City of Tillamook
The Dairylands

MEMO

To: Honorable Mayor and Members of City Council

From: Jamy Wilson, Finance Officer
Tim Lyda, Public Works Director

Date: February 27, 2017

Re: Ad Hoc Water and Sewer Committee Rate Recommendations

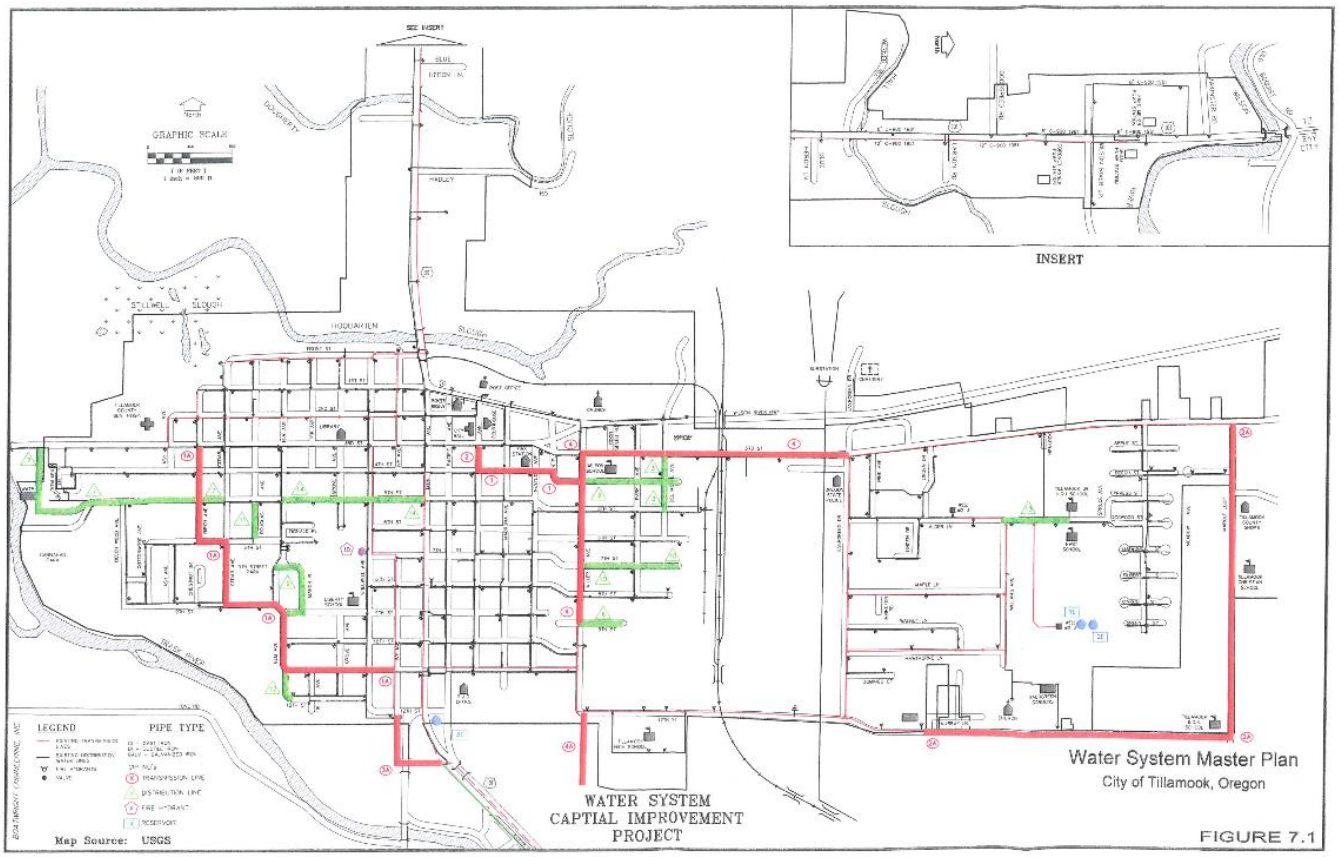
The City has not raised water or sewer rates since 2012 and as we are all aware, costs go up. The City Council charged an Ad Hoc Committee to review the City's needs and report back their recommendations. After several meetings over this last year and extensive research, which resulted in some internal billing adjustments this last Fall, the Ad Hoc Committee has reached a recommendation for the City on rates for Water and Sewer.

As part of their analysis, the Ad Hoc Committee studied rates in Cites with comparable population, along with plant size for our Wastewater Plant. Some of these Cities included Astoria, Seaside and Warrenton, which are shown in tables below for your viewing and comparisons. Rates for cities were all over the map, as every city has different scenarios of plant configurations, debt obligations, and other reasons for their rate structures; therefore, it is valuable to begin with a bit of background on our system.

In recent years, we have made significant improvements to the City's Wastewater Plant and collection system. The Wastewater Plant upgrades were paid for by both DEQ loans and grant funds. The new collection system main line and manholes on the west and east sides of town were paid for by grants from DEQ, not by the sewer rate. This has helped keep the sewer rates down. There is always more work to do on any system, but in the last few years we have made good strides in keeping up with deficiencies.

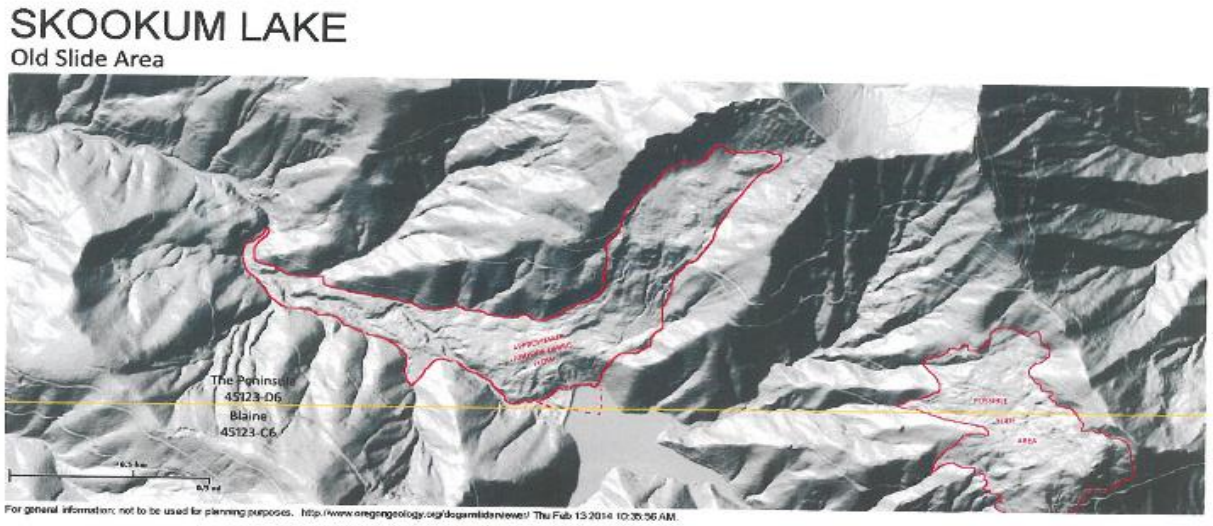
On the water side, the Water Master Plan for the City of Tillamook was recently updated and adopted by Council in 2015. It took into account the anticipated population growth and water demand of the City and its surrounds for a 20-year span. The Capital Improvement Plan (CIP) contained in the Water Master Plan describes the system's needed upgrades, replacements, as well as future growth needs. The CIP calls for funding for the repairs and upgrades at a total cost of $27,660,160.00 That is broken out into $6,915,040.00 in capital needs for the first five years. During the remaining fifteen years, a total of $20,745,120.00 will need to be raised. These figures, along with essential Operation and Maintenance needs, were used in the calculations leading up to the Ad Hoc Committee's recommendations.

The Water plant and distribution system are in need of repairs. This is simply due to their end of useful life; it is not due to deferred maintenance. The roof at the plant is ready to be replaced, along with some



internal piping. The Water Master Plan describes many such water system repairs and upgrades (see CIP Figure 7.1) including the water mains that need to be replaced.

This last year, the downtown grid water mains carrying water east to west were replaced on First, Second, Third, and Fourth Streets, as they were undersized and in conflict with the ODOT project (see map above). This was done in an effort to make the repairs before the ODOT paved the streets downtown at the completion of their bridge project. These projects were funded by City water funds. In the 2017 year, the project list includes the Skookum Lake Dam removal (see Map pics 1 & 4).



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This is an example of a project that Plans cannot always anticipate. As the drawings reflect, the City's Dam is built on an old slide and is now classified as a high hazard. This type of hazard requires monitoring, alarm systems with sirens and evacuation plans, similar to what is currently used on the Trask River. This high hazard classification has a potential for loss of life. The decision was made to remove the dam versus keeping the dam operational, which would have increased costs. The funding for the removal is mainly grant funding, with some water funds. Efforts are being made to keep cost down where possible, but this is an example of the need to sustain an adequate reserves for replacement.

When reviewing cost considerations, also bear in mind that each water plant has operational costs unique to the individual plant and distribution systems. While it is beneficial to compare our City's O & M costs with operational costs with other plants, other plants may not be dealing with the same conditions as your plant. For example, in relation to water intakes, some plants have water supply streams that naturally run clean (Bull Run Portland). Others, such as Killam and Fawcett Creek (City of Tillamook) rise fast and fall fast brining debris downstream with the water, which plugs the intakes. Equipment and skilled crew are needed to remove this in a timely manner. The water quality may require taking the plant off line until the creeks clean up before the water quality is clean enough to be treated. (See pictures below).


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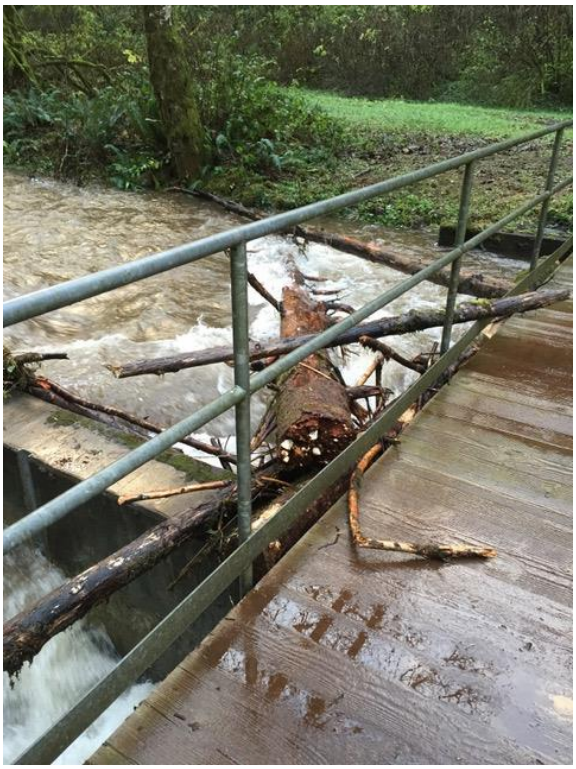
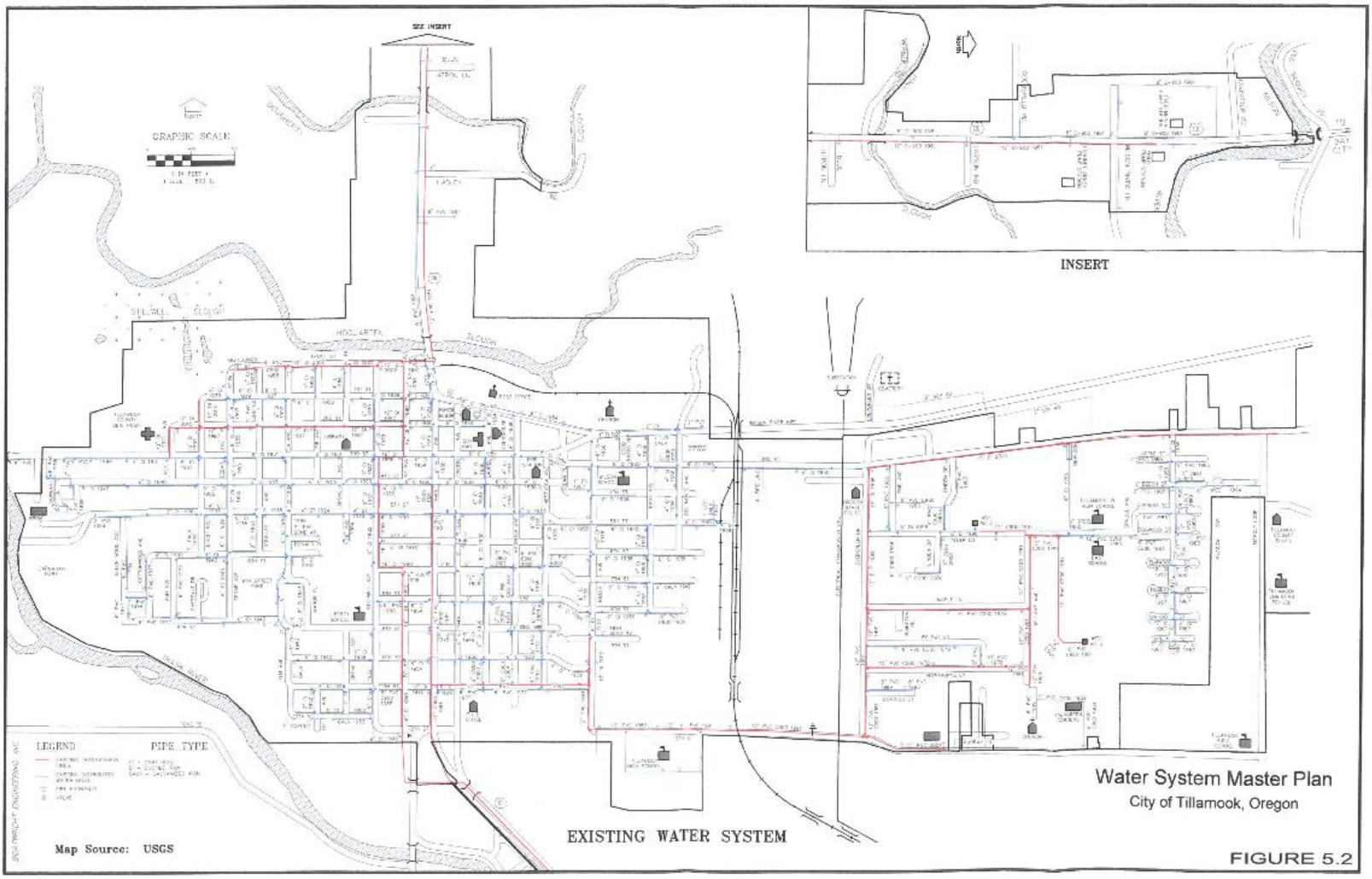


Sometimes, getting to the intake can be challenging, as there are hazards such as downed trees/debris in the road. (See pictures below).

The access road.

The length of the distribution system is directly tied to costs. Distance and the type of ground, all add to the cost of operation. Some systems lay the mains along roads and highways, which is a less expensive way to maintain and access. Our system goes over land, through fields, swamps, river crossings and soft soil to arrive at Tillamook. (See Map below). The transit time from the water plant to Highway 101 North takes approximately two days. The more pipe you have, the more segments that will need to be replaced in years to come as each line has a useful life span. This increases the operational costs. As you can see, we have both capital and operating expenses that differ from other systems, and as a result, the costs differ as well.



Also, please make note that there are inside city rates, outside city rates, and a water district rate involved. The City of Tillamook currently services outside water districts with varying numbers of meter connections. Some of the surrounding area districts have three to four connections, whereas others have an excess of 200 meter connections. Therefore, the City's base rate charges are applied in a very inconsistent manner outside of its City Limits. The water districts also do not pay the City for an SDC fee for meter connections made inside their water district.

That is just an overview of the complexities. There are as many options to resolve them as there are thinking people, but below is an explanation of some of the options and their impacts.

Option 1
A higher base rate method would use an increased meter maintenance fee that includes the average amount of water consumed. This offers the customer a water bill that will usually not vary. This makes it easy for customers to plan ahead and adjust their budget. The customer can set that money aside before the water bill comes and know have enough to cover the bill. The down side is that there is no incentive to conserve water. Oregon State Water Resources Dept. likes to see a rate that encourages water conservation.

Option 2
Oregon State Water Resources prefers a progressive rate method. This would be a base rate and the first 1,000 gallons at the standard rate and then a 10% increase on the next 1,000 gallons and so on. As you can see, this rate method is aimed at encouraging water conservation.

Option 3
There are some systems that have a combination higher base rate and consumption rate. The advantage to a higher base rate is that it helps the cash flow when there is a downturn in consumption, which occurred a few years ago. The higher consumption rate also encourages water conservation.

Option 4
A lower base rate method with a higher consumption rate is also an option. This has a downside in that it reduces cash flow for the water department if there is an economic downturn. The advantage to this is that the customer only pays for the water that is used and there is still an incentive to conserve the water.

Money will always be in short supply, but if you look closely at the water distribution map, it shows some lines that were installed in 1918 (WWI era) 1920, 1930 (the Great Depression) 1940, 1950, 1960 (WW II, Korean War and Vietnam War-current day). Regardless of the challenges, people managed to install new water mains and improve the system as needed. Which leads us to the question of what to do now. The options previously mentioned all have pros and cons to consider. The committee discussed and ultimately decided on **Option 4** as the most appropriate for our city's water methodology.

In July 2016, the Committee, along with the City Council, attended a Water Rate Study workshop presented by Tim Tice, Projects Manager of Oregon Association of Water Utilities. Tim recommended some rates with the future Capital Projects that are needed for the City to stay compliant with water regulations, as well as repairs and improvements to issues such as our water piping, which is currently experiencing an inordinate water loss monthly.

His suggestions were based on formulas between consumption rates, base rates, and capital projects and financing. Initially raising the base rate from $7.25 to $18.50 a month, along with a consumption rate increase from $3.75 to 4.75 or $5.00 per 1,000 gallons used. He believed that the mix of base and

consumption rate increases (similar to **Option 3**) would increase the cash flow and enable Capital Projects completion along with a strong reserve built up for more Capital Projects and emergencies. A typical bill for just water would increase from $29.00 to $42.25 monthly.

After debating this approach extensively, the Ad Hoc Committee is suggesting just a water consumption rate increase only, leaving the base rate with no change. The reasoning behind this theory is that it provides conserving water is an option in the customer's control to keep a water bill at a minimum. One idea was to include an informational water conservation pamphlet in the billing to help educate the public when the rates increase. This will be supported by the fact that the City is required by the State to prepare and adopt a Water Conservation Plan this year.

The Committee is recommending the rates per 1,000 gallons used shown below would go in effect March 2017, along with the Sewer Rate increase that is recommended. It will give the public time to adjust to a new rate before the higher usage summer months emerge upon us.

With the increases that are shown, it gives the Water Fund the ability to address the Capital Projects such as pipe replacement, replacements and repairs to the City's Wells, Skookum Lake Decommissioning, Water Treatment Plant Roof and Repairs, and Seismic Evaluation for the Water Treatment Plant and the Reservoir. According to our adopted Water Master Plan, these projects are mandatory in order to keep our plant, wells, and reservoir up to standards.

We are not raising Meter Rates, or any other fees, only consumption rates for actual water used. The green is the actual increase annually.

City Of Tillamook	16/17	17/18	18/19	19/20	20/21
Proposed Inside Rates	$3.75	$5.62	$6.18	$6.80	$7.48
Difference		*1.87*	*.56*	*.62*	*.68*
Proposed Outside Rates	$4.75	$7.13	$7.84	$8.62	$9.48
Difference		*2.38*	*.71*	*.78*	*.86*

This next table is a sample of the surrounding Cities that we looked at for comparable rates in gallons. Their water rates are broken down to show gallons, instead of cubic feet, or base rates for a certain amount of gallons.

City	Water
Seaside	$ 10.10 per 1,000 gallons
Astoria	$ 12.91 first 4,000 gallons $4.71 per additional

Warrenton	$ 26.12 for first 2,000 gallons, then $ 3.70 per additional 1,000 gallons

Remember there is no base rate increase proposed.

The Committee feels that addressing both rates together will be easier than a bunch of small hits for the average budget.

For the City Sewer Rate increase, the Ad Hoc Committee is suggesting a flat 4% rate increase every year until 2020/2021. This amount is based on just keeping the Sewer Fund functioning without going into a declining operating budget; it contains no capital improvements, reserves for replacement, or additional debt service. Every year DEQ requirements are changing and we are required to uphold certain certifications along with regulated chemicals and procedures to keep the Sewer Plant operating. If we don't increase the sewer rates, we will be forced to look for the difference in operational and service cuts to keep this fund out of the negative. This increase is not taking any capital projects into effect. This is strictly to keep this fund running in accordance with DEQ mandates.

The Current Rate is $73.25 for Residential and $122.25 for Outside; below is the change is recommended by the Ad Hoc Committee. The Table is referencing Single Family Residential and Single Family Outside Users with the green as actual monthly increase amount for each year. The 4% increase would affect all sewers rates across the board. You can see that a 4% increase is a small amount of money each month compared to the water.

	16/17	17/18	18/19	19/20	20/21
Inside Rate Increase	76.18	79.23	82.40	85.70	89.13
Difference	*2.93*	*3.05*	*3.17*	*3.30*	*3.40*
Outside Rate Increase	127.14	132.23	137.52	143.02	148.74
Difference	*4.89*	*5.09*	*5.29*	*5.50*	*5.72*

Sewer Rates were the hardest to compare. DEQ was contacted and there are not very good comparable Cities for our plant size and our population.

City	Sewer
Seaside	$66.58

Astoria	$94.36 family of 4
Warrenton	$52.87 + 10.57 Storm Water

TABLE 7-7

Capital Improvement Time Line Summary

Project Category	Project	CIP No.	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Medium-Term (2026-2034)	Long-Term (2034+)	Estimated Project Cost
DISTRIBUTION	Pipe Replacement 0-10 Years Remaining Life	1 thru 15	$ 100,675	$ 100,675	$ 100,675	$ 100,675	$ 100,675	$ 100,675	$ 100,675	$ 100,675					$ 805,400
	Pipe Replacement 10-20 Years Remaining Life	16 thru 61									$ 397,275	$ 397,275	$ 3,575,475		$ 4,370,025
	New	62												$ 6,630	$ 6,630
														Sub-total	$ 5,182,055
TRANSMISSION	Qty Pipe Replacement	2A, 4A, 5A					$ 110,500	$ 110,500							$ 221,000
	Rural Pipe Replacement	3B					$ 488,800								$ 488,800
	City New	1-3A & 5-11A	$ 138,170	$ 228,310	$ 138,170	$ 138,170	$ 138,170	$ 138,170	$ 138,170	$ 138,170	$ 138,170	$ 138,170	$ 935,420	$ 2,761,575	$ 5,168,835
	Rural New	1B, 2B,	$ 656,930	$ 656,930	$ 656,930	$ 656,930	$ 656,930	$ 656,930	$ 656,930	$ 656,930	$ 656,930	$ 656,930			$ 6,569,300
														Sub-total	$ 12,447,935
FIRE HYDRANTS	Replacement	1C	$ 20,800												$ 20,800
	New on exist. pipeline (11)	2-5C, 8-9C, 13-21C	$ 11,440	$ 11,440	$ 11,440	$ 11,440	$ 11,440	$ 5,720							$ 62,920
	New proposed pipeline (5)	6-7C, 10C, 12C	$ 5,720				$ 11,440					$ 11,440			$ 28,600
	Delay, no pipeline (2)	11C												$ 11,440	$ 11,440
														Sub-total	$ 123,760
STORAGE	Seismic Evaluation WTP & Reservoirs	5D			$ 39,000										$ 39,000
	0.5 MG Reservoir	1D					$ 910,000								$ 910,000
	0.5 MG Reservoir	2D							$ 546,000						$ 546,000
	0.5 MG Reservoir	3D										$ 728,000			$ 728,000
	0.5 MG Reservoir	4D											$ 728,000		$ 728,000
														Sub-total	$ 2,951,000
SOURCES	Pump Test Well 8	1E	$ 1,700												$ 1,700
	Water Conserv & Mngmt Plan 11-14-2017	2E	$ 50,000												$ 50,000
	Well No. 4	3E				$ 78,000									$ 78,000
	Well No. 5	6E										$ 78,000			$ 78,000
	Wtr Rt Transfer Well 1	4E					$ 4,800								$ 4,800
	Wtr Rt Transfer Old Well 2	7E											$ 4,800		$ 4,800
	Evaluate Well 1	5E											$ 6,500		$ 6,500
	Evaluate old Well 2	8E											$ 6,500		$ 6,500
														Sub-total	$ 230,300
MISCELLANEOUS	Leak Noise Correlator	1F	$ 30,000												$ 30,000
	SKADA Syst. Plant Controls	3F					$ 130,000								$ 130,000
	Sensus System/Tower	4F					$ 156,000								$ 156,000
	Meters @ overflows	5F	$ 7,800												$ 7,800
	Meters on all uses	6F	$ 20,000												$ 20,000
	Staff Gages @ Creeks	7F	$ 1,550												$ 1,550
	Skookum Lake Decommision	8F	$ 260,000												$ 260,000
	Stairs/Platfrom WTP Res's	9F					$ 71,500								$ 71,500
	Line overflow ponds @WTP	10F					$ 26,000								$ 26,000
	WTP Bldg Sides, Roof, Repairs	11F			$130,000										$ 130,000
														Sub-total	$ 832,850
Capital Improvement Projects	Totals		$ 1,304,785	$ 997,355	$ 1,076,215	$ 985,215	$ 2,816,255	$ 1,011,995	$ 1,441,775	$ 995,775	$ 1,192,375	$ 2,009,815	$ 6,256,695	$ 2,779,645	$ 23,767,900

All costs are in 2014 Dollars