



# STORM WATER USER RATE STUDY

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STORM WATER UTILITY  
OREM CITY, UTAH

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PREPARED BY  
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## SECTION I: EXECUTIVE SUMMARY

The City of Orem ("City") commissioned Lewis Young Robertson & Burningham, Inc. ("LYRB") to review the existing storm water utility fees (or rates) and provide a recommended rate schedule based on changes in forecasted expenses, capital improvements and bonding needs. The primary objectives of the rate analysis were to ensure sufficient revenues to cover all operation and maintenance (O&M) expenses while maintaining bond covenants, ensuring the appropriate debt service coverage ratio, and providing sufficient revenue to fund the proposed projects identified in the Master Plan and Capital Improvement Plan ("CIP").

A review of projected revenues under the existing rate structure relative to proposed expenses illustrated that the City would not have sufficient revenues to fund the needed capital improvements without a rate increase. As a result, City staff, the City Council and consultants evaluated many potential rate scenarios during the study phase of this analysis, with the City ultimately focusing on three CIP scenarios:

- ☞ **Scenario 1** – Phasing the proposed CIP over a five (5) year period with no new debt;
- ☞ **Scenario 2** – Phasing the proposed CIP over a seven (7) year period with no new debt; and,
- ☞ **Scenario 3** – Phasing the proposed CIP over a ten (10) year period with no new debt.

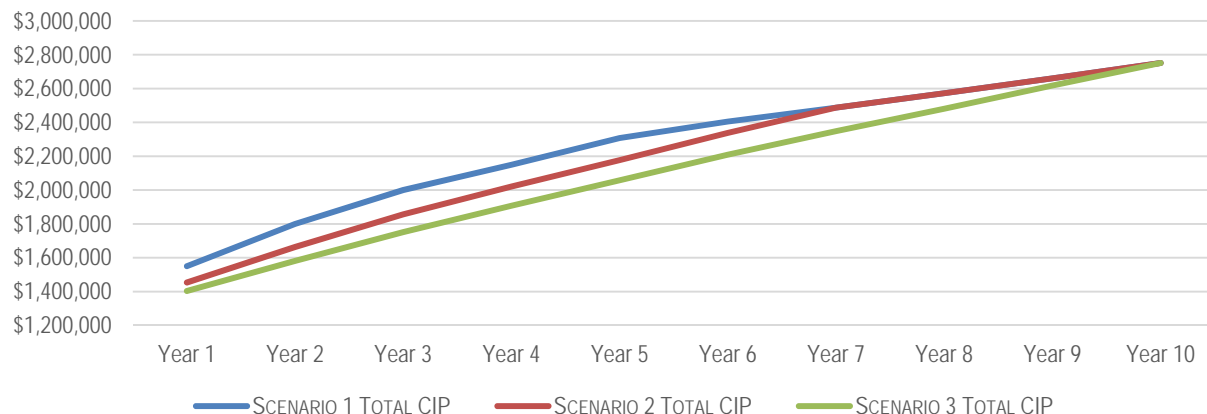
The rate scenarios shown below are structured to produce a final rate of \$8.60 within ten years. The annual rate increase curve (See **Figure 1.1**) for each scenario is adjusted to reflect the changes in the CIP, with Scenarios 2 and 3 funding a reduced CIP in order to allow for a more moderate annual increase in the rates. Scenario 2 results in a decrease of \$713,088 in CIP funding, with Scenario 3 resulting in a decrease of \$857,955.

TABLE 1.1: ILLUSTRATION OF PROPOSED RATE INCREASE SCENARIOS

	Scenario 1: 5-Year			Scenario 2: 7-Year			Scenario 3: 10-Year		
	Base Rate	Annual Increase	Cumulative Increase	Base Rate	Annual Increase	Cumulative Increase	Base Rate	Annual Increase	Cumulative Increase
Current	\$5.25	0.0%	0.0%	\$5.25	0.0%	0.0%	\$5.25	0.0%	0.0%
Year 1	\$6.25	19.0%	19.0%	\$5.95	13.3%	13.3%	\$5.85	11.4%	11.4%
Year 2	\$6.75	8.0%	28.6%	\$6.40	7.6%	21.9%	\$6.25	6.8%	19.0%
Year 3	\$7.10	5.2%	35.2%	\$6.85	7.0%	30.5%	\$6.60	5.6%	25.7%
Year 4	\$7.35	3.5%	40.0%	\$7.15	4.4%	36.2%	\$6.90	4.5%	31.4%
Year 5	\$7.60	3.4%	44.8%	\$7.45	4.2%	41.9%	\$7.20	4.3%	37.1%
Year 6	\$7.80	2.6%	48.6%	\$7.75	4.0%	47.6%	\$7.50	4.2%	42.9%
Year 7	\$8.00	2.6%	52.4%	\$8.00	3.2%	52.4%	\$7.80	4.0%	48.6%
Year 8	\$8.20	2.5%	56.2%	\$8.20	2.5%	56.2%	\$8.10	3.8%	54.3%
Year 9	\$8.40	2.4%	60.0%	\$8.40	2.4%	60.0%	\$8.40	3.7%	60.0%
Year 10	\$8.60	2.4%	63.8%	\$8.60	2.4%	63.8%	\$8.60	2.4%	63.8%
Estimated 10 Yr CIP	\$22,684,321			\$21,980,673			\$21,109,743		

The adopted rates by year ten register at 1.15 percent of current median household incomes (MHI), including current annual water and sewer assessments. An affordability index of 1.5 percent of MHI is used as a benchmark in this analysis.

FIGURE 1.1: PROPOSED CIP FUNDING





Each scenario assumes an annual growth of .5 percent in equivalent service units (ESUs). Annual Operation and Maintenance (“O&M”) expenditures are assumed to increase by three percent annually. The comparison of revenues and expenditures under the adopted rate increase illustrates that the City will continue to maintain the necessary debt service coverage ratios, while providing necessary funding for capital improvement and replacement projects according to the proposed CIP scenarios. The fund balance is anticipated to decrease slightly over time under each scenario, but remain above the minimum set by the City of maintaining at least 50 percent of O&M expenses in reserve funds.

TABLE 1.2: SUMMARY PRO FORMA – SCENARIO 1

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 10
<b>Usage Charge (per Month)</b>	\$6.25	\$6.75	\$7.10	\$7.35	\$7.60	\$8.60
Calculated ESUs	50,342	50,594	50,847	51,101	51,357	52,653
Total Operating Revenue	3,806,815	4,129,568	4,363,930	4,539,212	4,716,139	5,467,904
Total Operating Expense	(1,676,599)	(1,747,381)	(1,810,480)	(1,868,861)	(1,928,633)	(2,233,926)
Total Non-Operating Revenue	15,168	15,320	15,473	15,627	15,784	16,589
Total DS	(454,429)	(455,011)	(479,606)	(463,029)	(454,577)	(455,074)
<b>Total CIP</b>	<b>(1,550,000)</b>	<b>(1,800,000)</b>	<b>(2,000,000)</b>	<b>(2,150,000)</b>	<b>(2,307,660)</b>	<b>(2,751,470)</b>
Net Income (Loss) Before Transfers	140,954	142,495	89,317	72,950	41,052	44,022
Change in Net Position after Transfers and Contributions	50,671	51,309	(2,781)	(20,070)	(52,897)	(54,720)
Beginning Fund Balance	2,178,932	2,229,603	2,280,912	2,278,131	2,258,062	1,985,940
<b>Ending Fund Balance</b>	<b>\$2,229,603</b>	<b>\$2,280,912</b>	<b>\$2,278,131</b>	<b>\$2,258,062</b>	<b>\$2,205,164</b>	<b>\$1,931,220</b>
Days of Working Capital	479	470	453	435	412	311
Coverage Ratio	4.69	5.24	5.32	5.77	6.13	7.11

TABLE 1.3: SUMMARY PRO FORMA – SCENARIO 2

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 10
<b>Usage Charge (per Month)</b>	\$5.95	\$6.40	\$6.85	\$7.15	\$7.45	\$8.60
Calculated ESUs	50,342	50,594	50,847	51,101	51,357	52,653
Total Operating Revenue	3,625,583	3,917,074	4,211,390	4,416,570	4,623,697	5,467,904
Total Operating Expense	(1,658,476)	(1,726,132)	(1,795,226)	(1,856,597)	(1,919,389)	(2,233,926)
Total Non-Operating Revenue	15,168	15,320	15,473	15,627	15,784	16,589
Total DS	(454,429)	(455,011)	(479,606)	(463,029)	(454,577)	(455,074)
<b>Total CIP</b>	<b>(1,453,561)</b>	<b>(1,663,228)</b>	<b>(1,856,487)</b>	<b>(2,020,574)</b>	<b>(2,177,369)</b>	<b>(2,751,470)</b>
Net Income (Loss) Before Transfers	74,285	88,022	95,544	91,997	88,145	44,022
Change in Net Position after Transfers and Contributions	(15,999)	(3,164)	3,445	(1,022)	(5,804)	(54,720)
Beginning Fund Balance	2,178,932	2,162,933	2,159,769	2,163,215	2,162,193	1,976,500
<b>Ending Fund Balance</b>	<b>\$2,162,933</b>	<b>\$2,159,769</b>	<b>\$2,163,215</b>	<b>\$2,162,193</b>	<b>\$2,156,388</b>	<b>\$1,921,780</b>
Days of Working Capital	470	450	434	419	404	310
Coverage Ratio	4.33	4.82	5.04	5.53	5.95	7.11

TABLE 1.4: SUMMARY PRO FORMA – SCENARIO 3

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 10
<b>Usage Charge (per Month)</b>	\$5.85	\$6.25	\$6.60	\$6.90	\$7.20	\$8.60
Calculated ESUs	50,342	50,594	50,847	51,101	51,357	52,653
Total Operating Revenue	3,565,172	3,826,005	4,058,849	4,263,266	4,469,627	5,467,904
Total Operating Expense	(1,652,435)	(1,717,025)	(1,779,972)	(1,841,266)	(1,903,982)	(2,233,926)
Total Non-Operating Revenue	15,168	15,320	15,473	15,627	15,784	16,589
Total DS	(454,429)	(455,011)	(479,606)	(463,029)	(454,577)	(455,074)
<b>Total CIP</b>	<b>(1,403,625)</b>	<b>(1,580,771)</b>	<b>(1,751,754)</b>	<b>(1,907,334)</b>	<b>(2,058,293)</b>	<b>(2,751,470)</b>
Net Income (Loss) Before Transfers	69,851	88,517	62,990	67,264	68,558	44,022
Change in Net Position after Transfers and Contributions	(20,433)	(2,669)	(29,108)	(25,755)	(25,391)	(54,720)
Beginning Fund Balance	2,178,932	2,158,500	2,155,831	2,126,722	2,100,967	1,989,476
<b>Ending Fund Balance</b>	<b>\$2,158,500</b>	<b>\$2,155,831</b>	<b>\$2,126,722</b>	<b>\$2,100,967</b>	<b>\$2,075,576</b>	<b>\$1,934,755</b>
Days of Working Capital	470	452	430	411	392	312
Coverage Ratio	4.21	4.64	4.75	5.23	5.64	7.11



## SECTION II: OVERVIEW OF APPROACH AND ADOPTION OF REVISED RATES

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This study analyzes potential rate increase scenarios to meet current and future debt service obligations, while ensuring revenue sufficiency for capital improvements, the funding of depreciation (repair and replacement) and existing bond covenants. The recommendations presented in this study are based on reasonable planning, cost, and demand projections. The proposed rate scenarios are designed to recover the costs necessary to maintain a viable utility, while balancing economic and affordability concerns.

### EXISTING RATE STRUCTURE

The existing monthly charge for storm service consist of a base rate of \$5.25 per equivalent service unit (ESU). An ESU is equal to the average impervious surface of a residential property in Orem. The City's existing billing database includes all commercial and governmental properties in Orem. A single family home has an average impervious surface area of 2,700 square feet. This is equal to 1 ESU.

### GENERAL RATE OBJECTIVES

Several objectives were identified by the City which served as the foundation of the rate update and scenario analysis.

- ☒ First, the City wanted to ensure sufficient revenues to cover all operation and maintenance (O&M) expenses while maintaining bond covenants and the appropriate debt service coverage ratio of at least 1.25x.
- ☒ Second, the City wanted to continue to fund capital improvements in the ten-year window using rate revenues, while minimizing future bonding needs and maintaining a minimum fund balance of 50 percent of annual O&M expenses.
- ☒ Third, the City desired to maintain the existing rate structure based on ESU's.
- ☒ Finally, the proposed rate recommendations should be easy to implement and equitably distribute cost relative to demand.

### RATE DETERMINATION METHODOLOGY

Based on the above objectives, the storm water rate analysis has been divided into the following three phases:

1. **Revenue Growth Analysis:** LYRB studied existing revenue data and growth projections provided by the City. This information was then analyzed to determine the potential allocation of new accounts and the revenue potential within the storm water utility.
2. **Cost of Service Analysis:** The cost of service analysis is structured to balance revenue sufficiency with future operating and maintenance costs, contracts, repair and replacement, capital expenditures, funding for current system deficiencies and bond service coverage ratios. Expenses were projected out to 2026 and revenues were analyzed under a variety of scenarios to meet the City's needs.
3. **Rate Design Analysis:** The final phase focuses on structuring rates that will collect the necessary revenues based on the City's budgetary needs and rate objectives.

## SECTION III: REVENUE GROWTH ANALYSIS

### SERVICE AREA

The utility rates identified in this document will be assessed to all accounts within the storm water utility service area.

### DEMAND UNITS

The demand units in this analysis are ESUs. According to information provided by the City, there were an average of 49,823 ESUs in 2015, according to monthly revenue estimates. Based on total revenues received, the calculated ESUs for the purpose of this analysis are similar at 49,843, based on total revenues from Charges for Services of \$3,140,081 divided by the base rate of \$5.25.

TABLE 3.1: CITY-WIDE ESU GROWTH PROJECTIONS

ESUs (FY)	TOTAL ESUs
2015	49,843
2016	50,092
2017	50,342
2018	50,594
2019	50,847
2020	51,101
2021	51,357
2022	51,613
2023	51,871
2024	52,131
2025	52,392
2026	52,653

### HISTORIC AND PROJECTED OPERATING REVENUES

Utilizing the growth estimates shown in Table 3.1, LYRB forecasted the potential revenues generated from current service charges without any rate increases, as shown below.

TABLE 3.2: HISTORIC OPERATING REVENUES

	2009	2010	2011	2012	2013	2014	2015
Charges for Services	2,688,102	2,727,203	2,638,310	2,779,313	2,793,384	3,044,908	3,140,081
Other Revenues	720	92,103	960	165,038	298,423	58,860	30,534
<b>Total Operating Revenue</b>	<b>\$2,688,822</b>	<b>\$2,819,306</b>	<b>\$2,639,270</b>	<b>\$2,944,351</b>	<b>\$3,091,807</b>	<b>\$3,103,768</b>	<b>\$3,170,615</b>

TABLE 3.3: FORECASTED OPERATING REVENUES

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 10
Calculated ESUs	50,342	50,594	50,847	51,101	51,357	52,653
<b>Scenario 1</b>						
Usage Charge (per Month)	\$6.25	\$6.75	\$7.10	\$7.35	\$7.60	\$8.60
Total Operating Revenue	\$3,806,815	\$4,129,568	\$4,363,930	\$4,539,212	\$4,716,139	\$5,467,904
<b>Scenario 2</b>						
Usage Charge (per Month)	\$5.95	\$6.40	\$6.85	\$7.15	\$7.45	\$8.60
Total Operating Revenue	\$3,625,583	\$3,917,074	\$4,211,390	\$4,416,570	\$4,623,697	\$5,467,904
<b>Scenario 3</b>						
Usage Charge (per Month)	\$5.85	\$6.25	\$6.60	\$6.90	\$7.20	\$8.60
Total Operating Revenue	\$3,565,172	\$3,826,005	\$4,058,849	\$4,263,266	\$4,469,627	\$5,467,904

### PROJECTED NON-OPERATING REVENUES

Non-operating revenues are primarily comprised of impact fee revenues and interest revenues. The City currently assesses an impact fee within a recently annexed area of the City. However, revenues from these sources are not considered in this analysis at this time due to the uncertainty of the timing of new growth. Historic and projected total non-operating revenues are shown below. Assumptions regarding annual non-operating revenues do not change under each scenario.

TABLE 3.4: HISTORIC NON-OPERATING REVENUES

NON-OPERATING REVENUES (EXPENSES)	2009	2010	2011	2012	2013	2014	2015
Interest Revenue	42,185	9,672	11,610	23,372	15,164	15,261	14,869
SWA Impact Fee Revenues	-	-	-	-	-	-	-
Gain (Loss) on Sale of Capital Assets	45,000	(12,842)	-	15,150	-	-	-
Donations/Grants	-	-	-	-	198,267	-	-
Deferred Charges	(5,289)	(5,289)	(5,289)	(5,289)	(5,289)	(36,705)	-
<b>Total Non-Operating Revenue</b>	<b>81,896</b>	<b>(8,459)</b>	<b>6,321</b>	<b>33,233</b>	<b>208,142</b>	<b>(21,444)</b>	<b>14,869</b>

TABLE 3.5: FORECASTED NON-OPERATING REVENUES

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 10
<b>Total Non-Operating Revenues (Expenses)</b>	<b>\$15,168</b>	<b>\$15,320</b>	<b>\$15,473</b>	<b>\$15,627</b>	<b>\$15,784</b>	<b>\$16,589</b>

## SECTION IV: COST OF SERVICE ANALYSIS

This analysis considers historic revenues and expenses during the period from Fiscal Year ("FY") 2009 through FY 2015, and forecasts revenues and expenditures through 2026. Projected cash flows for the storm water utility were analyzed to ensure that the City's objectives are met – to ensure revenue sufficiency to cover O&M while maintaining bond covenants and the appropriate debt service coverage ratio; fund all necessary capital improvements; begin the process of funding depreciation; and, provide an appropriate fund balance according to the City's existing budget policies.

### COSTS TO BE RECOVERED THROUGH SERVICE CHARGES

#### OPERATIONS AND MAINTENANCE

General O&M expenses are incurred through the normal day-to-day operations of the storm water system. These expenses can include costs such as wages and salaries, benefits, utility costs and supplies. For the storm water system, these costs are considered fixed as the system does not deal with fluctuation in water flows like a culinary or secondary water system. Projections of the future O&M expenses, excluding the Administrative Fee, are projected to grow at an annual rate of three percent. Historic data shows an average annual growth of 1.4 percent growth in expenditures from 2009 to 2015. A comparison to the Municipal Cost Index (MCI) and Construction Cost Index (CCI) shows an average annual change in cost components of 2.8 percent and 3.2 percent respectively.<sup>1</sup> Thus, a three percent increase in operations and maintenance expenses appears reasonable for the purposes of forecasting expenses. According to the City, Administrative Expense is set to ten percent of new revenue plus previous year's total. Thus, the O&M expense is adjusted based on the calculated revenues for each scenario, resulting in a differing O&M forecast, until year ten when this is equalized.

TABLE 4.1: HISTORIC OPERATIONS AND MAINTENANCE EXPENSES

OPERATING EXPENSE	2009	2010	2011	2012	2013	2014	2015
Personal Services	(674,485)	(673,916)	(686,320)	(669,910)	(651,159)	(729,208)	(659,208)
Supplies and Maintenance	(212,687)	(239,202)	(189,413)	(210,265)	(263,956)	(223,887)	(236,525)
Administrative Fee*	(303,240)	(333,577)	(334,711)	(360,310)	(337,013)	(358,284)	(282,964)
Utilities	(5,536)	(5,639)	(6,647)	(8,556)	(8,415)	(7,450)	(8,234)
Contract Services	(162,236)	(153,990)	(161,318)	(148,592)	(139,232)	(164,162)	(244,434)
Equipment Lease and Rentals	(11,717)	(9,000)	(12,105)	(11,685)	(9,000)	(11,761)	(9,222)
Insurance	(29,760)	(29,760)	(29,844)	(41,341)	(41,571)	(45,708)	(45,707)
Changes in Lieu of Property Tax	-	-	-	-	-	-	(29,316)
Miscellaneous	(45,857)	(53,167)	(19,531)	(44,187)	(42,926)	(42,997)	(54,934)
<b>Total Operating Expense</b>	<b>(\$1,445,518)</b>	<b>(\$1,498,251)</b>	<b>(\$1,439,889)</b>	<b>(\$1,494,846)</b>	<b>(\$1,493,272)</b>	<b>(\$1,583,457)</b>	<b>(\$1,570,544)</b>

Source: City of Orem Financial Statements. \*According to the City, Administrative Expense set to ten percent of new revenue plus previous year's total.

TABLE 4.2: PROJECTED OPERATIONS AND MAINTENANCE EXPENSES

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 10
Scenario 1: Total Operating Expense	(1,676,599)	(1,747,381)	(1,810,480)	(1,868,861)	(1,928,633)	(2,233,926)
Scenario 2: Total Operating Expense	(1,658,476)	(1,726,132)	(1,795,226)	(1,856,597)	(1,919,389)	(2,233,926)
Scenario 3: Total Operating Expense	(\$1,652,435)	(\$1,717,025)	(\$1,779,972)	(\$1,841,266)	(\$1,903,982)	(\$2,233,926)

#### CAPITAL PROJECT COSTS

Capital projects must be constructed to update and expand the storm water system. Capital project costs may be paid through cash reserves, impact fees or debt financing. If the City is able to accumulate sufficient cash reserves and chooses to use these reserves to fund capital projects, the need for debt financing may be mitigated. In this analysis, several projects are identified that must be constructed through 2026 and beyond, and it is proposed that the projects be financed on a pay-as-you-go basis. Table 4.3 summarizes the total proposed capital improvement estimated construction costs. The City's Master Plan provides a detail of the proposed capital improvement plan (CIP). Scenario 2 results in a decrease of \$713,088 in CIP funding, with Scenario 3 resulting in a decrease of \$857,955.

TABLE 4.3: SUMMARY OF CAPITAL PROJECT COSTS

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 10
Scenario 1 Total CIP (5 Year Phase –In)	(1,550,000)	(1,800,000)	(2,000,000)	(2,150,000)	(2,307,660)	(2,751,470)
Scenario 2 Total CIP (7 Year Phase –In)	(1,453,561)	(1,663,228)	(1,856,487)	(2,020,574)	(2,177,369)	(2,751,470)
Scenario 3 Total CIP (10 Year Phase –In)	(\$1,403,625)	(\$1,580,771)	(\$1,751,754)	(\$1,907,334)	(\$2,058,293)	(\$2,751,470)

<sup>1</sup> Source: <http://americancityandcounty.com/mciarhive/#Archive>, Accessed January 2016. Based on average from 2000-2015.



**FUNDING OF DEPRECIATION (REPAIR & REPLACEMENT)**

Funding depreciation in the proposed rate structure, or adopting a formal repair and replacement plan, will reduce the City's need to issue future debt, and will therefore decrease future interest expense and help the City avoid abrupt rate increases to fund unforeseen expenses. The City's CIP includes both growth related projects and repair/replacement projects. Thus, an additional allocation in the CIP for depreciation is not included in this analysis.

**DEBT SERVICE COSTS**

The City has funded its existing capital infrastructure through a combination of different revenue sources, including rate revenues and the issuance of debt. There are two pieces of outstanding debt applicable to this analysis: the 2005A Water and Storm Sewer Revenue Bonds, of which 33.5 percent is related storm water, and the Series 2013 Water and Storm Sewer Revenue Refunding Bonds which refunded a portion of the 2005A Bonds. The 2005 Project consisted of the City's portion of the cost of a 20 million gallon ("MG") water tank, installation of water lines and construction of certain improvements to the City's storm water system.

TABLE 4.4: OUTSTANDING DEBT

DEBT SERVICE	2009	2010	2011	2012	2013	2014	2015	2016	2017
1994	-	-	-	-	-	-	-	-	-
2005A	(446,405)	(444,306)	(445,324)	(456,989)	(455,816)	(20,849)	(267,218)	(275,229)	-
2005B	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-
2013 Refunding of 2005A	-	-	-	-	-	(\$50,148)	(\$178,747)	(\$179,189)	(\$454,429)
Debt Service	2018	2019	2020	2021	2022	2023	2024	2025	2026
1994	-	-	-	-	-	-	-	-	-
2005A	-	-	-	-	-	-	-	-	-
2005B	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-
2013 Refunding of 2005A	(\$455,011)	(\$479,606)	(\$463,029)	(\$454,577)	(\$454,075)	(\$454,054)	(\$454,829)	(\$454,723)	(\$455,074)

Based on the desire of the City to reduce future debt issuance, this analysis assumes the City will not issue additional bonds in the planning horizon but will fund future capital needs through new rate revenues.



## SECTION V: RATE DESIGN ANALYSIS

### PROPOSED RATE STRUCTURE SCENARIOS

The primary objectives of the rate analysis was to ensure sufficient revenues to cover all operation and maintenance (O&M) expenses while maintaining bond covenants and the appropriate debt service coverage ratio. The City also wanted to ensure the recommended rates allowed for appropriate funding of capital improvements in the five-year window.

A review of projected revenues under the existing rate structure relative to proposed expenses illustrated that the City would not have sufficient revenues to fund the needed capital improvements without a rate increase. As a result, City staff, the City Council and consultants evaluated many potential rate scenarios during the study phase of this analysis, with the City ultimately focusing on three CIP scenarios:

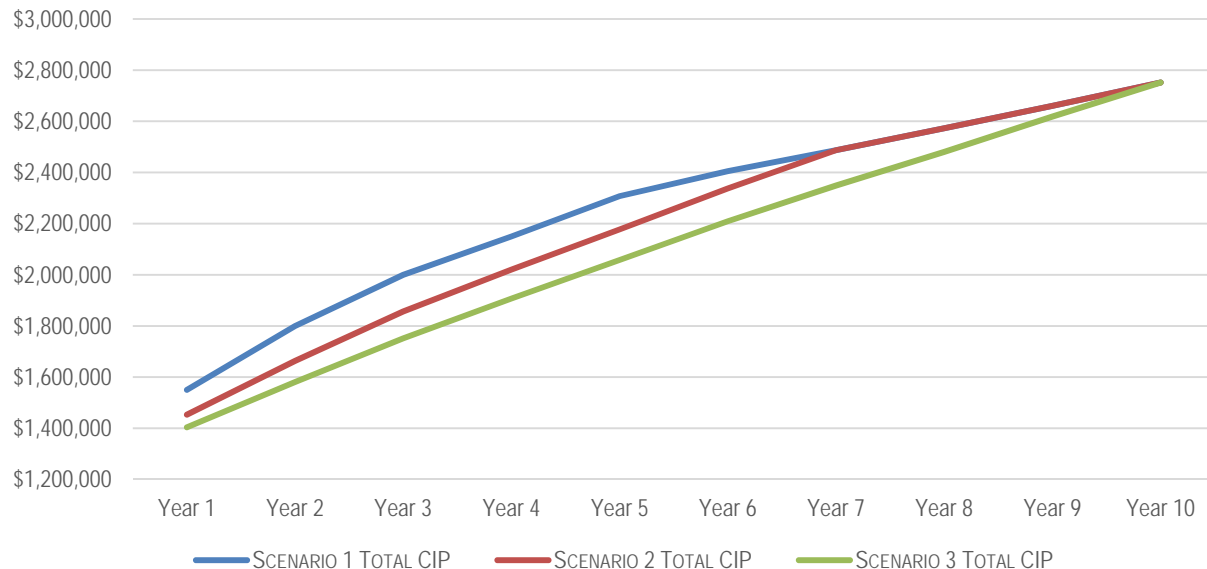
- ☐ **Scenario 1** – Phasing the proposed CIP over a five (5) year period with no new debt;
- ☐ **Scenario 2** – Phasing the proposed CIP over a seven (7) year period with no new debt; and,
- ☐ **Scenario 3** – Phasing the proposed CIP over a ten (10) year period with no new debt.

The rate scenarios shown below are structured to produce a final rate of \$8.60 within ten years. The annual rate increase curve (see **Figure 5.1**) for each scenario is adjusted to reflect the changes in the CIP, with Scenarios 2 and 3 funding a reduced CIP in order to allow for a more moderate annual increase in the rates.

TABLE 5.1: ILLUSTRATION OF PROPOSED RATE INCREASE SCENARIOS

	Scenario 1: 5-Year			Scenario 2: 7-Year			Scenario 3: 10-Year		
	Base Rate	Annual Increase	Cumulative Increase	Base Rate	Annual Increase	Cumulative Increase	Base Rate	Annual Increase	Cumulative Increase
Current	\$5.25	0.0%	0.0%	\$5.25	0.0%	0.0%	\$5.25	0.0%	0.0%
Year 1	\$6.25	19.0%	19.0%	\$5.95	13.3%	13.3%	\$5.85	11.4%	11.4%
Year 2	\$6.75	8.0%	28.6%	\$6.40	7.6%	21.9%	\$6.25	6.8%	19.0%
Year 3	\$7.10	5.2%	35.2%	\$6.85	7.0%	30.5%	\$6.60	5.6%	25.7%
Year 4	\$7.35	3.5%	40.0%	\$7.15	4.4%	36.2%	\$6.90	4.5%	31.4%
Year 5	\$7.60	3.4%	44.8%	\$7.45	4.2%	41.9%	\$7.20	4.3%	37.1%
Year 6	\$7.80	2.6%	48.6%	\$7.75	4.0%	47.6%	\$7.50	4.2%	42.9%
Year 7	\$8.00	2.6%	52.4%	\$8.00	3.2%	52.4%	\$7.80	4.0%	48.6%
Year 8	\$8.20	2.5%	56.2%	\$8.20	2.5%	56.2%	\$8.10	3.8%	54.3%
Year 9	\$8.40	2.4%	60.0%	\$8.40	2.4%	60.0%	\$8.40	3.7%	60.0%
Year 10	\$8.60	2.4%	63.8%	\$8.60	2.4%	63.8%	\$8.60	2.4%	63.8%
<b>Estimated 10 Yr CIP</b>	<b>\$22,684,321</b>			<b>\$21,980,673</b>			<b>\$21,109,743</b>		

FIGURE 5.1: PROPOSED CIP FUNDING



The comparison of revenues and expenditures under the adopted rate increase illustrates that the City will continue to maintain the necessary debt service coverage ratios, while providing for capital improvement and replacement projects according to the proposed CIP scenarios. The fund balance is anticipated to decrease slightly over time under each scenario, but remain above the minimum set by the City of maintaining at least 50 percent of O&M expenses in reserve funds. In other words, the model forecasts that the City will not be able to transfer funds into reserves as has been done in the past since this revenue will be needed to fund the proposed capital improvement projects.

TABLE 5.2: SUMMARY PRO FORMA – SCENARIO 1

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 10
<b>Usage Charge (per Month)</b>	\$6.25	\$6.75	\$7.10	\$7.35	\$7.60	\$8.60
Calculated ESUs	50,342	50,594	50,847	51,101	51,357	52,653
Total Operating Revenue	3,806,815	4,129,568	4,363,930	4,539,212	4,716,139	5,467,904
Total Operating Expense	(1,676,599)	(1,747,381)	(1,810,480)	(1,868,861)	(1,928,633)	(2,233,926)
Total Non-Operating Revenue	15,168	15,320	15,473	15,627	15,784	16,589
Total DS	(454,429)	(455,011)	(479,606)	(463,029)	(454,577)	(455,074)
<b>Total CIP</b>	<b>(1,550,000)</b>	<b>(1,800,000)</b>	<b>(2,000,000)</b>	<b>(2,150,000)</b>	<b>(2,307,660)</b>	<b>(2,751,470)</b>
Net Income (Loss) Before Transfers	140,954	142,495	89,317	72,950	41,052	44,022
Change in Net Position after Transfers and Contributions	50,671	51,309	(2,781)	(20,070)	(52,897)	(54,720)
Beginning Fund Balance	2,178,932	2,229,603	2,280,912	2,278,131	2,258,062	1,985,940
<b>Ending Fund Balance</b>	<b>\$2,229,603</b>	<b>\$2,280,912</b>	<b>\$2,278,131</b>	<b>\$2,258,062</b>	<b>\$2,205,164</b>	<b>\$1,931,220</b>
Days of Working Capital	479	470	453	435	412	311
Coverage Ratio	4.69	5.24	5.32	5.77	6.13	7.11

TABLE 5.3: SUMMARY PRO FORMA – SCENARIO 2

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 10
<b>Usage Charge (per Month)</b>	\$5.95	\$6.40	\$6.85	\$7.15	\$7.45	\$8.60
Calculated ESUs	50,342	50,594	50,847	51,101	51,357	52,653
Total Operating Revenue	3,625,583	3,917,074	4,211,390	4,416,570	4,623,697	5,467,904
Total Operating Expense	(1,658,476)	(1,726,132)	(1,795,226)	(1,856,597)	(1,919,389)	(2,233,926)
Total Non-Operating Revenue	15,168	15,320	15,473	15,627	15,784	16,589
Total DS	(454,429)	(455,011)	(479,606)	(463,029)	(454,577)	(455,074)
<b>Total CIP</b>	<b>(1,453,561)</b>	<b>(1,663,228)</b>	<b>(1,856,487)</b>	<b>(2,020,574)</b>	<b>(2,177,369)</b>	<b>(2,751,470)</b>
Net Income (Loss) Before Transfers	74,285	88,022	95,544	91,997	88,145	44,022
Change in Net Position after Transfers and Contributions	(15,999)	(3,164)	3,445	(1,022)	(5,804)	(54,720)
Beginning Fund Balance	2,178,932	2,162,933	2,159,769	2,163,215	2,162,193	1,976,500
<b>Ending Fund Balance</b>	<b>\$2,162,933</b>	<b>\$2,159,769</b>	<b>\$2,163,215</b>	<b>\$2,162,193</b>	<b>\$2,156,388</b>	<b>\$1,921,780</b>
Days of Working Capital	470	450	434	419	404	310
Coverage Ratio	4.33	4.82	5.04	5.53	5.95	7.11

TABLE 5.4: SUMMARY PRO FORMA – SCENARIO 3

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 10
<b>Usage Charge (per Month)</b>	\$5.85	\$6.25	\$6.60	\$6.90	\$7.20	\$8.60
Calculated ESUs	50,342	50,594	50,847	51,101	51,357	52,653
Total Operating Revenue	3,565,172	3,826,005	4,058,849	4,263,266	4,469,627	5,467,904
Total Operating Expense	(1,652,435)	(1,717,025)	(1,779,972)	(1,841,266)	(1,903,982)	(2,233,926)
Total Non-Operating Revenue	15,168	15,320	15,473	15,627	15,784	16,589
Total DS	(454,429)	(455,011)	(479,606)	(463,029)	(454,577)	(455,074)
<b>Total CIP</b>	<b>(1,403,625)</b>	<b>(1,580,771)</b>	<b>(1,751,754)</b>	<b>(1,907,334)</b>	<b>(2,058,293)</b>	<b>(2,751,470)</b>
Net Income (Loss) Before Transfers	69,851	88,517	62,990	67,264	68,558	44,022
Change in Net Position after Transfers and Contributions	(20,433)	(2,669)	(29,108)	(25,755)	(25,391)	(54,720)
Beginning Fund Balance	2,178,932	2,158,500	2,155,831	2,126,722	2,100,967	1,989,476
<b>Ending Fund Balance</b>	<b>\$2,158,500</b>	<b>\$2,155,831</b>	<b>\$2,126,722</b>	<b>\$2,100,967</b>	<b>\$2,075,576</b>	<b>\$1,934,755</b>
Days of Working Capital	470	452	430	411	392	312
Coverage Ratio	4.21	4.64	4.75	5.23	5.64	7.11

## SECTION VI: EVALUATION OF RATE OBJECTIVES

Several objectives were identified by the City which served as the foundation of the rate update and scenario analysis.

- ☒ First, the City wanted to ensure sufficient revenues to cover all operation and maintenance (O&M) expenses while maintaining bond covenants and the appropriate debt service coverage ratio of at least 1.25x.
- ☒ Second, the City wanted to continue to fund capital improvements in the five-year window using rate revenues, while minimizing future bonding needs and maintaining a minimum of 90 days of working capital.
- ☒ Third, the City desired to maintain the existing rate structure based on ESU's.
- ☒ Finally, the proposed rate recommendations should be easy to implement and equitably distribute cost relative to demand.

### EVALUATION OF EFFECTIVENESS OF RATE OBJECTIVES

#### REVENUE SUFFICIENCY

Rates are structured to ensure that all operational and maintenance expenses are covered, while maintaining reserves to fund repair and replacement costs, as well as future capital costs. The fund balance is anticipated to decrease slightly over time under each scenario, but remain above the minimum set by the City of maintaining at least 50 percent of Operation and Maintenance expenses in reserve funds.

#### FUNDING CAPITAL COSTS AND MAINTAINING REVENUE SUFFICIENCY

The rate analysis considers necessary increases to adequately fund the repair and replacement of existing facilities, future capital costs and to maintain a fund balance at the end of each year utilizing a pay-as-you go approach.

#### RATE STRUCTURE

The adopted rate maintains the existing rate structure with a fee assessment per ESU.

#### EQUITY AND SIMPLICITY

The adopted rates are simple to understand and the calculation follows a reasonable methodology by which the rates are assessed. Currently, rates are assessed based on a fee per ESU (based on impervious area), which is the method applied in this analysis. This is intended to assess a fee that is directly related to demand, i.e. storm water run-off from impervious surfaces throughout the City.

### CUSTOMER IMPACT AND AFFORDABILITY

The City must collect, through monthly rates, the costs of running efficient and effective utilities while making certain that the rates are affordable to the customers to whom the service is provided. The adopted rates by year ten register at 1.15 percent of current median household incomes (MHI), including current annual water and sewer assessments. An affordability index of 1.5 percent of MHI is used as a benchmark in this analysis, which is the affordability index for a combined annual water and sewer bill for an AA rated sewer or water utility bond. This falls below typical rating agency's affordability threshold.<sup>2</sup> It is important to note that the table below includes the full increase to the storm water rates at the end of the pro forma (Fiscal Year 2026) compared to the unadjusted 2015 MHI. Thus, this illustration represents a conservative estimate of affordability.

TABLE 6.1: AFFORDABILITY OF ADOPTED RATES AT END OF TEN YEAR PERIOD

Orem 2015 Median Household Income	\$54,048
Estimate of Annual Storm Bill	\$103
Estimate of Annual Sewer Bill	\$265
Estimate of Annual Water Bill	\$252
<b>Total Combined Annual Bill</b>	<b>\$620</b>
% of MHI	1.15%
Source: U.S. Census Bureau 2008-2012 ACS Survey 5-Year Estimates, Selected Economic Characteristics Estimate of annual bill based on typical single-family dwelling.	

<sup>2</sup> See "Tax Supported Rating Criteria", August 14, 2012, Fitch Ratings.



**APPENDIX A: DETAILED PRO FORMAS**

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# Orem City

## Utility Rate Study

### Storm Sewer Fund

Preliminary Data

## Scenario 1: 5-Year CIP Phasing

	Existing	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
2015											
Usage Charge (per Month)	\$5.25	\$6.25	\$6.75	\$7.10	\$7.35	\$7.60	\$7.80	\$8.00	\$8.20	\$8.40	\$8.60
Calculated ESUs	49,843	50,342	50,594	50,847	51,101	51,357	51,613	51,871	52,131	52,392	52,653
Charges for Services	\$3,140,081	\$3,775,667	\$4,098,109	\$4,332,157	\$4,507,121	\$4,683,726	\$4,831,017	\$4,979,664	\$5,129,676	\$5,281,064	\$5,433,838
Other Revenues	\$30,534	\$31,148	\$31,459	\$31,774	\$32,092	\$32,412	\$32,737	\$33,064	\$33,395	\$33,729	\$34,066
<b>Total Operating Revenue</b>	<b>\$3,170,615</b>	<b>\$3,806,815</b>	<b>\$4,129,568</b>	<b>\$4,363,930</b>	<b>\$4,539,212</b>	<b>\$4,716,139</b>	<b>\$4,863,754</b>	<b>\$5,012,728</b>	<b>\$5,163,071</b>	<b>\$5,314,793</b>	<b>\$5,467,904</b>
<b>Operating Expense</b>											
Personal Services	(\$659,208)	(\$678,984)	(\$699,354)	(\$720,334)	(\$741,944)	(\$764,203)	(\$787,129)	(\$810,743)	(\$835,065)	(\$860,117)	(\$885,920)
Supplies and Maintenance	(\$236,525)	(\$243,621)	(\$250,929)	(\$258,457)	(\$266,211)	(\$274,197)	(\$282,423)	(\$290,896)	(\$299,623)	(\$308,611)	(\$317,870)
Administrative Fee	(\$282,964)	(\$330,014)	(\$392,003)	(\$424,247)	(\$447,652)	(\$465,148)	(\$482,809)	(\$497,538)	(\$512,402)	(\$527,404)	(\$542,542)
Utilities	(\$8,234)	(\$8,481)	(\$8,735)	(\$8,998)	(\$9,267)	(\$9,545)	(\$9,832)	(\$10,127)	(\$10,431)	(\$10,744)	(\$11,066)
Contract Services	(\$244,434)	(\$172,740)	(\$177,923)	(\$183,260)	(\$188,758)	(\$194,421)	(\$200,253)	(\$206,261)	(\$212,449)	(\$218,822)	(\$225,387)
Equipment Lease and Rentals	(\$9,222)	(\$9,499)	(\$9,784)	(\$10,077)	(\$10,379)	(\$10,691)	(\$11,012)	(\$11,342)	(\$11,682)	(\$12,033)	(\$12,394)
Insurance	(\$45,707)	(\$47,078)	(\$48,491)	(\$49,945)	(\$51,444)	(\$52,987)	(\$54,577)	(\$56,214)	(\$57,900)	(\$59,637)	(\$61,426)
Changes in Lieu of Property Tax	(\$29,316)	(\$30,195)	(\$31,101)	(\$32,034)	(\$32,995)	(\$33,985)	(\$35,005)	(\$36,055)	(\$37,137)	(\$38,251)	(\$39,398)
Miscellaneous	(\$54,934)	(\$56,582)	(\$58,279)	(\$60,028)	(\$61,829)	(\$63,684)	(\$65,594)	(\$67,562)	(\$69,589)	(\$71,676)	(\$73,827)
<b>Total Operating Expense</b>	<b>(\$1,570,544)</b>	<b>(\$1,577,195)</b>	<b>(\$1,676,599)</b>	<b>(\$1,747,381)</b>	<b>(\$1,810,480)</b>	<b>(\$1,868,861)</b>	<b>(\$1,986,737)</b>	<b>(\$2,046,277)</b>	<b>(\$2,107,295)</b>	<b>(\$2,169,830)</b>	<b>(\$2,233,926)</b>
Net Operating Income (Loss)	\$1,600,071	\$1,609,426	\$2,130,216	\$2,382,187	\$2,553,451	\$2,670,351	\$2,877,017	\$2,966,450	\$3,055,776	\$3,144,962	\$3,233,977
<b>Total Non Operating Revenue</b>	<b>\$14,869</b>	<b>\$15,018</b>	<b>\$15,320</b>	<b>\$15,473</b>	<b>\$15,627</b>	<b>\$15,784</b>	<b>\$15,942</b>	<b>\$16,101</b>	<b>\$16,262</b>	<b>\$16,425</b>	<b>\$16,589</b>
Total Revenue Available for DS	\$1,614,940	\$1,624,443	\$2,145,384	\$2,397,507	\$2,568,923	\$2,685,979	\$2,803,290	\$2,892,959	\$2,982,551	\$3,072,038	\$3,161,387
<b>Debt Service</b>											
1994	-	-	-	-	-	-	-	-	-	-	-
2005A	(\$267,218)	(\$275,229)	-	-	-	-	-	-	-	-	-
2005B	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2013 Refunding of 2005A	(\$178,747)	(\$179,189)	(\$454,429)	(\$455,011)	(\$479,606)	(\$463,029)	(\$454,577)	(\$454,075)	(\$454,054)	(\$454,829)	(\$454,723)
Proposed: Series 2016	-	-	-	-	-	-	-	-	-	-	-
Proposed: Series 2020	-	-	-	-	-	-	-	-	-	-	-
<b>Total DS</b>	<b>(\$445,964)</b>	<b>(\$454,418)</b>	<b>(\$454,429)</b>	<b>(\$455,011)</b>	<b>(\$479,606)</b>	<b>(\$463,029)</b>	<b>(\$454,577)</b>	<b>(\$454,075)</b>	<b>(\$454,054)</b>	<b>(\$454,829)</b>	<b>(\$454,723)</b>
Total Revenue Available for CIP	\$1,168,976	\$1,170,025	\$1,690,954	\$1,942,495	\$2,089,317	\$2,222,950	\$2,348,712	\$2,438,883	\$2,528,498	\$2,617,209	\$2,706,664
<b>Total CIP</b>	<b>(\$1,211,076)</b>	<b>(\$1,550,000)</b>	<b>(\$1,800,000)</b>	<b>(\$2,000,000)</b>	<b>(\$2,150,000)</b>	<b>(\$2,307,660)</b>	<b>(\$2,405,017)</b>	<b>(\$2,487,312)</b>	<b>(\$2,572,421)</b>	<b>(\$2,660,441)</b>	<b>(\$2,751,470)</b>
Proposed: Series 2016 Proceeds	-	-	-	-	-	-	-	-	-	-	-
Proposed: Series 2020 Proceeds	-	-	-	-	-	-	-	-	-	-	-
Total Bond Proceeds	-	-	-	-	-	-	-	-	-	-	-
<b>Net Income (Loss) Before Transfers</b>	<b>(\$41,051)</b>	<b>\$140,954</b>	<b>\$142,495</b>	<b>\$89,317</b>	<b>\$72,950</b>	<b>\$41,052</b>	<b>\$33,866</b>	<b>\$41,186</b>	<b>\$44,788</b>	<b>\$46,223</b>	<b>\$44,022</b>
Contributions from Developers	\$50,000	\$50,500	\$51,005	\$51,515	\$52,030	\$52,551	\$53,076	\$53,607	\$54,143	\$54,684	\$55,231
Contributions from Government Funds	-	-	-	-	-	-	-	-	-	-	-
Transfers In	-	-	-	-	-	-	-	-	-	-	-
Transfers Out	(\$139,390)	(\$140,784)	(\$142,191)	(\$143,613)	(\$145,049)	(\$146,500)	(\$147,965)	(\$149,445)	(\$150,939)	(\$152,448)	(\$153,973)
<b>Change in Net Position</b>	<b>(\$130,441)</b>	<b>\$50,671</b>	<b>\$51,309</b>	<b>(\$2,781)</b>	<b>(\$20,070)</b>	<b>(\$52,897)</b>	<b>(\$61,023)</b>	<b>(\$54,652)</b>	<b>(\$52,009)</b>	<b>(\$51,541)</b>	<b>(\$54,720)</b>
Beginning Cash Balance	\$2,309,373	\$2,178,932	\$2,229,603	\$2,280,912	\$2,278,131	\$2,258,062	\$2,205,164	\$2,144,142	\$2,089,489	\$2,037,481	\$1,985,940
Ending Fund Balance	\$2,178,932	\$2,229,603	\$2,280,912	\$2,278,131	\$2,258,062	\$2,205,164	\$2,144,142	\$2,089,489	\$2,037,481	\$1,985,940	\$1,931,220
General Fund Restricted (Bond Proceeds)	-	-	-	-	-	-	-	-	-	-	-
<b>Unrestricted</b>	<b>\$2,178,932</b>	<b>\$2,229,603</b>	<b>\$2,280,912</b>	<b>\$2,278,131</b>	<b>\$2,258,062</b>	<b>\$2,205,164</b>	<b>\$2,144,142</b>	<b>\$2,089,489</b>	<b>\$2,037,481</b>	<b>\$1,985,940</b>	<b>\$1,931,220</b>
Unrestricted Days of Working Capital	529	497	479	470	453	435	412	389	368	348	329
Coverage Ratio (w/Impact Fees)	3.54	4.69	5.24	5.32	5.32	5.77	6.13	6.34	6.53	6.72	6.92
Coverage Ratio (w/o Impact Fees)	3.54	4.69	5.24	5.32	5.32	5.77	6.13	6.34	6.53	6.72	6.92



# Orem City

## Utility Rate Study

### Storm Sewer Fund

Preliminary Data

## Scenario 2: 7-Year CIP Phasing

	Existing	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Usage Charge (per Month)	\$5.25	\$5.95	\$6.40	\$6.85	\$7.15	\$7.45	\$7.75	\$8.00	\$8.20	\$8.40	\$8.60
Calculated ESUs	49,843	50,092	50,342	50,594	50,847	51,101	51,613	51,871	52,131	52,392	52,653
Charges for Services	\$3,140,081	\$3,155,781	\$3,594,435	\$3,885,614	\$4,179,616	\$4,384,478	\$4,591,284	\$4,800,049	\$4,979,664	\$5,129,676	\$5,281,064
Other Revenues	\$30,534	\$30,839	\$31,148	\$31,459	\$31,774	\$32,092	\$32,412	\$32,737	\$33,064	\$33,395	\$33,729
<b>Total Operating Revenue</b>	<b>\$3,170,615</b>	<b>\$3,186,621</b>	<b>\$3,625,583</b>	<b>\$3,917,074</b>	<b>\$4,211,390</b>	<b>\$4,416,570</b>	<b>\$4,623,697</b>	<b>\$4,832,786</b>	<b>\$5,012,728</b>	<b>\$5,163,071</b>	<b>\$5,314,793</b>
<b>Operating Expense</b>											
Personal Services	(\$659,208)	(\$678,984)	(\$699,354)	(\$720,334)	(\$741,944)	(\$764,203)	(\$787,129)	(\$810,743)	(\$835,065)	(\$860,117)	(\$885,920)
Supplies and Maintenance	(\$236,525)	(\$243,621)	(\$250,929)	(\$258,457)	(\$266,211)	(\$274,197)	(\$282,423)	(\$290,896)	(\$299,623)	(\$308,611)	(\$317,870)
Administrative Fee	(\$282,964)	(\$330,014)	(\$373,880)	(\$402,997)	(\$432,398)	(\$452,884)	(\$473,564)	(\$494,441)	(\$512,402)	(\$527,404)	(\$542,542)
Utilities	(\$8,234)	(\$8,481)	(\$8,735)	(\$8,998)	(\$9,267)	(\$9,545)	(\$9,832)	(\$10,127)	(\$10,431)	(\$10,744)	(\$11,066)
Contract Services	(\$244,434)	(\$172,740)	(\$177,923)	(\$183,260)	(\$188,758)	(\$194,421)	(\$200,253)	(\$206,261)	(\$212,449)	(\$218,822)	(\$225,387)
Equipment Lease and Rentals	(\$9,222)	(\$9,499)	(\$9,784)	(\$10,077)	(\$10,379)	(\$10,691)	(\$11,012)	(\$11,342)	(\$11,682)	(\$12,033)	(\$12,394)
Insurance	(\$45,707)	(\$47,078)	(\$48,491)	(\$49,945)	(\$51,444)	(\$52,987)	(\$54,577)	(\$56,214)	(\$57,900)	(\$59,637)	(\$61,426)
Changes in Lieu of Property Tax	(\$29,316)	(\$30,195)	(\$31,101)	(\$32,034)	(\$32,995)	(\$33,985)	(\$35,005)	(\$36,055)	(\$37,137)	(\$38,251)	(\$39,398)
Miscellaneous	(\$54,934)	(\$56,582)	(\$58,279)	(\$60,028)	(\$61,829)	(\$63,684)	(\$65,594)	(\$67,562)	(\$69,589)	(\$71,676)	(\$73,827)
<b>Total Operating Expense</b>	<b>(\$1,570,544)</b>	<b>(\$1,577,195)</b>	<b>(\$1,658,476)</b>	<b>(\$1,726,132)</b>	<b>(\$1,795,226)</b>	<b>(\$1,856,597)</b>	<b>(\$1,919,389)</b>	<b>(\$1,983,640)</b>	<b>(\$2,046,277)</b>	<b>(\$2,107,295)</b>	<b>(\$2,169,830)</b>
Net Operating Income (Loss)	\$1,600,071	\$1,609,426	\$1,967,107	\$2,190,942	\$2,416,164	\$2,559,973	\$2,704,308	\$2,849,146	\$2,966,450	\$3,055,776	\$3,144,962
<b>Total Non Operating Revenue</b>	<b>\$14,869</b>	<b>\$15,018</b>	<b>\$15,168</b>	<b>\$15,320</b>	<b>\$15,473</b>	<b>\$15,627</b>	<b>\$15,784</b>	<b>\$15,942</b>	<b>\$16,101</b>	<b>\$16,262</b>	<b>\$16,425</b>
Total Revenue Available for DS	\$1,614,940	\$1,624,443	\$1,982,275	\$2,206,262	\$2,431,637	\$2,575,600	\$2,720,092	\$2,865,087	\$2,982,551	\$3,072,038	\$3,161,387
<b>Debt Service</b>											
1994	-	-	-	-	-	-	-	-	-	-	-
2005A	(\$267,218)	(\$275,229)	-	-	-	-	-	-	-	-	-
2005B	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2013 Refunding of 2005A	(\$178,747)	(\$179,189)	(\$454,429)	(\$455,011)	(\$479,606)	(\$463,029)	(\$454,577)	(\$454,075)	(\$454,054)	(\$454,829)	(\$454,723)
Proposed: Series 2016	-	-	-	-	-	-	-	-	-	-	-
Proposed: Series 2020	-	-	-	-	-	-	-	-	-	-	-
<b>Total DS</b>	<b>(\$445,964)</b>	<b>(\$454,418)</b>	<b>(\$454,429)</b>	<b>(\$455,011)</b>	<b>(\$479,606)</b>	<b>(\$463,029)</b>	<b>(\$454,577)</b>	<b>(\$454,075)</b>	<b>(\$454,054)</b>	<b>(\$454,829)</b>	<b>(\$454,723)</b>
Total Revenue Available for CIP	\$1,168,976	\$1,170,025	\$1,527,846	\$1,751,250	\$1,952,031	\$2,112,571	\$2,265,514	\$2,411,012	\$2,528,498	\$2,617,209	\$2,706,664
<b>Total CIP</b>	<b>(\$1,211,076)</b>	<b>(\$1,453,561)</b>	<b>(\$1,663,228)</b>	<b>(\$1,856,487)</b>	<b>(\$2,020,574)</b>	<b>(\$2,177,369)</b>	<b>(\$2,337,810)</b>	<b>(\$2,487,312)</b>	<b>(\$2,572,421)</b>	<b>(\$2,660,441)</b>	<b>(\$2,751,470)</b>
Proposed: Series 2016 Proceeds	-	-	-	-	-	-	-	-	-	-	-
Proposed: Series 2020 Proceeds	-	-	-	-	-	-	-	-	-	-	-
Total Bond Proceeds	-	-	-	-	-	-	-	-	-	-	-
<b>Net Income (Loss) Before Transfers</b>	<b>(\$41,051)</b>	<b>\$74,285</b>	<b>\$88,022</b>	<b>\$95,544</b>	<b>\$91,997</b>	<b>\$88,145</b>	<b>\$73,202</b>	<b>\$41,186</b>	<b>\$44,788</b>	<b>\$46,223</b>	<b>\$44,022</b>
Contributions from Developers	\$50,000	\$50,500	\$51,005	\$51,515	\$52,030	\$52,551	\$53,076	\$53,607	\$54,143	\$54,684	\$55,231
Contributions from Government Funds	-	-	-	-	-	-	-	-	-	-	-
Transfers In	-	-	-	-	-	-	-	-	-	-	-
Transfers Out	(\$139,390)	(\$140,784)	(\$142,191)	(\$143,613)	(\$145,049)	(\$146,500)	(\$147,965)	(\$149,445)	(\$150,939)	(\$152,448)	(\$153,973)
<b>Change in Net Position</b>	<b>(\$130,441)</b>	<b>(\$15,999)</b>	<b>(\$3,164)</b>	<b>\$3,445</b>	<b>(\$1,022)</b>	<b>(\$5,804)</b>	<b>(\$21,687)</b>	<b>(\$54,652)</b>	<b>(\$52,009)</b>	<b>(\$51,541)</b>	<b>(\$54,720)</b>
Beginning Cash Balance	\$2,309,373	\$2,178,932	\$2,162,933	\$2,159,769	\$2,163,215	\$2,162,193	\$2,156,388	\$2,134,702	\$2,080,049	\$2,028,041	\$1,976,500
Ending Fund Balance	\$2,178,932	\$2,162,933	\$2,159,769	\$2,163,215	\$2,162,193	\$2,156,388	\$2,134,702	\$2,080,049	\$2,028,041	\$1,976,500	\$1,921,780
General Fund Restricted (Bond Proceeds)	-	-	-	-	-	-	-	-	-	-	-
<b>Unrestricted</b>	<b>\$2,178,932</b>	<b>\$2,162,933</b>	<b>\$2,159,769</b>	<b>\$2,163,215</b>	<b>\$2,162,193</b>	<b>\$2,156,388</b>	<b>\$2,134,702</b>	<b>\$2,080,049</b>	<b>\$2,028,041</b>	<b>\$1,976,500</b>	<b>\$1,921,780</b>
Unrestricted Days of Working Capital	529	497	470	450	434	419	404	387	366	346	328
Coverage Ratio (w/Impact Fees)	3.54	4.33	4.82	5.04	5.04	5.53	5.95	6.27	6.53	6.72	6.92
Coverage Ratio (w/o Impact Fees)	3.54	4.33	4.82	5.04	5.04	5.53	5.95	6.27	6.53	6.72	6.92



# Orem City

Utility Rate Study  
Storm Sewer Fund  
Preliminary Data

## Scenario 3: 10-Year CIP Phasing

	Existing	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Usage Charge (per Month)	\$5.25	\$5.85	\$6.25	\$6.60	\$6.90	\$7.20	\$7.50	\$7.80	\$8.10	\$8.40	\$8.60
Calculated ESUs	49,843	50,092	50,342	50,594	50,847	51,101	51,613	51,871	52,131	52,392	52,653
Charges for Services	\$3,140,081	\$3,155,781	\$3,534,024	\$3,794,545	\$4,027,075	\$4,231,175	\$4,437,214	\$4,645,209	\$4,855,172	\$5,067,119	\$5,281,064
Other Revenues	\$30,534	\$30,839	\$31,148	\$31,459	\$31,774	\$32,092	\$32,412	\$32,737	\$33,064	\$33,395	\$34,066
<b>Total Operating Revenue</b>	<b>\$3,170,615</b>	<b>\$3,186,621</b>	<b>\$3,565,172</b>	<b>\$3,826,005</b>	<b>\$4,058,849</b>	<b>\$4,263,266</b>	<b>\$4,469,627</b>	<b>\$4,677,945</b>	<b>\$4,888,236</b>	<b>\$5,100,514</b>	<b>\$5,314,793</b>
<b>Operating Expense</b>											
Personal Services	(\$659,208)	(\$678,984)	(\$699,354)	(\$720,334)	(\$741,944)	(\$764,203)	(\$787,129)	(\$810,743)	(\$835,065)	(\$860,117)	(\$885,920)
Supplies and Maintenance	(\$236,525)	(\$243,621)	(\$250,929)	(\$258,457)	(\$266,211)	(\$274,197)	(\$282,423)	(\$290,896)	(\$299,623)	(\$308,611)	(\$317,870)
Administrative Fee	(\$282,964)	(\$330,014)	(\$367,838)	(\$393,891)	(\$417,144)	(\$437,553)	(\$458,157)	(\$478,957)	(\$499,953)	(\$521,148)	(\$542,542)
Utilities	(\$8,234)	(\$8,481)	(\$8,735)	(\$8,998)	(\$9,267)	(\$9,545)	(\$9,832)	(\$10,127)	(\$10,431)	(\$10,744)	(\$11,066)
Contract Services	(\$244,434)	(\$172,740)	(\$177,923)	(\$183,260)	(\$188,758)	(\$194,421)	(\$200,253)	(\$206,261)	(\$212,449)	(\$218,822)	(\$225,387)
Equipment Lease and Rentals	(\$9,222)	(\$9,499)	(\$9,784)	(\$10,077)	(\$10,379)	(\$10,691)	(\$11,012)	(\$11,342)	(\$11,682)	(\$12,033)	(\$12,394)
Insurance	(\$45,707)	(\$47,078)	(\$48,491)	(\$49,945)	(\$51,444)	(\$52,987)	(\$54,577)	(\$56,214)	(\$57,900)	(\$59,637)	(\$61,426)
Changes in Lieu of Property Tax	(\$29,316)	(\$30,195)	(\$31,101)	(\$32,034)	(\$32,995)	(\$33,985)	(\$35,005)	(\$36,055)	(\$37,137)	(\$38,251)	(\$39,398)
Miscellaneous	(\$54,934)	(\$56,582)	(\$58,279)	(\$60,028)	(\$61,829)	(\$63,684)	(\$65,594)	(\$67,562)	(\$69,589)	(\$71,676)	(\$73,827)
<b>Total Operating Expense</b>	<b>(\$1,570,544)</b>	<b>(\$1,577,195)</b>	<b>(\$1,652,435)</b>	<b>(\$1,717,025)</b>	<b>(\$1,779,972)</b>	<b>(\$1,841,266)</b>	<b>(\$1,903,982)</b>	<b>(\$1,968,156)</b>	<b>(\$2,033,828)</b>	<b>(\$2,101,039)</b>	<b>(\$2,169,830)</b>
Net Operating Income (Loss)	\$1,600,071	\$1,609,426	\$1,912,737	\$2,108,980	\$2,278,877	\$2,422,000	\$2,565,645	\$2,709,789	\$2,854,408	\$2,999,475	\$3,144,962
<b>Total Non Operating Revenue</b>	<b>\$14,869</b>	<b>\$15,018</b>	<b>\$15,168</b>	<b>\$15,320</b>	<b>\$15,473</b>	<b>\$15,627</b>	<b>\$15,784</b>	<b>\$15,942</b>	<b>\$16,101</b>	<b>\$16,262</b>	<b>\$16,425</b>
Total Revenue Available for DS	\$1,614,940	\$1,624,443	\$1,927,905	\$2,124,299	\$2,294,350	\$2,437,627	\$2,581,429	\$2,725,731	\$2,870,509	\$3,015,737	\$3,161,387
<b>Debt Service</b>											
1994	-	-	-	-	-	-	-	-	-	-	-
2005A	(\$267,218)	(\$275,229)	-	-	-	-	-	-	-	-	-
2005B	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2013 Refunding of 2005A	(\$178,747)	(\$179,189)	(\$454,429)	(\$455,011)	(\$479,606)	(\$463,029)	(\$454,577)	(\$454,075)	(\$454,054)	(\$454,829)	(\$454,723)
Proposed: Series 2016	-	-	-	-	-	-	-	-	-	-	-
Proposed: Series 2020	-	-	-	-	-	-	-	-	-	-	-
<b>Total DS</b>	<b>(\$445,964)</b>	<b>(\$454,418)</b>	<b>(\$454,429)</b>	<b>(\$455,011)</b>	<b>(\$479,606)</b>	<b>(\$463,029)</b>	<b>(\$454,577)</b>	<b>(\$454,075)</b>	<b>(\$454,054)</b>	<b>(\$454,829)</b>	<b>(\$454,723)</b>
Total Revenue Available for CIP	\$1,168,976	\$1,170,025	\$1,473,476	\$1,669,288	\$1,814,744	\$1,974,598	\$2,126,851	\$2,271,656	\$2,416,455	\$2,560,907	\$2,706,664
<b>Total CIP</b>	<b>(\$1,211,076)</b>	<b>(\$1,403,625)</b>	<b>(\$1,580,771)</b>	<b>(\$1,751,754)</b>	<b>(\$1,907,334)</b>	<b>(\$2,058,293)</b>	<b>(\$2,209,252)</b>	<b>(\$2,348,657)</b>	<b>(\$2,480,361)</b>	<b>(\$2,618,226)</b>	<b>(\$2,751,470)</b>
Proposed: Series 2016 Proceeds	-	-	-	-	-	-	-	-	-	-	-
Proposed: Series 2020 Proceeds	-	-	-	-	-	-	-	-	-	-	-
Total Bond Proceeds	-	-	-	-	-	-	-	-	-	-	-
<b>Net Income (Loss) Before Transfers</b>	<b>(\$41,051)</b>	<b>\$69,851</b>	<b>\$88,517</b>	<b>\$62,990</b>	<b>\$67,264</b>	<b>\$68,558</b>	<b>\$62,404</b>	<b>\$67,798</b>	<b>\$80,546</b>	<b>\$88,438</b>	<b>\$44,022</b>
Contributions from Developers	\$50,000	\$50,500	\$51,005	\$51,515	\$52,030	\$52,551	\$53,076	\$53,607	\$54,143	\$54,684	\$55,231
Contributions from Government Funds	-	-	-	-	-	-	-	-	-	-	-
Transfers In	-	-	-	-	-	-	-	-	-	-	-
Transfers Out	(\$139,390)	(\$140,784)	(\$142,191)	(\$143,613)	(\$145,049)	(\$146,500)	(\$147,965)	(\$149,445)	(\$150,939)	(\$152,448)	(\$153,973)
<b>Change in Net Position</b>	<b>(\$130,441)</b>	<b>(\$20,433)</b>	<b>(\$2,669)</b>	<b>(\$29,108)</b>	<b>(\$25,755)</b>	<b>(\$25,391)</b>	<b>(\$32,485)</b>	<b>(\$28,040)</b>	<b>(\$16,250)</b>	<b>(\$9,326)</b>	<b>(\$54,720)</b>
Beginning Cash Balance	\$2,309,373	\$2,178,932	\$2,158,500	\$2,155,831	\$2,126,722	\$2,100,967	\$2,075,576	\$2,043,091	\$2,015,051	\$1,998,801	\$1,989,476
Ending Fund Balance	\$2,178,932	\$2,158,500	\$2,155,831	\$2,126,722	\$2,100,967	\$2,075,576	\$2,043,091	\$2,015,051	\$1,998,801	\$1,989,476	\$1,934,755
General Fund Restricted (Bond Proceeds)	-	-	-	-	-	-	-	-	-	-	-
<b>Unrestricted</b>	<b>\$2,309,373</b>	<b>\$2,178,932</b>	<b>\$2,158,500</b>	<b>\$2,126,722</b>	<b>\$2,100,967</b>	<b>\$2,075,576</b>	<b>\$2,043,091</b>	<b>\$2,015,051</b>	<b>\$1,998,801</b>	<b>\$1,989,476</b>	<b>\$1,934,755</b>
Unrestricted Days of Working Capital	529	497	470	452	430	411	392	374	357	342	330
Coverage Ratio (w/Impact Fees)	3.54	4.21	4.64	4.75	4.75	5.23	5.64	5.97	6.29	6.59	6.92
Coverage Ratio (w/o Impact Fees)	3.54	4.21	4.64	4.75	4.75	5.23	5.64	5.97	6.29	6.59	7.11