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

	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Budgeted	FY 2013-14 Estimated	FY 2014-15 Adopted
Revenues:					
System development charges	$199,945	$444,441	$230,000	$800,000	$500,000
Intergovernmental revenue	4,448	0	0	0	0
Interest on investments	11,369	7,041	5,400	5,400	6,000
Miscellaneous	0	0	0	0	0
Sub Total Revenues	$215,762	$451,482	$235,400	$805,400	$506,000
Expenditures:					
Personnel services	$0	$0	$0	$0	$0
Materials & services	0	0	0	0	0
Capital outlay	1,749,224	769,584	1,705,228	1,618,500	1,908,600
Sub Total Expenditures	$1,749,224	$769,584	$1,705,228	$1,618,500	$1,908,600
Revenues Over/Under Expenditures	(1,533,462)	(318,102)	(1,469,828)	(813,100)	(1,402,600)
Other financing sources (uses):					
Transfers in	$250,000	$247,584	$730,000	$730,000	$630,000
Transfers out	0	0	0	0	0
Total Other Financing Sources (Uses):	$250,000	$247,584	$730,000	$730,000	$630,000
Net Change in Fund Balance	($1,283,462)	($70,518)	($739,828)	($83,100)	($772,600)
Fund Balance/Working Capital Beginning of Year	2,862,225	1,578,763	1,508,245	1,508,245	1,425,145
Fund Balance (Contingency)/Working Capital End of Year	$1,578,763	$1,508,245	$768,417	$1,425,145	$652,545

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.

FUND:	DEPARTMENT:
505 WATER CONSTRUCTION	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 the slowdown in real estate development, the SDC balance available for improvement dwindled over the past few 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 2011-12 ACTUAL	FY 2012-13 ACTUAL	FY 2013-14 BUDGETED	FY 2014-15 PROPOSED	FY 2014-15 ADOPTED
POSITION					
CAPITAL OUTLAY	$1,749,224	$769,584	$1,705,228	$1,908,600	$1,908,600
TRANSFERS					
CONTINGENCY	0	0	768,417	652,545	652,545
TOTAL	**$1,749,224**	**$769,584**	**$2,473,645**	**$2,561,145**	**$2,561,145**

Funding Sources:	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2014-15
Beginning Working Capital	$2,862,225	$1,578,763	$1,508,245	$1,425,145	$1,425,145
System Development Fees	199,945	444,441	230,000	500,000	500,000
Miscellaneous Revenue	15,818	7,040	5,400	6,000	6,000
Transfers from:					
Water Fund	250,000	247,584	730,000	630,000	630,000

Funding of Projects:

3620 Extra Capacity Supply System	1,452,500	748,295	1,598,228	1,901,600	1,901,600
3635 JWC Capacity Projects	296,724	21,289	5,000	5,000	5,000
3636 Scoggins Dam Raise Project	0	0	2,000	2,000	2,000
3643 Willamette Water Supply System	0	0	100,000	0	0

FUND:	DEPARTMENT:
505 WATER CONSTRUCTION	PUBLIC WORKS
PROGRAM:	**PROGRAM MANAGER:**
3XXX INCREASED CAPACITY CAPITAL PROJECTS	DAVID WINSHIP

Progress on FY 2013-14 Action Plan:

Water system extra-capacity improvements budgeted and completed in FY 2013-14 include:

CIP No.	CIP Project Name
6063	Royal Woodlands West Utility Improvements
4079	Sorrento Pump Station Upgrades
4006	Water System Telemetry (annual upgrade project)
4105	Scholls Ferry Road-Fanno Creek Bridge - Waterline Relocation

Aquifer Storage and Recover (ASR)
During the winter and spring, when flow in the Tualatin River is plentiful, the city injects treated drinking water from the Joint Water Commission (JWC) water treatment plant into natural underground basalt formations (aquifers), 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 peak season demands (up to 17 mgd). Since 1999, the City has pumped out over 3.57 billion gallons of potable water stored in the three wells to help meet peak summer season water demand. Acting as a conservation measure, ASR conserves surface water from primary sources (rivers and dams) during environmentally stressful summer seasons. In 2013, 221 MG of stored water and native groundwater were recovered (pumped into the water system) from the ASR wells to help meet summer customer drinking water consumption.

JWC ASR Program
The Joint Water Commission (JWC) 2009 master plan 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

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 2012, 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 is located on Beaverton's Cooper Mountain Reservoir No. 1 site. This JWC ASR Cooper Mt. site is available for Beaverton to expand its ASR well program to increase water supply capacity in the summer and for emergencies.

FY 2014-15 Action Plan:

Water system extra-capacity water system improvements budget consist of:

CIP No.	CIP Project Name
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

FUND:	DEPARTMENT:
505 WATER CONSTRUCTION	PUBLIC WORKS
PROGRAM:	**PROGRAM MANAGER:**
3XXX INCREASED CAPACITY CAPITAL PROJECTS	DAVID WINSHIP

FY 2014-15 Action Plan (Continued):

CIP No.	CIP Project Name
4021D	ASR Well No. 5, Design only
4058A	Cooper Mt. Reservoir No. 2, Preliminary Design only
4107	Meridian Pump Station Replacement and Upgrade, Preliminary Design only
6083	South Cooper Mt. Infrastructure Study, Engineering only
5090	Jenkins Road Waterline Extension. Engineering only
4113	Relocate Meter Vault on Transmission Line in Reedsville

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 2014-2015. 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), 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 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 70,000 residents served by Beaverton's water system receive drinking water from the existing upper-elevation water storage reservoir on Cooper Mountain (No.1). With the annexation of the 544-acre South Cooper Mountain area, an additional 8,000 people may be added to the City's upper elevation water service area within the next 20 years, and 12,000 more when the remaining Urban Reserve 6B area is brought into the Urban Growth Boundary. 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. 4058A) to serve upper elevations of southwest Beaverton.

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

ASR No. 5 is proposed to replace and offset the loss in ASR capacity of existing ASR No. 1 and add new pumping capacity of an additional 1 million gallons per day of potable water. The proposed project, ASR No. 5 well and pumping station will have a total peak-capacity of two million gallons per day. ASR Construction of ASR Well No. 5 is planned over the next 3-5 years at the existing Sorrento Reservoir and Pump Station site, owned by the City of Beaverton.

City of Beaverton
CIP Financial Plan - Water
FY 2014-15 Adopted

Projects	Funding Sources SDC	Other Proceeds	Maint. & Repl.	Total for Fiscal Year
Estimated Beginning Balance 07/01/2014	1,425,145			1,425,145
Estimated addit'l Resources for FY 2014-15	1,136,000		3,163,400	4,299,400
Total Available in FY 2014-15	**2,561,145**	**0**	**3,163,400**	**5,724,545**
Projects for FY 2014-15				
3620 Water Extra Capacity Projects				
4021D ASR Well No. 5, Design	250,000			250,000
4107 Meridian Pump Station Replacement	200,000			200,000
4018 Wellhead Protection (ASR)	5,000			5,000
4006 Water System Telemetry (annual upgrade project)	40,000			40,000
4058A Cooper Mt. Reservoir No. 2 (5 MG)	175,000			175,000
4024 Water Extra-Capacity Projects	100,000			100,000
4067 Farmington Road Waterline Improvement (148th to Hocken) 4,000 LF of 12" & 16"	600,000			600,000
3192 Hocken Avenue Bridge, 12" Waterline Improvements	100,000			100,000
6083 South Cooper Mt. Infrastructure Study (Metro UGB)	60,000			60,000
4106 Scholls Ferry Road Improvement (Wa. Co.) - 24" Waterline	100,000			100,000
5090 Jenkins Road Waterline Extension	45,000			45,000
3316 Rose Biggi Avenue (Hall to Crescent) 12" Waterline, 1,586 LF	226,600			226,600
Program Total - 3620				1,901,600
3635 JWC Capacity Projects				
3635 JWC ASR Phase III	5,000			5,000
3636 Scoggins Dam Raise (TBWSP)	2,000			2,000
Maintenance & Replacement				
3611 JWC Projects			943,400	943,400
3700 Annual Water Line Maint. & Replacement Program			100,000	100,000
3701 Water System Improvements			2,065,000	2,065,000
3705 Fire Hydrant Replacement Program			55,000	55,000
Total Project Cost in FY 2014-15	**1,908,600**	**0**	**3,163,400**	**5,072,000**
Estimated Ending Balance @ 6-30-2015	**652,545**	**0**	**0**	**652,545**

City of Beaverton
CIP Financial Plan - Water
FY 2015-16 Proposed

Projects	Funding Sources SDC	Other Proceeds	Maint. & Repl.	Total for Fiscal Year
Estimated Beginning Balance 07/01/2015	652,545	0	0	652,545
Estimated addit'l Resources for FY 2015-16	1,136,000		1,929,575	3,065,575
Total Available in FY 2015-16	**1,788,545**	**0**	**1,929,575**	**3,718,120**
Projects for FY 2015-16				
3620 Water Extra Capacity Projects				
4078B Sexton Mt. Pump Station Upgrade, Ph 3, design	40,000			40,000
4018 Wellhead Protection (ASR)	5,000			5,000
4006 Water System Telemetry (annual upgrade project)	40,000			40,000
4058A Cooper Mt. Reservoir No. 2 (5 MG)	225,000			225,000
3316 Rose Biggi Avenue (Hall to Crescent)	60,000			60,000
Water Extra-Capacity Projects	50,000			50,000
4021D ASR Well No. 5, design	200,000			200,000
4107 Meridian Pump Station Replacement, prelim design	100,000			100,000
6083 South Cooper Mt. Infrastructure Study (Metro UGB)	20,000			20,000
Program Total - 3620				740,000
3635				
3635 JWC Capacity Projects	200,000			200,000
Maintenance & Replacement				
3611 JWC Projects			400,000	400,000
3700 Annual Water Line Maint. & Replacement Program			100,000	100,000
3701 Water System Improvements			1,374,575	1,374,575
3705 Fire Hydrant Replacement Program			55,000	55,000
Total Project Cost in FY 2015-16	**940,000**	**0**	**1,929,575**	**2,869,575**
Estimated Ending Balance @ 6-30-2016	**848,545**	**0**	**0**	**848,545**