

CAPITAL PROJECTS - WATER OPERATING FUND PROJECTS

CITY OF BEAVERTON, OREGON
FISCAL YEAR 2019-20 BUDGET

FUND: 501 WATER	DEPARTMENT: PUBLIC WORKS
PROGRAM: 3XXX WATER REPLACEMENT PROJECTS	PROGRAM MANAGER: DAVID WINSHIP

DRINKING WATER PROGRAM

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 86,000 of the total 98,050 residents within Beaverton city-limits. A total of 16,000 Beaverton residents were added to the City's service area after being withdrawn from Tualatin Valley Water District (TVWD) on July 1, 2018. The pending withdrawal on July 1, 2019 will add an additional 230 water meters to the City's service area. An additional, 8,000 new residents are expected in the South Cooper Mountain (SCM) area will be served by the City of Beaverton. An additional 9000 additional residents are predicted to be served by the City of Beaverton in next 10 years in the 1200-acre Urban Reserve 6B upon annexation to the City.

Progress on FY 2018-19 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 119,748 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 2018-19:

<u>CIP No.</u>	<u>CIP Project Name</u>
3106A	Menlo Dr (Allen Blvd to Fairmount Dr) Sidewalk Water Meter Service Relocation
3519A	Canyon Rd Intersection Improvements (MSTIP)
3611	JWC Upgrade Projects
4060	Water System Security Upgrades
4017A	Water System Master Plan (adopted November 2018)
4078C	Sexton Mt. Pump Station Upgrade and Emergency Generator, Phase 3, design
4107	Annual Water Line Maintenance and Replacement Projects
4111	Hyland Way
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
4120	Taralynn Ave (Allen Blvd - EOP) Waterline Replacement
4123	Barlow Ct (1500LF of 6")
4128	TVWD Cooperative Water Projects, service area analysis
4134A	Pressure Reducing Valves – PRV (SW 153 rd Ave/TV Hwy
4135	Griffith Dr Water Line Rep (3100 LF, 8")
4144	Spirea and Cherry Hill Dr (400LF 6" and 1400 8")
4152	Chestnut Pl (6" water line)
4169A	Nimbus North - Hall to Denney Commerce Center (System Upgrade)
6095	Sellwood Subdivision (1,150 LF 6" DIP)

Water Master Plan Update (CIP 4017A)

The City's updated Water Master Plan (WMP) was completed and adopted in November 2018. The WMP's estimates of the total water demand accounts for the rapid growth from development in SCM area, participation in the Willamette Water Supply Program (WWSP), and withdrawal of some existing TVWD service areas. The WMP lists major capital improvements needed to support this predicted future demand and includes expansion, over approximately the next 40 years, of the following water system components: water supply sources, transmission lines, water reservoir storage, City water mains, non-potable system,

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pumping stations, pressure relief valves (PRVs), and groundwater wells. The summary of the estimated costs for these projects are as follows:

- Projects needed by Year 2023 are approximately \$89 million
- Projects needed during Years 2024-2028 are an additional \$55 million, and
- Projects needed during Years 2029-2058 are an additional \$101 million.

The overall grand total of the projects listed in the 2018 WMP is approximately \$224.6 million over 40 years. Updated System Development Charges (SDC) and a 50 year seismic mitigation plan will follow.

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). Drinking water from ASR wells represents up to 30 percent of daily water consumed in the summer period, and 4.4 percent by volume of all water consumed in 2018 by Beaverton water customers.

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 through two operational wells: ASR Well No 2 (2 mgd) and ASR Well No. 4 (3 mgd), with an overall underground storage capacity volume of about 947 MG, which can be pumped out under the City’s ASR limited licenses and groundwater registrations issued by the Oregon Water Resources Department. ASR Well No. 3a will be drilled in FY 19-20 for use as a non-potable pumping well as supply for the City’s purple pipe system. During FY 19-20, final design engineering and land use approval for a new ASR Well No. 5 (2 mgd), ASR Well No. 7 (1 mgd), and ASR Well No. 7a (1.3 mgd) will also occur in FY 19-20. This will expand the capacity by 4.3 mgd and increase the reliability and capacity of supply both for the City of Beaverton and indirectly for our JWC partners.

In 2018, the average daily drinking water demand was 7.5 mgd, with the highest demand day of 13.2 mgd occurring in July for the City’s water service area. Due to higher than normal levels of Iron and Manganese in source water from the JWC, injection/storage of potable water into the ASRs did not occur in FY 18-19. In calendar year 2018, a total of 121.5 million gallons (MG) of stored water and native groundwater were recovered (pumped from ASR wells into the water system) from the ASR wells to help meet summer customer drinking water consumption.

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 currently owns a 25 percent share of JWC’s water plant capacity, equivalent to 18.75 mgd of water to supply drinking water to city water customers. Our respective share of capacity in the transmission lines is as follows:

- 14 mgd-capacity in the 13-mile long South Transmission Line
- 2.1 mgd capacity in the 14-mile long Northside Transmission Line
- Proposed JWC lease of an additional 2.1 mgd capacity in the Northside Transmission Line

In FY 19-20, a combined total transmission capacity of 18.2 mgd will serve businesses and 86,000 residents in the City’s service area.

The City’s budget included \$1.7 million in FY 2018-19, Beaverton’s proportional share of the total cost based on ownership share, for various JWC 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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FY 2019-20 Action Plan:

Significant water system improvement and replacement projects budgeted for FY 2019-20:

<u>CIP No.</u>	<u>CIP Project Name</u>
3611	JWC Upgrade Projects
4060	Water System Security Upgrades
4078C	Sexton Mt. Pump Station Upgrade and Emergency Generator
4107	Annual Water Line Maintenance and Replacement Projects
4111	Hyland Way
4120	Taralynn Ave. Allen Blvd. to end
4134	Pressure Reducing Valves – Davies/Brockman; Weir/158 th Ave. upgrades
4135	Griffith Dr Water Line Rep (3100 LF, 8")
4144	Spirea and Cherry Hill Dr (400LF 6" and 1400 8")
4152	Chestnut Pl (6" water line)
4169A	Nimbus North - Hall to Denney Commerce Center (System Upgrade) – Phase 1
4169B	Nimbus North - Hall to Denney Commerce Center (System Upgrade) – Phase 2
4169C	Nimbus North - Hall to Denney Commerce Center (System Upgrade) – Phase 3
6095	Sellwood Subdivision (11th Street - Lee to Alger)

Scoggins Dam and Hagg Lake

Since 1973, when the U.S. Bureau of Reclamation (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. Completion of the Scoggins Dam construction occurred in 1975. 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. Scoggins Dam/Hagg Lake is currently Beaverton’s and Washington County’s primary source of water in the summer and a central component to the 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.

In 2001, Reclamation in partnership with 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 creates Hagg Lake); construction of a large pipeline from the dam to the JWC water treatment plant; and a large pumping station to pump water from the Tualatin River into Hagg Lake during the winter.

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 property damage and loss of life to communities if it is not upgraded. Through local leadership from Clean Water Services and the JWC partners - Beaverton, Hillsboro, Forest Grove and the TVWD - continue to support the work to secure Scoggins Dam at the State and Federal level 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.

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During FY 19-20, the Principal Engineer in the Public Works Department will continue to work in collaboratively with Clean Water Services and with Reclamation staff from the Boise and Denver federal offices on the Reclamation designated Project Management Team (PMT). The Principal Engineer is a member of the PMT, representing the JWC member agencies who have repayment contracts with Reclamation.

On March 23, 2017, a neighborhood project meeting was held near the current dam site. The concept recommended by CWS is a new downstream roller-compacted concrete dam as a replacement of the existing Scoggins Dam. The downstream dam alternative 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. 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 image below is one of the several alternatives currently under consideration including other options which would strengthen and raise the existing dam in its current location. During FY 19-20, the feasibility-level design for the downstream roller-compacted concrete replacement dam will be completed and, if selected, this alternative could be under construction within three years.



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

Fund #	Proj #	CIP #	Project Name	SDC	Surcharge	Bond Proceeds	IFA Loan Proceeds	Operating: Maint & Replacement	Developer Reimb	Funding Total
Water Capital Improvement Projects:										
501	3611	3611	JWC Projects					1,701,125		1,701,125
501	3611	?	Barney Reservoir					56,435		56,435
501	3700	4017	Water System Hydraulic Modeling & Mapping					-		-
501	3700	4031Q	Annual Waterline Maintenance & Replacement Projects (3700)					-		-
501	3700	4166	ASR storage & recovery operations related to Potential Fe/Mn impacts					-		-
			Totals - 3700	-	-	-	-	-		-
501	3701	3410	Shared Use Path along Denney Rd (King Blvd-Fanno Creek Trailhead)					12,000		12,000
501	3701	3519A	Canyon Rd Intersection Improvements (MSTIP)					17,000		17,000
501	3701	4060	Water System Security Upgrades (Shake Alert)					8,000		8,000
501	3701	4111	Hyland Way					815,000		815,000
501	3701	4152	Chestnut Pl (6" water line)					90,000		90,000
501	3701	4135	Griffith Dr Water Line Rep (3100 LF, 8")					100,000		100,000
501	3701	4144	Spirea and Cherry Hill Dr (400LF 6" and 1400 8")					30,000		30,000
501	3701	4123	Barlow Ct (1500LF of 6")					30,000		30,000
501	3701	4120	Taralynn Avenue - Allen Blvd. to end (1,000 LF of 6")					10,000		10,000
501	3701	4134	Davies/Brockman; Weir Rd/158th Ave PRV Upgrades					30,000		30,000
501	3701	4133	Backup Emergency Generator (Sexton Mt)					-		-
501	3701	6095	Sellwood Subdivision (1,150 LF 6" DIP) -					60,000		60,000
501	3701	3106A	Menlo Dr (Allen Blvd to Fairmount Dr) Sidewalk Water Meter Service Relocation					63,000		63,000
501	3701	4017A	Water System Master Plan					111,000		111,000
501	3701	4078C	Sexton Mt. Pump Station Upgrade and Emergency Generator, Phase 3, design					15,000		15,000
501	3701	4118B	Settler Way Waterline Replacement (2,000 LF of 6"&8") Phase 2					420,000		420,000
501	3701	3407	Beaverton Creek Shared-Use Path (Cedar Hills Blvd-Lombard Ave)					6,000		6,000
501	3701	4169A	Nimbus North - Hall to Denney Commerce Center (System Upgrade) - 12", 8" and 6" - Total 6000 LF - NEW - Phase 1 of 3					50,000		50,000
501	3701	4170	Nimbus South - Hall to Scholls (System Upgrade) - NEW -					-		-
501	3701	3321	Westgate Dr/Cedar Hills Blvd.Dawson Wy Intersection Realignment					-		-
501	3701	4134A	2017 Water System PRVs Project - SW 153rd Ave&Beaverton CreekTC/Division&Village Place					5,000		5,000
		4118A								
			Totals - 3701	-	-	-	-	1,872,000		1,872,000
505	3620	3328	Western Ave (5th st - Allen Blvd) Improvement	50,000						50,000
505	3620	4046	Lloyd Water Line (TVH to Henry) - Upsize to 8", 500 LF - NEW	20,000						20,000
505	3620	4168	Electric Water Line (Tualaway to 139th) - New 8" - NEW	10,000						10,000
505	3620	4150	Denney Road Commerce Center (Opportunity Project) Replacement of 2,000 LF with 12" Waterline Upsizing. Joint project with redevelopment - complete	630,000						630,000
505	3620	4161	Denney Road Crossing at HW 217th - Replacement of 400 LF with 12" Waterline Upsizing. NEW	-						-
505	3620	4154	Urban Reserve Infrastructure Analysis (6B area)	30,000						30,000
505	3620	4006	Water System Telemetry (annual upgrade project)	100,000						100,000

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CIP Financial Plan - Water
FY 2018-19 Estimated**

Fund #	Proj #	CIP #	Project Name	SDC	Surcharge	Bond Proceeds	IFA Loan Proceeds	Operating: Maint & Replacement	Developer Reimb	Funding Total
505	3620	4018	Wellhead Protection	5,000						5,000
505	3620	4133	Backup Well Emergency Generator	5,000						5,000
505	3620	4021F	ASR Well No. 6, (Fence 2 lots, well maintenance/testing)	-						-
505	3620	4021H	ASR Well No. 7, Bierly, Lolich (well maintenance/testing)	-						-
505	3620	4024Q	Water Extra-Capacity Projects	-						-
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	500,000						500,000
505	3620	3408	Hocken Ave (RR-TV highway)	15,000						15,000
			Totals - 3620	1,375,000	-	-	-	-	-	1,375,000
505	3621	4021D	ASR Well No. 5 (includes combined facility w/Sorrento PS seismic upgrades)				357,000			357,000
505	3622	4058A	Cooper Mountain (5.5 MG) Reservoir No. 2 (Bond)			3,640,000				3,640,000
505	3622	4058B	Cooper Mountain Reservoir No. 3 (Bond?)			79,000				79,000
505	3622	5092C	SW 175th/Weir Road Water Transmission Line Project (Bond)			17,000				17,000
505	3622	5092B	175th/Kemmer Intersection (upgrade existing and new 24" waterline) (Bond)			1,050,000				1,050,000
505	3622	4151	Kemmer Rd (176th Ave - 182nd Ave) 24-Inch Waterline Extension (Bond)			54,000				54,000
			Totals - 3622 (North Cooper Mtn. Reservoir #2 and Transmission Lines) (Bond)	-	-	4,840,000	-	-	-	4,840,000
505	3623	4021G	South Cooper Mt. - Non-potable (purple pipe) Water System	950,000						950,000
505	3625	4140	SCM 24" Waterline Extension - High School to west (1,100 LF) (may be paid by SDC credits)	-						-
505	3627	5090	Jenkins Waterline Extension - 153rd Ave to Merlo (opportunity project) (Bond)			165,000				165,000
505	3627	4128C	158th at Merlo Connection to Jenkins (Bond)			17,500				17,500
505	3627	4128A	Cedar Hills Blvd/Jenkins Rd/Walker Rd Water System Improvements (Bond)			1,400				1,400
		4128D								
505	3627	4149	Baseline (158th - 163rd) - 1600 LF of 16" (Bond)			26,500				26,500
505	3627	5105	Waterhouse South Area 4 Withdrawal Area (Bond) (Walker Ph 3)			100,000				100,000
505	3627	5188B	Waterhouse South Area 4 Withdrawal Area (Bond) (Walker Ph 2)			100,000				100,000
505	3627	4159	TVWD Program Manager			820,000				820,000
505	3627	4171	Master meter - Schendel/Walker			60,000				60,000
505	3627	4128E	Urban Renewal Area 2 Withdrawal Area (Bond)			-				-
505	3627	4128F	Southwest Beaverton Area 3 Withdrawal Area (Bond)			-				-
505	3627	4128G	SW 170th/Arbor Creek TVWD Withdrawal Area 5 (Bond)			-				-
505	3627	4128H	Denney-Whitford, TVWD Withdrawal Area 6 (Bond)			-				-
			Totals - 3627 (Withdrawal of Areas from TVWD) (Bond)	-	-	1,290,400	-	-	-	1,290,400
505	3631	4107	Meridian Pump Station Replacement (Bond)			850,000				850,000
505	3636	4051	Scoggins Dam Raise (TBWSP)	4,000						4,000
505	3643	4155	Willamette Intake Facility (WIF)	10,000						10,000

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CIP Financial Plan - Water
FY 2018-19 Estimated**

Fund #	Proj #	CIP #	Project Name	SDC	Surcharge	Bond Proceeds	IFA Loan Proceeds	Operating: Maint & Replacement	Developer Reimb	Funding Total
505	3643	4155	Willamette Intake Facility (WIF) - Capital	145,000						145,000
			Totals - 3643 Willamette Water Supply WIF (Bond)	155,000	-	-	-	-	-	155,000
505	3645	4126	WWSP - Tile flat turn out - does not include Main WWSP capital obligation			-				-
			Totals - 3645 Willamette Water Supply WIF (Bond)	-	-	-	-	-	-	-
505	3645	4141	WWSP Supply Intertie (opportunity project) @ Cornelius Pass Road/TV Hwy. (Bond)			1,120,000				1,120,000
505	3645	4143	NTL Intertie (Possible Grant Funding) - Phase 1 - CornPass to Walker and 185th			300,000				300,000
			Totals - 3645 Willamette Water Supply Interties (Bond)	-	-	1,420,000	-	-	-	1,420,000
505	3644	4122	Alvord Lane Waterline, 2,600 LF of 16" (Bond)			1,460,000			158,000	1,618,000
505	3644	5092A	SW 175th - Scholls to Alvord (extend 24" waterline 1,200 LF & connections to other waterlines) (Opportunity)			125,000				125,000
505	3644	4128	South Cooper Mountain LID			-				-
			Totals - 3644 (South Cooper Mtn. Extra Capacity Projects) (Bond)	-	-	1,585,000	-	-	158,000	1,743,000
			Totals =>	2,484,000	-	9,985,400	357,000	3,629,560	158,000	16,613,960

**City of Beaverton
CIP Financial Plan - Water
FY 2019-20 Recommended**

Fund #	Proj #	CIP #	Project Name	Funding Source					
				Anticipated ENTIRE Project Total	SDC	Bond Proceeds	IFA Loan Proceeds	Operating: Maint & Replacement	Funding Total
Water Capital Improvement Projects:									
501	3611	3611	JWC Projects					1,460,000	1,460,000
501	3611	?	Barney Reservoir					50,000	50,000
Totals - 3611 Joint Water Commission Projects				-	-	-	-	1,510,000	1,510,000
501	3700	4017	Water System Hydraulic Modeling & Mapping					-	-
501	3700	4166	ASR storage & recovery operations related to Potential Fe/Mn impacts					-	-
Totals - 3700 Maintenance & Replacement Program				-	-	-	-	-	-
501	3701	3410	Shared Use Path along Denney Rd (King Blvd-Fanno Creek Trailhead)					-	-
501	3701	3321	Westgate Dr/Cedar Hills Blvd.Dawson Wy Intersection Realignment - JIM					50,000	50,000
501	3701	3519A	Canyon Rd Intersection Improvements (MSTIP)					10,000	10,000
501	3701	4060	Water System Security Upgrades					50,000	50,000
501	3701	4111	Hyland Way					22,500	22,500
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	4144	Spirea and CherryHill Dr (400LF 6" and 1400 8") - 1*					-	-
501	3701	4152	Chestnut Pl (6" water line) - 1*					-	-
501	3701	4170	Nimbus South - Hall to Scholls (System Upgrade) - NEW ?					-	-
501	3701	6095	Sellwood Subdivision 11th Street - Lee to Alger - (1,150 LF 6" DIP) ?					280,000	280,000
501	3701	4078C	Sexton Mt. Pump Station Upgrade and Emergency Generator, Phase 3, design					130,000	130,000
501	3701	4135 (1*)	Griffith Drive Waterline Replacement, 3,100 LF of 8" (1*)					-	-

**City of Beaverton
CIP Financial Plan - Water
FY 2019-20 Recommended**

Fund #	Proj #	CIP #	Project Name	Funding Source					
				Anticipated ENTIRE Project Total	SDC	Bond Proceeds	IFA Loan Proceeds	Operating: Maint & Replacement	Funding Total
501	3701	4158	AMI/Fixed Based Automated Meter Reading Infrastructure - (antenna(s) tower & communication network, meters for SCM)					50,000	50,000
501	3701	4169A (3*)	Nimbus North - Hall to Denney Commerce Center (System Upgrade) - NEW - Phase 1 of 3 - 1*					640,000	640,000
501	3701	4169B (3*)	Nimbus North - Hall to Denney Commerce Center (System Upgrade) - NEW - Phase 2 of 3 1*					30,000	30,000
501	3701	4169C (3*)	Nimbus North - Hall to Denney Commerce Center (System Upgrade) - NEW - Phase 3 of 3 ---- 1*					-	-
Totals - 3701 Water System Improvements				-	-	-	-	1,737,500	1,737,500

505	3620	3328	Western Ave (5th st - Allen Blvd) Improvement		20,000				20,000
505	3620	3408	Hocken Ave (RR-TV highway)		18,000				18,000
505	3620	4006	Water System Telemetry (annual upgrade project)		110,000				110,000
505	3620	4018	Wellhead Protection		5,000				5,000
505	3620	4021H	ASR Well No. 7 (Cooper Mt. ASR, well maintenance/testing)		10,000				10,000
505	3620	4021F	ASR Well No. 6 (well maintenance/testing)		10,000				10,000
505	3620	4046	Lloyd Water Line (TVH to Henry) - Upsize to 8", 500 LF - NE		10,000				10,000
505	3620	4078B	Sexton Mt. Pump Station Upgrade and Emergency Generator, Phases 3, 4, 5 (also in 3701)		-				-
505	3620	4154	Urban Reserve Infrastructure Analysis (6B)		100,000				100,000

**City of Beaverton
CIP Financial Plan - Water
FY 2019-20 Recommended**

Fund #	Proj #	CIP #	Project Name	Funding Source					
				Anticipated ENTIRE Project Total	SDC	Bond Proceeds	IFA Loan Proceeds	Operating: Maint & Replacement	Funding Total
505	3620	4161	Denney Road Crossing at HW 217th - Replacement of 400 LF with 12" Waterline Upsizing. NEW.		10,000				10,000
505	3620	4168	Electric Water Line (Tualaway to 139th) - New 8" - NEW ?		110,000				110,000
Totals - 3620 Extra Capacity Projects				-	403,000	-	-	-	403,000
505	3621	4021D	ASR Well No. 5 (includes combined facility w/Sorrento PS seismic upgrades)				1,272,000		1,272,000
Totals - 3621 ASR Well No. 5				-	-	-	1,272,000	-	1,272,000
505	3622	4058A	Cooper Mountain (5.5 MG) Reservoir No. 2 (Bond)			4,500,000			4,500,000
505	3622	4058B	Cooper Mountain (5.5 MG) Reservoir No. 3 (Siting and Land Purchase)(Bond)			1,020,000			1,020,000
505	3622	4151A	175th Transmission Main, 24" (Winkleman Park to Alvord Lane, 4800lf)(Bond)			3,750,000			3,750,000
505	3622	4151B	Weir Road 16" Transmission Line - SW 173rd to SW 165th Avenue/city limits (2,000 LF)(Bond)			1,250,000			1,250,000
Totals - 3622 Cooper Mountain Reservoir #2 & Water Lines (Bond)				-	-	10,520,000	-	-	10,520,000
505	3623	4021G	South Cooper Mt. - Non-potable (purple pipe) Water System		2,585,000				2,585,000
Totals - 3623 Non-Potable Purple Pipe Projects				-	2,585,000	-	-	-	2,585,000
505	3625	6083	South Cooper Mt. Infrastructure (Potable)		10,000				10,000
Totals - 3625 (South Cooper Mtn. Water SDC Projects)				-	10,000	-	-	-	10,000
505	3627	4128i	Area 3 - COB Transmission Line Intertie - 106th Ave - Division to Davis Road w/ PRV (5,400 LF of 16") (Bond)						-

**City of Beaverton
CIP Financial Plan - Water
FY 2019-20 Recommended**

Fund #	Proj #	CIP #	Project Name	Funding Source					
				Anticipated ENTIRE Project Total	SDC	Bond Proceeds	IFA Loan Proceeds	Operating: Maint & Replacement	Funding Total
505	3627	4149	West Baseline (158th - 163rd) - 1600 LF of 16" (Bond)			-			-
505	3627	4159	TVWD Program Manager			880,000			880,000
505	3627	4171	Master Meter (Schendel/Walker)			150,000			150,000
505	3627	5090	Jenkins Waterline Extension - 153rd Ave to Merlo (opportunity project) (Bond)			450,000			450,000
505	3627	5105	Waterhouse South Area 4 Withdrawal Area (Bond) (Walker Ph 3) - 4800 LF of 24" + PRV			750,000			750,000
505	3627	?	Five Oaks School, 173rd to NW 167th, 12" water line, 1500 LF			490,000			490,000
505	3627	5088B	Waterhouse/Elmonica Area, Withdrawal Area 4 (Bond) (Walker Ph 2)			20,000			20,000
Totals - 3627 (Withdrawal of Areas from TVWD) (Bond)				-	-	2,740,000	-	-	2,740,000
505	3628	4172	TVWD opportunity projects - Metzger East Pipeline - Scholls Ferry Rd, Nimbus Ave to Allen Blvd			100,000			100,000
505	3628	4173	TVWD opportunity projects - WWSP - SW Allen Blvd			75,000			75,000
505	3628	4174	TVWD opportunity projects - WWSP - SW Western Ave			75,000			75,000
Totals - 3628 - TVWD Opportunity Projects					-	250,000	-	-	250,000
505	3631	4107	Meridian Pump Station Replacement (Bond)			3,560,000			3,560,000
Totals - 3631 Meridian Pump Station (Bond)					-	3,560,000	-	-	3,560,000
505	3635	3635	JWC Capacity Projects - WTP upgrade and expansion ?		TRUE				-
Totals - 3635 JWC Capacity Projects					-	-	-	-	-

**City of Beaverton
CIP Financial Plan - Water
FY 2019-20 Recommended**

Fund #	Proj #	CIP #	Project Name	Funding Source					
				Anticipated ENTIRE Project Total	SDC	Bond Proceeds	IFA Loan Proceeds	Operating: Maint & Replacement	Funding Total
505	3636	4051	Scoggins Dam Replacement - Modification (TBWSP)		3,000				3,000
Totals - 3636 Scoggins Dam Raise					3,000	-	-	-	3,000
505	3646	4126	Willamette Water Supply Program (WWSP) [WIF Buy-in Cost from TVWD]			11,720,000			11,720,000
Totals - 3643 Willamette Water Supply WIF (Bond)					-	11,720,000	-	-	11,720,000
505	3645	4142	Tile Flat (WWSP - COB Intertie) Fluoridation and Pump Station			750,000			750,000
505	3645	4141	WWSP Supply Intertie (opportunity project) @ Cornelius Pass Road/TV Hwy. (Bond)			3,100,000			3,100,000
505	3645	4143	NTL / STL Intertie and Transmission Line - Phase 1 (170th from SW Shaw to Baseline) - 7200 LF of 24"			500,000			500,000
505	3645	4143	NTL / STL Intertie and Transmission Line (Corn Pass/Hwy 26 to Evergreen/Cornell) - Phase 2 (Century Blvd NTL at Gordon Faber Rec Complex to Evergreen Pkwy) - 900 LF of 24"			-			-
505	3645	4143	NTL / STL Intertie and Transmission Line (Corn Pass/Hwy 26 to Evergreen/Cornell) - Phase 3 (173rd - Baseline to Cornell) - 9000 LF of 24"			-			-
505	3645	4143	NTL / STL Intertie and Transmission Line (Corn Pass/Hwy 26 to Evergreen/Cornell) - Phase 4 (Cornell - Evergreen Pkwy - 173rd to Century) - 16,500 LF of 24"			-			-
505	3645	4143	NTL Intertie (possible grant funding)			-			-
Totals - 3645 Willamette Water Supply Interties (Bond)					-	4,350,000	-	-	4,350,000

**City of Beaverton
CIP Financial Plan - Water
FY 2019-20 Recommended**

Fund #	Proj #	CIP #	Project Name	Funding Source					
				Anticipated ENTIRE Project Total	SDC	Bond Proceeds	IFA Loan Proceeds	Operating: Maint & Replacement	Funding Total
505	3643	4155	Willamette Intake Facility (WIF) - Operational/Managing Agency			9,000			9,000
505	3643	4155	Willamette Intake Facility (WIF) - Capital			35,000			35,000
Total - 3645 Willamette Intake Facility (WIF)				-	-	44,000	-	-	44,000
Totals =>				-	3,001,000	33,184,000	1,272,000	3,247,500	40,704,500

BUDGET PREPARATION WORKSHEET SUMMARY

FUND: 501 WATER FUND

DEPT: 75 INFRASTRUCTURE PROJECTS

OBJ	2017 - ACTUAL		2018 - ACTUAL		2019 BUDGETED		2019 YTD	2019	2020 - PROPOSED		2020 - RECOMD		2020 ADOPTED	
	AMOUNT	FTE	AMOUNT	FTE	AMOUNT	FTE	ACT AMT	EST AMT	AMOUNT	FTE	AMOUNT	FTE	AMOUNT	FTE

CLASS: 15 CAPITAL OUTLAY

682 CONSTRUCTION

	707,517		2,113,398		3,151,030		1,706,154	1,276,000	3,542,500		1,537,500			
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683 CONST DESIGN & ENGR INSPECTION

	651,923		571,917		476,384		404,775	646,000	440,000		200,000			
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685 JWC CAPITAL EXPENSE

	871,201		1,047,618		2,345,250		649,843	1,750,000	1,535,000		1,510,000			
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TOTAL CLASS: 15 CAPITAL OUTLAY

	2,230,641		3,732,933		5,972,664		2,760,772	3,672,000	5,517,500		3,247,500			
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TOTAL DEPARTMENT: 75 INFRASTRUCTURE PROJECTS

	2,230,641		3,732,933		5,972,664		2,760,772	3,672,000	5,517,500		3,247,500			
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394