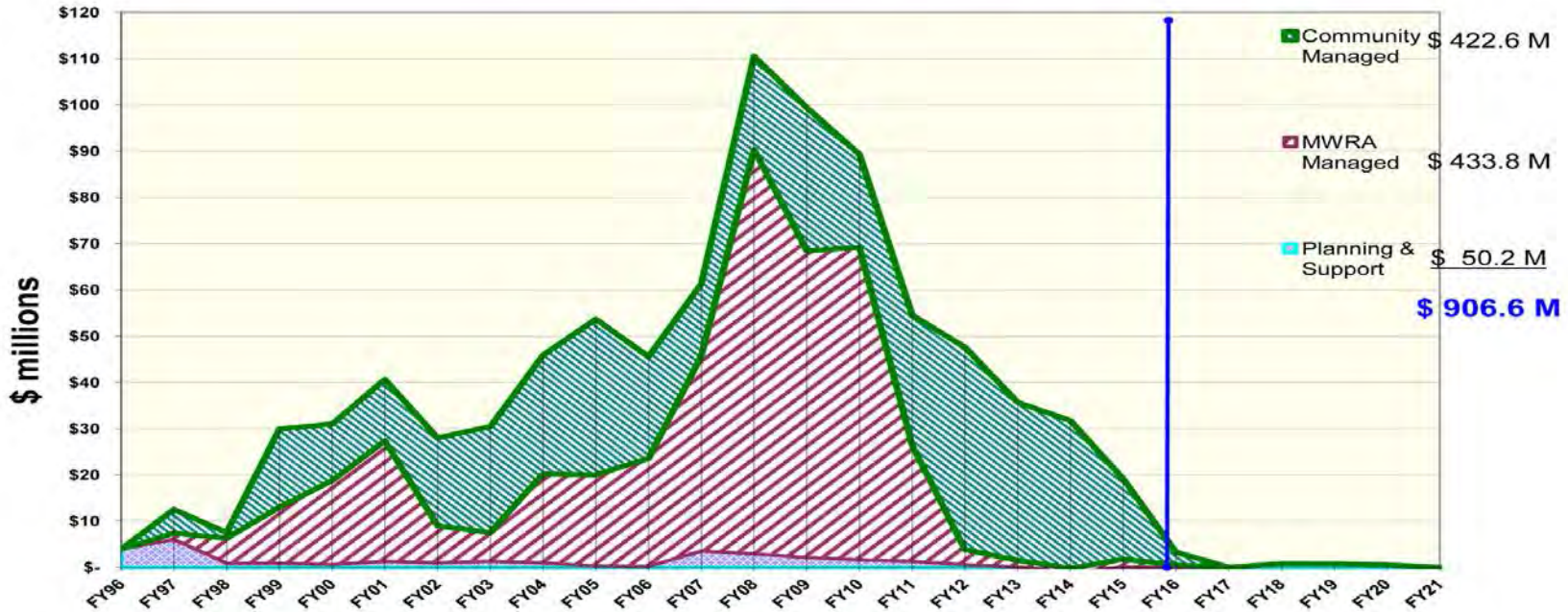


# Completed Projects



# MWRA CSO Capital Spending

## MWRA CSO Program Capital Budget



**\$891.2 million spent to date. Remaining spending of \$15.4 million for surface restorations, contract close-outs and CSO performance assessment thru 2020.**





# Spot Pond Covered Storage Facility and Pump Station





# Deer Island – North Main Pump Station VFDs and Motors





# FY17 Big Spenders





# FY17 Proposed CIP – What is New?



# Acceleration of Pipeline Jobs

## Southern Extra High



## Cambridge Sewer Branch





# Acceleration of Shaft 12, Shaft 2 and Winsor Power Station





- ✓ Further presentations to the Board on Redundancy options;
- ✓ Work with the Advisory Board;
- ✓ Affordability; and
- ✓ Reach a decision by June 2016.





# MWRA Fleet Update

December 16, 2015



## MWRA Fleet

- MWRA has 498 plated vehicles in the active fleet including light and heavy duty vehicles as well as equipment (generators, trailers)
- The average vehicle age is 7 years
- Approximately 45 vehicles per year are replaced at an average annual cost of \$1,500,000
- Fleet Services does Preventative Maintenance on approximately 30 vehicles per month
- Corrective Maintenance on approximately 150 vehicles per month
- New vehicle purchases have been done with both a reverse auction and sealed bids



# Vehicle Replacement Criteria

Type	Description	Age (Years)	Mileage	Other
Vehicles:	Class 1-3: sedan, pickup, 4x4, van	8	125,000	Condition warrants review
	Class 4-5: bus, med-heavy duty truck	8	75,000	Condition warrants review
	Class 6-8 tractor, tag-a-long trailer	10		Condition warrants review
Equipment:	Current Expense	10		Condition warrants review
	Capital (> \$100,000)	10		Condition warrants review



# Equipment





# Vehicles



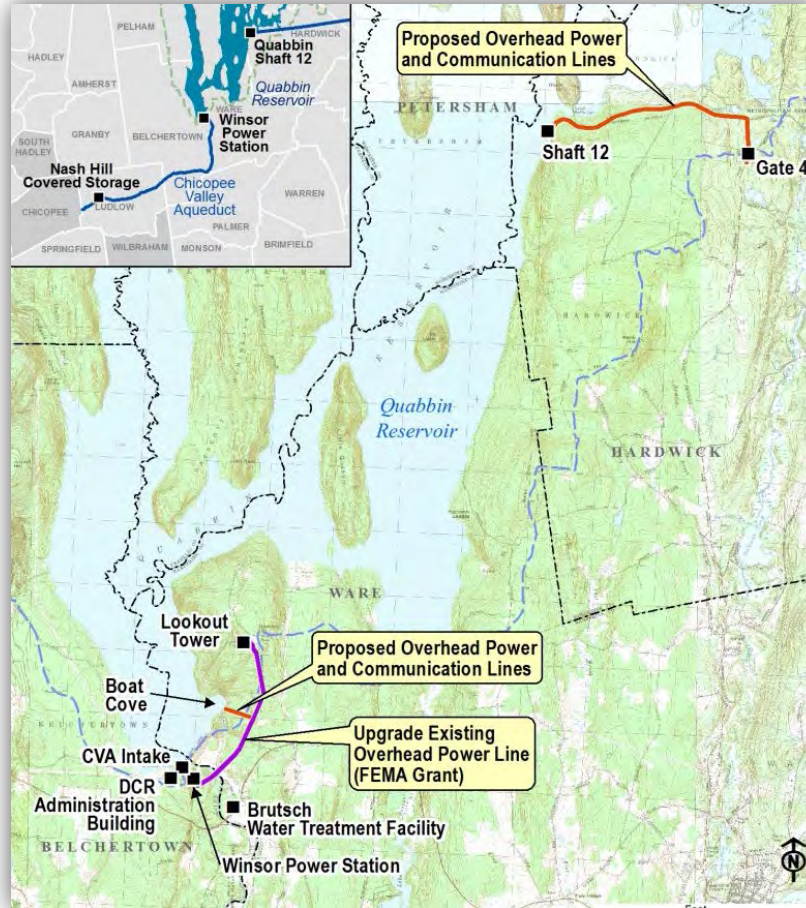


# Quabbin Power and Security Improvements Contract 7338

December 16, 2015



# Location of Power and Security Improvements





# Facilities to Receive Security Improvements



DCR Administration Building



Quabbin Reservoir Boat Cove



Winsor Power Station



Brutsch Treatment Facility





# Facilities to Receive Security Improvements



Quabbin Aqueduct Shaft 12 Service Building



CVA Intake Facility



Quabbin Aqueduct Shaft 12 Intake Building



Nash Hill Gate House