



WIFIA Water Construction Fund

- Water Supply Improvement Program

CITY OF BEAVERTON, OREGON
FISCAL YEAR 2020-21 BUDGET

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

	<u>FY 2017-18 Actual</u>	<u>FY 2018-19 Actual</u>	<u>FY 2019-20 Budgeted</u>	<u>FY 2019-20 Estimated</u>	<u>FY 2020-21 Adopted</u>
Revenues:					
Intergovernmental revenue	\$0	\$0	\$1,450,000	\$0	\$750,000
Bond/financing proceeds	0	0	0	1,450,000	16,425,826
Miscellaneous	0	0	0	0	0
Sub Total Revenues	<u>\$0</u>	<u>\$0</u>	<u>\$1,450,000</u>	<u>\$1,450,000</u>	<u>\$17,175,826</u>
Expenditures:					
Materials & services	\$0	\$0	\$100,000	\$100,000	\$100,000
Capital outlay	0	0	11,696,000	11,696,000	28,936,500
Sub Total Expenditures	<u>\$0</u>	<u>\$0</u>	<u>\$11,796,000</u>	<u>\$11,796,000</u>	<u>\$29,036,500</u>
Revenues Over/Under Expenditures	\$0	\$0	(\$10,346,000)	(\$10,346,000)	(\$11,860,674)
Other financing sources (uses):					
Transfers in	\$0	\$0	\$10,346,000	\$10,346,000	\$11,860,674
Transfers out	0	0	0	0	0
Total Other Financing Sources (Uses):	<u>\$0</u>	<u>\$0</u>	<u>\$10,346,000</u>	<u>\$10,346,000</u>	<u>\$11,860,674</u>
Net Change in Fund Balance	\$0	\$0	\$0	\$0	\$0
Fund Balance/Working Capital					
Beginning of Year	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Fund Balance (Contingency)/Working Capital					
End of Year	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>

This fund accounts for water system construction costs funded by the a low interest loan from the federal government's Water Infrastructure Financing and Innovation Act, State of Oregon Loans and transfers from the Water Construction Fund. This fund does not have a separately funded contingency account as it is considered an extension of the Water Construction Fund.

CITY OF BEAVERTON, OREGON
FISCAL YEAR 2020-21 BUDGET

FUND: 506 WIFIA WATER CONSTRUCTION PROJECTS	DEPARTMENT: PUBLIC WORKS
PROGRAM: WATER SUPPLY IMPROVEMENT PROJECTS	DEPARTMENT HEAD: CHAD LYNN

Program Trends:

The City's water utility operation is accounted for in the Water Fund. For financial reporting purposes, the Water Fund is a consolidation of the Water Operating Fund, Water Construction Fund and Water Debt Service Fund. For budgetary and financial control purposes, a separate budget is presented for each of these operations. The budget presented in this program is for the newly created Water Construction Fund - WIFIA Projects (506).

The City is funding a large water system construction program to expand Beaverton's water supply capacity, resilience, and redundancy through the US EPA Water Infrastructure Financing Innovation Act (WIFIA) over the next seven years. EPA's WIFIA group accepted the City's request for a total project cost of \$165 million, of which 49% will be funded by a WIFIA loan. The City has submitted a formal loan application to submit to EPA by anticipates accepting the loan in September 2020.

Many of the WIFIA water system projects - Water Supply Improvement Program (WSIP) are underway now providing jobs for many Oregon consulting and construction firms. By the summer of 2021, many 100's will be employed via contracts with this program and that pace will continue through 2027. The City's 51% contribution to the program is being assisted by two Drinking Water State Revolving Fund (DWSRF) low interest rate loans, which is another EPA program administered by Oregon Drinking Water Authority (OHA). The City has a current DWSRF loan for the ASR Well 5 project and will receive an additional loan for the North Transmission Intertie (NTI) project.

REQUIREMENTS	FY 2017-18 ACTUAL	FY 2018-19 ACTUAL	FY 2019-20 BUDGETED	FY 2020-21 PROPOSED	FY 2020-21 ADOPTED
MATERIALS & SERVICES	\$0	\$0	\$100,000	\$100,000	\$100,000
CAPITAL OUTLAY	0	0	11,696,000	28,936,500	28,936,500
TRANSFERS					
CONTINGENCY					
TOTAL	\$0	\$0	\$11,796,000	\$29,036,500	\$29,036,500

Funding Sources:	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2020-21
Intergovernmental Revenue	\$0	\$0	\$1,450,000	\$750,000	\$750,000
WIFIA Federal Loan	0	0	0	11,299,471	11,299,471
Loan Proceeds	0	0	0	5,126,355	5,126,355
Transfers from:					
Water Construction Fund	0	0	10,226,000	11,230,674	11,230,674
Water Fund	0	0	120,000	630,000	630,000

Funding of Projects:

3680 So. Cooper Mtn. Impr (WIFIA)	0	0	8,089,000	15,018,500	15,018,500
3682 ASR Improvements (WIFIA)	0	0	1,854,000	9,737,000	9,737,000
3683 North Transmission Intertie (WIFIA)	0	0	0	1,635,000	1,635,000
3684 North Trans. Intertie Con. (WIFIA)	0	0	873,000	841,000	841,000
3685 East Transmission Intertie (WIFIA)	0	0	850,000	905,000	905,000
3686 WWSP Connections (WIFIA)	0	0	30,000	800,000	800,000

WSIP Project Summary

The WIFIA loan will fund the "Water Supply Improvement Program" (WSIP) of the City, which now includes 24 major projects that will be transformative to the Beaverton water system:

- 5.5 MG of new, seismically sound, above-ground water storage
- 5 new or reconstructed major pump stations with stand-by power
- 10+ miles of large diameter earthquake resistant pipelines connecting the City to 4 regional surface water sources.

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- Addition of 3 new Aquifer Storage and Recovery (ASR) wells that will allow the City to store 300 million gallons of drinking water in the winter in deep basalt underground wells. When completed, the City will have a total of 6 ASR wells to access to a 1 billion gallons of stored water in deep basalt aquifers.
- Addition of 3 new ASR wells will provide an additional 5+ million gallons per day (mgd), during the summer, pumped from the wells into the City’s distribution system. The ASR wells help provide seismic protection for the City’s water supply and regional partners. The City has 5 mgd of existing ASR capacity with a successful 20-year operating history and the new wells will raise the total pumping capacity to 10 mgd.
- Conversion of the City’s entire water meter system to be automatically read to increase operating efficiency and improve water conservation.
- Ability to finally utilize all of the City’s purchased 18.75 million gallons per day (mgd) treatment capacity in the JWC treatment plant.
- First of its kind in Oregon “purple pipe” stormwater reuse system to supply summer residential irrigation water to substitute for and conserve 1 million gallons a day of drinking water. Water from this system will also be discharged into a local stream to enhance & cool summer streamflow.
- Increase system efficiency by implementing an Advanced Meter Infrastructure (AMI) system to remotely read water meters, upgrading existing pump stations, and upgrading the water system controls.
- Replace aging pipelines and pump stations that are reaching the end of useful-life.
- Manageable future water rate impacts due to low interest rates and long (35 year) repayment period.
- Allows the distribution of multiple water sources: Willamette Water Supply System (**Willamette River**), Joint Water Commission (**Tualatin and Trask Rivers**), Lake Oswego/Tigard (**Clackamas River**), City of Portland (**Bull Run River**) and **groundwater** storage of an added 300 million gallons from new ASR wells, to a major portion of Beaverton and to the City of Hillsboro during periods when the JWC water system is not functioning.

The North Transmission Intertie (NTI), is the largest project in the Water Supply Improvement Program (WSIP) being undertaken by the City with the assistance of a WIFIA loan. The goals of the program are to:

- Improve the seismic resiliency of the City’s water system by constructing key new facilities to current seismic standards.
- Improving the City’s water system’s reliability by interconnecting with several alternative sources of water supply

Specific benefits of the NTI are numerous and critical to the future of water supply to the City:

- Increases reliability of supply from the JWC by allowing the City to take its water supply from either the North or South Transmission Lines.
- Allows the South Transmission Line, which is the City’s sole source of owned supply from the JWC, to be taken out of service for repairs without jeopardizing the water supply to the City.
- Provides a seismically resilient “backbone” of supply to the City that can be relied upon to be useable after a major earthquake. It also provides a reliable and resilient transmission main for the northwest area of the City and other distribution pipelines that will be added as part of the overall WSIP.
- Allows the City to obtain its full capacity from the JWC treatment plant, which it currently cannot obtain due to a lack of capacity in the South Transmission Line.
- Increases the pressure in the South Transmission Line by equalizing the demand on the two (North and South) supply lines and, thereby, increasing the efficiency of pumping water to higher elevations in the City.
- Allows the provision of City water service to areas of the City that currently cannot be served by the City’s water system.

Progress on FY 2019-20 Action Plan:

Funding from the WIFIA program is expected in FY 2020-2021, so progress on current projects is shown in Water Construction Fund (505) on pages 414 - 417.

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FY 2020-21 Action Plan:

With the award of WIFIA funding in FY 2020-21, for most projects formerly listed under the Water Construction Fund (505), progress will now be shown under Water Construction Fund - WIFIA Projects (506). Continued development and growth opportunities occurred in the Cooper Mountain area and the city also began a schedule of transferring water service responsibilities for water system infrastructure obtained in the withdrawal of territory from the Tualatin Valley Water District (TVWD) for properties already within the city limits.

During FY 2020-21, the list of projects shows continued progress on development opportunities occurring in the Cooper Mountain area and TVWD transferring water service responsibilities to the City for approximately 16,000 city residents. Other significant extra-capacity water projects planned this year consists of:

Program: Water Extra Capacity- 3620* (all former 505 Fund Projects)

<u>CIP Project No.</u>	<u>CIP Project Name</u>
4021F	ASR Well No. 6 (well maintenance/testing)
4021G	SCM - ASR 3A - Supply source to Non-potable purple-pipe water system
4021H	ASR Well No. 7 (Cooper Mt. ASR, well maintenance/testing)
4154	Cooper Mountain Utility Master Plan
4197	SCM Stormwater Treatment & Non-Potable Injection Well ASR 3

Program: ASR 5 Project – IFA Loan – 3621

4021D	ASR Well No. 5 & Sorrento Pump Station Seismic Upgrade
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Program: Cooper Mountain Reservoir #2 and Transmission Mains (bonded) – 3622

4058A	Cooper Mountain (5.5 MG) Reservoir No. 2
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Program: Non-Potable “Purple Pipe” Mains – 3623

4021G	South Cooper Mt. - Non-potable (purple pipe) ASR 3A storage and recovery well Water System
4197	SCM Non-Potable Injection Well ASR 3 & Stormwater Treatment System for Injection

Program: S. Cooper Mtn. SDC Projects – 3625

4158	AMI Tower/Conversion City-wide
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Program: Withdrawal of Areas from TVWD – 3627 (bonded)

4149	West Baseline Watermain Ext 158th to 163 rd (design only)
4171	Area 4 – Master Meter (Schendel/Walker)
4175	Five Oaks School, 173rd to NW 167th, 12" water line, 1500 LF
5088B	Walker Ph. 2
5105	Walker Ph. 3

Program: TVWD Opportunity Projects – 3628

4172	TVWD opportunity projects - Metzger East Pipeline - Scholls Ferry Rd, Nimbus Ave to Allen Blvd (design)
4173	TVWD opportunity projects - WWSP - SW Allen Blvd (design)
4174	TVWD opportunity projects - WWSP - SW Western Ave. (design)

Program: Meridian Pump Station – 3631

4107	Meridian Pump Station Replacement and Upgrade, finish construction
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Program: Willamette Water Supply Interties (Bond) - 3645

4141	WWSP Supply Intertie (opportunity project) @ Cornelius Pass Road/TV Hwy.
4142	Tile Flat (WWSP - COB Intertie) Fluoridation and Pump Station
4143	North Transmission Intertie Phase 1

**City of Beaverton
CIP Financial Plan - Water
FY 2020-21 Adopted**

Fund #	Prog #	CIP #	Project Name	Funding Source						
				Anticipated ENTIRE Project Total	SDC	Bond Proceeds	IFA Loan Proceeds	WIFIA	Operating: Maint & Replacement	Funding Total
FUND 506 - WIFIA WATER CONSTRUCTION FUND										
506	3680	4021G	South Cooper Mt. - Non-potable (purple pipe) Water System					865,000		865,000
506	3680	4058A	Cooper Mountain (5.5 MG) Reservoir No. 2 (Bond)					12,008,000		12,008,000
506	3680	4078C	Sexton Mt. Pump Station Upgrade and Energy Recovery					630,000		630,000
506	3680	4107	Meridian Pump Station Replacement (Bond)					430,000		430,000
506	3680	4154	Cooper Mountain Utility Master Plan					85,500		85,500
506	3680	4197	SCM Non-Potable Injection Well ASR 3					1,000,000		1,000,000
Totals - 3680 South Cooper Mtn. Improvements				-	-	-	-	15,018,500	-	15,018,500
506	3681	4158	AMI Tower/Conversion							-
Totals - 3681 AMI Infrastructure				-	-	-	-	-	-	-
506	3682	4021D	ASR Well No. 5 (includes combined facility w/Sorrento PS seismic upgrades)				2,452,355	4,017,645		6,470,000
506	3682	4021F	ASR Well No. 6 (well maintenance/testing)							-
506	3682	4021H	ASR Well No. 7 (Cooper Mt. ASR, well maintenance/testing)					3,267,000		3,267,000
Totals - 3682 ASR Improvements				-	-	-	2,452,355	7,284,645	-	9,737,000
506	3683	4143	North Transmission Intertie Phase 1				1,635,000			1,635,000
Totals - 3683 North Transmission Line				-	-	-	1,635,000	-	-	1,635,000
506	3684	4149	West Baseline Watermain Ext 158th to 163rd				22,000			22,000
506	3684	4171	Master Meter (Schendel/Walker)				88,000			88,000
506	3684	4175	Five Oaks School, 173rd to NW 167th, 12" water line, 1500 LF				500,000			500,000
506	3684	5105	Walker Rd Phase 3							-
506	3684	5088B	Walker Rd Phase 2				231,000			231,000
Totals - 3684 North Transmission Intertie Connections				-	-	-	841,000	-	-	841,000
506	3685	4172	East Transmission Intertie - Nimbus to Western Ave (TVWD Opportunity Project)					678,750		678,750
506	3685	4174	East Transmission Intertie - SW Western Ave (TVWD Opportunity Project)					226,250		226,250
Total - 3685 East Transmission Intertie				-	-	-	-	905,000	-	905,000
506	3686	4142	Tile Flat (WWSP - COB Intertie) Fluoridation and Pump Station					800,000		800,000
Total - 3686 WWSP Connections				-	-	-	-	800,000	-	800,000
TOTALS				-	-	-	4,928,355	24,008,145	-	28,936,500