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EUGENE WATER & ELECTRIC BOARD
WATER DIVISION

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TO: Commissioners Farmer, Brown, Cassidy, Cunningham, and Ernst
FROM: Mel Damewood, Water Engineering Manager
RE: 2010 Draft Water Division 10-Year Capital Improvement Plan (CIP)

July 14, 2009

Issue Statement

At the July 21st Board Work Session, Water Staff will present the Draft 10-Year CIP for the Water Utility. I am providing a detailed backgrounder on the current status of the capital plan in order to focus on your questions about the CIP during the work session.

Background

The following is a chronology of significant events that have led EWEB to the direction that we are currently at with the 10-Year CIP and financial issues:

- December 2004 – EWEB Board passed Resolution 0704 that approved the 2004 Water System Master Plan. According to this resolution, Water’s CIP is to be submitted annually to the Board for approval. The Master Plan identified several necessary projects and emerging issues that were not identified in previous CIPs.
- September 2006 – The Board approved the first year of the 2007 CIP, funding the first year through a combination of rate increases and borrowing from the electric division. The plan reflected \$84 million (escalated dollars) in projects for the 10-year period. The Board directed staff to continue developing the 10-Year CIP and prepared interim discussions with the Board around a complete financial plan for supporting the CIP.
- February/April 2007 – Staff presented an updated CIP and risk analysis of major project areas. Engineering adjusted cost projections to \$118 million (escalated dollars) for the 10-Year CIP due to inflation and some added projects.
- July 2007 & September 2007 – Staff presented the draft and final 2008 10-Year CIP which reflected spending requirements of \$130 million (escalated dollars) in 10 years. Staff also presented a 10 year financial plan to support the CIP, with recommendations to increase Water Rates by 20% in 2008, with subsequent rate increases in the following years, and moving forward with a 2008 Bond Authorization to support the CIP.
- May 2008 – The Board approved a 17% average increase in Water Rates. The Board also approved a \$15 million bond authorization to support the capital plan.

- August and September 2008 – Staff presented the draft and final 2009 10-Year CIP which reflected spending requirements of \$130 million (escalated dollars) in 10 years. Staff also presented a 10 year financial plan to support the CIP, with recommendations to increase Water Rates by 20% in 2009, with subsequent rate increases in the following years.
- May 2009 – The Board approved an 18.1% average increase in Water Rates. Water Utility Staff also presented to the Board a revised 2009 5-Year CIP that reflected the need to reduce capacity adding projects that are backed through SDC revenues. The economic downturn has significantly reduced the amount of SDC revenues collected.

Discussion

2010– 2019 CIP Highlights by Project Area

Water Source Additions – Over the past year we have modified our work plans for Water Source Additions. Major changes include the following:

- 1) Intake Screens – Staff has deferred the screen replacement project a couple of years to adjust to the current SDC shortage. This was placed in 2012 and 2013 and will be funded through bonds. The Water Utility also plans to replace some of the older vintage pumps that still exist and have reached the end of their useful life.
- 2) Second Source – Over the past several years, Staff has been in conversation with the Board about the need for a second and separate source of supply. Planning estimates place the cost of the Second Source Project at \$120 million. This full expenditure has been placed in the out-years of the 10-Year CIP.
- 3) Total 5-Year expenditure = \$7.3 million, (\$2.35 million capacity adding, \$4.9 million renewal and replacement)
10-Year Expenditure = \$129.3 million

Water Production Additions & Improvements – The Hayden Bridge Filtration Plant Expansion should be completed by the end of 2009. This project sets the stage for the upgrade and modernization of the rest of the water treatment plant. When the expansion is completed, continued work on structural and seismic upgrades, existing piping systems, electrical and control systems, and computer-aided operations will begin.

Total 5-Year expenditure = \$8.6 million, (\$82,000 capacity adding, \$8.5 million renewal and replacement)
10-Year Expenditure = \$14.6 million

Pump Stations –The Shasta 1150 Pump Station project is now defined, with the bulk of the construction planned to occur in 2010. The rebuilding of pump stations continues at a rate of about one a year. Some new pump stations have been deferred due to SDC funding; however some of the planned pump station rebuilds have a significant capacity (SDC) component.

Total five-year expenditure = \$4.2 million (\$2.1 million capacity adding, \$2.1 renewal and replacement)
10-year expenditure = \$7.9 million

Water Reservoirs – EWEB will rehabilitate one more existing tank this coming winter and spring, the Willamette 975 reservoir, and has deferred the other rehabs until the latter 5 years in the CIP. A new reservoir, the Willamette 1325 reservoir needs to be constructed due to lack of fire storage to that service area in 2011.

Total 5-Year expenditure = \$3.3 million (\$433,000 capacity adding, \$2.9 million renewal and replacement)

10-Year Expenditure = \$13.3 million

Transmission Mains – EWEB will be deferring the air vacuum breaker replacements until a transmission study can be completed. The other unknown at this time is the evaluation and solution to the Water Utility's 36 inch transmission main crossing the Willamette River at the Beltline Bridge. This cost is not reflected in the CIP.

Total 5-and 10-Year expenditure = \$135,000

Water Services and Meters – Dollars for the annual replacement of meters were added back in because of the deferral of AMI/AMR. Also, the Water Utility is starting a new program to replace and rebuild large services and meters which have reached their service life or have safety issues. The rest of the Project is billable work, which includes installation of services and meters for new customers, and is offset with contribution in aid.

Total 5-Year expenditure = \$617,000, all renewal

10-Year Expenditure = \$1.1 million

Water Main Replacements – The Water Utility will continue increasing the funds in this project over time. In 2010, some money was shifted to main improvements to increase reliability in some areas of town.

Total 5-Year expenditure = \$14.0-million (\$700,000 capacity adding, \$13.3 million renewal and replacement)

10-Year Expenditure = \$44.5 million

Water Main Improvements – Water Utility staff has conducted more analysis in the last year to identify and target areas that have no redundancy, thus effecting reliability. The CIP reflects a boost in this area to increase reliability to our customers.

Total 5-Year expenditure = \$4.7 million (\$1.5 Million capacity adding, \$3.2 million renewal and replacement)

10-Year Expenditure = \$6.0 million

Water Main & Service Relocations – City and County road improvement projects drive this entire project area. Receiving timely information to accurately predict the cost impacts to EWEB on these projects has been difficult, but coordination with these agencies is occurring.

Total 5-Year expenditure = \$3.6 million (all renewal and replacement)

10-Year Expenditure = \$9.7 million

General Plant – This project covers equipment, vehicle, and special project needs that cannot be placed into a water facilities project.

Total 5-Year expenditure = \$2.6 million (all renewal and replacement)

10-Year Expenditure = \$5.2 million

Instrumentation and Control (I &C) Additions – EWEB Water's control systems, SCADA, and communication mediums are key facilities for the operation of the Water System. Some systems are becoming 25 to 30 years in age and need to be replaced with modern technology.

Total 5-Year expenditure = \$2.0 million (all renewal and replacement)

10-Year Expenditure = \$3.4 million

Facilities and Information Resource Management General Plant Additions – This is the Water Utility's portion of costs associated with facilities and IS projects. In general, the Water Utility is responsible for 14% of the costs of these projects.

Total 5-Year expenditure – \$1.1 million (all renewal and replacement)

10-Year Expenditure = \$2.3 million

Summary

Water Engineering and Planning has adjusted the CIP primarily around SDC expenditures over the last year. In the 5-year view, there is approximately \$45 million spent for aging infrastructure in renewal and replacement projects and \$7.2 million in capacity expanding projects that are SDC funded. The funding for these projects are not mutually exclusive, since many of the CIP projects will have both a renewal and a capacity adding component associated with the specific improvement.

There will need to be a Bond Authorization in 2011 to support some of these projects. The Water Utility and Financial Services are working closely together to finalize the terms for bonding, but it will include SDC funds to back it up.

In the out-years, the most prominent project is the \$120 million Second Source project. Until water rights are secured for this project, this project will remain in the out-years. Staff has started to conduct planning evaluation of the facilities that would be needed to provide a second source of supply. The current cost estimate represents a conservative view and is likely on the high end. Staff will continue to update these estimates as information becomes available.

Although the overall projected funding needs has been revised from \$202 million to \$241 million over 10 years, half of this need is in one project, the Second Source work. Staff has worked to spread jobs over the 10-year period in order minimize impacts to the current financial plan, however, some additional bond authorizations will be necessary to support the increasing costs. In the first 5 years of the plan, the annual expenditures for capital work hover around \$10 million for each year.

SDC expenditures and reserves balances still need to be resolved. At the current 7 million dollar expenditure for Capacity adding projects over the next 5 years, the SDC reserves will be depleted in a couple of years. Strategies around bonding to support these projects will need to be developed, and over the next 14 months, EWEB will be re-evaluating the SDC methodology. This methodology study will evaluate the need to overall SDC charges, as well as likely re-allocate the reimbursable portion of the SDC charge. Staff is looking to have these new charges approved by the Board in September of 2010.

Recommendation and Action

Water Staff has no recommendation and actions required at this time. This is information only. If you have more questions please contact Mel Damewood at 341-1878 or e-mail at mel.damewood@eweb.org.

Attachments:

2010-2014 Capital Improvement Plan Summary - Compared to Spring 2009 Amendments (7/09/2009)

Water Additions and Improvements – 10 Year Capital Plan Detail Spreadsheet
(7/09/2009)

2010 - 2014 Capital Improvement Plan Summary - Compared to Spring 2009 Amendment

Project Number	Project Area	BAM8 Budget 2009	Amended 2009	CIP 2010	Amended 2010	CIP 2011	Amended 2011	CIP 2012	Amended 2012	CIP 2013	Amended 2013	CIP 2014	Amended 2014	Total CIP 2010-2014	Amended 2009 2010-2014	Total CIP 2009- 2013	Amended 2009 2009-2013
14196	Water Source Additions	510,337	240,000	207,000	367,000	1,519,000	1,882,000	3,018,000	113,000	2,590,000	-	-	-	7,334,000	-	7,574,000	2,602,000
14270	Water Production Additions & Improvements	8,645,611	9,532,920	2,538,000	2,304,000	1,622,000	1,696,000	1,159,000	1,353,000	1,746,000	1,253,000	1,578,000	-	8,643,000	-	16,597,920	16,138,920
14204	Pump Station Improvements	774,494	790,932	1,410,000	174,000	1,293,000	776,000	701,000	201,000	626,000	1,047,000	213,000	-	4,243,000	-	4,820,932	2,988,932
14017	Water Reservoir Additions	1,149,849	1,315,641	1,339,000	3,101,000	913,000	764,000	153,000	244,000	163,000	958,000	754,000	-	3,322,000	-	3,883,641	6,382,641
14507	Water Transmission Improvements	166,208	135,262	-	-	-	-	-	-	-	-	-	-	-	-	135,262	135,262
14018	Water Services & Meters	500,983	500,983	116,000	54,000	120,000	56,000	123,000	56,000	127,000	56,000	131,000	-	617,000	-	986,983	722,983
14152	Water Main Replacements	913,740	1,827,054	1,888,000	2,259,000	2,198,000	1,931,000	2,577,000	3,534,000	3,346,000	4,368,000	4,024,000	-	14,033,000	-	11,836,054	13,919,054
14203	Water Main Improvements	867,046	524,928	1,545,000	1,622,000	804,000	731,000	637,000	197,000	801,000	245,000	895,000	-	4,682,000	-	4,311,928	3,319,928
14339	Water Main Relocations	2,666,513	1,721,676	828,000	931,000	627,000	946,000	677,000	1,005,000	723,000	1,061,000	752,000	-	3,607,000	-	4,576,676	5,664,676
19948	Water General Plant Additions	1,546,355	1,745,241	643,000	818,680	544,000	762,535	611,000	632,154	398,000	677,514	388,000	-	2,584,000	-	3,941,241	4,636,124
19948	Instrumentation and Control Plant	162,710	227,710	636,000	440,000	206,000	145,000	211,000	149,000	218,000	637,000	707,000	-	1,978,000	-	1,498,710	1,598,710
14015	Utility Infrastructure	483,717	483,717													483,717	483,717
14326	Facilities General Plant			114,000		134,000		-		-		-	-	248,000	-	248,000	-
23826	Information Resouce Management General Plant			206,000		191,000		151,000		166,000		160,000	-	874,000	-	714,000	-
	TOTAL CAPITAL BUDGET	18,387,563	19,046,064	11,470,000	12,070,680	10,171,000	9,689,535	10,018,000	7,484,154	10,904,000	10,302,514	9,602,000	-	52,165,000	-	61,609,064	58,592,947

FUNDING SOURCES

	Water Rates	7,851,000	7,851,000	7,975,000	7,975,000	7,975,000	7,975,000	7,975,000	7,975,000	7,975,000	7,975,000	7,975,000		39,875,000		39,751,000	39,751,000
	Capital Reserve Beginning Balance	3,232,937	3,232,937	3,269,652	3,269,652	2,486,287	1,885,607	4,406,287	3,824,072	5,508,287	5,922,918	5,789,287		3,269,652		3,232,937	3,232,937
	Customer Contributions	918,779	918,779	-	-	-	-	-	-	-	-	-		-		918,779	918,779
	2008 Bond Funding: Renewal & Replacement	-	3,365,132	956,535	-									956,535		4,321,667	-
	2008 Bond Funding: Capacity Improvement	-	4,447,868	1,668,100	-									1,668,100		6,115,968	-
	Total 2008 Bond Funding	7,687,000	7,813,000	2,624,635	2,624,635									2,624,635		10,437,635	10,437,635
	2011 Bond Funding: Renewal & Replacement					2,674,900	-	1,406,400	-	1,518,200	-			5,599,500		5,599,500	-
	2011 Bond Funding: Capacity Improvement					1,325,100	-	1,593,600	-	1,481,800	-			4,400,500		4,400,500	-
	Total 2011 Bond Funding					4,000,000	3,537,000	3,000,000	1,463,000	3,000,000	-			10,000,000		10,000,000	5,000,000
	SDC Funding	2,500,000	2,500,000	87,000	87,000	116,000	116,000	145,000	145,000	210,000	210,000	678,700		1,236,700		3,058,000	3,058,000
	TOTAL FUNDING SOURCES	22,189,716	22,315,716	13,956,287	13,956,287	14,577,287	13,513,607	15,526,287	13,407,072	16,693,287	14,107,918	14,442,987		57,005,987		67,398,351	62,398,351
	Proposed Capital Reserve Target		3,400,000	3,800,000	3,800,000	4,200,000	4,200,000	4,600,000	4,600,000	5,000,000	5,000,000	5,500,000					
	Capital Reserve Balance YE	3,802,153	3,269,652	2,486,287	1,885,607	4,406,287	3,824,072	5,508,287	5,922,918	5,789,287	3,805,404	4,840,987					

Attachment No. 1

Attachment No. 2

Water Additions and Improvements - 10 Year Capital Plan Detail Spreadsheet

			2009 budget	2010	2011	2012	2013	2014	2010-2014	2015-2019	2010-2019	2015	2016	2017	2018	2019	Renewal Replacement (%)	Capacity Improvement (%)
		Inflation Multiplier	1.0000	1.0300	1.0609	1.0928	1.1256	1.1593				1.1941	1.2299	1.2668	1.3048	1.3440		
014196	Water Source Additions																	
014196	29205	Metropolitan Intertie Projects - Game Farm Road	180,000	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
014196	29719	Intake Screen and Misc. Improvements	30,000	52,000	213,000	2,186,000	2,252,000	0	4,703,000	0	4,703,000	0	0	0	0	0	50	50
014196		Intake Pump Replacement	0	155,000	1,274,000	547,000	0	0	1,976,000	0	1,976,000	0	0	0	0	0	100	0
014196		Intake Standby Power	0	0	0	0	0	0	0	981,000	981,000	120,000	861,000	0	0	0	100	0
014196		Flood Proofing Electric Service Building at Intake	0	0	32,000	219,000	0	0	251,000	0	251,000	0	0	0	0	0	100	0
014196	29720	Intake Security Improvements	30,000	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
014196		Second Source of Supply	0	0	0	0	0	0	0	120,960,000	120,960,000	0	1,470,000	25,000,000	50,000,000	44,490,000	100	0
014196		Intake Seismic Upgrade and Structural Repair	0	0	0	66,000	338,000	0	404,000	0	404,000	0	0	0	0	0	100	0
		Project Total	240,000	207,000	1,519,000	3,018,000	2,590,000	0	7,334,000	121,941,000	129,275,000	120,000	2,331,000	25,000,000	50,000,000	44,490,000		
014270	Water Production Additions & Improvements																	
014270	28749	2008-2009 Hayden Bridge Expansion	8,661,000	0	0	0	0	0	0	0	0	0	0	0	0	0	30	70
014270	29711	Filter Piping, Valve, Instrumentation & Flowmeter Upgrades	40,000	1,133,000	1,061,000	1,093,000	1,126,000	1,160,000	5,573,000	0	5,573,000	0	0	0	0	0	100	0
014270	29712	Replace Clear Well Isolation Sluice Gates	0	0	160,000	0	0	0	160,000	0	160,000	0	0	0	0	0	100	0
014270	30852	Rehabilitate Settling Ponds	64,000	0	0	0	0	232,000	232,000	854,000	1,086,000	239,000	615,000	0	0	0	100	0
014270	30853	Plant Structural Rehabilitation & Seismic Improvements	0	0	0	66,000	620,000	186,000	872,000	592,000	1,464,000	192,000	197,000	203,000	0	0	100	0
014270	29713	House Water System Rehabilitation	280,000	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
014270	29714	Existing Filter Trough Improvements	51,699	824,000	0	0	0	0	824,000	0	824,000	0	0	0	0	0	90	10
014270	29715	Roof Replacement for Headhouse and Filter Buildings	121,523	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
014270	29716	WTP Security Upgrades	30,000	103,000	0	0	0	0	103,000	0	103,000	0	0	0	0	0	100	0
014270		Second Emergency Generator	0	0	0	0	0	0	0	810,000	810,000	72,000	738,000	0	0	0	100	0
014270		Headhouse Demolition and Improvements	0	155,000	160,000	0	0	0	315,000	0	315,000	0	0	0	0	0	100	0
014270	30854	Filter Automation and Networking	153,058	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
014270	30855	Power Distribution Analysis & Improvements	30,000	111,000	0	0	0	0	111,000	0	111,000	0	0	0	0	0	100	0
014270	30856	Anthracite and Sand for N7 & N8	101,640	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
014270		Plant Non Potable Water Improvements	0	134,000	0	0	0	0	134,000	0	134,000	0	0	0	0	0	100	0
014270		Lab Improvements	0	0	107,000	0	0	0	107,000	0	107,000	0	0	0	0	0	100	0
014270		SCADA/PLC 62 Relocation	0	0	54,000	0	0	0	54,000	0	54,000	0	0	0	0	0	100	0
014270		Contact Basin Mechanical & Misc Upgrades	0	78,000	80,000	0	0	0	158,000	0	158,000	0	0	0	0	0	100	0
014270		Telephone/Data Network Upgrade	0	0	0	0	0	0	0	359,000	359,000	359,000	0	0	0	0	100	0
014270		Misc. Improvements and Upgrades	0	0	0	0	0	0	0	3,337,000	3,337,000	359,000	431,000	824,000	849,000	874,000	100	0
		Project Total	9,532,920	2,538,000	1,622,000	1,159,000	1,746,000	1,578,000	8,643,000	5,952,000	14,595,000	1,221,000	1,981,000	1,027,000	849,000	874,000		
014204	Pump Station Improvements																	
014204		Expand Southwest 800 Pump Station Service (Warren 800 PS)	0	0	0	0	0	0	0	789,000	789,000	112,000	677,000	0	0	0	0	100
014204	29848	City View 975 PS Replacement	600,000	0	0	0	0	0	0	0	0	0	0	0	0	0	70	30
014204		City View 1150 PS Replacement with CV 1250 Booster	130,000	0	96,000	602,000	0	0	698,000	0	698,000	0	0	0	0	0	35	65
014204		Skinner Butte 607 PS Decommission or Rehabilitation	0	0	0	0	6,000	60,000	66,000	0	66,000	0	0	0	0	0	100	0
014204	29849	Shasta 1150 PS Expansion	0	1,133,000	531,000	0	0	0	1,664,000	0	1,664,000	0	0	0	0	0	50	50
014204		Relocate Willamette 975 PS	0	96,000	600,000	0	0	0	696,000	0	696,000	0	0	0	0	0	50	50
014204		Dillard 975 PS Expansion	0	0	0	0	0	48,000	48,000	198,000	246,000	198,000	0	0	0	0	0	100
014204		Startouch 1325 PS Modification/Rebuild or Decommission	0	13,000	66,000	0	0	0	79,000	0	79,000	0	0	0	0	0	100	0
014204	28805	Relocate Gillespie Butte PS	50,000	0	0	0	0	105,000	105,000	657,000	762,000	657,000	0	0	0	0	50	50
014204		Relocate Fairmont 850 #1 P.S. (Mission St.)	0	103,000	0	99,000	620,000	0	822,000	0	822,000	0	0	0	0	0	55	45
014204		Summit Terrace 1250 PS Generator	0	0	0	0	0	0	0	139,000	139,000	12,000	127,000	0	0	0	100	0
014204		Santa Clara PS Generator Plug-ins & Throw Over Switch	0	0	0	0	0	0	0	139,000	139,000	12,000	127,000	0	0	0	100	0
014204		Pump Station Improvements/Replacements	0	11,000	0	0	0	0	11,000	1,750,000	1,761,000	112,000	677,000	118,000	718,000	125,000	100	0
014204	29851	Bloomberg Valve Station Roof Replacement	10,932	54,000	0	0	0	0	54,000	0	54,000	0	0	0	0	0	100	0
		Project Total	790,932	1,410,000	1,293,000	701,000	626,000	213,000	4,243,000	3,672,000	7,915,000	1,103,000	1,608,000	118,000	718,000	125,000		
014017	Water Reservoir Additions																	
014017	26185	Reservoir Security Improvements	31,026	32,000	33,000	34,000	35,000	36,000	170,000	200,000	370,000	38,000	39,000	40,000	41,000	42,000	100	0
014017	29840	College Hill 603 Reservoir Rehab or Decommission	0	11,000	110,000	0	0	0	121,000	0	121,000	0	0	0	0	0	100	0
014017		Fairmont 603 Reservoir Decommission	0	0	0	119,000	0	0	119,000	0	119,000	0	0	0	0	0	100	0
014017	29841	Skinner's Butte 603 Reservoir Rehab or Decom	0	0	0	0	12,000	120,000	132,000	0	132,000	0	0	0	0	0	100	0
014017		City View 800 No. 1 Reservoir Repair & Struct. Upgrades	0	0	0	0	0	0	0	897,000	897,000	0	0	0	110,000	787,000	100	0
014017		Dillard 800 Reservoir Repair & Struct. Upgrades	0	0	0	0	0	0	0	820,000	820,000	100,000	720,000	0	0	0	100	0
014017		Willamette 800 No. 1 Reservoir Repair & Struct. Upgrades	0	0	0	0	0	0	0	847,000	847,000	0	104,000	743,000	0	0	100	0
014017		Willamette 800 No. 2 Reservoir Repair & Struct. Upgrades	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
014017	29842	Willamette 975 Reservoir Repair & Struct. Upgrades	411,947	800,000	0	0	0	0	800,000	0	800,000	0	0	0	0	0	100	0
014017		Shasta 800 Reservoir Repair & Struct. Upgrades	0	0	0	0	0	0	0	115,000	115,000	0	0	0	0	115,000	100	0
014017		Bloomberg 700 Reservoir Repair & Struct Upgrades	0	0	0	0	0	0	0	870,000	870,000	0	0	106,000	764,000	0	100	0
014017		Reservoir Painting 1-2 years after repairs	0	0	27,000	0	0	0	27,000	64,000	91,000	0	31,000	0	33,000	0	100	0
014017		College Hill 607 Repair and Seismic Retrofit	0	0	0	0	0	0	0	2,323,000	2,323,000	0	203,000	1,044,000	1,076,000	0	100	0
014017		Hawkins Hill 607 Roof Repair and Seismic Retrofit	0	0	0	0	116,000	598,000	714,000	615,000	1,329,000	615,000	0	0	0	0	100	0
014017		Hawkins Hill 607 Inlet/outlet Pipe Modifications	0	0	0	0	0	0	0	27,000	27,000	0	0	0	0	27,000	100	0
014017		College Hill 607 Inlet/outlet Pipe Modifications	0	0	0	0	0	0	0	27,000								

			2009 budget	2010	2011	2012	2013	2014	2010-2014	2015-2019	2010-2019	2015	2016	2017	2018	2019	Renewal Replacement	Capacity Improvement
014017	28816	College Hill 607 New Control valves for N/S cells	21,081	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
014017	29844	College Hill 607 Reservoir Security Improvements	527,000	372,000	0	0	0	0	372,000	0	372,000	0	0	0	0	0	100	0
		Project Total	1,315,641	1,339,000	913,000	153,000	163,000	754,000	3,322,000	10,020,000	13,342,000	887,000	2,058,000	2,820,000	2,181,000	2,074,000		
014507	Water Transmission Improvements																	
014507	30878	Air/Vacuum Release Valve Replacements	135,262	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
		Project Total	135,262	0	0	0	0	0	0	0	0	0	0	0	0	0		
014018	Water Services & Meters																	
014018		AMI/AMR	9,688	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
014018		Replacement of Water Meters	54,000	54,000	56,000	57,000	59,000	61,000	287,000	139,000	426,000	48,000	37,000	26,000	14,000	14,000	100	0
014018		Replacement of Large Water Services and Meters	0	62,000	64,000	66,000	68,000	70,000	330,000	383,000	713,000	72,000	74,000	77,000	79,000	81,000	100	0
		Project Total	63,688	116,000	120,000	123,000	127,000	131,000	617,000	522,000	1,139,000	120,000	111,000	103,000	93,000	95,000		
014152	Water Main Replacements																	
014152		2009 Annual Pipe Replacement	1,752,054	0	0	0	0	0	0	0	0	0	0	0	0	0	95	5
014152		2010 Annual Pipe Replacement	75,000	1,751,000	0	0	0	0	1,751,000	0	1,751,000	0	0	0	0	0	95	5
014152		2011 Annual Pipe Replacement	0	137,000	2,016,000	0	0	0	2,153,000	0	2,153,000	0	0	0	0	0	95	5
014152		2012 Annual Pipe Replacement	0	0	182,000	2,405,000	0	0	2,587,000	0	2,587,000	0	0	0	0	0	95	5
014152		2013 Annual Pipe Replacement	0	0	0	172,000	3,152,000	0	3,324,000	0	3,324,000	0	0	0	0	0	95	5
014152		2014 Annual Pipe Replacement	0	0	0	0	194,000	3,826,000	4,020,000	0	4,020,000	0	0	0	0	0	95	5
014152		2015 Annual Pipe Replacement	0	0	0	0	0	198,000	198,000	4,657,000	4,855,000	4,657,000	0	0	0	0	95	5
014152		2016 Annual Pipe Replacement	0	0	0	0	0	0	0	5,492,000	5,492,000	203,000	5,289,000	0	0	0	95	5
014152		2017 Annual Pipe Replacement	0	0	0	0	0	0	0	6,215,000	6,215,000	0	212,000	6,003,000	0	0	95	5
014152		2018 Annual Pipe Replacement	0	0	0	0	0	0	0	6,684,000	6,684,000	0	0	231,000	6,453,000	0	95	5
014152		2019 Annual Pipe Replacement	0	0	0	0	0	0	0	7,168,000	7,168,000	0	0	0	246,000	6,922,000	95	5
014152		2020 Annual Pipe Replacement (design only in 2019)	0	0	0	0	0	0	0	261,000	261,000	0	0	0	0	261,000	95	5
		Project Total	1,827,054	1,888,000	2,198,000	2,577,000	3,346,000	4,024,000	14,033,000	30,477,000	44,510,000	4,860,000	5,501,000	6,234,000	6,699,000	7,183,000		
014203	Water Main Improvements																	
014203	27549	College Hill 703 Connector Main	47,919	0	0	0	0	0	0	694,000	694,000	60,000	634,000	0	0	0	100	0
014203	10723	Eweb Contribution to Main Extensions (Umbrella Job)	50,000	52,000	54,000	75,000	100,000	151,000	432,000	1,020,000	1,452,000	168,000	185,000	203,000	222,000	242,000	50	50
014203	29846	Reliability & Water Quality Improvements (Looping)	56,740	24,000	47,000	62,000	64,000	65,000	262,000	357,000	619,000	67,000	69,000	71,000	74,000	76,000	90	10
014203	27559	Fire Flow Improvements	56,740	24,000	47,000	62,000	64,000	65,000	262,000	357,000	619,000	67,000	69,000	71,000	74,000	76,000	100	0
014203		Control Valve installations for Water Quality & Reliability	0	62,000	64,000	66,000	68,000	70,000	330,000	383,000	713,000	72,000	74,000	77,000	79,000	81,000	100	0
014203	28818	Shasta 975/Fairmont 975 Connector Pipeline	20,986	213,000	0	0	0	0	213,000	0	213,000	0	0	0	0	0	85	15
014203		Dillard 975 to Shasta 975 Connector Pipeline	0	0	0	0	0	0	0	559,000	559,000	0	0	0	55,000	504,000	20	80
014203	32312	Willamette 1150 to Fox Hollow 1150 Connector	20,000	755,000	0	0	0	0	755,000	0	755,000	0	0	0	0	0	20	80
014203	32626	Fox Hollow to Miramar Loop Connection	0	75,000	0	0	0	0	75,000	0	75,000	0	0	0	0	0	90	10
014203	29847	Shasta 975 to Bloomberg 700 redundant connection on 30th	20,000	309,000	336,000	0	0	0	645,000	0	645,000	0	0	0	0	0	50	50
014203		City View 800 to S. Louis Lane Connector	0	0	0	0	20,000	195,000	215,000	0	215,000	0	0	0	0	0	10	90
014203		Dillard 800 Looping Improvements	0	0	0	44,000	451,000	0	495,000	0	495,000	0	0	0	0	0	90	10
014203		WM 1325 to Startouch 1325 Connector	0	31,000	213,000	0	0	0	244,000	0	244,000	0	0	0	0	0	90	10
014203		WM 975 Looping Improvements	0	0	43,000	328,000	0	0	371,000	0	371,000	0	0	0	0	0	90	10
014203		WM 1150 to Crest 1150 Connector	0	0	0	0	0	35,000	35,000	323,000	358,000	323,000	0	0	0	0	90	10
014203		Kingsley Road (Marist) Loop Improvement	0	0	0	0	34,000	314,000	348,000	0	348,000	0	0	0	0	0	100	0
014203		Dillard 800 to Willamette 800 Connection Upgrade	0	0	0	0	0	0	0	973,000	973,000	0	87,000	533,000	353,000	0	90	10
014203		North CV 800 Looping Improvements (Buck to Griener)	0	0	0	0	0	0	0	403,000	403,000	0	0	0	40,000	363,000	90	10
014203	30045	Columbia Street Pressure Improvement	252,543	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
		Project Total	524,928	1,545,000	804,000	637,000	801,000	895,000	4,682,000	5,069,000	9,751,000	757,000	1,118,000	955,000	897,000	1,342,000		
014339	Water Main Relocations																	
014339	8560	Umbrella Job for Street Rebuild Relocations	0	528,000	627,000	677,000	723,000	752,000	3,307,000	6,117,000	9,424,000	1,140,000	1,180,000	1,222,000	1,265,000	1,310,000	100	0
014339	29504	Old Coburg Road/Chad Drive	36,525	0	0	0	0	0	0	0	0	0	0	0	0	0	50	50
014339	30667	Elmira Road	422,304	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
014339	30846	Delta Ponds Culvert 20-inch main relocation	64,690	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
014339	30851	Crest Drive Neighborhood Street Improvements	200,000	300,000	0	0	0	0	300,000	0	300,000	0	0	0	0	0	100	0
014339	31996	Floral Hill & Riverview Relocation & Improvement	524,613	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
014339	32087	I-5 Transmission Relocation	372,440	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
014339	32117	Riverview Main Relocation	101,104	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
		Project Total	1,721,676	828,000	627,000	677,000	723,000	752,000	3,607,000	6,117,000	9,724,000	1,140,000	1,180,000	1,222,000	1,265,000	1,310,000		
		Water main replacements relocations and improvements	4,073,658	4,261,000	3,629,000	3,891,000	4,870,000	5,671,000	22,322,000	41,663,000	63,985,000	6,757,000	7,799,000	8,411,000	8,861,000	9,835,000		
		Target		4,442,000	4,638,000	3,235,000	5,482,000	6,026,000				6,558,000	7,021,000	7,596,000	8,066,000	8,150,000		
019948	Water General Plant Additions																	
019948	1513	Water Division Vehicle Allowance	777,000	450,000	320,000	360,000	240,000	215,000	1,585,000	1,587,000	3,172,000	299,000	308,000	317,000	327,000	336,000	100	0
019948	20146	General Plant - Hayden Bridge Annual Allowance	30,000	32,000	33,000	34,000	35,000	36,000	170,000	200,000	370,000	38,000	39,000	40,000	41,000	42,000	100	0
019948	28833	General Plant - Water Operations Annual Allowance	45,000	59,000	86,000	109,000	71,000	84,000	409,000	538,000	947,000	69,000	76,000	150,000	135,000	108,000	100	0
019948	28834	Water System GIS Upgrades & Plug-ins/WMS/CMMS	49,918	36,000	37,000	38,000	39,000	40,000	190,000	218,000	408,000	41,000	42,0					

			2009 budget	2010	2011	2012	2013	2014	2010-2014	2015-2019	2010-2019	2015	2016	2017	2018	2019	Renewal Replacement	Capacity Improvement
019948	29896	Replacement of Leased Lines w/ Radio/Fiber Links	21,437	0	22,000	22,000	23,000	24,000	91,000	129,000	220,000	24,000	25,000	26,000	27,000	27,000	100	0
019948	29897	Purchase Monitoring Equipment (CL-17's etc.)	11,261	11,000	11,000	11,000	12,000	12,000	57,000	66,000	123,000	12,000	13,000	13,000	14,000	14,000	100	0
019948		Water Distribution Facilities Security Study	0	50,000	0	0	0	0	50,000	0	50,000	0	0	0	0	0	100	0
019948	29898	Access Control & Alarm Replacement Program	48,729	0	50,000	52,000	53,000	55,000	210,000	301,000	511,000	57,000	58,000	60,000	62,000	64,000	100	0
019948	28822	Migration from RTU's to PLC-based Controllers	0	0	58,000	60,000	61,000	63,000	242,000	345,000	587,000	65,000	67,000	69,000	71,000	73,000	100	0
019948		Chemical (CL2) Building RTU Replacement	0	80,000	0	0	0	0	80,000	0	80,000	0	0	0	0	0	100	0
019948		Raw Water RTU Replacement	65,000	230,000	0	0	0	0	230,000	0	230,000	0	0	0	0	0	100	0
019948		Instrumentation & Comms for Control Valve locations	0	11,000	11,000	11,000	12,000	12,000	57,000	66,000	123,000	12,000	13,000	13,000	14,000	14,000	100	0
019948	29899	Fixed Remote Water Quality Sites	25,210	52,000	54,000	55,000	57,000	58,000	276,000	0	276,000	0	0	0	0	0	100	0
019948	27645	New Itanium Servers to replace Alpha Servers	56,073	62,000	0	0	0	0	62,000	0	62,000	0	0	0	0	0	100	0
019948		Upgrade SCADA System	0	0	0	0	0	483,000	483,000	505,000	988,000	249,000	256,000	0	0	0	100	0
019948		SCADA Data Storage System Purchase	0	40,000	0	0	0	0	40,000	0	40,000	0	0	0	0	0	100	0
Project Total			227,710	636,000	206,000	211,000	218,000	707,000	1,978,000	1,412,000	3,390,000	419,000	432,000	181,000	188,000	192,000		
014326 Facilities General Plant Additions																		
014326	448	Update HQ HVAC Controls	0	0	29,000	0	0	0	29,000	0	29,000	0	0	0	0	0	100	0
014326	448	Replaces North Building Roof	0	14,000	0	0	0	0	14,000	0	14,000	0	0	0	0	0	100	0
014326	448	Replace South Building Roof	0	14,000	0	0	0	0	14,000	0	14,000	0	0	0	0	0	100	0
014326	448	Replace Emergency Generator	0	23,000	0	0	0	0	23,000	0	23,000	0	0	0	0	0	100	0
014326	31699	IS Facility Upgrades(not in until 8/6) (Replace Data Center/UPS System)	0	0	35,000	0	0	0	35,000	0	35,000	0	0	0	0	0	100	0
014326		Replace Boiler/add mechanical space	0	0	42,000	0	0	0	42,000	0	42,000	0	0	0	0	0	100	0
014326		Relocate Emergency Generator/air compressor/overhaul system	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
014326		Add seismic bracing	0	0	28,000	0	0	0	28,000	0	28,000	0	0	0	0	0	100	0
014326		Replace Halon/Fire Alarm	0	49,000	0	0	0	0	49,000	0	49,000	0	0	0	0	0	100	0
014326		Chiller #3 Upgrade	0	14,000	0	0	0	0	14,000	0	14,000	0	0	0	0	0	100	0
014326		Ballast /Lamp Retrofit & Lighting controls upgrade	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
014326		Miscellaneous	312,439	0	0	0	0	0	0	320,000	320,000	60,000	62,000	64,000	66,000	68,000	100	0
Project Total			312,439	114,000	134,000	0	0	0	248,000	320,000	568,000	60,000	62,000	64,000	66,000	68,000		
023826 Information Resource Management General Plant Additions																		
023826	27658	Capital Office Systems and Security Projects	0	4,000	4,000	4,000	4,000	4,000	20,000	25,000	45,000	5,000	5,000	5,000	5,000	5,000	100	0
023826	25067	Network Data Security & Recovery Capital Work(supports 16149 & 16150)	0	21,000	22,000	23,000	23,000	24,000	113,000	132,000	245,000	25,000	26,000	26,000	27,000	28,000	100	0
023826	25096	ITAC Projects (supports Proj 14325)	0	0	37,000	38,000	39,000	40,000	154,000	218,000	372,000	41,000	42,000	44,000	45,000	46,000	100	0
017944	29617	HRIS Upgrade	0	75,000	0	0	0	0	75,000	0	75,000	0	0	0	0	0	100	0
023826	25066	Telephone Capital work (supports Proj 16148)	0	6,000	0	0	2,000	2,000	10,000	0	10,000	0	0	0	0	0	100	0
023826		Replace Servers	0	0	0	0	7,000	0	7,000	0	7,000	0	0	0	0	0	100	0
023826		Replace file server plus SAN expansion	0	3,000	0	0	0	0	3,000	0	3,000	0	0	0	0	0	100	0
023826		Add ISO base/tracking for next aisle in Data Center	0	5,000	0	0	0	0	5,000	0	5,000	0	0	0	0	0	100	0
023826	23898	Network Services (supports 16149)	0	28,000	29,000	52,000	54,000	56,000	219,000	304,000	523,000	57,000	59,000	61,000	63,000	64,000	100	0
023826		replace core switches	0	0	28,000	0	0	0	28,000	0	28,000	0	0	0	0	0	100	0
023826	30789	replace SUN SAN, tape library system, Unix servers	0	11,000	22,000	0	0	0	33,000	0	33,000	0	0	0	0	0	100	0
023826		SAN expansion/additional media agents	0	12,000	12,000	0	0	0	24,000	0	24,000	0	0	0	0	0	100	0
023826	28783	IS Security Capital Work	0	14,000	15,000	15,000	16,000	16,000	76,000	89,000	165,000	17,000	17,000	18,000	18,000	19,000	100	0
023826	27663	Manage HW & SW Assets (supports Proj 16162)	0	3,000	3,000	3,000	4,000	0	13,000	0	13,000	0	0	0	0	0	100	0
023826	25068	Computer & Comm Infrastructure (supports proj 16554)	0	6,000	6,000	6,000	7,000	7,000	32,000	37,000	69,000	7,000	7,000	7,000	8,000	8,000	100	0
031714	31712	CIS Capital	0	0	10,000	10,000	10,000	11,000	41,000	57,000	98,000	11,000	11,000	11,000	12,000	12,000	100	0
023826		Elevator Communication Upgrade	0	0	3,000	0	0	0	3,000	0	3,000	0	0	0	0	0	100	0
014083	32588	Replace Meter Reading Handhelds	0	18,000	0	0	0	0	18,000	0	18,000	0	0	0	0	0	100	0
023826		Miscellaneous	478,617	0	0	0	0	0	0	20,000	20,000	4,000	4,000	4,000	4,000	4,000	100	0
Project Total			478,617	206,000	191,000	151,000	166,000	160,000	874,000	882,000	1,756,000	167,000	171,000	176,000	182,000	186,000		
PROGRAM TOTAL			18,125,052	11,470,000	10,171,000	10,018,000	10,904,000	9,602,000	52,165,000	188,999,000	241,164,000	11,315,000	17,032,000	38,465,000	63,701,000	58,486,000		
Total Renewal*			11,428,934	9,714,900	8,729,900	8,279,400	9,212,200	9,039,300	44,975,700	181,927,650	226,903,350	10,176,500	15,075,850	37,547,900	62,971,350	56,156,050		
Total Capacity*			6,696,119	1,755,100	1,441,100	1,738,600	1,691,800	562,700	7,189,300	6,668,350	13,857,650	1,138,500	1,956,150	917,100	689,650	1,966,950		
* All figures adjusted for inflation																		
Annual Inflation Rate (roughly based on ENR CCI)				3.00	3.00	3.00	3.00	3.00				3.00	3.00	3.00	3.00	3.00		
Inflation multiplier from 2008 dollars				1.0300	1.0609	1.0928	1.1256	1.1593				1.1941	1.2299	1.2668	1.3048	1.3440		
PROGRAM TOTAL**			18,125,052	11,470,000	10,171,000	10,018,000	10,904,000	9,602,000	52,165,000	188,596,000	240,761,000	11,315,000	17,032,000	38,465,000	63,661,000	58,123,000		