



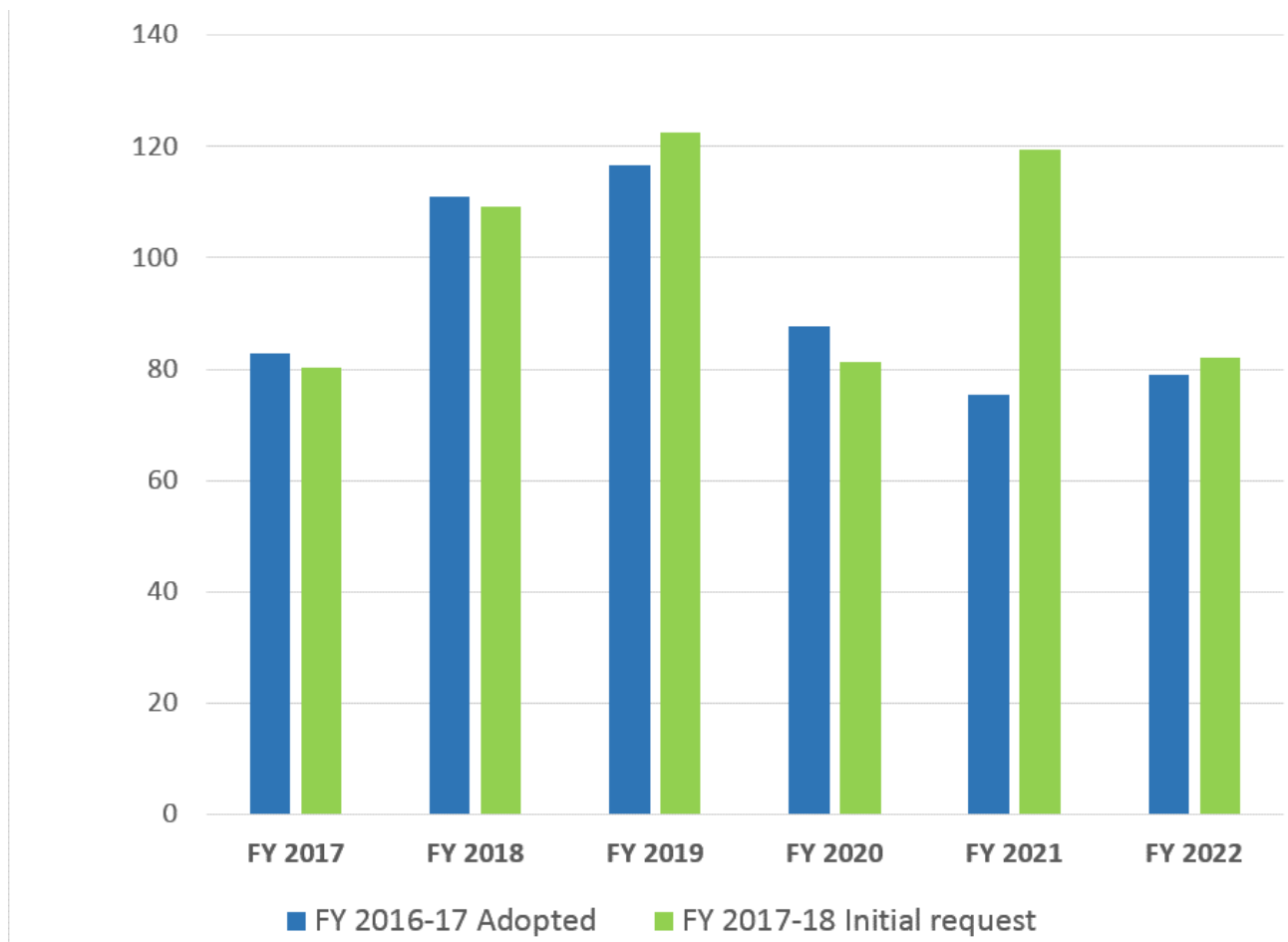
## Capital Improvement Program

Capital program planning at the Water Bureau is a collaborative effort among CIP Planning, Asset Management, and Engineering teams. The primary drivers of the bureau’s capital work are ensuring the reliable functioning of the drinking water system, replacing assets that are at or near the end of their useful lives, and achieving compliance with federal and state drinking water regulations. The bureau combines asset-management planning with master planning and other types of studies to recommend the most effective mix of capital projects for a five-year budget cycle.

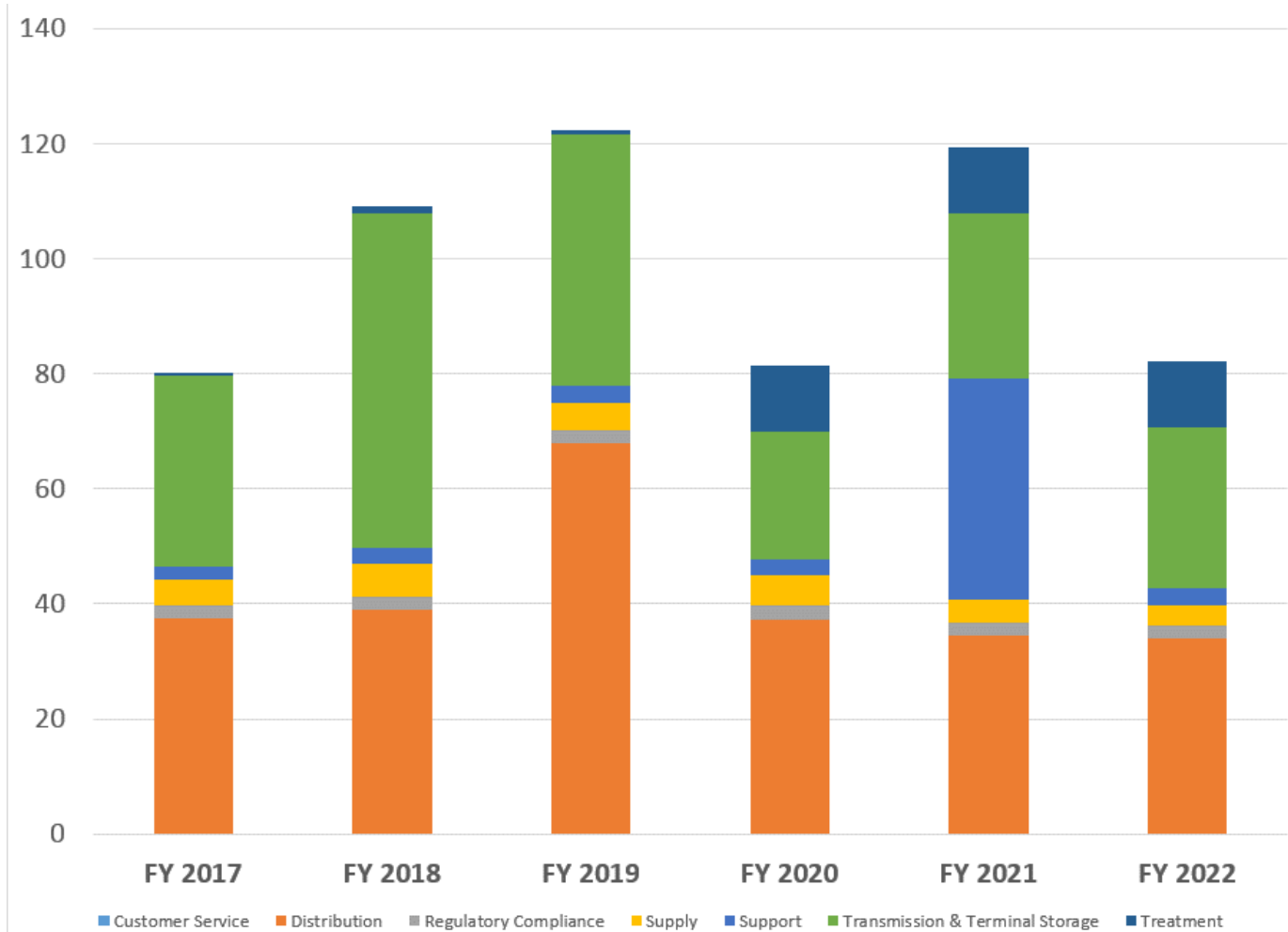
### PWB MAJOR BUDGET PROGRAMS

- Customer Service
- Distribution
- Regulatory Compliance and Water Quality
- Supply
- Support
- Transmission and Terminal Storage
- Treatment

### Initial FY 2017-18 CIP 5-Year Comparison



## Initial FY 2017-18 CIP by Program



## FY 2017-18 5-Year CIP Program Comparison

	FY 2016-17 CIP	FY 2017-18 CIP	Difference
Customer Service	\$ 0.3 Million	\$ 0.5 Million	\$ 0.2 Million
Distribution	\$ 218 Million	\$ 212 Million	(\$ 6.0) Million
Regulatory Compliance	\$ 11.6 Million	\$ 11.5 Million	-
Supply	24.6 Million	\$ 23.2 Million	(\$ 1.4) Million
Support	\$13.7 Million	\$ 50 Million	\$ 36.3 Million
Transmission and Terminal Storage	\$ 181 Million	\$ 181 Million	-
Treatment	\$ 24.4	\$ 36 Million	\$ 11.6 Million

## FY 2017-18 New Major Projects

For Fiscal Year (FY) 2017-18, the bureau proposes to begin \$10 million in new projects including distribution main work to reduce the risk of damage to I-5, expansion of the groundwater supply and a project to improve conduit operations.

	Initial Total	FY 2017-18 Amount
Fulton Pump Mains	\$ 5.1 Million	\$ 60,000
Vivian GW Supply	\$ 1.7 Million	\$ 160,000
Sandy River Crossing Outfall	\$ 0.65 Million	\$ 190,000

- The **Fulton Pump Mains Project (\$ 5.1 million)** will install approximately 3,350 feet of replacement main including about 300 feet to be bored under the I-5 Freeway.
- The **Vivian Groundwater Supply Improvements (\$ 1.7 million)** will provide an ammonia treatment system, corrosion control system, chlorine system improvements, two new booster pumps, and electrical upgrades at the Vivian site, acquired as part of the Powell Valley Water District annexation.
- The **Sand River Crossing Outfall Project (\$ 0.65 Million)** will install approximately 300 linear feet of 36-inch pipe for a new outfall at the Sandy River Crossing. The project will reduce the time needed time to flush or reactivate Conduits 2 or 4, and reduce the use of groundwater necessary during turbidity events in the Bull Run Watershed.

## Initial FY 2017-18 5-Year CIP

		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
		2018	2019	2020	2021	2022	5 Year Total
PROJECT	NAME						
<b>WBCSSE</b>	Emergency Management (<\$500k/project)	100,000	100,000	100,000	100,000	100,000	500,000
	<b>CUSTOMER SERVICE TOTAL</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>500,000</b>
<b>WBDIDM</b>	Distribution Mains (<\$500k/project)	14,705,000	12,150,000	9,950,000	18,650,000	15,650,000	71,105,000
W01590	Willamette River Pipe Crossing	6,600,000	38,600,000	7,900,000			53,100,000
W01682	Cornell Road Services - Macleay Park	1,000					1,000
W01842	N Jantzen Ave west of Pavilion	19,000					19,000
W01865	SW Flower Terrace at Dosch	23,000					23,000
W01880	SW Vista Ave from Spring St to Laurel St	766,000	10,000				776,000
W02004	Penridge Mains	230,000	2,000,000				2,230,000
W02005	Willamette Blvd Bridge Main Replacement	860,000	440,000	2,670,000	280,000		4,250,000
<b>W02073</b>	<b>SW Boones Ferry Rd at SW Arnold St Bridge</b>	<b>356,000</b>					<b>356,000</b>
<b>W02077</b>	<b>SE 20th Ave Oak St north of SE Pine St</b>	<b>330,000</b>					<b>330,000</b>
<b>W02100</b>	<b>Humboldt Sewer Repair</b>	<b>1,000</b>					<b>1,000</b>
<b>W02105</b>	<b>NE 49th and Roselawn Bundle</b>	<b>127,000</b>	<b>101,000</b>	<b>678,000</b>	<b>10,000</b>		<b>916,000</b>
<b>W02107</b>	<b>Fulton Pump Mains Replacement</b>	<b>60,000</b>	<b>570,000</b>	<b>630,000</b>	<b>30,000</b>	<b>2,835,000</b>	<b>4,125,000</b>
W01400	Interstate Facility Rehabilitation						
<b>WBDIHY</b>	Distribution Hydrant	1,400,000	1,400,000	1,400,000	1,400,000	1,400,000	7,000,000
<b>WBDIME</b>	Distribution Meters	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
<b>WBDIPT</b>	Pump Stations Tanks (<\$500k/project)	800,000	1,658,300	3,000,000	3,000,000	3,000,000	11,458,300
W01446	Greenleaf Pump Station	1,000,000	1,000				1,001,000
W01848	Council Crest Tank Roof Replacement	502,000					502,000
<b>WBDISV</b>	Distribution Service	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	30,000,000
<b>WBDIFS</b>	Field Support	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	20,000,000
	<b>DISTRIBUTION TOTAL</b>	<b>38,780,000</b>	<b>67,930,300</b>	<b>37,228,000</b>	<b>34,370,000</b>	<b>33,885,000</b>	<b>212,193,300</b>
<b>WBRCRC</b>	Regulatory Compliance (<\$500k/project)	2,300,000	2,300,000	2,300,000	2,300,000	2,300,000	11,500,000
	<b>REGULATORY COMPLIANCE TOTAL</b>	<b>2,300,000</b>	<b>2,300,000</b>	<b>2,300,000</b>	<b>2,300,000</b>	<b>2,300,000</b>	<b>11,500,000</b>
<b>WBSUBR</b>	Bull Run Watershed (<\$500k/project)	500,000	500,000	2,500,000	3,000,000	3,000,000	9,500,000
W01874	Road 10R MP 28.77 - 31.85	740,000	1,150,000				1,890,000
W01875	Road 10H MP 10.95 - 12.56	1,018,000					1,018,000
W02001	Dam 1 Needle Valve Replacement	252,000	2,365,000	473,000			3,090,000
W02003	Headworks Septic System Replacement	410,000					410,000
W02021	Microwave Communications System	1,626,000					1,626,000
<b>W02110</b>	<b>Road 10E MP 6.2 - 8.2</b>	<b>135,000</b>	<b>110,000</b>	<b>1,407,000</b>			<b>1,652,000</b>
<b>WBSUGW</b>	Groundwater (<\$500k/project)	390,000	210,000	50,000	550,000	550,000	1,750,000
W01371	Groundwater Electrical Supply Improvements	550,000					550,000
<b>W02106</b>	<b>Vivian Groundwater Improvements</b>	<b>160,000</b>	<b>340,000</b>	<b>830,000</b>	<b>400,000</b>		<b>1,730,000</b>
	<b>SUPPLY TOTAL</b>	<b>5,781,000</b>	<b>4,675,000</b>	<b>5,260,000</b>	<b>3,950,000</b>	<b>3,550,000</b>	<b>23,216,000</b>
<b>W02128</b>	<b>Portland Building Contribution</b>				<b>35,500,000</b>		<b>35,500,000</b>
<b>WBASPL</b>	Planning	2,900,000	2,900,000	2,900,000	2,900,000	2,900,000	14,500,000
	<b>SUPPORT TOTAL</b>	<b>2,900,000</b>	<b>2,900,000</b>	<b>2,900,000</b>	<b>38,400,000</b>	<b>2,900,000</b>	<b>50,000,000</b>
<b>WBTCT</b>	Conduits Transmission (<\$500k/project)	2,743,440	5,226,000	5,314,000	16,000,000	16,000,000	45,283,440
W02006	Gresham Conduit 2 Trestle Upgrades	655,000	230,000				885,000
<b>W02057</b>	<b>Conduit 3 Internal Inspection</b>	<b>62,000</b>					<b>62,000</b>
<b>W02104</b>	<b>Sandy River Crossing Outfall</b>	<b>190,000</b>	<b>274,000</b>	<b>186,000</b>			<b>650,000</b>
<b>WBTTR</b>	Terminal Reservoirs (<\$500k/project)	100,000	100,000	100,000	100,000	100,000	500,000
W01402	Washington Park Reservoir 3	54,100,000	37,700,000	15,100,000	6,900,000	12,000,000	125,800,000
W01524	Tabor Reservoir Adjustments	159,000					159,000
<b>W02108</b>	<b>WA Park Hypochlorite</b>		<b>188,000</b>	<b>344,000</b>	<b>1,208,000</b>		<b>1,740,000</b>
<b>W02111</b>	<b>Powell Butte Reservoir 1 Roof Upgrades</b>		<b>125,000</b>	<b>1,211,000</b>	<b>4,720,000</b>		<b>6,056,000</b>
	<b>TRANSMISSION &amp; TERMINAL STORAGE TOTAL</b>	<b>58,009,440</b>	<b>43,843,000</b>	<b>22,255,000</b>	<b>28,928,000</b>	<b>28,100,000</b>	<b>181,135,440</b>
<b>WBTMTM</b>	Treatment Improvements (<\$500k/project)	60,000	575,000	11,300,000	11,300,000	11,300,000	34,535,000
W01860	Headworks Generator Improvements	890,000	145,000				1,035,000
W02002	Chlorine Scrubber Replacement	400,000					400,000
	<b>TREATMENT TOTAL</b>	<b>1,350,000</b>	<b>720,000</b>	<b>11,300,000</b>	<b>11,300,000</b>	<b>11,300,000</b>	<b>35,970,000</b>
	<b>Grand Total</b>	<b>109,220,440</b>	<b>122,468,300</b>	<b>81,343,000</b>	<b>119,348,000</b>	<b>82,135,000</b>	<b>514,514,740</b>
	Adopted FY16/17 5-YR CIP	110,990,000	116,542,000	87,771,000	75,494,000	80,783,000	471,580,000
	<b>Inflation Adjusted (4.6%) Adopted FY16/17 5-YR CIP</b>	<b>116,095,540</b>	<b>121,902,932</b>	<b>91,808,466</b>	<b>78,966,724</b>	<b>84,499,018</b>	<b>493,272,680</b>
	<b>Difference</b>	<b>(6,875,100)</b>	<b>565,368</b>	<b>(10,465,466)</b>	<b>40,381,276</b>	<b>(2,364,018)</b>	<b>21,242,060</b>