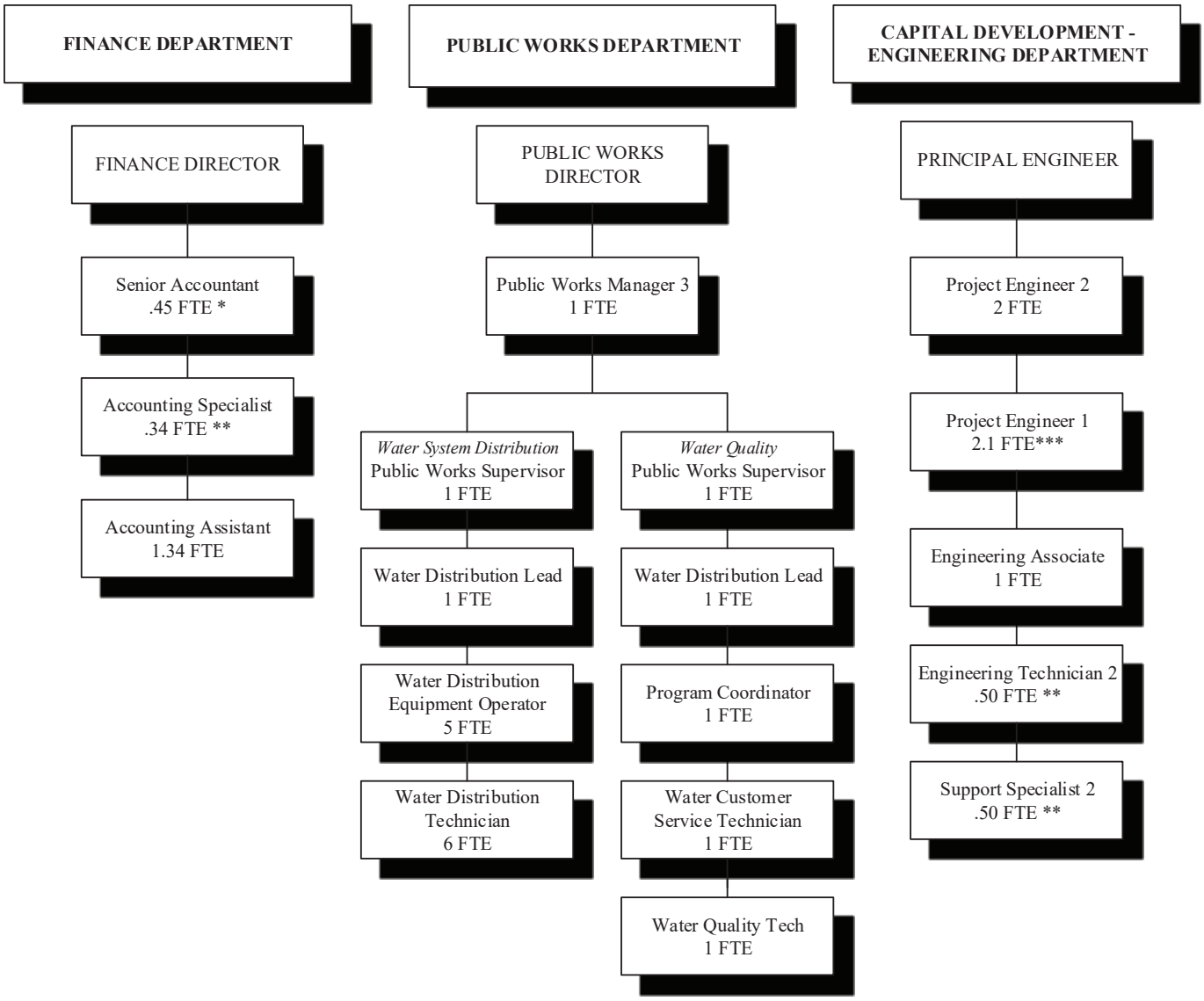
Water Fund

- Utility Billing
- Enterprise Management & Administration
- Water Services
- Water System Distribution
- Water System Quality
- Water Replacement Projects

Beaverton
OREGON

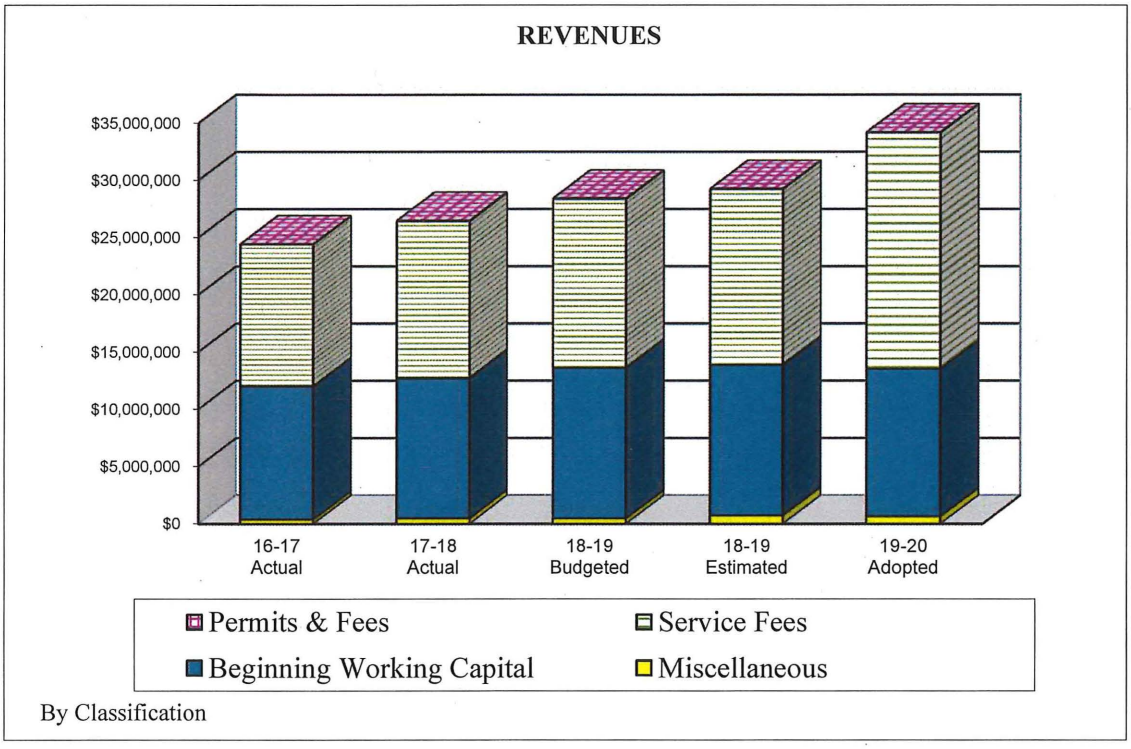
Water Fund

FY 2019-20 BUDGETED POSITIONS

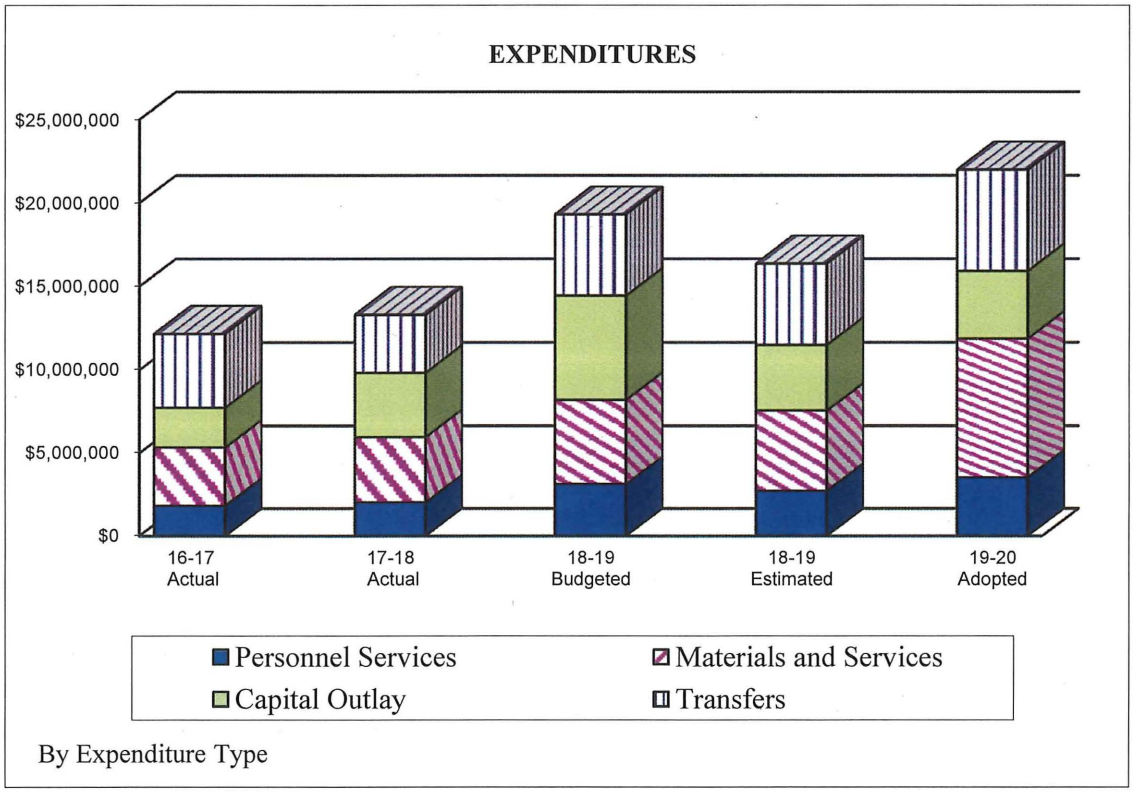


* *Partially funded in General/Water/Sewer/Storm Drain Funds*
** *Partially funded in Water/Sewer/Storm Drain Funds*
*** *Partially funded in General/Street/Water/Sewer/Storm Drain Funds*

WATER FUND
ADOPTED FY 2019-20



By Classification



By Expenditure Type

WATER FUND (MAJOR FUND)
SUMMARY OF REVENUES AND EXPENDITURES
AND OTHER FINANCING SOURCES & USES

	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Budgeted	FY 2018-19 Estimated	FY 2019-20 Adopted
Revenues:					
Interest on investments	$148,244	$206,543	$235,400	$275,600	$313,600
Intergovernmental revenue	294	101,872	88,820	88,820	80,000
Charges for services	12,407,619	13,745,028	14,795,780	15,374,330	20,658,244
Project engineering charges	121,745	91,179	60,000	300,000	200,000
Miscellaneous	103,699	70,623	70,000	55,629	50,000
Sub Total Revenues	$12,781,601	$14,215,245	$15,250,000	$16,094,379	$21,301,844
Expenditures:					
Personnel services	$1,830,320	$2,026,674	$3,129,059	$2,721,921	$3,535,746
Materials & services	3,514,262	3,937,402	5,082,327	4,844,000	8,340,608
Capital outlay	2,404,567	3,874,358	6,238,714	3,938,050	4,047,907
Sub Total Expenditures	$7,749,149	$9,838,434	$14,450,100	$11,503,971	$15,924,261
Revenues Over/Under Expenditures	$5,032,452	$4,376,811	$799,900	$4,590,408	$5,377,583
Other financing sources (uses):					
Transfers in	$0	$0	$0	$0	$0
Transfers out	(4,422,442)	(3,466,361)	(4,859,850)	(4,859,850)	(6,067,277)
Total Other Financing Sources (Uses):	(4,422,442)	(3,466,361)	(4,859,850)	(4,859,850)	(6,067,277)
Net Change in Fund Balance	$610,010	$910,450	($4,059,950)	($269,442)	($689,694)
Fund Balance/Working Capital Beginning of Year	11,626,817	12,236,827	13,147,277	13,147,277	12,877,835
Fund Balance (Contingency)/Working Capital End of Year	$12,236,827	$13,147,277	$9,087,327	$12,877,835	$12,188,141

Contingency for FY 2019-20 adopted budget is available for appropriation upon the City Council's approval. The contingency policy is to maintain a target of 42% of expenditures in contingency for continuing operations. The FY 2019-20 contingency consists of $11,257,260 operational contingency which is equal to 51% of expenditures and other financing sources and uses, $500,000 for catastrophic loss reserve for the Joint Water Commission's operating plant, $600,000 in a water revenue stabilization account, $398,636 for equipment and vehicle replacement, and $121,939 for future replacement of the Operations facility.

FUND:	SUMMARY FOR WATER FUND:
501 WATER	INCLUDING: CIP PROJECTS, FINANCE, AND PUBLIC WORKS

MISSION STATEMENT:

To provide potable water to the City within the mandates of the State of Oregon Department of Human Services and Federal Environmental Protection Agency that is of sufficient quality, quantity and pressure to meet all of the applicable rules criteria.

REQUIREMENTS	FY 2016-17 ACTUAL	FY 2017-18 ACTUAL	FY 2018-19 BUDGETED	FY 2019-20 PROPOSED	FY 2019-20 ADOPTED
POSITION	20.69	21.69	26.88	27.63	27.63
PERSONNEL SERVICES	$1,830,320	$2,026,674	$3,129,059	$3,535,746	$3,535,746
MATERIALS & SERVICES	3,514,262	3,937,402	5,082,327	8,340,608	8,340,608
CAPITAL OUTLAY	2,404,567	3,874,358	6,238,714	4,047,907	4,047,907
TRANSFERS	4,422,442	3,466,361	4,859,850	6,067,277	6,067,277
CONTINGENCY	0	0	9,087,327	10,909,211	12,188,141
TOTAL	**$12,171,591**	**$13,304,795**	**$28,397,277**	**$32,900,749**	**$34,179,679**

Funding Sources:	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**	**FY 2019-20**
Beginning Working Capital	$11,626,817	$12,236,827	$13,147,277	$12,877,835	$12,877,835
Intergovernmental Revenue	294	101,872	88,820	80,000	80,000
Permits & Fees	10,134	51,989	45,000	20,000	20,000
Water Service Fees	12,397,485	13,693,039	14,750,780	19,359,314	20,638,244
Miscellaneous Revenues	373,688	368,348	365,400	563,600	563,600
Water Projects:					
3611 Joint Water Commission Project	$805,574	$1,047,618	$2,345,250	$1,510,000	$1,510,000
3700 Maint. & Replacement Program	32,204	30,300	100,000	0	0
3701 Water System Improvements	1,392,863	2,655,015	3,527,414	1,737,500	1,737,500

FUND: 501 WATER	**DEPARTMENT:** FINANCE
PROGRAM: 0545 UTILITY BILLING	**PROGRAM MANAGER:** SUE ANN KONIAK

Program Goal:
To maintain the financial stability for the operation and maintenance of City's water system by providing citizens and businesses with timely and accurate utility bills and the subsequent collection and deposit of these charges. These efforts are aimed at achievement of the City Council priority of "Build stronger relationships with local special districts" as all utility services are provided in partnership with other regional agencies such as Clean Water Services and the Joint Water Commission. This effort applies to Water, Sanitary Sewer and Storm Drain utilities.

REQUIREMENTS	FY 2016-17 ACTUAL	FY 2017-18 ACTUAL	FY 2018-19 BUDGETED	FY 2019-20 PROPOSED	FY 2019-20 ADOPTED
POSITION	1.64	1.64	2.08	2.13	2.13
PERSONNEL SERVICES	$146,790	$138,860	$194,449	$208,477	$208,477
MATERIALS & SERVICES	142,160	152,828	151,723	191,215	191,215
CAPITAL OUTLAY					
TRANSFERS	2,351	2,081	2,772	2,752	2,752
TOTAL	**$291,301**	**$293,769**	**$348,944**	**$402,444**	**$402,444**

Program Objective (services provided):
- Coordinate meter reading and generate a timely, easy to understand bill to customers for water usage, water meter and water line service.
- Promptly post payments of water charges to the appropriate customer account(s).
- Provide citizens and businesses with outstanding customer service for the following functions:
  - Information regarding their water accounts
  - Establishing and closing customer accounts
  - Assist customers with navigating the web in making on-line payments
  - Assistance with payment arrangements, account hardship assistance payments, delinquent charges, leak adjustments, scheduling turn-on and discontinuance of water services
- Update and maintain customer records.
- Implement City Code with respect to water service regulations.
- Perform prudent and timely collection practices to maintain a low delinquency and non-payment rate. Assign severely delinquent accounts to the collection agency for assistance.
- Perform a monthly reconciliation between customer accounts and the general ledger.
- Recommend the adjustment of service rates and control expenses sufficiently to maintain adequate cash flow and debt service coverage ratios.

Progress on FY 2018-19 Action Plan:
The City is currently in the process of renegotiating a contract to complete a major upgrade to the Utility Billing System with the present vendor and hope to receive their contract along with a time line of implementation by the end of December 2019. We hope to have the new upgrade operational during FY 2019-20. In addition, the City is currently in the process of implementing radio read capability for reading meters in new developments such as in the South Cooper Mountain area or large meters in vaults. During the fiscal year we filled positions among the Utility Billing (UB) staff vacated by retirements and expansion, including the position of Lead Worker. With a new phone system a Call Center board was installed that easily allows all UB staff to recognize who is already engaged with a customer or if a Spanish-speaking customer is waiting for service.

FUND: 501 WATER	**DEPARTMENT:** FINANCE
PROGRAM: 0545 UTILITY BILLING	**PROGRAM MANAGER:** SUE ANN KONIAK

In regional water business:

- The City became a member of the Willamette Intake Facility Commission that will create a new source of drinking water. An agreement to join the Willamette Water Supply System Commission will also be considered.
- The City Council and TVWD Board agreed for the city to assume responsibility for nearly 16,000 people in areas south of Highway 26 and west of Scholls Ferry Road beginning in FY 2018-19. Benefits for the transferring customers are monthly bills (instead of bi-monthly) and potentially lower rates (on average about $188 per year) based on the difference between the City's existing water rates and TVWD's.
- Initiate analysis of connecting the City's water system to the Joint Water Commission's North Transmission Line.

FY 2019-20 Action Plan:

- Fully implement the upgrade of the City's current Utility Billing System to a new SQL based database platform.
- With the withdrawal of water customers from TVWD and the City taking over and providing water service to more areas of the City, continue the set-up of new customer accounts. There will also be several thousand new accounts created by residential development at S. Cooper Mountain.
- Maintain water rates sufficient to meet operating costs, replacement, upgrades and debt service coverage ratio.
- Continue to pursue staffing changes to accommodate succession plans across the utility related staff. This includes management staff changes in assignment.
- Work to complete the City's first non-potable water irrigation (purple pipe) system in the South Cooper Mountain development area.

Performance Measures:	**FY 2016-17 Actual**	**FY 2017-18 Actual**	**FY 2018-19 Budgeted/Revised**	**FY 2019-20 Adopted**
Number of water accounts*	17,980	18,031	22,300 / 22,400	22,925
Number of water accounts maintained per FTE *	4,495	4,508	4,460 / 4,480	4,585
Avg. Monthly Uncollectable Account Write Offs	$1,150	$2,400	$2,000 / $1,400	$2,000
Percentage of Account Write Offs of Total Sales	.10%	.19%	.17% / .11%	.12%
Number of customers receiving e-bills**	3,500	4,620	5,000 / 3,492^	3,806^
Percentage of Accounts using e-bills**	16%	26%	28% / 15.6%^	16.6%^
Number of Debit/Credit Card transactions through the web**	70,000	81,800	84,000 / 89,200	97,200
Number of Autopay transactions through the web**	24,000	38,200	40,000 / 43,975	47,930
Total $ all utility payments, received through the web**	$9,000,000	$11,180,000	$11,200,000 / $12,458,000	$13,579,000

* Note: This Performance Measure is based on the City Water accounts only. It does not include City of Beaverton citizens and businesses which are served water by Tualatin Valley Water District, West Slope Water District or Raleigh Water District.
**Based on the web payment system as a whole, not just water.
^ Performance measure changed to include only current active accounts.

Performance Outcomes and Program Trends:

The program has been better able to meet the increasing demand for utility billing services with the increase of one staff member for customer service and the increased involvement of another Senior Accountant in Utility Billing management. The amount of work involved with transitioning more than 4100 customer accounts from the Tualatin Valley Water District to the city was considerable and on-going. As the more intensive phases of the withdrawal process declines, then the work of finally upgrading the billing and customer account software will take off.

FUND: 501 WATER	**DEPARTMENT:** FINANCE
PROGRAM: 0545 UTILITY BILLING	**PROGRAM MANAGER:** SUE ANN KONIAK

Performance Outcomes and Program Trends (continued):
The program's low percentage in account write offs, for the most part, is due to the fact that water service is discontinued for non-payment of an active account. Staff is very diligent in working with customers who may be struggling financially. The City offers payment arrangements and if applicable, hardship payment assistance for eligible accounts through the Beaverton Cares program and other outside agencies.

Water consumption for the current year is expected to be slightly higher or even with the previous year. There was not a lot of growth in the past years, but is expected to increase for FY 2019-20, as construction starts in the new South Cooper Mountain area. As areas of the City are drawn into the City's water service area from other water districts, customer counts will increase. In the current year, any growth has been offset by water conservation measures.

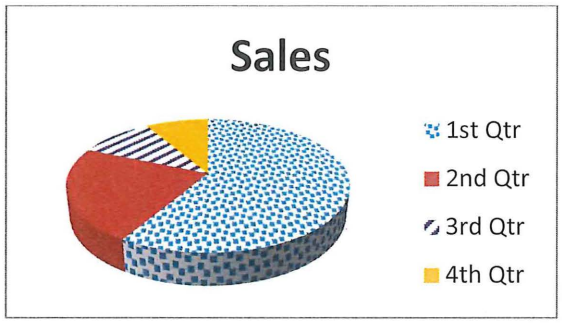
The City of Beaverton is an active member of the Joint Water Commission and Barney Reservoir Commission purchasing water for industrial, commercial, domestic and irrigation purposes. Water consumption trends in Beaverton mirror the per capita reduction experienced by other utilities. While conservation is encouraged to reduce the amount of wasteful water usage, the reduction in annual sales affects the financial health of the utility. The City of Beaverton has made it a practice to make gradual increases in both base and consumption rates (per 100 cubic feet) and anticipates another increase in the coming year based on careful analysis of the performance of the Water Fund. There is a 10 cent increase (3.15%) in the water consumption rate, and a 6.7% increase in the water base charge planned for FY 19-20.

The following is a table of the various monthly water utility costs for an average residential household using 8 CCF of water provided by the City. Rates are adjusted as needed, to maintain the financial stability of the water fund. The rates include an allowance for a 5% Right-of-Way Fee for the impact of water service on the streets and other parts of the system.

	FY 2016-17	**FY 2017-18**	**FY 2018-19**	**FY 2019-20 ****
Water Using 8 CCF:				
Base*	$13.00	$14.00	$15.00	$16.00
Consumption*	23.76	24.56	25.36	26.16
Total	$36.76	$38.56	$40.36	$42.16

** Proposed

The graph below illustrates the variability of water sales during the seasons of the year. 1st Quarter is July, August and September which typically show evidence of lawn and yard irrigation. Beaverton purchases water from the Joint Water Commission even in the winter months to fill the underground storage capacity of the Aquifer Storage and Recovery system to cover summer water use.



FUND: 501 WATER	**DEPARTMENT:** PUBLIC WORKS
PROGRAM: 0740 ENTERPRISE MANAGEMENT & ADMIN.	**PROGRAM MANAGER:** DAVID WINSHIP

Program Goal:
To provide engineering and policy expertise for management of city enterprise funds and water resources. The program participates in development of intergovernmental agreements and conducts long-term planning to ensure the city can provide an adequate supply of quality drinking water, water for firefighting, adequate funding, perpetual replacement of existing public infrastructure and extra-capacity facilities necessary to serve growth. The program also works to protect the safety and integrity of the public water system from cross connections and promote healthful drinking water by enforcement of the Beaverton Code and the Oregon Health Authority (OHA) Drinking Water Program Administrative Rules, which require the installation, inspection, operation, maintenance, and annual testing of backflow devices.

REQUIREMENTS	FY 2016-17 ACTUAL	FY 2017-18 ACTUAL	FY 2018-19 BUDGETED	FY 2019-20 PROPOSED	FY 2019-20 ADOPTED
POSITION	2.80	3.80	5.80	6.50	6.50
PERSONNEL SERVICES	$281,138	$415,603	$775,982	$1,001,634	$1,001,634
MATERIALS & SERVICES	134,810	148,238	385,911	974,250	974,250
CAPITAL OUTLAY					
TRANSFERS	3,179	51,701	24,836	31,186	31,186
TOTAL	**$419,127**	**$615,542**	**$1,186,729**	**$2,007,070**	**$2,007,070**

Program Objectives:
Overall responsibility for management and implementation of the multi-year Capital Improvements Plan (CIP), including administration of Water Fund (501) and Water Fund Construction (505) fund budgets and coordination and participation with regional water agencies, including emergency planning and management. Other key objectives include:

- Update and administer the current water master plan and; maintain and administer water infrastructure renewal and replacement plan.
- Ensure City compliance with OHA Drinking Water Program design standards and plan review exemption.
- For the South Cooper Mt. annexation area, Urban Reserve Area 6B, BURA, Enterprise Zone and Creekside District areas, continue to plan, design, and build required potable and non-potable water infrastructure through the CIP and/or coordination with the Site Development Division.
- Participate in committees of the Joint Water Commission (JWC), Regional Water Providers Consortium (RWPC), Barney Reservoir Joint Ownership Commission (BRJOC), and other related programs. Participate in the Willamette Water Supply Program (WWSP) and the Willamette River "Water Intake Facility" Commission as a new participating financial partner in the project.
- Provide expertise on water resource, water quality, and water rights issues, design standards and cooperative agreements to the City's Public Works Department, and as needed for the JWC and Barney Reservoir Joint Ownership Commission.
- Provide oversight for the production and distribution of the annual US EPA-mandated Consumer Confidence Report (Water Quality) to all city water customers.
- Review and provide technical expertise to the cross connections program which administers the annual testing program for privately-owned backflow assemblies and devices as required by OHA.

Progress on FY 2018-19 Action Plan:

New Water Supply Source Update
The Beaverton City Council authorized an expenditure of $100,000 to fund participation in the Willamette Water Supply Program (WWSP) Preliminary Design in 2013, a joint project being undertaken by the City of Hillsboro and Tualatin Valley Water District (TVWD). The new water supply source is expected to be operational by about 2026 with an approximate total cost of $1.2 billion to withdraw water from the Willamette River and treat up to 60 million gallons per day (mgd) for drinking water.

FUND: 501 WATER	**DEPARTMENT:** PUBLIC WORKS
PROGRAM: 0740 ENTERPRISE MANAGEMENT & ADMIN.	**PROGRAM MANAGER:** DAVID WINSHIP

The City currently has one member serving on the Willamette River "Water Intake Facility" Commission. The City's total financial commitment to the WWSP is estimated at approximately $61 million, for a total capacity of 5 mgd. Once the project is complete and operational in 2026, by IGA the project name will change to the Willamette Water Supply System (WWSS).

FY 2019-20 Action Plan:

Willamette Water Supply Program (WWSP)
The City completed negotiations on the IGA with TVWD and City of Hillsboro to become a financial partner in the WWSP. A new permanent 5 mgd water supply is vital to the City's future, and the City intends to use its 2014 water right permit on the Willamette River as a new secondary source water supply to augment our JWC supply.

Aquifer Storage and Recovery (ASR)
The city will continue using ASR as an alternative means to increase water supply capacity by up to 5 mgd during the summer. ASR enables the city to meet short-term peak water demand during the summer, helping to delay the need to purchase water, and delay the need to build capital improvements for additional water treatment and storage. Two new ASR wells are scheduled to be drilled in FY19-20, and the following summarizes new activities:

ASR3a
A new well at the existing ASR3 site will be drilled to provide non-potable source water for the new purple pipe system (non-potable). A new pump station facility is scheduled to be completed the following year, and the new well is expected to be operational in 2021.

ASR7a
A new well at the Cooper Mountain Reservoir site will be drilled to provide additional water for the City's upper elevations, with the ability to fill existing Cooper Reservoir #1, and future Cooper Reservoir #2 at the same site.

ASR 5
Final design for ASR Well No. 5 will start in spring 2019, and construction of a new pump station will begin in 2020. The new ASR5 facility and the City's existing Sorrento Pump Station (originally built in 1966), will be combined into a new seismically resilient structure. ASR5 is estimated be operational in 2021. When complete, ASR5 will provide an additional 2 mgd which will increase the reliability and capacity of the City's water supply. The project is financed by a $5 million loan and loan-forgiveness funds from the State of Oregon Infrastructure Finance Agency (IFA) and the US EPA.

Performance Measures:	**FY 2016-17 Actual**	**FY 2017-18 Actual**	**FY 2018-19 Budgeted/Actual**	**FY 2019-20 Adopted**
Management and Administration				
Total water storage reservoir (non-groundwater storage) capacity within City limits (in million gallons - MGD)	28.5	28.5	28.5	28.5
Total ASR groundwater in MGD for summer peak use	5	5	5	5
Average daily water demand (City water customers - MGD)	6.89	7.15	7.3	9.7
Number of average demand days that can be supplied from in-City water storage reservoirs including ASR wells	13	12	11	10

FUND: 501 WATER	**DEPARTMENT:** PUBLIC WORKS
PROGRAM: 0741 WATER SERVICES	**DEPARTMENT HEAD:** DAVID DONALDSON

Program Objectives:

This program accounts for payments to the Joint Water Commission (JWC) for water purchased for resale and to the Tualatin Valley Water District (TVWD) for contract water meter reading. This program supports the Beaverton Community Vision Plan in these elements:

- *Community Vision Target: Be a National Leader in Sustainable Practices and Programs*
- *Community Vision Goal: Provide High Quality Public Services*

The entire water system, like the city's other utilities, is dependent on cooperation of other regional utilities which demonstrates the relevance of these City Council's priority statement for 2019:

- Build stronger relationships among local special districts.
- Prepare a long-range budget plan or philosophy to address foreseeable major expenses.

There are several actions directed toward these priorities:

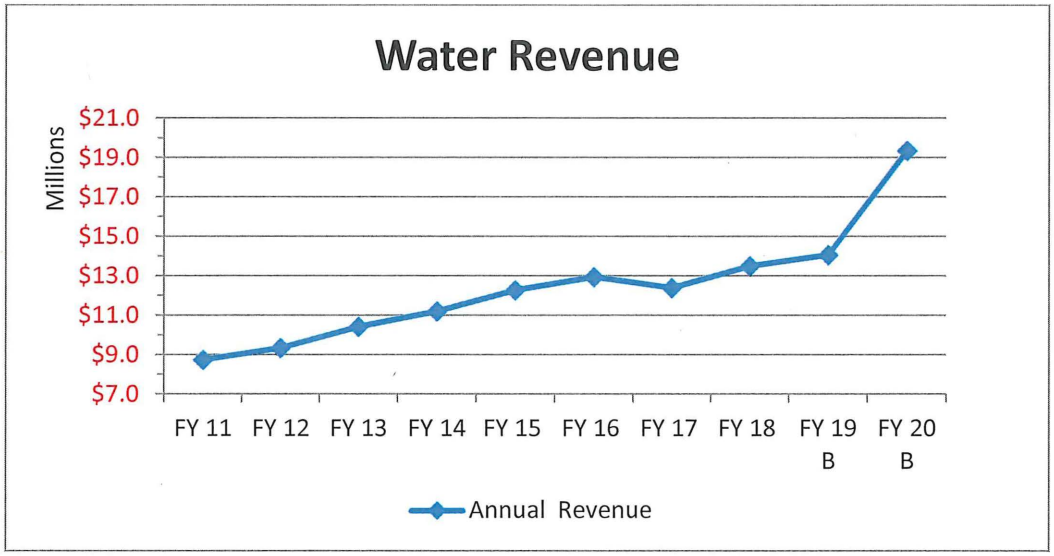
- Continue the withdrawal of service territory from TVWD
- Design series of improvements to connect to the JWC North Transmission Line to improve system resiliency, as approved by the City Council
- Join the Willamette Water Supply Project
- Complete the non-potable water irrigation project using a purple pipe system

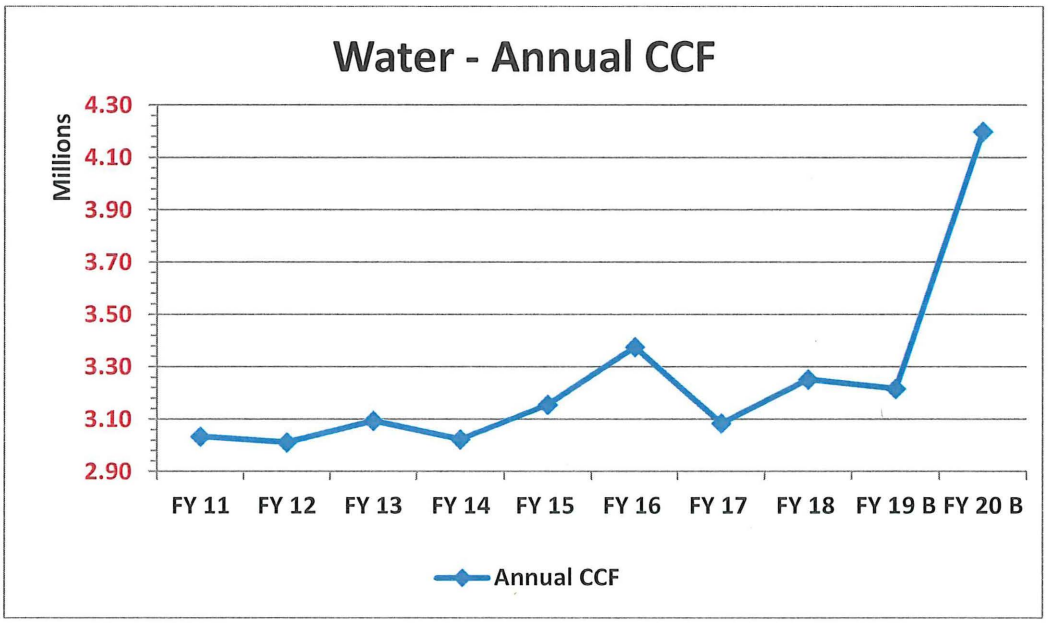
REQUIREMENTS	FY 2016-17 ACTUAL	FY 2017-18 ACTUAL	FY 2018-19 BUDGETED	FY 2019-20 PROPOSED	FY 2019-20 ADOPTED
MATERIALS & SERVICES	$2,298,429	$2,650,692	$3,169,469	$5,534,451	$5,534,451
CAPITAL OUTLAY					
TRANSFERS	3,929,464	2,786,239	4,123,692	5,350,787	5,350,787
CONTINGENCY	0	0	9,087,327	10,909,211	12,066,202
TOTAL	**$6,227,893**	**$5,436,931**	**$16,380,488**	**$21,794,449**	**$22,951,440**

Water sale trends show an increasing trend of consumption and sales since the Great Recession. Residential and commercial vacancies have declined. The values for FY 18-19 and FY 19-20 reflect budgeted values for the year. The increase in FY 19-20 reflects additional consumption by more than 4100 customers formerly served by TVWD. During FY 18-19, these new Beaverton customers are served water through the former TVWD system in an arrangement called "wheeling". Another 260 accounts will be withdrawn from TVWD effective July 1, 2019 and "wheeled" beginning in fall 2019.

CITY OF BEAVERTON, OREGON
FISCAL YEAR 2019-20 BUDGET
CURRENT LEVEL OF SERVICES

FUND: 501 WATER	**DEPARTMENT:** PUBLIC WORKS
PROGRAM: 0741 WATER SERVICES	**DEPARTMENT HEAD:** DAVID DONALDSON





Water rates may be adjusted in base charges as well as the rate per 100 cubic feet (CCF). In recent years, the practice has been to adjust both by $1 in the base and 10¢ in the consumption rate. The budget for FY 2019-20 increases the base rate to $16/month for a standard residential meter and changed the consumption rate to $3.27 per CCF. Additional rate increases may occur for FY 19-20 in order to build reserves and demonstrate capacity to support a new Water Revenue Bond late in the fiscal year. The rate increases are necessary to maintain the required amount of debt service coverage reserve as well as build reserve funds for critical additions to the storage, transmission and distribution system in the coming five years.

FUND: 501 WATER	**DEPARTMENT:** PUBLIC WORKS
PROGRAM: 0741 WATER SERVICES	**DEPARTMENT HEAD:** DAVID DONALDSON

The program includes payments to the West Slope Water District for a previous transfer of 66 accounts to the City of Beaverton. This represents 4.36% of annual debt service on water reservoir bond issue and reimbursement for under consumption on the Portland water contract.

The specific financial impact of the withdrawal of more than 4100 customer accounts from TVWD can now be estimated. Wheeling water allows new city customers to be serviced by TVWD, billed by Beaverton and enjoy lower water rates. The estimates include both revenues and expenditures and account for:

- TVWD's $1.26 average cost per meter read to read the 4,107 meters in the withdrawal areas 12 times (monthly) per year.
- TVWD's $1.722 Wheeling Rate to wheel water through their system.
- JWC's $0.40 cost of water production for the water provided to the withdrawal areas.
- Increase in Water Demand (Meter) Revenue – approximately $ 1,324,776
- Increase in Water Sales (Consumption) Revenue – approximately $3,077,258
- Any potential increase in Water Operations costs have been nominal as the "wheeling" charges paid to TVWD require many expenses to be borne by TVWD. The City will begin to incur additional meter and system expenses in the coming years.

Cost/benefit analysis is now underway regarding the construction of various water mains and master meters to serve the withdrawal areas. Direct service by city crews also implies higher operational costs in labor and equipment. The city is not obligated to move to the direct service option, as wheeling may occur on a long-term basis in some areas.

FUND: 501 WATER	**DEPARTMENT:** PUBLIC WORKS
PROGRAM: 0742 WATER SYSTEM DISTRIBUTION	**PROGRAM MANAGER:** BRIAN RIGWOOD

Program Goal:
Provide high quality potable water in sufficient quantities and at adequate pressures for residential and commercial consumption and fire protection. Perform routine maintenance of our water infrastructure to protect and preserve the public investment. Promote cooperative relationships and agreements with other public agencies which results in increased efficiency by utilizing a larger pool of industry knowledge.

REQUIREMENTS	FY 2016-17 ACTUAL	FY 2017-18 ACTUAL	FY 2018-19 BUDGETED	FY 2019-20 PROPOSED	FY 2019-20 ADOPTED
POSITION	12.75	12.75	13.50	13.50	13.50
PERSONNEL SERVICES	$966,719	$996,955	$1,464,225	$1,577,496	$1,577,496
MATERIALS & SERVICES	462,630	495,732	666,595	839,210	839,210
CAPITAL OUTLAY	133,926	77,649	81,400	659,157	659,157
TRANSFERS	58,563	96,059	84,166	114,284	114,284
TOTAL	**$1,621,838**	**$1,666,395**	**$2,296,386**	**$3,190,147**	**$3,190,147**

Program Objectives:
The water distribution system program will continue to maintain the potable water system for the City of Beaverton by performing maintenance of the distribution system. This includes replacing some of the aging components of the older fire hydrants, water meters, and water services. Flushing water mains is part of the maintenance program to ensure quality water is delivered to the consumer. Repairing leaks in the distribution system will continue to be a high priority so that drinking water is conserved and will not cause property damage.

Customer service will continue to be a major focus in addressing customer's concerns and needs. This will include turning water off/on, checking for leaks, checking pressure related issues, and addressing other concerns.

Progress on FY 2018-19 Action Plan:
The water distribution division accomplished the following in FY 18-19:

- The water crew worked with the CityWorks analyst to launch a mobile application for work orders.
- Replacement of failing commercial water meters continued. Radio deployment is keeping pace with new development and is ready for route integration with utility billing.
- The water crew continues to replace hydrants, repair or replace broken water mains along with other components that make up the water system. Customer response to water service requests and timely resolutions are highly successful.
- Water Distribution actively participated in the new engineering design manual and are taking the lead in implementation of the new standards.

FY 2019-20 Action Plan:
The water distribution division will continue to maintain the water system by:

- Continuing to review and evaluate the asset inventory to prioritize replacement of critical water infrastructure. This is important to accurately assess the substantial assets accepted from the Tualatin Valley Water District (TVWD) withdrawal process.
- Continue to replace aging infrastructure such as water mains, services, hydrants, valves and meters to maintain a robust and reliable water system that provides uninterrupted service to the customer.
- Perform valve exercising, main flushing and maintenance on components of the water system such as fire hydrants, valves and water mains.
- Implementation of the Water Master Plan, optimizing meter reading and increasing emergency response training.
- Staff up, train and develop system operators that are capable of handling any and all issues that arise with a dynamic system that is experiencing rapid growth along with increased operational complexity.

FUND: 501 WATER	**DEPARTMENT:** PUBLIC WORKS
PROGRAM: 0742 WATER SYSTEM DISTRIBUTION	**PROGRAM MANAGER:** BRIAN RIGWOOD

Performance Measures:	**FY 2016-17 Actual**	**FY 2017-18 Actual**	**FY 2018-19 Budgeted/Revised**	**FY 2019-20 Adopted**
Water Hydrant Replacement Program	28	20	25 / 7	25
Installing Dead End Blow Offs	2	0	2 / 0	0
Customer/Water Service Requests	6,000	6,500	9,250 / 6,700	8,000
Water Leak Repairs	50	45	65 / 54	60
Fire Hydrant Maintenance	2,513	2,490	2,575 / 2,550	2,575
Total Water Meters in Distribution System	18,267	18,300	19,800 / 22,456	22,756
Water Meter Replacement Program	800	680	1,000 / 600	900

Performance Outcomes and Program Trends:
Installing blow offs on dead end water lines is necessary to control the age of water in the system. Overall, the installation of blow offs has reached a point where most of the system's dead end lines can be flushed. Flushing the system helps to maintain adequate chlorine levels and disinfection while reducing the possible formation of harmful disinfection byproducts. Moving forward attention to flushing programs and increased collection of water quality parameters will help develop an effective control of water age.

Leak detection in the water distribution system is an important measure of the system's integrity and reliability. Consequently, leak identification and repair is a priority activity. The leak detection program identifies water leakages for repair and reduces unaccounted water loss. Our major leak detection equipment has recently been updated and we are researching some advanced techniques that may be deployed if the technology proves to be reliable.

Fire hydrant replacement, operation and maintenance are critical to ensure that the hydrants in the system are in good operable condition and are available for fire protection purposes. Hydrants in the system are also valuable and necessary points for flushing waterlines after main repair. Standardization of hydrant type has helped improve maintenance procedures and reduce necessary parts inventory. It is anticipated that all two port hydrants will be upgraded to current standards this fiscal year.

Replacement of old malfunctioning water meters is important to accurately measure water consumed by customers and to maintain the Water Fund's revenue stream and reduce unaccounted water loss. When feasible staff utilizes technology to help with efficiency and transparency for improved customer service/satisfaction. Additionally, staff is replacing the old untestable meters, meters that are beyond calibration and any meter that is not capable of data sharing. Eleven large meters were replaced this year. The new meters are remote capable with radio testing underway. QA/QC testing is complete and the technology is ready to enhance remote information gathering and streamline the process time throughout the organization.

The city continues to take over service responsibilities from selected areas within the city limits previously served by TVWD. Responsibilities include meters, customer service calls and residential notice for any change in service issues. City staff offered efficiency solutions to the TVWD meter reading staff and awaits their response.

FUND: 501 WATER	**DEPARTMENT:** PUBLIC WORKS
PROGRAM: 0743 WATER SYSTEM QUALITY	**PROGRAM MANAGER:** BRIAN RIGWOOD

Program Goal:

To provide a reliable supply of safe drinking water that exceeds all standards at a reasonable cost. To operate, monitor and maintain the city's water supply using efficient, environmentally sound solutions that benefit present and future residents of the City of Beaverton.

REQUIREMENTS	FY 2016-17 ACTUAL	FY 2017-18 ACTUAL	FY 2018-19 BUDGETED	FY 2019-20 PROPOSED	FY 2019-20 ADOPTED
POSITION	3.50	3.50	5.50	5.50	5.50
PERSONNEL SERVICES	$435,673	$475,256	$694,403	$748,139	$748,139
MATERIALS & SERVICES	476,233	489,912	708,629	801,482	801,482
CAPITAL OUTLAY	40,000	63,776	184,650	141,250	141,250
TRANSFERS	428,885	530,281	624,384	568,268	568,268
CONTINGENCY	0	0	0	0	121,939
TOTAL	**$1,380,791**	**$1,559,225**	**$2,212,066**	**$2,259,139**	**$2,381,078**

Program Objectives:

This program is responsible for ensuring public health protection by providing a safe uninterrupted supply of drinking water to the residents of the City of Beaverton. This program performs all required water quality testing and monitoring for reporting to EPA and/or its primacy agency. Additionally, this program is responsible for the operation and maintenance of water supply infrastructure, such as storage reservoirs, groundwater wells, pumping stations, fluoridation facilities, control valves, pressure reducing stations, large transmission lines and water system telemetry control.

Water quality testing remains one of the highest priorities of the city's Water Division to provide outstanding potable drinking water. Adequate quantity provides operating pressure, fire flow and emergency storage to maintain compliance with the standards of the Oregon Health Authority (OHA) and the Federal Environmental Protection Agency (EPA).

Progress on FY 2018-19 Action Plan:

The Water Quality division accomplished all of the following during FY 18-19:

- The city met or exceeded all federal and state mandated drinking water standards.
- Inspected all pressure reducing valves (PRVs) and rebuilt 5 PRVs this year.
- Maintained the ASR wells, pump stations, reservoirs and fluoride stations.
- Migration to cellular Supervisory Control and Data Acquisition (SCADA) control continued.
- Multiagency water quality team developed a viable course of action to deal with iron and manganese levels in the resource leaving the JWC treatment plant. Testing continues and on-line surrogate monitoring is installed.

FY 2019-20 Action Plan:

The Water Quality division will accomplish all of the following during FY 19-20:

- Meet the Federal and State mandated water quality monitoring and sampling.
- Propose optimum process to OHA to ensure optimized corrosion control at ASR entry points.
- Inspect all pressure relief valves (PRVs) and rebuild approximately 10 PRVs.
- Maintain the ASR wells, pump stations, reservoirs, and the fluoride stations.
- Continue cellular SCADA migration to replace unsupported system hardware.

FUND: 501 WATER	**DEPARTMENT:** PUBLIC WORKS
PROGRAM: 0743 WATER SYSTEM QUALITY	**PROGRAM MANAGER:** BRIAN RIGWOOD

Performance Measures:

	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Budgeted/Actual	FY 2019-20 Adopted
Water Quality Testing	1,280	1,960	2,000 / 2,082	2,150
Average # of water samples tested per month	90	164	165 / 174	179
Pump Operation & Maintenance. Operate, inspect, and maintain pumps in four water pumping stations and three Aquifer Storage Recovery (ASR) groundwater wells in various locations throughout the City. Figure shown is for total number of pumps in these facilities.	29	28	28 / 28	28
PRV Maintenance. Inspect each of 161 mainline pressure-reducing valves (PRVs) every 2 months, and rebuild 10-percent per year.	151	151	157 / 157	161
Solar energy production (reservoir site) kWh	546,752	550,000	550,000	550,000

Performance Outcomes and Program Trends:

Federal and State mandated drinking water quality regulations will be more stringent over the coming years. New rule implementation will require additional staff analysis to determine how we will meet the compliance standards. It is expected that overall costs for water quality monitoring will grow due to the increased number of drinking water contaminants regulated by the US EPA. Sampling and testing required for the Stage 2 Disinfection Byproduct Rule and the Ground water rule continues for 2019/2020. Additional testing for UCMR4 is required to assist EPA in assessing the next regulated monitoring group off of the contaminant candidate list. The corrosion study to determine optimum alkalinity and pH levels at the ASR wells was completed. The next step will be to present the findings to OHA and agree on an engineered treatment solution for design.

Continued inspection, maintenance, and replacement of city-owned PRVs are important tasks performed by this program. PRVs separate and control Beaverton's 11 different water pressure zones that result from the topographical differences in the city's water service area. 161 larger mainline PRVs will be inspected and repaired as necessary in FY 19/20.

The 130 city-owned backflow assemblies for municipal buildings and city landscape irrigation systems must be tested annually according to the administrative rules of the Oregon Health Authority. Water quality staff ensure that our certified backflow testers perform and report these tests in addition to monitoring and reporting the required annual testing of all devices in the city that are privately owned.

Construction inspection continues to occupy approximately 1.5 FTE of the water quality staff time. There are 12 major projects coming in the FY 19/20 in which staff will be heavily participating. Processes and practices to ensure the safety of the live potable water system as these projects are constructed are in place and documented. Streamlining of disinfection has been beneficial to contractor efficiency in project completion.

Water Quality Staff is performing any additional water quality sampling and information requests as a result of the new withdrawn TVWD service areas. Staff has been working on a streamlined work request process to respond to water inquiries.

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

DRINKING WATER PROGRAM

For a complete narrative of the budget process for Water Construction Projects, refer to pages 67 - 70.

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:

CIP No.	CIP Project Name
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 153rd 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

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

system components: water supply sources, transmission lines, water reservoir storage, City water mains, non-potable system, 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.

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

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

CIP No.	CIP Project Name
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/158th 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.

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

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 2019-20 Adopted

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*)					-	-
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
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**

City of Beaverton
CIP Financial Plan - Water
FY 2019-20 Adopted

Fund #	Proj #	CIP #	Project Name	Funding Source					
				Anticipated ENTIRE Project Total	SDC	Bond Proceeds	IFA Loan Proceeds	Operating: Maint & Replacement	Funding Total
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" Tranmission 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 Tranmission Line Intertie - 106th Ave - Division to Davis Road w/ PRV (5,400 LF of 16") **(Bond)**			-			-
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		-	-	-	-	-
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**

City of Beaverton
CIP Financial Plan - Water
FY 2019-20 Adopted

Fund #	Proj #	CIP #	Project Name	Funding Source					
				Anticipated ENTIRE Project Total	SDC	Bond Proceeds	IFA Loan Proceeds	Operating: Maint & Replacement	Funding Total
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 - Evergren 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**
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**