



# Washington Aqueduct

## FY 2011 O&M and Capital Budgets

Presentation to the Wholesale Customer Board



# Agenda

---

- Budget Formulation Process/Timeline
- Primary Drivers for FY 2011 O&M
- FY 2011 Operating Budget
- FY 2011-20 Capital Improvement Plan



# Budget Formulation Process/Timeline

---

- ✓ Branch budgets prepared/Management reviews..... May 2009
- ✓ 1<sup>st</sup> draft presented to Tech. Committee..... Jun 5, 2009
- ✓ Individual budget feedback meetings with customers..... July, 2009
- ✓ Revised budget presented to Tech. Committee..... Aug 11, 2009
- ✓ Budget presentation to Full Board Meeting..... Sep 9, 2009
- ✓ Further discussions with DCWASA ..... Sep 21, 2009
- ✓ Budget presentation to Tech. Committee..... Sep 25, 2009
- Budget presentation to Full Board Meeting..... Sep 30, 2009
- Budget submission to DC budget office ..... Nov 2009
- Submission to DC Council/Arlington County Board/Falls Church City Council
- Budget submission to US Army Corps of Engineers – June 2010 (for budget execution)



# Annual O&M of Residuals

Components	Cost
Residuals Hauling & Disposal (170MG/day and \$35/wet ton)	\$ 1,340,000
Electricity ( 4.7 million KWH/year)	\$ 521,700
4 additional positions (FY2010 authorization)	\$ 341,304
Residuals - Polymer ( 40 ton @ \$3000/ton)	\$ 120,000
<b>Total annual costs</b>	<b>\$ 2,323,004</b>
FY 2011 costs (11 months)	\$ 2,129,420

- Residuals project is driven by NPDES Permit and Federal Facilities Compliance Agreement. Annual O&M costs of residuals facility are expected to be \$2.3 million.



# Primary Drivers for FY 2011 O&M

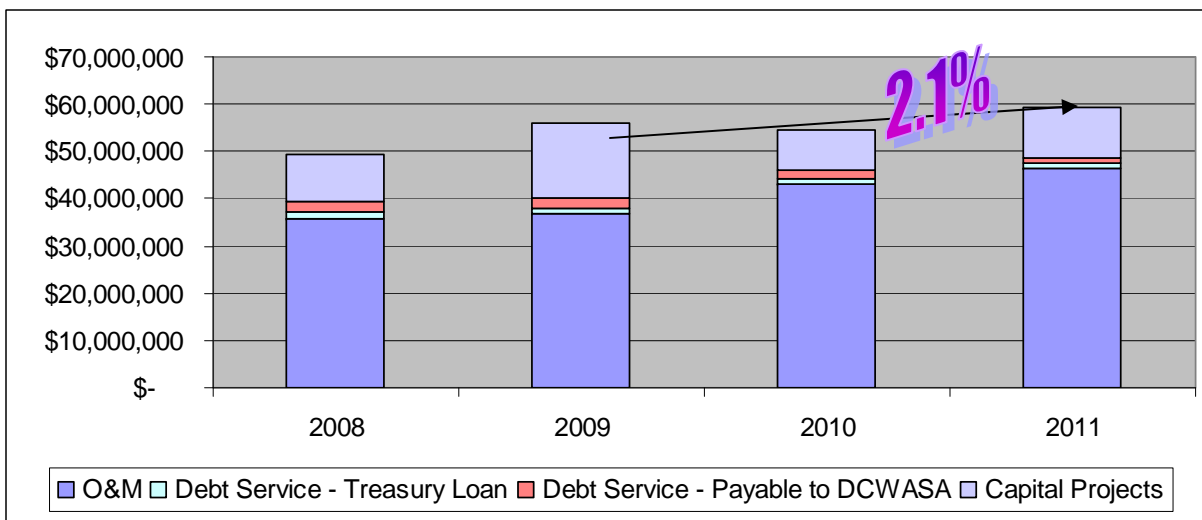
---

- Residuals (Trucking, Power, Chemicals)
- Chlorine to Hypochlorite conversion
- Lime to Caustic Soda
- Enhanced engineering capabilities
- Wage increase/4 new positions
- Lower electricity rates
- Lower Orthophosphate prices



# Summary of Total Cost

	2008	2009	2010	2011
O&M	\$ 35,736,000	\$ 36,725,000	\$ 43,037,000	\$ 45,342,283
		2.8%	17.2%	5.4%
Debt Service - Treasury Loan	\$ 1,395,000	\$ 1,308,000	\$ 1,308,000	\$ 981,000
Debt Service - Payable to DCWASA	\$ 2,292,000	\$ 1,986,697	\$ 1,760,508	\$ 1,305,603
Capital Projects	\$ 10,000,000	\$ 15,992,000	\$ 8,250,000	\$ 10,770,000
<b>Total</b>	<b>\$ 49,423,000</b>	<b>\$ 56,011,697</b>	<b>\$ 54,355,508</b>	<b>\$ 58,398,887</b>
		13.3%	-3.0%	7.4%
vs. DCWASA Rate Increase		7.5%	9%	13%





# FY 2011 Operating Budget



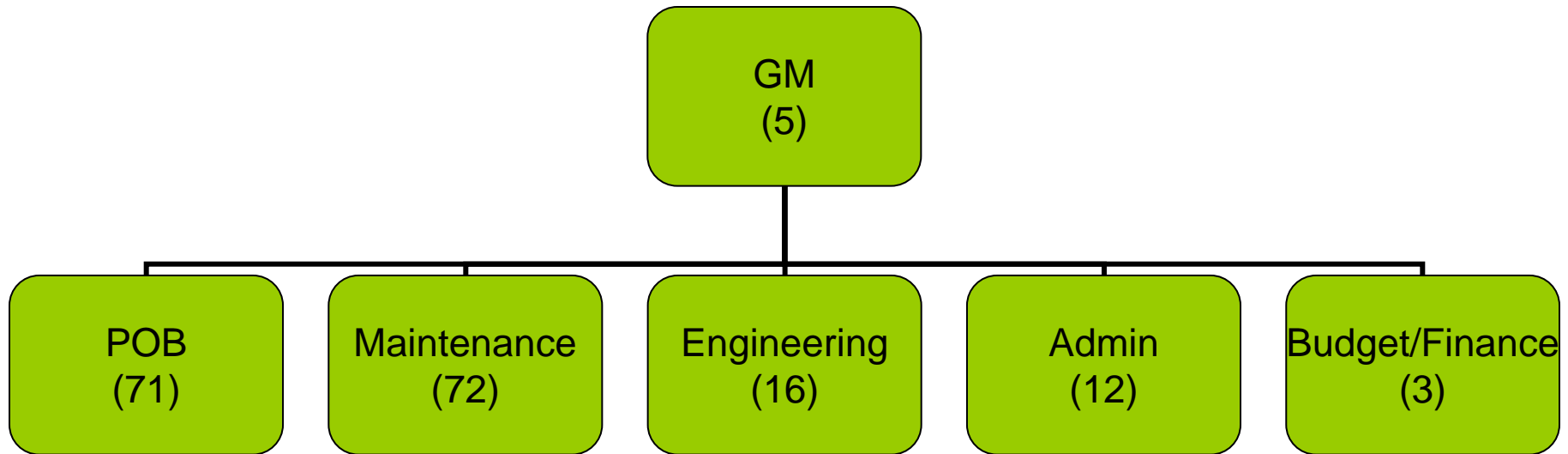
# Current Proposed Operating Budget

	2007 Actuals	2008 Actuals	2009 Expected	2010 Budget	2011 Budget	% Budget Increase
<b>Employees</b>	150	155	155	179	179	
<b>Personnel</b>	<b>12,901,653</b>	<b>13,297,176</b>	<b>13,221,265</b>	<b>15,743,000</b>	<b>15,743,045</b>	<b>0.0%</b>
Regular labor & Benefits	11,875,488	11,977,148	12,119,663	14,650,000	14,807,945	
Recruitment incentives	59,780	150,945	26,000	50,000	100,000	
Overtime	616,724	611,239	714,410	250,000	250,000	
Awards	198,222	199,116	179,869	375,000	250,000	
Training	49,645	48,286	98,000	250,000	200,000	
Staff Augmentation	101,794	310,442	83,323	168,000	135,100	
<b>Supplies and Material</b>	<b>7,182,102</b>	<b>7,037,869</b>	<b>8,012,522</b>	<b>11,648,000</b>	<b>12,425,400</b>	<b>6.7%</b>
Chemicals	4,805,984	5,519,997	7,011,201	11,048,000	11,611,400	
Other Supplies	2,376,118	1,517,872	1,001,321	600,000	814,000	
<b>Energy</b>	<b>5,552,395</b>	<b>5,594,741</b>	<b>7,197,732</b>	<b>7,094,000</b>	<b>6,831,950</b>	<b>-3.7%</b>
Utilities	5,354,572	5,426,668	7,070,511	6,362,000	6,482,700	
Heating Oil #2	167,311	150,367	104,417	625,000	308,750	
Diesel	3,812	12,536	14,357	63,000	31,500	
Gasoline	6,411	5,170	8,446	12,000	7,500	
Propane	20,289	-	-	32,000	1,500	
<b>Services</b>	<b>5,521,645</b>	<b>6,350,160</b>	<b>6,799,737</b>	<b>7,900,000</b>	<b>9,516,888</b>	<b>20.5%</b>
Regional Agreements	378,708	497,966	687,476	805,000	845,250	
Admin Services	1,205,296	1,152,186	1,266,202	1,596,000	1,720,000	
Facilities related services	1,221,172	1,922,054	1,530,800	1,546,574	1,617,143	
AE Services/Studies/Engineering projects	916,066	1,160,994	1,715,029	1,919,500	2,424,500	
Operations and Maintenance services	1,800,403	1,616,960	1,600,230	2,032,926	2,909,995	
<b>Equipment</b>	<b>324,439</b>	<b>231,223</b>	<b>75,062</b>	<b>450,000</b>	<b>595,000</b>	<b>32.2%</b>
<b>Communications</b>	<b>122,939</b>	<b>166,734</b>	<b>135,157</b>	<b>202,000</b>	<b>230,000</b>	<b>13.9%</b>
<b>Total</b>	<b>31,605,173</b>	<b>32,677,903</b>	<b>35,441,475</b>	<b>43,037,000</b>	<b>45,342,283</b>	<b>5.4%</b>
<b>vs. Budget</b>	<b>\$ 33,019,035</b>	<b>\$ 35,736,000</b>	<b>\$ 36,725,000</b>	<b>\$ 43,037,000</b>	<b>\$ 45,342,283</b>	
O&M Execution	95.7%	91.4%	96.5%	-	-	
Budget Increase		8.2%	2.8%	17.2%	5.4%	



# FY 2011 Personnel

---

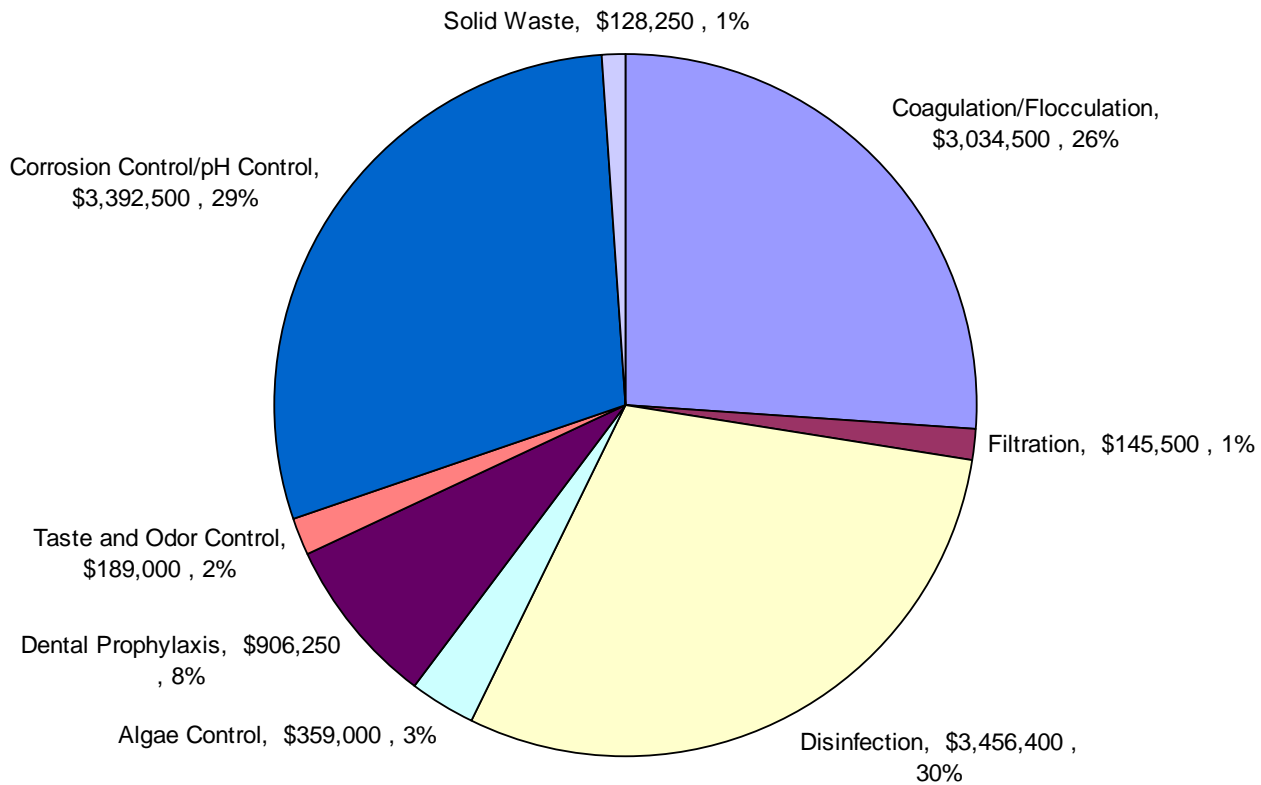


- Authorized headcount: 179 (same as FY 2010 level)
  - Funded positions: 174
  - O&M Funded: 166, Capital funded: 8
- Only unscheduled overtime is budgeted. Scheduled overtime will be funded through ongoing vacancies.



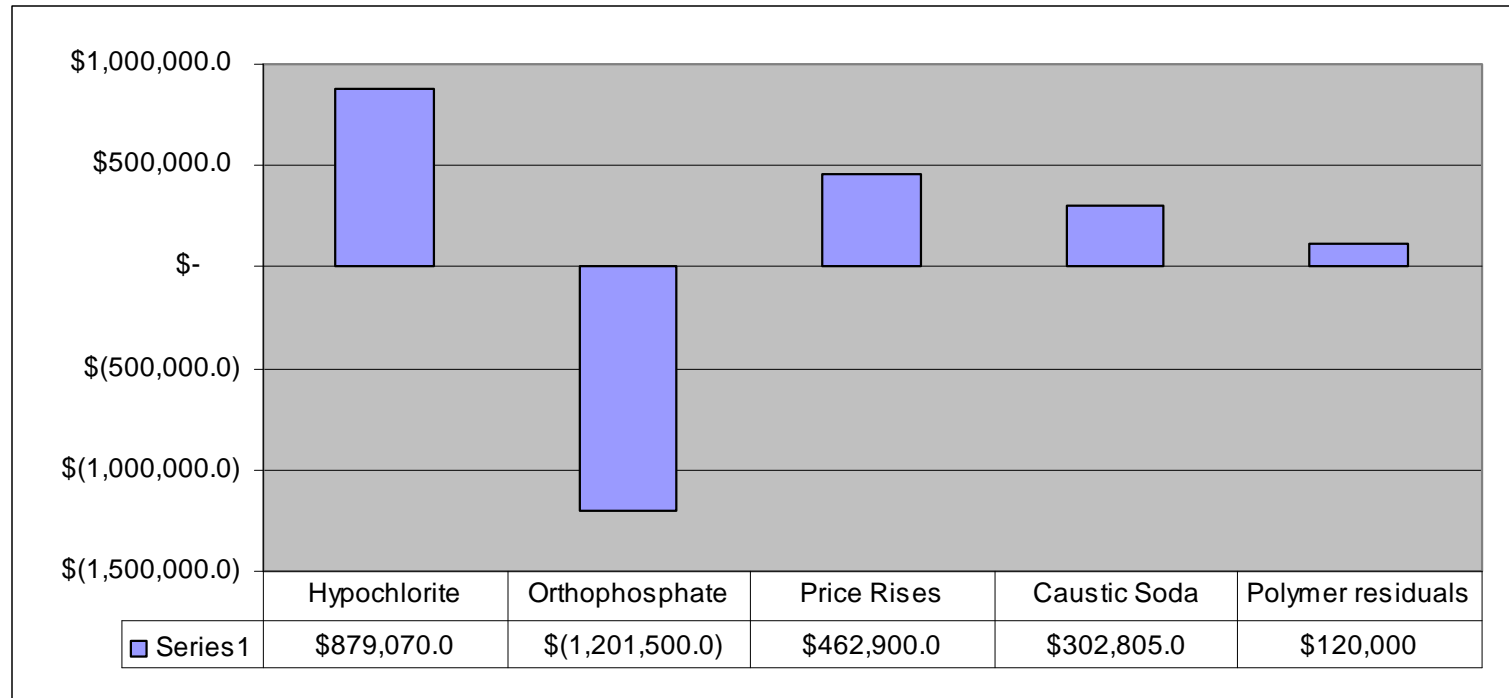
# FY 2011 Chemicals by Function

---





# Attribution for Chemicals (FY 2011 )



Chemical costs are projected to be higher by \$563,000, primarily attributed to:

- Transition from liquid chlorine to hypochlorite: \$879,000
- Transition from Lime to caustic soda for better corrosion control: \$303,000
- Polymer - Residuals: \$120,000
- Chemical price increases (offset by orthophosphate price decline): -\$600,000



# FY 2010 vs. FY 2011 Chemicals

		2010 Baseline budget				2011 Proposed				Changes
Chemical	Unit	Quantity	Unit Cost	Total	Quantity	Unit Cost	Total			
<b>Coagulation/Flocculation</b>										
Alum	Tons	9500	\$ 310	\$ 2,945,000	9500	\$ 315	\$ 2,992,500	\$ 47,500		
Polymer - Cationic	Totes	20	\$ 1,400	\$ 28,000	20	\$ 1,600	\$ 32,000	\$ 4,000		
Polymer - nonionic	Totes	5	\$ 1,700	\$ 8,500	5	\$ 2,000	\$ 10,000	\$ 1,500		
<b>Filtration</b>										
PACL	Gallons	55,000	\$ 1.95	\$ 107,250	55000	\$ 2	\$ 115,500	\$ 8,250		
	Totes	25	\$ 1,100	\$ 27,500	25	\$ 1,200	\$ 30,000	\$ 2,500		
<b>Disinfection</b>										
Liquid Chlorine	Tons	593	\$ 610	\$ 361,730		\$ 610	\$ -	\$ (361,730)		
Sodium Hypochlorite	Tons	1243	\$ 1,600	\$ 1,988,800	1835	\$ 1,760	\$ 3,229,600	\$ 1,240,800		
Ammonia	Tons	270	\$ 795	\$ 214,650	270	\$ 840	\$ 226,800	\$ 12,150		
<b>Algae Control</b>										
Sodium Permanganate	Totes	80	\$ 2,300	\$ 184,000	80	\$ 2,800	\$ 224,000	\$ 40,000		
Copper Sulfate	Totes	45	\$ 3,000	\$ 135,000	45	\$ 3,000	\$ 135,000	\$ -		
<b>Dental Prophylaxis</b>										
Fluoride Acid	Tons	1250	\$ 450	\$ 562,500	1250	\$ 725	\$ 906,250	\$ 343,750		
<b>Taste and Odor Control</b>										
Carbon	Tons	75	\$ 1,900	\$ 142,500	90	\$ 2,100	\$ 189,000	\$ 46,500		
<b>Corrosion Control/pH Control</b>										
Phosphoric acid	Tons	675	\$ 5,280	\$ 3,564,000	675	\$ 3,500	\$ 2,362,500	\$ (1,201,500)		
Caustic Soda	Tons	538	\$ 840	\$ 451,920	1075	\$ 800	\$ 860,000	\$ 408,080		
Lime	Tons	1795	\$ 145	\$ 260,275	1000	\$ 155	\$ 155,000	\$ (105,275)		
Sulfuric Acid	Tons	155	\$ 400	\$ 62,000	50	\$ 300	\$ 15,000	\$ (47,000)		
<b>Waste</b>										
Polmer - Residuals	Tons				40	\$ 3,000	\$ 120,000	\$ 120,000		
Sodium Bisulfate	Drums	30	\$ 150	\$ 4,500	30	\$ 275	\$ 8,250	\$ 3,750		
				<b>\$11,048,125</b>					<b>\$11,611,400</b>	<b>\$ 563,275</b>



# FY 2011 Energy

---

<b>Electricity</b>		<b>\$ 6,182,700</b>
	Electricity 51M KWH @0.111	\$5,661,000
	Additional electricity for residuals (4.7M KWH@0.111)	\$ 521,700
<b>Natural Gas</b>		<b>\$ 300,000</b>
<b>Heating Fuel #2</b>		<b>\$ 308,750</b>
	Admin building 30,000 gal@\$3.25	
	Dalecarlia Shops 20000 @\$3.25	
	Little Falls 15000 gal@\$3.25	
	McMillan 30000 gal@\$3.25	
<b>Diesel</b>		<b>\$ 31,500</b>
	McMillan Diesel (7500@\$3/gallon)	
	Dalecarlia Diesel 3000@ \$3	
<b>Propane</b>		<b>\$ 1,500</b>
	Forklifts 300 gals@\$5	
<b>Gasoline</b>		<b>\$ 7,500</b>
	2500 gallons @\$3	
<b>Total</b>		<b>\$ 6,831,950</b>

- Energy costs are projected to be down 3.7%.
- Lower electricity rate (through GSA) offsets most of the new electrical demand to operate the Residuals facility.



# FY 2011 Services

	2010	2011	\$ Change
<i>Regional Agreements/Water Related Programs</i>	805,000	\$ 845,250	\$ 40,250
<i>Admin Services/OWCP</i>	1,596,000	\$ 1,720,000	\$ 124,000
<i>Facilities Services</i>	1,546,574	\$ 1,617,143	\$ 70,569
<i>AE Services/Studies/Engineering projects</i>	1,919,500	\$ 2,424,500	\$ 505,000
<i>Operations and Maintenance services</i>	1,496,426	\$ 2,450,995	\$ 954,569
<i>IT Maintenance (includes Lab)</i>	536,500	\$ 459,000	\$ (77,500)
<b>Total</b>	<b>\$ 7,900,000</b>	<b>\$ 9,516,888</b>	<b>\$ 1,616,888</b>

- Services are higher by \$1.6 million as compared to 2010 budget.
- Engineering services are budgeted to be higher by \$600,000 due to special projects, studies, improved engineering capabilities and capability to react to extraordinary external events.
- Operations and maintenance services include GSA vehicles, water quality laboratory equipment services and external analyses, emergency repairs, HVAC, and other maintenance contracts. These services are expected to rise by \$1 million due to solid waste disposal contract for Residuals facility.



# FY 2011 Equipment

---

<b>FIXED EQUIPMENT</b>	<b>\$ 221,000</b>
<b>EQUIPMENT</b>	<b>\$ 174,000</b>
<b>ITEQUIPMENT</b>	<b>\$ 200,000</b>
<b>Total</b>	<b>\$ 595,000</b>

- Fixed equipment includes procurement of electronic circuit boards, crane track, lathe, pumps, pH Analyzers, turbidimeters, etc.
- Equipment include safety devices, hand tools, process equipment, valves, gauges, survey, laboratory instruments etc.
- IT Equipment includes procurement of Laboratory Information Management System (LIMS) and SCADA RTUs.



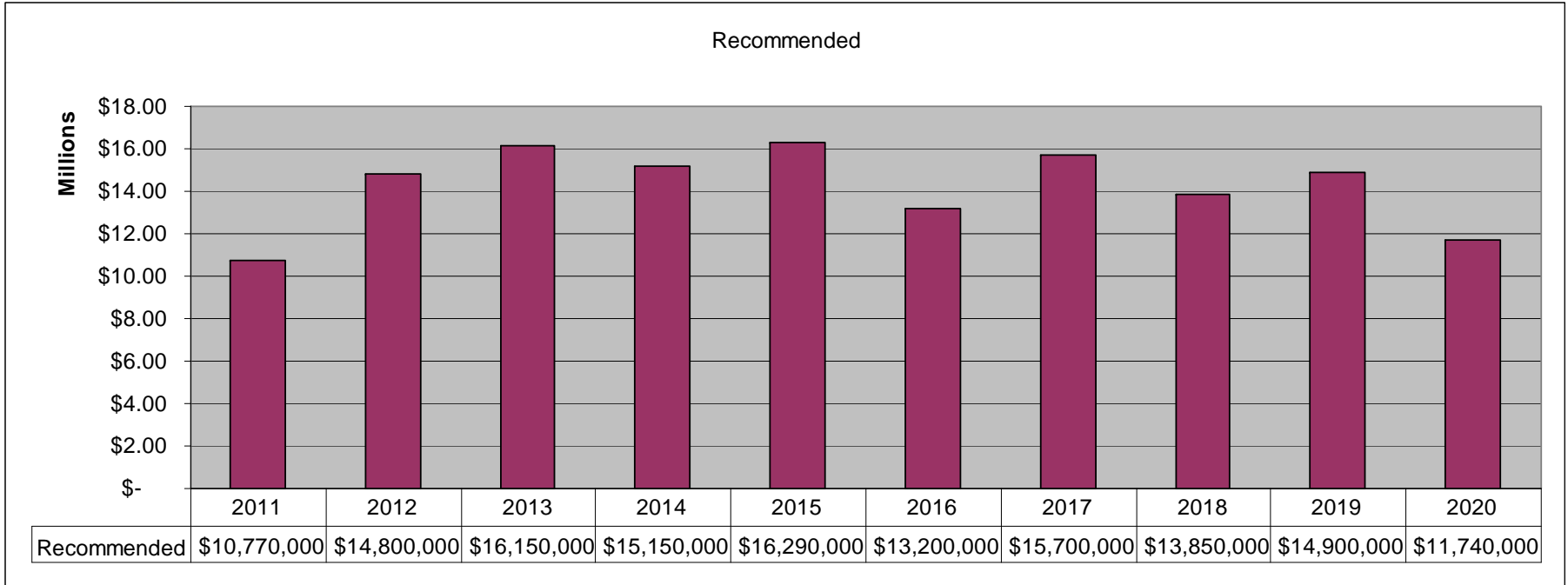
# Capital Improvement Plan

FY 2011

FY2011-FY2020



# CIP 2011-2020



- Washington Aqueduct has focused its 10-year Capital Improvement Plan of \$142.5 million in areas of revitalization, regulatory compliance, process improvements, public education, security and safety.
- FY 2011 CIP will be limited to \$10.77 million (vs. yearly average of \$14.25 million).
- WA staff and Technical Committee will review long-term sustainable capital funding strategy.



# FY 2011 Projects

Category	Code	Description	FY 2011	10-yr CIP Total	% Requested
<b>Revitalization/Infrastructure Improvements</b>					
	<b>122</b>	<b>Dalecarlia Pumping Station</b>			
		Building Renovation	\$ 500,000	\$ 1,500,000	33%
		Pump Motor Control Conversions	\$ 1,900,000	\$ 1,900,000	100%
		Roof Replacement	\$ 200,000	\$ 1,500,000	13%
	<b>126</b>	<b>McMillan WTP Improvements</b>			
		Annex 1 Building Renovation	\$ 150,000	\$ 1,150,000	13%
		Chemical Building Renovations	\$ 600,000	\$ 2,900,000	21%
		Clearwell Cleaning and Disinfection	\$ 100,000	\$ 3,600,000	3%
		East Shaft Pumping Station Renovation	\$ 200,000	\$ 1,500,000	13%
	<b>127</b>	<b>Appurtenant Transmission &amp; Storage Facilities</b>			
		Finished Water Reservoir Cleanings	\$ 2,150,000	\$ 6,100,000	35%
		Georgetown Reservoir Building Improvements	\$ 300,000	\$ 5,000,000	6%
		L.F.P.S. Motor Control Upgrades	\$ 500,000	\$ 1,900,000	26%
		Warehouse No. 6 Improvements	\$ 500,000	\$ 1,100,000	45%
	<b>128</b>	<b>Dalecarlia WTP Improvements</b>			
		East Filter Building Renovation, Ph. II	\$ 300,000	\$ 7,000,000	4%
		Maintenance Building Renovation	\$ 700,000	\$ 2,800,000	25%
<b>Regulatory Compliance</b>					
	<b>126</b>	<b>McMillan WTP Improvements</b>			
		Silt Curtain Replacement	\$ 720,000	\$ 720,000	100%
<b>Process Improvements</b>					
	<b>126</b>	<b>McMillan WTP Improvements</b>			
		Sample Line Replacement	\$ 200,000	\$ 200,000	100%
	<b>128</b>	<b>Dalecarlia WTP Improvements</b>			
		Sample Line Replacement	\$ 1,150,000	\$ 1,150,000	100%
<b>Security/Safety</b>					
	<b>122</b>	<b>Dalecarlia Pumping Station</b>			
		Fire Protection System Improvements	\$ 150,000	\$ 350,000	43%
	<b>126</b>	<b>McMillan WTP Improvements</b>			
		Fire Protection System Improvements	\$ 150,000	\$ 800,000	19%
	<b>127</b>	<b>Appurtenant Transmission &amp; Storage Facilities</b>			
		Fire Protection System Improvements	\$ 150,000	\$ 350,000	43%
	<b>128</b>	<b>Dalecarlia WTP Improvements</b>			
		Fire Protection System Improvements	\$ 150,000	\$ 1,250,000	12%
		<b>Grand Total</b>	<b>\$10,770,000</b>	<b>\$ 42,770,000</b>	<b>25%</b>



# Major Projects ( > \$3 million)

Code	Description	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Project Total
<b>122</b>	<b>Dalecarlia Pumping Station</b>											
	Valve and Piping Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 500,000	\$ 1,000,000	\$ 2,000,000	\$ 3,500,000
<b>126</b>	<b>McMillan WTP Improvements</b>											
	Clearwell Cleaning and Disinfection	\$ 100,000	\$ 1,000,000	\$ -	\$ 100,000	\$ 1,100,000	\$ -	\$ -	\$ 100,000	\$ 1,200,000	\$ -	\$ 3,600,000
	GIS System	\$ -	\$ -	\$ -	\$ -	\$ 300,000	\$ 600,000	\$ 2,400,000	\$ -	\$ -	\$ -	\$ 3,300,000
	McMillan Building Renovations	\$ -	\$ -	\$ 200,000	\$ 300,000	\$ 1,200,000	\$ -	\$ -	\$ 300,000	\$ 300,000	\$ 1,200,000	\$ 3,500,000
<b>127</b>	<b>Appurtenant Transmission &amp; Storage Facilities</b>											
	City Tunnel Repairs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,000,000	\$ 2,500,000	\$ 4,500,000	\$ 9,000,000
	Conduit Repairs	\$ -	\$ -	\$ -	\$ 2,150,000	\$ 3,000,000	\$ 3,000,000	\$ 2,750,000	\$ 3,000,000	\$ 3,000,000	\$ -	\$ 16,900,000
	Finished Water Reservoir Cleanings	\$ 2,150,000	\$ -	\$ 100,000	\$ 1,100,000	\$ 100,000	\$ 1,150,000	\$ 100,000	\$ 1,200,000	\$ -	\$ 200,000	\$ 6,100,000
	Georgetown Reservoir Building Improvements	\$ 300,000	\$ 700,000	\$ 2,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,000,000	\$ 5,000,000
<b>128</b>	<b>Dalecarlia WTP Improvements</b>											
	Administration Building Improvements	\$ -	\$ 2,000,000	\$ 2,200,000	\$ 4,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,700,000
	Chemical Building Electrical Upgrades	\$ -	\$ -	\$ 500,000	\$ 1,000,000	\$ 2,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,000,000
	Clearwell Cleaning & Disinfection	\$ -	\$ 100,000	\$ 1,050,000	\$ -	\$ -	\$ 150,000	\$ 1,100,000	\$ -	\$ 150,000	\$ 1,200,000	\$ 3,750,000
	East Filter Building Renovation, Ph. II	\$ 300,000	\$ 2,000,000	\$ 4,700,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,000,000
	GIS System	\$ -	\$ -	\$ -	\$ -	\$ 600,000	\$ 2,100,000	\$ 2,200,000	\$ -	\$ -	\$ -	\$ 4,900,000
	Roof Replacements	\$ -	\$ -	\$ -	\$ -	\$ 300,000	\$ 800,000	\$ 2,200,000	\$ -	\$ -	\$ -	\$ 3,300,000
<b>Grand Total</b>		<b>\$ 2,850,000</b>	<b>\$ 5,800,000</b>	<b>\$ 10,750,000</b>	<b>\$ 9,150,000</b>	<b>\$ 9,100,000</b>	<b>\$ 7,800,000</b>	<b>\$ 10,750,000</b>	<b>\$ 7,100,000</b>	<b>\$ 8,150,000</b>	<b>\$ 11,100,000</b>	<b>\$ 82,550,000</b>