

**CAPITAL PROJECTS - WATER OPERATING FUND PROJECTS**

**CITY OF BEAVERTON**

**BUDGET TREND ANALYSIS - FY 2015-16 TO FY 2018-19**

With Explanations on Significant Changes between Budgeted 2017-18 and Recommended 2018-19

Fund:	Water Fund					
Department:	Water Operations					
CLASS	Actual FY 2015-16	Actual FY 2016-17	Budget FY 2017-18	Estimated FY 2017-18	Recommended FY 2018-19	% Change Budgeted Vs. Recommended
Personnel Services	\$1,013,303	\$1,402,392	\$1,816,732	\$1,509,474	\$2,158,628	18.82%
Materials and Services	2,873,154	3,237,292	3,955,346	3,669,009	4,005,298	1.26%
Capital Outlay	687,413	173,926	79,153	122,902	265,450	235.36%
Transfers	3,646,920	4,416,912	3,416,756	3,456,870	4,924,748	44.14%
<b>SUB-TOTAL</b>	<b>\$8,220,790</b>	<b>\$9,230,522</b>	<b>\$9,267,987</b>	<b>\$8,758,255</b>	<b>\$11,354,124</b>	
Contingency						
Unreserved			8,926,176		7,984,944	
JWC Emergency			500,000		500,000	
Rate Stabilization			600,000		600,000	
Reserve for equip.			324,323		342,168	
<b>TOTAL</b>	<b>\$8,220,790</b>	<b>\$9,230,522</b>	<b>\$19,618,486</b>	<b>\$8,758,255</b>	<b>\$20,781,236</b>	
FTE's	10.75	10.75	16.25	16.25	19.00	

**Explanation of item(s) that are significant (10% and greater than \$10,000):**

**Personnel services:**

FY 2018-19 reflects a net increase of 2.75 FTE consisting of: 3.0 FTE new positions for Water Operations; 2 FTE Water Distribution Equipment Operators, 1 FTE Water Customer Service Technician and the reallocation of a 0.25 FTE Inventory Control Technician from the Water Fund to the Garage Fund. The Recommended Budget also includes step increases, COLA increases for SEIU, and Management as well as a 2.23% increase in retirement reserves contributions (PERS), medical insurance cost increases of 7.5% for the Kaiser Plan, and an 11% increase in MODA plans.

**Materials and services:**

No significant changes.

**Capital outlay:**

FY 2018-19 reflects an increase for vehicle replacements over the amount budgeted in FY 2017-18.

**Transfers:**

FY 2018-19 reflect in increase of \$1.5 million to the water debt service fund for the annual on the new \$21 million in water revenue bond issue.

CITY OF BEAVERTON, OREGON  
FISCAL YEAR 2018-19 BUDGET

<b>FUND:</b> 501 WATER	<b>DEPARTMENT:</b> PUBLIC WORKS
<b>PROGRAM:</b> 3XXX WATER REPLACEMENT PROJECTS	<b>PROGRAM MANAGER:</b> DAVID WINSHIP

**DRINKING WATER PROGRAM**

For a complete narrative of the budget process for Water Construction Projects, refer to pages 66 – 67.

The Drinking Water Program is funded by: the Water Construction Fund (505) which obtains revenue from Water System Development Charges (SDCs), loans and water revenue bonds and the Water Fund (501) that obtains revenue from water sales, water connection permits, and fees.

The City of Beaverton (City) provides drinking water to approximately 70,000 of the total 96,165 residents within Beaverton city-limits. TVWD currently serves approximately 16,000 Beaverton residents within the withdrawal areas depicted on the following page. These residents are scheduled to be served by the City within 5-7 years. An additional, 8,000 new residents are expected in the South Cooper Mt. area will be served by the City of Beaverton.

**Progress on FY 2017-18 Action Plan:**

**Replacement Projects**

The City currently owns, operates and maintains approximately 286 miles of 2” through 36” diameter waterlines. In 1991, the City identified approximately 162,240 lineal feet of water lines ranging in size from 2 to 24 inches and 2,265 fire hydrants that would require replacement over the estimated following 35 years. To date, the City has replaced approximately 107,041 lineal feet (66 %) of the previously identified waterlines for replacement because they were at the end of useful life.

Significant water renewal and replacement projects budgeted, designed and/or constructed in FY 2017-18:

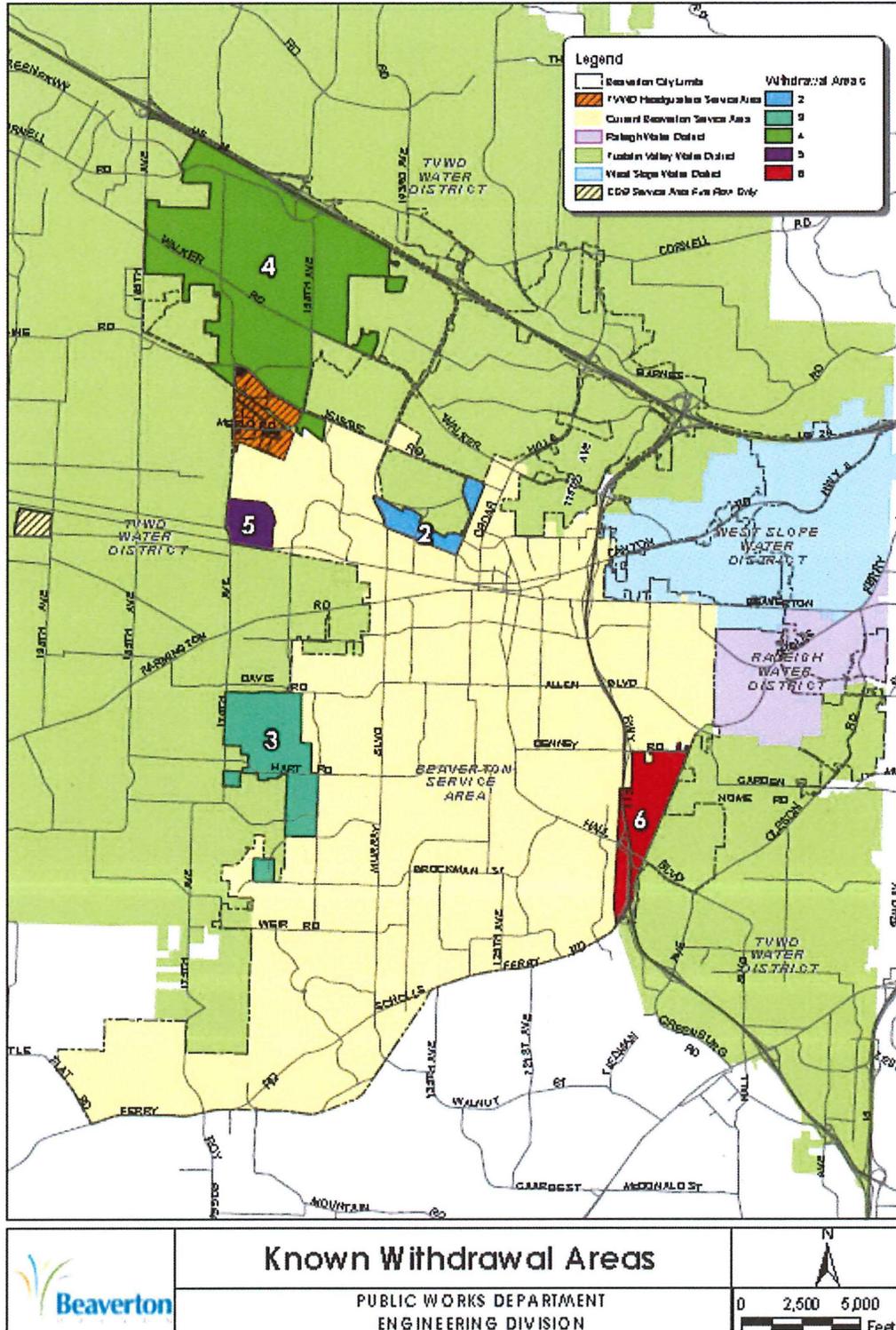
<u>CIP No.</u>	<u>CIP Project Name</u>
3302	Farmington Road Waterline Improvements (148th Ave to Hocken Rd)
4109	Denney Rd (105th Ave - Rollingwood DR and King Blvd - Belaire DR) 12-inch Waterline
4131	140th Ct (140th Ave to End) Waterline Replacement
4083	Duncan Ln (Jamieson to the West) Waterline Upgrade
3611	JWC Upgrade Projects
4060	Water System Security Upgrades
4017A	Water System Master Plan (last update-2009)
4128	TVWD Cooperative Water Projects, service area analysis
4118A	Settler Way Waterline Replacement (1,400 LF of 6" & 8") Phase 1 (includes Greenway Ridge)
4118B	Settler Way Waterline Replacement (2,000 LF of 6" & 8") Phase 2
4107	Annual Water Line Maintenance and Replacement Projects
4120	Taralynn Ave. Allen Blvd. to end
4121	Kimberly CT
4132	27 <sup>th</sup> CT – Kimberly CT @ 142 <sup>nd</sup> Ave
4134A	Pressure Reducing Valves – PRV (various locations)
6037	Beaverdam RD – Rose Biggi Ave. to Watson Ave

**Water Master Plan Update (CIP 4017A)**

The City hired Murraysmith and Associates in 2016 to complete an update to the City’s 2009 Water Master Plan. Originally anticipated to be complete summer 2017, rapid growth from development in South Cooper Mountain (SCM), City participation in the Willamette Water Supply Program (WWSP), and withdrawal of some existing TVWD service areas made water demand forecasting difficult, and ultimately delayed the master plan completion. Now that City participation in the WWSP is confirmed (5 MGD), better forecasting for SCM is known, and the City and TVWD have signed a 40-year IGA covering withdrawal and transfer of service areas from TVWD to the City’s water service area, Murraysmith can estimate total water demand, develop a CIP project list, and determine if water SDCs are adequate in both the short-term and long-term. The Water Master Plan Update is scheduled to be complete summer 2018. A reset of SDC charges will follow.

CITY OF BEAVERTON, OREGON  
FISCAL YEAR 2018-19 BUDGET

<b>FUND:</b> 501 WATER	<b>DEPARTMENT:</b> PUBLIC WORKS
<b>PROGRAM:</b> 3XXX WATER REPLACEMENT PROJECTS	<b>PROGRAM MANAGER:</b> DAVID WINSHIP



Withdrawal and transfer of water service areas from TVWD to the City's water service area from IGA

CITY OF BEAVERTON, OREGON  
FISCAL YEAR 2018-19 BUDGET

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**Aquifer Storage and Recover (ASR)**

During the winter and spring, when streamflow in the Tualatin River is plentiful, the City injects treated drinking water originating from the Joint Water Commission (JWC) water treatment plant into deep natural underground basalt formations (aquifers), mixing with and displacing native groundwater. During the summer months, when natural streamflow in the Tualatin River is low, treated water is recovered (pumped out) from ASR wells to supplement JWC surface water and help meet Beaverton’s overall peak season demands which have reached as high as 17 million gallons per day (mgd).

Since 1999, the City has used ASR as an alternative means to increase summer time drinking water supply and currently provides up to 5 mgd. In 2017, the average daily drinking water demand was 7.15 mgd and the highest demand day was 13.61 mgd for the City’s water service area. Beaverton’s ASR technology plays a vital role in meeting peak (summer) season customer water demand, which reached 15.2 million gallons on August 1, 2015. That single day volume included nearly 2 million gallons wheeled through the Beaverton water system to the City of Tigard under a water purchase contract Tigard has with the Joint Water Commission (JWC) for the summer.

Drinking water from ASR wells represents up to 30 percent of daily water consumed in the summer period, and 7.3 percent of all water consumed in 2017 by Beaverton water customers. Beaverton’s ASR program involves conveying treated drinking water from the JWC water treatment plant into natural underground basalt formations (aquifers), where it is stored for later use. The City currently has two operational ASR Wells Nos. 2 and 4. ASR 3, was drilled in 2000, and construction of a pumping station is planned for 2018, and is listed as CIP No. 4021G.

Since 1999, the City has pumped out over 4.25 billion gallons of potable water stored in the three wells and from native groundwater reserves to help meet peak summer season water demand. Acting as a conservation measure, ASR conserves surface water from primary sources (rivers and dams) during environmentally stressful summer seasons. In calendar year 2017, a total of 191 million gallons (MG) of stored water and native groundwater were recovered (pumped into the water system) from the ASR wells to help meet summer customer drinking water consumption.

ASR Well No. 1, originally constructed as a conventional groundwater well in 1945, was refitted for ASR use in 1997, having a peak pumping capacity of 1 mgd. Having reached the end of its useful life, ASR No. 1 was permanently taken out of service and converted to a groundwater monitoring well. The current total peak pumping capacity of the remaining ASR Well Nos. 2 and 4 is 5 mgd, with an overall underground storage capacity volume of about 851 MG, which can be pumped out under the City’s ASR and groundwater permits with the Oregon Water Resources Department.

Once completed, ASR Well No. 5 (CIP 4021D) will expand ASR capacity by 2 mgd. ASR 5 will increase the reliability and capacity of supply both for the City of Beaverton and indirectly for our JWC partners. An increase in 2 mgd during average peak season water demand will provide for an equivalent added supply of potable water to approximately 15,800 new Beaverton residents (using current average-day per capita water use) as Beaverton’s residential and commercial and industrial business grows. Water storage volume in the new ASR well will be approximately 237 million gallons (727.3 acre-feet), which will be recovered (pumped out of the well) during the peak summer months to supply City of Beaverton water users during peak-season demand. ASR Well No. 5 will raise the current peak pumping capacity of 5 mgd to 7 mgd.

**Joint Water Commission Supply**

The Joint Water Commission (JWC) water treatment plant has a nominal capacity of 75 million gallons per day (mgd) of treated drinking water. The City of Beaverton owns a 25 percent share of JWC’s water plant capacity, equivalent to 18.75 mgd of drinking water to supply water to 70,000 city water customers of the total 95,385 residents and businesses within the city limits. To convey the JWC treated water to Beaverton, the City owns the equivalent of 14 mgd-capacity in the 13-mile long South Transmission Line; and equivalent of 2.1 mgd capacity in the 14-mile long Northside Transmission Line; along with full ownership of the Beaverton’s 7-mile long 36-inch diameter transmission line, which in combination the three carries potable water from the JWC water treatment plant to Beaverton’s in-town storage reservoirs and distribution system. The City’s budget included \$515,900 in FY 2016-17, Beaverton’s proportional share of the total cost based on ownership share, for various projects. The projects replace and upgrade selected parts of the Water Treatment Plant, added backup power generation and other projects related to operation and maintenance of overall JWC assets.

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FISCAL YEAR 2018-19 BUDGET

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**FY 2018-19 Action Plan:**

Significant water system improvement and replacement projects budgeted for FY 2018-19:

<u>CIP No.</u>	<u>CIP Project Name</u>
6073B	Beaverdam Rd (Cedar Hills Blvd - Watson) Utility Improvement, Phase 2
4120	Taralynn Ave (Allen Blvd - EOP) Waterline Replacement
6095	11th Street - Lee to Alger (1,150 LF 6" DIP)
3106A	Menlo DR (Allen Blvd to Fairmount DR) Sidewalk Water Meter Service Relocation
4132	27th Court - Kimberly Ct to 142nd Ave (600 LF of 6")
4118A	Settler Way Waterline Replacement (1,400 LF of 6"&8") Phase 1 (includes Greenway Ridge)
4118B	Settler Way Waterline Replacement (2,000 LF of 6"&8") Phase 2
4078B	Sexton Mountain Pump Station Upgrade
4134	Davies/Brockman PRV Upgrade
3611	JWC Upgrade Projects
4017A	Water System Master Plan
4134A	PRV Upgrades (various locations)

**Scoggins Dam and Hagg Lake**

In 2001, in partnership with the U.S. Bureau of Reclamation (Reclamation), the City of Beaverton joined Clean Water Services, the Tualatin Valley Water District, and City of Hillsboro as water supply partners to form the Tualatin Basin Water Supply Project Partnership (TBWSP). The purpose of the project was to increase the storage capacity behind Scoggins Dam to about 100,000 acre-feet to meet long-term water supply needs. The TBWSP consisted of raising the height of Scoggins Dam (which forms Hagg Lake); construction of a large pipeline from the dam to the JWC water treatment plant; a large pumping station to pump water from the Tualatin River into Hagg Lake during the winter; and expansion of the JWC water treatment plant south of Forest Grove. Since 1973, when Reclamation was developing the Tualatin Project (Scoggins Dam, Hagg Lake), the City of Beaverton has been a direct municipal "repayment contractor" to Reclamation for 4,000 acre-feet (1.3 billion gallons) annually. Beaverton has two current contracts with Reclamation dating as far back as 1971.

During the summer, when drinking water demand is high and Tualatin River streamflow is low, Beaverton requests release of water from Hagg Lake (Scoggins Reservoir) and Barney Reservoir (formed behind a dam on the Trask River in the Coast Range) to compensate for the amount of water removed for Beaverton's summer use. Scoggins Dam is situated on Scoggins Creek creating Hagg Lake. Flows from the dam downstream into lower Scoggins Creek are tributary to the Tualatin River, near Gaston. Completion of the Scoggins Dam construction occurred in 1975.

Scoggins Dam/Hagg Lake is currently Beaverton's and Washington County's primary source of water in the summer and a central component to our region's water supply. Hagg Lake supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, irrigates 17,000 acres of cropland, provides important flood control and recreation opportunities, and sustains water quality in the Tualatin River to protect fish and wildlife habitat.

A potentially catastrophic problem was identified with Scoggins Dam in 2007 by Reclamation staff, related to a Cascadia Subduction Zone earthquake. Between 2009 and 2010, a Risk Analysis was performed on Scoggins Dam to determine the risk from seismic events with Scoggins Dam, owned and operated by Reclamation. Evaluation of risks associated with seismic-induced overtopping and spillway wall failure causing potential catastrophic dam failure provided justification to initiate expedited action to reduce risks based on Reclamation guidelines. Risks associated with earthquake-induced internal erosion were found to be within the range of justification to take action to reduce risk. Based on the findings of these risk analyses, a decision was made in 2010 to move into a Corrective Action Study (CAS).

Scoggins Dam has been classified as one of the most seismically at-risk dams that Reclamation manages. This classification means that failure of the dam due to a large earthquake could result in significant damages or even loss of life to communities if it is not upgraded. Reclamation has spent the last six years developing and refining alternatives, with scopes and cost estimates to complete a seismic retrofit of the Scoggins Dam in a Corrective Action Study under Reclamation's Safety of Dams Program. The estimates for structural modifications of the existing dam are \$200 to \$500 million. Through local leadership from Clean Water Services, the JWC partners—Beaverton, Hillsboro, Forest Grove and the TVWD continue to support the work to secure

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Scoggins Dam to reduce the risk of failure in a major earthquake in order to protect public safety, secure our region’s water supply, and help meet future needs.

During FY 18-19, the Principal Engineer in the Public Works Department will continue to work in partnership with Clean Water Services, will continue to work directly with Reclamation staff from the Boise and Denver federal offices on the designated Project Management Team (PMT). The PMT continues to work toward a final PMP containing a determination of corrective actions to modify the existing Scoggins Dam. The Principal Engineer is a member of the PMT, representing the JWC members who have repayment contracts with Reclamation.

In a relatively new development of the project, Reclamation and Clean Water Services sent a letter in November 2015 to approximately 28 property owners downstream of Scoggins to inform them of a newly considered dam safety/water supply concept that could impact their property and a subsequent local informational meeting was held with property owners and local residents. In addition, on March 23, 2017, a neighborhood project meeting was held near the current dam site. The new concept under consideration is a new downstream dam as a replacement of the existing Scoggins Dam, which forms Hagg Lake. The downstream dam concept would inundate the area currently occupied by Stimson Mill and a number of nearby homes and properties. Reclamation and CWS are coordinating with Stimson Lumber. Stimson is supportive of the efforts to review this concept and have indicated that they want to keep the mill in the area and retain the jobs should relocation be necessary. Reclamation and CWS are working closely on this new concept with the other Tualatin Repayment Contractors—Tualatin Valley Irrigation District, and the Cities of Hillsboro, Beaverton and Forest Grove.

The picture below is one of several concepts currently under consideration including options which would strengthen and raise the dam in its current location. Studies, reviews and other processes will continue for several years before the preferred alternative by Reclamation is selected. During FY 18-19, the downstream roller-compacted concrete replacement dam will be designed at the feasibility level, following successful drilling to find foundation rock at the downstream location in late 2017. As the lead partner, CWS will continue the outreach efforts with the neighbors, property owners and stakeholders on this project. Scoggins Dam/Hagg Lake is central to our region’s economic vitality and environmental health and it must be strengthened to protect public safety and secure our primary water supply.



**City of Beaverton  
CIP Financial Plan - Water  
FY 2017-18 Estimated**

Fund #	CIP #	Project #	Project Name	SDC	Surcharge	Bond Proceeds	IFA Loan Proceeds	Operating: Maint & Replacement	Funding Total
<b>Water Capital Improvement Projects:</b>									
501	3611	3611	JWC Projects					995,325	995,325
									1,792,250
501	3700	4017	Water System Hydraulic Modeling & Mapping					50,000	50,000
501	3700	4031Q	Annual Waterline Maintenance & Replacement Projects (3700)					50,000	50,000
			<b>Totals - 3700</b>	-	-	-	-	<b>100,000</b>	<b>100,000</b>
501	3701	3302	Farmington Rd. Waterline Improvement (148th to Hocken) 4,000 LF of 12" & 16"					2,500	2,500
501	3701	3407	Beaverton Creek Shared Use Path					38,000	38,000
501	3701	3518	Canyon Road Alternative Bike Network					24,000	24,000
501	3701	4060	Water System Security Upgrades					40,000	40,000
501	3701	4088	Energy Recovery Hydro Projects (Energy Trust of Oregon)					10,000	10,000
501	3701	4111	Hyland Way					63,000	63,000
501	3701	4116	6th St 8-Inch Waterline (Stott Ave to Watson Ave)					166,000	166,000
501	3701	4118	Greenway Ridge Waterline (6-inch replacement)					189,000	189,000
501	3701	4120	Taralynn Avenue - Allen Blvd. to end (1,000 LF of 6")					15,000	15,000
501	3701	4121	Kimberly Court (1,100 LF of 6")					553,000	553,000
501	3701	4134	Davies/Brockman; Weir Rd/158th Ave PRV Upgrades					70,000	70,000
501	3701	4133	Backup Emergency Generator					5,000	5,000
501	3701	6095	Sellwood Subdivision (1,150 LF 6" DIP)					210,000	210,000
501	3701	4017A	Water System Master Plan					96,000	96,000
501	3701	4078C	Sexton Mt. Pump Station Upgrade and Emergency Generator, Phase 3, design					90,000	90,000
501	3701	4118A	Settler Way Waterline Replacement (1,400 LF of 6"&8") Phase 1 (includes Greenway Ridge)					474,000	474,000
501	3701	4118B	Settler Way Waterline Replacement (2,000 LF of 6"&8") Phase 2					26,000	26,000
501	3701	4134A	2017 Water System PRVs Project - SW 153rd Ave&Beaverton CreekTC/Division&Village Place					340,000	340,000

**City of Beaverton  
CIP Financial Plan - Water  
FY 2017-18 Estimated**

Fund #	CIP #	Project #	Project Name	SDC	Surcharge	Bond Proceeds	IFA Loan Proceeds	Operating: Maint & Replacement	Funding Total
501	3701	4152	Chestnut PI (BH Hwy - Cypress St) 1200 LF of 8"					400,000	400,000
501	3701	6073B	Beaverdam Rd Waterline Replacement (Rose Biggi Ave - Watson Ave), Phase 2; 800 LF of 8"					305,000	305,000
			<b>Totals - 3701</b>	-	-	-	-	<b>3,116,500</b>	<b>3,116,500</b>
									2,955,551
505	3620	3302	Farmington Rd. Waterline Improvement (148th to Hocken) 4,000 LF of 12"	2,500					2,500
505	3620	4006	Water System Telemetry (annual upgrade project)	75,000					75,000
	3620	4150	Denney Road Commerce Center (Opportunity Project) Replacement of 2,000 LF with 12" Waterline Upsizing. Joint project with redevelopment	380,000					380,000
505	3620	4118A	Settler Way Waterline Replacement (1,400 LF of 6" & 8") Phase 1 (includes Greenway Ridge)	422,000					422,000
505	3620	4118B	Settler Way Waterline Replacement (2,000 LF of 6" & 8") Phase 2	26,000					26,000
505	3620	3408	Hocken Ave (RR-TV highway)	5,000					5,000
			<b>Totals - 3620</b>	<b>910,500</b>	-	-	-	-	<b>910,500</b>
									1,313,500
505	3621	4021D	ASR Well No. 5 (includes combined facility w/Sorrento PS seismic upgrades)				200,000		200,000
									1,600,000
505	3622	4058A	Cooper Mountain (5.5 MG) Reservoir No. 2 (Bond)			250,000			250,000
505	3622	5092C	SW 175th/Weir Road Water Transmission Line Project (Bond)			745,000			745,000
505	3622	5092B	175th/Kemmer Intersection (upgrade existing and new 24" waterline) (Bond)			200,000			200,000
505	3622	4151	Kemmer Rd (176th Ave - 182nd Ave) 24-Inch Waterline Extension (Bond)			175,000			175,000
			<b>Totals - 3622 (North Cooper Mtn. Reservoir #2 and Transmission Lines) (Bond)</b>	-	-	<b>1,370,000</b>	-	-	<b>1,370,000</b>
									2,209,625
505	3623	4021G	South Cooper Mt. - Non-potable (purple pipe) Water System (G2A)	700,000					700,000
									425,000
505	3625	6083	South Cooper Mt. Infrastructure (Potable)	50,000					50,000
									750,000
505	3627	5090	Jenkins Waterline Extension - 153rd Ave to Merlo (opportunity project) (Bond)			136,000			136,000
505	3627	4128C	158th at Merlo Connection to Jenkins (Bond)			1,422,000			1,422,000
505	3627	4128A	Cedar Hills Blvd/Jenkins Rd/Walker Rd Water System Improvements (Bond)			1,135,000			1,135,000
505	3627	4128D	Waterhouse South Area 4 Withdrawal Area (Bond)			200,000			200,000
505	3627	4128E	Urban Renewal Area 2 Withdrawal Area (Bond)			150,000			150,000
505	3627	4128F	Southwest Beaverton Area 3 Withdrawal Area (Bond)			100,000			100,000
505	3627	4128G	SW 170th/Arbor Creek TVWD Withdrawal Area 5 (Bond)			100,000			100,000
505	3627	4128H	Denney-Whitford, TVWD Withdrawal Area 6 (Bond)			150,000			150,000
			<b>Totals - 3627 (Withdrawal of Areas from TVWD) (Bond)</b>	-	-	<b>3,393,000</b>	-	-	<b>3,393,000</b>
									3,350,000
505	3631	4107	Meridian Pump Station Replacement (Bond)			200,000			200,000
									400,000
505	3636	4051	Scoggins Dam Raise (TBWSP)	2,000					2,000
									2,000
505	3643	4126	Willamette Water Supply Program (WWSP) (Bond)			50,000			50,000
505	3643	4141	WWSP Supply Intertie (opportunity project) @ Cornelius Pass Road/TV Hwy. (Bond)			150,000			150,000
			<b>Totals - 3643 Willamette Water Supply (Bond)</b>	-	-	<b>200,000</b>	-	-	<b>200,000</b>
									844,000
505	3644	4122	Alvord Lane Waterline, 2,600 LF of 16" (Bond)			580,000			580,000
505	3644	5092A	SW 175th - Scholls to Alvord (extend 24" waterline 1,200 LF & connections to other waterlines) (Oppor			866,000			866,000
505	3644	4148	South Cooper Mountain LID			50,000			50,000
			<b>Totals - 3644 (South Cooper Mtn. Extra Capacity Projects), (Bond)</b>	-	-	<b>1,496,000</b>	-	-	<b>1,496,000</b>
									1,974,000
			<b>Totals =&gt;</b>	<b>1,662,500</b>	-	<b>6,659,000</b>	<b>200,000</b>	<b>4,211,825</b>	<b>12,733,325</b>

**City of Beaverton  
CIP Financial Plan - Water  
FY 2018-19 Recommended**

Fund #	CIP #	Proj #	Project Name	SDC	Surcharge	Bond Proceeds	IFA Loan Proceeds	Operating: Maint & Replacement	Developer Reimb	Funding Total
<b>Water Capital Improvement Projects:</b>										
501	3611	3611	<b>JWC Projects</b>					1,882,250		1,882,250
501	3700	4017	Water System Hydraulic Modeling & Mapping					50,000		50,000
501	3700	4031Q	Annual Waterline Maintenance & Replacement Projects (3700)					50,000		50,000
			<b>Totals - 3700</b>					100,000		100,000
501	3701	3410	Shared Use Path along Denney Rd (King Blvd-Fanno Creek Trailhead)					6,000		6,000
501	3701	3519A	Canyon Rd Intersection Improvements (MSTIP)					10,000		10,000
501	3701	4060	Water System Security Upgrades					40,000		40,000
501	3701	4111	Hyland Way					820,000		820,000
501	3701	4120	Taralynn Avenue - Allen Blvd. to end (1,000 LF of 6")					210,000		210,000
501	3701	4134	Davies/Brockman; Weir Rd/158th Ave PRV Upgrades					265,000		265,000
501	3701	4133	Backup Emergency Generator					10,000		10,000
501	3701	6095	Sellwood Subdivision (1,150 LF 6" DIP)					360,000		360,000
501	3701	3106A	Menlo Dr (Allen Blvd to Fairmount Dr) Sidewalk Water Meter Service Relocation					60,000		60,000
501	3701	4017A	Water System Master Plan					27,000		27,000
501	3701	4078C	Sexton Mt. Pump Station Upgrade and Emergency Generator, Phase 3, design					60,000		60,000
501	3701	4118A	Settler Way Waterline Replacement (1,400 LF of 6"&8") Phase 1 (includes Greenway Ridge)					10,000		10,000
501	3701	4118B	Settler Way Waterline Replacement (2,000 LF of 6"&8") Phase 2					410,000		410,000
501	3701	3407	Beaverton Creek Shared-Use Path (Cedar Hills Blvd-Lombard Ave)					6,000		6,000
501	3701	3321	Westgate Dr/Cedar Hills Blvd/Dawson Wy Intersection Realignment					15,000		15,000
501	3701	4134A	2017 Water System PRVs Project - SW 153rd Ave&Beaverton CreekTC/Division&Village Place					5,000		5,000
			<b>Totals - 3701</b>					2,314,000		2,314,000
	3620	4150	Denney Road Commerce Center (Opportunity Project) Replacement of 2,000 LF with 12" Waterline Upsizing, Joint project with redevelopment <b>NEW</b>	370,000						370,000
505	3620	4154	Urban Reserve Infrastructure Analysis (6B area)	100,000						100,000
505	3620	4006	Water System Telemetry (annual upgrade project)	100,000						100,000
505	3620	4018	Wellhead Protection	5,000						5,000
505	3620	4133	Backup Emergency Generator	5,000						5,000
505	3620	4021F	ASR Well No. 6, (Fence 2 lots, well maintenance/testing)	50,000						50,000
505	3620	4021H	ASR Well No. 7 (Cooper Mt. ASR well maintenance/testing)	50,000						50,000
505	3620	4024Q	Water Extra-Capacity Projects	100,000						100,000
505	3620	4118A	Settler Way Waterline Replacement (1,400 LF of 6"&8") Phase 1 (includes Greenway Ridge)	10,000						10,000
505	3620	4118B	Settler Way Waterline Replacement (2,000 LF of 6"&8") Phase 2	470,000						470,000
505	3620	3408	Hocken Ave (RR-TV highway)	15,000						15,000
			<b>Totals - 3620</b>	1,275,000						1,275,000
505	3621	4021D	<b>ASR Well No. 5 (includes combined facility w/Sorrento PS seismic upgrades)</b>					1,100,000		1,100,000
505	3622	4058A	Cooper Mountain (5.5 MG) Reservoir No. 2 (Bond)			500,000				500,000
505	3622	5092C	SW 175th/Weir Road Water Transmission Line Project (Bond)			2,000				2,000
505	3622	5092B	175th/Kemmer Intersection (upgrade existing and new 24" waterline) (Bond)			920,000				920,000
505	3622	4151	Kemmer Rd (176th Ave - 182nd Ave) 24-Inch Waterline Extension (Bond)			515,000				515,000
			<b>Totals - 3622 (North Cooper Mtn. Reservoir #2 and Transmission Lines) (Bond)</b>			1,937,000				1,937,000
505	3623	4021G	<b>South Cooper Mt. - Non-potable (purple pipe) Water System</b>	600,000						600,000
505	3625	4140	<b>SCM 24" Waterline Extension - High School to west (1,100 LF) (may be paid by SDC credits)</b>	600,000						600,000
505	3627	5090	Jenkins Waterline Extension - 153rd Ave to Merlo (opportunity project) (Bond)			1,035,000				1,035,000
505	3627	4128C	158th at Merlo Connection to Jenkins (Bond)			15,000				15,000
505	3627	4128A	Cedar Hills Blvd/Jenkins Rd/Walker Rd Water System Improvements (Bond)			8,000				8,000
505	3627	4128D	Waterhouse South Area 4 Withdrawal Area (Bond)			200,000				200,000
505	3627	4128E	Urban Renewal Area 2 Withdrawal Area (Bond)			1,650,000				1,650,000
505	3627	4128F	Southwest Beaverton Area 3 Withdrawal Area (Bond)			50,000				50,000
505	3627	4128G	SW 170th/Arbor Creek TVWD Withdrawal Area 5 (Bond)			100,000				100,000
505	3627	4128H	Denney-Whitford, TVWD Withdrawal Area 6 (Bond)			100,000				100,000
			<b>Totals - 3627 (Withdrawal of Areas from TVWD) (Bond)</b>			3,158,000				3,158,000
505	3631	4107	<b>Meridian Pump Station Replacement (Bond)</b>			2,950,000				2,950,000
505	3636	4061	<b>Scoggins Dam Raise (TBWSP)</b>	4,000						4,000
505	3643	4126	Willamette Water Supply Program (WWSP) (Bond)			350,000				350,000
505	3643	4141	WWSP Supply Intertie (opportunity project) @ Cornelius Pass Road/TV Hwy. (Bond)			1,650,000				1,650,000
			<b>Totals - 3643 Willamette Water Supply (Bond)</b>			2,000,000				2,000,000
505	3644	4122	Alvord Lane Waterline, 2,600 LF of 16" (Bond)			632,000			158,000	790,000
505	3644	5092A	SW 175th - Scholls to Alvord (extend 24" waterline 1,200 LF & connections to other waterlines) (Opportunity Project) (Bond)			10,000				10,000
505	3644	4128	South Cooper Mountain LID			50,000				50,000
			<b>Totals - 3644 (South Cooper Mtn. Extra Capacity Projects) (Bond)</b>			692,000			158,000	850,000
			<b>Totals =&gt;</b>	2,479,000		10,737,000	1,100,000	4,296,250	158,000	18,770,250