



Water Extra Capacity Project

CITY OF BEAVERTON, OREGON
FISCAL YEAR 2013-14 BUDGET

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

	<u>FY 2010-11</u> <u>Actual</u>	<u>FY 2011-12</u> <u>Actual</u>	<u>FY 2012-13</u> <u>Budgeted</u>	<u>FY 2012-13</u> <u>Estimated</u>	<u>FY 2013-14</u> <u>Adopted</u>
Revenues:					
System development charges	\$321,906	\$199,945	\$200,000	\$219,000	\$230,000
Intergovernmental revenue	23,031	4,448	0	0	0
Interest on investments	15,887	11,369	10,750	6,400	5,400
Miscellaneous	0	0	0	0	0
Sub Total Revenues	<u>\$360,824</u>	<u>\$215,762</u>	<u>\$210,750</u>	<u>\$225,400</u>	<u>\$235,400</u>
Expenditures:					
Personnel services	\$0	\$0	\$0	\$0	\$0
Materials & services	0	0	0	0	0
Capital outlay	675,681	1,749,224	1,446,332	1,053,004	1,605,228
Sub Total Expenditures	<u>\$675,681</u>	<u>\$1,749,224</u>	<u>\$1,446,332</u>	<u>\$1,053,004</u>	<u>\$1,605,228</u>
Revenues Over/Under Expenditures	(314,857)	(1,533,462)	(1,235,582)	(827,604)	(1,369,828)
Other financing sources (uses):					
Transfers in	\$180,000	\$250,000	\$240,000	\$240,000	\$630,000
Transfers out	0	0	0	0	0
Total Other Financing Sources (Uses):	<u>\$180,000</u>	<u>\$250,000</u>	<u>\$240,000</u>	<u>\$240,000</u>	<u>\$630,000</u>
Net Change in Fund Balance	(\$134,857)	(\$1,283,462)	(\$995,582)	(\$587,604)	(\$739,828)
Fund Balance/Working Capital Beginning of Year	<u>2,997,082</u>	<u>2,862,225</u>	<u>1,578,763</u>	<u>1,578,763</u>	<u>991,159</u>
Fund Balance (Contingency)/Working Capital End of Year	<u>\$2,862,225</u>	<u>\$1,578,763</u>	<u>\$583,181</u>	<u>\$991,159</u>	<u>\$251,331</u>

This fund accounts for water system construction costs funded through bond proceeds and system development charges. Contingency represents the unused system development charges and bond sale proceeds which are available and allocated for construction projects in future years as identified in the City's Capital Improvement Plan.

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FUND: 505 WATER CONSTRUCTION	DEPARTMENT: PUBLIC WORKS
DEPARTMENT HEAD: PETER ARELLANO	

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 on this page is for the Water Construction Fund. This fund accounts for expenditures for improvements to the system with the main source of revenue being water System Development Charges (SDCs). Due to a slowdown in real estate development SDCs have dwindled recent years. Contributions of operating funds for the replacement portion of capital projects continues to be a challenge as consumption continues to decline and operating revenue is limited. The sale of revenue bonds funds major facility construction projects. Over the next five years, there will be several capital projects that will require water revenue bonds to fund the improvements.

REQUIREMENTS	FY 2010-11 ACTUAL	FY 2011-12 ACTUAL	FY 2012-13 BUDGETED	FY 2013-14 PROPOSED	FY 2013-14 ADOPTED
POSITION					
CAPITAL OUTLAY	\$675,681	\$1,749,224	\$1,446,332	\$1,514,500	\$1,605,228
TRANSFERS					
CONTINGENCY	0	0	583,181	342,059	251,331
TOTAL	\$675,681	\$1,749,224	\$2,029,513	\$1,856,559	\$1,856,559

Funding Sources:

	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2013-14
Beginning Working Capital	\$2,997,082	\$2,862,225	\$1,578,763	\$991,159	\$991,159
System Development Fees	321,906	199,945	200,000	230,000	230,000
Miscellaneous Revenue	38,918	15,818	10,750	5,400	5,400
Transfers from:					
Water Fund	180,000	250,000	240,000	630,000	630,000

Funding of Projects:

3620 Extra Capacity Supply System	503,785	1,452,500	1,399,332	1,507,500	1,598,228
3635 JWC Capacity Projects	171,896	296,724	47,000	5,000	5,000
3636 Scoggins Dam Raise Project	0	0	0	2,000	2,000

CITY OF BEAVERTON, OREGON
FISCAL YEAR 2013-14 BUDGET

FUND: 505 WATER CONSTRUCTION	DEPARTMENT: PUBLIC WORKS
PROGRAM: 3XXX INCREASED CAPACITY CAPITAL PROJECTS	DEPARTMENT HEAD: PETER ARELLANO

Progress on FY 2012-13 Action Plan:

Water system extra-capacity improvements budgeted and completed in FY 2012-13 include:

<u>CIP No.</u>	<u>CIP Project Name</u>
6076	Belaire Utility Improvements Phase 3 (Baker to Denney)
3225	155th Ave Sidewalk, Bikelane & Waterline Improvements (Sexton Mtn Drive to Flagstone Dr)
4006	Water System Telemetry Upgrades
3317	Dawson Way Extension to Hocken
6067	South Central "H" (East of Alger) Utility Improvements
6076	5 th Street Waterline Improvements (Griffith Drive to Hwy 217)
6076	Wonderland Park 12" Waterline Extension
4105	Scholls Ferry Road-Fanno Creek Bridge - Waterline Relocation

Aquifer Storage and Recovery

The Joint Water Commission (JWC) 2009 master plan preliminarily evaluated and recommended utilization of Aquifer Storage and Recovery (ASR). The JWC ASR program provides multiple benefits to the JWC including:

- 1) Providing emergency storage capacity
- 2) Helping to solidify valuable surface water rights
- 3) Delaying the need of a new transmission pipeline and water treatment plant expansions
- 4) Reducing the required size of a future new transmission pipeline from a 66-inch diameter to 60-inch
- 5) Allowing excess water treatment plant capacity during low demand periods for ASR recharge, providing full utilization of this valuable asset

ASR Well No. 1, originally constructed as a conventional groundwater well in 1945, was refitted for ASR use in 1997, with a peak pumping capacity of 1 million gallons a day (mgd). ASR Well No. 1 reached the end of its useful life two years ago and is now only available for emergency service. The current total peak pumping capacity of the remaining ASR Well Nos. 2 and 4 is 5 mgd, with an underground storage capacity of about 450 million gallons.

ASR No. 5 will replace and offset the loss in capacity of existing ASR No. 1 and add new pumping capacity of an additional 1 mgd for a total of 2mgd. Construction is planned over the next 3-5 years at the existing Sorrento Reservoir and Pump Station site owned by the City.

Expanded ASR capacity, using ASR Well No. 5, by 2 mgd will increase the reliability and capacity of supply both for the City of Beaverton and for regional partners through Washington County. An increase in 2 mgd during average peak season water demand will provide for an equivalent supply of potable water to approximately 17,600 new Beaverton residents (using current per capita water use) as Beaverton's population grows. Work on ASR No. 5 in FY 2013-14 will be preliminary engineering.

A phased JWC ASR program with an estimated total capacity approximately 18 mgd was submitted to the Oregon Water Resources Department in 2011. The State reviewed the application and approved a Limited License to allow the JWC's ASR program to proceed utilizing up to 14 wells. The JWC limited license specifically lists the cities of Beaverton and Hillsboro, and the Tualatin Valley Water District as the permitted users of the ASR technology on the upper elevations of Cooper Mountain. In FY 2011-12, the JWC ASR partners successfully drilled and pump tested two exploratory 1,000-foot deep test wells in the designated Cooper Mountain area. One test well will be located on Beaverton's Cooper Mountain Reservoir site. The objective of this initial phase of the JWC ASR program is to identify optimum locations for test wells, conduct well testing, and prepare facilities plans.

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FY 2013-14 Action Plan:

Water system extra-capacity waterline improvements budgeted consist of:

<u>CIP No.</u>	<u>CIP Project Name</u>
4106	Scholls Ferry Road (Washington Co.) – 24” Waterline Extension (Loon to Roy Rogers)
3316	Rose Biggi Avenue (Hall to Crescent) 12" Waterline
4067	Farmington Road Utility Improvements (148th Ave to Hocken Rd), design only
3192	Hocken Avenue Bridge, 12" Waterline Improvements

South Cooper Mountain Annexation and Concept Plan

One of the most significant City of Beaverton infrastructure planning projects of the last 25 years will continue in FY 2013-2014. The Metro-designated South Cooper Mountain area (544 acres), which is largely undeveloped, was added to the Urban Growth Boundary (UGB) in 2011 and annexed to the City of Beaverton January 2013, following the State ratification of the UGB addition. As an element of the Metro action to add the South Cooper Mountain area to the UGB, the City is required to prepare a land use concept plan (including comprehensive and land use plan), which must cover public infrastructure for the entire 6B Urban Reserve (1,776 acres) including the 544-acre South Cooper Mountain area.

An infrastructure study (CIP No. 6083), which is part of the concept plan for the entire 6B Urban Reserve, requires extensive evaluation of potable water supply and service needs and projected costs to ensure provision of water service and fire protection for a fully developed area.

An engineering consultant study in 2008 concluded that within about 5 years, the City’s upper-elevation water storage needs would exceed the capacity of the 5.5 million gallon reservoir on Cooper Mountain (Cooper Mountain Reservoir No. 1), currently serving these areas of the City. In 2009, the Beaverton City Council adopted a Water System Master Plan that included the 2008 upper elevation storage findings. Since 2009, the City’s engineering staff has evaluated potential locations for a future reservoir, with a capacity of approximately 5 million gallons, located above an elevation of 550 feet and within a reasonable distance of existing water mains to fill and drain the reservoir. Approximately three to five (3-5) acres of land is needed for this new facility. Approximately 15,000 of the total 71,000 residents served by Beaverton’s water system are served by the existing upper-elevation water storage reservoir on Cooper Mountain. With the annexation of the 544-acre South Cooper Mountain area, an additional 13,000 people may be added to the City’s upper elevation water service area within the next 20 years. Public works engineering staff continues working toward securing a site and complete preliminary engineering for a future water reservoir, Cooper Mountain Reservoir No. 2 (Project No. 4045A) to serve upper elevations of southwest Beaverton.

**City of Beaverton
CIP Financial Plan - Water
FY 2013-14 Adopted**

Projects	Funding Sources			Total for Fiscal Year
	SDC	Other Funding	Maint. & Repl.	
Estimated Beginning Balance 07-01-2013	991,159			991,159
Estimated addit'l Resources for FY 2013-14	765,400		1,582,899	2,348,299
Total Available FY 2013-14	1,756,559	0	1,582,899	3,339,458
Projects in FY 2013-14				
CIP# Proj #				
3620	Water Extra Capacity Projects			
4018	Wellhead Protection (ASR)	5,000		5,000
4006	Water System Telemetry (annual upgrade project)	40,000		40,000
4024	Water Extra-Capacity Projects	50,000		50,000
4067	Farmington Road Utility Improvements (148th Ave to Hocken Rd), Design	50,000		50,000
4079	Sorrento Pump Station Upgrades	10,000		10,000
3192	Hocken Avenue Bridge, 12" Waterline Improvements			0
6083	South Cooper Mt. Infrastructure Study (Metro UGB)	60,000		60,000
4106	Scholls Ferry Road Improvement (Wa. Co.) - 24" Waterline Extension (Loon to Roy Rogers)	1,000,728		1,000,728
3316	Rose Biggi Avenue (Hall to Crescent) 12" Waterline, 1,586 LF	60,000		60,000
6044	Royal Woodlands East Utility Improvements	22,500		22,500
6063	Royal Woodlands West Utility Improvements	300,000		300,000
	Program Total - 3620			1,598,228
3635	3635 JWC ASR Phase III	5,000		5,000
	3636 Scoggins Dam Raise (TBWSP)	2,000		2,000
				7,000
Maintenance & Replacement (1)				
3611	JWC Projects		519,899	519,899
3700	Annual Water Line Maint. & Replacement Program		100,000	100,000
3701	Water System Improvements		918,000	918,000
3705	Fire Hydrant Replacement Program		45,000	45,000
	Total Project Cost in FY 2013-14	1,605,228	0	1,582,899
	Estimated Ending Balance 6-30-2014	151,331	0	151,331

Note: Shaded projects are to be completed by city workers, application or installation of materials only.

