FORT COLLINS-LOVELAND WATER DISTRICT

Water Financial Planning and Rate Study Report

March 16, 2018





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Board of Directors Fort Collins-Loveland Water District 5150 Snead Drive Fort Collins, CO 80525

Subject: Water Financial Planning and Rate Study Report

Dear Board of Directors,

Raftelis is pleased to provide this Water Financial Planning and Rate Study (Study) report to the Fort Collins-Loveland Water District (the District). The primary goals of the Study were to determine the amount of rate revenue required from all customers during the study period and the related annual revenue increases, calculate cost to serve each customer class, and to develop rates and tap fees.

This report summarizes Raftelis' key findings and discusses the methodologies that we used to conduct the study. It is our understanding that the District Board of Directors (Board) will not, at this time, take action to consider the rate structure changes discussed in this report. Instead, the Board has chosen to consider an interim step (not reflected in this report) consisting of the implementation of a 4.0% across-the-board increase in rates coupled with an increase in tap fees to be effective in May 2018.

It has been a pleasure working with you and District staff. Thank you for the support you provided during this study.

Sincerely,

RAFTELIS

Richard D. GiardinaExecutive Vice President

Ridard D. Standing

John J. Wright Manager

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TABLE OF CONTENTS

1	EXECUTIVE SUMMARY	7
	1.1 DISTRICT BACKGROUND	7
	1.2 STUDY OVERVIEW	7
	1.3 FINANCIAL PLAN	8
	1.4 COST OF SERVICE STUDY	9
	1.5 RATE DESIGN	10
	1.6 TAP FEES	11
	1.7 WATER RESOURCE SURCHARGE FOR COMMERCIAL AND IRRIGATION	
	CUSTOMERS	13
2	FINANCIAL PLAN	14
	2.1 OVERVIEW OF CAPITAL FINANCING PROCESS	14
	2.2 FINANCIAL PLANNING ASSUMPTIONS	
	2.3 FORECAST BILLED WATER CONSUMPTION	15
	2.4 FINANCAL PLAN RESULTS	17
3	COST OF SERVICE STUDY	18
	3.1 OVERVIEW OF THE WATER COST OF SERVICE PROCESS	18
	3.2 2018 TEST YEAR REVENUE REQUIREMENT	
	3.3 CUSTOMER CLASS PEAKING FACTORS	19
	3.4 RESULTS OF COST OF SERVICE ANALYSIS	20
4	RATE DESIGN	22
5	TAP FEES	25
	5.1 TAP FEE INFRASTRUCTURE COMPONENT	25
	5.2 WATER RESOURCES COST	26
	5.3 SAMPLE CALCULATIONS FOR RESIDENTIAL TAP FEES	27
	5.4 COMMERCIAL AND IRRIGATION TAP FEES	28
6	CUSTOMER BILL IMPACTS FROM RATES	31
	6.1 RESIDENTIAL CUSTOMERS	31
	6.2 COMMERCIAL CUSTOMERS	31
	6.3 IRRIGATION CUSTOMERS	32
	6.4 MULTI-UNIT RESIDENTIAL CUSTOMERS	32

DISCLOSURE	34
APPENDIX A: FINANCIAL PLAN	
APPENDIX B: COST OF SERVICE STUDY	
APPENDIX C: RATE DESIGN	
APPENDIX D: TAP FEES	
LIST OF TABLES	
Table 1: Projected CIP Expenditures 2018 - 2030 (\$ millions)	8
Table 2: Summary of Financial Plan CIP Financing Strategy	8
Table 3: Revenue Requirement from Rates (\$ millions)	
Table 4: Cost of Service Study Results for 2018 Test Year	
Table 5: Existing 2017 Rate Structure	
Table 6: Calculated 2018 Rate Structure	
Table 7: Residential Tap Fees (excluding meter costs)	
Table 8: Non-Residential Tap Fees - 1.0 C-BT Unit for 3/4" Meter (excludes meter cost	_
Table 9: Historical Monthly and Annual Consumption by Class per Account	
Table 10: Projected Customer Accounts	
Table 11: Projected Billed Water Consumption (kgal/yr.)	
Table 12: Detail of Financial Plan Results (\$ millions)	
Table 13: Detail of 2018 Test Year Revenue Requirement	
Table 14: System Customer Class Peaking Factors (kgal)	
Table 16: Cost of Service Study Results for 2018 Test Year	
Table 17: Existing Monthly Service Charges by Meter Size	
Table 18: Calculated Uniform Volumetric Rates for Non-Residential Customers	
Table 19: Calculated Residential Volumetric Rates (\$/kgal)	
Table 20: Monthly Service Charges, All Customers (\$/month)	
Table 21: Tap Fee Infrastructure Component Calculation	
Table 22: Residential Tap Fees (excluding meter costs)	
Table 23: Commercial Tap Fees Based on 2016 Demand (excluding meter costs)	
Table 24: Irrigation Tap Fees Based on 2016 Demand (excluding meter costs)	
Table 25: Non-Residential Tap Fees - 1 C-BT Unit for 3/4" Meter (excludes meter cost	
Table 26: Water Resource Surcharge for Commercial and Irrigation Customers	•
Table 27: Annual Bill Impacts for Residential Customers in 2018	31
Table 28: Annual Bill Impacts for Commercial Customers in 2018	32
Table 29: Annual Bill Impacts for a 1" Irrigation Customer in 2018	32
Table 30: Annual Bill Impacts for Multi-Unit Residential Customers in 2018	33

LIST OF FIGURES

Figure 1: Development of the Water Capital Financing Plan	14
Figure 2: Determination of Water Customer Class Revenue Requirements	19
Figure 3: Ranking of Board Pricing Objectives	23
Figure 4: Residential Annual Use per Lot by Gross Lot Size	26

EXECUTIVE SUMMARY

1.1 DISTRICT BACKGROUND

Fort Collins-Loveland Water District (the District) is located roughly 60 miles north of Denver. The District was formed in 1961. It serves an area of approximately 60 square miles, with boundaries that range from south of Harmony Road to 57th Street in Loveland and then east from the foothills to the Larimer-Weld County line. The District serve more than 17,000 customers who reside in parts of Fort Collins, Loveland, Timnath, Windsor, and Larimer County.

The District owns water rights from a variety of sources, including shares from the North Poudre Irrigation Company, Colorado-Big Thompson (C-BT), the Josh Ames Divide Canal and Reservoir Company, and the Windsor Reservoir Company. It is also a participant in the Northern Integrated Supply Project (NISP). NISP is a \$746 million proposed water storage and distribution project that will supply fifteen Northern Front Range water utilities with 40,000 acre-feet of additional water supplies. The District will receive an additional 3,000 acre feet of water supplies from its participation in NISP. These supplies are necessary to help meet the long-term water demands projected to be created by continuing growth the District's service territory.

The District is also a member of the "Tri-Districts", a group of three water districts, which includes North Weld County Water District and East Larimer County Water District. In October 2016, the Tri-Districts re-established their relationship and under the Soldier Canyon Water Treatment Authority to develop and manage water treatment facilities to the benefit of the three water districts. Specifically, the Soldier Canyon Water Treatment Authority manages the Soldier Canyon Filter Plant, which provides the districts with water treatment and filtration services.

1.2 STUDY OVERVIEW

In May 2017, the District engaged Raftelis Financial Consultants, Inc. (Raftelis) to conduct a Water Financial Planning and Rate Study (Study). The Study includes:

- \tilde{N} A financial plan for the period 2018 2030.
- $\tilde{\mathbb{N}}$ A cost of service study that determines the revenue required from each customer class.
- N The development of water rate structures that reflect each customer class's cost of service (COS) and District-determined pricing objectives.
- N The development of tap fees (also known as plant investment fees) and associated assessment schedules/methodologies.

Calendar year of 2018 was considered the "test year" for purposes of the COS Study, while the complete "study period" extends through 2030. This report summarizes the key findings and recommendations for each of these main objectives.

1.3 FINANCIAL PLAN

The District must make very large capital improvement plan (CIP) expenditures during the 2018 -2030 planning horizon. As shown in Table 1, these CIP expenditures total \$258.8 million when expressed in 2017 dollars. After the application of annual construction cost inflation of 3%, the CIP totals \$320.8 million. Approximately \$70.8 million (22.1%) of these inflated costs are associated with the District's estimated share of NISP costs. Another \$44.2 million (13.8%) are associated with the District's participation in the construction of new regional water treatment facility with several NISP partners. See Appendix A for a detail of CIP expenditures.

Table 1: Projected CIP Expenditures 2018 - 2030 (\$ millions)

Type of Expenditure	Uninflated	Inflated
Growth-Related CIP Expenditures		
Raw Water	\$77.7	\$96.1
Source of Supply	67.1	80.3
Treatment	59.9	77.6
Pumps	0.1	0.1
Transmission Mains	28.4	36.8
Distribution Mains	0.0	0.0
Meters	0.0	0.0
Total Growth-Related CIP	233.2	290.9
Non-Growth CIP Expenditures	25.7	29.9
Total CIP Expenditures	\$258.8	\$320.8

The key objective of the financial planning process is to determine a CIP financing strategy that will maintain District financial integrity while successfully funding all required capital expenditures. Table 2 presents a summary of the CIP financing strategy as determined via the financial planning process. It features annual rate revenue increases of 4% coupled with \$185 million in proposed revenue bond issues. Due to space limitations, the years 2028 - 2030 have been omitted. The detailed financial plan can be found in Appendix A to this report.

Table 2: Summary of Financial Plan CIP Financing Strategy

Metric	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Overall Rate Revenue Increase	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Cumulative Revenue Increase	4.0%	8.2%	12.5%	17.0%	21.7%	26.5%	31.6%	36.9%	42.3%	48.0%
Proposed Bond Issues (\$ Million)			\$40.0		\$40.0		\$35.0		\$35.0	
Ending Cash (\$ millions)	\$33.7	\$25.1	\$47.1	\$35.6	\$60.9	\$53.3	\$79.1	\$50.4	\$67.2	\$57.4
Debt Service Coverage Ratio Including Tap Fees	7.73	7.99	3.52	3.59	2.40	2.48	2.22	2.28	1.86	1.93
Debt Service Coverage Ratio Excluding Tap Fees	1.80	1.92	0.89	0.93	0.66	0.70	0.66	0.70	0.59	0.63
Target Debt Service Coverage Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50

A natural outcome of the financial planning process is the determination of the amount of rate revenues that must be collected from customers during each year of the planning horizon (the revenue requirement from rates). Table 3 shows this projection. Due to space limitations, the years 2028 - 2030 have been omitted.

Table 3: Revenue Requirement from Rates (\$ millions)

Metric	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
O&M Expenses	\$9.8	\$10.1	\$10.4	\$10.8	\$11.2	\$11.6	\$12.0	\$12.4	\$12.9	\$13.3	\$13.8
CIP Expenditures	10.7	17.4	22.0	26.1	23.3	21.3	18.1	16.4	39.3	24.3	19.6
Debt Service	1.9	1.9	1.9	4.5	4.6	7.1	7.1	8.3	8.3	10.6	10.6
Net Surplus/ (Deficit)	(1.6)	(4.4)	(8.5)	(14.6)	(11.5)	(11.4)	(7.5)	(6.3)	(28.7)	(15.2)	(9.8)
Gross Revenue Requirement	20.8	25.0	25.8	26.8	27.6	28.7	29.7	30.8	31.8	33.0	34.2
Less: Misc. Operating Revenues	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Less: Misc. Non- Operating Revenues	1.4	1.6	1.6	1.7	1.6	1.8	1.7	1.9	1.7	1.8	1.8
Less: Tap Fees	<u>8.0</u>	<u>11.5</u>	<u>11.7</u>	<u>11.9</u>	<u>12.2</u>	<u>12.4</u>	<u>12.6</u>	<u>12.9</u>	<u>13.2</u>	<u>13.4</u>	<u>13.7</u>
Net Revenue Requirement	\$10.4	\$10.9	\$11.5	\$12.1	\$12.8	\$13.5	\$14.3	\$15.0	\$15.9	\$16.8	\$17.7

1.4 COST OF SERVICE STUDY

Having established the total amount of rate revenues that must be recovered to sustain the District's operations, a cost of service study must be conducted to determine how much revenue must be recovered from different types of customers based on their unique demand characteristics. Table 4 presents the results of the study for the 2018 test year. As shown in Table 4, residential and irrigation customers are currently paying less than their calculated COS. In contrast, commercial and multi-unit residential customers are currently paying more than their calculated COS.

There are several reasons a misalignment between revenue recovery and COS can occur. The District's current rate structure charges the same volumetric rates per tier for each customer class. This approach to revenue recovery does not account for the differences in class COS as determined by the unique consumption characteristics of each class. Another reason may be that the District has not implemented the results of a COS study for a significant period. As a result, a misalignment may occur between revenue recovery and the actual cost of providing service due to changes in customer class water consumption characteristics or changes in the composition of the overall District-wide revenue requirement.

A detail of the cost of service study can be found in Appendix B to this report.

Table 4: Cost of Service Study Results for 2018 Test Year

Customer Class	Revenue Under Existing Rates	Test Year Cost of Service	Required Change in Revenue		
Customers at FCLWD Rates					
Residential	\$6,519,867	\$7,049,071	\$529,203	8.12%	
Commercial	1,164,573	1,055,957	(108,616)	-9.33%	
Irrigation	912,392	1,149,120	236,728	25.95%	
Multi-Unit Residential	<u>445,798</u>	<u>130,666</u>	(315,132)	<u>-70.69%</u>	
Total at FCLWD Rates	9,042,631	9,384,814	342,183	3.78%	
Customers at City Rates					
Residential	922,399	1,010,390	87,991	9.54%	
Commercial	93,319	80,165	(13,154)	-14.10%	
Irrigation	275,984	388,297	112,313	40.70%	
Multi-Unit Residential	<u>185,528</u>	<u>76,990</u>	(108,539)	<u>-58.50%</u>	
Total at City Rates	1,477,231	1,555,885	78,653	5.32%	
Total System	\$10,519,862	\$10,940,699	\$420,836	4.00%	

1.5 RATE DESIGN

The key step in the rate study process is the identification of rate structures that recover the estimated cost of service for each customer class. The District currently recovers costs from customers using a monthly service charge that varies by meter size and a 3-TIER volumetric rate structure that applies to all types of customers. Table 5, shows the District's current rate structure.

Table 5: Existing 2017 Rate Structure

Charge/ Rate	Customers Located within the District	Customers Located within the City of Fort Collins
Monthly Service Charge	within the District	the dity of Fore comins
5/8" and 3/4"	\$13.40	\$13.40
1"	19.53	19.53
1.5"	34.70	34.70
2"	53.00	53.00
3"	101.80	101.80
4"	203.60	203.60
Multi-Unit Residential Service Charge per Unit	13.40	13.40
Volumetric Rate per 1,000 Gallons (All Customer Types)		
1,000 - 8,000 Gallons	\$1.56	\$2.73
8,000 - 15,000 Gallons	2.21	3.57
Greater than 15,000 Gallons	2.97	4.40

Table 6 shows the rate design calculated by Raftelis which includes the key components listed below. Details of the rate design can be found in Appendix C to this report.

- Maintenance of the existing monthly service charge structure based on meter size.
- Modification of the current residential consumption TIERs so that TIER 3 starts at 22,000 gallons of monthly consumption instead of 15,000 gallons.
- Replacement of the existing 3-TIER rate structure for non-residential customers with a customer class-specific uniform volumetric rate.
- Begin having multi-unit residential customers pay a monthly service charge based on the meter size serving each account rather than paying a monthly service charge based on the number of units in each multi-unit residential account.

Table 6: Calculated 2018 Rate Structure

Charge/Rate	Customers Located within the District	Customers Located within the City of Fort Collins		
Monthly Service Charge (All Customers)				
5/8" and 3/4"	\$13.95	\$13.95		
1"	20.33	20.33		
1.5"	36.12	36.12		
2"	55.17	55.17		
3"	105.96	105.96		
4"	211.94	211.94		
Residential Volumetric Rate per 1,000 gallons				
1,000 to 8,000	\$1.80	\$3.07		
8,000 to 22,000	2.55	4.02		
Greater than 22,000	3.42	4.95		
Non-Residential Volume Rate per 1,000 gallons				
Commercial (1)	\$2.20 + \$0.50 surcharge = \$2.70	\$3.64 + \$0.50 surcharge = \$4.14		
Irrigation (1)	3.73 + 0.50 surcharge = 4.23	6.18 + 0.50 surcharge = 6.68		
Multi-Unit Residential (2)	\$1.56	\$2.73		

⁽¹⁾ These rates reflect the three-year phase-in of a Water Resource Surcharge of \$1.50 per thousand gallons. The derivation of this Surcharge is discussed fully in Section 5.4 of this report.

1.6 TAP FEES

1.6.1 Residential Tap Fees

The District's current tap fee for a residential customer with a 3/4" meter size consists of a \$7,000 infrastructure component and a \$25,000 water resources cost component. This results in a total tap fee of \$32,000 before the consideration of meter installation costs. Raftelis recommends that the District increase the infrastructure component to \$10,869 and the water resource cost component to

⁽²⁾ The calculated cost of service rates for multi-unit residential customers are \$1.21 per thousand gallons for customers located within the District and \$2.03 per thousand gallons for customers located outside the District. As directed by District Staff, the volumetric rates for these customers will remain at their existing TIER 1 levels of \$1.56 per thousand gallons and \$2.73 per thousand gallons, respectively.

\$27,200. This results in a total tap fee of \$38,069 before the consideration of other factors such as meter costs.

In addition to updating the cost inputs used in the calculation of residential tap fee, Raftelis also recommends that the water resources cost component of the residential tap fees be scaled based on gross lot size. This will allow the tap fees charged by the District to reflect the fact that small lot residential dwellings impose lower water demands and lower water resource costs on the District's system. Correspondingly, it will allow the tap fees charged by the District to reflect the fact that large lot residential dwellings impose higher water demands and correspondingly higher water resource costs. Table 7 shows the tap fee assessment schedule for residential customers based on the scaling recommended by District Staff.

Sections 5.2 and 5.3 of this report discuss the calculation of residential tap fees. A detail of the calculation of the infrastructure component of the tap fee is provided in Appendix D.

Lot Square Footage Range	Required C-BT Units	Annual Allotment (Gallons)	Water Cost	Infrastructure Cost	Total Tap Fee	Existing Tap Fee	\$ Difference
<= 6,000	0.524	85,366	\$14,252	\$10,869	\$25,121	\$32,000	(\$6,879)
6,001-7,000	0.762	124,161	20,728	10,869	31,597	32,000	(403)
7,001-8,000	0.803	130,795	21,836	10,869	32,705	32,000	705
8,001-9,000	0.888	144,623	24,144	10,869	35,014	32,000	3,014
9,001-10,000	1.015	165,405	27,614	10,869	38,483	32,000	6,483
10,001-11,000	1.078	175,672	29,328	10,869	40,197	32,000	8,197
11,001-12,000	1.145	186,587	31,150	10,869	42,019	32,000	10,019
>12,000	1.776	289,338	48,304	10,869	59,173	32,000	27,173

Table 7: Residential Tap Fees (excluding meter costs)

1.6.2 **Non-Residential Tap Fees (Commercial and Irrigation)**

As discussed in Section 5.4 of this report, Raftelis calculated commercial and residential tap fees based on actual 2016 water demand data. The resulting tap fees were significantly higher than the District's existing tap fees. At the direction of the Board, Raftelis also calculated commercial and irrigation tap fees based on the assumption that, similar to residential tap fees, a new commercial or irrigation connection with a 3/4" meter size would use 1.0 C-BT units. Table 8 shows the resulting assessment schedule for non-residential tap fees.

			•		•			
Meter Size	Design GPM	Design GPM Ratio	Infrastructure Component	Total C-BT Units	Water Cost	Total Tap Fee	Existing Tap Fee	\$ Difference
3/4"	10	1	\$10,869	1.00	\$27,200	\$38,069	\$32,000	\$6,069
1"	25	2.5	27,173	2.50	68,000	95,173	80,000	15,173
1 1/2"	50	5	54,346	5.00	136,000	190,346	160,000	30,346
2"	80	8	86,953	8.00	217,600	304,553	256,000	48,553
3"	175	17.5	190,211	17.50	476,000	666,211	560,000	106,211
4"	300	30	326,075	30.00	816,000	1,142,075	962,000	180,075
6"	625	62.5	\$679,324	62.50	\$1,700,000	\$2,379,324	\$2,000,000	\$379,324

Table 8: Non-Residential Tap Fees - 1.0 C-BT Unit for 3/4" Meter (excludes meter costs)

1.7 WATER RESOURCE SURCHARGE FOR COMMERCIAL AND IRRIGATION **CUSTOMERS**

The tap fees shown in Table 8 do not fully recover the cost of the water resources required to serve commercial and irrigation customers. Based on discussions with the District Board, Raftelis calculated a water resource cost surcharge of \$1.49 per thousand gallons to be assessed on all commercial and irrigation usage in lieu of tap fees based on actual non-residential customer demand characteristics. This surcharge could be implemented in equal installments over a 3-year period. Thus, in 2018, the water resource surcharge would be \$0.50 per thousand gallons. A full discussion of the water resource surcharge is provided in Section 5.4 of this report.

2 FINANCIAL PLAN

OVERVIEW OF CAPITAL FINANCING PROCESS

The District finances its CIP using cash flows generated from four primary funding sources: 1) rate revenues from the provision of water service; 2) tap fee revenues from new customers connecting to the water system; 3) external debt financing, and; 4) various miscellaneous revenue sources. Raftelis prepared a long-term District capital financing strategy featuring a proposed mixed of these funding sources to illustrate the magnitude of potential rate revenue increases and external debt financing required to successfully pay for the District's planned CIP expenditures.

In addition to its forecasted CIP expenditures, the District provided Raftelis with information regarding its operating and maintenance (0&M) expense requirements, existing debt service payments, miscellaneous revenue sources, and projected CIP expenditures. As discussed in Section 1, a significant portion of the District's total CIP, roughly 22.1% or \$70.8 million, is directly related to the additional 3,000 acre feet of water supplies that will be provided by NISP. Raftelis combined this information to create a financial plan, which identifies annual rate revenue increases as well as proposed debt issuances to cover NISP and other growth-related capital expenditures.

Figure 1 presents a graphical illustration of the process used by Raftelis to fund capital projects during the planning period.

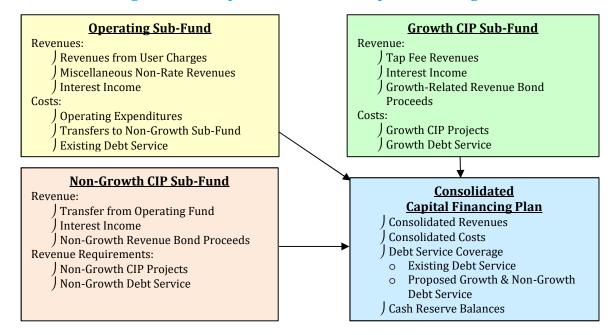


Figure 1: Development of the Water Capital Financing Plan

2.2 FINANCIAL PLANNING ASSUMPTIONS

The key assumptions used in the development of Raftelis' hypothetical capital financing plan included the following:

Customer Account Growth:

All Customer Classes: 2%

Annual Cost Escalation Inflation Rates:

- Operating and Maintenance Expenses: 3%
- Chemicals and Utilities: 5%
- Capital Costs: 3%

Debt Financing Assumptions:

- Month of Debt Issue: January
- Debt Service Repayment Delay: Repayment Begins Immediately After Issue
- Debt Interest Rate: 5% Annually (the District's current weighted average cost of debt is estimated to be approximately 4.8%. A 5% borrowing rate for future debt was chosen for
 - conservatism)
- Debt Term: 30 Years
- Debt Issuance Expense: 2%
- Debt Service Reserve: 1 year

Cash Reserve Assumptions:

- Operating Reserve: 90 Days (25%) of Annual O&M Expenses
- Capital Reserve: 25% of Next Year's CIP

2.3 FORECAST BILLED WATER CONSUMPTION

A key component of the financial planning process is the development of a demand forecast and associated projection of future water rate revenues under existing rates. Raftelis analyzed District water consumption data for the years 2014-2016, to predict future customer water consumption. Table 9 shows the average monthly consumption and annual consumption by customer class.

	Table 9: Historical	l Monthly and	d Annual Co	onsumption b	v Class	per Account
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Customer Type	Average Monthly (kgal/mo.)	Average Annual (kgal/yr.)
Residential, FCLWD Rates	11.58	139.00
Residential, City Rates	8.28	99.31
Commercial, FCLWD Rates	60.12	721.45
Commercial, City Rates	126.85	1,522.17
Irrigation, FCLWD Rates	205.24	2,462.85
Irrigation, City Rates	241.93	2,903.12
Multi-Unit Residential, FCLWD Rates	23.42	281.04
Multi-Unit Residential, City Rates	13.81	165.73

Table 10 shows the total number of accounts by customer class, and the overall number of accounts added each year for the 8-year period 2017-2024.

Table 10: Projected Customer Accounts

Customer Class	2017	2018	2019	2020	2021	2022	2023	2024
Residential, FCLWD Rates	13,910	14,188	14,472	14,761	15,056	15,357	15,665	15,978
Residential, City Rates	1,907	1,946	1,984	2,024	2,065	2,106	2,148	2,191
Commercial, FCLWD Rates	568	579	591	603	615	627	640	652
Commercial, City Rates	13	14	14	14	14	15	15	15
Irrigation, FCLWD Rates	120	122	124	127	129	132	135	137
Irrigation, City Rates	21	21	22	22	23	23	23	24
Multi-Unit Residential, FCLWD Rates	255	260	265	271	276	282	287	293
Multi-Unit Residential, City Rates	151	154	157	160	163	167	170	173
Total System	16,945	17,284	17,629	17,982	18,341	18,709	19,083	19,463

Table 11 displays the projected billed consumption per year by customer class for the 8-year period 2017-2024. It is important to note that the financial plan assumes a 1% decline in water usage per account for residential and commercial customers, due to projected increased conservation measures and the installation of increasingly efficient plumbing fixtures.

Table 11: Projected Billed Water Consumption (kgal/yr.)

Customer Class	2017	2018	2019	2020	2021	2022	2023	2024
Residential, FCLWD Rates	1,903,512	1,907,123	1,918,210	1,931,842	1,946,820	1,962,671	1,979,162	1,996,160
Residential, City Rates	189,425	190,079	191,333	192,795	194,369	196,016	197,718	199,465
Commercial, FCLWD Rates	410,769	414,346	420,257	427,020	434,282	441,905	449,825	458,004
Commercial, City Rates	20,184	20,351	20,637	20,966	21,320	21,692	22,079	22,479
Irrigation, FCLWD Rates	286,957	289,275	296,784	302,702	308,746	314,914	321,206	327,625
Irrigation, City Rates	60,457	60,945	61,795	62,775	63,832	64,943	66,099	67,294
Multi-Unit Residential, FCLWD Rates	71,665	72,308	73,350	74,537	75,810	77,145	78,532	79,963
Multi-Unit Residential, City Rates	25,019	25,345	25,762	26,216	26,692	27,187	27,696	28,220
Total System	2,967,988	2,979,772	3,008,128	3,038,852	3,071,870	3,106,473	3,142,317	3,179,211
% Change		0.40%	0.95%	1.02%	1.09%	1.13%	1.15%	1.17%

2.4 FINANCAL PLAN RESULTS

Table 12 provides a detail of the projected financial plan. Due to space limitations, the years 2028 -2030 have been omitted. The required annual rate revenue increases and proposed revenue bond issues listed in Table 12 form the financing plan required to pay for projected CIP expenditures while maintaining the financial integrity of the District.

This plan is projected to fully fund all projected CIP expenditures, O&M expenses, and existing and future debt service payments. The plan is also projected to maintain adequate debt service coverage ratios (DSCR) and cash reserves. These increases are indicative of the overall revenues needed to sustain the utility regardless of the COS analysis or any changes in the District's rate structure.

Table 12: Detail of Financial Plan Results (\$ millions)

Metric	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Annual Rate	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Revenue Increases	4.0070	4.00 /0	4.00 /0	4.00 /0	4.00 /0	4.00 /0	4.0070	4.00 /0	4.00 /0	4.00 /0
Rate Revenues	\$10.9	\$11.5	\$12.1	\$12.8	\$13.5	\$14.3	\$15.0	\$15.9	\$16.8	\$17.7
Misc. Revenue	2.6	2.6	2.7	2.7	2.8	2.8	2.9	2.8	2.8	2.8
Tap Fees	<u>11.5</u>	<u>11.7</u>	<u>11.9</u>	<u>12.2</u>	<u>12.4</u>	<u>12.6</u>	<u>12.9</u>	<u>13.2</u>	<u>13.4</u>	<u>13.7</u>
Total Revenues	25.0	25.8	26.8	27.6	28.7	29.7	30.8	31.8	33.0	34.2
0&M Expenses	10.1	10.4	10.8	11.2	11.6	12.0	12.4	12.9	13.3	13.8
Debt Service	1.9	1.9	4.5	4.6	7.1	7.1	8.3	8.3	10.6	10.6
CIP Expenditures	<u>17.4</u>	<u>22.0</u>	<u>26.1</u>	23.3	<u>21.3</u>	<u>18.1</u>	<u>16.4</u>	<u>39.3</u>	<u>24.3</u>	<u>19.6</u>
Total Expenditures	29.4	34.4	41.4	39.1	40.1	37.2	37.1	60.4	48.2	44.0
Net Surplus/ (Deficit)	(\$4.4)	(\$8.5)	(\$14.6)	(\$11.5)	(\$11.4)	(\$7.5)	(\$6.3)	(\$28.7)	(\$15.2)	(\$9.8)
Beginning Cash Balance	38.1	33.7	25.1	47.1	35.6	60.9	53.3	79.1	50.4	67.2
Add: Net Surplus/(Deficit)	(\$4.4)	(\$8.5)	(\$14.6)	(\$11.5)	(\$11.4)	(\$7.5)	(\$6.3)	(\$28.7)	(\$15.2)	(\$9.8)
Add: Net Bond Proceeds	0.0	0.0	<u>36.6</u>	0.0	<u>36.6</u>	0.0	32.0	0.0	32.0	0.0
Ending Cash Balance	\$33.7	\$25.1	\$47.1	\$35.6	\$60.9	\$53.3	\$79.1	\$50.4	\$67.2	\$57.4
Debt Service Coverage Ratio (Including Tap Fees)	7.73	7.99	3.52	3.59	2.40	2.48	2.22	2.28	1.86	1.93
Debt Service Coverage Ratio (Excluding Tap Fees)	1.80	1.92	0.89	0.93	0.66	0.70	0.66	0.70	0.59	0.63
Target Debt Service Coverage Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50

3 COST OF SERVICE STUDY

3.1 OVERVIEW OF THE WATER COST OF SERVICE PROCESS

The purpose of a COS study is to allocate the water utility revenue requirement to each customer class in direct proportion to the demands they impose on the utility system. To accomplish this objective, Raftelis conducted a detailed analysis of customer water consumption characteristics and engaged in a multi-step cost allocation process. The procedures followed by Raftelis were based on the industry standard "base-extra capacity method" of cost allocations as published by the American Water Works Association in the Seventh Edition of the Manual of Water Supply Practices M1. Principles of Water Rates, Fees, and Charges.

The primary steps in the water COS study process include:

- Costs and Demand: Determining the test year revenue requirement and forecast billed water consumption.
- Cost Functionalization: Assigning the O&M, capital, and non-rate revenue components of the revenue requirement to functional service categories. This process results in the assignment of costs to the specific water utility functional activities they are incurred to perform.
- Cost Allocation: Allocating the functionalized O&M, capital, and non-rate revenue components of the revenue requirement to specific cost parameters such as base demand, maximum day demand, and maximum hour demand. This process results in the assignment of costs to the specific types of water service they are incurred to serve.
- **Units of Service**: Determining the customer class units of service for each cost parameter based on metrics such as annual average day billed usage, maximum day and maximum hour extra capacity demand, the number of equivalent meters, and annual number of water bills.
- **<u>Unit Cost of Service</u>**: Determining the utility-wide unit cost of service for each cost parameter. The unit cost of service is determined by dividing the revenue requirement assigned to each cost parameter by its associated utility-wide units of service.
- **Customer Class Revenue Requirements**: Calculating the customer class revenue requirement by multiplying the customer class specific units of service for each cost parameter by the associated utility-wide unit cost of service.

Figure 2 provides a visual overview of key steps in the water cost of service study process.

Determine the **Functionalize** Allocate Revenue Determine the Distribute the **Total System** Requirement to Revenue Unit Cost of Service Revenue **Demand Parameters** Revenue Requirement Requirement Requirement Base Demand to Customer - Raw Water \$ Base Demand \$/Unit Classes +0&M- Source of Supply \$ Max Day Demand Max Day Demand Revenue - Treatment \$ Max Hour Demand **Customer Class** \$/Unit Requirement - Pumping \$ Customer Service Units of Service - Storage \$ Meters Max Hour Demand \$ Billing and + Capital Cost - Transmission \$/Unit Revenue - Distribution Collection \$ Unit Cost of \$ Fire Flow Demand Equivalent Meter - Meters Requirement Service \$/Unit - Customer Service - Non-Rate Revenues - Fire Protection Customer Bill **Total Customer** \$/Unit = Net Revenue Class Requirement from Fire Flow Demand Revenue Rates \$/Unit Requirement

Figure 2: Determination of Water Customer Class Revenue Requirements

3.2 2018 TEST YEAR REVENUE REQUIREMENT

The revenue requirement is the amount of revenue that a utility must collect from the rates paid by its customers. The foundation of the projected revenue requirement developed by Raftelis for the COS study was the District's adopted 2017 budget. Table 13 shows the calculation of the District's revenue requirement for the 2018 test year. A detail of this revenue requirement through the entire study period as well as the District's financial plan can be found in Appendix A to this report.

Revenue Requirement from Rates	2018
O&M	10,094,826
CIP Expenditures	17,393,574
Debt Service	1,930,994
Net Consolidated Cash Flow	(4,396,491)
Gross Revenue Requirement	25,022,903
Less: Miscellaneous Revenues	14,082,246
Net Revenue Requirement from Rates	\$10,940,657

Table 13: Detail of 2018 Test Year Revenue Requirement

3.3 CUSTOMER CLASS PEAKING FACTORS

The District purchases treated water from the Solider Canyon Water Treatment Authority. A critical element in the cost allocation process is the determination of the maximum day and maximum hour peak demands imposed by the individual customer classes of the District on the Soldier Canyon Filter Plant (SCFP). Those customer classes that impose the highest peak demands on the utility system are generally allocated the largest proportion of costs. Table 14 shows the historic SCFP production for 2014, 2015 and 2016.

Table 14: System Customer Class Peaking Factors (kgal)

Calendar Year	Annual Average Day (AAD)	Maximum Day (MD)	Ratio of MD to AAD	Estimated System Maximum Hour	Estimated Maximum Hour (MH)
2014	7,902	18,713	2.37	25,286	3.20
2015	7,908	19,656	2.49	25,305	3.20
2016	9,308	21,624	2.32	29,786	3.20

The approach employed by Raftelis to estimate customer class peaking factors generally follows the methodology described in Appendix A of the Seventh Edition of the AWWA "Manual of Water Supply Practices M1, Principles of Water Rates, Fees, and Charges." Table 15 shows the peaking factors for each customer class, based on the average of 2014, 2015 and 2016 data. These are the peaking factors used in the Raftelis COS analysis. Note that irrigation has the highest max day and max hour peaking factors. Residential has the second highest peaking factors due to outdoor irrigation usage.

Table 15: Historical Peaking Factors by Customer Class

Customer Class	Maximum Day	Maximum Hour
Residential, FCLWD Rates	2.51	3.35
Residential, City Rates	2.21	2.96
Commercial, FCLWD and City Rates	2.09	2.80
Irrigation, FCLWD and City Rates	3.42	4.58
Multi-Unit Residential, FCLWD and City Rates	1.37	1.84

RESULTS OF COST OF SERVICE ANALYSIS

The Raftelis COS analysis indicates an imbalance between the costs incurred by the District serve each individual customer class and the actual level of revenue collected from the rates they pay for service. Specifically, the District has been under-recovering costs from the residential and irrigation customers and over-recovering from commercial and multi-unit residential customers. Table 16 shows the imbalance between 2018 revenue recovery versus the estimated 2018 COS. Note that this assumes a 4% overall increase in rate revenue in 2018.

Table 16: Cost of Service Study Results for 2018 Test Year

Customer Class	Revenue Under Existing Rates	Cost of Service Revenue	Required Change in Revenue	
Customers at FCLWD Rates				
Residential	\$6,519,867	\$7,049,071	\$529,203	8.12%
Commercial	1,164,573	1,055,957	(108,616)	-9.33%
Irrigation	912,392	1,149,120	236,728	25.95%
Multi-Unit Residential	<u>445,798</u>	<u>130,666</u>	(315,132)	<u>-70.69%</u>
Total at FCLWD Rates	9,042,631	9,384,814	342,183	3.78%
Customers at City Rates				
Residential	922,399	1,010,390	87,991	9.54%
Commercial	93,319	80,165	(13,154)	-14.10%
Irrigation	275,984	388,297	112,313	40.70%
Multi-Unit Residential	<u>185,528</u>	<u>76,990</u>	(108,539)	<u>-58.50%</u>
Total at City Rates	1,477,231	1,555,885	78,653	5.32%
Total System	\$10,519,862	\$10,940,699	\$420,836	4.00%

Any change in revenue shown in Table 16 greater than the overall 4% increase, indicates that a customer class has been paying less than its COS. Any change in revenue less than the overall 4% increase, indicates that this class has been paying more than its COS.

There are several reasons a misalignment between revenue recovery and COS can occur. The District's current rate structure charges the same volumetric rates per tier for each customer class. This approach to revenue recovery does not account for the differences in class COS as determined the unique consumption characteristics of each class. Another reason may be that the District has not implemented the results of a COS study for a significant period. As a result, a misalignment may occur between revenue recovery and the actual cost of providing service due to changes in customer class water consumption characteristics or changes in the composition of the overall District-wide revenue requirement.

4 RATE DESIGN

The District's current monthly service charges and volumetric rates are shown below. The key thing to note about the District's current volumetric rates is that they do not reflect the actual cost of providing services to individual customer classes. Instead, all customer classes pay the same volumetric rates regardless of the actual costs they impose on the utility system.

Monthly service charge for Residential, Commercial and Irrigation Accounts:

Table 17: Existing Monthly Service Charges by Meter Size

Meter Size	Monthly Service Charge
5/8" and 3/4"	\$13.40
1"	19.53
1.5"	34.70
2"	53.00
3"	101.80
4"	203.60

- $\hat{\mathbb{N}}$ Volumetric rates for all customers, based on monthly billed water consumption:
 - Customers located within the District:
 - Tier 1: \$1.56 per thousand gallons for the first 8,000 gallons,
 - Tier 2: \$2.21 per thousand gallons for 8,001 to 15,000 gallons,
 - Tier 3: \$2.97 per thousand gallons for greater than 15,000 gallons,
 - Customers located within the City of Fort Collins:
 - Tier 1: \$2.73 per thousand gallons for the first 8,000 gallons,
 - Tier 2: \$3.57 per thousand gallons for 8,001 to 15,000 gallons,
 - Tier 3: \$4.40 per thousand gallons for greater than 15,000 gallons,
 - All Multi Unit customers pay a flat \$13.40 per unit

There are multiple rate structure alternatives the District could implement in lieu of its existing structure. On March 24, 2017, Raftelis conducted a "Ratemaking 101" workshop with the Board of Directors (Board) of the District.

During the workshop, Raftelis led the Board through a pricing objectives exercise. The purpose of this exercise was to identify the most important objectives to achieve in the District's water rate design(s). Specifically, each Board member was asked to rank the pricing objectives listed below as Essential, Very Important, Important, or Least Important.

Conservation/Demand Management Rate Stability **Revenue Stability** Simple to Understand and Update Affordability Cost of Service Based Allocations Minimization of Customer Impacts Ease of Implementation

The pricing objectives considered to be Essential by Board members were assigned a total of 4 points in the ranking process. Pricing objectives considered to be Very Important, Important, and Least Important were assigned 3, 2, and 1 points, respectively, in the ranking process. Figure 3 summarizes the results of the pricing objective exercise.

Figure 3: Ranking of Board Pricing Objectives

Rank	Pricing Objective	Weighted Score
1	Revenue Stability	21
2	Conservation/Demand Management	18
3	Rate Stability	14
3	Cost of Service Based Allocations	14
3	Economic Development	14
6	Affordability	10
6	Minimization of Customer Impacts	10
8	Simple to Understand and Update	7
8	Ease of Implementation	7

Based on the Board's pricing objectives, Raftelis sought to develop rate design options that met the Board's criteria. As part of this process, Raftelis evaluated the use of tiered rate structures with unique volumetric rates and consumption tiers for each customer class. We do not recommend this approach.

Unlike residential customers who share similar water consumption characteristics, the water consumption characteristics of non-residential customers (multi-unit residential, commercial and irrigation) are highly diverse. For instance, a commercial customer could be a small office with low water usage or a busy car wash with significant water demands. Due to this inherent diversity, it is difficult to develop a tiered volumetric rate structure appropriate for all non-residential customers. For example, under the District's current volumetric rate structure, a high percentage of nonresidential water consumption is concentrated in TIER 3 regardless of the costs such customers impose on the utility system.

For the reasons described above, Raftelis calculated a uniform volumetric rate structure for nonresidential customers. These calculated non-residential uniform volumetric rates are shown in Table 18.

Table 18: Calculated Uniform Volumetric Rates for Non-Residential Customers

Customer Class	Uniform Rate (\$/kgal)				
District Rates					
Commercial	\$2.20				
Irrigation	\$3.73				
Multi-Unit Residential	\$1.56				
City R	lates				
Commercial	\$3.64				
Irrigation	\$6.18				
Multi-Unit Residential	\$2.73				

A second shortcoming of the District's existing volumetric rate structure is the high percentage of residential water consumption that also occurs in Tier 3 (roughly 40%). Raftelis adjusted the consumption tier thresholds for residential customers by widening the second tier and increasing the starting point for the third tier such that a smaller percentage of use is in that tier. This adjustment would increase revenue reliability and enable the District to send a more pronounced conservation price signals in TIER 3. Table 19 shows the residential volumetric rates calculated for the years 2018 - 2027. Rates for the years 2018 -2030 have been omitted due to space limitations.

Table 19: Calculated Residential Volumetric Rates (\$/kgal)

Consumption Tiers	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
	District Rates									
Up to 8,000 gals	\$1.80	\$1.88	\$1.96	\$2.04	\$2.13	\$2.22	\$2.31	\$2.41	\$2.51	\$2.62
8,001 - 22,000	2.55	2.66	2.77	2.89	3.01	3.14	3.27	3.41	3.55	3.70
Greater than 22,000	3.42	3.56	3.71	3.86	4.02	4.19	4.36	4.54	4.73	4.92
				City Rate	S					
Up to 8,000 gals	\$3.07	\$3.19	\$3.32	\$3.45	\$3.59	\$3.74	\$3.88	\$4.04	\$4.20	\$4.37
8,001 - 22,000	4.02	4.18	4.35	4.52	4.70	4.89	5.09	5.29	5.50	5.72
Greater than 22,000	4.95	5.15	5.35	5.57	5.79	6.02	6.26	6.51	6.77	7.05

Another way to promote revenue reliability is through the monthly service charge. Raftelis recommends keeping the monthly service charge relatively consistent with current levels in order to preserve the percentage of total revenues that base charge revenues currently comprise (i.e., roughly 30%). The calculated monthly service charges for the years 2018-2027 are shown in Table 20. Due to space limitations, the years 2028 - 2030 have been omitted.

Table 20: Monthly Service Charges, All Customers (\$/month)

Meter										
Size	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
3/4"	\$13.95	\$14.51	\$15.09	\$15.69	\$16.32	\$16.97	\$17.65	\$18.36	\$19.09	\$19.86
1"	20.33	21.14	21.99	22.87	23.78	24.73	25.72	26.75	27.82	28.94
1 1/2"	36.12	37.56	39.07	40.63	42.26	43.95	45.70	47.53	49.43	51.41
2"	55.17	57.38	59.67	62.06	64.54	67.12	69.81	72.60	75.50	78.52
3"	105.96	110.20	114.61	119.19	123.96	128.92	134.07	139.44	145.01	150.81
4"	211.94	220.42	229.23	238.40	247.94	257.86	268.17	278.90	290.05	301.66

5 TAP FEES

The District has long strived to implement tap fees that are not only legal and defensible, but that also recover the cost of growth-related capital expenditures in an equitable manner, from both an interand intra-class perspective. The District currently charges tap fees that consist of three components: a water resources cost component, a facilities infrastructure component and a meter cost component. Raftelis was informed that meter costs have not changed since the District's current tap fee assessment schedule was adopted. With respect to the other two components, Raftelis conducted various analyses to arrive at the modifications described in the subsections that follow.

5.1 TAP FEE INFRASTRUCTURE COMPONENT

This component reflects the unit cost of growth-related infrastructure that must be constructed by the District to serve new customers. The tap fee infrastructure component currently applicable to all residential dwellings and all 3/4" commercial and irrigation connections is \$7,000. Raftelis calculations indicate that the infrastructure tap fee component should be increased to \$10,869. Raftelis arrived at this conclusion using industry standard tap fee calculation methods, known as the Capacity Equity Buy-In, Incremental and Hybrid approaches. Table 21 summarizes the results of each calculation approach. Appendix D to this report provides the detailed calculations underlying each outcome.

Capacity Equity Buy In Incremental Tap Fee Infrastructure Component Hybrid Treatment \$4,420 \$8.095 \$6,164 Source of Supply 407 17,384 4,705 \$4,827 \$25,479 Total \$10,869 **Current Infrastructure Component** \$7,000 \$7,000 \$7,000 Difference \$18,479 \$3,869 (\$2,173)

Table 21: Tap Fee Infrastructure Component Calculation

As noted previously, the tap fee infrastructure component is the same for all residential connections and all 3/4" commercial and irrigation connections. The tap fee infrastructure component for commercial and irrigation connections are then scaled up based on meter flow rate equivalency assumptions.

The District assumes that for multi-unit residential connections, the annual water consumption of an individual multi-unit residential dwelling unit is equivalent to 40% of a residential dwelling unit. After consultations with District staff, this assumption was maintained in the tap fees calculated by Raftelis. As discussed later in this report, the calculated tap fee infrastructure component paid by for each multi-unit residential dwelling unit is \$4,348 (\$10,869 * .40).

5.2 WATER RESOURCES COST

5.2.1 Residential Water Demand Differences Based on Lot Size

The District asked Raftelis to explore the concept of implementing residential tap fees in which the water cost component varies based on gross lot size. To understand the relationship between gross lot size and residential demand, Raftelis analyzed 2012 residential consumption (a particularly dry year) and gross lot size data provided by the District. Raftelis not only analyzed the annual use of residential customers but also calculated their implied annual outdoor demands. This estimate of implied outdoor use was derived calculating each customer's average winter consumption (AWC), multiplying AWC by 12 to determine implied annual indoor demand, and then subtracting implied annual indoor use from total annual use. Not surprisingly, as shown in Figure 4, on average, both annual demand and annual outdoor demand increased steadily for smaller lot sizes.

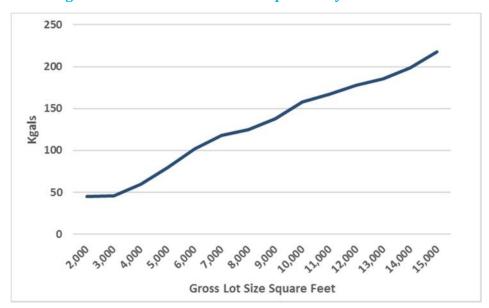


Figure 4: Residential Annual Use per Lot by Gross Lot Size

5.2.2 Modifications to Existing Residential Water Resources Cost

The District currently assumes that all residential customers will, regardless of their gross lot size, require one share of Colorado Big Thompson (C-BT) water. However, given the usage patterns shown in Figure 4, a more equitable way to determine the tap fee water cost for new residential connections may be to recognize how annual demand varies by gross lot size. Under this approach, residential customers with gross lot sizes who require less than a single C-BT unit would pay less than the current price of \$27,200, while residential customers with gross lot sizes that require more than one C-BT unit would pay a more than \$27,200.

Using data from 2012, Raftelis calculated the average annual water use per gross lot size in one thousand gallon increments. To determine the required C-BT units for a given lot size, Raftelis took those averages and divided them by the number of gallons in a single C-BT unit (325,851 gallons, or one acre foot). Based on discussions with District Staff, Raftelis also assumed a 50% firm yield for C-

BT units and a 5% system water loss percentage. Below is an example calculation for a residential customer with a gross lot size of 6,500 square feet and average annual water use of approximately 118,000 gallons.

Step 1: 325,851 gallons per acre foot * 50% firm yield = 162,926 firm yield gallons per C-BT unit

Step 2: 118,000 annual use / 162,926 firm yield gallons = .72% C-BT units

Step 3: .72% C-BT units / .95 for a 5.0% water loss adjustment = .76 C-BT units

Step 4: 162,926 firm yield gallons *.76 C-BT units = 124,161 required annual water allotment

Raftelis and the District agreed that residential customers with gross lot sizes larger than 12,000 square feet pay a water cost tap fee equivalent to 1.776 C-BT units or \$48,304. The District anticipates that the majority of new residential connections will be roughly 8,000 square feet. This translates to a water cost tap fee component of \$21,836. Table 22 shows the resulting residential tap fee water cost assessment schedule.

Table 22: Residential Tap Fees (excluding meter costs)

Lot Square Footage Range	Required C-BT Units	Annual Allotment (Gallons)	Water Cost	Infrastructure Cost	Total Tap Fee	Existing Tap Fee	\$ Difference
<= 6,000	0.524	85,366	\$14,252	\$10,869	\$25,121	\$32,000	(\$6,879)
6,001-7,000	0.762	124,161	20,728	10,869	31,597	32,000	(403)
7,001-8,000	0.803	130,795	21,836	10,869	32,705	32,000	705
8,001-9,000	0.888	144,623	24,144	10,869	35,014	32,000	3,014
9,001-10,000	1.015	165,405	27,614	10,869	38,483	32,000	6,483
10,001-11,000	1.078	175,672	29,328	10,869	40,197	32,000	8,197
11,001-12,000	1.145	186,587	31,150	10,869	42,019	32,000	10,019
>12,000	1.776	289,338	48,304	10,869	59,173	32,000	27,173

5.3 SAMPLE CALCULATIONS FOR RESIDENTIAL TAP FEES

Example Calculation for Residential

Meter Size = 3/4"

Lot Size = 9,500 Square Feet

Facilities Tap Fee \$10,869 Water Resources Cost 27,614 Total Tap Fee \$38,483

Example Calculation for Multi-Unit Residential

MF Units = 10 Meter Size 1"

Facilities Tap Fee \$43,476 (\$10,869 * .40 * 10 Units) Water Resources Cost 87,344 (\$21,836 * .40 * 10 Units)

Total Tap Fee = \$130.820

5.4 COMMERCIAL AND IRRIGATION TAP FEES

The District currently charges new non-residential (commercial and irrigation) connections a tap fee based on the assumption that a non-residential customer with a 3/4" meter uses the same amount of water as an average residential customer (1.0 C-BT units). In actuality, 3/4" commercial and irrigation customers use significantly more water than 3/4" residential customers. In 2016, the average District residential customer used approximately 153,000 gallons which equates to approximately 1.0 C-BT unit. In contrast, the average District commercial customer with a 3/4" meter used approximately 332,000 gallons which equates to 2.14 C-BT units. An average District irrigation customer with a 3/4" meter used approximately 722,000 gallons annually which equates to 4.65 C-BT units.

5.4.1 Commercial and Irrigation Tap Fees Based on Actual 2016 Water Consumption

Tables 23 and 24 show the calculated commercial and irrigation tap fee assessment schedule based on actual 2016 water consumption patterns. As shown in the far right column of Table 23, if actual 2016 demand data is used in the tap fee calculation, the tap fee for a commercial customer with a 3/4" meter would increase by \$37,010 (116%) from \$32,000 to \$69,010. Similarly, as shown in the far right column of Table 24, the tap fee for an irrigation customer with a 3/4" meter would increase by \$105,484 (330%) from \$32,000 to \$137,484. Raftelis met with the District Board regarding the tap fees shown Tables 23 and 24. The Board considered the increases too high to be implemented.

Table 23: Commercial Tap Fees Based on 2016 Demand (excluding meter costs)

Meter Size	Design GPM	Design GPM Ratio	Infrastructure Component	Required C-BT Units (1)	Water Cost	Total Tap Fee	Existing Tap Fee	\$ Difference
3/4"	10	1	\$10,869	2.14	58,141	69,010	32,000	37,010
1"	25	2.5	27,173	5.34	145,352	172,525	80,000	92,525
1 1/2"	50	5	54,346	10.69	290,704	345,050	160,000	185,050
2"	80	8	86,953	17.10	465,126	552,080	256,000	296,080
3"	175	17.5	190,211	37.41	1,017,463	1,207,674	560,000	647,674
4"	300	30	326,075	64.13	1,744,223	2,070,298	962,000	1,108,298
6"	625	62.5	679,324	133.60	3,633,798	4,313,122	2,000,000	2,313,122
(1) Based	l on annual	3/4" com	nercial usage of 33	1,670 gallons,	CB-T annual fir	m yield of 162,926	gallons, 5% w	ater loss

Table 24: Irrigation Tap Fees Based on 2016 Demand (excluding meter costs)

		Design		Required				
Meter	Design	GPM	Infrastructure	C-BT	Water	Total	Existing	\$
Size	GPM	Ratio	Component	Units (1)	Cost	Tap Fee	Tap Fee	Difference
3/4"	10	1	\$10,869	4.65	126,615	137,484	32,000	105,484
1"	25	2.5	27,173	11.64	316,538	343,711	80,000	263,711
1 1/2"	50	5	54,346	23.27	633,077	687,422	160,000	527,422
2"	80	8	86,953	37.24	1,012,923	1,099,876	256,000	843,876
3"	175	17.5	190,211	81.46	2,215,768	2,405,979	560,000	1,845,979
4"	300	30	326,075	139.65	3,798,460	4,124,535	962,000	3,162,535
6"	625	62.5	679,324	290.94	7,913,457	8,592,781	2,000,000	6,592,781
(1) Base	d on annu	al 3/4" irrig	gation usage of 722	2,299 gallons,	CB-T annual fi	rm yield of 162,92	6 gallons, 5%	water loss

5.4.2 Commercial and Irrigation Tap Fees Based on Assumption of 1 C-BT Unit

An alternative to calculating commercial and irrigation tap fees based on actual consumption characteristics (Tables 23 and 24) is to maintain the current assumption that a 3/4" non-residential customer uses the same amount of water as an average residential customer (1.0 C-BT unit). The commercial and irrigation tap fees calculated under this approach are shown in Table 25. Note that the required tap fee increases shown in the far right column of Table 25 are significantly smaller than those that would be required if commercial and irrigation tap fees were based on actual water consumption characteristics. This outcome occurs because the tap fees shown in Table 25 do not fully recover the cost of water resources to serve new customers. A related conclusion to draw from this analysis is that tap fees paid by commercial and irrigation customers in the past have not been adequate to compensate the District for the water resources it has been require to acquire on their behalf.

Overtime, the water consumption characteristics of commercial and irrigation customers may decline due to the conservation price signals sent by future rate revenue increases adopted by the Board and the potential imposition of a water resource surcharge (see Section 5.4.2). If so, this may somewhat narrow the gap between commercial and irrigation tap fees calculated based on actual water demand (see Tables 23 and 24 above) and the tap fees calculated in Table 25 which are based on the assumption that a 3/4" commercial and irrigation customer uses water resources equivalent to 1.0 C-BT units, similar to residential customers. Raftelis recommends that in the next rate study undertaken by the District, that the average amount of water resources that must be dedicated to commercial and irrigation customers be fully updated to reflect potential changes in water demand.

Table 25: Non-Residential Tap Fees - 1 C-BT Unit for 3/4" Meter (excludes meter costs)

		Design		Total				
Meter	Design	GPM	Infrastructure	C-BT	Water	Total	Existing	\$
Size	GPM	Ratio	Component	Units	Cost	Tap Fee	Tap Fee	Difference
3/4"	10	1	\$10,869	1.00	27,200	38,069	32,000	6,069
1"	25	2.5	27,173	2.50	68,000	95,173	80,000	15,173
1 1/2"	50	5	54,346	5.00	136,000	190,346	160,000	30,346
2"	80	8	86,953	8.00	217,600	304,553	256,000	48,553
3"	175	17.5	190,211	17.50	476,000	666,211	560,000	106,211
4"	300	30	326,075	30.00	816,000	1,142,075	962,000	180,075
6"	625	62.5	679,324	62.50	1,700,000	2,379,324	2,000,000	379,324

5.4.3 Ramifications of Implementing Less than Full Cost Commercial and Irrigation Tap Fees

As noted above the actual average usage characteristics of commercial and irrigation customers is significantly greater than the assumptions the District has traditionally used to calculate their tap fees. Thus, existing commercial and irrigation customers have not paid an adequate amount to fund the water resource investments the District has made on their behalf. Further, if the District implements the tap fees shown in Table 25, the District will not be recovering an adequate amount to purchase the water resources for new commercial and irrigation customers.

Raftelis met with the District Board to address the question of how the District can recover the cost of water resources not recovered in commercial and irrigation tap fees. The Board chose to impose, to implement a Water Resources Surcharge on the volumetric rates for all commercial and irrigation customers. This Surcharge is designed to recover the projected shortfall in tap fee revenues associated with the implementation of the tap fees shown in Table 25. As shown in the far right column of Table 26, Raftelis estimates this surcharge to be \$1.49 per thousand gallons calculated as the projected annual tap fee revenue shortfall divided by projected annual commercial and irrigation customer billed demand.

Table 26: Water Resource Surcharge for Commercial and Irrigation Customers

Year	Revenues if Tap Fees are Based on Actual 2016 Usage (\$millions)	Revenues if Tap Fees are Based on 3/4" CB-T Units Set at 1.0 (\$ millions)	Revenue Shortfall (\$ millions)	Projected Commercial and Irrigation Billed Consumption (Kgal)	Required Water Resource Surcharge (\$/Kgal)
2018	\$12.76	\$11.59	\$1.17	784,917	\$1.49
2019	13.01	11.82	1.19	799,473	1.49
2020	13.27	12.06	1.22	813,463	1.50
2021	13.54	12.30	1.24	828,180	1.50
2022	13.81	12.54	1.27	843,455	1.50
2023	14.09	12.79	1.29	859,209	1.50
2024	14.37	13.05	1.32	875,403	1.51
2025	14.66	13.31	1.34	892,012	1.51
2026	14.95	13.58	1.37	909,023	1.51
2027	15.25	13.85	1.40	926,431	1.51
2028	15.55	14.13	1.43	944,232	1.51
2029	15.86	14.41	1.46	962,426	1.51
2030	16.18	14.70	1.48	981,014	1.51
Total	\$187.31	\$170.12	\$17.19		

5.4.4 District Impact Fee

In addition to its tap fee, the District currently imposes a \$1,100 impact fee for all new taps connecting to the water system. The costs intended to be recovered via this impact fee have been fully accounted for in the Raftelis tap fee and COS analysis. Therefore, Raftelis recommends that the District no longer charge the impact fee for any new connections to the water system.

6 CUSTOMER BILL IMPACTS FROM RATES

As discussed in Section 3, certain customer classes, particularly irrigation and residential customers are being subsidized by other customer classes, like multi-unit residential, under the existing rate structure. The COS rates under the amended structure are designed to resolve these inequities, resulting in steeper increases for some customer classes than for others. It is useful to recall that total user charge revenues must increase by 4% annually. For each bill impact shown in the sub-sections that follow, the "Status Quo" to which calculated bills are compared reflects a 4% across-the-board increase to all customer classes and to both the monthly base charge as well as the volumetric rates.

6.1 RESIDENTIAL CUSTOMERS

The indicated COS increase for residential customers was more than the required 4% overall rate revenue increase. However, for heavy residential users, bills will increase by less than the 4% status quo increase. Table 27 provides three examples of changes in residential bills.

Table 27: Annual Bill Impacts for Residential Customers in 2018

Customer Type	Bill Under Status Quo Rate Structure (1)	Calculated Bill Under New Rate Structure (1)	Difference (\$)	Difference (%)				
Low Usage (48 Kgals)								
Volume Rates	\$77.88	\$86.40	\$8.52	10.9%				
Base Charge	<u>167.23</u>	167.40	0.17	0.1%				
Total Bill	\$245.11	\$253.80	\$8.69	3.5%				
Medium Usage (1	192 Kgals)							
Volume Rates	\$385.88	\$417.60	\$31.72	8.2%				
Base Charge	<u>167.23</u>	<u>167.40</u>	0.17	0.1%				
Total Bill	\$553.11	\$585.00	\$31.89	5.8%				
High Usage (300	Kgals)							
Volume Rates	\$719.47	\$724.32	\$4.85	0.7%				
Base Charge	167.23	167.40	0.17	0.1%				
Total Bill	\$886.70	\$891.72	\$5.02	0.6%				
(1) Bill reflects a 4	% rate revenue incre	ease in 2018						

6.2 COMMERCIAL CUSTOMERS

Before consideration of the Water Resource Surcharge discussed in Section 5.4.3, the cost of service study results indicate that District commercial customers have been contributing roughly 9% more rate revenue than the costs that they are placing on the system (Table 16). Table 26 shows estimated 2018 bill impacts for commercial customers. These bill impacts compare the bills that commercial customers would pay in 2018 under the existing rate structure to the bills that they would pay under the calculated rate structure, including the Water Resource Surcharge.

Table 28: Annual Bill Impacts for Commercial Customers in 2018

Customer Type	Bill Under Status Quo Rate Structure (1)	Calculated Bill Under New Rate Structure (1)	Difference (\$)	Difference (%)				
3/4" Meter (24 Kgals)								
Volume Rates	\$38.87	\$64.69	\$25.82	66.4%				
Base Charge	<u>167.23</u>	<u>167.40</u>	0.17	0.1%				
Total Bill	\$206.11	\$232.09	\$25.99	12.6%				
1" Meter (595 Kg	1" Meter (595 Kgals)							
Volume Rates	\$1,630.50	\$1,606.36	(\$24.15)	-1.5%				
Base Charge	<u>243.73</u>	<u>243.96</u>	<u>0.23</u>	<u>0.1%</u>				
Total Bill	\$1,874.24	\$1,850.32	(\$23.92)	-1.3%				
3" Meter (3,427 I	Kgals)							
Volume Rates	\$10,378.15	\$9,252.90	(\$1,125.25)	-10.8%				
Base Charge	<u>1,270.46</u>	<u>1,271.52</u>	<u>1.06</u>	<u>0.1%</u>				
Total Bill	\$11,648.61	\$10,524.42	(\$1,124.19)	-9.7%				
(1) Bill reflects a 4	% rate revenue incre	ease in 2018						

6.3 IRRIGATION CUSTOMERS

Before consideration of the Water Resource Surcharge discussed in Section 5.4.3, the cost of service study results indicate that District irrigation customers have been contributing roughly 26% less rate revenue than the costs that they are placing on the system (Table 16). Table 27 shows estimated 2018 bill impacts for an irrigation customer with a 1" meter. This table compares the bill that an irrigation customers would pay in 2018 under the existing structure to the bill it would pay under the calculated rate structure, including the Water Resource Surcharge.

Table 29: Annual Bill Impacts for a 1" Irrigation Customer in 2018

Customer Type	Bill Under Status Quo Rate Structure (1)	Calculated Bill Under New Rate Structure (1)	Difference (\$)	Difference (%)					
1" Meter (1,070 kgals)									
Volume Rates	\$3,220.09	\$4,528.00	\$1,307.92	40.6%					
Base Charge	243.73	243.96	0.23	0.1%					
Total Bill	\$3,463.82	\$4,771.96	\$1,308.14	37.8%					
(1) Bill reflects a 4	% rate revenue incre	(1) Bill reflects a 4% rate revenue increase in 2018							

6.4 MULTI-UNIT RESIDENTIAL CUSTOMERS

Historically, in addition to volumetric rates, the District has charged each unit of a multi-unit residential account a flat monthly charge equivalent to the monthly base charge for customers with 3/4" meters. As a result, multi-unit residential accounts have been paying significantly more than their estimated cost of service. As shown in Table 16, they have been contributing roughly 71% more than the costs they are imposing on the system.

Table 28 shows estimated 2018 bill impacts for multi-unit residential customers. These bill impacts compare the bills that multi-unit residential customers would pay in 2018 under the existing structure to the bills that they would pay under the calculated rate structure. Note that under the proposed rate structure, multi-unit residential customers pay a monthly service charge based on the meter size serving each account rather than paying a monthly service charge based on the number of units in each multi-unit residential account.

Table 30: Annual Bill Impacts for Multi-Unit Residential Customers in 2018

Customer Type	Bill Under Status Quo Rate Structure (1)	Calculated Bill Under New Rate Structure (1)	Difference (\$)	Difference (%)					
3/4" Meter, 2 Units (117 Kgals)									
Volume Rates	\$215.41	\$182.45	(32.95)	-15.3%					
Base Charge	<u>334.46</u>	<u>167.40</u>	(167.06)	<u>-49.9%</u>					
Total Bill	\$549.87	\$349.85	(200.02)	-36.4%					
1 1/2" Meter, 70	Units (3,377 Kgals)								
Volume Rates	\$10,223.07	\$5,267.80	(4,955.27)	-48.5%					
Base Charge	11,706.24	433.44	(11,272.80)	<u>-96.3%</u>					
Total Bill	\$21,929.31	\$5,701.24	(16,228.07)	-74.0%					
(1) Bill reflects a 4	% rate revenue incre	ase in 2018							

7 MUNICIPAL SECRUITES RULEMAKING BOARD (MSRB) DISCLOSURE

Raftelis is registered with the U.S. Securities Exchange Commission (SEC) and the Municipal Securities Rulemaking Board (MSRB) as a Municipal Advisor. Registration as a Municipal Advisor is a requirement under the Dodd-Frank Wall Street Reform and Consumer Protection Act. All firms that provide financial forecasts that include assumptions about the size, timing, and terms for possible future debt issues, as well as debt issuance support services for specific proposed bond issues, including bond feasibility studies and coverage forecasts, must be registered with the SEC and MSRB to legally provide financial opinions and advice. Raftelis' registration as a Municipal Advisor means our clients can be confident that Raftelis is fully qualified and capable of providing financial advice related to all aspects of utility financial planning in compliance with the applicable regulations of the SEC and the MSRB.

REPORT APPENDICES

Fort Collins Loveland Water District Rate Study Appendix A: Financial Plan

3/16/2018

Appendix A Fort Collins Loveland Water District Rate Study Financial Plan

Page A-1 3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study Financial Plan Master Control

	Budget						Fore	ecast						
Model Inputs	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Rate Revenue Adjustment	0.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Operating Fund														
% Transfer to Growth Sub-Fund	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Amount Transferred to Growth Sub-Fund	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Transfer to Non-Growth Sub-Fund	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Amount Transferred to Non-Growth Sub-Fund	35,178,199	1,311,283	1,546,951	1,799,700	2,044,174	2,404,324	2,740,987	4,213,663	4,607,847	5,033,278	5,491,855	5,985,644	6,516,862	7,087,890
Ending Balance	2,443,778	2,523,706	2,612,064	2,703,728	2,798,829	2,897,505	2,999,899	3,106,161	3,216,447	3,330,918	3,449,746	3,573,105	3,701,182	3,834,167
Target	2,443,778	2,523,706	2,612,064	2,703,728	2,798,829	2,897,505	2,999,899	3,106,161	3,216,447	3,330,918	3,449,746	3,573,105	3,701,182	3,834,167
Variance from Target	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth CIP Sub-Fund														
Revenue Bond Debt Issue (\$ Millions)	0	0	0	40	0	40	0	35	0	35	0	35	0	0
Ending Balance	3,589,043	507,636	(6,089,027)	19,876,533	8,382,609	32,549,904	25,282,342	48,576,107	17,093,156	31,461,622	16,641,548	19,214,105	(18,313,108)	(30,458,539)
Target	3,633,696	4,569,133	5,010,670	5,271,327	4,945,811	3,707,974	3,596,428	9,310,127	5,367,511	4,707,495	7,867,561	10,501,798	4,227,541	3,633,696
Variance from Target	(44,654)	(4,061,497)	(11,099,697)	14,605,206	3,436,798	28,841,929	21,685,914	39,265,980	11,725,645	26,754,127	8,773,986	8,712,306	(22,540,649)	(34,092,235)
Non-Growth CIP Sub-Fund														
Revenue Bond Debt Issue (\$ Millions)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ending Balance	32,046,161	30,651,147	28,625,190	24,517,721	24,450,508	25,421,271	25,041,432	27,372,562	30,083,612	32,414,833	37,273,009	42,696,595	48,577,581	55,088,528
Variance from Target	31,331,464	29,722,317	27,117,903	23,959,463	24,060,499	24,609,919	24,536,753	26,860,946	29,367,781	32,210,054	37,079,389	42,477,206	48,364,827	54,373,830
Consolidated Cash														
Total Cash	38,078,981	33,682,490	25,148,226	47,097,982	35,631,945	60,868,679	53,323,672	79,054,830	50,393,215	67,207,374	57,364,303	65,483,805	33,965,655	28,464,156
Combined Targets	6,077,474	7,092,840	7,622,734	7,975,055	7,744,640	6,605,479	6,596,327	12,416,288	8,583,957	8,038,414	11,317,307	14,074,904	7,928,723	7,467,863
Variance from Combined Targets	32,001,507	26,589,650	17,525,492	39,122,927	27,887,306	54,263,200	46,727,346	66,638,542	41,809,258	59,168,960	46,046,996	51,408,901	26,036,932	20,996,293
Debt Service Coverage														
Calculated Including PIFs (Target 1.50)	5.70	7.73	7.99	3.52	3.59	2.40	2.48	2.22	2.28	1.86	1.93	1.65	2.07	2.16
Calculated Excluding PIFs (Target 1.50)	1.57	1.80	1.92	0.89	0.93	0.66	0.70	0.66	0.70	0.59	0.63	0.56	0.73	0.79

 O&M Reserve (Days of Annual O&M)
 90

 Capital Reserve (% of Next Year's CIP)
 25.00%

Fort Collins-Loveland Water District 2017 Rate & Fee Study Existing 2017 Rates

	Actual	Actual						Projected I	Rates with No I	ncreases					
Jurisdiciton	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
District Rates															
Monthly Base Charge															
5/8" and 3/4"	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40
1"	19.53	19.53	19.53	19.53	19.53	19.53	19.53	19.53	19.53	19.53	19.53	19.53	19.53	19.53	19.53
1.5"	34.70	34.70	34.70	34.70	34.70	34.70	34.70	34.70	34.70	34.70	34.70	34.70	34.70	34.70	34.70
2"	53.00	53.00	53.00	53.00	53.00	53.00	53.00	53.00	53.00	53.00	53.00	53.00	53.00	53.00	53.00
3"	101.80	101.80	101.80	101.80	101.80	101.80	101.80	101.80	101.80	101.80	101.80	101.80	101.80	101.80	101.80
4"	203.60	203.60	203.60	203.60	203.60	203.60	203.60	203.60	203.60	203.60	203.60	203.60	203.60	203.60	203.60
Multi Unit Charge per Unit	13.40	13.40	13.40	13.40	13.40	13.40	13.40	13.40	13.40	13.40	13.40	13.40	13.40	13.40	13.40
Volume Rate per 1,000 Gallons															
1 to 8	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56
8 to 15	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21
Greater than 15	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97
City Rates															
Monthly Base Charge															
5/8" and 3/4"	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40	\$13.40
1"	19.53	19.53	19.53	19.53	19.53	19.53	19.53	19.53	19.53	19.53	19.53	19.53	19.53	19.53	19.53
1.5"	34.70	34.70	34.70	34.70	34.70	34.70	34.70	34.70	34.70	34.70	34.70	34.70	34.70	34.70	34.70
2"	53.00	53.00	53.00	53.00	53.00	53.00	53.00	53.00	53.00	53.00	53.00	53.00	53.00	53.00	53.00
3"	101.80	101.80	101.80	101.80	101.80	101.80	101.80	101.80	101.80	101.80	101.80	101.80	101.80	101.80	101.80
4"	203.60	203.60	203.60	203.60	203.60	203.60	203.60	203.60	203.60	203.60	203.60	203.60	203.60	203.60	203.60
Multi Unit Charge per Unit	13.40	13.40	13.40	13.40	13.40	13.40	13.40	13.40	13.40	13.40	13.40	13.40	13.40	13.40	13.40
Volume Rate per 1,000 Gallons															
1 to 8	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73
8 to 15	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57
Greater than 15	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40

Fort Collins-Loveland Water District 2017 Rate & Fee Study Escalation Factors Used in Financial Plan

		Budget						Projecte	ed Escalation	n Factors					
	Item	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
30 Operating Revo	enue Metered revenue	n/o	2/2	2/2	n/a	n/a	n/o	2/2	n/o	2/2	n/n	n/a	2/2	n/a	2/2
3012	Water sales - construction	n/a 0.0%	n/a 0.0%	n/a 0.0%	n/a 0.0%	n/a 0.0%	n/a 0.0%	n/a 0.0%	n/a 0.0%	n/a 0.0%	n/a 0.0%	n/a 0.0%	n/a 0.0%	n/a 0.0%	n/a 0.0%
3014	Town of Windsor	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Srping Canyon	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3020	Water rental	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3150 3200	Miscellaneous income Management fees - SFCSD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
35 Non-Operating		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3510	Property taxes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3530	Soldier Canyon Income	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3551	Interest on investments	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3560 3561	Tap fees (water) Tap fees (PIF)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3570	Meter fees	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3580	Impact fees	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3700	Sale of assets	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3750	Inclusion fees	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
40 Source and Tre 4010	Assessments	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
4020	Soldier Canyon	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
4060	City of Loveland	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
4070	FTC - Water Sale IGA	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
4071	FTC - Transmission charges	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
4072 4073	FTC - Water Exchange IGA FTC - Water purchase	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
4080	North Weld County Water District	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
4090	R & M - Source and Supply	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
4100	Water Resource Consulting	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
50 Engineering	F	0.007	2.00/	2.007	2.007	2.007	2.00/	2.007	2.007	2.007	2.007	2.004	2.00/	2.007	2.007
5000 5010	Engineering wages Payroll taxes	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
5020	Medical insurance	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
5030	Life insurance	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
5040	Retirement	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
5050	Worker's compensation insurance	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
5060	Cell phone service	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
5065 5070	Consulting Dues and subscriptions	0.0%	0.0% 3.0%	0.0% 3.0%	0.0% 3.0%	0.0% 3.0%	0.0% 3.0%	0.0% 3.0%	0.0% 3.0%						
5080	Education & training	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
5090	Fuel	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
5100	Miscellaneous	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
5115	R & M - equipment	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
5120 5125	R & M - vehicles Software maintenance	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
5130	Supplies	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
60 Distribution								0.075				0.0,0			
6010	Wages	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
6020	Overtime & on-call pay	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
6030 6040	Payroll taxes Medical insurance	0.0%	3.0% 5.0%	3.0% 5.0%	3.0% 5.0%	3.0% 5.0%	3.0% 5.0%	3.0% 5.0%	3.0% 5.0%						
6050	Life insurance	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
6060	Retirement	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
6070	Worker's compensation insurance	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
6080	R & M - lines & equipment	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
6081 6082	R & M - emergency contingency R & M -tank cleaning	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
6090	Cell phone service	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
6100	Education & training	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
6110	Fuel	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
6115	Internet hosting	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
6117 6120	Meter hosting service Office supplies	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
6140	R & M - vehicles	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
6150	Safety program	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
6160	Supplies	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
6170	Telemetry	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
6180 6190	Uniforms Utilities	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
6200	Utilities Utility locates	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
6210	Water quality testing	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
70 Office															
7000	Wages	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
7010 7020	Payroll taxes	0.0%	3.0% 5.0%	3.0% 5.0%	3.0%	3.0% 5.0%	3.0%	3.0% 5.0%	3.0% 5.0%	3.0% 5.0%	3.0%	3.0% 5.0%	3.0% 5.0%	3.0% 5.0%	3.0% 5.0%
7020 7030	Medical insurance Life insurance	0.0%	3.0%	3.0%	5.0% 3.0%	3.0%	5.0% 3.0%	3.0%	3.0%	3.0%	5.0% 3.0%	3.0%	3.0%	3.0%	3.0%
7040	Retirement	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
7050	Worker's compensation insurance	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
7070	Education & training	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
7100	Miscellaneous expense	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
7105 7110	On-line bill processing Payroll processing	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
7110 7120	Payroll processing Postage	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
7130	Printing	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
7140	Publications & notices	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
7150	R & M - equipment	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
7155	Software maintenance	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
7160 7170	Supplies Telephone	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
	Travel	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
7190	ITavei														

Fort Collins-Loveland Water District 2017 Rate & Fee Study Escalation Factors Used in Financial Plan

		Budget						Projecte	d Escalation	n Factors					
	Item	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
80 Administration	1	•	•	•	•	•	•	•	•		•	•			
8000	Wages	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8010	Payroll taxes	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8020	Medical insurance	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
8030	Life insurance	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8040	Retirement	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
8050	Worker's compensation insurance	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
8060	Directors fees	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8070	Directors payroll taxes	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8080	Directors expenses	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8090	Audit & consulting fees	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8120	Contingency	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8130	Customer relations	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8140	Dues & subscriptions	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8150	Education & training	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8160	Insurance - liability	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8170	Insurance - property	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8175	Janitorial service	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8180	Legal	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8190	Miscellaneous expenses	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8200	R & M - land and building	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8205	Trash removal service	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8210	Travel - manager	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8211	Utility - electricity	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
8212	Utility - gas	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
8213	Utility - sewer	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
8214	Utility - storm water	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8215	Utility - water	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8220	Water conservation	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Constuction Co.	st Inflation	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Construction Co	ost Inflation Index	100.0%	103.0%	106.1%	109.3%	112.6%	115.9%	119.4%	123.0%	126.7%	130.5%	134.4%	138.4%	142.6%	146.9%
		•			•			•			•				
Interest Earning	gs on Cash Balance	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast Customer Accounts

	Actual	Actual	Actual	Estimated					Pr	ojected Custo	mer Account (Growth Rates					
Account Type	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Residential Account Growth		2.5%	2.4%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Commercial Account Growth		4.6%	1.5%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Irrigation Account Growth		12.7%	2.1%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Residential, No Patio, FCLWD Rates	·				•	•											
3/4"	12,658	12,974	13,303	13,569	13,840	14,117	14,400	14,688	14,981	15,281	15,587	15,898	16,216	16,541	16,871	17,209	17,553
1"	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4
Total	12,661	12,977	13,306	13,572	13,844	14,120	14,403	14,691	14,985	15,284	15,590	15,902	16,220	16,544	16,875	17,213	17,557
Residential, No Patio, City Rates																	
3/4"	1,819	1,857	1,870	1,907	1,946	1,984	2,024	2,065	2,106	2,148	2,191	2,235	2,280	2,325	2,372	2,419	2,467
Total	1,819	1,857	1,870	1,907	1,946	1,984	2,024	2,065	2,106	2,148	2,191	2,235	2,280	2,325	2,372	2,419	2,467
Residential, No Patio, City Exchange																	
3/4"	32	32	32	33	33	34	35	35	36	37	37	38	39	40	41	41	42
Total	32	32	32	33	33	34	35	35	36	37	37	38	39	40	41	41	42
Residential, Patio																	
3/4"	260	281	299	305	311	317	324	330	337	343	350	357	364	372	379	387	395
Total	260	281	299	305	311	317	324	330	337	343	350	357	364	372	379	387	395
Total Residential - All	14,772	15,147	15,507	15,817	16,133	16,456	16,785	17,121	17,463	17,813	18,169	18,532	18,903	19,281	19,667	20,060	20,461
Commercial - FCLWD Rates																	
3/4"	331	346	350	357	364	372	379	387	394	402	410	418	427	435	444	453	462
1"	88	93	96	98	100	102	104	106	108	111	113	115	117	120	122	125	127
1.5"	50	52	52	53	54	55	56	57	58	59	60	62	63	64	65	67	68
2"	26	28	28	29	29	30	31	31	32	32	33	34	34	35	36	37	37
3"	8	9	9	9	9	9	9	10	10	10	10	10	11	11	11	11	12
4"	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Walmart 1.5" as 2" Wtr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Walmart 8" as 3" Fire Line	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1" Billed as 3/4"	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Water 2" Billed as 3/4"	-			0	0	0	0	0	0	0	0	0	0	0	0	0	0
Foothills Gateway	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	506	532	540	551	562	573	585	596	608	620	633	645	658	672	685	699	713
Commercial - City Rates 3/4"	3	2	2	3	3	2	2	2	3	3	4	4	4	4	4	4	4
3/4 1"		1	3	3	3 1	3 1	3 1	3 1	3 1	3 1	1	4	1	1	1	1	
	1	6	6	1	6	6	6	7	7	7	7	7	7	7	8	8	1
1.5" 2"	6			6 2	2	2	2	2	2	2	2	2	2	2	8	8	8
3"	1	2	1	1	1	1	1	1	1	1	1	1	=	1	1	1	3
	13	12	13	13	14	14	14	14	15	15	15	16	1 16	16	16	17	1 17
Total Commercial - City Exchange	13	12	15	15	14	14	14	14	15	15	15	10	10	16	10	17	17
3/4"	15	15	15	15	15	16	16	16	17	17	17	18	18	18	19	19	19
3/4 1"	- 15	-	- 15	15	15	16	0	16	0	0	0	18	18	18	19	19	0
1.5"	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2"	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Z Total	17	17	17	17	17	18	18	18	19	19	20	20	20	21	21	22	22
Total Commercial - All	536	561	570	581	593	605	617	629	642	655	668	681	695	709	723	737	752
Total Commercial - All	556	100	5/0	291	223	005	011	029	042	005	008	160	095	709	/23	/3/	/52

Page A-4 3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast Customer Accounts

	Actual	Actual	Actual	Estimated					F	Projected Custo	mer Account (Growth Rates					
Account Type	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Irrigation - FCLWD Rates																	
3/4"	47	49	48	49	50	51	52	53	54	55	56	57	59	60	61	62	63
1"	23	25	23	23	24	24	25	25	26	26	27	27	28	28	29	30	30
1.5"	25	26	28	29	29	30	31	31	32	32	33	34	34	35	36	37	37
2"	15	15	14	14	15	15	15	15	16	16	16	17	17	17	18	18	18
Standby Wt Tap	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	110	115	113	116	118	120	123	125	128	130	133	135	138	141	144	147	149
Irrigation - City Rates																	
3/4"	6	6	7	7	7	7	7	7	7	7	8	8	8	8	8	8	9
1"	10	8	9	9	9	10	10	10	10	10	11	11	11	11	11	12	12
1.5"	5	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5
2"	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	21	19	20	21	21	22	22	23	23	23	24	24	25	25	26	26	27
Irrigation - City Exchange																	
3/4"	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4
1"	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5
Total Irrigation - All	135	138	138	140	143	146	149	152	155	158	161	165	168	171	175	178	182
Multi-Unit - FCLWD																	
3/4"	216	243	250	255	260	265	271	276	282	287	293	299	305	311	317	323	330
1"	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	216	243	250	255	260	265	271	276	282	287	293	299	305	311	317	323	330
Multi-Unit - City Rates																	
3/4"	130	147	148	151	154	157	160	163	167	170	173	177	180	184	188	191	195
Total	130	147	148	151	154	157	160	163	167	170	173	177	180	184	188	191	195
Total Multi-Unit - All	346	390	398	406	414	422	431	439	448	457	466	476	485	495	505	515	525
Grand Total Accounts	15,789	16,236	16,613	16,945	17,284	17,629	17,982	18,342	18,708	19,083	19,464	19,853	20,251	20,656	21,069	21,490	21,920

Page A-5 3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast Equivalent Meters

	Actual	Actual	Actual	Actual	Actual	Estimated						Projected	l Equivalent	Meters					
Accounts by Class and Meter Size	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Residential, No Patio, FCLWD Rates					•				•					•		•		•	·
3/4"	11,823	12,245	12,658	12,974	13,303	13,569	13,840	14,117	14,400	14,688	14,981	15,281	15,587	15,898	16,216	16,541	16,871	17,209	17,553
1"	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6
Total	11,828	12,250	12,663	12,979	13,308	13,574	13,845	14,122	14,405	14,693	14,987	15,286	15,592	15,904	16,222	16,547	16,878	17,215	17,559
Residential, No Patio, City Rates																			
3/4"	1,699	1,768	1,819	1,857	1,870	1,907	1,946	1,984	2,024	2,065	2,106	2,148	2,191	2,235	2,280	2,325	2,372	2,419	2,467
Total	1,699	1,768	1,819	1,857	1,870	1,907	1,946	1,984	2,024	2,065	2,106	2,148	2,191	2,235	2,280	2,325	2,372	2,419	2,467
Residential, No Patio, City Exchange																			
3/4"	32	32	32	32	32	33	33	34	35	35	36	37	37	38	39	40	41	41	42
Total	32	32	32	32	32	33	33	34	35	35	36	37	37	38	39	40	41	41	42
Residential, Patio																			
3/4"	224	247	260	281	299	305	311	317	324	330	337	343	350	357	364	372	379	387	395
Total	224	247	260	281	299	305	311	317	324	330	337	343	350	357	364	372	379	387	395
Total Residential - All	13,783	14,297	14,774	15,149	15,509	15,819	16,135	16,458	16,787	17,123	17,465	17,815	18,171	18,534	18,905	19,283	19,669	20,062	20,464
Commercial - FCLWD Rates																			
3/4"	245		331	346	350	357	364	372	379	387	394	402	410	418	427	435	444	453	462
1"	107		141	149	154	157	160	164	167	170	174	177	181	184	188	192	195	199	203
1.5"	71		99	103	103	105	107	109	112	114	116	119	121	123	126	128	131	133	136
2"	123		168	179	181	184	188	192	196	200	204	208	212	216	220	225	229	234	239
3"	84		102	109	112	114	117	119	121	124	126	129	131	134	137	139	142	145	148
4"	12		20	20	20	20	21	21	22	22	23	23	23	24	24	25	25	26	26
Walmart 1.5" as 2" Wtr	1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walmart 8" as 3" Fire Line	37		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1" Billed as 3/4"	1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Water 2" Billed as 3/4"	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Foothills Gateway																			
Total	681	0	861	907	920	939	957	977	996	1,016	1,036	1,057	1,078	1,100	1,122	1,144	1,167	1,190	1,214
Commercial - City Rates																			
3/4"	1		3	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4
1"	3		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1.5"	10		12	12	12	12	12	13	13	13	14	14	14	14	15	15	15	16	16
2"	6		13	13	13	13	13	14	14	14	14	15	15	15	16	16	16	17	17
3"	26		13	13	13	13	13	14	14	14	14	15	15	15	16	16	16	17	17
Total	46		42	41	42	43	44	45	46	47	48	48	49	50	51	52	54	55	56
Commercial - City Exchange																			
3/4"	15		15	15	15	15	15	16	16	16	17	17	17	18	18	18	19	19	19
1"	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5"	2		2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3
2"	9		6	6	6	7	7	7	7	7	7	7	7	8	8	8	8	8	8
Total	25		24	23	23	24	24	25	25	26	26	27	27	28	28	29	29	30	31
Total Commercial - All	752		926	971	986	1,005	1,025	1,046	1,067	1,088	1,110	1,132	1,155	1,178	1,201	1,225	1,250	1,275	1,301

Page A-5 3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast Equivalent Meters

	Actual	Actual	Actual	Actual	Actual	Estimated						Projected	d Equivalent	Meters					
Accounts by Class and Meter Size	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Irrigation - FCLWD Rates				•														•	
3/4"	39		47	49	48	49	50	51	52	53	54	55	56	57	59	60	61	62	63
1"	30		37	40	37	37	38	39	40	40	41	42	43	44	45	46	47	47	48
1.5"	42		49	52	57	58	59	60	61	62	64	65	66	68	69	70	72	73	75
2"	63		95	97	90	91	93	95	97	99	101	103	105	107	109	111	114	116	118
Standby Wt Tap																			
Total	174		228	238	231	235	240	245	250	255	260	265	270	276	281	287	293	299	305
Irrigation - City Rates																			
3/4"	6		6	6	7	7	7	7	7	7	7	7	8	8	8	8	8	8	9
1"	7		15	13	14	15	15	15	16	16	16	17	17	17	18	18	18	19	19
1.5"	19		9	8	8	8	8	8	8	9	9	9	9	9	10	10	10	10	10
2"	4		3	6	6	7	7	7	7	7	7	7	7	8	8	8	8	8	8
Total	36		34	33	35	36	37	37	38	39	40	40	41	42	43	44	45	45	46
Irrigation - City Exchange																			
3/4"	3		3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4
1"	1		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Total	4		5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6
Total Irrigation - All	214		267	275	271	276	282	287	293	299	305	311	317	323	330	336	343	350	357
Multi-Unit - FCLWD																			
3/4"	196		216	243	250	255	260	265	271	276	282	287	293	299	305	311	317	323	330
1"	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	196		216	243	250	255	260	265	271	276	282	287	293	299	305	311	317	323	330
Multi-Unit - City Rates																			
3/4"	128		130	147	148	151	154	157	160	163	167	170	173	177	180	184	188	191	195
Total	128		130	147	148	151	154	157	160	163	167	170	173	177	180	184	188	191	195
Total Multi-Unit - All	324		346	390	398	406	414	422	431	439	448	457	466	476	485	495	505	515	525
Grand Total Equivalent Meters	15,073		16,313	16,785	17,163	17,506	17,856	18,214	18,578	18,949	19,328	19,715	20,109	20,511	20,922	21,340	21,767	22,202	22,646

Fort Collins-Loveland Water District 2017 Rate & Fee Study

Average Billed Consumption per Account - Existing Disaggregated Rate Structure

	Historical	Average Consump	tion per Account	Used in 2017
Customer Class	2014	2015	2016	Forecast
Residential, No Patio, FCLWD Rates	131.16	133.08	152.76	139.00
Residential, No Patio, City Rates	95.07	95.45	107.41	99.31
Residential, No Patio, City Exchange	150.86	176.97	193.66	173.83
Residential, Patio	38.18	37.40	36.07	37.21
Commercial, FCLWD Rates	702.46	693.85	768.04	721.45
Commercial, Billed as City Use	1,381.58	1,558.84	1,626.08	1,522.17
Commercial, City Exchange Use	661.92	772.06	906.93	780.31
Irrigation, FCLWD Rates	2,291.85	2,149.16	2,947.54	2,462.85
Irrigation, City Rates	2,635.18	2,935.33	3,138.83	2,903.12
Irrigation, City Exchange	471.42	612.04	725.76	603.07
Residential, Multi-Unit - FCLWD	299.03	272.61	271.48	281.04
Residential, Multi-Unit - City	166.64	166.27	164.29	165.73
Total	166.43	167.40	192.30	175.38

			Demand	Reduction Factors	for Average Consu	ımption per Acco	unt			
2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

						Projected Averag	e Consumption per	Account		
Customer Class	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Residential, No Patio, FCLWD Rates	137.61	136.23	134.87	133.52	132.19	130.86	129.55	128.26	126.98	125.71
Residential, No Patio, City Rates	98.32	97.33	96.36	95.40	94.44	93.50	92.56	91.64	90.72	89.81
Residential, No Patio, City Exchange	172.09	170.37	168.67	166.98	165.31	163.66	162.02	160.40	158.80	157.21
Residential, Patio	36.84	36.47	36.11	35.75	35.39	35.04	34.69	34.34	34.00	33.66
Commercial, FCLWD Rates	721.45	721.45	721.45	721.45	721.45	721.45	721.45	721.45	721.45	721.45
Commercial, Billed as City Use	1522.17	1522.17	1522.17	1522.17	1522.17	1522.17	1522.17	1522.17	1522.17	1522.17
Commercial, City Exchange Use	780.31	780.31	780.31	780.31	780.31	780.31	780.31	780.31	780.31	780.31
Irrigation, FCLWD Rates	2462.85	2462.85	2462.85	2462.85	2462.85	2462.85	2462.85	2462.85	2462.85	2462.85
Irrigation, City Rates	2903.12	2903.12	2903.12	2903.12	2903.12	2903.12	2903.12	2903.12	2903.12	2903.12
Irrigation, City Exchange	603.07	603.07	603.07	603.07	603.07	603.07	603.07	603.07	603.07	603.07
Residential, Multi-Unit - FCLWD	281.04	281.04	281.04	281.04	281.04	281.04	281.04	281.04	281.04	281.04
Residential, Multi-Unit - City	165.73	165.73	165.73	165.73	165.73	165.73	165.73	165.73	165.73	165.73
Total	175.38	175.38	175.38	175.38	175.38	175.38	175.38	175.38	175.38	175.38

				2016 Actual	Billed Consumptio	on (Thousands of 0	Gallons)			
		Tier Co	onsumption			Percentage	e in Each Tier		Average	Average per
Customer Class	1 to 8	8.001 to 15	Greater than 15	Total	1 to 8	8.001 to 15	Greater than 15	Total	Accounts	Account
Residential, No Patio	874,236.01	363,181.13	795,172.86	2,032,590	43.0%	17.9%	39.1%	100%	13,306.00	152.76
Residential, No Patio, City Rates	122,924.70	40,910.76	37,024.54	200,860	61.2%	20.4%	18.4%	100%	1,870.00	107.41
Residential, No Patio, City Exchange	2,261.96	864.98	3,070.06	6,197	36.5%	14.0%	49.5%	100%	32.00	193.66
Residential, Patio	9,885.80	456.27	442.73	10,785	91.7%	4.2%	4.1%	100%	299.00	36.07
Commercial, FCLWD Rates	37,271.05	22,828.36	354,707.60	414,807	9.0%	5.5%	85.5%	100%	540.08	768.04
Commercial, Billed as City Use	961.47	756.90	19,420.70	21,139	4.5%	3.6%	91.9%	100%	13.00	1,626.08
Commercial, City Exchange Use	1,001.52	540.51	13,649.11	15,191	6.6%	3.6%	89.8%	100%	16.75	906.93
Irrigation, FCLWD Rates	9,089.97	7,294.80	317,423.91	333,809	2.7%	2.2%	95.1%	100%	113.25	2,947.54
Irrigation, City Rates	1,718.65	1,442.90	60,922.98	64,085	2.7%	2.3%	95.1%	100%	20.42	3,138.83
Irrigation, City Exchange	291.54	233.30	2,378.19	2,903	10.0%	8.0%	81.9%	100%	4.00	725.76
Residential, Multi-Unit	4,906.23	10,425.21	52,537.56	67,869	7.2%	15.4%	77.4%	100%	250.00	271.48
Residential, Multi-Unit, City Rates	12,701.42	6,015.67	5,597.92	24,315	52.2%	24.7%	23.0%	100%	148.00	164.29
Total System	1,077,250	454,951	1,662,348	3,194,549	33.7%	14.2%	52.0%	100%	16,613	192.30

Fort Collins-Loveland Water District 2017 Rate & Fee Study Average Billed Consumption per Account - Existing Disaggregated Rate Structure

				2015 Actual	Billed Consumpti	on (Thousands of	Gallons)			
		Tier Co	onsumption			Percentag	e in Each Tier		Average	Average per
Customer Class	1 to 8	8.001 to 15	Greater than 15	Total	1 to 8	8.001 to 15	Greater than 15	Total	Accounts	Account
Residential, No Patio	742,782.11	308,571.65	675,607.24	1,726,961	43.0%	17.9%	39.1%	100%	12,976.92	133.08
Residential, No Patio, City Rates	108,481.25	36,103.82	32,674.21	177,259	61.2%	20.4%	18.4%	100%	1,857.00	95.45
Residential, No Patio, City Exchange	2,067.11	790.46	2,805.59	5,663	36.5%	14.0%	49.5%	100%	32.00	176.97
Residential, Patio	9,633.30	444.62	431.42	10,509	91.7%	4.2%	4.1%	100%	281.00	37.40
Commercial, FCLWD Rates	33,192.64	20,330.35	315,893.52	369,417	9.0%	5.5%	85.5%	100%	532.42	693.85
Commercial, Billed as City Use	850.81	669.79	17,185.51	18,706	4.5%	3.6%	91.9%	100%	12.00	1,558.84
Commercial, City Exchange Use	852.59	460.13	11,619.35	12,932	6.6%	3.6%	89.8%	100%	16.75	772.06
Irrigation, FCLWD Rates	6,744.89	5,412.85	235,533.23	247,691	2.7%	2.2%	95.1%	100%	115.25	2,149.16
Irrigation, City Rates	1,495.70	1,255.72	53,019.84	55,771	2.7%	2.3%	95.1%	100%	19.00	2,935.33
Irrigation, City Exchange	245.86	196.75	2,005.57	2,448	10.0%	8.0%	81.9%	100%	4.00	612.04
Residential, Multi-Unit	4,788.76	10,175.60	51,279.64	66,244	7.2%	15.4%	77.4%	100%	243.00	272.61
Residential, Multi-Unit, City Rates	12,767.23	6,046.84	5,626.93	24,441	52.2%	24.7%	23.0%	100%	147.00	166.27
Total System	923,902	390,459	1,403,682	2,718,043	34.0%	14.4%	51.6%	100%	16,236	167.40

				2014 Actual	Billed Consumpti	ion (Thousands of	Gallons)			
		Tier Co	onsumption			Percentag	e in Each Tier		Average	Average per
Customer Class	1 to 8	8.001 to 15	Greater than 15	Total	1 to 8	8.001 to 15	Greater than 15	Total	Accounts	Account
Residential, No Patio, FCLWD Rates	714,220.72	296,706.48	649,628.85	1,660,556	43.0%	17.9%	39.1%	100%	12,661.00	131.16
Residential, No Patio, City Rates	105,828.64	35,220.99	31,875.26	172,925	61.2%	20.4%	18.4%	100%	1,819.00	95.07
Residential, No Patio, City Exchange	1,762.14	673.84	2,391.67	4,828	36.5%	14.0%	49.5%	100%	32.00	150.86
Residential, Patio	9,098.22	419.92	407.46	9,926	91.7%	4.2%	4.1%	100%	260.00	38.18
Commercial, FCLWD Rates	31,947.99	19,568.01	304,048.24	355,564	9.0%	5.5%	85.5%	100%	506.17	702.46
Commercial, Billed as City Use	816.90	643.09	16,500.52	17,961	4.5%	3.6%	91.9%	100%	13.00	1,381.58
Commercial, City Exchange Use	749.14	404.30	10,209.52	11,363	6.6%	3.6%	89.8%	100%	17.17	661.92
Irrigation, FCLWD Rates	6,844.24	5,492.57	239,002.36	251,339	2.7%	2.2%	95.1%	100%	109.67	2,291.85
Irrigation, City Rates	1,478.21	1,241.04	52,400.01	55,119	2.7%	2.3%	95.1%	100%	20.92	2,635.18
Irrigation, City Exchange	189.37	151.54	1,544.77	1,886	10.0%	8.0%	81.9%	100%	4.00	471.42
Residential, Multi-Unit	4,669.22	9,921.58	49,999.55	64,590	7.2%	15.4%	77.4%	100%	216.00	299.03
Residential, Multi-Unit, City Rates	11,316.37	5,359.68	4,987.48	21,664	52.2%	24.7%	23.0%	100%	130.00	166.64
Total System	888,921	375,803	1,362,996	2,627,720	33.8%	14.3%	51.9%	100%	15,789	166.43

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast Billed Consumption - Existing Disaggregated Rate Structure

		Actual	Estimated						Projecte	ed Price Elastici	ty Factors					
Item		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Annual Revenue Increases				4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
% Decline in Consumption Due to Price Elasticity																
TIER 1	1.0%		0.0%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
TIER 2	2.0%		0.0%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
TIER 3	3.0%		0.0%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%

TIER 3	3.078		0.070	1.2/0	1.2/0	1.2/0	1.2/0	1.2/0	1.2/0	1.2/0	1.2/0	1.270	1.2/0	1.2/0	1.2/0	1.2/0
			F.C						5							
Customer Class	Consumption by Tier	Actual 2016	Estimated 2017	2018	2019	2020	2021	2022	2023	Iled Consumpti 2024	2025	2026	2027	2028	2029	2030
Residential, No Patio, FCLWD Rates	by Her	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1 to 8	43.0%	874,236	811,397	816,071	820,808	826,635	833,040	839,820	846,874	854,145	861,598	869,211	876,967	884,856	892,868	900,999
8.001 to 15	17.9%	363,181	337,076	337,656	339,616	342,027	344,678	347,483	350,401	353,410	356,494	359,643	362,853	366,117	369,432	372,796
Greater than 15	39.1%	795,173	738,016	736,306	740,580	745,838	751,617	757,734	764,098	770,658	777,383	784,252	791,250	798,368	805,597	812,933
Total	100.0%	2,032,590	1,886,489	1,890,033	1,901,003	1,914,501	1,929,335	1,945,037	1,961,373	1,978,213	1,995,475	2,013,106	2,031,070	2,049,340	2,067,897	2,086,728
		_,,	_,,,,,,,,,,	_,,	_,,	_,,	_,,,,	_,,	_,,	_,_ ,	_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	_,,,	_,	_,,	_,,,	_,,,,,,,,
Forecast Demand Before Elasticity Adjustment			1,886,489	1,904,976	1,923,645	1,942,497	1,961,533	1,980,756	2,000,168	2,019,769	2,039,563	2,059,551	2,079,734	2,100,116	2,120,697	2,141,480
Annual Loss Due to Price Elasticity Response			0	(14,943)	(22,642)	(27,996)	(32,198)	(35,720)	(38,795)	(41,557)	(44,088)	(46,445)	(48,665)	(50,776)	(52,800)	(54,751)
Annual % Loss Due to Price Elasticity Response			0.00%	-0.78%	-1.18%	-1.44%	-1.64%	-1.80%	-1.94%	-2.06%	-2.16%	-2.26%	-2.34%	-2.42%	-2.49%	-2.56%
Cumulative Loss Due to Price Elasticity Response			0	(14,943)	(37,585)	(65,582)	(97,780)	(133,499)	(172,294)	(213,851)	(257,939)	(304,384)	(353,049)	(403,825)	(456,625)	(511,376)
Cumulative % Loss Due to Price Elasticity Response			0.00%	-0.40%	-0.66%	-0.86%	-1.03%	-1.16%	-1.28%	-1.39%	-1.48%	-1.57%	-1.65%	-1.72%	-1.79%	-1.85%
Residential, No Patio, City Rates 1 to 8	61.2%	122,925	115,927	116 505	117 264	118,261	119,226	120,236	121,281	122,352	123,447	124,562	125,696	126,848	120.016	129,201
8.001 to 15	20.4%	40,911	38,582	116,595 38,648	117,364 38,903	39,200	39,520	39,855	40,202	40,557	40,920	41,289	41,665	42,047	128,016 42,434	42,827
6.001 to 15 Greater than 15	18.4%	37.025	38,582 34.917	38,648	35,066	35,334	35,622	35,855	36,236	36,556	36.883	41,289 37,216	37,555	42,047 37.899	38.248	38,602
Total	100.0%	200.860	189,425	190.079	191,333	192,795	194,369	196,016	197,718	199,465	201,250	203.068	204,917	206,794	208,699	210,630
Total	100.070	200,000	105,425	130,073	151,555	132,733	154,505	150,010	137,710	133,403	201,250	203,000	204,517	200,734	200,033	210,030
Forecast Demand Before Elasticity Adjustment			189,425	191,282	193,156	195,049	196,961	198,891	200,840	202,808	204,796	206,803	208,829	210,876	212,943	215,029
Annual Loss Due to Price Elasticity Response			0	(1,203)	(1,823)	(2,254)	(2,592)	(2,875)	(3,122)	(3,343)	(3,546)	(3,735)	(3,913)	(4,082)	(4,243)	(4,399)
Annual % Loss Due to Price Elasticity Response			0.00%	-0.63%	-0.94%	-1.16%	-1.32%	-1.45%	-1.55%	-1.65%	-1.73%	-1.81%	-1.87%	-1.94%	-1.99%	-2.05%
Cumulative Loss Due to Price Elasticity Response			0	(1,203)	(3,026)	(5,281)	(7,873)	(10,748)	(13,870)	(17,213)	(20,760)	(24,495)	(28,407)	(32,489)	(36,732)	(41,132)
Cumulative % Loss Due to Price Elasticity Response			0.00%	-0.32%	-0.53%	-0.69%	-0.82%	-0.93%	-1.03%	-1.11%	-1.18%	-1.25%	-1.31%	-1.37%	-1.43%	-1.48%
Residential, No Patio, City Exchange																
1 to 8	36.5%	2,262	2,071	2,083	2,094	2,109	2,125	2,142	2,159	2,178	2,196	2,216	2,235	2,255	2,275	2,296
8.001 to 15	14.0%	865	792	793	798	803	809	816	822	829	837	844	851	859	867	874
Greater than 15	49.5% 100.0%	3,070	2,811	2,804 5.681	2,820 5.712	2,839	2,861	2,883	2,907	2,932	2,957	2,983 6.043	3,009 6.096	3,036	3,064	3,091
Total	100.0%	6,197	5,674	5,081	5,712	5,751	5,794	5,841	5,889	5,939	5,990	6,043	6,096	6,150	6,206	6,262
Forecast Demand Before Elasticity Adjustment			5.674	5,729	5,786	5,842	5,900	5,957	6,016	6,075	6,134	6,194	6,255	6,316	6,378	6,441
Annual Loss Due to Price Elasticity Response			0	(49)	(74)	(91)	(105)	(117)	(127)	(136)	(144)	(152)	(159)	(166)	(173)	(179)
Annual % Loss Due to Price Elasticity Response			0.00%	-0.85%	-1.28%	-1.57%	-1.78%	-1.96%	-2.11%	-2.24%	-2.35%	-2.45%	-2.54%	-2.63%	-2.71%	-2.78%
Cumulative Loss Due to Price Elasticity Response			0	(49)	(123)	(214)	(319)	(436)	(563)	(699)	(843)	(995)	(1,154)	(1,320)	(1,492)	(1,671)
Cumulative % Loss Due to Price Elasticity Response			0.00%	-0.43%	-0.72%	-0.94%	-1.12%	-1.27%	-1.40%	-1.51%	-1.61%	-1.71%	-1.79%	-1.87%	-1.94%	-2.01%
north est north																
Residential, Patio 1 to 8	91.7%	9.886	10.404	10,464	10.542	10,629	10,721	10,816	10,914	11,013	11.114	11.217	11,322	11,427	11,535	11,643
8.001 to 15	4.2%	456	480	481	485	489	493	497	502	506	511	516	520	525	530	535
Greater than 15	4.1%	443	466	465	468	472	476	481	485	489	494	498	503	508	512	517
Total	100.0%	10,785	11,350	11,409	11,495	11,590	11,690	11,794	11,900	12,009	12.119	12.231	12,345	12,460	12,577	12,696
Total	100.070	10,703	11,550	11,403	11,433	11,550	11,050	11,754	11,500	12,003	12,113	12,231	12,545	12,400	12,577	12,030
Forecast Demand Before Elasticity Adjustment		10,785	11,350	11,461	11,573	11,687	11,801	11,917	12,034	12,152	12,271	12,391	12,512	12,635	12,759	12,884
Annual Loss Due to Price Elasticity Response		0	0	(52)	(78)	(97)	(111)	(123)	(134)	(143)	(152)	(160)	(167)	(175)	(181)	(188)
Annual % Loss Due to Price Elasticity Response			0.00%	-0.45%	-0.68%	-0.83%	-0.94%	-1.03%	-1.11%	-1.18%	-1.24%	-1.29%	-1.34%	-1.38%	-1.42%	-1.46%
Cumulative Loss Due to Price Elasticity Response			0	(52)	(130)	(226)	(337)	(461)	(594)	(737)	(889)	(1,049)	(1,216)	(1,391)	(1,572)	(1,761)
Cumulative % Loss Due to Price Elasticity Response			0.00%	-0.23%	-0.38%	-0.49%	-0.59%	-0.66%	-0.73%	-0.79%	-0.84%	-0.89%	-0.94%	-0.98%	-1.01%	-1.05%

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast Billed Consumption - Existing Disaggregated Rate Structure

Community Follows Butter																
Commercial, FCLWD Rates 1 to 8	9.0%	37.271	35,710	36,279	36,797	37,389	38,025	38,692	39.386	40,102	40.839	41,596	42,372	43.167	43,981	44.813
8.001 to 15	5.5%	22,828	21,872	22,131	22,447	22,809	23,196	23,604	24,027	24,464	24,913	25,375	42,372 25,849	26,334	26,830	27,338
6.001 to 15 Greater than 15	5.5% 85.5%	354,708	339.854	342,492	347,379	352,971	358.974	365.276	371.823	378,585	385.544	392.691	400.019	407,524	415.204	423.058
Total	100.0%	414,807	397,437	400,902	406,623	413,168	420,195	427,572	435,235	443,150	451,297	459,663	468,240	407,524	486,015	495,209
Total	100.076	414,007	337,437	400,502	400,023	413,100	420,133	421,312	733,233	443,130	431,237	433,003	400,240	477,023	400,013	433,203
Forecast Demand Before Elasticity Adjustment			397,437	405,386	413,494	421,763	430,199	438,803	447,579	456,530	465,661	474,974	484,474	494,163	504,046	514,127
Annual Loss Due to Price Elasticity Response			0	(4,484)	(6,870)	(8,595)	(10,004)	(11,231)	(12,343)	(13,380)	(14,364)	(15,311)	(16,233)	(17,138)	(18,031)	(18,918
Annual % Loss Due to Price Elasticity Response			0.00%	-1.11%	-1.66%	-2.04%	-2.33%	-2.56%	-2.76%	-2.93%	-3.08%	-3.22%	-3.35%	-3.47%	-3.58%	-3.68%
Cumulative Loss Due to Price Elasticity Response			0	(4,484)	(11,354)	(19,950)	(29,954)	(41,184)	(53,527)	(66,907)	(81,271)	(96,582)	(112,816)	(129,954)	(147,985)	(166,904
Cumulative % Loss Due to Price Elasticity Response			0.00%	-0.56%	-0.94%	-1.23%	-1.47%	-1.67%	-1.85%	-2.00%	-2.14%	-2.27%	-2.39%	-2.50%	-2.60%	-2.70%
Commercial, Billed as City Use																
1 to 8	4.5%	961	918	933	946	961	977	994	1,012	1,030	1,049	1,068	1,088	1,109	1,129	1,151
8.001 to 15	3.6%	757	723	731	742	753	766	779	793	808	823	838	853	869	886	902
Greater than 15	91.9%	19,421	18,543	18,687	18,950	19,252	19,577	19,919	20,274	20,641	21,019	21,407	21,806	22,214	22,631	23,058
Total	100.0%	21,139	20,184	20,351	20,637	20,966	21,320	21,692	22,079	22,479	22,891	23,313	23,747	24,191	24,646	25,111
Forecast Demand Before Elasticity Adjustment		21,139	20,184	20,588	20.999	21,419	21.848	22,285	22,730	23,185	23,649	24.122	24,604	25,096	25,598	26,110
Annual Loss Due to Price Elasticity Response		0	0	(237)	(363)	(454)	(528)	(593)	(651)	(706)	(758)	(808)	(857)	(905)	(952)	(999
Annual % Loss Due to Price Elasticity Response			0.00%	-1.15%	-1.73%	-2.12%	-2.42%	-2.66%	-2.87%	-3.05%	-3.21%	-3.35%	-3.48%	-3.61%	-3.72%	-3.83%
Cumulative Loss Due to Price Elasticity Response			0	(237)	(599)	(1,053)	(1,581)	(2,173)	(2,825)	(3,531)	(4,289)	(5,097)	(5,954)	(6,859)	(7,811)	(8,810
Cumulative % Loss Due to Price Elasticity Response			0.00%	-0.58%	-0.98%	-1.28%	-1.53%	-1.74%	-1.92%	-2.08%	-2.23%	-2.36%	-2.48%	-2.60%	-2.71%	-2.81%
Comment City Endows the																
Commercial, City Exchange Use 1 to 8	6.6%	1,002	879	893	906	920	936	952	969	987	1,005	1,023	1,042	1,062	1,082	1,102
8.001 to 15	3.6%	541	474	480	487	495	503	512	521	530	540	550	560	571	581	592
Greater than 15	89.8%	13,649	11,978	12,071	12,242	12,438	12,648	12,870	13,099	13,337	13,582	13,833	14,091	14,354	14,625	14,901
Total	100.0%	15,191	13.332	13,444	13,634	13,852	14,087	14,333	14,589	14,854	15,126	15,406	15,693	15,987	16,288	16,595
Total	100.070	13,131	13,332	15,444	13,034	13,032	14,007	14,555	14,505	14,054	15,120	13,400	13,033	13,307	10,200	10,333
Forecast Demand Before Elasticity Adjustment		15,191	13,332	13,598	13,870	14,148	14,430	14,719	15,013	15,314	15,620	15,932	16,251	16,576	16,908	17,246
Annual Loss Due to Price Elasticity Response		0	0	(154)	(236)	(295)	(344)	(386)	(424)	(460)	(494)	(526)	(558)	(589)	(620)	(650)
Annual % Loss Due to Price Elasticity Response			0.00%	-1.13%	-1.70%	-2.09%	-2.38%	-2.62%	-2.83%	-3.00%	-3.16%	-3.30%	-3.43%	-3.55%	-3.67%	-3.77%
Cumulative Loss Due to Price Elasticity Response			0	(154)	(390)	(685)	(1,029)	(1,415)	(1,839)	(2,299)	(2,793)	(3,319)	(3,877)	(4,466)	(5,086)	(5,736
Cumulative % Loss Due to Price Elasticity Response			0.00%	-0.58%	-0.97%	-1.26%	-1.51%	-1.71%	-1.89%	-2.05%	-2.19%	-2.33%	-2.45%	-2.56%	-2.67%	-2.77%
Irrigation, FCLWD Rates																
1 to 8	2.7%	9,090	7,747	7,870	8,076	8,237	8,402	8,570	8,741	8,916	9,094	9,276	9,461	9,651	9,844	10,041
8.001 to 15	2.2%	7,295	6,217	6,291	6,455	6,584	6,715	6,850	6,987	7,126	7,269	7,414	7,562	7,714	7,868	8,025
Greater than 15	95.1%	317,424	270,532	272,631	279,736	285,322	291,027	296,847	302,783	308,839	315,015	321,315	327,742	334,296	340,982	347,802
Total	100.0%	333,809	284,496	286,792	294,266	300,143	306,144	312,266	318,511	324,881	331,378	338,005	344,765	351,661	358,694	365,868
Forecast Demand Before Elasticity Adjustment		333,809	284,496	290,186	295,990	301,909	307,948	314,107	320,389	326,796	333,332	339,999	346,799	353,735	360,810	368,026
Annual Loss Due to Price Elasticity Response		0	0	(3,394)	(1,724)	(1,767)	(1,804)	(1,841)	(1,878)	(1,916)	(1,954)	(1,994)	(2,034)	(2,074)	(2,116)	(2,158
Annual % Loss Due to Price Elasticity Response			0.00%	-1.17%	-0.58%	-0.59%	-0.59%	-0.59%	-0.59%	-0.59%	-0.59%	-0.59%	-0.59%	-0.59%	-0.59%	-0.59%
Cumulative Loss Due to Price Elasticity Response			0	(3,394)	(5,117)	(6,884)	(8,688)	(10,529)	(12,407)	(14,323)	(16,278)	(18,271)	(20,305)	(22,379)	(24,495)	(26,653
Cumulative % Loss Due to Price Elasticity Response			0.00%	-0.59%	-0.59%	-0.59%	-0.59%	-0.59%	-0.59%	-0.59%	-0.59%	-0.59%	-0.59%	-0.59%	-0.59%	-0.59%
Irrigation, City Rates																
1 to 8	2.7%	1,719	1,621	1,647	1,670	1,697	1,725	1,755	1,786	1,819	1,852	1,886	1,921	1,957	1,994	2,031
8.001 to 15	2.3%	1,443	1,361	1,377	1,397	1,419	1,443	1,468	1,494	1,521	1,549	1,577	1,606	1,637	1,667	1,699
Greater than 15	95.1%	60,923	57,475	57,921	58,728	59,660	60,664	61,720	62,819	63,954	65,124	66,325	67,557	68,819	70,111	71,433
Total	100.0%	64,085	60,457	60,945	61,795	62,775	63,832	64,943	66,099	67,294	68,524	69,788	71,085	72,413	73,772	75,163
Forecast Demand Before Elasticity Adjustment		64,085	60,457	61,667	62,900	64,158	65,441	66,750	68,085	69,447	70,835	72,252	73,697	75,171	76,675	78,20
Annual Loss Due to Price Elasticity Response		0	0	(721)	(1,105)	(1,382)	(1,609)	(1,807)	(1,986)	(2,153)	(2,311)	(2,464)	(2,613)	(2,758)	(2,902)	(3,045
Annual % Loss Due to Price Elasticity Response	1		0.00%	-1.17%	-1.76%	-2.15%	-2.46%	-2.71%	-2.92%	-3.10%	-3.26%	-3.41%	-3.54%	-3.67%	-3.79%	-3.89%
Cumulative Loss Due to Price Elasticity Response	1		0	(721)	(1,826)	(3,209)	(4,818)	(6,624)	(8,610)	(10,762)	(13,074)	(15,537)	(18,150)	(20,908)	(23,811)	(26,856
Cumulative % Loss Due to Price Elasticity Response			0.00%	-0.59%	-1.00%	-1.30%	-1.56%	-1.77%	-1.95%	-2.12%	-2.27%	-2.40%	-2.53%	-2.65%	-2.76%	-2.86%

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast Billed Consumption - Existing Disaggregated Rate Structure

Irrigation, City Exchange																
1 to 8	10.0%	292	247	251	255	259	263	268	273	278	283	288	293	299	304	310
8.001 to 15	8.0%	233	198	200	203	206	210	213	217	221	225	229	234	238	243	247
Greater than 15	81.9%	2.378	2.016	2,031	2,061	2,094	2.130	2,167	2,206	2,246	2,287	2,330	2,373	2,418	2,464	2,510
Total	100.0%	2,903	2,461	2,482	2,518	2,559	2,602	2,648	2,696	2,745	2,795	2,847	2,901	2,955	3,011	3.068
Total	100.070	2,303	2,401	2,402	2,510	2,333	2,002	2,040	2,030	2,743	2,733	2,047	2,301	2,555	3,011	3,000
Forecast Demand Before Elasticity Adjustment		2,903	2,461	2,510	2,560	2,611	2,663	2,717	2,771	2,826	2,883	2,941	2,999	3,059	3,121	3,183
Annual Loss Due to Price Elasticity Response		0	0	(27)	(42)	(52)	(61)	(68)	(75)	(81)	(87)	(93)	(99)	(104)	(110)	(115)
Annual % Loss Due to Price Elasticity Response			0.00%	-1.09%	-1.63%	-2.00%	-2.29%	-2.52%	-2.71%	-2.88%	-3.03%	-3.17%	-3.29%	-3.41%	-3.52%	-3.62%
Cumulative Loss Due to Price Elasticity Response			0	(27)	(69)	(121)	(182)	(251)	(326)	(407)	(495)	(588)	(687)	(791)	(901)	(1,016)
Cumulative % Loss Due to Price Elasticity Response			0.00%	-0.55%	-0.93%	-1.21%	-1.44%	-1.64%	-1.81%	-1.97%	-2.10%	-2.23%	-2.35%	-2.46%	-2.56%	-2.65%
Residential, Multi-Unit - FCLWD																
1 to 8	7.2%	4,906	5,181	5,263	5,339	5,425	5,518	5,615	5,716	5,820	5,928	6,038	6,150	6,266	6,384	6,505
8.001 to 15	15.4%	10,425	11,008	11,139	11,299	11,482	11,678	11,884	12,097	12,318	12,545	12,778	13,017	13,261	13,512	13,768
Greater than 15	77.4%	52,538	55,476	55,906	56,712	57,630	58,614	59,646	60,718	61,825	62,964	64,134	65,332	66,560	67,817	69,101
Total	100.0%	67,869	71,665	72,308	73,350	74,537	75,810	77,145	78,532	79,963	81,436	82,949	84,500	86,088	87,712	89,374
Forecast Demand Before Elasticity Adjustment		67.869	71.665	73.098	74.560	76.051	77.572	79.124	80.706	82.320	83.967	85.646	87.359	89.106	90.888	92,706
Annual Loss Due to Price Elasticity Response		0	0	(790)	(1,210)	(1,514)	(1,762)	(1,979)	(2,174)	(2,357)	(2,530)	(2,697)	(2,859)	(3,019)	(3,176)	(3,332)
Annual % Loss Due to Price Elasticity Response			0.00%	-1.08%	-1.62%	-1.99%	-2,27%	-2.50%	-2.69%	-2.86%	-3.01%	-3.15%	-3,27%	-3,39%	-3,49%	-3.59%
Cumulative Loss Due to Price Elasticity Response			0	(790)	(2,000)	(3,515)	(5,277)	(7,256)	(9,430)	(11,787)	(14,318)	(17,015)	(19,874)	(22,892)	(26,068)	(29,400)
Cumulative % Loss Due to Price Elasticity Response			0.00%	-0.55%	-0.92%	-1.20%	-1.44%	-1.63%	-1.80%	-1.95%	-2.09%	-2.22%	-2.33%	-2.44%	-2.54%	-2.64%
				2.22.12												
Residential, Multi-Unit - City Rates																
1 to 8	52.2%	12,701	13,069	13,277	13,496	13,733	13,983	14,242	14,509	14,783	15,064	15,353	15,647	15,949	16,257	16,571
8.001 to 15	24.7%	6,016	6,190	6,263	6,366	6,478	6,596	6,718	6,844	6,974	7,106	7,242	7,381	7,523	7,669	7,817
Greater than 15	23.0%	5,598	5,760	5,805	5,900	6,004	6,113	6,226	6,343	6,463	6,586	6,712	6,841	6,973	7,107	7,245
Total	100.0%	24,315	25,019	25,345	25,762	26,216	26,692	27,187	27,696	28,220	28,757	29,307	29,869	30,445	31,033	31,633
Forecast Demand Before Elasticity Adjustment		24,315	25,019	25,519	26,030	26,550	27,081	27,623	28,175	28,739	29,314	29,900	30,498	31,108	31,730	32,365
Annual Loss Due to Price Elasticity Response		0	0	(174)	(267)	(334)	(389)	(436)	(479)	(519)	(557)	(593)	(629)	(663)	(698)	(731)
Annual % Loss Due to Price Elasticity Response			0.00%	-0.68%	-1.03%	-1.26%	-1.44%	-1.58%	-1.70%	-1.81%	-1.90%	-1.98%	-2.06%	-2.13%	-2.20%	-2.26%
Cumulative Loss Due to Price Elasticity Response			0	(174)	(442)	(776)	(1,165)	(1,601)	(2,081)	(2,600)	(3,157)	(3,750)	(4,379)	(5,042)	(5,740)	(6,471
Cumulative % Loss Due to Price Elasticity Response			0.00%	-0.35%	-0.58%	-0.76%	-0.90%	-1.03%	-1.13%	-1.23%	-1.31%	-1.39%	-1.46%	-1.53%	-1.59%	-1.65%
Annual Use (All Classes)																
After Price Elasticity Adjustment		3,194,549	2,967,988	2,979,772	3,008,128	3,038,852	3,071,870	3,106,473	3,142,317	3,179,211	3,217,038	3,255,726	3,295,227	3,335,509	3,376,550	3,418,337
Before Price Elasticity Adjustment		540,095	2,967,988	3,006,000	3,044,563	3,083,685	3,123,377	3,163,648	3,204,506	3,245,962	3,288,025	3,330,705	3,374,013	3,417,958	3,462,552	3,507,805
% Difference		491.48%	0.00%	-0.87%	-1.20%	-1.45%	-1.65%	-1.81%	-1.94%	-2.06%	-2.16%	-2.25%	-2.34%	-2.41%	-2.48%	-2.55%
Cumulative Use (All Classes)																
Cumulative Total Use - After Price Elasticity Adjustment		3.194.549	6.162.537	9,142,309	12.150.437	15.189.289	18,261,159	21,367,633	24.509.950	27.689.161	30.906.199	34.161.925	37,457,153	40,792,662	44,169,212	47,587,549
Cumulative Total Use - Before Price Elasticity Adjustment		540,095	3,508,083	6,514,083	9,558,646	12,642,331	15,765,709	18,929,356	22,133,862	25,379,824	28,667,849	31,998,554	35,372,567	38,790,525	42,253,077	45,760,881
% Difference		491.48%	75.67%	40.35%	27.11%	20.15%	15.83%	12.88%	10.74%	9.10%	7.81%	6.76%	5.89%	5.16%	42,255,077	3.99%
% Difference		491.48%	/3.6/%	40.35%	27.11%	20.15%	15.83%	12.88%	10.74%	9.10%	7.81%	0.76%	5.89%	5.10%	4.53%	3.99%

Page A-8 3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study Service Charge Revenue at Existing Rates

	Actual	Estimated						Projected	Service Charge R	evenue					
Customer Class	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Residential, No Patio, FCLWD Rates															
3/4"	\$2,139,122	\$2,181,905	\$2,225,543	\$2,270,054	\$2,315,455	\$2,361,764	\$2,408,999	\$2,457,179	\$2,506,323	\$2,556,449	\$2,607,578	\$2,659,730	\$2,712,924	\$2,767,183	\$2,822,527
1"	703	717	731	746	761	776	792	808	824	840	857	874	892	910	928
Total	2,139,825	2,182,622	2,226,274	2,270,800	2,316,216	2,362,540	2,409,791	2,457,987	2,507,147	2,557,290	2,608,435	2,660,604	2,713,816	2,768,092	2,823,454
Residential, No Patio, City Rates															
3/4"	300,696	306,710	312,844	319,101	325,483	331,993	338,633	345,405	352,313	359,360	366,547	373,878	381,355	388,982	396,762
Total	300,696	306,710	312,844	319,101	325,483	331,993	338,633	345,405	352,313	359,360	366,547	373,878	381,355	388,982	396,762
Residential, No Patio, City Exchange															
3/4"	5,146	5,249	5,353	5,461	5,570	5,681	5,795	5,911	6,029	6,149	6,272	6,398	6,526	6,656	6,790
Total	5,146	5,249	5,353	5,461	5,570	5,681	5,795	5,911	6,029	6,149	6,272	6,398	6,526	6,656	6,790
Residential, Patio															
3/4"	48,079	49,041	50,022	51,022	52,042	53,083	54,145	55,228	56,332	57,459	58,608	59,780	60,976	62,196	63,439
Total	48,079	49,041	50,022	51,022	52,042	53,083	54,145	55,228	56,332	57,459	58,608	59,780	60,976	62,196	63,439
Residential - All	2,493,746	2,543,621	2,594,494	2,646,384	2,699,311	2,753,297	2,808,363	2,864,531	2,921,821	2,980,258	3,039,863	3,100,660	3,162,673	3,225,927	3,290,445
Commercial - FCLWD Rates															
3/4"	56,307	57,433	58,582	59,753	60,948	62,167	63,411	64,679	65,972	67,292	68,638	70,010	71,411	72,839	74,296
1"	22,577	23,028	23,489	23,959	24,438	24,926	25,425	25,934	26,452	26,981	27,521	28,071	28,633	29,205	29,789
1.5"	21,479	21,909	22,347	22,794	23,250	23,715	24,189	24,673	25,166	25,670	26,183	26,707	27,241	27,786	28,341
2"	17,967	18,326	18,693	19,067	19,448	19,837	20,234	20,638	21,051	21,472	21,902	22,340	22,787	23,242	23,707
3"	10,689	10,903	11,121	11,343	11,570	11,802	12,038	12,278	12,524	12,774	13,030	13,290	13,556	13,827	14,104
4"	2,443	2,492	2,542	2,593	2,645	2,697	2,751	2,806	2,863	2,920	2,978	3,038	3,099	3,161	3,224
Walmart 1.5" as 2" Wtr	636	649	662	675	688	702	716	731	745	760	775	791	807	823	839
Walmart 8" as 3" Fire Line	1,222	1,246	1,271	1,296	1,322	1,349	1,376	1,403	1,431	1,460	1,489	1,519	1,549	1,580	1,612
1" Billed as 3/4"	161	164	167	171	174	178	181	185	188	192	196	200	204	208	212
Water 2" Billed as 3/4"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Foothills Gateway	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	133,480	136,150	138,873	141,650	144,483	147,373	150,321	153,327	156,394	159,521	162,712	165,966	169,285	172,671	176,125
Commercial - City Rates															
3/4"	482	492	502	512	522	533	543	554	565	577	588	600	612	624	637
1"	234	239	244	249	254	259	264	269	275	280	286	291	297	303	309
1.5"	2,498	2,548	2,599	2,651	2,704	2,758	2,814	2,870	2,927	2,986	3,046	3,106	3,169	3,232	3,297
2"	1,272	1,297	1,323	1,350	1,377	1,404	1,432	1,461	1,490	1,520	1,551	1,582	1,613	1,645	1,678
3"	1,222	1,246	1,271	1,296	1,322	1,349	1,376	1,403	1,431	1,460	1,489	1,519	1,549	1,580	1,612
Total	5,709	5,823	5,939	6,058	6,179	6,303	6,429	6,558	6,689	6,822	6,959	7,098	7,240	7,385	7,533
Commercial - City Exchange															
3/4"	2,372	2,419	2,468	2,517	2,567	2,619	2,671	2,724	2,779	2,835	2,891	2,949	3,008	3,068	3,130
1"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5"	416	425	433	442	451	460	469	478	488	498	508	518	528	539	549
2"	636	649	662	675	688	702	716	731	745	760	775	791	807	823	839
Total	3,424	3,493	3,563	3,634	3,706	3,781	3,856	3,933	4,012	4,092	4,174	4,258	4,343	4,430	4,518
Total Commercial - All	142,613	145,466	148,375	151,342	154,369	157,457	160,606	163,818	167,094	170,436	173,845	177,322	180,868	184,486	188,175

Page A-8 3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study Service Charge Revenue at Existing Rates

	Actual	Estimated						Projected	Service Charge R	evenue					
Customer Class	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Irrigation - FCLWD Rates				•				<u> </u>							
3/4"	15,758	16,074	16,395	16,723	17,057	17,399	17,747	18,101	18,463	18,833	19,209	19,594	19,985	20,385	20,793
1"	10,312	10,518	10,728	10,943	11,162	11,385	11,613	11,845	12,082	12,324	12,570	12,821	13,078	13,339	13,606
1.5"	22,486	22,935	23,394	23,862	24,339	24,826	25,322	25,829	26,345	26,872	27,410	27,958	28,517	29,088	29,669
2"	17,172	17,515	17,866	18,223	18,588	18,959	19,338	19,725	20,120	20,522	20,933	21,351	21,778	22,214	22,658
Standby Wt Tap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	65,728	67,042	68,383	69,751	71,146	72,569	74,020	75,501	77,011	78,551	80,122	81,724	83,359	85,026	86,726
Irrigation - City Rates															
3/4"	2,090	2,132	2,175	2,218	2,263	2,308	2,354	2,401	2,449	2,498	2,548	2,599	2,651	2,704	2,758
1"	1,875	1,912	1,951	1,990	2,029	2,070	2,111	2,154	2,197	2,241	2,285	2,331	2,378	2,425	2,474
1.5"	6,662	6,796	6,932	7,070	7,212	7,356	7,503	7,653	7,806	7,962	8,121	8,284	8,450	8,619	8,791
2"	636	649	662	675	688	702	716	731	745	760	775	791	807	823	839
Total	11,264	11,489	11,719	11,953	12,192	12,436	12,685	12,938	13,197	13,461	13,730	14,005	14,285	14,571	14,862
Irrigation - City Exchange															
3/4"	965	984	1,004	1,024	1,044	1,065	1,087	1,108	1,130	1,153	1,176	1,200	1,224	1,248	1,273
1"	234	239	244	249	254	259	264	269	275	280	286	291	297	303	309
Total	1,199	1,223	1,248	1,273	1,298	1,324	1,350	1,377	1,405	1,433	1,462	1,491	1,521	1,551	1,582
Total Irrigation - All	78,191	79,754	81,350	82,977	84,636	86,329	88,055	89,817	91,613	93,445	95,314	97,220	99,165	101,148	103,171
Multi-Unit - FCLWD															
3/4"	237,341	242,088	246,929	251,868	256,905	262,043	267,284	272,630	278,083	283,644	289,317	295,103	301,006	307,026	313,166
1"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	237,341	242,088	246,929	251,868	256,905	262,043	267,284	272,630	278,083	283,644	289,317	295,103	301,006	307,026	313,166
Multi-Unit - City Rates															
3/4"	97,445	99,394	101,382	103,409	105,477	107,587	109,739	111,933	114,172	116,456	118,785	121,160	123,584	126,055	128,576
Total	97,445	99,394	101,382	103,409	105,477	107,587	109,739	111,933	114,172	116,456	118,785	121,160	123,584	126,055	128,576
Total Irrigation - All	334,786	341,481	348,311	355,277	362,383	369,630	377,023	384,563	392,255	400,100	408,102	416,264	424,589	433,081	441,742
Grand Total Charge Revenue	\$3,049,336	\$3,110,323	\$3,172,529	\$3,235,980	\$3,300,699	\$3,366,713	\$3,434,047	\$3,502,728	\$3,572,783	\$3,644,239	\$3,717,123	\$3,791,466	\$3,867,295	\$3,944,641	\$4,023,534

Page A-9 3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study Volumetric Revenue at Existing Rates

	Actual	Estimated						Projected Volum	netric Revenue at	Existing Rates					
Customer Class	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Residential, No Patio, FCLWD Rates	•		<u>'</u>			<u> </u>	<u>'</u>	<u>'</u>				<u>'</u>	<u>'</u>	<u>'</u>	
1 to 8	\$1,363,808	\$1,265,779	\$1,273,070	\$1,280,460	\$1,289,551	\$1,299,543	\$1,310,119	\$1,321,123	\$1,332,466	\$1,344,093	\$1,355,969	\$1,368,069	\$1,380,375	\$1,392,875	\$1,405,559
8 to 15	802,630	744,938	746,220	750,552	755,881	761,737	767,937	774,387	781,035	787,851	794,812	801,904	809,118	816,444	823,879
Greater than 15	2,361,663	2,191,909	2,186,829	2,199,522	2,215,139	2,232,302	2,250,470	2,269,371	2,288,855	2,308,828	2,329,228	2,350,013	2,371,152	2,392,623	2,414,412
Total	4,528,102	4,202,625	4,206,119	4,230,533	4,260,570	4,293,583	4,328,526	4,364,881	4,402,357	4,440,772	4,480,009	4,519,985	4,560,644	4,601,943	4,643,850
Residential, No Patio, City Rates															
1 to 8	335,584	316,480	318,303	320,404	322,852	325,487	328,246	331,096	334,021	337,010	340,055	343,151	346,295	349,485	352,718
8 to 15	146,051	137,737	137,974	138,885	139,946	141,088	142,284	143,519	144,787	146,083	147,403	148,745	150,108	151,490	152,892
Greater than 15	162,908	153,634	153,278	154,289	155,468	156,737	158,065	159,438	160,847	162,286	163,752	165,243	166,757	168,293	169,850
Total	644,544	607,851	609,555	613,578	618,266	623,312	628,595	634,054	639,655	645,378	651,209	657,139	663,160	669,268	675,460
Residential, No Patio, City Exchange															
1 to 8	3,529	3,231	3,249	3,267	3,290	3,314	3,341	3,369	3,397	3,426	3,456	3,487	3,518	3,550	3,582
8 to 15	1,912	1,750	1,753	1,763	1,775	1,788	1,803	1,818	1,833	1,849	1,865	1,881	1,898	1,915	1,933
Greater than 15	9,118	8,348	8,329	8,374	8,432	8,496	8,564	8,634	8,708	8,783	8,860	8,938	9,018	9,099	9,181
Total	14,558	13,329	13,332	13,404	13,496	13,599	13,707	13,821	13,938	14,058	14,181	14,306	14,434	14,564	14,695
Residential, Patio															
1 to 8	15,422	16,230	16,323	16,446	16,582	16,725	16,873	17,025	17,180	17,338	17,499	17,662	17,827	17,994	18,164
8 to 15	1,008	1,061	1,063	1,071	1,080	1,089	1,099	1,109	1,119	1,129	1,140	1,150	1,161	1,172	1,183
Greater than 15	1,315	1,384	1,381	1,391	1,402	1,415	1,427	1,440	1,453	1,466	1,480	1,494	1,508	1,522	1,536
Total	17,745	18,675	18,767	18,908	19,064	19,229	19,399	19,574	19,752	19,934	20,118	20,306	20,496	20,688	20,883
Residential All															
1 to 8	1,718,343	1,601,719	1,610,946	1,620,577	1,632,274	1,645,070	1,658,579	1,672,613	1,687,064	1,701,868	1,716,979	1,732,368	1,748,015	1,763,904	1,780,022
8 to 15	951,602	885,486	887,011	892,270	898,681	905,703	913,122	920,832	928,774	936,911	945,219	953,680	962,284	971,022	979,887
Greater than 15	2,535,004	2,355,275	2,349,816	2,363,576	2,380,441	2,398,950	2,418,526	2,438,884	2,459,863	2,481,363	2,503,320	2,525,687	2,548,434	2,571,537	2,594,979
Total	5,204,949	4,842,480	4,847,773	4,876,423	4,911,396	4,949,722	4,990,227	5,032,329	5,075,702	5,120,142	5,165,517	5,211,736	5,258,734	5,306,463	5,354,888
Commercial, FCLWD Rates															
1 to 8	58,143	55,708	56,595	57,403	58,327	59,319	60,360	61,442	62,559	63,709	64,890	66,101	67,341	68,610	69,908
8 to 15	50,451	48,338	48,910	49,608	50,407	51,264	52,164	53,099	54,065	55,059	56,079	57,126	58,197	59,294	60,416
Greater than 15	1,053,482	1,009,367	1,017,200	1,031,716	1,048,322	1,066,152	1,084,870	1,104,314	1,124,397	1,145,067	1,166,293	1,188,056	1,210,346	1,233,156	1,256,483
Total	1,162,075	1,113,413	1,122,705	1,138,727	1,157,056	1,176,735	1,197,394	1,218,855	1,241,021	1,263,834	1,287,262	1,311,283	1,335,885	1,361,060	1,386,807
Commercial, Billed as City Use															
1 to 8	2,625	2,506	2,546	2,582	2,623	2,667	2,714	2,762	2,812	2,864	2,917	2,971	3,027	3,083	3,142
8 to 15	2,702	2,580	2,611	2,647	2,689	2,735	2,783	2,832	2,884	2,936	2,991	3,046	3,103	3,162	3,221
Greater than 15	85,451	81,590	82,223	83,378	84,707	86,138	87,641	89,205	90,820	92,484	94,192	95,945	97,740	99,577	101,456
Total	90,778	86,676	87,380	88,607	90,020	91,540	93,138	94,799	96,516	98,284	100,100	101,962	103,869	105,822	107,819
Commercial, City Exchange Use															
1 to 8	1,562	1,371	1,393	1,413	1,435	1,460	1,485	1,512	1,539	1,567	1,596	1,626	1,656	1,688	1,719
8 to 15	1,195	1,048	1,061	1,076	1,093	1,111	1,131	1,151	1,172	1,193	1,216	1,238	1,261	1,285	1,309
Greater than 15	40,538	35,575	35,851	36,358	36,940	37,565	38,222	38,905	39,611	40,338	41,084	41,849	42,633	43,435	44,255
Total	43,295	37,995	38,305	38,846	39,468	40,136	40,838	41,568	42,322	43,098	43,896	44,713	45,551	46,408	47,284
Commercial All															
1 to 8	62,330	59,585	60,534	61,397	62,385	63,445	64,559	65,716	66,911	68,140	69,403	70,698	72,024	73,381	74,769
8 to 15	54,347	51,966	52,582	53,331	54,189	55,110	56,078	57,082	58,120	59,188	60,285	61,410	62,562	63,741	64,946
Greater than 15	1,179,470	1,126,533	1,135,275	1,151,453	1,169,970	1,189,855	1,210,734	1,232,424	1,254,828	1,277,888	1,301,569	1,325,850	1,350,718	1,376,167	1,402,194
Total	1,296,148	1,238,085	1,248,390	1,266,181	1,286,544	1,308,411	1,331,370	1,355,222	1,379,859	1,405,217	1,431,258	1,457,958	1,485,305	1,513,290	1,541,910

Fort Collins-Loveland Water District 2017 Rate & Fee Study Volumetric Revenue at Existing Rates

	Actual	Estimated						Projected Volum	etric Revenue at	Existing Rates					
Customer Class	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Irrigation, FCLWD Rates															
1 to 8	14,180	12,086	12,278	12,598	12,849	13,106	13,368	13,636	13,909	14,187	14,470	14,760	15,055	15,356	15,663
8 to 15	16,121	13,740	13,903	14,265	14,550	14,841	15,137	15,440	15,749	16,064	16,385	16,713	17,047	17,388	17,736
Greater than 15	942,749	803,479	809,714	830,815	847,407	864,350	881,634	899,266	917,250	935,595	954,307	973,393	992,860	1,012,717	1,032,972
Total	973,051	829,305	835,895	857,677	874,807	892,297	910,140	928,342	946,908	965,846	985,162	1,004,865	1,024,963	1,045,462	1,066,371
Irrigation, City Rates															
1 to 8	4,692	4,426	4,497	4,559	4,632	4,710	4,792	4,877	4,965	5,056	5,149	5,245	5,343	5,443	5,546
8 to 15	5,151	4,860	4,917	4,986	5,065	5,150	5,240	5,333	5,429	5,529	5,631	5,735	5,842	5,952	6,064
Greater than 15	268,061	252,889	254,851	258,404	262,504	266,923	271,570	276,403	281,399	286,544	291,830	297,251	302,804	308,489	314,303
Total	277,904	262,175	264,265	267,949	272,201	276,782	281,601	286,613	291,794	297,129	302,609	308,231	313,990	319,884	325,913
Irrigation, City Exchange	,	,	,	•	,	,	,	ŕ	,	,	,	•	,	,	,
1 to 8	455	385	392	397	404	411	418	425	433	441	449	458	466	475	484
8 to 15	516	437	442	449	456	464	472	480	489	498	507	517	526	536	546
Greater than 15	7,063	5,987	6,033	6,120	6,219	6,325	6,436	6,552	6,671	6,794	6,920	7,049	7,182	7,317	7,456
Total	8,034	6,809	6,867	6,966	7,078	7,199	7,326	7,457	7,593	7,733	7,876	8,024	8,174	8,328	8,486
Irrigation All	2,22				.,,,,	.,	.,,,,,	.,	.,	.,	.,		-,		
1 to 8	19,327	16,897	17,166	17,555	17,885	18,227	18,578	18,938	19,307	19,684	20,069	20,462	20,864	21,274	21,693
8 to 15	21,788	19,037	19,262	19,699	20,070	20,454	20,849	21,253	21,667	22,091	22,523	22,965	23,416	23,876	24,347
Greater than 15	1,217,873	1,062,355	1,070,599	1,095,339	1,116,130	1,137,597	1,159,640	1,182,220	1,205,320	1,228,933	1,253,056	1,277,693	1,302,846	1,328,523	1,354,731
Total	1,258,989	1,098,289	1,107,027	1,132,592	1,154,086	1,176,278	1,199,067	1,222,412	1,246,295	1,270,707	1,295,648	1,321,120	1,347,126	1,373,674	1,400,770
Residential, Multi-Unit, FCLWD	1,230,303	1,030,203	2,207,027	1,102,002	2,23 1,000	2,270,270	2,233,007	1,222,112	1,2 10,233	1,2,0,707	1,233,010	1,521,120	1,5 17,120	2,575,67	1,100,770
1 to 8	7,654	8,082	8,210	8,329	8,464	8,608	8,760	8,917	9,080	9,247	9,419	9,595	9,775	9,960	10,148
8 to 15	23,040	24,328	24,616	24,971	25,375	25,808	26,263	26,735	27,222	27,724	28,239	28,767	29,307	29,861	30,426
Greater than 15	156,037	164,763	166,042	168,433	171,160	174,083	177,149	180,333	183,621	187,003	190,477	194,037	197,684	201,415	205,231
Total	186,730	197,173	198,869	201,733	204,998	208,499	212,172	215,985	219,923	223,974	228,134	232,399	236,766	241,235	245,805
Residential, Multi-Unit, City Rates	100,750	137,173	150,005	201,733	204,550	200,433	212,172	213,303	213,323	223,374	220,134	232,333	250,700	241,233	243,003
1 to 8	34,675	35,679	36,247	36,844	37,492	38,174	38,881	39,609	40,358	41,126	41,912	42,717	43,540	44,381	45,240
8 to 15	21,476	22,098	22,359	22,728	23,128	23,548	23,984	24,434	24,895	25,369	25,854	26,351	26,858	27,377	27,907
Greater than 15	24,631	25,344	25,541	25,961	26,418	26,898	27,396	27,910	28,438	28,979	29,533	30,100	30,680	31,272	31,877
Total	80,782	83,121	84,147	85,533	87,039	88,620	90,261	91,953	93,691	95,474	97,299	99,168	101,078	103,030	105,024
Multi-Family All	80,782	65,121	04,147	65,555	67,033	00,020	30,201	31,333	93,091	33,474	31,233	33,100	101,078	103,030	103,024
1 to 8	42,329	43,761	44,457	45,173	45,956	46,782	47,640	48,526	49,438	50,373	51,331	52,312	53,315	54,340	55,388
8 to 15	44,516	46,426	46,976	47,698	48,503	49,356	50,247	51,169	52,118	53,093	54,093	55,117	56,166	57,237	58,333
Greater than 15	180,667	190,107	191,582	194,395	197,578	200,981	204,546	208,243	212,058	215,982	220,009	224,137	228,363	232,687	237,108
Total	267,512	280,294	283,015	287,266	292,037	297,120	302,433	307,938	313,614	319,448	325,434	331,566	337,844	344,265	350,830
Grand Total All	207,312	200,234	203,013	207,200	232,037	237,120	302,433	307,330	313,014	313,440	323,434	331,300	337,044	344,203	330,030
1 to 8	1,842,329	1,721,963	1,733,104	1,744,701	1,758,500	1,773,524	1,789,356	1,805,793	1,822,720	1,840,065	1,857,782	1,875,841	1,894,218	1,912,900	1,931,873
8 to 15	1,072,253	1,002,915	1,005,830	1,012,999	1,021,443	1,030,624	1,040,295	1,050,337	1,060,680	1,071,283	1,082,120	1,093,173	1,104,428	1,115,877	1,127,513
Greater than 15	5,113,016	4,734,270	4,747,272	4,804,762	4,864,119	4,927,383	4,993,445	5,061,772	5,132,070	5,204,166	5,277,954	5,353,367	5,430,362	5,508,915	5,589,012
Total Volumetric Revenue	\$8,027,597	\$7,459,147	\$7,486,206	\$7,562,462	\$7,644,063	\$7,731,531	\$7,823,097	\$7,917,902	\$8,015,469	\$8,115,514	\$8,217,857	\$8,322,380	\$8,429,008	\$8,537,691	\$8,648,398
Total Volumetric Revenue	\$6,027,357	\$7,435,147	\$7,460,200	\$7,302,402	\$7,044,003	\$7,731,331	\$1,623,031	\$7,517,502	\$6,013,403	\$6,113,314	30,217,037	30,322,300	30,423,000	\$6,337,031	\$6,046,356
Percentage in Each Consumption Block															
1 to 8	22.9%	23.1%	23.2%	23.1%	23.0%	22.9%	22.9%	22.8%	22.7%	22.7%	22.6%	22.5%	22.5%	22.4%	22.3%
8 to 15	13.4%	13.4%	13.4%	13.4%	13.4%	13.3%	13.3%	13.3%	13.2%	13.2%	13.2%	13.1%	13.1%	13.1%	13.0%
Greater than 15	63.7%	63.5%	63.4%	63.5%	63.6%	63.7%	63.8%	63.9%	64.0%	64.1%	64.2%	64.3%	64.4%	64.5%	64.6%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total Volumetric Revenue	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Page A-10 3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study Total Revenue at Existing Rates

	Actual	Estimated							al Revenue at Exis	sting Rates					
Customer Class	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Residential, No Patio, FCLWD Rates						<u>'</u>	<u>'</u>	·		<u>'</u>	<u>'</u>	· ·	<u>'</u>		
1 to 8	\$1,363,808	\$1,265,779	\$1,273,070	\$1,280,460	\$1,289,551	\$1,299,543	\$1,310,119	\$1,321,123	\$1,332,466	\$1,344,093	\$1,355,969	\$1,368,069	\$1,380,375	\$1,392,875	\$1,405,559
8 to 15	802,630	744,938	746,220	750,552	755,881	761,737	767,937	774,387	781,035	787,851	794,812	801,904	809,118	816,444	823,879
Greater than 15	2,361,663	2,191,909	2,186,829	2,199,522	2,215,139	2,232,302	2,250,470	2,269,371	2,288,855	2,308,828	2,329,228	2,350,013	2,371,152	2,392,623	2,414,412
Total Volumetric	4,528,102	4,202,625	4,206,119	4,230,533	4,260,570	4,293,583	4,328,526	4,364,881	4,402,357	4,440,772	4,480,009	4,519,985	4,560,644	4,601,943	4,643,850
Total Service Chage	2,139,825	2,182,622	2,226,274	2,270,800	2,316,216	2,362,540	2,409,791	2,457,987	2,507,147	2,557,290	2,608,435	2,660,604	2,713,816	2,768,092	2,823,454
Total Volumetric + Service Charge	6,667,927	6,385,247	6,432,394	6,501,333	6,576,786	6,656,123	6,738,317	6,822,868	6,909,503	6,998,061	7,088,444	7,180,589	7,274,460	7,370,035	7,467,304
% Service Charge	32.1%		34.6%	34.9%	35.2%	35.5%	35.8%	36.0%	36.3%	36.5%	36.8%	37.1%	37.3%	37.6%	37.8%
% TIER 1 + Service Charge	52.5%		54.4%	54.6%	54.8%	55.0%	55.2%	55.4%	55.6%	55.7%	55.9%	56.1%	56.3%	56.5%	56.6%
Residential, No Patio, City Rates	52.570	3 1.070	3 , 0	3 1.070	31.070	33.070	33.270	33.170	33.070	33.770	33.370	30.170	30.370	30.370	30.070
1 to 8	\$335,584	\$316,480	\$318.303	\$320,404	\$322,852	\$325,487	\$328,246	\$331.096	\$334,021	\$337,010	\$340.055	\$343.151	\$346,295	\$349.485	\$352,718
8 to 15	146,051	137,737	137,974	138,885	139,946	141,088	142,284	143,519	144,787	146,083	147,403	148,745	150,108	151,490	152,892
Greater than 15	162,908	153,634	153,278	154,289	155,468	156,737	158,065	159,438	160,847	162,286	163,752	165,243	166,757	168,293	169,850
Total Volumetric	644,544	607.851	609,555	613.578	618,266	623,312	628,595	634,054	639,655	645,378	651,209	657,139	663,160	669,268	675,460
Total Service Chage	300,696	306,710	312,844	319,101	325,483	331,993	338,633	345,405	352,313	359,360	366,547	373,878	381,355	388,982	396,762
Total Volumetric + Service Charge	945,240	914,561	922,399	932,679	943,749	955,305	967,227	979,459	991,969	1,004,738	1,017,756	1,031,016	1,044,515	1,058,251	1,072,222
% Service Charge	31.8%		33.9%	34.2%	34.5%	34.8%	35.0%	35.3%	35.5%	35.8%	36.0%	36.3%	36.5%	36.8%	37.0%
% TIER 1 + Service Charge	67.3%		68.4%	68.6%	68.7%	68.8%	68.9%	69.1%	69.2%	69.3%	69.4%	69.5%	69.7%	69.8%	69.9%
Residential, No Patio, City Exchange	07.5%	00.170	06.476	06.0%	00.770	00.070	00.570	09.176	09.270	09.570	09.4%	09.5%	09.770	09.6%	09.9%
	ć2 F20	ć2 224	ć2 240	ć2 267	ć2 200	62.244	62.244	ć2 260	62.207	ć2 42C	62.456	62.407	62.540	62.550	ć2 F02
1 to 8	\$3,529	\$3,231 1,750	\$3,249	\$3,267	\$3,290	\$3,314 1,788	\$3,341 1,803	\$3,369	\$3,397 1,833	\$3,426	\$3,456	\$3,487	\$3,518	\$3,550 1,915	\$3,582
8 to 15	1,912		1,753	1,763	1,775		,	1,818		1,849	1,865	1,881	1,898		1,933
Greater than 15	9,118	8,348	8,329	8,374	8,432	8,496	8,564	8,634	8,708	8,783	8,860	8,938	9,018	9,099	9,181
Total Volumetric	14,558	13,329	13,332	13,404	13,496	13,599	13,707	13,821	13,938	14,058	14,181	14,306	14,434	14,564	14,695
Total Service Chage	5,146	5,249	5,353	5,461	5,570	5,681	5,795	5,911	6,029	6,149	6,272	6,398	6,526	6,656	6,790
Total Volumetric + Service Charge	19,704	18,578	18,685	18,865	19,066	19,280	19,502	19,731	19,967	20,207	20,453	20,704	20,960	21,220	21,485
% Service Charge	26.1%		28.7%	28.9%	29.2%	29.5%	29.7%	30.0%	30.2%	30.4%	30.7%	30.9%	31.1%	31.4%	31.6%
% TIER 1 + Service Charge	44.0%	45.6%	46.0%	46.3%	46.5%	46.7%	46.8%	47.0%	47.2%	47.4%	47.6%	47.7%	47.9%	48.1%	48.3%
Residential, Patio															
1 to 8	\$15,422	\$16,230	\$16,323	\$16,446	\$16,582	\$16,725	\$16,873	\$17,025	\$17,180	\$17,338	\$17,499	\$17,662	\$17,827	\$17,994	\$18,164
8 to 15	1,008	1,061	1,063	1,071	1,080	1,089	1,099	1,109	1,119	1,129	1,140	1,150	1,161	1,172	1,183
Greater than 15	1,315	1,384	1,381	1,391	1,402	1,415	1,427	1,440	1,453	1,466	1,480	1,494	1,508	1,522	1,536
Total Volumetric	17,745	18,675	18,767	18,908	19,064	19,229	19,399	19,574	19,752	19,934	20,118	20,306	20,496	20,688	20,883
Total Service Chage	48,079	49,041	50,022	51,022	52,042	53,083	54,145	55,228	56,332	57,459	58,608	59,780	60,976	62,196	63,439
Total Volumetric + Service Charge	65,824	67,716	68,788	69,930	71,107	72,312	73,544	74,802	76,085	77,393	78,727	80,086	81,472	82,884	84,322
% Service Charge	73.0%		72.7%	73.0%	73.2%	73.4%	73.6%	73.8%	74.0%	74.2%	74.4%	74.6%	74.8%	75.0%	75.2%
% TIER 1 + Service Charge	96.5%	96.4%	96.4%	96.5%	96.5%	96.5%	96.6%	96.6%	96.6%	96.6%	96.7%	96.7%	96.7%	96.7%	96.8%
Residential All															
1 to 8	1,718,343	1,601,719	1,610,946	1,620,577	1,632,274	1,645,070	1,658,579	1,672,613	1,687,064	1,701,868	1,716,979	1,732,368	1,748,015	1,763,904	1,780,022
8 to 15	951,602	885,486	887,011	892,270	898,681	905,703	913,122	920,832	928,774	936,911	945,219	953,680	962,284	971,022	979,887
Greater than 15	2,535,004	2,355,275	2,349,816	2,363,576	2,380,441	2,398,950	2,418,526	2,438,884	2,459,863	2,481,363	2,503,320	2,525,687	2,548,434	2,571,537	2,594,979
Total Volumetric	5,204,949	4,842,480	4,847,773	4,876,423	4,911,396	4,949,722	4,990,227	5,032,329	5,075,702	5,120,142	5,165,517	5,211,736	5,258,734	5,306,463	5,354,888
Total Service Chage	2,493,746	2,543,621	2,594,494	2,646,384	2,699,311	2,753,297	2,808,363	2,864,531	2,921,821	2,980,258	3,039,863	3,100,660	3,162,673	3,225,927	3,290,445
Total Volumetric + Service Charge	7,698,695	7,386,101	7,442,267	7,522,806	7,610,708	7,703,020	7,798,590	7,896,860	7,997,523	8,100,400	8,205,380	8,312,396	8,421,407	8,532,389	8,645,333
% Service Charge	32.4%	34.4%	34.9%	35.2%	35.5%	35.7%	36.0%	36.3%	36.5%	36.8%	37.0%	37.3%	37.6%	37.8%	38.1%
% TIER 1 + Service Charge	54.7%	56.1%	56.5%	56.7%	56.9%	57.1%	57.3%	57.5%	57.6%	57.8%	58.0%	58.1%	58.3%	58.5%	58.6%
Commercial, FCLWD Rates															
1 to 8	\$58,143	\$55,708	\$56,595	\$57,403	\$58,327	\$59,319	\$60,360	\$61,442	\$62,559	\$63,709	\$64,890	\$66,101	\$67,341	\$68,610	\$69,908
8 to 15	50,451	48,338	48,910	49,608	50,407	51,264	52,164	53,099	54,065	55,059	56,079	57,126	58,197	59,294	60,416
Greater than 15	1,053,482	1,009,367	1,017,200	1,031,716	1,048,322	1,066,152	1,084,870	1,104,314	1,124,397	1,145,067	1,166,293	1,188,056	1,210,346	1,233,156	1,256,483
Total Volumetric	1,162,075	1,113,413	1,122,705	1,138,727	1,157,056	1,176,735	1,197,394	1,218,855	1,241,021	1,263,834	1,287,262	1,311,283	1,335,885	1,361,060	1,386,807
Total Service Chage	133,480														
Total Volumetric + Service Charge	1,295,555	1,113,413	1,122,705	1,138,727	1,157,056	1,176,735	1,197,394	1,218,855	1,241,021	1,263,834	1,287,262	1,311,283	1,335,885	1,361,060	1,386,807
% Service Charge	10.3%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% TIER 1 + Service Charge	14.8%		5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
70 TELL I DELVICE CHAIRE	14.870	5.070	5.070	3.070	5.070	5.070	5.070	3.070	5.070	3.070	3.070	3.070	5.070	3.070	5.070

Fort Collins-Loveland Water District 2017 Rate & Fee Study Total Revenue at Existing Rates

	Actual	Estimated						Projected Total	al Revenue at Exis	ting Rates					
Customer Class	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Commercial, Billed as City Use															
1 to 8	\$2,625	\$2,506	\$2,546	\$2,582	\$2,623	\$2,667	\$2,714	\$2,762	\$2,812	\$2,864	\$2,917	\$2,971	\$3,027	\$3,083	\$3,142
8 to 15	2,702	2,580	2,611	2,647	2,689	2,735	2,783	2,832	2,884	2,936	2,991	3,046	3,103	3,162	3,221
Greater than 15	85,451	81,590	82,223	83,378	84,707	86,138	87,641	89,205	90,820	92,484	94,192	95,945	97,740	99,577	101,456
Total Volumetric	90,778	86,676	87,380	88,607	90,020	91,540	93,138	94,799	96,516	98,284	100,100	101,962	103,869	105,822	107,819
Total Service Chage	5,709	5,823	5,939	6,058	6,179	6,303	6,429	6,558	6,689	6,822	6,959	7,098	7,240	7,385	7,533
Total Volumetric + Service Charge	96,487	92,499	93,319	94,666	96,199	97,843	99,567	101,357	103,205	105,106	107,059	109,060	111,110	113,207	115,351
% Service Charge	5.9%	6.3%	6.4%	6.4%	6.4%	6.4%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
% TIER 1 + Service Charge	8.6%	9.0%	9.1%	9.1%	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%	9.3%
Commercial, City Exchange Use															
1 to 8	\$1,562	\$1,371	\$1,393	\$1,413	\$1,435	\$1,460	\$1,485	\$1,512	\$1,539	\$1,567	\$1,596	\$1,626	\$1,656	\$1,688	\$1,719
8 to 15	1,195	1,048	1,061	1,076	1,093	1,111	1,131	1,151	1,172	1,193	1,216	1,238	1,261	1,285	1,309
Greater than 15	40,538	35,575	35,851	36,358	36,940	37,565	38,222	38,905	39,611	40,338	41,084	41,849	42,633	43,435	44,255
Total Volumetric	43,295	37,995	38,305	38,846	39,468	40,136	40,838	41,568	42,322	43,098	43,896	44,713	45,551	46,408	47,284
Total Service Chage	3,424	3,493	3,563	3,634	3,706	3,781	3,856	3,933	4,012	4,092	4,174	4,258	4,343	4,430	4,518
Total Volumetric + Service Charge	46,719	41,488	41,868	42,480	43,174	43,917	44,695	45,501	46,334	47,191	48,070	48,971	49,893	50,837	51,802
% Service Charge	7.3%	8.4%	8.5%	8.6%	8.6%	8.6%	8.6%	8.6%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%
% TIER 1 + Service Charge	10.7%	11.7%	11.8%	11.9%	11.9%	11.9%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
Commercial All															
1 to 8	62,330	59,585	60,534	61,397	62,385	63,445	64,559	65,716	66,911	68,140	69,403	70,698	72,024	73,381	74,769
8 to 15	54,347	51,966	52,582	53,331	54,189	55,110	56,078	57,082	58,120	59,188	60,285	61,410	62,562	63,741	64,946
Greater than 15	1,179,470	1,126,533	1,135,275	1,151,453	1,169,970	1,189,855	1,210,734	1,232,424	1,254,828	1,277,888	1,301,569	1,325,850	1,350,718	1,376,167	1,402,194
Total Volumetric	1,296,148	1,238,085	1,248,390	1,266,181	1,286,544	1,308,411	1,331,370	1,355,222	1,379,859	1,405,217	1,431,258	1,457,958	1,485,305	1,513,290	1,541,910
Total Service Chage	142,613	9,316	9,502	9,692	9,886	10,084	10,285	10,491	10,701	10,915	11,133	11,356	11,583	11,814	12,051
Total Volumetric + Service Charge	1,438,761	1,247,400	1,257,892	1,275,873	1,296,429	1,318,495	1,341,655	1,365,713	1,390,560	1,416,132	1,442,391	1,469,314	1,496,887	1,525,104	1,553,961
% Service Charge	9.9%	0.7%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
% TIER 1 + Service Charge	14.2%	5.5%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%
Irrigation, FCLWD Rates															
1 to 8	\$14,180	\$12,086	\$12,278	\$12,598	\$12,849	\$13,106	\$13,368	\$13,636	\$13,909	\$14,187	\$14,470	\$14,760	\$15,055	\$15,356	\$15,663
8 to 15	16,121	13,740	13,903	14,265	14,550	14,841	15,137	15,440	15,749	16,064	16,385	16,713	17,047	17,388	17,736
Greater than 15	942,749	803,479	809,714	830,815	847,407	864,350	881,634	899,266	917,250	935,595	954,307	973,393	992,860	1,012,717	1,032,972
Total Volumetric	973,051	829,305	835,895	857,677	874,807	892,297	910,140	928,342	946,908	965,846	985,162	1,004,865	1,024,963	1,045,462	1,066,371
Total Service Chage	65,728	67,042	68,383	69,751	71,146	72,569	74,020	75,501	77,011	78,551	80,122	81,724	83,359	85,026	86,726
Total Volumetric + Service Charge	1,038,779	896,347	904,278	927,428	945,953	964,866	984,160	1,003,842	1,023,919	1,044,397	1,065,284	1,086,590	1,108,321	1,130,488	1,153,097
% Service Charge	6.3%	7.5%	7.6%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%
% TIER 1 + Service Charge	7.7%	8.8%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%
Irrigation, City Rates															
1 to 8	\$4,692	\$4,426	\$4,497	\$4,559	\$4,632	\$4,710	\$4,792	\$4,877	\$4,965	\$5,056	\$5,149	\$5,245	\$5,343	\$5,443	\$5,546
8 to 15	5,151	4,860	4,917	4,986	5,065	5,150	5,240	5,333	5,429	5,529	5,631	5,735	5,842	5,952	6,064
Greater than 15	268,061	252,889	254,851	258,404	262,504	266,923	271,570	276,403	281,399	286,544	291,830	297,251	302,804	308,489	314,303
Total Volumetric	277,904	262,175	264,265	267,949	272,201	276,782	281,601	286,613	291,794	297,129	302,609	308,231	313,990	319,884	325,913
Total Service Chage	11,264	11,489	11,719	11,953	12,192	12,436	12,685	12,938	13,197	13,461	13,730	14,005	14,285	14,571	14,862
Total Volumetric + Service Charge	289,168	273,664	275,984	279,903	284,393	289,218	294,286	299,551	304,991	310,590	316,340	322,236	328,275	334,455	340,775
% Service Charge	3.9%	4.2%	4.2%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.4%	4.4%	4.4%
% TIER 1 + Service Charge	5.5%	5.8%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Irrigation, City Exchange	5.570	3.070	3.370	3.370	3.370	3.370	3.370	3.370	0.070	0.070	0.070	0.070	0.070	0.070	0.070
1 to 8	\$455	\$385	\$392	\$397	\$404	\$411	\$418	\$425	\$433	\$441	\$449	\$458	\$466	\$475	\$484
8 to 15	516	437	442	449	456	464	472	480	489	498	507	517	526	536	546
Greater than 15	7,063	5,987	6,033	6,120	6,219	6,325	6,436	6,552	6,671	6,794	6,920	7,049	7,182	7,317	7,456
Total Volumetric	8,034	6,809	6,867	6,966	7,078	7,199	7,326	7,457	7,593	7,733	7,876	8,024	8,174	8,328	8,486
Total Service Chage	1,199	1,223	1,248	1,273	1,298	1,324	1,350	1,377	1,405	1,433	1.462	1,491	1,521	1,551	1,582
Total Volumetric + Service Charge	9,233	8,032	8,114	8,238	8,376	8,523	8,676	8,835	8,998	9,166	9,338	9,515	9,695	9,880	10,068
% Service Charge	13.0%	15.2%	15.4%	15.4%	15.5%	15.5%	15.6%	15.6%	15.6%	15.6%	15.7%	15.7%	15.7%	15.7%	15.7%
% TIER 1 + Service Charge	17.9%	20.0%	20.2%	20.3%	20.3%	20.4%	20.4%	20.4%	20.4%	20.4%	20.5%	20.5%	20.5%	20.5%	20.5%
10 TIEN 1 + Dervice Charge	17.9%	20.0%	20.2/0	20.5/0	20.370	20.470	20.470	20.4/0	20.470	20.470	20.370	20.370	20.370	20.370	20.5%

Fort Collins-Loveland Water District 2017 Rate & Fee Study Total Revenue at Existing Rates

	Actual	Estimated						Projected To	tal Revenue at Exi	sting Rates					
Customer Class	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Irrigation All		<u> </u>			<u> </u>				<u> </u>	<u> </u>	<u> </u>		<u>"</u>	<u>'</u>	
1 to 8	19,327	16,897	17,166	17,555	17,885	18,227	18,578	18,938	19,307	19,684	20,069	20,462	20,864	21,274	21,693
8 to 15	21,788	19,037	19,262	19,699	20,070	20,454	20,849	21,253	21,667	22,091	22,523	22,965	23,416	23,876	24,347
Greater than 15	1,217,873	1,062,355	1,070,599	1,095,339	1,116,130	1,137,597	1,159,640	1,182,220	1,205,320	1,228,933	1,253,056	1,277,693	1,302,846	1,328,523	1,354,731
Total Volumetric	1,258,989	1,098,289	1,107,027	1,132,592	1,154,086	1,176,278	1,199,067	1,222,412	1,246,295	1,270,707	1,295,648	1,321,120	1,347,126	1,373,674	1,400,770
Total Service Chage	78,191	79,754	81,350	82,977	84,636	86,329	88,055	89,817	91,613	93,445	95,314	97,220	99,165	101,148	103,171
Total Volumetric + Service Charge	1,337,179	1,178,043	1,188,377	1,215,569	1,238,722	1,262,607	1,287,122	1,312,229	1,337,907	1,364,152	1,390,962	1,418,340	1,446,291	1,474,822	1,503,941
% Service Charge	5.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%
% TIER 1 + Service Charge	7.3%	8.2%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%
Residential, Multi-Unit, FCLWD															
1 to 8	\$7,654	\$8,082	\$8,210	\$8,329	\$8,464	\$8,608	\$8,760	\$8,917	\$9,080	\$9,247	\$9,419	\$9,595	\$9,775	\$9,960	\$10,148
8 to 15	23,040	24,328	24,616	24,971	25,375	25,808	26,263	26,735	27,222	27,724	28,239	28,767	29,307	29,861	30,426
Greater than 15	156,037	164,763	166,042	168,433	171,160	174,083	177,149	180,333	183,621	187,003	190,477	194,037	197,684	201,415	205,231
Total Volumetric	186,730	197,173	198,869	201,733	204,998	208,499	212,172	215,985	219,923	223,974	228,134	232,399	236,766	241,235	245,805
Total Service Chage	237,341	242,088	246,929	251,868	256,905	262,043	267,284	272,630	278,083	283,644	289,317	295,103	301,006	307,026	313,166
Total Volumetric + Service Charge	424,071	439,261	445,798	453,601	461,904	470,543	479,456	488,615	498,005	507,619	517,451	527,502	537,772	548,261	558,971
% Service Charge	56.0%	55.1%	55.4%	55.5%	55.6%	55.7%	55.7%	55.8%	55.8%	55.9%	55.9%	55.9%	56.0%	56.0%	56.0%
% TIER 1 + Service Charge	57.8%	57.0%	57.2%	57.4%	57.5%	57.5%	57.6%	57.6%	57.7%	57.7%	57.7%	57.8%	57.8%	57.8%	57.8%
Residential, Multi-Unit, City Rates															
1 to 8	\$34,675	\$35,679	\$36,247	\$36,844	\$37,492	\$38,174	\$38,881	\$39,609	\$40,358	\$41,126	\$41,912	\$42,717	\$43,540	\$44,381	\$45,240
8 to 15	21,476	22,098	22,359	22,728	23,128	23,548	23,984	24,434	24,895	25,369	25,854	26,351	26.858	27.377	27,907
Greater than 15	24,631	25,344	25,541	25,961	26,418	26,898	27,396	27,910	28,438	28,979	29,533	30,100	30,680	31,272	31,877
Total Volumetric	80,782	83,121	84,147	85,533	87,039	88,620	90,261	91,953	93,691	95,474	97,299	99,168	101,078	103,030	105,024
Total Service Chage	97,445	99,394	101,382	103,409	105,477	107,587	109,739	111,933	114,172	116,456	118,785	121,160	123,584	126,055	128,576
Total Volumetric + Service Charge	178,226	182,514	185,528	188,942	192,516	196,207	200,000	203,886	207,863	211,929	216,084	220,328	224,661	229,085	233,601
% Service Charge	54.7%	54.5%	54.6%	54.7%	54.8%	54.8%	54.9%	54.9%	54.9%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%
% TIER 1 + Service Charge	74.1%	74.0%	74.2%	74.2%	74.3%	74.3%	74.3%	74.3%	74.3%	74.4%	74.4%	74.4%	74.4%	74.4%	74.4%
Multi-Family All	74.170	74.070	74.270	74.270	74.570	74.570	74.570	74.570	74.570	74.470	74.470	74.470	74.470	74.470	74.470
1 to 8	42,329	43,761	44,457	45,173	45,956	46,782	47,640	48,526	49,438	50,373	51,331	52,312	53,315	54,340	55,388
8 to 15	44,516	46,426	46,976	47,698	48,503	49,356	50,247	51,169	52,118	53,093	54,093	55,117	56,166	57,237	58,333
Greater than 15	180,667	190,107	191,582	194,395	197,578	200,981	204,546	208,243	212,058	215,982	220,009	224,137	228,363	232,687	237,108
Total Volumetric	267,512	280,294	283,015	287,266	292,037	297,120	302,433	307,938	313,614	319,448	325,434	331,566	337,844	344,265	350,830
Total Service Chage	334,786	341,481	348,311	355,277	362,383	369,630	377,023	384,563	392,255	400.100	408,102	416,264	424,589	433,081	441,742
Total Volumetric + Service Charge	602,297	621,775	631,326	642,543	654,420	666,750	679,456	692,501	705,868	719,548	733,535	747,830	762,433	777,346	792,572
% Service Charge	55.6%	54.9%	55.2%	55.3%	55.4%	55.4%	55.5%	55.5%	55.6%	55.6%	55.6%	55.7%	55.7%	55.7%	55.7%
% TIER 1 + Service Charge	62.6%	62.0%	62.2%	62.3%	62.4%	62.5%	62.5%	62.5%	62.6%	62.6%	62.6%	62.7%	62.7%	62.7%	62.7%
Grand Total All	02.070	02.070	02.270	02.570	02.470	02.570	02.570	02.570	02.070	02.070	02.070	02.770	02.770	02.770	02.770
1 to 8	1,842,329	1,721,963	1,733,104	1,744,701	1,758,500	1,773,524	1,789,356	1,805,793	1,822,720	1,840,065	1,857,782	1,875,841	1,894,218	1,912,900	1,931,873
8 to 15	1,072,253	1,002,915	1,005,830	1,012,999	1,021,443	1,030,624	1,040,295	1,050,337	1,060,680	1,071,283	1,082,120	1,093,173	1,104,428	1,115,877	1,127,513
Greater than 15	5,113,016	4,734,270	4,747,272	4,804,762	4,864,119	4,927,383	4,993,445	5,061,772	5,132,070	5,204,166	5,277,954	5,353,367	5,430,362	5,508,915	5,589,012
Total Volumetric	8,027,597	7,459,147	7,486,206	7,562,462	7,644,063	7,731,531	7,823,097	7,917,902	8,015,469	8,115,514	8,217,857	8,322,380	8,429,008	8,537,691	8,648,398
Total Service Chage	3,049,336	2,974,173	3,033,656	3,094,329	3,156,216	3,219,340	3,283,727	3,349,401	3,416,389	3,484,717	3,554,412	3,625,500	3,698,010	3,771,970	3,847,409
Total Volumetric + Service Charge	\$11,076,933	\$10,433,320	\$10,519,862	\$10,656,791	\$10,800,278	\$10,950,871	\$11,106,824	\$11,267,303	\$11,431,859	\$11,600,231	\$11,772,268	\$11,947,880	\$12,127,018	\$12,309,661	\$12,495,807
% Service Charge	27.5%	28.5%	28.8%	29.0%	29.2%	29.4%	29.6%	29.7%	29.9%	30.0%	30.2%	30.3%	30.5%	30.6%	30.8%
% TIER 1 + Service Charge	44.2%	45.0%	45.3%	45.4%	45.5%	45.6%	45.7%	45.8%	45.8%	45.9%	46.0%	46.0%	46.1%	46.2%	46.2%
70 HER 1 + Service Charge	44.2/0	45.070	45.570	43.470	43.370	45.070	43.770	45.670	45.870	43.370	40.070	40.076	40.170	40.270	40.270
Percentage in Each Consumption Block															
1 to 8	22.9%	23.1%	23.2%	23.1%	23.0%	22.9%	22.9%	22.8%	22.7%	22.7%	22.6%	22.5%	22.5%	22.4%	22.3%
8 to 15	13.4%	13.4%	13.4%	13.4%	13.4%	13.3%	13.3%	13.3%	13.2%	13.2%	13.2%	13.1%	13.1%	13.1%	13.0%
Greater than 15	63.7%	63.5%	63.4%	63.5%	63.6%	63.7%	63.8%	63.9%	64.0%	64.1%	64.2%	64.3%	64.4%	64.5%	64.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Valumetric as % of Total	72.5%	71.5%	71.2%	71.0%	70.00/	70.0%	70.40/	70.3%	70.1%	70.0%	60.897	69.7%	60 50/	69.4%	60.20/
Volumetric as % of Total	72.5% 27.5%	71.5% 28.5%	71.2% 28.8%	71.0% 29.0%	70.8% 29.2%	70.6% 29.4%	70.4%	70.3% 29.7%	70.1% 29.9%	70.0%	69.8% 30.2%		69.5% 30.5%	69.4% 30.6%	69.2% 30.8%
Fixed as % of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	29.6% 100.0%			30.0%	100.0%	30.3% 100.0%	100.0%		100.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Fort Collins-Loveland Water District 2017 Rate & Fee Study Detail of Miscellaneous Non-Rate Revenues

Page A-11 3/16/2018

		Actual	Estimated						Projected	Miscellaneous R	evenues					
	Item	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
30 Operating F	Revenue		•	•		<u> </u>		<u> </u>	<u> </u>	<u> </u>						
3012	Water sales - construction	\$161,892	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3014	Town of Windsor	366,299	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000
	Spring Canyon		113,368	113,368	113,368	113,368	113,368	113,368	113,368	113,368	113,368	113,368	113,368	113,368	113,368	113,368
3020	Water rental	213,815	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000
3150	Miscellaneous income	169,536	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
3200	Management fees - SFCSD	450,189	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871
	Total Operating	1,361,731	1,142,239	1,142,239	1,142,239	1,142,239	1,142,239	1,142,239	1,142,239	1,142,239	1,142,239	1,142,239	1,142,239	1,142,239	1,142,239	1,142,239
35 Non-Opera	iting Revenue (excluding PIFs)															
3510	Property taxes	1,116,199	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000
3530	Soldier Canyon Income	198,876	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3551	Interest on investments	246,603	260,000	260,000	260,000	260,000	260,000	260,000	260,000	260,000	260,000	260,000	260,000	260,000	260,000	260,000
3570	Meter fees	116,105	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000
3580	Impact fees	394,900	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000
3700	Sale of assets	(79,630)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3750	Inclusion fees	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Non-Operating	1,993,053	1,610,000	1,610,000	1,610,000	1,610,000	1,610,000	1,610,000	1,610,000	1,610,000	1,610,000	1,610,000	1,610,000	1,610,000	1,610,000	1,610,000
	Total	\$3,354,784	\$2,752,239	\$2,752,239	\$2,752,239	\$2,752,239	\$2,752,239	\$2,752,239	\$2,752,239	\$2,752,239	\$2,752,239	\$2,752,239	\$2,752,239	\$2,752,239	\$2,752,239	\$2,752,239

Fort Collins Loveland Water District Rate Study

Appendix A: Financial Plan

Page A-12 3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study Detail of PIF Revenues - Potential New Structures with Water Cost and Tap Fee Scaling

Hybrid PIF (Scaled Water Cost Only)	
PIF - Total Infrastructrue	\$10,869

Water Cost	
Cost per AF	\$21,836

	Actual	Estimated						Proj	ected PIF Reven	ues					
PIF Component	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Incremental SFRE Annual Growth			350	357	364	372	379	387	394	402	410	418	427	435	444
PIFs - Water Cost	\$10,057,500	\$6,250,000	\$7,645,279	\$7,798,185	\$7,954,148	\$8,113,231	\$8,275,496	\$8,441,006	\$8,609,826	\$8,782,022	\$8,957,663	\$9,136,816	\$9,319,552	\$9,505,943	\$9,696,062
PIFs - Infrastructure Component	2,942,100	1,700,000	3,805,574	3,881,685	3,959,319	4,038,505	4,119,275	4,201,661	4,285,694	4,371,408	4,458,836	4,548,013	4,638,973	4,731,753	4,826,388
Total PIF Revenues	\$12,999,600	\$7,950,000	\$11,450,853	\$11,679,870	\$11,913,467	\$12,151,737	\$12,394,771	\$12,642,667	\$12,895,520	\$13,153,430	\$13,416,499	\$13,684,829	\$13,958,526	\$14,237,696	\$14,522,450

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast of O&M Expenses

		Actual	Estimated						Summary of	Projected O&M	Expenses					
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
40	Source and Treatment	3,254,954	5,094,000	5,284,020	5,481,691	5,687,339	5,901,306	6,123,950	6,355,644	6,596,777	6,847,757	7,109,011	7,380,983	7,664,139	7,958,966	8,265,974
50	Engineering	324,747	538,500	555,763	573,599	592,029	611,072	630,751	651,088	672,105	693,828	716,280	739,487	763,476	788,276	813,914
60	Distribution	1,963,445	2,540,000	2,622,798	2,708,410	2,796,936	2,888,483	2,983,157	3,081,073	3,182,347	3,287,101	3,395,462	3,507,562	3,623,536	3,743,527	3,867,682
70	Office	714,991	839,950	867,398	895,781	925,134	955,491	986,890	1,019,367	1,052,962	1,087,715	1,123,669	1,160,868	1,199,358	1,239,185	1,280,400
80	Administration	622,120	762,660	764,847	788,776	813,473	838,962	865,270	892,424	920,453	949,385	979,252	1,010,083	1,041,912	1,074,772	1,108,699
	Total	6,880,257	9,775,110	10,094,826	10,448,257	10,814,911	11,195,315	11,590,018	11,999,595	12,424,644	12,865,786	13,323,673	13,798,983	14,292,421	14,804,727	15,336,668
40	Source and Treatment	47.3%	52.1%	52.3%	52.5%	52.6%	52.7%	52.8%	53.0%	53.1%	53.2%	53.4%	53.5%	53.6%	53.8%	53.9%
50	Engineering	4.7%	5.5%	5.5%	5.5%	5.5%	5.5%	5.4%	5.4%	5.4%	5.4%	5.4%	5.4%	5.3%	5.3%	5.3%
60	Distribution	28.5%	26.0%	26.0%	25.9%	25.9%	25.8%	25.7%	25.7%	25.6%	25.5%	25.5%	25.4%	25.4%	25.3%	25.2%
70	Office	10.4%	8.6%	8.6%	8.6%	8.6%	8.5%	8.5%	8.5%	8.5%	8.5%	8.4%	8.4%	8.4%	8.4%	8.3%
80	Administration	9.0%	7.8%	7.6%	7.5%	7.5%	7.5%	7.5%	7.4%	7.4%	7.4%	7.3%	7.3%	7.3%	7.3%	7.2%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

		Actual	Estimated						Detail of F	Projected O&M E	xpenses					
	Item	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
40 Source and	Treatment															
4010	Assessments	\$931,857	\$1,500,000	\$1,545,000	\$1,591,350	\$1,639,091	\$1,688,263	\$1,738,911	\$1,791,078	\$1,844,811	\$1,900,155	\$1,957,160	\$2,015,875	\$2,076,351	\$2,138,641	\$2,202,801
4020	Soldier Canyon	1,267,569	1,950,000	2,047,500	2,149,875	2,257,369	2,370,237	2,488,749	2,613,186	2,743,846	2,881,038	3,025,090	3,176,345	3,335,162	3,501,920	3,677,016
4060	City of Loveland	14,939	50,000	51,500	53,045	54,636	56,275	57,964	59,703	61,494	63,339	65,239	67,196	69,212	71,288	73,427
4070	FTC - Water Sale IGA	816,583	824,000	848,720	874,182	900,407	927,419	955,242	983,899	1,013,416	1,043,819	1,075,133	1,107,387	1,140,609	1,174,827	1,210,072
4071	FTC - Transmission charges	130,322	125,000	128,750	132,613	136,591	140,689	144,909	149,257	153,734	158,346	163,097	167,990	173,029	178,220	183,567
4072	FTC - Water Exchange IGA	8,919	123,000	126,690	130,491	134,405	138,438	142,591	146,868	151,274	155,813	160,487	165,302	170,261	175,369	180,630
4073	FTC - Water purchase	84,765	437,000	450,110	463,613	477,522	491,847	506,603	521,801	537,455	553,579	570,186	587,291	604,910	623,058	641,749
4080	North Weld County Water District	0	25,000	25,750	26,523	27,318	28,138	28,982	29,851	30,747	31,669	32,619	33,598	34,606	35,644	36,713
4090	R & M - Source and Supply	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4100	Water Resource Consulting	0	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
	Total	3,254,954	5,094,000	5,284,020	5,481,691	5,687,339	5,901,306	6,123,950	6,355,644	6,596,777	6,847,757	7,109,011	7,380,983	7,664,139	7,958,966	8,265,974
50 Engineering																
5000	Engineering wages	229,502	240,000	\$247,200	\$254,616	\$262,254	\$270,122	\$278,226	\$286,573	\$295,170	\$304,025	\$313,146	\$322,540	\$332,216	\$342,183	\$352,448
5010	Payroll taxes	19,291	20,000	20,600	21,218	21,855	22,510	23,185	23,881	24,597	25,335	26,095	26,878	27,685	28,515	29,371
5020	Medical insurance	36,000	36,000	37,800	39,690	41,675	43,758	45,946	48,243	50,656	53,188	55,848	58,640	61,572	64,651	67,883
5030	Life insurance	2,008	2,700	2,781	2,864	2,950	3,039	3,130	3,224	3,321	3,420	3,523	3,629	3,737	3,850	3,965
5040	Retirement	14,951	14,400	15,120	15,876	16,670	17,503	18,378	19,297	20,262	21,275	22,339	23,456	24,629	25,860	27,153
5050	Worker's compensation insurance	2,085	3,000	3,150	3,308	3,473	3,647	3,829	4,020	4,221	4,432	4,654	4,887	5,131	5,388	5,657
5060	Cell phone service	355	1,200	1,236	1,273	1,311	1,351	1,391	1,433	1,476	1,520	1,566	1,613	1,661	1,711	1,762
5065	Consulting	0	185,000	190,550	196,267	202,154	208,219	214,466	220,900	227,527	234,352	241,383	248,625	256,083	263,766	271,679
5070	Dues and subscriptions	335	1,200	1,236	1,273	1,311	1,351	1,391	1,433	1,476	1,520	1,566	1,613	1,661	1,711	1,762
5080	Education & training	936	6,000	6,180	6,365	6,556	6,753	6,956	7,164	7,379	7,601	7,829	8,063	8,305	8,555	8,811
5090	Fuel	1,130	2,000	2,100	2,205	2,315	2,431	2,553	2,680	2,814	2,955	3,103	3,258	3,421	3,592	3,771
5100	Miscellaneous	0	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305	1,344	1,384	1,426	1,469
5115	R & M - equipment	0	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	3,360	3,461	3,564	3,671
5120	R & M - vehicles	0	1,500	1,545	1,591	1,639	1,688	1,739	1,791	1,845	1,900	1,957	2,016	2,076	2,139	2,203
5125	Software maintenance	17,239	19,000	19,570	20,157	20,762	21,385	22,026	22,687	23,368	24,069	24,791	25,534	26,300	27,089	27,902
5130	Supplies	915	3,000	3,090	3,183	3,278	3,377	3,478	3,582	3,690	3,800	3,914	4,032	4,153	4,277	4,406
	Total	324,747	538,500	555,763	573,599	592,029	611,072	630,751	651,088	672,105	693,828	716,280	739,487	763,476	788,276	813,914

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast of O&M Expenses

		Actual	Estimated						Summary of	Projected O&M	Expenses					
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
60 Distribution	1				•		<u> </u>	<u> </u>	<u> </u>			•		<u> </u>		
6010	Wages	932,811	965,000	993,950	1,023,769	1,054,482	1,086,116	1,118,699	1,152,260	1,186,828	1,222,433	1,259,106	1,296,879	1,335,786	1,375,859	1,417,13
6020	Overtime & on-call pay	77,867	86,100	88,683	91,343	94,084	96,906	99,813	102,808	105,892	109,069	112,341	115,711	119,183	122,758	126,44
6030	Payroll taxes	76,789	85,000	87,550	90,177	92,882	95,668	98,538	101,494	104,539	107,675	110,906	114,233	117,660	121,190	124,82
6040	Medical insurance	192,000	192,000	201,600	211,680	222,264	233,377	245,046	257,298	270,163	283,671	297,855	312,748	328,385	344,804	362,045
6050	Life insurance	8,205	8,000	8,240	8,487	8,742	9,004	9,274	9,552	9,839	10,134	10,438	10,751	11,074	11,406	11,748
6060	Retirement	51,010	57,900	60,795	63,835	67,026	70,378	73,897	77,592	81,471	85,545	89,822	94,313	99,029	103,980	109,179
6070	Worker's compensation insurance	24,589	30,000	31,500	33,075	34,729	36,465	38,288	40,203	42,213	44,324	46,540	48,867	51,310	53,876	56,569
6080	R & M - lines & equipment	235,109	375,000	386,250	397,838	409,773	422,066	434,728	447,770	461,203	475,039	489,290	503,969	519,088	534,660	550,700
6081	R & M - emergency contingency	0	0	0	. 0	0	0	0	0	. 0	0	0	0	0	0	,
6082	R & M -tank cleaning	0	275,000	283,250	291,748	300,500	309,515	318,800	328,364	338,215	348,362	358,813	369,577	380,664	392,084	403,847
6090	Cell phone service	12,788	14,000	14,420	14,853	15,298	15,757	16,230	16,717	17,218	17,735	18,267	18,815	19,379	19,961	20,559
6100	Education & training	4,679	12,000	12,360	12,731	13,113	13,506	13,911	14,329	14,758	15,201	15,657	16,127	16,611	17,109	17,622
6110	Fuel	29,240	50,000	52,500	55,125	57,881	60,775	63,814	67,005	70,355	73,873	77,566	81,445	85,517	89,793	94,282
6115	Internet hosting	16,949	7,500	7,725	7,957	8,195	8,441	8,695	8,955	9,224	9,501	9,786	10,079	10,382	10,693	11,014
6117	Meter hosting service	12,717	60,000	61,800	63,654	65,564	67,531	69,556	71,643	73,792	76,006	78,286	80,635	83,054	85,546	88,112
6120	Office supplies	415	2.000	2.060	2,122	2,185	2,251	2,319	2,388	2,460	2,534	2,610	2,688	2,768	2,852	2,937
6140	R & M - vehicles	19,765	40,000	41,200	42,436	43,709	45,020	46,371	47,762	49,195	50,671	52,191	53,757	55,369	57,030	58,741
6150	Safety program	8,715	8,000	8,240	8,487	8,742	9,004	9,274	9,552	9,839	10,134	10,438	10,751	11,074	11,406	11,748
6160	Supplies	3,002	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	3,360	3,461	3,564	3,671
6170	Telemetry	17,885	12,000	12,360	12,731	13,113	13,506	13,911	14,329	14,758	15,201	15,657	16,127	16,611	17,109	17,622
6180	Uniforms	7,280	10,000	10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,037	13,439	13,842	14,258	14,685
6190	Utilities	190,930	205,000	211,150	217,485	224,009	230,729	237,651	244,781	252,124	259,688	267,479	275,503	283,768	292,281	301,049
6200	Utility locates	18,401	18,000	18,540	19,096	19,669	20,259	20,867	21,493	22,138	23,000	23,486	24,190	24,916	25,664	26,434
6210	Water quality testing	22,299	25,000	25,750	26,523	27,318	20,239	28,982	21,493	30,747	31,669	32,619	33,598	34,606	25,664 35,644	36,713
6210	Total	1,963,445	2,540,000	2,622,798			2,888,483				3,287,101	3,395,462	3,507,562		3,743,527	3,867,682
	Total	1,963,445	2,540,000	2,022,798	2,708,410	2,796,936	2,000,403	2,983,157	3,081,073	3,182,347	3,267,101	3,393,402	3,307,302	3,623,536	3,743,327	3,007,002
70 Office																
7000	Wages	419,143	460,000	473,800	488,014	502,654	517,734	533,266	549,264	565,742	582,714	600,196	618,202	636,748	655,850	675,526
7010	Payroll taxes	31,420	36,800	37,904	39,041	40,212	41,419	42,661	43,941	45,259	46,617	48,016	49,456	50,940	52,468	54,042
7010	Medical insurance	84,000	84,000	88,200	92,610	97,241	102,103	107,208	112,568	118,196	124,106	130,312	136,827	143,669	150,852	158,395
7020	Life insurance	3,537	4,000	4,120	4,244	4,371	4,502	4,637	4,776	4,919	5,067	5,219	5,376	5,537	5,703	5,874
7040	Retirement	23,715	27,600	28,980	30,429	31,950	4,502 33,548	35,225	36,987	38,836	40,778	42,817	44,957	47,205	49,566	52,044
7050	Worker's compensation insurance	955	850	28,980 893	937	984	1,033	1,085	1,139	1,196	1,256	1,319	1,385	1,454	1,526	1,603
7070	•	570	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	6,720	6,921	7,129	7,343
7100	Education & training Miscellaneous expense	415	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3.075	3,167	3,262	3,360	3,461	3,564	7,343 3,671
7100		7,158	22,000	,	23,340		2,814	2,898 25,504	26,269	27,057	27,869	28,705		30,453	31,367	32,308
	On-line bill processing	•	•	22,660		24,040	,		,	,	,		29,566	,	,	,
7110	Payroll processing	6,801	7,800	8,034	8,275	8,523	8,779	9,042	9,314	9,593	9,881	10,177	10,483	10,797	11,121	11,455
7120	Postage	44,883	58,000	59,740	61,532	63,378	65,280	67,238	69,255	71,333	73,473	75,677	77,947	80,286	82,694	85,175
7130	Printing	27,823	32,000	32,960	33,949	34,967	36,016	37,097	38,210	39,356	40,537	41,753	43,005	44,295	45,624	46,993
7140	Publications & notices	893	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305	1,344	1,384	1,426	1,469
7150	R & M - equipment	13,654	26,000	26,780	27,583	28,411	29,263	30,141	31,045	31,977	32,936	33,924	34,942	35,990	37,070	38,182
7155	Software maintenance	21,089	41,700	42,951	44,240	45,567	46,934	48,342	49,792	51,286	52,824	54,409	56,041	57,723	59,454	61,238
7160	Supplies	14,902	15,000	15,450	15,914	16,391	16,883	17,389	17,911	18,448	19,002	19,572	20,159	20,764	21,386	22,028
7170	Telephone	13,757	15,000	15,450	15,914	16,391	16,883	17,389	17,911	18,448	19,002	19,572	20,159	20,764	21,386	22,028
7190	Travel	276	700	721	743	765	788	811	836	861	887	913	941	969	998	1,028
	Total	714,991	839,950	867,398	895,781	925,134	955,491	986,890	1,019,367	1,052,962	1,087,715	1,123,669	1,160,868	1,199,358	1,239,185	1,280,400

Page A-13 3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast of O&M Expenses

		Actual	Estimated						Summary o	f Projected O&N	1 Expenses					
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
80 Administrati	on															
8000	Wages	187,488	147,000	151,410	155,952	160,631	165,450	170,413	175,526	180,791	186,215	191,802	197,556	203,482	209,587	215,874
8010	Payroll taxes	19,163	11,760	12,113	12,476	12,850	13,236	13,633	14,042	14,463	14,897	15,344	15,804	16,279	16,767	17,270
8020	Medical insurance	4,065	14,000	14,700	15,435	16,207	17,017	17,868	18,761	19,699	20,684	21,719	22,805	23,945	25,142	26,399
8030	Life insurance	774	1,200	1,236	1,273	1,311	1,351	1,391	1,433	1,476	1,520	1,566	1,613	1,661	1,711	1,762
8040	Retirement	12,360	11,760	12,348	12,965	13,614	14,294	15,009	15,760	16,548	17,375	18,244	19,156	20,114	21,119	22,175
8050	Worker's compensation insurance	1,955	2,500	2,625	2,756	2,894	3,039	3,191	3,350	3,518	3,694	3,878	4,072	4,276	4,490	4,714
8060	Directors fees	7,654	8,000	8,240	8,487	8,742	9,004	9,274	9,552	9,839	10,134	10,438	10,751	11,074	11,406	11,748
8070	Directors payroll taxes	644	640	659	679	699	720	742	764	787	811	835	860	886	912	940
8080	Directors expenses	13,803	10,000	10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,048	13,439	13,842	14,258	14,685
8090	Audit & consulting fees	10,000	11,000	11,330	11,670	12,020	12,381	12,752	13,135	13,529	13,934	14,353	14,783	15,227	15,683	16,154
8110	Collection Fees		21,000													
8115	Consulting Services		175,000	180,250	185,658	191,227	196,964	202,873	208,959	215,228	221,685	228,335	235,185	242,241	249,508	256,993
8120	Contingency	18,122	15,000	15,450	15,914	16,391	16,883	17,389	17,911	18,448	19,002	19,572	20,159	20,764	21,386	22,028
8130	Customer relations	2,642	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	3,360	3,461	3,564	3,671
8140	Dues & subscriptions	7,113	8,000	8,240	8,487	8,742	9,004	9,274	9,552	9,839	10,134	10,438	10,751	11,074	11,406	11,748
8150	Education & training	45	6,000	6,180	6,365	6,556	6,753	6,956	7,164	7,379	7,601	7,829	8,063	8,305	8,555	8,811
8160	Insurance - liability	36,996	45,000	46,350	47,741	49,173	50,648	52,167	53,732	55,344	57,005	58,715	60,476	62,291	64,159	66,084
8170	Insurance - property	32,235	35,000	36,050	37,132	38,245	39,393	40,575	41,792	43,046	44,337	45,667	47,037	48,448	49,902	51,399
8175	Janitorial service	8,430	10,500	10,815	11,139	11,474	11,818	12,172	12,538	12,914	13,301	13,700	14,111	14,534	14,970	15,420
8180	Legal	165,546	150,000	154,500	159,135	163,909	168,826	173,891	179,108	184,481	190,016	195,716	201,587	207,635	213,864	220,280
8190	Miscellaneous expenses	420	500	515	530	546	563	580	597	615	633	652	672	692	713	734
8200	R & M - land and building	19,173	30,000	30,900	31,827	32,782	33,765	34,778	35,822	36,896	38,003	39,143	40,317	41,527	42,773	44,056
8205	Trash removal service	1,440	1,800	1,854	1,910	1,967	2,026	2,087	2,149	2,214	2,280	2,349	2,419	2,492	2,566	2,643
8210	Travel - manager	8,695	11,400	11,742	12,094	12,457	12,831	13,216	13,612	14,021	14,441	14,874	15,321	15,780	16,254	16,741
8211	Utility - electricity	8,416	10,000	10,500	11,025	11,576	12,155	12,763	13,401	14,071	14,775	15,513	16,289	17,103	17,959	18,856
8212	Utility - gas	4,240	7,000	7,350	7,718	8,103	8,509	8,934	9,381	9,850	10,342	10,859	11,402	11,972	12,571	13,200
8213	Utility - sewer	1,339	1,600	1,680	1,764	1,852	1,945	2,042	2,144	2,251	2,364	2,482	2,606	2,737	2,873	3,017
8214	Utility - storm water	1,849	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	3,360	3,461	3,564	3,671
8215	Utility - water	1,700	2,000	2,060	2,122	2,185	2,251	2,319	2,388	2,460	2,534	2,610	2,688	2,768	2,852	2,937
8220	Water conservation	45,813	10,000	10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,048	13,439	13,842	14,258	14,685
	Total	622,120	762,660	764,847	788,776	813,473	838,962	865,270	892,424	920,453	949,385	979,252	1,010,083	1,041,912	1,074,772	1,108,699
	Grand Total	\$6,880,257	\$9,775,110	\$10,094,826	\$10,448,257	\$10,814,911	\$11,195,315	\$11,590,018	\$11,999,595	\$12,424,644	\$12,865,786	\$13,323,673	\$13,798,983	\$14,292,421	\$14,804,727	\$15,336,668

95.2%

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90.1%

9.9%

100.0%

89.3%

10.7%

100.0%

3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast of Uninflated CIP

% Growth CIP

Total CIP

% Non-Growth CIP

70.7%

29.3%

100.0%

83.6%

16.4%

100.0%

83.1%

16.9%

100.0%

23.1%

100.0%

Summary of CIP Projects								Projected I	Jninflated CIP								
by FCLWD Function	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2018 - 2030 Total	2017 - 2030 Total	2017 - 2030 Growth
Treatment	\$3,000,001	\$5,625,080	\$8,400,159	\$7,715,080	\$30,000	\$0	\$0	\$0	\$16,500,000	\$500,000	\$1,346,275	\$8,271,775	\$15,000,000	\$5,000,000	\$68,388,368	\$71,388,369	\$59,866,273
Raw Water & Water Rights	6,170,400	6,417,250	10,138,600	12,366,000	16,742,000	15,794,000	10,008,000	10,195,000	12,378,000	14,145,000	11,145,000	5,995,000	5,995,000	5,995,000	137,313,850	143,484,250	137,313,850
Water Storage	440,842	341,736	833,174	715,036	858,503	520,000	520,000	520,000	520,000	520,000	520,000	520,000	520,000	520,000	7,428,449	7,869,291	7,428,449
Meters	206,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	650,000	856,000	0
Distribution	637,000	4,298,400	1,123,000	2,878,800	2,847,040	1,892,400	4,251,960	2,338,800	375,000	3,280,000	1,375,000	8,323,000	8,323,000	375,000	41,681,400	42,318,400	28,566,800
Operations Equipment	125,000	96,000	126,000	76,000	132,000	96,000	251,000	76,000	132,000	96,000	126,000	76,000	132,000	96,000	1,511,000	1,636,000	0
Office & Engineering Equipment	58,000	48,500	48,500	48,500	48,500	48,500	48,500	48,500	48,500	48,500	48,500	48,500	48,500	48,500	630,500	688,500	0
Building Improvements & Equipment	68,500	10,000	10,000	10,000	10,000	10,000	10,000	110,000	1,010,000	10,000	10,000	10,000	10,000	10,000	1,100,000	1,168,500	0
Total Uninflated CIP	\$10,705,743	\$16,886,966	\$20,729,433	\$23,859,416	\$20,718,043	\$18,410,900	\$15,139,460	\$13,338,300	\$31,013,500	\$18,649,500	\$14,620,775	\$23,294,275	\$30,078,500	\$12,094,500	\$258,703,567	\$269,409,310	\$233,175,372
	Budget							Projected l	Jninflated CIP								
Uninflated CIP Summary	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2018 - 2030 Total	2017 - 2030 Total	
Total Uninflated CIP	\$10,705,743	\$16,886,966	\$20,729,433	\$23,859,416	\$20,718,043	\$18,410,900	\$15,139,460	\$13,338,300	\$31,013,500	\$18,649,500	\$14,620,775	\$23,294,275	\$30,078,500	\$12,094,500	\$258,833,567	\$269,539,310	
Growth CIP	7,573,705	14,111,442	17,227,385	18,341,892	18,734,023	17,065,200	12,421,480	11,696,900	29,398,000	16,455,000	14,011,275	22,734,775	29,463,000	11,515,000	233,175,372	240,749,076	
Non-Growth CIP	3,132,038	2,775,524	3,502,048	5,517,524	1,984,020	1,345,700	2,717,980	1,641,400	1,615,500	2,194,500	609,500	559,500	615,500	579,500	25,658,195	28,790,233	
Total Uninflated CIP	\$10,705,743	\$16,886,966	\$20,729,433	\$23,859,416	\$20,718,043	\$18,410,900	\$15,139,460	\$13,338,300	\$31,013,500	\$18,649,500	\$14,620,775	\$23,294,275	\$30,078,500	\$12,094,500	\$258,833,567	\$269,539,310	

92.7%

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5.2%

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88.2%

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				Budget									Projected U	ninflated CIP				
	PIF			Ĭ														
Project	Functionalization	% Growth	% Non-Growth	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2018 - 2030 Total
Treatment		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,																
Soldier Canyon Expansion	Treatment	70.0%	30.0%	1,246,375	4,185,080	8,370,159	4,185,080											16,740,318
Soldier Canyon Water treatment improvements	Treatment	0.0%	100.0%	992,498	,,	.,,	,,											
Soldier Canyon Control system improvements	Treatment	0.0%	100.0%	24,928														
Soldier Canyon Source of supply construction	Treatment	0.0%	100.0%	460,200														
Soldier Canyon Heavy equipment	Treatment	0.0%	100.0%	15,340														
Soldier Canyon Contingency	Treatment	0.0%	100.0%	260,660														
Purchase Fort Collins 5 MGD	Treatment	100.0%	0.0%									16,500,000						16,500,00
NISP: Groupe Regional WTP Land Purchase	Treatment	100.0%	0.0%		1,340,000													1,340,00
NISP: Groupe Regional WTP	Treatment	100.0%	0.0%		100,000	30,000	30,000	30,000					500,000	1,346,275	8,271,775	15,000,000	5,000,000	30,308,05
Pleasant Valley Pipe Line - Taste & Odor	Treatment	0.0%	100.0%				3,500,000											3,500,00
, ,																		
Raw Water & Water Rights																		1
Water Purchases - new	Raw Water	100.0%	0.0%	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	68,900,00
Water Rights - water resources	Raw Water	100.0%	0.0%	675,000	675,000	675,000	675,000	675,000	675,000	675,000	675,000	675,000	675,000	675,000	675,000	675,000	675,000	8,775,000
Legal, Engineering and Infrastructure	Source of Supply	100.0%	0.0%	195,400	67,250	32,600	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	319,85
NISP: Glade, Galeton, Poudre Dvrsn/PS/Pipe	Source of Supply	100.0%	0.0%		375,000	4,100,000	6,221,000	10,624,000	9,225,000	4,013,000	4,200,000	6,383,000	6,900,000	3,900,000			,,,,,	55,941,00
NISP: Northern Tier, County Line Pipe, SWSP PS	Source of Supply	100.0%	0.0%			31,000	150,000	123,000	574,000				1,250,000	1,250,000				3,378,000
Water Storage																		
Overland Trail Reservoirs	Source of Supply	100.0%	0.0%	409,492	322,963	813,379	694,718	837,660	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	7,168,720
North of Poudre storage investigations	Source of Supply	100.0%	0.0%	6,300														
Water Storage Acquisition	Source of Supply	100.0%	0.0%	25,050	18,773	19,795	20,318	20,843	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	259,729
,																		1
Meters																		1
New meters (300)	Meters	100.0%	0.0%	90,000														
Replacement meters (333)	Meters	0.0%	100.0%	100,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	520,00
Hydrant meters (10)	Meters	0.0%	100.0%	16,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	130,00
Distribution																		
PRV Removal/Replace	Distribution Mains	0.0%	100.0%	250,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	975,000
Telemetry upgrades	Distribution Mains	0.0%	100.0%	100,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	650,00
Pump Station Electrical Service	Pumps	0.0%	100.0%	12,000														
City/County Improvements	Distribution Mains	0.0%	100.0%	75,000			75,000			75,000			75,000					225,00
Main lining	Distribution Mains	0.0%	100.0%	200,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	1,625,00
Turman 14" PRV	Distribution Mains	0.0%	100.0%		375,000													375,00
287 14" PRV - Deferred	Distribution Mains	0.0%	100.0%	0														
Rectifier	Distribution Mains	50.0%	50.0%		25,000													25,00
Airport Pump Station Modifications	Pumps	50.0%	50.0%		250,000													250,00
Waterline oversizing	Transmission Mains	100.0%	0.0%		125,000													125,000
Contingency	Transmission Mains	0.0%	100.0%		263,000													263,000
SE Park 24" Water Line and Meter Vault	Transmission Mains	100.0%	0.0%		1,190,400													1,190,40
Airport 24" Water Line (Bore)	Transmission Mains	100.0%	0.0%		1,380,000													1,380,000
Longview 12" Water Line	Transmission Mains	50.0%	50.0%		300,000	508,000												808,00
24" Water Line US287 - I25 Phase 1	Transmission Mains	50.0%	50.0%			225,000	225,000											450,00
24" Water Line US287 - I25 Phase 2	Transmission Mains	50.0%	50.0%					2,207,040										2,207,04
24" Water Line US287 - I25 Phase 3	Transmission Mains	50.0%	50.0%							3,786,960								3,786,96
Carpenter Road 16" Water Line	Transmission Mains	50.0%	50.0%						1,502,400									1,502,40
Carpenter Road 12" Water Line	Transmission Mains	50.0%	50.0%								1,372,200							1,372,200
Airport 12" Water Line	Transmission Mains	50.0%	50.0%								591,600							591,60
Donath Lake 12" Water Line	Transmission Mains	50.0%	50.0%										2,580,000					2,580,000

3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast of Uninflated CIP

Timnath Landings 24" Oversizing	Transmission Mains	100.0%	0.0%				2,188,800											2,188,800
NISP: Finished 36" Water Transmission Line from																		
Groupe WTP to FCLWD Distribution	Transmission Mains	100.0%	0.0%											1,000,000	7,948,000	7,948,000		16,896,000
Service Line/Water Line Repair/Maintenance	Distribution Mains	0.0%	100.0%		125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	1,625,000
Tank Paint/Maintenance	Treated Water Storag	0.0%	100.0%					250,000					250,000					500,000
Pump Station Transfer/Disconnect	Pumps	0.0%	100.0%		15,000	15,000	15,000	15,000	15,000	15,000								90,000
Operations Equipment																		
0-Drive Upgrade I Notebook Replacements	Administration	0.0%	100.0%	18,000														0
Backflow program software	Administration	0.0%	100.0%	15,000														0
Vehicles	Administration	0.0%	100.0%	10,000		50,000		50,000		50,000		50,000		50,000		50,000		300,000
Valve Operating Truck	Administration	0.0%	100.0%							125,000								125,000
John Deere Roll Over Program	Administration	0.0%	100.0%		20,000				20,000				20,000				20,000	80,000
Skidster Mini X rollover	Administration	0.0%	100.0%	6,000				6,000				6,000				6,000		18,000
Power Tools	Administration	0.0%	100.0%	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	104,000
Misc	Administration	0.0%	100.0%	68,000	68,000	68,000	68,000	68,000	68,000	68,000	68,000	68,000	68,000	68,000	68,000	68,000	68,000	884,000
Office & Engineering Equipment																		
8 Computers - office	Administration	0.0%	100.0%	24.000	24.000	24.000	24.000	24.000	24.000	24.000	24.000	24.000	24.000	24.000	24.000	24.000	24,000	312,000
Computers/equipment - engineering	Administration	0.0%	100.0%	13,000	13.000	13,000	13.000	13,000	13.000	13.000	13.000	13,000	13,000	13.000	13,000	13.000	13.000	169,000
Printer - engineering	Administration	0.0%	100.0%	4,500	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	15,000	15,000	13,000	105,000
Digital pressure recorders	Administration	0.0%	100.0%	5,000														0
Misc	Administration	0.0%	100.0%	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	149,500
Building Improvements & Equipment																		
Temperature sensor for server room	Administration	0.0%	100.0%	8,500														0
Re-vent cooling to server room	Administration	0.0%	100.0%	10,000														0
Front desk security	Administration	0.0%	100.0%	50,000														0
Makida and Endament Change Building	A description of the second	0.00/	400.00/								400 000	4 000 000						4 400 000
Vehicle and Equipment Storage Building	Administration	0.0%	100.0%								100,000	1,000,000						1,100,000
Carpet/Roof/Misc.	Administration	0.0%	100.0%		10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast Inflated CIP

Summary of CIP Projects	Budget							Projecte	ed Inflated CIP								
by FCLWD Function	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2017 - 2030 Total	2018 - 2030 Total	2017 - 2030 Growth Total
Treatment	3,000,001	5,793,832	8,911,729	8,430,476	33,765	0	0	0	20,901,706	652,387	1,809,281	11,450,071	21,386,413	7,342,669	89,712,329	86,712,328	77,558,679
Raw Water & Water Rights	6,170,400	6,609,768	10,756,041	13,512,662	18,843,268	18,309,575	11,950,075	12,538,564	15,680,080	18,456,017	14,977,948	8,298,482	8,547,437	8,803,860	173,454,176	167,283,776	167,283,776
Water Storage	440,842	351,988	883,914	781,339	966,253	602,823	620,907	639,534	658,720	678,482	698,837	719,802	741,396	763,638	9,548,474	9,107,632	9,107,632
Meters	206,000	51,500	53,045	54,636	56,275	57,964	59,703	61,494	63,339	65,239	67,196	69,212	71,288	73,427	1,010,316	804,316	0
Distribution	637,000	4,283,152	1,042,865	2,992,761	2,765,420	2,031,512	4,909,895	2,722,695	316,693	3,790,366	335,979	346,058	356,440	367,133	26,897,969	26,260,969	13,240,452
Operations Equipment	125,000	98,880	133,673	83,047	148,567	111,290	299,707	93,470	167,214	125,258	169,333	105,202	188,200	140,979	1,989,822	1,864,822	0
Office & Engineering Equipment	58,000	49,955	51,454	52,997	54,587	56,225	57,912	59,649	61,438	63,281	65,180	67,135	69,149	71,224	838,187	780,187	0
Building Improvements & Equipment	68,500	10,300	10,609	10,927	11,255	11,593	11,941	135,286	1,279,438	13,048	13,439	13,842	14,258	14,685	1,619,121	1,550,621	0
Total Uninflated CIP	10,705,743	17,249,374	21,843,329	25,918,846	22,879,391	21,180,981	17,910,140	16,250,692	39,128,628	23,844,078	18,137,193	21,069,804	31,374,581	17,577,614	305,070,395	294,364,652	267,190,540

	Budget								Projected Infla	ited CIP						
Summary	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2017 - 2030 Total	2018 - 2030 Total
Total Inflated CIP	10,705,743	17,393,574	21,991,855	26,071,828	23,318,340	21,343,279	18,077,307	16,404,427	39,286,974	24,333,367	19,649,099	32,244,724	42,884,749	17,761,181	331,466,447	320,760,705
Growth CIP	7,573,705	14,534,785	18,276,533	20,042,680	21,085,308	19,783,244	14,831,897	14,385,712	37,240,507	21,470,043	18,829,982	31,470,246	42,007,193	16,910,166	298,441,999	290,868,294
Non-Growth CIP	3,132,038	2,858,790	3,715,322	6,029,147	2,233,032	1,560,035	3,245,410	2,018,715	2,046,467	2,863,325	819,117	774,479	877,556	851,015	33,024,448	29,892,410
Total Inflated CIP	10,705,743	17,393,574	21,991,855	26,071,828	23,318,340	21,343,279	18,077,307	16,404,427	39,286,974	24,333,367	19,649,099	32,244,724	42,884,749	17,761,181	331,466,447	320,760,705
% Growth CIP	70.7%	83.6%	83.1%	76.9%	90.4%	92.7%	82.0%	87.7%	94.8%	88.2%	95.8%	97.6%	98.0%	95.2%	90.0%	90.7%
% Non-Growth CIP	29.3%	16.4%	16.9%	23.1%	9.6%	7.3%	18.0%	12.3%	5.2%	11.8%	4.2%	2.4%	2.0%	4.8%	10.0%	9.3%
Total CIP	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Uninflated Growth CIP	7,573,705	14,111,442	17,227,385	18,341,892	18,734,023	17,065,200	12,421,480	11,696,900	29,398,000	16,455,000	14,011,275	22,734,775	29,463,000	11,515,000	240,749,076	233,175,372
Uninflated Non- Growth CIP	3,132,038	2,775,524	3,502,048	5,517,524	1,984,020	1,345,700	2,717,980	1,641,400	1,615,500	2,194,500	609,500	559,500	615,500	579,500	28,790,233	25,658,195
Total Uninflated CIP	10,705,743	16,886,966	20,729,433	23,859,416	20,718,043	18,410,900	15,139,460	13,338,300	31,013,500	18,649,500	14,620,775	23,294,275	30,078,500	12,094,500	269,539,310	258,833,567
Inflated Growth CIP	7,573,705	14,534,785	18,276,533	20,042,680	21,085,308	19,783,244	14,831,897	14,385,712	37,240,507	21,470,043	18,829,982	31,470,246	42,007,193	16,910,166	298,441,999	290,868,294
Inflated Non-Growth CIP	3,132,038	2,858,790	3,715,322	6,029,147	2,233,032	1,560,035	3,245,410	2,018,715	2,046,467	2,863,325	819,117	774,479	877,556	851,015	33,024,448	29,892,410
Total Inflated CIP	10,705,743	17,393,574	21,991,855	26,071,828	23,318,340	21,343,279	18,077,307	16,404,427	39,286,974	24,333,367	19,649,099	32,244,724	42,884,749	17,761,181	331,466,447	320,760,705
Difference Due to Inflation - Growth CIP	0	423,343	1,049,148	1,700,789	2,351,285	2,718,044	2,410,417	2,688,812	7,842,507	5,015,043	4,818,707	8,735,471	12,544,193	5,395,166	57,692,923	57,692,923
Difference Due to Inflation - Non-Growth	0	83,266	213,275	511,623	249,012	214,335	527,430	377,315	430,967	668,825	209,617	214,979	262,056	271,515	4,234,215	4,234,215
Total Cost Increase Due to Inflation	0	506,609	1,262,422	2,212,412	2,600,297	2,932,379	2,937,847	3,066,127	8,273,474	5,683,867	5,028,324	8,950,449	12,806,249	5,666,681	61,927,138	61,927,138

Cumulative Summary of CIP	Budget						Cumula	tive Projected In	flated CIP						Test Year
by Raftelis Function	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2018
Raw Water	5,975,000	12,129,250	18,468,128	24,997,171	31,722,086	38,648,749	45,783,212	53,131,708	60,700,659	68,496,679	76,526,579	84,797,377	93,316,298	102,090,787	12,129,250
Source of Supply	636,242	1,443,748	6,744,825	14,509,783	27,594,389	39,580,123	45,016,643	50,846,245	59,616,095	70,954,574	78,601,458	79,348,944	80,118,855	80,911,863	1,443,748
Treatment	3,000,001	8,793,832	17,705,561	26,136,037	26,169,802	26,169,802	26,169,802	26,169,802	47,071,508	47,723,895	49,533,176	60,983,247	82,369,660	89,712,329	8,793,832
Transmission Mains	0	3,356,152	4,133,792	6,771,416	9,255,459	10,997,152	15,518,981	17,934,207	17,934,207	21,300,522	22,644,438	33,646,329	44,978,277	44,978,277	3,356,152
Distribution Mains	625,000	1,423,250	1,821,088	2,312,815	2,734,880	3,169,608	3,706,932	4,168,134	4,643,173	5,230,321	5,734,290	6,253,378	6,788,038	7,338,738	1,423,250
Treated Water Storage	0	0	0	0	281,377	281,377	281,377	281,377	281,377	607,570	607,570	607,570	607,570	607,570	0
Pumps	12,000	284,950	300,864	317,254	334,137	351,526	369,437	369,437	369,437	369,437	369,437	369,437	369,437	369,437	284,950
Meters	206,000	257,500	310,545	365,181	421,457	479,420	539,123	600,617	663,955	729,194	796,390	865,601	936,890	1,010,316	257,500
Customer Service	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administration	251,500	410,635	606,371	753,343	967,752	1,146,860	1,516,419	1,804,825	3,312,914	3,514,502	3,762,455	3,948,634	4,220,241	4,447,130	410,635
Total	10,705,743	28,099,317	50,091,172	76,163,000	99,481,340	120,824,619	138,901,926	155,306,352	194,593,326	218,926,694	238,575,793	270,820,517	313,705,266	331,466,447	28,099,317

			Budget									Forecast Inf	lated CIP				
Functionalization	% Growth	% Non-Growth	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2018 - 2030 Total
Treatment	70.0%	30.0%	1,246,375	4,310,632	8,879,902	4,573,149	0	0	0	0	0	0	0	0	0	0	17,763,6
Treatment	0.0%	100.0%	992,498	0	0	0	0	0	0	0	0	0	0	0	0	0	
Treatment	0.0%	100.0%	24,928	0	0	0	0	0	0	0	0	0	0	0	0	0	
Treatment	0.0%	100.0%	460,200	0	0	0	0	0	0	0	0	0	0	0	0	0	
Treatment	0.0%	100.0%	15,340	0	0	0	0	0	0	0	0	0	0	0	0	0	
Treatment	0.0%	100.0%	260,660	0	0	0	0	0	0	0	0	0	0	0	0	0	
Treatment	100.0%	0.0%	0	0	0	0	0	0	0	0	20,901,706	0	0	0	0	0	20,901,
Treatment	100.0%	0.0%	0	1,380,200	0	0	0	0	0	0	0	0	0	0	0	0	1,380,
Treatment	100.0%	0.0%	0	103,000	31,827	32,782	33,765	0	0	0	0	652,387	1,809,281	11,450,071	21,386,413	7,342,669	42,842,
Treatment	0.0%	100.0%	0	0	0	3,824,545	0	0	0	0	0	0	0	0	0	0	3,824,
Raw Water	100.0%	0.0%	5,300,000	5,459,000	5,622,770	5,791,453	5,965,197	6,144,153	6,328,477	6,518,331	6,713,881	6,915,298	7,122,757	7,336,440	7,556,533	7,783,229	85,257,
Raw Water	100.0%	0.0%	675,000	695,250	716,108	737,591	759,718	782,510	805,985	830,165	855,070	880,722	907,144	934,358	962,389	991,260	10,858
Source of Supply	100.0%	0.0%	195,400	69,268	34,585	21,855	22,510	23,185	23,881	24,597	25,335	26,095	26,878	27,685	28,515	29,371	383

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast Inflated CIP

Source of Supply	100.0%	0.0%	0	386,250	4,349,690	6,797,855	11,957,406	10,694,303	4,791,732	5,165,470	8,085,793	9,002,935	5,241,274	0	0	0	66,47
Source of Supply	100.0%	0.0%	0	0	32,888	163,909	138,438	665,423	0	0,103,470	0,003,733	1,630,966	1,679,895	0	0	0	4,31
Source of Supply	200.070	0.070		J	32,000	103,303	130,130	003,123	J	J	J	1,030,300	1,013,033				1,52
Source of Supply	100.0%	0.0%	409,492	332,652	862,914	759,137	942,794	579,637	597,026	614,937	633,385	652,387	671,958	692,117	712,880	734,267	8,78
Source of Supply	100.0%	0.0%	6,300	0	002,511	0	0	0	0	011,557	033,303	032,307	0.1,550	0	0	751,207	0,71
Source of Supply	100.0%	0.0%	25,050	19,336	21,001	22,202	23,459	23,185	23,881	24,597	25,335	26,095	26,878	27,685	28,515	29,371	32
		0.0,1	,	,	,	,	20,100	,		,		,	,	,	,		
Meters	100.0%	0.0%	90,000	0	0	0	0	0	0	0	0	0	0	0	0	0	
Meters	0.0%	100.0%	100,000	41,200	42,436	43,709	45,020	46,371	47,762	49,195	50,671	52,191	53,757	55,369	57,030	58,741	64
Meters	0.0%	100.0%	16,000	10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,048	13,439	13,842	14,258	14,685	16
Meters	0.0%	100.0%	16,000	10,500	10,609	10,927	11,255	11,595	11,941	12,299	12,008	13,046	15,459	15,642	14,236	14,003	10
Distribution Mains	0.0%	100.0%	250,000	77,250	79,568	81,955	84,413	86,946	89,554	92,241	95,008	97,858	100,794	103,818	106,932	110,140	1,20
Distribution Mains	0.0%	100.0%	100,000	51,500	53,045	54,636	56,275	57,964	59,703	61,494	63,339	65,239	67,196	69,212	71,288	73,427	80
Pumps	0.0%	100.0%	12,000	0	0	0	0	0	0	0	05,555	05,233	0	0		0	0.
Distribution Mains	0.0%	100.0%	75,000	0	0	81,955	0	0	89,554	0	0	97,858	0	0			2
Distribution Mains	0.0%	100.0%	200,000	128,750	132,613	136,591	140,689	144,909	149,257	153,734	158,346	163,097	167,990	173,029	178,220	183,567	2,0
Distribution Mains	0.0%	100.0%	200,000	386,250	132,013	130,331	0	144,303	0	133,734	138,340	103,037	0	173,029	0		3
Distribution Mains	0.0%	100.0%	0	380,230	0	0	0	0	0	0	0	0	0	0			-
	50.0%	50.0%	0	25,750	0	0	0	0	0	0	0	0	0	0			
Distribution Mains Pumps	50.0%	50.0%	0	257,500	0	0	0	0	0	0	0	0	0	0			2
	100.0%	0.0%	0	128,750	0	0	0	0		0	0	0	0	0			1
Transmission Mains									0			-					2
Transmission Mains	0.0%	100.0%	0	270,890	0	0	0	0	0	0	0	0	0	0			
Transmission Mains	100.0%	0.0%	0	1,226,112	0	0	0	0	0	0	0	0	0	0			1,2
Transmission Mains	100.0%	0.0%	0	1,421,400	0	0	0	0	0	0	0	0	0	0			1,4
Transmission Mains	50.0%	50.0%	0	309,000	538,937	0	0	0	0	0	0	0	0	0			;
Transmission Mains	50.0%	50.0%	0	0	238,703	245,864	0	0	0	0	0	0	0	0			4
Transmission Mains	50.0%	50.0%	0	0	0	0	2,484,043	0	0	0	0	0	0	0		0	2,4
Transmission Mains	50.0%	50.0%	0	0	0	0	0	0	4,521,828	0	0	0	0	0			4,5
Transmission Mains	50.0%	50.0%	0	0	0	0	0	1,741,693	0	0	0	0	0	0			1,7
Transmission Mains	50.0%	50.0%	0	0	0	0	0	0	0	1,687,633	0	0	0	0	0	0	1,6
Transmission Mains	50.0%	50.0%	0	0	0	0	0	0	0	727,593	0	0	0	0	0	0	7
Transmission Mains	50.0%	50.0%	0	0	0	0	0	0	0	0	0	3,366,315	0	0	0	0	3,3
Transmission Mains	100.0%	0.0%	0	0	0	2,391,761	0	0	0	0	0	0	0	0	0	0	2,3
Transmission Mains	100.0%	0.0%	0	0	0	0	0	0	0	0	0	0	1,343,916	11,001,891	11,331,948	0	23,6
Distribution Mains	0.0%	100.0%	0	128,750	132,613	136,591	140,689	144,909	149,257	153,734	158,346	163,097	167,990	173,029	178,220	183,567	2,0
Treated Water Storage	0.0%	100.0%	0	0	0	0	281,377	0	0	0	0	326,193	0	0	0	0	(
Pumps	0.0%	100.0%	0	15,450	15,914	16,391	16,883	17,389	17,911	0	0	0	0	0	0	0	
Administration	0.0%	100.0%	18,000	0	0	0	0	0	0	0	0	0	0	0	0	0	
Administration	0.0%	100.0%	15,000	0	0	0	0	0	0	0	0	0	0	0	0	0	
Administration	0.0%	100.0%	10,000	0	53,045	0	56,275	0	59,703	0	63,339	0	67,196	0	71,288	0	
Administration	0.0%	100.0%	0	0	0	0	0	0	149,257	0	0	0	0	0		0	
Administration	0.0%	100.0%	0	20,600	0	0	0	23,185	0	0	0	26,095	0	0	0	29,371	
Administration	0.0%	100.0%	6,000	0	0	0	6,753	0	0	0	7,601	0	0	0		0	
Administration	0.0%	100.0%	8,000	8,240	8,487	8,742	9,004	9,274	9,552	9,839	10,134	10,438	10,751	11,074	11,406	11,748	
Administration	0.0%	100.0%	68,000	70,040	72,141	74,305	76,535	78,831	81,196	83,631	86,140	88,725	91,386	94,128	96,952	99,860	1
			,	-7		,	.,	-,	.,	,	,	,	. ,	. ,	,	,	
Administration	0.0%	100.0%	24.000	24,720	25,462	26,225	27,012	27,823	28,657	29,517	30,402	31,315	32,254	33,222	34,218	35,245	
Administration	0.0%	100.0%	13,000	13,390	13,792	14,205	14,632	15,071	15,523	15,988	16,468	16,962	17,471	17,995	18,535	19,091	
Administration	0.0%	100.0%	4,500	0	0	0	0	0	0	0	0	0	0	0	0	0	
Administration	0.0%	100.0%	5,000	0	0	0	0	0	0	0	0	0	0	0	0	0	
Administration	0.0%	100.0%	11,500	11,845	12,200	12,566	12,943	13,332	13,732	14,144	14,568	15,005	15,455	15,919	16,396	16,888	
, willingtration	0.070	100.070	11,500	11,043	12,200	12,500	12,543	13,332	13,732	17,144	14,500	13,003	15,455	13,313	10,350	10,000	
	 						+										
Administration	0.0%	100.0%	8,500	0	0	0	0	0	0	0	0	0	0	0	0	0	
Administration							-									-	
Administration	0.0%	100.0%	10,000	0	0	0	0	0	0	0	0	0	0	0			
Administration	0.0%	100.0%	50,000	0	0	0	0	0	0	0	0	0	0	0	0	0	_
Administration	0.0%	100.0%	0	0	0	0	0	0	0	122,987	1,266,770	0	0	0	0	0	1,
Administration	0.0%	100.0%	0	10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,048	13,439	13,842	14,258	14,685	

Page A-16 3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study CIP Fund (Growth and Non-Growth)

	Budget					Projected	CIP Fund Sources	and Uses for Grov	vth Capital Expend	litures				
Growth CIP Fund	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Sources of Funds				•			•	•	•					
Beginning Balance	\$3,212,747	\$3,589,043	\$507,636	(\$6,089,027)	\$19,876,533	\$8,382,609	\$32,549,904	\$25,282,342	\$48,576,107	\$17,093,156	\$31,461,622	\$16,641,548	\$19,214,105	(\$18,313,108
Transfer In from Operations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PIFs - Water Resource Component	6,250,000	7,645,279	7,798,185	7,954,148	8,113,231	8,275,496	8,441,006	8,609,826	8,782,022	8,957,663	9,136,816	9,319,552	9,505,943	9,696,062
PIFs - Infrastructure Component	1,700,000	3,805,574	3,881,685	3,959,319	4,038,505	4,119,275	4,201,661	4,285,694	4,371,408	4,458,836	4,548,013	4,638,973	4,731,753	4,826,388
Total PIFs	7,950,000	11,450,853	11,679,870	11,913,467	12,151,737	12,394,771	12,642,667	12,895,520	13,153,430	13,416,499	13,684,829	13,958,526	14,237,696	14,522,450
Growth CIP Bond Proceeds	0	0	0	36,597,943	0	36,597,943	0	32,023,200	0	32,023,200	0	32,023,200	0	0
Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest Income	0	2,526	0	98,888	41,705	161,940	125,783	241,672	85,041	156,525	82,794	95,593	0	0
Total Sources	11,162,747	15,042,421	12,187,506	42,521,271	32,069,974	57,537,262	45,318,353	70,442,733	61,814,578	62,689,380	45,229,245	62,718,866	33,451,801	(3,790,658
Uses of Funds														
Growth CIP	7,573,705	14,534,785	18,276,533	20,042,680	21,085,308	19,783,244	14,831,897	14,385,712	37,240,507	21,470,043	18,829,982	31,470,246	42,007,193	16,910,166
Proposed Growth Debt Service	0	0	0	2,602,057	2,602,057	5,204,115	5,204,115	7,480,915	7,480,915	9,757,715	9,757,715	12,034,515	9,757,715	9,757,715
Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Uses	7,573,705	14,534,785	18,276,533	22,644,738	23,687,365	24,987,359	20,036,012	21,866,627	44,721,422	31,227,758	28,587,697	43,504,761	51,764,908	26,667,881
Ending Balance	3,589,043	507,636	(6,089,027)	19,876,533	8,382,609	32,549,904	25,282,342	48,576,107	17,093,156	31,461,622	16,641,548	19,214,105	(18,313,108)	(30,458,539
Target Reserve	3,633,696	4,569,133	5,010,670	5,271,327	4,945,811	3,707,974	3,596,428	9,310,127	5,367,511	4,707,495	7,867,561	10,501,798	4,227,541	3,633,696
Variance from Target Reserve	(\$44,654)	(\$4,061,497)	(\$11,099,697)	\$14,605,206	\$3,436,798	\$28,841,929	\$21,685,914	\$39,265,980	\$11,725,645	\$26,754,127	\$8,773,986	\$8,712,306	(\$22,540,649)	(\$34,092,235
	Budget					Projected CI	P Fund Sources an	d Uses for Non-Gr	owth Capital Expe	nditures				
Non-Growth CIP Fund	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Sources of Funds Beginning Balance	\$0	\$32,046,161	\$30,651,147	\$28,625,190	\$24,517,721	\$24,450,508	\$25,421,271	\$25,041,432	\$27,372,562	\$30,083,612	\$32,414,833	\$37,273,009	\$42,696,595	\$48,577,581
Transfer In from Operations	35,178,199	1,311,283	1,546,951	1,799,700	2,044,174	2,404,324	2,740,987	4,213,663	4,607,847	5,033,278	5,491,855	5,985,644	6,516,862	7,087,890
Non-Growth CIP Bond Proceeds	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest Income	0	152,493	142,414	121,979	121,644	126,474	124,584	136,182	149,670	161,268	185,438	212,421	241,680	274,072
Total Sources	35,178,199	33,509,937	32,340,512	30,546,869	26,683,540	26,981,306	28,286,842	29,391,277	32,130,079	35,278,158	38,092,126	43,471,074	49,455,137	55,939,543
Uses of Funds														
Non-Growth CIP	3,132,038	2,858,790	3,715,322	6,029,147	2,233,032	1,560,035	3,245,410	2,018,715	2,046,467	2,863,325	819,117	774,479	877,556	851,015
Proposed Non-Growth Debt Service	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Uses	3,132,038	2,858,790	3,715,322	6,029,147	2,233,032	1,560,035	3,245,410	2,018,715	2,046,467	2,863,325	819,117	774,479	877,556	851,015
Ending Balance	32,046,161	30,651,147	28,625,190	24,517,721	24,450,508	25,421,271	25,041,432	27,372,562	30,083,612	32,414,833	37,273,009	42,696,595	48,577,581	55,088,528
Target Reserve	714,697	928,831	1,507,287	558,258	390,009	811,353	504,679	511,617	715,831	204,779	193,620	219,389	212,754	714,697
Variance from Target Reserve	\$31,331,464	\$29,722,317	\$27,117,903	\$23,959,463	\$24,060,499	\$24,609,919	\$24,536,753	\$26,860,946	\$29,367,781	\$32,210,054	\$37,079,389	\$42,477,206	\$48,364,827	\$54,373,830

Page A-17 3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study Growth CIP Financing

Discount Rate	4.77%

Proposed Debt Issues						Projected	Debt Service fo	r Growth CIP Finar	cing					
Item	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Amount of Issue	\$0	\$0	\$0	\$40,000,000	\$0	\$40,000,000	\$0	\$35,000,000	\$0	\$35,000,000	\$0	\$35,000,000	\$0	\$(
Equal Annual Debt Service	0	0	0	2,602,057	0	2,602,057	0	2,276,800	0	2,276,800	0	2,276,800	0	
Bond Issuance Expense	0	0	0	800,000	0	800,000	0	700,000	0	700,000	0	700,000	0	(
Debt Service Reserve	0	0	0	2,602,057	0	2,602,057	0	2,276,800	0	2,276,800	0	2,276,800	0	(
Net Bond Proceeds	0	0	0	36,597,943	0	36,597,943	0	32,023,200	0	32,023,200	0	32,023,200	0	(
Bond Issue Terms														
Month of Issue (Jan = 1)	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Repayment Delay (up to 15 years)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest Rate (Annual Coupon Rate)	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Payment Period (Years)	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Issuance Expense (% of Total Issue)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Debt Service Reserve (% of Annual Debt Service)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Proposed Total Debt Service														
2017 Revenue Bond Issue	0	0	0	0	0	0	0	0	0	0	0	0	0	
2018 Revenue Bond Issue		0	0	0	0	0	0	0	0	0	0	0	0	
2019 Revenue Bond Issue			0	0	0	0	0	0	0	0	0	0	0	
2020 Revenue Bond Issue				2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,05
2021 Revenue Bond Issue					0	0	0	0	0	0	0	0	0	
2022 Revenue Bond Issue						2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,05
2023 Revenue Bond Issue							0	0	0	0	0	0	0	
2024 Revenue Bond Issue								2,276,800	2,276,800	2,276,800	2,276,800	2,276,800	2,276,800	2,276,80
2025 Revenue Bond Issue									0	0	0	0	0	
2026 Revenue Bond Issue										2,276,800	2,276,800	2,276,800	2,276,800	2,276,80
2027 Revenue Bond Issue											0	0	0	
2028 Revenue Bond Issue												2,276,800	2,276,800	2,276,80
2029 Revenue Bond Issue													0	
2030 Revenue Bond Issue														
Proposed Total Debt Service	\$0	\$0	\$0	\$2,602,057	\$2,602,057	\$5,204,115	\$5,204,115	\$7,480,915	\$7,480,915	\$9,757,715	\$9,757,715	\$12,034,515	\$12,034,515	\$12,034,51

Appendix A: Financial Plan

Page A-18 3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study

Non-Growth CIP Financing Discount Rate 4.77%

Proposed Debt Issues						Projected D	ebt Service for N	Ion-Growth CIP F	inancing					
Item	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Amount of Issue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equal Annual Debt Service	0	(•	0	0	0	0	0	0	0	0	0	0
Bond Issuance Expense	0	() 0	0	0	0	0	0	0	0	0	0	0	0
Debt Service Reserve	0	() 0	0	0	0	0	0	0	0	0	0	0	0
Net Bond Proceeds	0	() 0	0	0	0	0	0	0	0	0	0	0	0
Bond Issue Terms														
Month of Issue (Jan = 1)	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Repayment Delay (up to 15 years)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest Rate (Annual Coupon Rate)	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Payment Period (Years)	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Issuance Expense (% of Total Issue)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Debt Service Reserve (% of Annual Debt Service)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
		1	<u>'</u>		'	,				,			,	
Proposed Total Debt Service														
2017 Revenue Bond Issue	()	0	0 0	0	0	0	0	0	0	0	0	0	0
2018 Revenue Bond Issue			0	0 0	0	0	0	0	0	0	0	0	0	0
2019 Revenue Bond Issue				0 0	0	0	0	0	0	0	0	0	0	0
2020 Revenue Bond Issue				0	0	0	0	0	0	0	0	0	0	0
2021 Revenue Bond Issue					0	0	0	0	0	0	0	0	0	0
2022 Revenue Bond Issue						0	0	0	0	0	0	0	0	0
2023 Revenue Bond Issue							0	0	0	0	0	0	0	0
2024 Revenue Bond Issue								0	0	0	0	0	0	0
2025 Revenue Bond Issue									0	0	0	0	0	0
2026 Revenue Bond Issue										0	0	0	0	0
2027 Revenue Bond Issue											0	0	0	0
2028 Revenue Bond Issue												0	0	0
2029 Revenue Bond Issue													0	0
2030 Revenue Bond Issue														0
Proposed Total Debt Service	\$0) \$	0 \$(0 \$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Fort Collins-Loveland Water District 2017 Rate & Fee Study Debt Service Summary (Existing and Proposed)

Type of Debt Existing Debt Service City of Fort Collins Principal Interest Total CWCB - 150052 Principal Interest Total CWCB - 150065 Principal Interest Total CWCB - 150065 Principal Interest Total Series 2010 Revenue Bonds Principal Interest Total	\$349,744 448,539 798,282 4,071 4,114 8,186 4,802 4,598 9,400 815,000 297,726 1,112,726	\$367,637 430,645 798,282 4,254 3,931 8,186 5,009 4,391 9,400 850,000 265,126 1,115,126	\$386,446 411,836 798,282 4,446 3,740 8,186 5,224 4,176 9,400 875,000 233,250	\$406,218 392,065 798,282 4,646 3,540 8,186 5,449 3,951 9,400	\$427,000 \$71,282 798,282 4,855 3,331 8,186 5,683 3,717 9,400	\$448,847 349,436 798,282 5,073 3,112 8,186 5,928 3,472 9,400	\$471,810 \$26,472 798,282 5,302 2,884 8,186 6,182 3,217 9,400	\$495,949 302,333 798,282 5,540 2,645 8,186 6,448 2,952	\$521,323 276,960 798,282 5,790 2,396 8,186	\$547,995 250,288 798,282 6,050 2,135 8,186	\$576,031 222,251 798,282 6,322 1,863 8,186	\$605,502 192,780 798,282 6,607 1,579 8,186	\$636,481 161,802 798,282 6,904 1,281 8,186	2030 \$669,044 129,238 798,282 7,215 971 8,186	\$367,63 \$367,63 430,64 798,28 4,29 3,93 8,18
Existing Debt Service City of Fort Collins Principal Interest Total CWCB - 150052 Principal Interest Total CWCB - 150065 Principal Interest Total CWCB - 150065 Principal Interest Total Series 2010 Revenue Bonds Principal Interest Total	\$349,744 448,539 798,282 4,071 4,114 8,186 4,802 4,598 9,400 815,000 297,726 1,112,726	\$367,637 430,645 798,282 4,254 3,931 8,186 5,009 4,391 9,400 850,000 265,126	\$386,446 411,836 798,282 4,446 3,740 8,186 5,224 4,176 9,400	\$406,218 392,065 798,282 4,646 3,540 8,186 5,449 3,951 9,400	\$427,000 371,282 798,282 4,855 3,331 8,186 5,683 3,717	\$448,847 349,436 798,282 5,073 3,112 8,186	\$471,810 326,472 798,282 5,302 2,884 8,186 6,182 3,217	\$495,949 302,333 798,282 5,540 2,645 8,186	\$521,323 276,960 798,282 5,790 2,396 8,186	\$547,995 250,288 798,282 6,050 2,135	\$576,031 222,251 798,282 6,322 1,863	\$605,502 192,780 798,282 6,607 1,579	\$636,481 161,802 798,282 6,904 1,281	\$669,044 129,238 798,282 7,215 971 8,186	\$367,63 430,64 798,28 4,29
City of Fort Collins Principal Interest Total CWCB - 150052 Principal Interest Total CWCB - 150065 Principal Interest Total CWCB - 150065 Principal Interest Total Series 2010 Revenue Bonds Principal Interest Total	448,539 798,282 4,071 4,114 8,186 4,802 4,598 9,400 815,000 297,726 1,112,726	430,645 798,282 4,254 3,931 8,186 5,009 4,391 9,400 850,000 265,126	411,836 798,282 4,446 3,740 8,186 5,224 4,176 9,400	392,065 798,282 4,646 3,540 8,186 5,449 3,951 9,400	371,282 798,282 4,855 3,331 8,186 5,683 3,717	349,436 798,282 5,073 3,112 8,186 5,928 3,472	326,472 798,282 5,302 2,884 8,186 6,182 3,217	302,333 798,282 5,540 2,645 8,186	276,960 798,282 5,790 2,396 8,186	250,288 798,282 6,050 2,135	222,251 798,282 6,322 1,863	192,780 798,282 6,607 1,579	161,802 798,282 6,904 1,281	129,238 798,282 7,215 971 8,186	430,6 798,2 4,2 3,9
Principal Interest Total CWCB - 150052 Principal Interest Total CWCB - 150065 Principal Interest Total Series 2010 Revenue Bonds Principal Interest Total	448,539 798,282 4,071 4,114 8,186 4,802 4,598 9,400 815,000 297,726 1,112,726	430,645 798,282 4,254 3,931 8,186 5,009 4,391 9,400 850,000 265,126	411,836 798,282 4,446 3,740 8,186 5,224 4,176 9,400	392,065 798,282 4,646 3,540 8,186 5,449 3,951 9,400	371,282 798,282 4,855 3,331 8,186 5,683 3,717	349,436 798,282 5,073 3,112 8,186 5,928 3,472	326,472 798,282 5,302 2,884 8,186 6,182 3,217	302,333 798,282 5,540 2,645 8,186	276,960 798,282 5,790 2,396 8,186	250,288 798,282 6,050 2,135	222,251 798,282 6,322 1,863	192,780 798,282 6,607 1,579	161,802 798,282 6,904 1,281	129,238 798,282 7,215 971 8,186	430,6 798,2 4,2 3,9
Interest Total CWCB - 150052 Principal Interest Total CWCB - 150065 Principal Interest Total Series 2010 Revenue Bonds Principal Interest Total	448,539 798,282 4,071 4,114 8,186 4,802 4,598 9,400 815,000 297,726 1,112,726	430,645 798,282 4,254 3,931 8,186 5,009 4,391 9,400 850,000 265,126	411,836 798,282 4,446 3,740 8,186 5,224 4,176 9,400	392,065 798,282 4,646 3,540 8,186 5,449 3,951 9,400	371,282 798,282 4,855 3,331 8,186 5,683 3,717	349,436 798,282 5,073 3,112 8,186 5,928 3,472	326,472 798,282 5,302 2,884 8,186 6,182 3,217	302,333 798,282 5,540 2,645 8,186	276,960 798,282 5,790 2,396 8,186	250,288 798,282 6,050 2,135	222,251 798,282 6,322 1,863	192,780 798,282 6,607 1,579	161,802 798,282 6,904 1,281	129,238 798,282 7,215 971 8,186	430,6 798,2 4,2 3,9
Total CWCB - 150052 Principal Interest Total CWCB - 150065 Principal Interest Total Series 2010 Revenue Bonds Principal Interest Total	798,282 4,071 4,114 8,186 4,802 4,598 9,400 815,000 297,726 1,112,726	798,282 4,254 3,931 8,186 5,009 4,391 9,400 850,000 265,126	798,282 4,446 3,740 8,186 5,224 4,176 9,400 875,000	798,282 4,646 3,540 8,186 5,449 3,951 9,400	798,282 4,855 3,331 8,186 5,683 3,717	798,282 5,073 3,112 8,186 5,928 3,472	798,282 5,302 2,884 8,186 6,182 3,217	798,282 5,540 2,645 8,186	798,282 5,790 2,396 8,186	798,282 6,050 2,135	798,282 6,322 1,863	798,282 6,607 1,579	798,282 6,904 1,281	798,282 7,215 971 8,186	798,2 4,2 3,9
CWCB - 150052 Principal Interest Total CWCB - 150065 Principal Interest Total Series 2010 Revenue Bonds Principal Interest Total	4,071 4,114 8,186 4,802 4,598 9,400 815,000 297,726 1,112,726	4,254 3,931 8,186 5,009 4,391 9,400 850,000 265,126	4,446 3,740 8,186 5,224 4,176 9,400	4,646 3,540 8,186 5,449 3,951 9,400	4,855 3,331 8,186 5,683 3,717	5,073 3,112 8,186 5,928 3,472	5,302 2,884 8,186 6,182 3,217	5,540 2,645 8,186	5,790 2,396 8,186	6,050 2,135	6,322 1,863	6,607 1,579	6,904 1,281	7,215 971 8,186	4,2 3,9
Principal Interest Total CWCB - 150065 Principal Interest Total Series 2010 Revenue Bonds Principal Interest Total	4,114 8,186 4,802 4,598 9,400 815,000 297,726 1,112,726	3,931 8,186 5,009 4,391 9,400 850,000 265,126	3,740 8,186 5,224 4,176 9,400	3,540 8,186 5,449 3,951 9,400	3,331 8,186 5,683 3,717	3,112 8,186 5,928 3,472	2,884 8,186 6,182 3,217	2,645 8,186 6,448	2,396 8,186	2,135	1,863	1,579	1,281	971 8,186	3,9
Principal Interest Total CWCB - 150065 Principal Interest Total Series 2010 Revenue Bonds Principal Interest Total	4,114 8,186 4,802 4,598 9,400 815,000 297,726 1,112,726	3,931 8,186 5,009 4,391 9,400 850,000 265,126	3,740 8,186 5,224 4,176 9,400	3,540 8,186 5,449 3,951 9,400	3,331 8,186 5,683 3,717	3,112 8,186 5,928 3,472	2,884 8,186 6,182 3,217	2,645 8,186 6,448	2,396 8,186	2,135	1,863	1,579	1,281	971 8,186	3,9
Interest Total CWCB - 150065 Principal Interest Total Series 2010 Revenue Bonds Principal Interest Total	4,114 8,186 4,802 4,598 9,400 815,000 297,726 1,112,726	3,931 8,186 5,009 4,391 9,400 850,000 265,126	3,740 8,186 5,224 4,176 9,400	3,540 8,186 5,449 3,951 9,400	3,331 8,186 5,683 3,717	3,112 8,186 5,928 3,472	2,884 8,186 6,182 3,217	2,645 8,186 6,448	2,396 8,186	2,135	1,863	1,579	1,281	971 8,186	3,9
Total CWCB - 150065 Principal Interest Total Series 2010 Revenue Bonds Principal Interest Total	8,186 4,802 4,598 9,400 815,000 297,726 1,112,726	8,186 5,009 4,391 9,400 850,000 265,126	8,186 5,224 4,176 9,400 875,000	5,449 3,951 9,400	5,683 3,717	5,928 3,472	6,182 3,217	6,448	8,186					8,186	
CWCB - 150065 Principal Interest Total Series 2010 Revenue Bonds Principal Interest Total	4,802 4,598 9,400 815,000 297,726 1,112,726	5,009 4,391 9,400 850,000 265,126	5,224 4,176 9,400 875,000	5,449 3,951 9,400	5,683 3,717	5,928 3,472	6,182 3,217	6,448		8,186	8,186	8,186	8,186		8,1
Principal Interest Total Series 2010 Revenue Bonds Principal Interest Total	4,598 9,400 815,000 297,726 1,112,726	4,391 9,400 850,000 265,126	4,176 9,400 875,000	3,951 9,400	3,717	3,472	3,217		6 726						
Principal Interest Total Series 2010 Revenue Bonds Principal Interest Total	4,598 9,400 815,000 297,726 1,112,726	4,391 9,400 850,000 265,126	4,176 9,400 875,000	3,951 9,400	3,717	3,472	3,217		6 726						
Interest Total Series 2010 Revenue Bonds Principal Interest Total	4,598 9,400 815,000 297,726 1,112,726	4,391 9,400 850,000 265,126	4,176 9,400 875,000	3,951 9,400	3,717	3,472	3,217		6 726						
Total Series 2010 Revenue Bonds Principal Interest Total	9,400 815,000 297,726 1,112,726	9,400 850,000 265,126	9,400	9,400				2 952		7,015	7,316	7,631	7,959	8,301	5,0
Series 2010 Revenue Bonds Principal Interest Total	815,000 297,726 1,112,726	850,000 265,126	875,000	•	9,400	9,400	0.400	2,332	2,674	2,385	2,084	1,769	1,441	1,099	4,3
Principal Interest Total	297,726 1,112,726	265,126		045.000			3,400	9,400	9,400	9,400	9,400	9,400	9,400	9,400	9,4
Principal Interest Total	297,726 1,112,726	265,126		015 000											
Interest Total	297,726 1,112,726	265,126		015 000											
Interest Total	297,726 1,112,726	265,126		915,000	1,000,000	1,000,000	1,050,000								850,0
Total	1,112,726			198,250	152,500	102,500	52,500								265,
		1,115,120	1,108,250	1,113,250	1,152,500	1,102,500	1,102,500	0	0	0	0	0	0	0	1,115,1
	1,928,594		1,100,250	1,110,200	1,132,300	2,202,500	1,102,500	ŭ	· ·	Ü	ŭ	· ·	ŭ	ŭ	1,110,1
Total Existing Debt Service	2,020,000	1,930,994	1,924,118	1,929,118	1,968,368	1,918,368	1,918,368	815,868	815,868	815,868	815,868	815,868	815,868	815,868	1,930,9
		_,	_,	_,,,	_,	2,0 20,000	_,,,,,,,,,	0.00,000	020,000	0.00,000	010,000	520,000	,	020,000	
Proposed Growth Debt Service															
2017 Revenue Bond Issue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2018 Revenue Bond Issue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		U	0	0	0	0	0	0	0	0	0	0		0	
2019 Revenue Bond Issue			U		-				-			-	0	-	
2020 Revenue Bond Issue				2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	
2021 Revenue Bond Issue					0	0	0	0	0	0	0	0	0	0	
2022 Revenue Bond Issue						2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	2,602,057	
2023 Revenue Bond Issue							0	0	0	0	0	0	0	0	
2024 Revenue Bond Issue								2,276,800	2,276,800	2,276,800	2,276,800	2,276,800	2,276,800	2,276,800	
2025 Revenue Bond Issue									0	0	0	0	0	0	
2026 Revenue Bond Issue										2,276,800	2,276,800	2,276,800	2,276,800	2,276,800	
2027 Revenue Bond Issue											0	0	0	0	
2028 Revenue Bond Issue												2,276,800	0	0	
2029 Revenue Bond Issue												, .,	0	0	
2030 Revenue Bond Issue													-	0	
														-	
Total Proposed Growth Debt Service	0	0	0	2,602,057	2,602,057	5,204,115	5,204,115	7,480,915	7,480,915	9,757,715	9,757,715	12,034,515	9,757,715	9,757,715	
				,,	,,	-, - , -	-, - , -	,,-	,,-	-, - , -	-, - , -	,,.	., . ,	., . ,	
Proposed Non-Growth Debt Service															
2017 Revenue Bond Issue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2018 Revenue Bond Issue		0	0	0	0	0	0	0	0	0	0	0	0	0	
2019 Revenue Bond Issue		U	0	0	0	0	0	0	0	0	0	0	0	0	
2020 Revenue Bond Issue			U	0	0	0	0	0	0	0	0	0	0	0	
				U			-	-	-			-	-	-	
2021 Revenue Bond Issue					0	0	0	0	0	0	0	0	0	0	
2022 Revenue Bond Issue						0	0	0	0	0	0	0	0	0	
2023 Revenue Bond Issue							0	0	0	0	0	0	0	0	
2024 Revenue Bond Issue								0	0	0	0	0	0	0	
2025 Revenue Bond Issue									0	0	0	0	0	0	
2026 Revenue Bond Issue										0	0	0	0	0	
2027 Revenue Bond Issue											0	0	0	0	
2028 Revenue Bond Issue												0	0	0	
2029 Revenue Bond Issue													0	0	
2030 Revenue Bond Issue														0	
														-	
Total Proposed Non-Growth Debt Service	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Debt Service	\$1,928,594	\$1,930,994	\$1,924,118	\$4,531,175	\$4,570,425	\$7,122,483	\$7,122,483	\$8,296,783	\$8,296,783						\$1,930,

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast Operating Fund Cash Flow

	%	Months	Budget						Projecte	d Operating Cash	Flows					
Description	Increase	Effective	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Rate Revenues at Existing Rates			\$10,433,320	\$10,519,862	\$10,656,791	\$10,800,278	\$10,950,871	\$11,106,824	\$11,267,303	\$11,431,859	\$11,600,231	\$11,772,268	\$11,947,880	\$12,127,018	\$12,309,661	\$12,495,80
<u>Year</u>																
2018	4.00%	12		420,794	426,272	432,011	438,035	444,273	450,692	457,274	464,009	470,891	477,915	485,081	492,386	499,83
2019	4.00%	12			443,323	449,292	455,556	462,044	468,720	475,565	482,570	489,726	497,032	504,484	512,082	519,82
2020	4.00%	12				467,263	473,778	480,526	487,469	494,588	501,872	509,315	516,913	524,663	532,565	540,61
2021	4.00%	12 12					492,730	499,747	506,967	514,371	521,947	529,688	537,590	545,650	553,868	562,24
2022 2023	4.00%	12						519,737	527,246 548,336	534,946 556,344	542,825 564,538	550,876 572,911	559,093 581,457	567,476 590,175	576,023 599,063	584,73 608,12
2024	4.00%	12							346,330	578,598	587,120	595,827	604,715	613,782	623,026	632,44
2025	4.00%	12								370,330	610,605	619,660	628,904	638,333	647,947	657,74
2026	4.00%	12									010,003	644,446	654,060	663,866	673,865	684,05
2027	4.00%	12										044,440	680,222	690,421	700,819	711,41
2028	4.00%	12											000,222	718,038	728,852	739,87
2029	4.00%	12												710,030	758,006	769,469
2030	4.00%	12													750,000	800,24
2000	1.0070															000,2
Additional Revenue from Rate Incre	ases		0	420,794	869,594	1,348,566	1,860,099	2,406,326	2,989,430	3,611,687	4,275,486	4,983,340	5,737,901	6,541,969	7,398,503	8,310,630
Total Rate Revenue from Metered V	Vater Sales		10,433,320	10,940,657	11,526,385	12,148,844	12,810,970	13,513,149	14,256,733	15,043,546	15,875,718	16,755,609	17,685,781	18,668,988	19,708,164	20,806,438
Miscellaenous Operating Revenues																
Water sales - construction			0	0	0	0	0	0	0	0	0	0	0	0	0	(
Town of Windsor			350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000
Water rental			110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000
Miscellaneous income			100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Management fees - SFCSD			468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871
Total Miscellaneous Operating Ro	evenue		1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871
Miscellaneous Non-Operating Rever	nues															
Property taxes			1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000
Soldier Canyon Income			0	0	0	0	0	0	0	0	0	0	0	0	0	,,
Interest on investments			0	0	0	0	0	0	0	0	0	0	0	0	0	(
PIFs - Water Resource Componer	nt		0	0	0	0	0	0	0	0	0	0	0	0	0	(
PIFs - Infrasstructure Component	t		0	0	0	0	0	0	0	0	0	0	0	0	0	(
Grants			0	0	0	0	0	0	0	0	0	0	0	0	0	(
Other			0	0	0	0	0	0	0	0	0	0	0	0	0	(
Meter fees			80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000
Impact fees			220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000
Sale of assets			0	0	0	0	0	0	0	0	0	0	0	0	0	(
Inclusion fees			0	0	0	0	0	0	0	0	0	0	0	0	0	(
Total Miscellaneous Non-Operati	ing		1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000
O			0	07.504	402.420	107.670	442.447	440.267	425 744	420.024	445 400	452.042	450.004	450 425	470 400	400 40
Operating Fund Interest Income Total Revenues			12,812,190	97,504 13,417,031	102,428 14,007,684	107,678 14,635,393	113,117 15,302,958	119,367 16,011,387	125,741 16,761,345	138,021 17,560,437	145,199 18,399,787	152,812 19,287,291	160,881 20,225,533	169,435 21,217,293	178,498 22,265,533	188,102 23,373,410
iotai keveilues			12,012,190	13,417,031	14,007,004	14,033,393	13,302,936	10,011,367	10,701,343	17,300,437	10,399,767	19,207,291	20,223,333	21,217,293	22,203,333	23,373,410
D&M Expenses																
Source and Treatment			5,094,000	5,284,020	5,481,691	5,687,339	5,901,306	6,123,950	6,355,644	6,596,777	6,847,757	7,109,011	7,380,983	7,664,139	7,958,966	8,265,974
Engineering			538,500	555,763	573,599	592,029	611,072	630,751	651,088	672,105	693,828	716,280	739,487	763,476	788,276	813,914
Distribution			2,540,000	2,622,798	2,708,410	2,796,936	2,888,483	2,983,157	3,081,073	3,182,347	3,287,101	3,395,462	3,507,562	3,623,536	3,743,527	3,867,682
Office			839,950	867,398	895,781	925,134	955,491	986,890	1,019,367	1,052,962	1,087,715	1,123,669	1,160,868	1,199,358	1,239,185	1,280,40
Administration			762,660	764,847	788,776	813,473	838,962	865,270	892,424	920,453	949,385	979,252	1,010,083	1,041,912	1,074,772	1,108,699
Total O&M Expenses			9,775,110	10,094,826	10,448,257	10,814,911	11,195,315	11,590,018	11,999,595	12,424,644	12,865,786	13,323,673	13,798,983	14,292,421	14,804,727	15,336,668

Page A-20 3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast Operating Fund Cash Flow

	%	Months	Budget						Projecte	ed Operating Cash	Flows					
Description	Increase	Effective	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing Debt Service			1,928,594	1,930,994	1,924,118	1,929,118	1,968,368	1,918,368	1,918,368	815,868	815,868	815,868	815,868	815,868	815,868	815,868
Total Expenditures Before Transfers (Out to CIP Fun	ds	11,703,704	12,025,819	12,372,375	12,744,029	13,163,683	13,508,386	13,917,963	13,240,512	13,681,654	14,139,541	14,614,851	15,108,289	15,620,595	16,152,536
L																
Transfers Out to CIP Funds			35,178,199	1,311,283	1,546,951	1,799,700	2,044,174	2,404,324	2,740,987	4,213,663	4,607,847	5,033,278	5,491,855	5,985,644	6,516,862	7,087,890
Total Expenditures After Transfers Ou	ut to CIP Fund	5	46,881,903	13,337,102	13,919,326	14,543,729	15,207,857	15,912,711	16,658,950	17,454,175	18,289,502	19,172,819	20,106,706	21,093,933	22,137,457	23,240,425
Net Operating Cash Flow			(34,069,713)	79,929	88,358	91,663	95,101	98,676	102,394	106,262	110,286	114,472	118,827	123,360	128,076	132,985
Cash Reserves																
Beginning Balance			36,513,490	2,443,778	2,523,706	2,612,064	2,703,728	2,798,829	2,897,505	2,999,899	3,106,161	3,216,447	3,330,918	3,449,746	3,573,105	3,701,182
Add: Net Operating Cash Flow			(34,069,713)	79,929	88,358	91,663	95,101	98,676	102,394	106,262	110,286	114,472	118,827	123,360	128,076	132,985
Ending Operating Cash Balance			\$2,443,778	\$2,523,706	\$2,612,064	\$2,703,728	\$2,798,829	\$2,897,505	\$2,999,899	\$3,106,161	\$3,216,447	\$3,330,918	\$3,449,746	\$3,573,105	\$3,701,182	\$3,834,167
Target Reserve			2.443.778	2,523,706	2,612,064	2,703,728	2,798,829	2,897,505	2,999,899	3,106,161	3,216,447	3,330,918	3,449,746	3,573,105	3,701,182	3,834,167
Variance from Target Reserve			0	0	0	0	0	0	0	0	0	0	0	0	0	0

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast Consolidated Cash Flow

	%	Months	Budget	Projected Consolidated Cash Flows												
Description	Increase	Effective	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Rate Revenues at Existing Rates			\$10,433,320	\$10,519,862	\$10,656,791	\$10,800,278	\$10,950,871	\$11,106,824	\$11,267,303	\$11,431,859	\$11,600,231	\$11,772,268	\$11,947,880	\$12,127,018	\$12,309,661	\$12,495,807
<u>Year</u>																
2018	4.00%	12		420,794	426,272	432,011	438,035	444,273	450,692	457,274	464,009	470,891	477,915	485,081	492,386	499,832
2019	4.00%	12			443,323	449,292	455,556	462,044	468,720	475,565	482,570	489,726	497,032	504,484	512,082	519,826
2020	4.00%	12				467,263	473,778	480,526	487,469	494,588	501,872	509,315	516,913	524,663	532,565	540,619
2021	4.00%	12					492,730	499,747	506,967	514,371	521,947	529,688	537,590	545,650	553,868	562,243
2022	4.00%	12						519,737	527,246	534,946	542,825	550,876	559,093	567,476	576,023	584,733
2023	4.00%	12							548,336	556,344	564,538	572,911	581,457	590,175	599,063	608,122
2024	4.00%	12								578,598	587,120	595,827	604,715	613,782	623,026	632,447
2025	4.00%	12									610,605	619,660	628,904	638,333	647,947	657,745
2026	4.00%	12										644,446	654,060	663,866	673,865	684,055
2027	4.00%	12											680,222	690,421	700,819	711,417
2028	4.00%	12												718,038	728,852	739,874
2029	4.00%	12													758,006	769,469
2030	4.00%	12														800,248
Additional Revenue from Rate Increases			0	420,794	869.594	1,348,566	1,860,099	2,406,326	2,989,430	3,611,687	4,275,486	4,983,340	5,737,901	6,541,969	7,398,503	8,310,630
Total Rate Revenue from Metered Water Sale	ıs.		10,433,320	10,940,657	11,526,385	12,148,844	12,810,970	13,513,149	14,256,733	15,043,546	15,875,718	16,755,609	17,685,781	18,668,988	19,708,164	20,806,438
Total Nate Nevenue II om Metereu Water Sale	.5		20,155,520	10,5 10,057	11,020,000	12,110,011	12,010,570	10,010,110	11,230,733	15,0 15,5 10	15,075,710	10,755,005	17,000,701	10,000,500	13,700,10	20,000,100
Miscellaenous Operating Revenues																
Water sales - construction			0	0	0	0	0	0	0	0	0	0	0	0	0	0
Town of Windsor			350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000
Water rental			110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000
Miscellaneous income			100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Management fees - SFCSD			468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871
Total Miscellaneous Operating Revenue			1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871
Miscellaneous Non-Operating Revenues																
Property taxes			1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000
Soldier Canyon Income			0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest on investments			0	0	0	0	0	0	0	0	0	0	0	0	0	0
PIFs - Water Resource Component			6,250,000	7,645,279	7,798,185	7,954,148	8,113,231	8,275,496	8,441,006	8,609,826	8,782,022	8,957,663	9,136,816	9,319,552	9,505,943	9,696,062
PIFs - Infrastructure Component			1,700,000	3,805,574	3,881,685	3,959,319	4,038,505	4,119,275	4,201,661	4,285,694	4,371,408	4,458,836	4,548,013	4,638,973	4,731,753	4,826,388
Grants			0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other			0	0	0	0	0	0	0	0	0	0	0	0	0	0
Meter fees			80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000
Impact fees			220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000
Sale of assets			0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inclusion fees			0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Miscellaneous Non-Operating			9,300,000	12,800,853	13,029,870	13,263,467	13,501,737	13,744,771	13,992,667	14,245,520	14,503,430	14,766,499	15,034,829	15,308,526	15,587,696	15,872,450
				252 522		222 545	275.455		275 422	545.075	270.010			.==		
Interest Income			0	252,523	244,842	328,545	276,466	407,780	376,108	515,875	379,910	470,605	429,113	477,448	420,178	462,174
Total Revenues			20,762,190	25,022,903	25,829,967	26,769,727	27,618,043	28,694,572	29,654,378	30,833,811	31,787,928	33,021,583	34,178,594	35,483,832	36,744,909	38,169,933
O&M Expenses																
Source and Treatment			5,094,000	5,284,020	5,481,691	5,687,339	5,901,306	6,123,950	6,355,644	6,596,777	6,847,757	7,109,011	7,380,983	7,664,139	7,958,966	8,265,974
Engineering			538,500	555,763	573,599	592,029	611,072	630,751	651,088	672,105	693,828	7,109,011	7,380,983	763,476	788,276	813,914
Distribution			2,540,000	2,622,798	2,708,410	2,796,936	2,888,483	2,983,157	3,081,073	3,182,347	3,287,101	3,395,462	3,507,562	3,623,536	3,743,527	3,867,682
Office			839,950	867,398	895,781	925,134	955,491	986,890	1,019,367	1,052,962	1,087,715	1,123,669	1,160,868	1,199,358	1,239,185	1,280,400
Administration			762,660	764,847	788,776	813,473	838,962	865,270	892,424	920,453	949,385	979,252	1,010,083	1,041,912	1,074,772	1,108,699
Total O&M Expenses			9,775,110	10,094,826	10,448,257	10,814,911	11,195,315	11,590,018	11,999,595	12,424,644	12,865,786	13,323,673	13,798,983	14,292,421	14,804,727	15,336,668
•																
Net Revenues Available for Debt Service			10,987,080	14,928,077	15,381,710	15,954,816	16,422,729	17,104,553	17,654,783	18,409,167	18,922,142	19,697,910	20,379,611	21,191,410	21,940,182	22,833,265
Debt Service																
Existing Debt Service			1,928,594	1,930,994	1,924,118	1,929,118	1,968,368	1,918,368	1,918,368	815,868	815,868	815,868	815,868	815,868	815,868	815,868
Proposed Debt Service			0	0	0	2,602,057	2,602,057	5,204,115	5,204,115	7,480,915	7,480,915	9,757,715	9,757,715	12,034,515	9,757,715	9,757,715
Total Debt Service			1,928,594	1,930,994	1,924,118	4,531,175	4,570,425	7,122,483	7,122,483	8,296,783	8,296,783	10,573,583	10,573,583	12,850,383	10,573,583	10,573,583

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast Consolidated Cash Flow

Description Increase Effective CIP Expenditures Growth CIP Non-Growth CIP Total CIP Total Expenditures Net Consolidated Cash Flow Cash Reserves Beginning Balance Add: Net Consolidated Cash Flow Add: Net Bond Proceeds Ending Operating Cash Balance Target Reserve Variance from Target Reserve Debt Service Coverage Calculation (Including Connection Fees) Total Revenues (Including PIFs) Less: O&M Expenses Net Revenue Available for Debt Service (Including PIFs) Debt Service Coverage Ratio (Including PIFs) Debt Service Coverage Ratio (Including PIFs)	2017 7,573,705 3,132,038 10,705,743 22,409,446 (1,647,256) 39,726,237 (1,647,256) 0 38,078,981	2018 14,534,785 2,858,790 17,393,574 29,419,394 (4,396,491) 38,078,981 (4,396,491) 0	2019 18,276,533 3,715,322 21,991,855 34,364,230 (8,534,263) 33,682,490 (8,534,263)	2020 20,042,680 6,029,147 26,071,828 41,417,914 (14,648,187) 25,148,226	21,085,308 2,233,032 23,318,340 39,084,080 (11,466,037)	19,783,244 1,560,035 21,343,279 40,055,780 (11,361,209)	14,831,897 3,245,410 18,077,307 37,199,385 (7,545,007)	14,385,712 2,018,715 16,404,427 37,125,853 (6,292,042)	37,240,507 2,046,467 39,286,974 60,449,543 (28,661,615)	2026 21,470,043 2,863,325 24,333,367 48,230,624 (15,209,041)	18,829,982 819,117 19,649,099 44,021,665 (9,843,071)	31,470,246 774,479 32,244,724 59,387,529 (23,903,698)	42,007,193 877,556 42,884,749 68,263,059	2030 16,910,166 851,015 17,761,181 43,671,432
Growth CIP Non-Growth CIP Total CIP Total Expenditures Net Consolidated Cash Flow Cash Reserves Beginning Balance Add: Net Consolidated Cash Flow Add: Net Consolidated Cash Flow Add: Net Bond Proceeds Ending Operating Cash Balance Target Reserve Variance from Target Reserve Debt Service Coverage Calculation (Including Connection Fees) Total Revenues (Including PIFs) Less: 0&M Expenses Net Revenue Available for Debt Service (Including PIFs) Debt Service Debt Service Coverage Ratio (Including PIFs)	3,132,038 10,705,743 22,409,446 (1,647,256) 39,726,237 (1,647,256) 0	2,858,790 17,393,574 29,419,394 (4,396,491) 38,078,981 (4,396,491) 0	3,715,322 21,991,855 34,364,230 (8,534,263) 33,682,490	6,029,147 26,071,828 41,417,914 (14,648,187)	2,233,032 23,318,340 39,084,080	1,560,035 21,343,279 40,055,780	3,245,410 18,077,307 37,199,385	2,018,715 16,404,427 37,125,853	2,046,467 39,286,974 60,449,543	2,863,325 24,333,367 48,230,624	819,117 19,649,099 44,021,665	774,479 32,244,724 59,387,529	877,556 42,884,749 68,263,059	851,015 17,761,181 43,671,432
Non-Growth CIP Total CIP Total Expenditures Net Consolidated Cash Flow Cash Reserves Beginning Balance Add: Net Consolidated Cash Flow Add: Net Bond Proceeds Ending Operating Cash Balance Target Reserve Variance from Target Reserve Debt Service Coverage Calculation (Including Connection Fees) Total Revenues (Including PIFs) Less: O&M Expenses Net Revenue Available for Debt Service (Including PIFs) Debt Service Debt Service Coverage Ratio (Including PIFs)	3,132,038 10,705,743 22,409,446 (1,647,256) 39,726,237 (1,647,256) 0	2,858,790 17,393,574 29,419,394 (4,396,491) 38,078,981 (4,396,491) 0	3,715,322 21,991,855 34,364,230 (8,534,263) 33,682,490	6,029,147 26,071,828 41,417,914 (14,648,187)	2,233,032 23,318,340 39,084,080	1,560,035 21,343,279 40,055,780	3,245,410 18,077,307 37,199,385	2,018,715 16,404,427 37,125,853	2,046,467 39,286,974 60,449,543	2,863,325 24,333,367 48,230,624	819,117 19,649,099 44,021,665	774,479 32,244,724 59,387,529	877,556 42,884,749 68,263,059	851,015 17,761,181 43,671,432
Total CIP Total Expenditures Net Consolidated Cash Flow Cash Reserves Beginning Balance Add: Net Consolidated Cash Flow Add: Net Bond Proceeds Ending Operating Cash Balance Target Reserve Variance from Target Reserve Debt Service Coverage Calculation (Including Connection Fees) Total Revenues (Including PIFs) Less: O&M Expenses Net Revenue Available for Debt Service (Including PIFs) Debt Service Debt Service Coverage Ratio (Including PIFs)	10,705,743 22,409,446 (1,647,256) 39,726,237 (1,647,256)	17,393,574 29,419,394 (4,396,491) 38,078,981 (4,396,491) 0	21,991,855 34,364,230 (8,534,263) 33,682,490	26,071,828 41,417,914 (14,648,187)	23,318,340 39,084,080	21,343,279 40,055,780	18,077,307 37,199,385	16,404,427 37,125,853	39,286,974 60,449,543	24,333,367 48,230,624	19,649,099 44,021,665	32,244,724 59,387,529	42,884,749 68,263,059	17,761,181 43,671,432
Total Expenditures Net Consolidated Cash Flow Cash Reserves Beginning Balance Add: Net Consolidated Cash Flow Add: Net Bond Proceeds Ending Operating Cash Balance Target Reserve Variance from Target Reserve Debt Service Coverage Calculation (Including Connection Fees) Total Revenues (Including PIFs) Less: O&M Expenses Net Revenue Available for Debt Service (Including PIFs) Debt Service Debt Service Coverage Ratio (Including PIFs)	22,409,446 (1,647,256) 39,726,237 (1,647,256)	29,419,394 (4,396,491) 38,078,981 (4,396,491) 0	34,364,230 (8,534,263) 33,682,490	41,417,914 (14,648,187)	39,084,080	40,055,780	37,199,385	37,125,853	60,449,543	48,230,624	44,021,665	59,387,529	68,263,059	43,671,432
Net Consolidated Cash Flow Cash Reserves Beginning Balance Add: Net Consolidated Cash Flow Add: Net Bond Proceeds Ending Operating Cash Balance Target Reserve Variance from Target Reserve Debt Service Coverage Calculation (Including Connection Fees) Total Revenues (Including PIFs) Less: O&M Expenses Net Revenue Available for Debt Service (Including PIFs) Debt Service Debt Service Coverage Ratio (Including PIFs) Debt Service Coverage Ratio (Including PIFs)	(1,647,256) 39,726,237 (1,647,256) 0	(4,396,491) 38,078,981 (4,396,491) 0	(8,534,263)	(14,648,187)	,,	-,,	. , ,	- , -,	, -,	-,,-	, , ,	,,-		
Cash Reserves Beginning Balance Add: Net Consolidated Cash Flow Add: Net Bond Proceeds Ending Operating Cash Balance Target Reserve Variance from Target Reserve Debt Service Coverage Calculation (Including Connection Fees) Total Revenues (Including PIFs) Less: O&M Expenses Net Revenue Available for Debt Service (Including PIFs) Debt Service Debt Service Coverage Ratio (Including PIFs)	39,726,237 (1,647,256) 0	38,078,981 (4,396,491) 0	33,682,490	(// // //	(11,466,037)	(11,361,209)	(7,545,007)	(6,292,042)	(28,661,615)	(15.209.041)	(9 843 071)			
Beginning Balance Add: Net Consolidated Cash Flow Add: Net Bond Proceeds Ending Operating Cash Balance Target Reserve Variance from Target Reserve Debt Service Coverage Calculation (Including Connection Fees) Total Revenues (Including PIFs) Less: O&M Expenses Net Revenue Available for Debt Service (Including PIFs) Debt Service Debt Service Coverage Ratio (Including PIFs) Debt Service Coverage Ratio (Including PIFs)	(1,647,256) 0	(4,396,491) 0	,,	25 148 226						(==,===,= :=,	(3,043,071)	(23,903,698)	(31,518,150)	(5,501,499)
Add: Net Consolidated Cash Flow Add: Net Bond Proceeds Ending Operating Cash Balance Target Reserve Variance from Target Reserve Debt Service Coverage Calculation (Including Connection Fees) Total Revenues (Including PIFs) Less: O&M Expenses Net Revenue Available for Debt Service (Including PIFs) Debt Service Debt Service Coverage Ratio (Including PIFs) Debt Service Coverage Ratio (Including PIFs)	(1,647,256) 0	(4,396,491) 0	,,	25 148 226										
Add: Net Bond Proceeds Ending Operating Cash Balance Target Reserve Variance from Target Reserve Debt Service Coverage Calculation (Including Connection Fees) Total Revenues (Including PIFs) Less: O&M Expenses Net Revenue Available for Debt Service (Including PIFs) Debt Service Debt Service Coverage Ratio (Including PIFs)	0	0	(8,534,263)	-, -, -	47,097,982	35,631,945	60,868,679	53,323,672	79,054,830	50,393,215	67,207,374	57,364,303	65,483,805	33,965,655
Ending Operating Cash Balance Target Reserve Variance from Target Reserve Debt Service Coverage Calculation (Including Connection Fees) Total Revenues (Including PIFs) Less: O&M Expenses Net Revenue Available for Debt Service (Including PIFs) Debt Service Debt Service Coverage Ratio (Including PIFs) Debt Service Coverage Calculation (Excluding PIFs)	Ü	0		(14,648,187)	(11,466,037)	(11,361,209)	(7,545,007)	(6,292,042)	(28,661,615)	(15,209,041)	(9,843,071)	(23,903,698)	(31,518,150)	(5,501,499)
Target Reserve Variance from Target Reserve Debt Service Coverage Calculation (Including Connection Fees) Total Revenues (Including PIFs) Less: O&M Expenses Net Revenue Available for Debt Service (Including PIFs) Debt Service Debt Service Coverage Ratio (Including PIFs) Debt Service Coverage Calculation (Excluding PIFs)	38,078,981		0	36,597,943	0	36,597,943	0	32,023,200	0	32,023,200	0	32,023,200	0	0
Variance from Target Reserve Debt Service Coverage Calculation (Including Connection Fees) Total Revenues (Including PIFs) Less: O&M Expenses Net Revenue Available for Debt Service (Including PIFs) Debt Service Debt Service Coverage Ratio (Including PIFs) Debt Service Coverage Calculation (Excluding PIFs)		33,682,490	25,148,226	47,097,982	35,631,945	60,868,679	53,323,672	79,054,830	50,393,215	67,207,374	57,364,303	65,483,805	33,965,655	28,464,156
Debt Service Coverage Calculation (Including Connection Fees) Total Revenues (Including PIFs) Less: O&M Expenses Net Revenue Available for Debt Service (Including PIFs) Debt Service Debt Service Coverage Ratio (Including PIFs) Debt Service Coverage Calculation (Excluding PIFs)	6,077,474	7,092,840	7,622,734	7,975,055	7,744,640	6,605,479	6,596,327	12,416,288	8,583,957	8,038,414	11,317,307	14,074,904	7,928,723	7,467,863
Total Revenues (Including PIFs) Less: O&M Expenses Net Revenue Available for Debt Service (Including PIFs) Debt Service Debt Service Coverage Ratio (Including PIFs) Debt Service Coverage Calculation (Excluding PIFs)	32,001,507	26,589,650	17,525,492	39,122,927	27,887,306	54,263,200	46,727,346	66,638,542	41,809,258	59,168,960	46,046,996	51,408,901	26,036,932	20,996,293
Less: O&M Expenses Net Revenue Available for Debt Service (Including PIFs) Debt Service Debt Service Coverage Ratio (Including PIFs) Debt Service Coverage Calculation (Excluding PIFs)														
Net Revenue Available for Debt Service (Including PIFs) Debt Service Debt Service Coverage Ratio (Including PIFs) Debt Service Coverage Calculation (Excluding PIFs)	20,762,190	25,022,903	25,829,967	26,769,727	27,618,043	28,694,572	29,654,378	30,833,811	31,787,928	33,021,583	34,178,594	35,483,832	36,744,909	38,169,933
Debt Service Debt Service Coverage Ratio (Including PIFs) Debt Service Coverage Calculation (Excluding PIFs)	9,775,110	10,094,826	10,448,257	10,814,911	11,195,315	11,590,018	11,999,595	12,424,644	12,865,786	13,323,673	13,798,983	14,292,421	14,804,727	15,336,668
Debt Service Coverage Ratio (Including PIFs) Debt Service Coverage Calculation (Excluding PIFs)	10,987,080	14,928,077	15,381,710	15,954,816	16,422,729	17,104,553	17,654,783	18,409,167	18,922,142	19,697,910	20,379,611	21,191,410	21,940,182	22,833,265
Debt Service Coverage Calculation (Excluding PIFs)	1,928,594	1,930,994	1,924,118	4,531,175	4,570,425	7,122,483	7,122,483	8,296,783	8,296,783	10,573,583	10,573,583	12,850,383	10,573,583	10,573,583
, , ,	5.70	7.73	7.99	3.52	3.59	2.40	2.48	2.22	2.28	1.86	1.93	1.65	2.07	2.16
Total Davison (Finduction DIFe)														
Total Revenues (Excluding PIFs)	12,812,190	13,572,050	14,150,098	14,856,260	15,466,307	16,299,800	17,011,712	17,938,291	18,634,498	19,605,084	20,493,765	21,525,306	22,507,213	23,647,483
Less: O&M Expenses	9,775,110	10,094,826	10,448,257	10,814,911	11,195,315	11,590,018	11,999,595	12,424,644	12,865,786	13,323,673	13,798,983	14,292,421	14,804,727	15,336,668
Net Revenue Available for Debt Service (Excluding PIFs)	3,037,080	3,477,224	3,701,840	4,041,349	4,270,992	4,709,782	5,012,116	5,513,647	5,768,711	6,281,411	6,694,782	7,232,885	7,702,486	8,310,815
Debt Service	1	1,930,994	1,924,118	4,531,175	4,570,425	7,122,483	7,122,483	8,296,783	8,296,783	10,573,583	10,573,583	12,850,383	10,573,583	10,573,583
Debt Service Coverage Ratio (Excluding PIFs)	1,928,594	1.80	1.92	0.89	0.93	0.66	0.70	0.66	0.70	0.59	0.63	0.56	0.73	0.79

Fort Collins Loveland Water District Rate Study
Appendix B: Cost of Service Study
3/16/2018

Appendix B Fort Collins Loveland Water District Rate Study Cost of Service Study

Fort Collins-Loveland Water District 2017 Rate & Fee Study Revenue Requirement from Rates

	Budget						Forecast Reve	nue Requirement fr	rom Rates						Test Year
Item	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2018
0&M Expenses	2017	2010	2015	2020	2021	LULL	2025	2021	2023	2020	2027	2020	2023	2030	2010
Source and Treatment	5,094,000	5,284,020	5,481,691	5,687,339	5,901,306	6,123,950	6,355,644	6,596,777	6,847,757	7,109,011	7,380,983	7,664,139	7,958,966	8,265,974	5,284,02
Engineering	538,500	555,763	573,599	592,029	611,072	630,751	651,088	672,105	693,828	716,280	739,487	763,476	788,276	813,914	555,76
Distribution	2,540,000	2,622,798	2,708,410	2,796,936	2,888,483	2,983,157	3,081,073	3,182,347	3,287,101	3,395,462	3,507,562	3,623,536	3,743,527	3,867,682	2,622,79
Office	839,950	867,398	895,781	925,134	955,491	986,890	1,019,367	1,052,962	1,087,715	1,123,669	1,160,868	1,199,358	1,239,185	1,280,400	867,39
	762,660		788,776	813,473	838,962	865,270	892,424			979,252			1,074,772	1,108,699	764,84
Administration		764,847						920,453	949,385		1,010,083	1,041,912			
Total O&M	9,775,110	10,094,826	10,448,257	10,814,911	11,195,315	11,590,018	11,999,595	12,424,644	12,865,786	13,323,673	13,798,983	14,292,421	14,804,727	15,336,668	10,094,82
Capital Improvement Program															
Growth CIP	7,573,705	14,534,785	18,276,533	20,042,680	21,085,308	19,783,244	14,831,897	14,385,712	37,240,507	21,470,043	18,829,982	31,470,246	42,007,193	16,910,166	14,534,7
Non-Growth CIP	3,132,038	2,858,790	3,715,322	6,029,147	2,233,032	1,560,035	3,245,410	2,018,715	2,046,467	2,863,325	819,117	774,479	877,556	851,015	2,858,7
Total CIP	10,705,743	17,393,574	21,991,855	26,071,828	23,318,340	21,343,279	18,077,307	16,404,427	39,286,974	24,333,367	19,649,099	32,244,724	42,884,749	17,761,181	17,393,5
Debt Service															
	1,928,594	1,930,994	1,924,118	1,929,118	1,968,368	1,918,368	1,918,368	815,868	815,868	815,868	815,868	815,868	815,868	815,868	1,930,9
Existing Debt Service		1,930,994													1,930,9
Proposed Debt Service	0	•	0	2,602,057	2,602,057	5,204,115	5,204,115	7,480,915	7,480,915	9,757,715	9,757,715	12,034,515	9,757,715	9,757,715	
Total Debt Service	1,928,594	1,930,994	1,924,118	4,531,175	4,570,425	7,122,483	7,122,483	8,296,783	8,296,783	10,573,583	10,573,583	12,850,383	10,573,583	10,573,583	1,930,99
Total Expenditures	22,409,446	29,419,394	34,364,230	41,417,914	39,084,080	40,055,780	37,199,385	37,125,853	60,449,543	48,230,624	44,021,665	59,387,529	68,263,059	43,671,432	29,419,39
Net Consolidated Cash Flow	(1,647,256)	(4,396,491)	(8,534,263)	(14,648,187)	(11,466,037)	(11,361,209)	(7,545,007)	(6,292,042)	(28,661,615)	(15,209,041)	(9,843,071)	(23,903,698)	(31,518,150)	(5,501,499)	(4,396,49
Gross Revenue Requirement from Rates	20,762,190	25,022,903	25,829,967	26,769,727	27,618,043	28,694,572	29,654,378	30,833,811	31,787,928	33,021,583	34,178,594	35,483,832	36,744,909	38,169,933	25,022,90
Less: Miscellaneous Operating Revenues															
Water sales - construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Town of Windsor	-	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,00
	350,000														
Water rental	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,00
Miscellaneous income	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,00
Management fees - SFCSD	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,871	468,87
Total Miscellaneous Operating Revenue	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,871	1,028,87
Less: Miscellaenous Non-Oprerating Revenues															
Property taxes	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,00
Soldier Canyon Income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Interest on investments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PIFs - Water Resource Component	6,250,000	7,645,279	7,798,185	7,954,148	8,113,231	8,275,496	8,441,006	8,609,826	8,782,022	8,957,663	9,136,816	9,319,552	9,505,943	9,696,062	7,645,27
PIFs - Infrastructure Component	1,700,000	3,805,574	3,881,685	3,959,319	4,038,505	4,119,275	4,201,661	4,285,694	4,371,408	4,458,836	4,548,013	4,638,973	4,731,753	4,826,388	3,805,57
Meter fees	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,00
Impact fees	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,00
Sale of assets	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	220,00
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Inclusion fees Total Miscellaneous Non-Operating	9,300,000	12,800,853	13,029,870	13,263,467	13,501,737	13,744,771	13,992,667	14,245,520	14,503,430	14,766,499	15,034,829	15,308,526	15,587,696	15,872,450	12,800,85
Less: interest Income	0	252,523	244,842	328,545	276,466	407,780	376,108	515,875	379,910	470,605	429,113	477,448	420,178	462,174	252,52
Total Miscellaneous Revenues	10,328,871	14,082,246	14,303,582	14,620,882	14,807,073	15,181,422	15,397,645	15,790,265	15,912,210	16,265,974	16,492,813	16,814,844	17,036,745	17,363,495	14,082,24
Net Revenue Requirement from Rates	10,433,320	10,940,657	11,526,385	12,148,844	12,810,970	13,513,149	14,256,733	15,043,546	15,875,718	16,755,609	17,685,781	18,668,988	19,708,164	20,806,438	10,940,65
check	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Control Cont Description	10.007.000	14.020.037	45 204 740	15.051.010	46 422 722	47.404.552	47.654.702	40 400 463	40.022.442	10.007.010	20.270.64	24 404 447	24.040.400	22 022 25	14 000
Capital Cost Revenue Requirement	10,987,080	14,928,077	15,381,710	15,954,816	16,422,729	17,104,553	17,654,783	18,409,167	18,922,142	19,697,910	20,379,611	21,191,410	21,940,182	22,833,265	14,928,07
Operating Revenue Requirement	9,775,110	10,094,826	10,448,257	10,814,911	11,195,315	11,590,018	11,999,595	12,424,644	12,865,786	13,323,673	13,798,983	14,292,421	14,804,727	15,336,668	10,094,82
Total Gross Revenue Require3ment	20,762,190	25,022,903	25,829,967	26,769,727	27,618,043	28,694,572	29,654,378	30,833,811	31,787,928	33,021,583	34,178,594	35,483,832	36,744,909	38,169,933	25,022,9
Less: Total Miscellaneous Revenues	10,328,871	14,082,246	14,303,582	14,620,882	14,807,073	15,181,422	15,397,645	15,790,265	15,912,210	16,265,974	16,492,813	16,814,844	17,036,745	17,363,495	14,082,2
Net Revenue Requirement frrom Rates	10,433,320	10,940,657	11,526,385	12,148,844	12,810,970	13,513,149	14,256,733	15,043,546	15,875,718	16,755,609	17,685,781	18,668,988	19,708,164	20,806,438	10,940,6
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-,-
check															

Fort Collins-Loveland Water District 2017 Rate & Fee Study System Production Metrics

Actual Total FCLWD	Annual Flow (Thousands	of Gallons)	Actual Total System	Estimated Water Loss (Thous	sands of Gallons)
			Annual	Estimated	Estimated
Year	Annual	Annual Average Day	Treated Consumption	Water Loss	Water Loss %
2016	3,397,482	9,308	3,194,551	202,931	5.97%
2015	2,886,386	7,908	2,717,789	168,597	5.84%
2014	2,884,187	7,902	2,628,127	256,060	8.88%
Average	3,056,018	8,373	2,846,822	209,196	6.85%

Actual T	otal System Coincident Ma	ax Month Production (Thousands o	of Gallons)
	Actual Month	Actual	Average Day
Year	of Occurence	Max Month Production	in Max Month
2016	July	610,490	19,693
2015	August	521,061	16,808
2014	July	474,019	15,291
Average		535,190	17,264

	Actual Total	System Coincident Max Day Prod	uction (Thousands of Gallons)	
	Actual Day	Actual	Ratio of Max Day Production	Ratio of Max Day Production
Year	of Occurence	Max Day Production	to Annual Avg. Day	to Avg. Day in Max Month
2016	July	21,624	2.32	1.10
2015	July	19,656	2.49	1.17
2014	July	18,713	2.37	1.22
Average		19,998	2.39	1.16

	E	Estimated Total System Coinciden	t Max Hour Production (Thousands of Gallor	is)	
		3.20			
	Actual Date and Time	Estimated	Ratio of Max Hour Production	Ratio of Max Hour Production	Ratio of Max Hour
Year	of Max Hour	Max Hour Production	to Annual Avg. Day	to Avg. Day in Max Month	to Max Day
2016	Unknown	29,786	3.20	1.51	1.38
2015	Unknown	25,305	3.20	1.51	1.29
2014	Unknown	25,286	3.20	1.65	1.35
Average		26.792	3.20	1.55	1.34

Fort Collins-Loveland Water District 2017 Rate & Fee Study System Demand Ratios Used in Cost Allocations

Calculated Base / Max Day Allocations	
System Max Day / Average Day Ratio	2.39
Base Allocation %	41.9%
Max Day Allocation %	58.1%
Total Allocation %	100.0%
Base / Max Hour Allocations	
System Max Hour to Average Day Ratio	3.20
Base Allocation %	31.3%
Max Hour Allocation %	68.8%
Total Allocation %	100.0%
Base / Max Day / Max Hour Allocation	
System Max Hour X System Max Day	7.64
Base Allocation %	31.3%
Max Day Allocation %	43.4%
Max Hour Allocation %	25.4%
Total Allocation %	100.0%

Check on Base / Max Day Allocation	ıs
System Average Day	8,373
System Max Day	19,998
Base Allocation %	41.9%
Max Day Allocation %	58.1%
Total Allocation %	100.0%
Check on Base / Max Hour Allocatio	ns
System Average Day	8,373
System Max Hour	26,792
Base Allocation %	31.3%
Max Hour Allocation %	68.8%
Total Allocation %	100.0%
Check on Base / Max Day / Max Hour Allo	ocation
System Average Day	8,373
System Max Day Less Average Day	11,625
System Max Hour Less Max Day	6,795
Base Allocation %	31.3%
Max Day Allocation %	43.4%
Max Hour Allocation %	25.4%
Total Allocation %	100.0%

Fort Collins-Loveland Water District 2017 Rate & Fee Study

Billed Consumption Data Used to Develop Peaking Factors - Existing Disaggregated Rate Structure

														2016 Class N	letrics	2016 Syste	m Metrics	2016 Peakir	ng Factors
			2016 Actu	ial Billed Cor	nsumption (Kgals)									Ratio of Avg. Day	System Ratio of	System Ratio of	Customer	Customer
	31	28	31	30	31	30	31	31	30	31	30	31	Avg Day in	Annual	in Max. Mo. to	MD to Avg.	MH to Avg.	Class	Class
Customer Class	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Max Month	Avg. Day	Annual Avg. Day	Day in Max Mo.	Day in Max Mo.	MD Peak	MH Peak
Residential, No Patio, FCLWD Rates	54,001	52,432	63,419	78,936	186,702	381,644	386,524	320,654	273,856	111,797	62,156	60,468	12,721.5	5,568.7	2.28	1.10	1.51	2.51	3.46
Residential, No Patio, City Rates	7,611	7,174	8,906	11,090	27,353	34,747	32,473	27,149	19,286	8,945	7,586	8,540	1,158.2	550.3	2.10	1.10	1.51	2.31	3.18
Residential, No Patio, City Exchange	192	191	229	245	753	1,136	1,141	974	708	285	126	218	36.8	17.0	2.17	1.10	1.51	2.38	3.28
Residential, Patio	679	606	732	788	1,023	1,287	1,214	1,083	1,014	770	784	803	42.9	29.5	1.45	1.10	1.51	1.59	2.20
Commercial, FCLWD Rates	17,160	16,874	19,918	24,729	38,452	60,820	64,336	56,254	52,393	28,466	18,349	15,973	2,075.4	1,133.5	1.83	1.10	1.51	2.01	2.77
Commercial, Billed as City Use	394	320	415	459	1,862	5,327	4,879	3,476	2,930	459	370	247	177.6	57.9	3.07	1.10	1.51	3.37	4.64
Commercial, City Exchange Use	784	933	1,053	998	1,767	1,596	1,901	1,524	1,586	1,420	833	797	61.3	41.6	1.47	1.10	1.51	1.62	2.23
Irrigation, FCLWD Rates	22	27	648	5,562	30,915	80,294	86,501	72,952	49,475	7,375	38	1	2,790.4	914.5	3.05	1.10	1.51	3.35	4.61
Irrigation, City Rates	0	0	286	931	10,779	15,523	15,080	13,334	7,794	358	0	0	517.4	175.6	2.95	1.10	1.51	3.24	4.46
Irrigation, City Exchange	0	0	0	18	207	771	921	563	364	59	0	0	29.7	8.0	3.73	1.10	1.51	4.10	5.65
Residential, Multi-Unit, FCLWD Rates	7,121	6,573	7,202	6,566	8,108	9,354	9,365	8,659	8,198	6,904	6,749	7,385	302.1	252.6	1.20	1.10	1.51	1.31	1.81
Residential, Multi-Unit, City Rates	33	31	35	56	101	196	220	183	138	41	30	18	7.1	3.0	2.39	1.10	1.51	2.63	3.62
Total System	87,996	85,162	102,842	130,378	308,024	592,694	604,555	506,804	417,743	166,880	97,020	94,450	19,501.8	8,752.2	2.23				

														2015 Class N	letrics	2015 Syste	m Metrics	2015 Peakir	ng Factors
			2015 Actu	al Billed Cor	nsumption (Kgals)									Ratio of Avg. Day	System Ratio of	System Ratio of	Customer	Customer
	31	28	31	30	31	30	31	31	30	31	30	31	Avg Day in	Annual	in Max. Mo. to	MD to Avg.	MH to Avg.	Class	Class
Customer Class	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Max Month	Avg. Day	Annual Avg. Day	Day in Max Mo.	Day in Max Mo.	MD Peak	MH Peak
Residential, No Patio, FCLWD Rates	55,305	49,126	72,584	95,233	97,311	230,885	321,306	325,006	261,777	102,359	54,805	61,265	10,484.1	4,731.4	2.22	1.17	1.51	2.59	3.34
Residential, No Patio, City Rates	7,760	6,769	9,834	11,744	14,824	23,789	30,941	28,708	18,355	8,634	7,497	8,405	926.1	485.6	1.91	1.17	1.51	2.23	2.87
Residential, No Patio, City Exchange	196	170	251	285	400	774	1,142	1,095	698	242	191	219	36.8	15.5	2.37	1.17	1.51	2.78	3.57
Residential, Patio	645	574	711	839	860	1,158	1,237	1,193	1,000	745	739	809	39.9	28.8	1.39	1.17	1.51	1.62	2.09
Commercial, FCLWD Rates	18,493	16,382	21,337	24,555	28,058	43,211	50,665	55,997	50,235	25,393	17,347	17,489	1,806.4	1,011.4	1.79	1.17	1.51	2.09	2.69
Commercial, Billed as City Use	384	313	581	679	773	3,486	4,426	3,877	2,827	711	403	248	142.8	51.2	2.79	1.17	1.51	3.26	4.19
Commercial, City Exchange Use	756	817	1,006	789	1,115	1,455	1,695	1,347	1,198	1,025	950	779	54.7	35.4	1.54	1.17	1.51	1.80	2.32
Irrigation, FCLWD Rates	23	16	1,879	6,305	9,636	43,811	61,147	67,301	51,039	6,263	176	96	2,171.0	678.6	3.20	1.17	1.51	3.74	4.82
Irrigation, City Rates	0	0	481	2,252	3,881	12,354	14,806	14,251	7,565	181	0	0	477.6	152.8	3.13	1.17	1.51	3.66	4.71
Irrigation, City Exchange	0	0	25	84	168	507	658	679	288	38	0	0	21.9	6.7	3.27	1.17	1.51	3.82	4.92
Residential, Multi-Unit, FCLWD Rates	5,228	4,669	5,203	5,070	5,066	5,711	6,672	6,552	5,812	5,682	4,969	5,610	215.2	181.5	1.19	1.17	1.51	1.39	1.79
Residential, Multi-Unit, City Rates	2,019	1,724	1,964	2,140	1,953	2,109	2,395	2,213	2,010	2,007	1,868	2,040	77.2	67.0	1.15	1.17	1.51	1.35	1.74
Total System	90,810	80,561	115,855	149,976	164,045	369,249	497,087	508,218	402,804	153,280	88,944	96,959	16,394.1	7,446.0	2.20				

														2014 Class N	letrics	2014 Syste	m Metrics	2014 Peaki	ng Factors
			2014 Actu	al Billed Co	nsumption	(Kgals)									Ratio of Avg. Day	System Ratio of	System Ratio of	Customer	Customer
	31	28	31	30	31	30	31	31	30	31	30	31	Avg Day in	Annual	in Max. Mo. to	MD to Avg.	MH to Avg.	Class	Class
Customer Class	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Max Month	Avg. Day	Annual Avg. Day	Day in Max Mo.	Day in Max Mo.	MD Peak	MH Peak
Residential, No Patio, FCLWD Rates	55,378	48,093	61,192	137,490	195,253	272,259	278,636	239,905	170,615	90,451	53,823	57,460	8,988.3	4,549.5	1.98	1.22	1.65	2.42	3.27
Residential, No Patio, City Rates	7,705	6,536	8,944	15,488	25,124	26,740	25,193	19,779	14,219	8,166	7,234	7,797	812.7	473.8	1.72	1.22	1.65	2.10	2.84
Residential, No Patio, City Exchange	163	145	202	372	726	784	698	723	421	251	175	168	23.3	13.2	1.76	1.22	1.65	2.16	2.91
Residential, Patio	648	561	695	894	977	1,061	1,098	990	847	733	666	757	35.4	27.2	1.30	1.22	1.65	1.59	2.15
Commercial, FCLWD Rates	16,488	15,656	18,712	27,204	38,061	44,031	52,975	47,234	36,431	24,640	17,563	16,569	1,708.9	974.1	1.75	1.22	1.65	2.15	2.90
Commercial, Billed as City Use	369	314	394	1,109	2,664	4,134	2,323	3,151	2,212	713	314	262	101.7	49.2	2.07	1.22	1.65	2.53	3.42
Commercial, City Exchange Use	587	569	375	1,351	1,169	1,118	1,319	1,305	1,144	925	913	586	42.6	31.1	1.37	1.22	1.65	1.67	2.26
Irrigation, FCLWD Rates	6	8	1,008	16,376	38,396	53,488	57,360	47,433	30,370	6,860	20	14	1,850.3	688.6	2.69	1.22	1.65	3.29	4.44
Irrigation, City Rates	0	11	449	5,489	11,924	12,353	12,073	7,716	4,991	113	0	0	411.8	151.0	2.73	1.22	1.65	3.34	4.51
Irrigation, City Exchange	0	0	3	183	330	384	478	378	129	0	0	0	15.4	5.2	2.98	1.22	1.65	3.65	4.94
Residential, Multi-Unit, FCLWD Rates	5,069	4,342	4,706	5,229	5,893	6,310	6,149	5,948	5,517	5,225	4,812	5,391	210.3	177.0	1.19	1.22	1.65	1.45	1.97
Residential, Multi-Unit, City Rates	1,701	1,481	1,677	1,554	2,024	1,886	1,914	1,815	1,921	1,912	1,824	1,954	61.7	59.4	1.04	1.22	1.65	1.27	1.72
Lil'Thomp/City LvInd	342	0	36	14	0	0	15	0	0	0	0	0	11.0	1.1	9.90	1.223796936	1.653660958	12.11534745	16.37091618
Total System	88458.4	77715.12	98393.44	212753	322542.9	424548.8	440231.4	376376.9	268815.2	139988.1	87344.01	90959.29	14201.01445	7200.347003	1.972268065				

Fort Collins-Loveland Water District 2017 Rate & Fee Study

Customer Class Peaking Factor Summary - Existing Disaggregated Rate Structure

	Summary of Customer Class Peaking Factors										
	N	/laximum Day Pe	aking Factors		Maximum Hour Peaking Factors						
Customer Class	2014	2015	2016	Average	2014	2015	2016	Average			
Residential, No Patio, FCLWD Rates	2.42	2.59	2.51	2.51	3.27	3.34	3.46	3.35			
Residential, No Patio, City Rates	2.10	2.23	2.31	2.21	2.84	2.87	3.18	2.96			
Residential, No Patio, City Exchange	2.16	2.78	2.38	2.44	2.91	3.57	3.28	3.26			
Residential, Patio	1.59	1.62	1.59	1.60	2.15	2.09	2.20	2.15			
Commercial, FCLWD Rates	2.15	2.09	2.01	2.08	2.90	2.69	2.77	2.79			
Commercial, Billed as City Use	2.15	2.09	2.01	2.08	2.90	2.69	2.77	2.79			
Commercial, City Exchange Use	1.67	1.80	1.62	1.70	2.26	2.32	2.23	2.27			
Irrigation, FCLWD Rates	3.29	3.74	3.35	3.46	4.44	4.82	4.61	4.62			
Irrigation, City Rates	3.29	3.74	3.35	3.46	4.44	4.82	4.61	4.62			
Irrigation, City Exchange	3.65	3.82	4.10	3.86	4.94	4.92	5.65	5.17			
Residential, Multi-Unit, FCLWD Rates	1.45	1.39	1.31	1.38	1.97	1.79	1.81	1.85			
Residential, Multi-Unit, City Rates	1.45	1.39	1.31	1.38	1.97	1.79	1.81	1.85			

	Sort of Custom	ner Class Peakin	g Factors from H	lighest to Lowe	st			
		Maximum Day I	Peaking Factors		I	Maximum Hour	Peaking Factors	
Customer Class	2014	2015	2016	Average	2014	2015	2016	Average
Irrigation, City Exchange	3.65	3.82	4.10	3.86	4.63	4.61	5.30	4.84
Irrigation, City Rates	3.34	3.66	3.24	3.41	4.23	4.41	4.18	4.27
Irrigation, FCLWD Rates	3.29	3.74	3.35	3.46	4.17	4.52	4.33	4.34
Commercial, Billed as City Use	2.53	3.26	3.37	3.05	3.20	3.93	4.35	3.83
Residential, No Patio, FCLWD Rates	2.42	2.59	2.51	2.51	3.06	3.13	3.24	3.14
Residential, No Patio, City Exchange	2.16	2.78	2.38	2.44	2.73	3.35	3.07	3.05
Commercial, FCLWD Rates	2.15	2.09	2.01	2.08	2.72	2.52	2.60	2.61
Residential, No Patio, City Rates	2.10	2.23	2.31	2.21	2.66	2.69	2.98	2.78
Commercial, City Exchange Use	1.67	1.80	1.62	1.70	2.12	2.18	2.09	2.13
Residential, Patio	1.59	1.62	1.59	1.60	2.02	1.96	2.06	2.01
Residential, Multi-Unit, FCLWD Rates	1.45	1.39	1.31	1.38	1.84	1.67	1.70	1.74
Residential, Multi-Unit, City Rates	1.27	1.35	2.63	1.75	1.61	1.63	3.39	2.21

Fort Collins-Loveland Water District 2017 Rate & Fee Study

Billed Consumption Data Used to Develop Peaking Factors - Consolidated Customer Types

										2016 Class Metrics			2016 System Metrics		2016 Peaking Factors				
				2016 Actu	ual Billed Con	sumption (Kg	als)								Ratio of Avg. Day	System Ratio of	System Ratio of	Customer	Customer
	31	28	31	30	31	30	31	31	30	31	30	31	Avg Day in	Annual	in Max. Mo. to	MD to Avg.	MH to Avg.	Class	Class
Customer Class	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Max Month	Avg. Day	Annual Avg. Day	Day in Max Mo.	Day in Max Mo.	MD Peak	MH Peak
Residential	62,482	60,403	73,286	91,059	215,832	418,814	421,351	349,860	294,865	121,798	70,652	70,029	13,960.5	6,165.6	2.26	1.10	1.51	2.49	3.42
Commercial	18,338	18,128	21,386	26,186	42,081	67,742	71,117	61,254	56,910	30,345	19,552	17,017	2,294.1	1,233.0	1.86	1.10	1.51	2.04	2.81
Irrigation	22	27	933	6,511	41,901	96,588	102,502	86,848	57,633	7,792	38	1	3,306.5	1,098.1	3.01	1.10	1.51	3.31	4.55
Residential, Multi-Unit	7,154	6,604	7,237	6,622	8,210	9,550	9,585	8,842	8,336	6,945	6,778	7,403	309.2	255.5	1.21	1.10	1.51	1.33	1.83
Total System	87,996	85,162	102,842	130,378	308,024	592,694	604,555	506,804	417,743	166,880	97,020	94,450	19,501.8	8,752.2	2.23				

	2016 Actual Billed Consumption (Kgals)									2016 Class Metrics			2016 System Metrics		2016 Peaking Factors				
				2016 Actu	al Billed Con	sumption (Kg	als)								Ratio of Avg. Day	System Ratio of	System Ratio of	Customer	Customer
	31	28	31	30	31	30	31	31	30	31	30	31	Avg Day in	Annual	in Max. Mo. to	MD to Avg.	MH to Avg.	Class	Class
Customer Class	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Max Month	Avg. Day	Annual Avg. Day	Day in Max Mo.	Day in Max Mo.	MD Peak	MH Peak
Residential	63,906	56,640	83,380	108,102	113,396	256,604	354,625	356,003	281,830	111,979	63,231	70,697	11,484.0	5,261.4	2.18	1.17	1.51	2.55	3.29
Commercial	19,633	17,512	22,924	26,023	29,945	48,152	56,785	61,220	54,260	27,129	18,700	18,516	1,974.8	1,098.1	1.80	1.17	1.51	2.10	2.71
Irrigation	23	16	2,385	8,642	13,685	56,673	76,611	82,230	58,892	6,483	176	96	2,652.6	838.1	3.16	1.17	1.51	3.70	4.76
Residential, Multi-Unit	7,248	6,393	7,166	7,211	7,019	7,819	9,066	8,765	7,822	7,689	6,837	7,650	292.5	248.5	1.18	1.17	1.51	1.38	1.77
Total System	90,810	80,561	115,855	149,976	164,045	369,249	497,087	508,218	402,804	153,280	88,944	96,959	16,394.1	7,446.0	2.20				

													2016 Class Metrics			2016 System Metrics		2016 Peaking Factors	
				2016 Actu	ial Billed Cons	sumption (Kg	als)								Ratio of Avg. Day	System Ratio of	System Ratio of	Customer	Customer
	31	28	31	30	31	30	31	31	30	31	30	31	Avg Day in	Annual	in Max. Mo. to	MD to Avg.	MH to Avg.	Class	Class
Customer Class	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Max Month	Avg. Day	Annual Avg. Day	Day in Max Mo.	Day in Max Mo.	MD Peak	MH Peak
Residential	63,895	55,334	71,033	154,244	222,081	300,844	305,625	261,396	186,101	99,600	61,898	66,183	9,858.9	5,063.7	1.95	1.22	1.65	2.38	3.22
Commercial	17,444	16,540	19,482	29,665	41,895	49,283	56,617	51,690	39,786	26,278	18,790	17,418	1,826.4	1,054.5	1.73	1.22	1.65	2.12	2.86
Irrigation	6	19	1,460	22,048	50,650	66,226	69,912	55,527	35,490	6,974	20	14	2,255.2	844.8	2.67	1.22	1.65	3.27	4.41
Residential, Multi-Unit	6,771	5,823	6,383	6,782	7,917	8,196	8,063	7,764	7,439	7,136	6,636	7,345	273.2	236.3	1.16	1.22	1.65	1.41	1.91
Lil'Thomp/City LvInd	342	0	36	14	0	0	15	0	0	0	0	0	11.0	1.1	9.90	1.22	1.65	12.12	16.37
Total System	88,458	77,715	98,393	212,753	322,543	424,549	440,231	376,377	268,815	139,988	87,344	90,959	14,201.0	7,200.3	1.97				

Fort Collins-Loveland Water District 2017 Rate & Fee Study Combined Customer Class Peaking Factor Summary - Consolidated Customer Types

	Summ	ary of Customer	Class Peaking	Factors				
	N	/laximum Day Pe	aking Factors		N	laximum Hour P	eaking Factors	
Customer Class	2014	2015	2016	Average	2014	2015	2016	Average
Residential, No Patio, FCLWD Rates	2.42	2.59	2.51	2.51	3.27	3.34	3.46	3.35
Residential, No Patio, City Rates	2.10	2.23	2.31	2.21	2.84	2.87	3.18	2.96
Residential, No Patio, City Exchange	2.16	2.78	2.38	2.44	2.91	3.57	3.28	3.26
Residential, Patio	1.59	1.62	1.59	1.60	2.15	2.09	2.20	2.15
Commercial, FCLWD Rates	2.12	2.10	2.04	2.09	2.86	2.71	2.81	2.80
Commercial, Billed as City Use	2.12	2.10	2.04	2.09	2.86	2.71	2.81	2.80
Commercial, City Exchange Use	2.12	2.10	2.04	2.09	2.86	2.71	2.81	2.80
Irrigation, FCLWD Rates	3.27	3.70	3.31	3.42	4.41	4.76	4.55	4.58
Irrigation, City Rates	3.27	3.70	3.31	3.42	4.41	4.76	4.55	4.58
Irrigation, City Exchange	3.27	3.70	3.31	3.42	4.41	4.76	4.55	4.58
Residential, Multi-Unit, FCLWD Rates	1.41	1.38	1.33	1.37	1.91	1.77	1.83	1.84
Residential, Multi-Unit, City Rates	1.41	1.38	1.33	1.37	1.91	1.77	1.83	1.84

	Sort of Custom	ner Class Peaking	g Factors from H	lighest to Lowe	st			
		Maximum Day F	Peaking Factors		I	Maximum Hour	Peaking Factors	
Customer Class	2014	2015	2016	Average	2014	2015	2016	Average
Irrigation, FCLWD Rates	3.27	3.70	3.31	3.42	4.41	4.76	4.55	4.58
Irrigation, City Rates	3.27	3.70	3.31	3.42	4.41	4.76	4.55	4.58
Irrigation, City Exchange	3.27	3.70	3.31	3.42	4.41	4.76	4.55	4.58
Residential, No Patio, FCLWD Rates	2.42	2.59	2.51	2.51	3.27	3.34	3.46	3.35
Residential, No Patio, City Exchange	2.16	2.78	2.38	2.44	2.91	3.57	3.28	3.26
Residential, No Patio, City Rates	2.10	2.23	2.31	2.21	2.84	2.87	3.18	2.96
Commercial, FCLWD Rates	2.12	2.10	2.04	2.09	2.86	2.71	2.81	2.80
Commercial, Billed as City Use	2.12	2.10	2.04	2.09	2.86	2.71	2.81	2.80
Commercial, City Exchange Use	2.12	2.10	2.04	2.09	2.86	2.71	2.81	2.80
Residential, Patio	1.59	1.62	1.59	1.60	2.15	2.09	2.20	2.15
Residential, Multi-Unit, FCLWD Rates	1.41	1.38	1.33	1.37	1.91	1.77	1.83	1.84
Residential, Multi-Unit, City Rates	1.41	1.38	1.33	1.37	1.91	1.77	1.83	1.84

Fort Collins-Loveland Water District 2017 Rate & Fee Study Test Year 2018 Summary Asset Functionalization

		Detailed Asset Functio	nalization - Before Inco	orportion of CWIP		
	Original Cost	Net Book Value	RCN	RCN Less Depreciation	Additions through Test Year	RCNLD Through Test Year
Asset Category	at 12/31/2016	as of 12/31/2016	at 12/31/2016	at 12/31/2016	2018	2018
Raw Water	\$95,636,090	\$95,636,090	\$110,405,345	\$110,405,345	\$12,129,250	\$122,534,595
Source of Supply	5,799,216	5,738,853	6,578,635	6,406,589	1,443,748	7,850,337
Treatment	31,969,559	28,449,685	40,465,946	34,852,589	8,793,832	43,646,421
Transmission Mains	27,139,182	17,796,604	48,454,152	24,434,059	3,356,152	27,790,211
Distribution Mains	49,190,008	36,624,700	68,211,852	48,275,952	1,423,250	49,699,202
Treated Water Storage	8,627,625	6,870,711	11,483,041	8,076,605	0	8,076,605
Pumps	2,547,595	1,861,911	3,569,497	2,453,602	284,950	2,738,552
Meters	6,215,398	3,839,688	9,719,875	4,986,388	257,500	5,243,888
Customer Service	0	0	0	0	0	0
Administration	6,490,164	3,410,600	8,347,841	4,269,439	410,635	4,680,074
Total Before CWIP	233,614,836	200,228,842	307,236,184	244,160,566	28,099,317	272,259,883
CWIP (Timnath Tank - All Treated Wate Storarge)	4,062,297	4,062,297	4,062,297	4,062,297		
Total After CWIP	\$237,677,133	\$204,291,139	\$311,298,481	\$248,222,863	\$28,099,317	\$272,259,883

		Detailed Asset Function	onalization - After Inco	prportion of CWIP		
	Original Cost	Net Book Value	RCN	RCN Less Depreciation	Additions through Test Year	RCNLD Through Test Year
Asset Category	at 12/31/2016	as of 12/31/2016	at 12/31/2016	at 12/31/2016	2018	2018
Raw Water	\$95,636,090	\$95,636,090	\$110,405,345	\$110,405,345	\$12,129,250	\$122,534,595
Source of Supply	5,799,216	5,738,853	6,578,635	6,406,589	1,443,748	7,850,337
Treatment	31,969,559	28,449,685	40,465,946	34,852,589	8,793,832	43,646,421
Transmission Mains	27,139,182	17,796,604	48,454,152	24,434,059	3,356,152	27,790,211
Distribution Mains	49,190,008	36,624,700	68,211,852	48,275,952	1,423,250	49,699,202
Treated Water Storage	12,689,922	10,933,009	15,545,338	12,138,902	0	8,076,605
Pumps	2,547,595	1,861,911	3,569,497	2,453,602	284,950	2,738,552
Meters	6,215,398	3,839,688	9,719,875	4,986,388	257,500	5,243,888
Customer Service	0	0	0	0	0	0
Administration	6,490,164	3,410,600	8,347,841	4,269,439	410,635	4,680,074
Total	\$237,677,133	\$204,291,139	\$311,298,481	\$248,222,863	\$28,099,317	\$272,259,883

		Summary As	set Functionalization Per	rcentages		
	Original Cost	Net Book Value	RCN	RCN Less Depreciation	Additions through Test Year	RCNLD Through Test Year
Asset Category	at 12/31/2016	as of 12/31/2016	at 12/31/2016	at 12/31/2016	2018	2018
Raw Water	40.24%	46.81%	35.47%	44.48%	43.17%	45.01%
Source of Supply	2.44%	2.81%	2.11%	2.58%	5.14%	2.88%
Treatment	13.45%	13.93%	13.00%	14.04%	31.30%	16.03%
Transmission Mains	11.42%	8.71%	15.57%	9.84%	11.94%	10.21%
Distribution Mains	20.70%	17.93%	21.91%	19.45%	5.07%	18.25%
Freated Water Storage	5.34%	5.35%	4.99%	4.89%	0.00%	2.97%
Pumps	1.07%	0.91%	1.15%	0.99%	1.01%	1.01%
Meters	2.62%	1.88%	3.12%	2.01%	0.92%	1.93%
Customer Service	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
dministration	2.73%	1.67%	2.68%	1.72%	1.46%	1.72%
otal	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study **Test Year 2018 Summary Asset Functionalization**

			Detail o	f Main Sizes (Inch Fee	t)				
Size (Inches)	Copper	PVC	DI	CI	Steel	AC	Unknown	Other	Total Inch Feet
1	1,964	11,595	507	0	0	0	0	0	14,066
1.25	0	0	713	0	0	0	0	0	713
1.5	238	190	95	0	0	0	0	0	523
2	291	228,096	507	253	887	0	17,614	0	247,649
2.5	0	30,888	0	0	0	0	0	0	30,888
3	0	602,744	3,612	4,372	0	1,999,832	950	0	2,611,509
4	0	3,111,990	9,377	221,253	507	2,301,996	1,774	0	5,646,897
6	0	22,281,558	192,361	483,564	0	2,621,964	27,372	0	25,606,817
8	0	81,980,237	161,188	14,700	7,096	445,548	10,644	0	82,619,412
10	0	10,824,422	21,542	12,672	0	1,876,723	634	0	12,735,994
12	0	45,978,071	959,524	514,737	10,644	12,165	4,562	0	47,479,703
14	0	58,545	1,207,261	93,139	0	7,474,199	0	0	8,833,144
15	0	8,554	0	0	0	0	0	5,037	13,591
16	0	1,676,759	2,332,662	0	18,248	1,983,928 0	0	0	6,011,597
18 20	0	20,529	1,227,156	0	14,051,854	0	0		15,299,539
20 22	0	0	3,221,222 0	0	1,899,533 2,053,244	0	0	0	5,120,755 2,053,244
22	0	4,542,152	7,586,473	0	3,080,817	0	0	0	15,209,441
30	0	4,542,152	1,406,592	0	5,221,498	0	0	0	6,628,090
36	0	0	5,421,842	0	5,738,895	0	0	0	11,160,737
48	0	0	1,785,231	0	5,738,895	0	0	0	1,785,231
48 Total	2,493	171,356,328	25,537,866	1,344,689	32,083,223	18,716,354	63,550	5,037	249,109,540
Total	2,493	1/1,330,328	25,557,800	1,344,089	32,083,223	18,/10,354	03,330	5,037	249,109,540
Inch Feet of 12" or Smaller Diameter	2,493	165,049,790	1,349,425	1,251,550	19,135	9,258,227	63,550	0	176,994,170
Inch Feet of 14" or Greater Diameter	0	6,306,538	24,188,440	93,139	32,064,088	9,458,127	0	5,037	72,115,370
Total Inch Feet	2,493	171,356,328	25,537,866	1,344,689	32,083,223	18,716,354	63,550	5,037	249,109,540
	,	, ,		, ,	, ,	, ,	·	,	
Inch Feet of 12" or Smaller Diameter	100.00%	96.32%	5.28%	93.07%	0.06%	49.47%	100.00%	0.00%	71.059
Inch Feet of 14" or Greater Diameter	0.00%	3.68%	94.72%	6.93%	99.94%	50.53%	0.00%	100.00%	28.959
Total Inch Feet	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.009
				of Main Sizes (Miles)					
Size (Inches)	Copper	PVC	DI	CI	Steel	AC	Unknown	Other	Total Miles
1	0.031	0.183	0.008						0.22
1.25			0.009						0.00
1.5	0.003	0.002	0.001	0.000			0.400		0.00
2	0.002	1.800	0.004	0.002	0.007		0.139		1.95
2.5		0.195	0.040	0.000		40.534	0.005		0.19
3		3.171	0.019	0.023	0.000	10.521	0.005		13.73
4		12.279	0.037	0.873	0.002	9.083	0.007		22.28
6		58.611	0.506	1.272		6.897	0.072		67.35
8		161.735	0.318	0.029	0.014	0.879	0.021		162.99
10		17.084	0.034	0.02		2.962	0.001		20.10
12		60.472	1.262	0.677	0.014	0.016	0.006		62.44
14		0.066	1.361	0.105		8.426			9.95
15		0.009						0.005	0.01
16		1.654	2.301		0.018	1.957			5.93
18		0.018	1.076		12.321				13.41
20			2.542		1.499				4.04
22					1.473				1.47
24		2.987	4.989		2.026				10.00
30			0.740		2.747				3.48
36			2.377		2.516				4.89
48			0.587						0.58
Total	0.036	320.266	18.171	3.001	22.637	40.741	0.251	0.005	405.10

Page B-9 3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study

Allocation Factor for Customer Service and Administration

Test Year 2018 Capital Cost Allocation to Demand Parameters

		Capital Cost Rev	enue Requiremer	nt Allocation Perc	entages					
	Functionalized			Volumetric		Custome	er Service	Private	e Fire	
	Revenue	Total				Equivalent		Equivalent		
Functional Category	Requirement	%	Base	Max Day	Max Hour	Meters	Bills	Connections	Bills	Public Fire
Raw Water	\$6,718,602	100.00%	100.00%							
Source of Supply	430,436	100.00%	100.00%							
Treatment	2,393,144	100.00%	41.87%	58.13%						
Transmission Mains	1,523,744	100.00%	41.87%	58.13%						
Distribution Mains	2,725,020	100.00%	31.25%		68.75%					
Treated Water Storage	442,842	100.00%	31.25%		68.75%					
Pumps	150,155	100.00%	31.25%	43.39%	25.36%					
Meters	287,524	100.00%				100.00%]			
Customer Service	0	100.00%					100.00%			
Administration	256,610	100.00%	66.97%	15.96%	15.10%	1.96%	0.00%	0.00%	0.00%	0.00%
Total Capital Cost Revenue Requirement	\$14,928,077	100.00%	66.97%	15.96%	15.10%	1.96%	0.00%	0.00%	0.00%	0.00%
check	0									

		Capital Cost Re	venue Requireme	ent Dollar Percent	ages					
	Functionalized			Volumetric		Custome	r Service	Privat	e Fire	
	Revenue	Total				Equivalent		Equivalent		
Functional Category	Requirement	%	Base	Max Day	Max Hour	Meters	Bills	Connections	Bills	Public Fire
Raw Water	45.01%	\$6,718,602	\$6,718,602	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Source of Supply	2.88%	430,436	430,436	0	0	0	0	0	0	0
Treatment	16.03%	2,393,144	1,001,965	1,391,179	0	0	0	0	0	0
Transmission Mains	10.21%	1,523,744	637,963	885,781	0	0	0	0	0	0
Distribution Mains	18.25%	2,725,020	851,569	0	1,873,451	0	0	0	0	0
Treated Water Storage	2.97%	442,842	138,388	0	304,454	0	0	0	0	0
Pumps	1.01%	150,155	46,924	65,151	38,081	0	0	0	0	0
Meters	1.93%	287,524	0	0	0	287,524	0	0	0	0
Customer Service	0.00%	0	0	0	0	0	0	0	0	0
Administration	1.72%	256,610	171,858	40,964	38,758	5,029	0	0	0	0
Total Capital Cost Revenue Requirement	100.00%	\$14,928,077	\$9,997,705	\$2,383,075	\$2,254,744	\$292,553	\$0	\$0	\$0	\$0

66.97%

15.96%

15.10%

1.96%

0.00%

0.00%

0.00%

0.00%

100.00%

Fort Collins-Loveland Water District 2017 Rate & Fee Study Test Year 2018 O&M Functionalization

					O&M Functional	Allocation Percent	ages						
		Revenue	Total				Transmission	Distribution	Treated			Customer	
	O&M Cost Centers	Requirement	% Allocation	Raw Water	Source of Supply	Treatment	Mains	Mains	Water Storage	Pumps	Meters	Service	Administration
40	Source and Treatment												
	4010 Assessments	\$1,545,000	100.0%			100.00%							
	4020 Soldier Canyon	2,047,500	100.0%			100.00%							
	4060 City of Loveland	51,500	100.0%			100.00%							
	4070 FTC - Water Sale IGA	848,720	100.0%			100.00%							
	4071 FTC - Transmission charges	128,750	100.0%			100.00%							
	4072 FTC - Water Exchange IGA	126,690	100.0%			100.00%							
	4073 FTC - Water purchase	450,110	100.0%			100.00%							
	4080 North Weld County Water District	25,750	100.0%			100.00%							
	4090 R & M - Source and Supply	0	100.0%			100.00%							
	4100 Water Resource Consulting	60,000	100.0%			100.00%							
50	Engineering	555,763	100.0%	35.5%	2.1%	13.0%	15.6%	21.9%	5.0%	1.1%	3.1%	0.0%	2.7%
60	Distribution	2,622,798	100.0%				28.9%	71.1%					
70	Office	867,398	100.0%									100.00%	
80	Administration	764,847	100.0%	35.5%	2.1%	13.0%	15.6%	21.9%	5.0%	1.1%	3.1%	0.0%	2.7%
	Total	\$10,094,826	100.0%	4.6%	0.3%	54.0%	9.6%	21.3%	0.7%	0.2%	0.4%	8.6%	0.4%
	check	0			·			·				·	·

				O&M Functional A	Allocation Percent	ages						
	% in Each	Revenue				Transmission	Distribution	Treated			Customer	
O&M Cost Centers	Cost Center	Requirement	Raw Water	Source of Supply	Treatment	Mains	Mains	Water Storage	Pumps	Meters	Service	Administration
40 Source and Treatment												
4010 Assessments	15.3%	\$1,545,000	\$0	\$0	\$1,545,000	\$0	\$0	\$0	\$0	\$0	\$0	
4020 Soldier Canyon	20.3%	2,047,500	0	0	2,047,500	0	0	0	0	0	0	
4060 City of Loveland	0.5%	51,500	0	0	51,500	0	0	0	0	0	0	
4070 FTC - Water Sale IGA	8.4%	848,720	0	0	848,720	0	0	0	0	0	0	
4071 FTC - Transmission charges	1.3%	128,750	0	0	128,750	0	0	0	0	0	0	
4072 FTC - Water Exchange IGA	1.3%	126,690	0	0	126,690	0	0	0	0	0	0	
4073 FTC - Water purchase	4.5%	450,110	0	0	450,110	0	0	0	0	0	0	
4080 North Weld County Water District	0.3%	25,750	0	0	25,750	0	0	0	0	0	0	
4090 R & M - Source and Supply	0.0%	0	0	0	0	0	0	0	0	0	0	
4100 Water Resource Consulting	0.6%	60,000	0	0	60,000	0	0	0	0	0	0	
50 Engineering	5.5%	555,763	197,107	11,745	72,244	86,505	121,779	27,753	6,373	17,353	0	14
60 Distribution	26.0%	2,622,798	0	0	0	759,281	1,863,517	0	0	0	0	
70 Office	8.6%	867,398	0	0	0	0	0	0	0	0	867,398	
80 Administration	7.6%	764,847	271,261	16,163	99,423	119,050	167,594	38,194	8,770	23,881	0	20
Total	100.0%	\$10,094,826	\$468,368	\$27,908	\$5,455,687	\$964,836	\$2,152,890	\$65,947	\$15,143	\$41,234	\$867,398	\$3

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Fort Collins-Loveland Water District 2017 Rate & Fee Study Tank Your 2018 ORAM Functions Allegation

Test Year 2018 O&M Expense Allocation to Demand Parameters

		O&M E	xpense Revenue I	Requirement Allo	cation Percentag	es				
	Functionalized			Volumetric		Custome	er Service	Private	Fire	
	Revenue	Total				Equivalent		Equivalent		
Functional Category	Requirement	%	Base	Max Day	Max Hour	Meters	Bills	Connections	Bills	Public Fire
Raw Water	\$468,368	100.00%	100.00%							
Source of Supply	27,908	100.00%	100.00%							
Treatment	5,455,687	100.00%	41.87%	58.13%						
Mains	964,836	100.00%	41.87%	58.13%						
Mains	2,152,890	100.00%	31.25%		68.75%					
Water Storage	65,947	100.00%	31.25%		68.75%					
Pumps	15,143	100.00%	31.25%	43.39%	25.36%					
Meters	41,234	100.00%				100.00%				
Service	867,398	100.00%				98.00%	2.00%			
Administration	35,414	100.00%	42.24%	40.68%	16.64%	0.45%	0.00%	0.00%	0.00%	0.00%
Total O&M Revenue Requirement	\$10,094,826	100.00%	38.61%	37.18%	15.21%	8.83%	0.17%	0.00%	0.00%	0.00%

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		0&M I	Expense Revenue	Requirement Do	llar Percentages					
	Revenue			Volumetric		Custome	Service	Private	Fire	
	Requirement	Revenue				Equivalent		Equivalent		
Functional Category	Percentage	Requirement	Base	Max Day	Max Hour	Meters	Bills	Connections	Bills	Public Fire
Raw Water	4.64%	\$468,368	\$468,368	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Source of Supply	0.28%	27,908	27,908	0	0	0	0	0	0	0
Treatment	54.04%	5,455,687	2,284,195	3,171,492	0	0	0	0	0	0
Mains	9.56%	964,836	403,959	560,877	0	0	0	0	0	0
Mains	21.33%	2,152,890	672,778	0	1,480,112	0	0	0	0	0
Water Storage	0.65%	65,947	20,609	0	45,339	0	0	0	0	0
Pumps	0.15%	15,143	4,732	6,570	3,840	0	0	0	0	0
Meters	0.41%	41,234	0	0	0	41,234	0	0	0	0
Service	8.59%	867,398	0	0	0	850,050	17,348	0	0	0
Administration	0.35%	35,414	14,958	14,405	5,892	159	0	0	0	0
Total O&M Revenue Requirement	100.00%	\$10,094,826	\$3,897,508	\$3,753,344	\$1,535,183	\$891,443	\$17,348	\$0	\$0	\$0

Allocation Factor for Buildings/Office/Equip	100.00%	42.24%	40.68%	16.64%	0.45%	0.00%	0.00%	0.00%	0.00%

Appendix B: Cost of Service Study

Page B-12 3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study

Test Year 2018 Non-Rate Revenue Functional Allocation

						Non-Rate Rev	enue Functional Percer	ntages				
					Transmission							
Non-Rate Revenue Item	Total	Raw Water	Source of Supply	Treatment	Mains	Distribution Mains	Water Storage	Pumps	Meters	Cust. Svc.	Administration	Total
Water sales - construction	\$0	45%	3%	16%	10%	18%	3%	1%	2%	0%	2%	100%
Town of Windsor	350,000	45%	3%	16%	10%	18%	3%	1%	2%	0%	2%	100%
Water rental	110,000	45%	3%	16%	10%	18%	3%	1%	2%	0%	2%	100%
Miscellaneous income	100,000	45%	3%	16%	10%	18%	3%	1%	2%	0%	2%	100%
Management fees - SFCSD	468,871	45%	3%	16%	10%	18%	3%	1%	2%	0%	2%	100%
Property taxes	1,050,000	45%	3%	16%	10%	18%	3%	1%	2%	0%	2%	100%
Soldier Canyon Income	0											0%
Interest on investments	0											0%
PIFs - Water Resource Component	7,645,279	100%										100%
PIFs - Infrastructure Component	3,805,574		50%	35%	12%			4%				100%
Meter fees	80,000									100%		100%
Impact fees	220,000	45%	3%	16%	10%	18%	3%	1%	2%	0%	2%	100%
Sale of assets	0											0%
Inclusion fees	0											0%
Interest Income	252,523	45%	3%	16%	10%	18%	3%	1%	2%	0%	2%	100%
Total Non-Rate Revenues	\$14,082,246				•				*		•	

					Non-R	ate Revenue Functio	onal Dollar Allocations				
					Transmission						
Non-Rate Revenue Item	Total	Raw Water	Source of Supply	Treatment	Mains	Distribution Mains	Water Storage	Pumps	Meters	Cust. Svc.	Administration
Water sales - construction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Town of Windsor	350,000	157,523	10,092	56,109	35,725	63,890	10,383	3,521	6,741	0	6,016
Water rental	110,000	49,507	3,172	17,634	11,228	20,080	3,263	1,106	2,119	0	1,891
Miscellaneous income	100,000	45,006	2,883	16,031	10,207	18,254	2,967	1,006	1,926	0	1,719
Management fees - SFCSD	468,871	211,022	13,519	75,165	47,859	85,589	13,909	4,716	9,031	0	8,060
Property taxes	1,050,000	472,568	30,276	168,327	107,176	191,670	31,148	10,562	20,224	0	18,049
Soldier Canyon Income	0	0	0	0	0	0	0	0	0	0	0
Interest on investments	0	0	0	0	0	0	0	0	0	0	0
PIFs - Water Resource Component	7,645,279	7,645,279	0	0	0	0	0	0	0	0	0
PIFs - Infrastructure Component	3,805,574	0	1,899,743	1,331,850	440,239	0	0	133,741	0	0	0
Meter fees	80,000	0	0	0	0	0	0	0	0	80,000	0
Impact fees	220,000	99,014	6,343	35,269	22,456	40,160	6,526	2,213	4,237	0	3,782
Sale of assets	0	0	0	0	0	0	0	0	0	0	0
Inclusion fees	0	0	0	0	0	0	0	0	0	0	0
Interest Income	252,523	113,652	7,281	40,482	25,776	46,096	7,491	2,540	4,864	0	4,341
Total Non-Rate Rate Revenues	\$14,082,246	\$8,793,571	\$1,973,310	\$1,740,868	\$700,666	\$465,740	\$75,687	\$159,404	\$49,141	\$80,000	\$43,858

3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study Test Year 2018 Non-Rate Revenue Allocation to Demand Parameters

		Non-	Rate Revenue Re	quirement Alloca	tion Percentages					
	Functionalized			Volumetric		Custome	r Service	Private	e Fire	
	Revenue	Total				Equivalent		Equivalent		
Functional Category	Requirement	%	Base	Max Day	Max Hour	Meters	Bills	Connections	Bills	Public Fire
Raw Water	\$8,793,571	100.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Source of Supply	1,973,310	100.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Treatment	1,740,868	100.00%	41.87%	58.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Mains	700,666	100.00%	41.87%	58.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Mains	465,740	100.00%	31.25%	0.00%	68.75%	0.00%	0.00%	0.00%	0.00%	0.00%
Water Storage	75,687	100.00%	31.25%	0.00%	68.75%	0.00%	0.00%	0.00%	0.00%	0.00%
Pumps	159,404	100.00%	31.25%	43.39%	25.36%	0.00%	0.00%	0.00%	0.00%	0.00%
Meters	49,141	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%
Service	80,000	100.00%	0.00%	0.00%	0.00%	98.00%	2.00%	0.00%	0.00%	0.00%
Administration	43,858	100.00%	42.24%	40.68%	16.64%	0.45%	0.00%	0.00%	0.00%	0.00%
Total Non-Rate Revenue	\$14,082,246	100.00%	85.40%	10.70%	2.98%	0.91%	0.01%	0.00%	0.00%	0.00%

		Non	-Rate Revenue R	equirement Dolla	ar Percentages					
	Functionalized			Volumetric		Custome	r Service	Private	e Fire	
	Revenue	Total				Equivalent		Equivalent		
Functional Category	Requirement	%	Base	Max Day	Max Hour	Meters	Bills	Connections	Bills	Public Fire
Raw Water	62.44%	\$8,793,571	\$8,793,571	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Source of Supply	14.01%	1,973,310	1,973,310	0	0	0	0	0	0	0
Treatment	12.36%	1,740,868	728,869	1,011,999	0	0	0	0	0	0
Mains	4.98%	700,666	293,356	407,310	0	0	0	0	0	0
Mains	3.31%	465,740	145,544	0	320,196	0	0	0	0	0
Water Storage	0.54%	75,687	23,652	0	52,035	0	0	0	0	0
Pumps	1.13%	159,404	49,814	69,164	40,426	0	0	0	0	0
Meters	0.35%	49,141	0	0	0	49,141	0	0	0	0
Service	0.57%	80,000	0	0	0	78,400	1,600	0	0	0
Administration	0.31%	43,858	18,525	17,840	7,297	197	0	0	0	0
Total Non-Rate Revenue	100.00%	\$14,082,246	\$12,026,641	\$1,506,313	\$419,954	\$127,738	\$1,600	\$0	\$0	\$0

Fort Collins-Loveland Water District 2017 Rate & Fee Study Test Year 2018 Units of Service

	Forecast			Base		Max Day			Max Hour		Custo	mer	Private Fi	re		Allocation of P	ublic Fire
	2018	Estimated	Base	Avg. Day	Max Day	Total	Extra	Max Hour	Total	Extra	Equivalent		Equiv.		Public	Hydrants Ba	sed on
Customer Class	Billed	Lost Water	Demand	Demand	Peak	Capacity	Capacity	Peak	Capacity	Capacity	Meters	Bills	Conne ctions	Bills	Fire Hydrants	Equivalent N	√eters
Residential, No Patio, FCLWD Rates	1,890,033	129,380	2,019,413	5,533	2.51	13,864	8,331	3.35	18,550	4,686	13,845	166,123				2,051	78.8%
Residential, No Patio, City Rates	190,079	13,012	203,090	556	2.21	1,232	675	2.96	1,649	417	1,946	23,347				288	11.1%
Residential, No Patio, City Exchange	5,681	389	6,070	17	2.44	41	24	3.26	54	14	33	400				5	0.2%
Residential, Patio	11,409	781	12,191	33	1.60	54	20	2.15	72	18	311	3,733				46	1.8%
Commercial, FCLWD Rates	400,902	27,443	428,345	1,174	2.09	2,451	1,277	2.80	3,280	829	957	6,743				142	5.4%
Commercial, Billed as City Use	20,351	1,393	21,744	60	2.09	124	65	2.80	167	42	44	162				7	0.2%
Commercial, City Exchange Use	13,444	920	14,364	39	2.09	82	43	2.80	110	28	24	209				4	0.1%
Irrigation, FCLWD Rates	286,792	19,632	306,424	840	3.42	2,875	2,036	4.58	3,843	968	240	1,414				0	0.0%
Irrigation, City Rates	60,945	4,172	65,117	178	3.42	611	433	4.58	817	206	37	255				0	0.0%
Irrigation, City Exchange	2,482	170	2,652	7	3.42	25	18	4.58	33	8	5	50				0	0.0%
Residential, Multi-Unit, FCLWD Rates	72,308	4,950	77,258	212	1.37	291	79	1.84	389	98	260	3,121				39	1.5%
Residential, Multi-Unit, City Rates	25,345	1,735	27,080	74	1.37	102	28	1.84	136	34	154	1,848				23	0.9%
Private Fire						0	0		0	0			0	0			
Public Hydrants						450	450		3,600	3,150					2,603		
Total After Price Elasticity Adjustment	2,979,772	203,977	3,183,749	8,723		22,201	13,478		32,700	10,499	17,856	207,404	0	0	2,603	2,603	100.0%

Pu	blic Fire Flows			
	Fire #1	Fire #2	Fire #3	Total
Estimate of Max Day Fire Flow Volumes	Gallons	Gallons	Gallons	Gallons
Fire Flow per Minute	2,500	0	0	
Duration of Fire in Hours	3.00	0.00	0.00	
Duration of Fire in Minutes	180	0	0	
Total Max Day Fire Flow	450,000	0	0	450,000
	Fire #1	Fire #2	Fire #3	Total
Estimate of Max Hour Fire Flows	Gallons	Gallons	Gallons	Gallons
Fire Flow per Minute	2,500	0	0	
Duration of Fire Expressed on a 24-Hour Basis	1,440	1,440	1,440	
Total Max Hour Fire Flow	3,600,000	0	0	3,600,000

Meter Flow Equ	ivalencies - AW	WA Manual M6	(2012 Edition)
		Flow (Max	Calculated
		Consistent	Flow
Meter Type	Meter	GPM)	Equivalency
Displacement	5/8" x 3/4"	15	1.00
Displacement	3/4"	25	1.00
Displacement	1"	40	1.60
Displacement	1 1/2"	50	2.00
Compound	2"	160	6.40
Compound	3"	320	12.80
Compound	4"	500	20.00
Compound	6"	1000	40.00
Compound	8"	1600	64.00
Compound	10"	2300	92.00
Class II Turbine	12"	5000	200.00

Fort Collins-Loveland Water District 2017 Rate & Fee Study Test Year 2018 Unit Cost of Service - Existing Disaggregated Rate Structrure

		Volumetric	Fixed		Volumetric		Customer	Service	Private Fire		
	Revenue	Revenue	Revenue		Max Day	Max Hour	Equivalent		Equivalent		
Item	Requirement	Requirement	Requirement	Base	Extra Capacity	Extra Capacity	Meters	Bills	Connections	Bills	Public Fire
Customer Class Units of Service											
Residential, No Patio, FCLWD Rates				2,019,413	8,331	4,686	13,845	166,123	0	0	2,051
Residential, No Patio, City Rates				203,090	675	417	1,946	23,347	0	0	288
Residential, No Patio, City Exchange				6,070	24	14	33	400	0	0	5
Residential, Patio				12,191	20	18	311	3,733	0	0	46
Commercial, FCLWD Rates				428,345	1,277	829	957	6,743	0	0	142
Commercial, Billed as City Use				21,744	65	42	44	162	0	0	7
Commercial, City Exchange Use				14,364	43	28	24	209	0	0	4
Irrigation, FCLWD Rates				306,424	2,036	968	240	1,414	0	0	0
Irrigation, City Rates				65,117	433	206	37	255	0	0	0
Irrigation, City Exchange				2,652	18	8	5	50	0	0	0
Residential, Multi-Unit, FCLWD Rates				77,258	79	98	260	3,121	0	0	39
Residential, Multi-Unit, City Rates				27,080	28	34	154	1,848	0	0	23
Subtotal				3,183,749	13,028	7,349	17,856	207,404	0	0	2,603
Private Fire				0	0	0	0	0	0	0	0
Public Hydrants				0	450	3,150	0	0	0	0	0
Total System Units of Service Before Adjustment for Outside City Multiplier				3,183,749	13,478	10,499	17,856	207,404	0	0	2,603
Capital Cost Revenue Requirement	\$14,928,077	\$14,635,524	\$292,553	\$9,997,705	\$2,383,075	\$2,254,744	\$292,553	\$0	\$0	\$0	\$0
Unit Cost of Service	\$14,926,077	\$14,055,524	\$292,555	\$3,997,703	\$176.8092	\$2,234,744	\$16.3836	\$0.0000	\$0.0000	\$0.0000	\$0.0000
Offic Cost of Service				\$5.1402	\$170.0092	3214.7332	\$10.5650	\$0.0000	\$0.0000	\$0.0000	\$0.0000
O&M Revenue Requirement	\$10,094,826	\$9,186,035	\$908,791	\$3,897,508	\$3,753,344	\$1,535,183	\$891,443	\$17,348	\$0	\$0	\$0
Unit Cost of Service	\$10,054,820	33,180,033	3308,731	\$1.2242	\$278.4745	\$1,555,185	\$49.9229	\$0.0836	\$0.0000	\$0.0000	\$0.0000
Offic Cost of Service				\$1.2242	3276.4743	\$140.2105	\$49.9229	\$0.0656	\$0.0000	\$0.0000	\$0.0000
Non-Rate Revenue Offset	\$14,082,246	\$13,952,908	\$129,338	\$12,026,641	\$1,506,313	\$419,954	\$127,738	\$1,600	\$0	\$0	\$0
Unit Cost of Service	\$14,002,240	Ģ13,332,300	7125,550	\$3.7775	\$111.7589	\$39.9985	\$7.1536	\$0.0077	\$0.0000	\$0.0000	\$0.0000
of the cost of service				<i>\$3.7773</i>	Ş111.7505	Ç33.3303	\$7.1330	\$0.0077	Ş0.0000	Ç0.0000	\$0.0000
Net Revenue Requirement from Rates	\$10,940,657	\$9,868,651	\$1,072,005	\$1,868,572	\$4,630,106	\$3,369,973	\$1,056,257	\$15,748	\$0	\$0	\$0
Unit Cost of Service Before Adjustment for Outside City Multiplier				\$0.5869	\$343.5248	\$320.9732	\$59.1529	\$0.0759	\$0.0000	\$0.0000	\$0.0000
Customer Class Units of Service FCLWD Rates									_	_	
Residential, No Patio, FCLWD Rates				2,019,413	8,331	4,686	13,845	166,123	0	0	2,051
Residential, No Patio, City Exchange				6,070	24		33	400	0	0	5
Residential, Patio				12,191	20		311	3,733	0	0	46
Commercial, FCLWD Rates				428,345	1,277		957	6,743	0	0	142
Commercial, City Exchange Use				14,364	43		24	209	0	0	4
Irrigation, FCLWD Rates				306,424	2,036		240	1,414	0	0	0
Irrigation, City Exchange				2,652	18		5	50	0	0	0
Residential, Multi-Unit, FCLWD Rates				77,258	79	98 6,650	260	3,121	0	0	39 2,286
Subtotal				2,866,717	11,828	0,050	15,676	181,792	U	U	2,286
Private Fire				0	0	0	0	0	0	0	0
Public Hydrants				0	409	2,850	0	0	0	0	0
Total Units of Service at FCLWD Rates Before Adjustment for Outside City Multiplier				2,866,717	12,236	9,500	15,676	181,792	0	0	2,286
				-							-
Customer Class Units of Service City Rates											
Residential, No Patio, City Rates				203,090	675	417	1,946	23,347	0	0	288
Commercial, Billed as City Use				21,744	65	42	44	162	0	0	7
Irrigation, City Rates				65,117	433		37	255	0	0	0
Residential, Multi-Unit, City Rates				27,080	28	34	154	1,848	0	0	23
Subtotal				317,032	1,200	700	2,180	25,612	0	0	317
Delivate Fire				0	_	•	2	_	_		0
Private Fire Public Hydrants				0	0 41	300	0	0	0	0	0
Total Units of Service, City Rates Before Adjustment for Outside City Multiplier				317,032	1,242	1,000	2,180	25,612	0	0	317
	1			517,552	1,272	1,000	2,130	20,012	0	U	317

Fort Collins-Loveland Water District 2017 Rate & Fee Study Test Year 2018 Unit Cost of Service - Existing Disaggregated Rate Structrure

		Volumetric	Fixed		Volumetric		Customer	Service	Private Fire		
	Revenue	Revenue	Revenue		Max Day	Max Hour	Equivalent		Equivalent		ĺ
Item	Requirement	Requirement	Requirement	Base	Extra Capacity	Extra Capacity	Meters	Bills	Connections	Bills	Public Fire
City Volumetric Rate Multiplier	161.54%										
Unit Cost of Service, FCLWD Rates After Adjustment for OC Multiplier				\$0.5530	\$325.0933	\$303.2081	\$59.1529	\$0.0759	\$0.0000	\$0.0000	\$0.0000
Unit Cost of Service, City Rates After Adjustment for OC Multiplier				\$0.8933	\$525.1507	\$489.7977	\$59.1529	\$0.0759	\$0.0000	\$0.0000	\$0.0000
Customer Class Revenue Requirement, FCLWD Rates											
Residential, No Patio, FCLWD Rates	\$6,077,590	\$5,245,979	\$831,611	\$1,116,778	\$2,708,416	\$1,420,785	\$818,998	\$12,614	\$0	\$0	\$0
Residential, No Patio, City Exchange	17,250	15,250	2,000	3,357	7,770	4,124	1,969	30	0	0	0
Residential, Patio	37,465	18,780	18,685	6,742	6,545	5,493	18,401	283	0	0	0
Commercial, FCLWD Rates	960,799	903,651	57,148	236,884	415,302	251,466	56,636	512	0	0	0
Commercial, City Exchange Use	31,744	30,304	1,441	7,944	13,927	8,433	1,425	16	0	0	0
Irrigation, FCLWD Rates	1,139,097	1,124,783	14,314	169,459	661,800	293,523	14,207	107	0	0	0
Irrigation, City Exchange	10,023	9,736	287	1,467	5,729	2,541	283	4	0	0	0
Residential, Multi-Unit, FCLWD Rates	113,862	98,239	15,623	42,725	25,690	29,824	15,386	237	0	0	0
Private Fire	0	0	0	0	0	0	0	0	0	0	0
Public Hydrants	996,985	996,985	0	0	132,814	864,171	0	0	0	0	0
Total Revenue Requirement, FCLWD Rates	9,384,814	8,443,706	941,108	1,585,354	3,977,992	2,880,359	927,305	13,803	0	0	С
Customer Class Revenue Requirement, City Rates											
Residential, No Patio, City Rates	857,294	740,437	116,858	181,429	354,557	204,451	115,085	1,773	0	0	0
Commercial, Billed as City Use	76,711	74,101	2,609	19,425	34,056	20,621	2,597	12	0	0	0
Irrigation, City Rates	388,297	386,116	2,182	58,172	227,183	100,761	2,162	19	0	0	0
Residential, Multi-Unit, City Rates	64,873	55,625	9,249	24,192	14,546	16,887	9,108	140	0	0	0
Private Fire	0	0	0	0	0	0	0	0	0	0	0
Public Hydrants	168,667	168,667	0	0	21,772	146,895	0	0	0	0	0
Total Revenue Requirement, City Rates	1,555,843	1,424,945	130,897	283,218	652,114	489,614	128,952	1,945	0	0	(
Total	\$10,940,657	\$9,868,651	\$1,072,005	\$1,868,572	\$4,630,106	\$3,369,973	\$1,056,257	\$15,748	\$0	\$0	\$

Fort Collins-Loveland Water District 2017 Rate & Fee Study

Test Year 2018 Unit Cost of Service - Existing Disaggregated Rate Structure

				Revenue R	equirement by Cu	stomer Class Before	e Reallocation of P	ublic Fire Protectio	n Costs						
	Total			Volume	etric					Customer Servi	ce		Private I	Fire	
	Revenue		Max Day	Max Hour	Total Before	RTS Adj.	Total Ater	Equivalent		Total Before	RTS	Total Ater	Equivalent		
Customer Class	Requirement	Base	Extra Capacity	Extra Capacity	RTS Adj.	to Base	RTS Adj.	Meters	Bills	RTS Adj.	Adjustment	RTS Adj.	Connections	Bills	Public Fire
Customer Classes at FCLWD Rates															
Residential, No Patio, FCLWD Rates	\$6,077,590	\$1,116,778	\$2,708,416	\$1,420,785	\$5,245,979	\$444,484	\$4,801,495	\$818,997.78	\$12,614	\$831,611	\$444,484	\$1,276,095	\$0	\$0	\$0
Residential, No Patio, City Exchange	17,250	3,357	7,770	4,124	15,250	1,336	13,914	1,969	30	2,000	1,336	3,336	0	0	0
Residential, Patio	37,465	6,742	6,545	5,493	18,780	2,683	16,097	18,401	283	18,685	2,683	21,368	0	0	0
Commercial, FCLWD Rates	960,799	236,884	415,302	251,466	903,651	94,281	809,370	56,636	512	57,148	94,281	151,429	0	0	0
Commercial, City Exchange Use	31,744	7,944	13,927	8,433	30,304	3,162	27,142	1,425	16	1,441	3,162	4,602	0	0	0
Irrigation, FCLWD Rates	1,139,097	169,459	661,800	293,523	1,124,783	67,446	1,057,337	14,207	107	14,314	67,446	81,760	0	0	0
Irrigation, City Exchange	10,023	1,467	5,729	2,541	9,736	584	9,152	283	4	287	584	871	0	0	0
Residential, Multi-Unit, FCLWD Rates	113,862	42,725	25,690	29,824	98,239	17,005	81,234	15,386	237	15,623	17,005	32,628	0	0	0
Private Fire	0	0	0	0	0		0	0	0	0	0	0	0	0	0
Public Hydrants	996,985	0	132,814	864,171	996,985		996,985	0	0	0	0	0	0	0	0
Total Customer Classes at FCLWD Rates	9,384,814	1,585,354	3,977,992	2,880,359	8,443,706	630,980	7,812,726	927,305	13,803	941,108	630,980	7,812,726	0	0	0
Customer Classes at City Rates															
Residential, No Patio, City Rates	857,294	181,429	354,557	204,451	740,437	72,210	668,227	115,085	1,773	116,858	72,210	189,067	0	0	0
Commercial, Billed as City Use	76,711	19,425	34,056	20,621	74,101	7,731	66,370	2,597	12	2,609	7,731	10,341	0	0	0
Irrigation, City Rates	388,297	58,172	227,183	100,761	386,116	23,153	362,963	2,162	19	2,182	23,153	25,334	0	0	0
Residential, Multi-Unit, City Rates	64,873	24,192	14,546	16,887	55,625	9,628	45,996	9,108	140	9,249	9,628	18,877	0	0	0
Private Fire	0	0	0	0	0		0	0	0	0	0	0	0	0	0
Public Hydrants	168,667	0	21,772	146,895	168,667		168,667	0	0	0	0	0	0	0	0
Total Customer Classes at City Rates	1,555,843	283,218	652,114	489,614	1,424,945	112,722	1,312,223	128,952	1,945	130,897	112,722	1,312,223	0	0	0
Total System Revenue Requirement	\$10,940,657	\$1,868,572	\$4,630,106	\$3,369,973	\$9,868,651	\$743,702	\$9,124,949	\$1,056,257	\$15,748	\$1,072,005	\$743,702	\$1,815,707	\$0	\$0	\$0

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	Selection of Public Fire Allocation Methodology
1	Public Fire Reallocated on MD & MH Extra Capacity Volumes
2	Public Fire Reallocated on Equivalent Meters
2	Selection

	F	Revenue Requireme	nt by Customer Cla	ss After Reallocation	on of Public Fire Pr	otection Costs				
	Total		Volumetric			Customer Service		Private	Fire	
	Revenue	Base After	Max Day	Max Hour	Equivalent		RTS	Equivalent		
Customer Class	Requirement	RTS Adj.	Extra Capacity	Extra Capacity	Meters	Bills	Adjustment	Connections	Bills	Public Fire
Customer Classes at FCLWD Rates										
Residential, No Patio, FCLWD Rates	\$6,972,107	\$672,294	\$2,708,416	\$1,420,785	\$1,713,515	\$12,614	\$444,484	\$0	\$0	\$0
Residential, No Patio, City Exchange	19,401	2,021	7,770	4,124	4,120	30	1,336	0	0	0
Residential, Patio	57,563	4,058	6,545	5,493	38,499	283	2,683	0	0	0
Commercial, FCLWD Rates	1,022,657	142,603	415,302	251,466	118,494	512	94,281	0	0	0
Commercial, City Exchange Use	33,300	4,782	13,927	8,433	2,981	16	3,162	0	0	0
Irrigation, FCLWD Rates	1,139,097	102,013	661,800	293,523	14,207	107	67,446	0	0	0
Irrigation, City Exchange	10,023	883	5,729	2,541	283	4	584	0	0	0
Residential, Multi-Unit, FCLWD Rates	130,666	25,720	25,690	29,824	32,190	237	17,005	0	0	0
Total Customer Classes at FCLWD Rates	9,384,814	954,374	3,845,178	2,016,189	1,924,289	13,803	630,980	0	0	0
Customer Classes at City Rates										
Residential, No Patio, City Rates	1,010,390	109,219	354,557	204,451	268,180	1,773	72,210	0	0	0
Commercial, Billed as City Use	80,165	11,694	34,056	20,621	6,052	12	7,731	0	0	0
Irrigation, City Rates	388,297	35,019	227,183	100,761	2,162	19	23,153	0	0	0
Residential, Multi-Unit, City Rates	76,990	14,563	14,546	16,887	21,225	140	9,628	0	0	0
Total Customer Classes at City Rates	1,555,843	170,495	630,342	342,719	297,619	1,945	112,722	0	0	0
Total System Revenue Requirement	\$10,940,657	\$1,124,870	\$4,475,520	\$2,358,908	\$2,221,909	\$15,748	\$743,702	\$0	\$0	\$0
che	ck \$0									

Public	Fire Allocation Fact	tors
% of Max Day	% of Max Hour	% of Equivalent
85.2%	82.6%	89.7%
0.2%	0.2%	0.2%
0.2%	0.3%	2.0%
13.1%	14.6%	6.2%
0.4%	0.5%	0.2%
0.8%	1.7%	1.7%
100.0%	100.0%	100.0%
87.9%	84.5%	90.8%
8.4%	8.5%	2.0%
3.6%	7.0%	7.2%
100.0%	100.0%	100.0%

Fort Collins-Loveland Water District 2017 Rate & Fee Study Test Year 2018 Unit Cost of Service - Existing Disaggregated Rate Structure

Comparison of Test Year Revenue at Existing Rates vs. COS Test Year 2018 Test Year 2018												
Test Year 2018	Test Year 2018											
Revenue at	Cost of Service											
Existing Rates	Service	\$ Change	% Change									
\$6,432,394	\$6,972,107	\$539,713	8.4%									
18,685	19,401	716	3.8%									
68,788	57,563	(11,226)	-16.3%									
1,122,705	1,022,657	(100,048)	-8.9%									
41,868	33,300	(8,567)	-20.5%									
904,278	1,139,097	234,819	26.0%									
8,114	10,023	1,908	23.5%									
445,798	130,666	(315,132)	-70.7%									
9,042,631	9,384,814	342,183	3.8%									
922,399	1,010,390	87,991	9.5%									
93,319	80,165	(13,154)	-14.1%									
275,984	388,297	112,313	40.7%									
185,528	76,990	(108,539)	-58.5%									
1,477,231	1,555,843	78,611	5.3%									
\$10,519,862	\$10,940,657	\$420,794	4.0%									
	Revenue at Existing Rates \$6,432,394 18,685 68,788 1,122,705 41,868 904,278 8,114 445,798 9,042,631 922,399 93,319 275,984 185,528 1,477,231	Revenue at Existing Rates	Revenue at Existing Rates Cost of Service Service \$ Change \$6,432,394 \$6,972,107 \$539,713 18,685 19,401 716 68,788 57,563 (11,22657 1,122,705 1,022,657 (100,048) 41,868 33,300 (8,567) 904,278 1,139,097 234,819 8,114 10,023 1,908 445,798 130,666 (315,132) 9,042,631 9,384,814 342,183 922,399 1,010,390 87,991 93,319 80,165 (13,154) 275,984 388,297 112,313 185,528 76,990 (108,539) 1,477,231 1,555,843 78,611 \$10,519,862 \$10,940,657 \$420,794									

Average	Average		
per Kgal	per Kgal		
Revenue	cos	% Change	% Change
\$3.40	\$3.69	\$0.29	8.4%
\$3.29	\$3.42	\$0.13	3.8%
\$6.03	\$5.05	(\$0.98)	-16.3%
\$2.80	\$2.55	(\$0.25)	-8.9%
\$3.11	\$2.48	(\$0.64)	-20.5%
\$3.15	\$3.97	\$0.82	26.0%
\$3.27	\$4.04	\$0.77	23.5%
\$6.17	\$1.81	(\$4.36)	-70.7%
\$3.37	\$3.50	\$0.13	3.8%
\$4.85	\$5.32	\$0.46	9.5%
\$4.59	\$3.94	(\$0.65)	-14.1%
\$4.53	\$6.37	\$1.84	40.7%
\$7.32	\$3.04	(\$4.28)	-58.5%
\$4.98	\$5.24	\$0.26	5.3%
\$3.53	\$3.67	\$0.14	4.0%

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S Adjustment to Class COS	39.80%	
st Year Fixed Revenue Contribution	27.45%	

	Service Charge Rate Design													
				Annual		Existing	Monthly	Monthly	Monthly	Monthly	Calculated	Existing		
	Revenue			Unit Cost	Meter	Price	Capacity	Billing	Public Fire	RTS	Monthly	Fixed	Dollar	%
COS Component	Requirement	L	Inits of Service	of Service	Size	Equivalency	Charge	Component	Component	Component	Charge	Charge	Difference	Difference
Meters	\$1,056,257	17,856	Equivalent Meters	\$59.15	5/8 and 3/4"	1.00	\$4.93	\$0.08	\$5.44	\$3.47	\$13.92	\$13.40	\$0.52	3.88%
Billing and Collection	15,748	207,404	Bills	0.08	1"	1.46	7.20	0.08	7.94	5.07	20.28	19.53	0.75	3.84%
Public Fire	1,165,652	17,856	Equivalent Meters	65.28	1.5"	2.60	12.81	0.08	14.13	9.02	36.03	34.70	1.33	3.83%
Readiness to Serve Adjustment	743,702	17,856	Equivalent Meters	41.65	2"	3.97	19.57	0.08	21.60	13.78	55.03	53.00	2.03	3.83%
Total COS	\$2,981,359				3"	7.63	37.62	0.08	41.52	26.49	105.70	101.80	3.90	3.83%
Check	\$0				4"	15.27	75.27	0.08	83.07	53.00	211.41	203.60	7.81	3.84%

			All Clas	sses, FCLWD Rates -	Volumetric Rate Desi	gn						All Classes, FCLWD	- Service Charge Reven	iue
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	1 to 8	879,174	32.77%	1.000	\$1,437,540	\$1.635	21.29%	\$1.560	\$0.075	4.81%	Size	Billable Units	Charge	Revenue
Block 2	8 to 15	379,171	14.13%	1.417	\$878,311	2.316	13.01%	2.210	0.106	4.81%	5/8 and 3/4"	14,934	\$13.92	\$2,494,544
Block 3	Greater than 15	1,424,707	53.10%	1.904	\$4,435,091	3.113	65.70%	2.970	0.143	4.81%	1"	150	20.28	36,544
Block 4											1.5"	111	36.03	47,944
Block 5											2"	60	55.03	39,333
											3"	10	105.70	12,867
		2,683,052	100.00%	Forecast	\$6,750,943	\$2.516	100.00%				4"	1	211.41	2,639
	Check	0		Target	\$6,750,943							15,266		2,633,871
				Difference	\$0	•						Total I	Revenue Requirement	9,384,814
												Net Volumetric I	Revenue Requirement	\$6,750,943

			Residential,	No Patio, FCLWD Ra	ites - Volumetric Rate	Design					Residential, No Patio, FCLWD Rates, Service Charge Revenue			
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	1 to 8	816,071	43.18%	1.000	\$1,410,278	\$1.728	30.27%	\$1.560	\$0.168	10.78%	Size	Billable Units	Charge	Revenue
Block 2	8 to 15	337,656	17.87%	1.417	\$826,645	2.448	17.74%	2.210	0.238	10.78%	5/8 and 3/4"	13,840	\$13.92	\$2,311,907
Block 3	Greater than 15	736,306	38.96%	1.904	\$2,422,517	3.290	51.99%	2.970	0.320	10.78%	1"	3	20.28	760
Block 4											1.5"		36.03	0
Block 5											2"		55.03	0
											3"		105.70	0
		1,890,033	100.00%	Forecast	\$4,659,440	\$2.465	100.00%				4"		211.41	0
	Check	0		Target	\$4,659,440					•	1	13,844		2,312,667
				Difference	\$0	•						Total	Revenue Requirement	6,972,107
												Net Volumetric	Revenue Requirement	\$4,659,440

	Residential, No Patio, City Exchange - Volumetric Rate Design Onsumption Distribution Forecast Calculated Revenue Existing Dollar %												Exchange, Service Charg	e Revenue
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	1 to 8	2,083	36.67%	1.000	\$3,373	\$1.619	24.37%	\$1.560	\$0.059	3.81%	Size	Billable Units	Charge	Revenue
Block 2	8 to 15	793	13.97%	1.417	\$1,820	2.294	13.15%	2.210	0.084	3.81%	5/8 and 3/4"	33	\$13.92	\$5,561
Block 3	Greater than 15	2,804	49.37%	1.904	\$8,646	3.083	62.48%	2.970	0.113	3.81%	1"		20.28	0
Block 4											1.5"		36.03	0
Block 5											2"		55.03	0
											3"		105.70	0
		5,681	100.00%	Forecast	\$13,840	\$2.436	100.00%				4"		211.41	0
	Check	0		Target	\$13,840			•				33		5,561
				Difference	\$0	•						Total	Revenue Requirement	19,401
												Net Volumetric	Revenue Requirement	\$13,840

TS Adjustment to Class COS	39.80%	
est Year Fixed Revenue Contribution	27.45%	

			Residentia	I, Patio FCLWD Rate	es - Volumetric Rate D	esign					Residential, Patio FCLWD Service Charge Re			venue
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	1 to 8	10,464	91.71%	1.000	\$4,871	\$0.466	86.98%	\$1.560	(\$1.094)	-70.16%	Size	Billable Units	Charge	Revenue
Block 2	8 to 15	481	4.22%	1.417	\$317	0.659	5.66%	2.210	(1.551)	-70.16%	5/8 and 3/4"	311	\$13.92	\$51,963
Block 3	Greater than 15	465	4.07%	1.904	\$412	0.886	7.36%	2.970	(2.084)	-70.16%	1"		20.28	0
Block 4											1.5"		36.03	0
Block 5											2"		55.03	0
	Block 3										3"		105.70	0
		11,409	100.00%	Forecast	\$5,600	\$0.491	100.00%				4"		211.41	0
	Check	0		Target	\$5,600						1	311		51,963
	Difference \$0											Total	Revenue Requirement	57,563
												Net Volumetric	Revenue Requirement	\$5,600

			Comme	ercial, FCLWD Rates -	 Volumetric Rate Des 	ign					Cor	nmercial, FCLWD R	tates, Service Charge Re	evenue
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	1 to 8	36,279	9.05%	1.000	\$44,281	\$1.221	5.04%	\$1.560	(\$0.339)	-21.76%	Size	Billable Units	Charge	Revenue
Block 2	8 to 15	22,131	5.52%	1.417	\$38,269	1.729	4.36%	2.210	(0.481)	-21.76%	5/8 and 3/4"	365	\$13.92	\$61,029
Block 3	Greater than 15	342,492	85.43%	1.904	\$795,882	2.324	90.60%	2.970	(0.646)	-21.76%	1"	100	20.28	24,391
Block 4											1.5"	54	36.03	23,204
Block 5											2"	30	55.03	20,096
											3"	10	105.70	12,867
		400,902	100.00%	Forecast	\$878,432	\$2.191	100.00%				4"	1	211.41	2,639
	Check 0 Target \$878											561		144,225
		\$0	•						Total I	Revenue Requirement	1,022,65			
												Net Volumetric I	Revenue Requirement	\$878,43

			Comme	rcial, City Exchange	 Volumetric Rate Des 	ign					Commercial, City Exchange, Service Charge Rever			venue
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	0	893	6.64%	1.000	\$1,076	\$1.205	3.64%	\$1.560	(\$0.355)	-22.73%	Size	Billable Units	Charge	Revenue
Block 2	0	480	3.57%	1.417	\$820	1.708	2.77%	2.210	(0.502)	-22.73%	5/8 and 3/4"	15	\$13.92	\$2,563
Block 3	0	12,071	89.79%	1.904	\$27,704	2.295	93.59%	2.970	(0.675)	-22.73%	1"	0	20.28	0
Block 4											1.5"	1	36.03	450
Block 5											2"	1	55.03	687
											3"		105.70	0
		13,444	100.00%	Forecast	\$29,600	\$2.202	100.00%				4"		211.41	0
	Check	0		Target	\$29,600		•	•		•		17		3,700
	Difference \$0											Total	Revenue Requirement	33,300
												Net Volumetric	Revenue Requirement	\$29,600

			Irrigat	ion, FCLWD Rates - \	Volumetric Rate Desig					Iri	igation, FCLWD Ra	ates, Service Charge Re	venue	
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	1 to 8	7,870	2.74%	1.000	\$15,688	\$1.993	1.47%	\$1.560	\$0.433	27.78%	Size	Billable Units	Charge	Revenue
Block 2	8.001 to 15	6,291	2.19%	1.417	\$17,764	2.824	1.66%	2.210	0.614	27.78%	5/8 and 3/4"	102	\$13.92	\$17,031
Block 3	Greater than 15	272,631	95.06%	1.904	\$1,034,632	3.795	96.87%	2.970	0.825	27.78%	1"	46	20.28	11,140
Block 4											1.5"	56	36.03	24,291
Block 5											2"	28	55.03	18,550
											3"		105.70	0
		286,792	100.00%	Forecast	\$1,068,085	\$3.724	100.00%				4"		211.41	0
	Check 0 Target \$1,068,						•					232		71,012
	Difference \$0											Total	Revenue Requirement	1,139,097
												Net Volumetric	Revenue Requirement	\$1,068,085

RTS Adjustment to Class COS	39.80%	
est Year Fixed Revenue Contribution	27.45%	

			Irrigati	on, City Exchange - '	Volumetric Rate Desig	gn					Irrigation, City Exchange, Service Charge Re			venue
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	1 to 8	251	10.11%	1.000	\$498	\$1.983	5.70%	\$1.560	\$0.423	27.09%	Size	Billable Units	Charge	Revenue
Block 2	8.001 to 15	200	8.06%	1.417	\$562	2.809	6.44%	2.210	0.599	27.09%	5/8 and 3/4"	6	\$13.92	\$1,043
Block 3	Greater than 15	2,031	81.83%	1.904	\$7,667	3.775	87.86%	2.970	0.805	27.09%	1"	1	20.28	253
Block 4											1.5"		36.03	0
Block 5											2"		55.03	0
											3"		105.70	0
		2,482	100.00%	Forecast	\$8,727	\$3.515	100.00%				4"		211.41	0
V.	Check	0		Target	\$8,727				•			7		1,296
	Difference \$0											Total	Revenue Requirement	10,023
												Net Volumetric	Revenue Requirement	\$8,727

			Multi-l	Jnit, FCLWD Rates -	Volumetric Rate Desi	gn					Mi	ulti-Unit, FCLWD R	ates, Service Charge Re	venue
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	1 to 8	5,263	7.28%	1.000	\$3,601	\$0.684	4.13%	\$1.560	(\$0.876)	-56.14%	Size	Billable Units	Charge	Revenue
Block 2	8.001 to 15	11,139	15.40%	1.417	\$10,796	0.969	12.38%	2.210	(1.241)	-56.14%	5/8 and 3/4"	260	\$13.92	\$43,447
Block 3	Greater than 15	55,906	77.32%	1.904	\$72,822	1.303	83.49%	2.970	(1.667)	-56.14%	1"		20.28	0
Block 4											1.5"		36.03	0
Block 5											2"		55.03	0
											3"		105.70	0
		72,308	100.00%	Forecast	\$87,219	\$1.206	100.00%				4"		211.41	0
	Check 0 Target \$87,2									•		260		43,447
		\$0	•						Total	Revenue Requirement	130,666			
									Net Volumetric	Revenue Requirement	\$87,219			

						Α	III Classes, City Rat	es - Service Charge Reve	nue					
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	1 to 8	132,452	44.64%	1.000	\$410,523	\$3.099	34.59%	\$2.730	\$0.369	13.53%	Size	Billable Units	Charge	Revenue
Block 2	8 to 15	47,020	15.85%	1.308	\$190,576	4.053	16.06%	3.570	0.483	13.53%	5/8 and 3/4"	2,116	\$13.92	\$353,486
Block 3	Greater than 15	117,248	39.51%	1.612	\$585,703	4.995	49.35%	4.400	0.595	13.53%	1"	9	20.28	2,279
Block 4											1.5"	23	36.03	9,896
Block 5											2"	3	55.03	2,061
											3"	1	105.70	1,320
		296,720	100.00%	Forecast	\$1,186,801	\$4.000	100.00%				4"	0	211.41	0
	Check	0		Target	\$1,186,801							2,153		369,041
	Difference \$0											Total	Revenue Requirement	1,555,843
												Net Volumetric	Revenue Requirement	\$1,186,801

	Residential, No Patio, City Rates - Volumetric Rate Design on Distribution Forecast Calculated Revenue Existing Dollar												y Rates - Service Charge	Revenue
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	1 to 8	116,595	61.34%	1.000	\$357,912	\$3.070	52.22%	\$2.730	\$0.340	12.44%	Size	Billable Units	Charge	Revenue
Block 2	8 to 15	38,648	20.33%	1.308	\$155,143	4.014	22.64%	3.570	0.444	12.44%	5/8 and 3/4"	1,946	\$13.92	\$324,984
Block 3	Greater than 15	34,836	18.33%	1.612	\$172,351	4.948	25.15%	4.400	0.548	12.44%	1"		20.28	0
Block 4											1.5"		36.03	0
Block 5											2"		55.03	0
											3"		105.70	0
		190,079	100.00%	Forecast	\$685,406	\$3.606	100.00%				4"		211.41	0
	Check	0		Target	\$685,406							1,946		324,984
	Difference \$0											Total	Revenue Requirement	1,010,390
										Net Volumetric Revenue Requirement \$685,406			\$685,406	

TS Adjustment to Class COS	39.80%	
est Year Fixed Revenue Contribution	27.45%	

			Comm	ercial, City Rates - V	olumetric Rate Desig	n					Co	mmercial, City Ra	tes, Service Charge Rev	enue
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	1 to 8	933	4.58%	1.000	\$2,156	\$2.312	2.91%	\$2.730	(\$0.418)	-15.31%	Size	Billable Units	Charge	Revenue
Block 2	8 to 15	731	3.59%	1.308	\$2,211	3.023	2.99%	3.570	(0.547)	-15.31%	5/8 and 3/4"	3	\$13.92	\$521
Block 3	Greater than 15	18,687	91.82%	1.612	\$69,631	3.726	94.10%	4.400	(0.674)	-15.31%	1"	1	20.28	253
Block 4											1.5"	6	36.03	2,699
Block 5											2"	2	55.03	1,374
											3"	1	105.70	1,320
		20,351	100.00%	Forecast	\$73,998	\$3.636	100.00%				4"		211.41	0
	Check	0		Target	\$73,998		•			•		14		6,167
				Difference	\$0	_						Total	Revenue Requirement	80,165
												Net Volumetric	Revenue Requirement	\$73,998

			Irrig	ation, City Rates - Vo	olumetric Rate Design	ı						Irrigation, City Rate	es, Service Charge Reve	nue
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	1 to 8	1,647	2.70%	1.000	\$6,400	\$3.886	1.70%	\$2.730	\$1.156	42.33%	Size	Billable Units	Charge	Revenue
Block 2	8 to 15	1,377	2.26%	1.308	\$6,999	5.081	1.86%	3.570	1.511	42.33%	5/8 and 3/4"	14	\$13.92	\$2,259
Block 3	Greater than 15	57,921	95.04%	1.612	\$362,729	6.263	96.44%	4.400	1.863	42.33%	1"	8	20.28	2,026
Block 4											1.5"	17	36.03	7,197
Block 5											2"	1	55.03	687
											3"		105.70	0
		60,945	100.00%	Forecast	\$376,128	\$6.172	100.00%				4"		211.41	0
	Check	. 0		Target	\$376,128		•			•		40		12,169
				Difference	\$0	•						Total Revenue Requirem		388,297
												Net Volumetric	Revenue Requirement	\$376.128

			Mult	i-Unit, City Rates - Vo	olumetric Rate Design	1					N	Лulti-Unit, City Rat	es, Service Charge Rever	nue
Consumption			Distribution	Proposed	Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	1 to 8	13,277	52.39%	1.000	\$22,085	\$1.663	43.08%	\$2.730	(\$1.067)	-39.07%	Size	Billable Units	Charge	Revenue
Block 2	8.001 to 15	6,263	24.71%	1.308	\$13,623	2.175	26.57%	3.570	(1.395)	-39.07%	5/8 and 3/4"	154	\$13.92	\$25,721
Block 3	Greater than 15	5,805	22.90%	1.612	\$15,561	2.681	30.35%	4.400	(1.719)	-39.07%	1"		20.28	0
											1.5"		36.03	0
											2"		55.03	0
											3"		105.70	0
		25,345	100.00%	Forecast	\$51,269	\$2.023	100.00%				4"		211.41	0
	Check	0		Target	\$51,269				•			154		25,721
				Difference	\$0	<u>-</u> '						Total	Revenue Requirement	76,990
												Net Volumetric	Revenue Requirement	\$51 269

Fort Collins Loveland Water District Rate Study
Appendix C: Rate Design

3/16/2018

Appendix C Fort Collins Loveland Water District Rate Study Rate Design

Fort Collins-Loveland Water District 2017 Rate & Fee Study

Average Billed Consumption per Account - New Consolidated Rate Design

	Historical A	Average Consumpt	tion per Account	Used in 2017
Customer Class	2014	2015	2016	Forecast
Residential, FCLWD Rates	129.34	131.16	150.29	136.93
Residential, City Rates	95.07	95.45	107.41	99.31
Commercial, FCLWD Rates	701.13	696.23	772.22	723.20
Commercial, City Rates	1,381.58	1,558.84	1,626.08	1,522.17
Irrigation, FCLWD Rates	2,227.78	2,097.60	2,871.74	2,399.04
Irrigation, City Rates	2,635.18	2,935.33	3,138.83	2,903.12
Residential, Multi-Unit, FCLWD Rates	299.03	272.61	271.48	281.04
Residential, Multi-Unit, City Rates	166.64	166.27	164.29	165.73
Total	166.43	167.40	192.30	175.38

					Demand Reduction	n Factors						
2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

						Projected Avera	ge Consumption per	Account					
Customer Class	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Residential, FCLWD Rates	135.56	134.21	132.86	131.54	130.22	128.92	127.63	126.35	125.09	123.84	122.60	121.37	120.16
Residential, City Rates	98.32	97.33	96.36	95.40	94.44	93.50	92.56	91.64	90.72	89.81	88.92	88.03	87.15
Commercial, FCLWD Rates	715.96	708.80	701.72	694.70	687.75	680.88	674.07	667.33	660.65	654.05	647.51	641.03	634.62
Commercial, City Rates	1506.95	1491.88	1476.96	1462.19	1447.57	1433.09	1418.76	1404.57	1390.53	1376.62	1362.86	1349.23	1335.73
Irrigation, FCLWD Rates	2399.04	2399.04	2399.04	2399.04	2399.04	2399.04	2399.04	2399.04	2399.04	2399.04	2399.04	2399.04	2399.04
Irrigation, City Rates	2903.12	2903.12	2903.12	2903.12	2903.12	2903.12	2903.12	2903.12	2903.12	2903.12	2903.12	2903.12	2903.12
Residential, Multi-Unit, FCLWD Rates	281.04	281.04	281.04	281.04	281.04	281.04	281.04	281.04	281.04	281.04	281.04	281.04	281.04
Residential, Multi-Unit, City Rates	165.73	165.73	165.73	165.73	165.73	165.73	165.73	165.73	165.73	165.73	165.73	165.73	165.73
Total	175.38	175.38	175.38	175.38	175.38	175.38	175.38	175.38	175.38	175.38	175.38	175.38	175.38

				2016 Actu	al Billed Consumpt	ion (Thousands of	Gallons)			
		Tier Co	onsumption			Percentage	e in Each Tier		Average	Average per
Customer Class	1 to 8	8.001 to 22	Greater than 22	Total	1 to 8	8.001 to 22	Greater than 22	Total	Accounts	Account
Residential, FCLWD Rates	886,365.99	605,461.70	557,744.11	2,049,572	43.2%	29.5%	27.2%	100%	13,637.00	150.29
Residential, City Rates	122,924.70	40,910.76	37,024.54	200,860	61.2%	20.4%	18.4%	100%	1,870.00	107.41
Commercial, FCLWD Rates	429,998.14	-	-	429,998	100%				556.83	772.22
Commercial, City Rates	21,139.07	-	-	21,139	100%				13.00	1,626.08
Irrigation, FCLWD Rates	336,711.71	-	-	336,712	100%				117.25	2,871.74
Irrigation, City Rates	64,084.53	-	-	64,085	100%				20.42	3,138.83
Residential, Multi-Unit, FCLWD Rates	67,869.00	-	-	67,869	100%				250.00	271.48
Residential, Multi-Unit, City Rates	24,315.00	-	-	24,315	100%				148.00	164.29
Total System	1,953,408	646,372	594,769	3,194,549	61.1%	20.2%	18.6%	100%	16,613	192.30

Fort Collins-Loveland Water District 2017 Rate & Fee Study

Average Billed Consumption per Account - New Consolidated Rate Design

				2015 Actu	ual Billed Consumpt	ion (Thousands of	Gallons)			
		Tier Co	onsumption			Percentage	e in Each Tier		Average	Average per
Customer Class	1 to 8	8.001 to 22	Greater than 22	Total	1 to 8	8.001 to 22	Greater than 22	Total	Accounts	Account
Residential, FCLWD Rates	753,842.47	514,937.11	474,353.93	1,743,134	43.2%	29.5%	27.2%	100%	13,289.92	131.16
Residential, City Rates	108,481.25	36,103.82	32,674.21	177,259	61.2%	20.4%	18.4%	100%	1,857.00	95.45
Commercial, FCLWD Rates	382,348.57	-	-	382,349	100.0%	0.0%	0.0%	100%	549.17	696.23
Commercial, City Rates	18,706.12	-	-	18,706	100.0%	0.0%	0.0%	100%	12.00	1,558.84
Irrigation, FCLWD Rates	250,139.14	-	-	250,139	100.0%	0.0%	0.0%	100%	119.25	2,097.60
Irrigation, City Rates	55,771.26	-	-	55,771	100.0%	0.0%	0.0%	100%	19.00	2,935.33
Residential, Multi-Unit, FCLWD Rates	66,244.00	-	-	66,244	100.0%	0.0%	0.0%	100%	243.00	272.61
Residential, Multi-Unit, City Rates	24,441.00	-	-	24,441	100.0%	0.0%	0.0%	100%	147.00	166.27
Total System	1,659,974	551,041	507,028	2,718,043	61.1%	20.3%	18.7%	100%	16,236	167.40

				2014 Actu	ual Billed Consumpt	tion (Thousands of	Gallons)			
		Tier Co	onsumption			Percentage	e in Each Tier		Average	Average per
Customer Class	1 to 8	8.001 to 22	Greater than 22	Total	1 to 8	8.001 to 22	Greater than 22	Total	Accounts	Account
Residential, FCLWD Rates	724,510.94	494,901.24	455,897.12	1,675,309	43.2%	29.5%	27.2%	100%	12,953.00	129.34
Residential, City Rates	105,828.64	35,220.99	31,875.26	172,925	61.2%	20.4%	18.4%	100%	1,819.00	95.07
Commercial, FCLWD Rates	366,927.19	-	-	366,927	100.0%	0.0%	0.0%	100%	523.33	701.13
Commercial, City Rates	17,960.52	-	-	17,961	100.0%	0.0%	0.0%	100%	13.00	1,381.58
Irrigation, FCLWD Rates	253,224.86	-	-	253,225	100.0%	0.0%	0.0%	100%	113.67	2,227.78
Irrigation, City Rates	55,119.27	-	-	55,119	100.0%	0.0%	0.0%	100%	20.92	2,635.18
Residential, Multi-Unit	64,590.35	-	-	64,590	100.0%	0.0%	0.0%	100%	216.00	299.03
Residential, Multi-Unit, City Rates	21,663.53	-	-	21,664	100.0%	0.0%	0.0%	100%	130.00	166.64
Total System	1,609,825	530,122	487,772	2,627,720	61.3%	20.2%	18.6%	100%	15,789	166.43

				2012 Actu	ial Billed Consumpt	ion (Thousands of	Gallons)			
		Tier Co	onsumption			Percentage	e in Each Tier		Average	Average per
Customer Class	1 to 8	8.001 to 22	Greater than 22	Total	1 to 8	8.001 to 22	Greater than 22	Total	Accounts	Account
Residential, FCLWD Rates	945,278.61	645,703.92	594,814.76	2,185,797	43.2%	29.5%	27.2%	100%	12,082.00	180.91
Residential, City Rates	123,157.43	40,988.22	37,094.63	201,240	61.2%	20.4%	18.4%	100%	1,699.00	118.45
Commercial, FCLWD Rates	397,093.87	-	-	397,094	100.0%	0.0%	0.0%	100%	394.00	1,007.85
Commercial, City Rates	22,928.13	-	-	22,928	100.0%	0.0%	0.0%	100%	10.67	2,149.51
Irrigation, FCLWD Rates	331,283.67	-	-	331,284	100.0%	0.0%	0.0%	100%	92.42	3,584.67
Irrigation, City Rates	66,541.69	-	-	66,542	100.0%	0.0%	0.0%	100%	20.83	3,194.00
Residential, Multi-Unit	65,753.90	-	-	65,754	100.0%	0.0%	0.0%	100%	196.00	335.48
Residential, Multi-Unit, City Rates	19,523.74	-	-	19,524	100.0%	0.0%	0.0%	100%	128.00	152.53
Total System	1,971,561	686,692	631,909	3,290,163	59.9%	20.9%	19.2%	100%	14,623	225.00

3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast Billed Consumption - New Consolidated Rate Design

		Actual	Estimated						Project	ed Price Elasticity	Factors					
Item		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Annual Revenue Increases				4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
		_														
% Decline in Consumption Due to Price Elastici	ity															
TIER 1	1.0%		0.0%	1.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
TIER 2	2.0%		0.0%	2.9%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
TIER 3	3.0%		0.0%	4.4%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%

TIER 3	3.0%		0.0%	4.4%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%
0	Consumption	Actual	Estimated	2040	2040	2020	2024	2022		lled Consumption		2025	2027	2020	2020	2020
Customer Class Residential, FCLWD Rates	by Tier	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1 to 8	43.2%	886.366	823.706	819.536	825.032	830.936	837.399	844.228	851.325	858.636	866.128	873.778	881.571	889.496	897.544	905.713
8.001 to 22	29.5%	605,462	562,660	551,449	561,302	565,319	569,716	574,362	579,190	584,165	589,262	594,466	599,768	605,160	610,635	616,193
Greater than 22	27.2%	557,744	518,316	500,284	514,980	518,665	522,700	526,962	531,392	535,956	540,632	545,407	550,271	555,218	560,242	565,339
Total	100.0%	2,049,572	1,904,682	1,871,269	1,901,315	1,914,921	1,929,815	1,945,551	1,961,907	1,978,757	1,996,022	2,013,652	2,031,611	2,049,873	2,068,421	2,087,24
Forecast Demand Before Elasticity Adjustment			1,904,682	1,923,348	1,942,197	1,961,230	1,980,450	1,999,859	2,019,457	2,039,248	2,059,233	2,079,413	2,099,791	2,120,369	2,141,149	2,162,13
Annual Loss Due to Price Elasticity Response			0	(52,079)	(40,882)	(46,309)	(50,635)	(54,308)	(57,550)	(60,491)	(63,211)	(65,761)	(68,181)	(70,496)	(72,727)	(74,89
Annual % Loss Due to Price Elasticity Response			0.00%	-2.71%	-2.10%	-2.36%	-2.56%	-2.72%	-2.85%	-2.97%	-3.07%	-3.16%	-3.25%	-3.32%	-3.40%	-3.46
Cumulative Loss Due to Price Elasticity Response			0	(52,079)	(92,961)	(139,270)	(189,906)	(244,213)	(301,764)	(362,255)	(425,466)	(491,227)	(559,407)	(629,903)	(702,630)	(777,52
Cumulative % Loss Due to Price Elasticity Response			0.00%	-1.38%	-1.64%	-1.83%	-1.99%	-2.13%	-2.25%	-2.35%	-2.44%	-2.53%	-2.61%	-2.68%	-2.75%	-2.81
Residential, City Rates																
1 to 8	61.2%	122,925	115,927	115,340	116,352	117,232	118,180	119,174	120,202	121,257	122,336	123,436	124,554	125,690	126,843	128,013
8.001 to 22	20.4%	40,911	38,582	37,813	38,568	38,859	39,174	39,503	39,844	40,194	40,551	40,916	41,287	41,663	42,045	42,433
Greater than 22	18.4%	37,025	34,917	33,702	34,763	35,026	35,310	35,606	35,914	36,229	36,551	36,880	37,214	37,553	37,898	38,247
Total	100.0%	200,860	189,425	186,855	189,683	191,117	192,663	194,284	195,959	197,680	199,439	201,231	203,054	204,906	206,786	208,693
Forecast Demand Before Elasticity Adjustment			189,425	191,282	193,156	195,049	196,961	198,891	200,840	202,808	204,796	206,803	208,829	210,876	212,943	215,02
Annual Loss Due to Price Elasticity Response			0	(4,427)	(3,473)	(3,932)	(4,298)	(4,607)	(4,881)	(5,128)	(5,357)	(5,572)	(5,775)	(5,970)	(6,157)	(6,339
Annual % Loss Due to Price Elasticity Response			0.00%	-2.31%	-1.80%	-2.02%	-2.18%	-2.32%	-2.43%	-2.53%	-2.62%	-2.69%	-2.77%	-2.83%	-2.89%	-2.95
Cumulative Loss Due to Price Elasticity Response			0	(4,427)	(7,900)	(11,832)	(16,129)	(20,737)	(25,617)	(30,746)	(36,103)	(41,675)	(47,450)	(53,419)	(59,576)	(65,919
Cumulative % Loss Due to Price Elasticity Response			0.00%	-1.18%	-1.40%	-1.56%	-1.70%	-1.81%	-1.91%	-2.00%	-2.08%	-2.15%	-2.22%	-2.28%	-2.33%	-2.39
Commercial, FCLWD Rates																
All Use	100.0%	429,998	410,754	408,674	414,061	417,538	421,186	424,951	428,807	432,740	436,741	440,804	444,925	449,101	453,330	457,611
Total	100.0%	429,998	410,754	408,674	414,061	417,538	421,186	424,951	428,807	432,740	436,741	440,804	444,925	449,101	453,330	457,612
Forecast Demand Before Elasticity Adjustment			410,754	414,779	418,844	422,949	427,094	431,279	435,506	439,774	444,083	448,436	452,830	457,268	461,749	466,27
Annual Loss Due to Price Elasticity Response			0	(6,105)	(4,783)	(5,410)	(5,908)	(6,328)	(6,699)	(7,033)	(7,342)	(7,632)	(7,906)	(8,167)	(8,419)	(8,663
Annual % Loss Due to Price Elasticity Response			0.00%	-1.47%	-1.14%	-1.28%	-1.38%	-1.47%	-1.54%	-1.60%	-1.65%	-1.70%	-1.75%	-1.79%	-1.82%	-1.86
Cumulative Loss Due to Price Elasticity Response			0	(6,105)	(10,888)	(16,299)	(22,206)	(28,535)	(35,233)	(42,267)	(49,609)	(57,241)	(65,146)	(73,314)	(81,733)	(90,396
Cumulative % Loss Due to Price Elasticity Response			0.00%	-0.75%	-0.88%	-0.99%	-1.07%	-1.14%	-1.20%	-1.26%	-1.31%	-1.35%	-1.39%	-1.43%	-1.46%	-1.50
Commercial, City Rates																
All Use	100.0%	21,139	20,184	20,082	20,242	20,268	20,278	20,275	20,262	20,237	20,202	20,156	20,099	20,031	19,951	19,858
Total	100.0%	21,139	20,184	20,082	20,242	20,268	20,278	20,275	20,262	20,237	20,202	20,156	20,099	20,031	19,951	19,858
Forecast Demand Before Elasticity Adjustment		21,139	20,184	20,588	20,999	21,419	21,848	22,285	22,730	23,185	23,649	24,122	24,604	25,096	25,598	26,11
Annual Loss Due to Price Elasticity Response		0	0	(506)	(758)	(1,152)	(1,570)	(2,009)	(2,469)	(2,948)	(3,447)	(3,966)	(4,505)	(5,065)	(5,647)	(6,252
Annual % Loss Due to Price Elasticity Response			0.00%	-2.46%	-3.61%	-5.38%	-7.19%	-9.02%	-10.86%	-12.72%	-14.58%	-16.44%	-18.31%	-20.18%	-22.06%	-23.94
Cumulative Loss Due to Price Elasticity Response			0	(506)	(1,264)	(2,415)	(3,985)	(5,994)	(8,463)	(11,411)	(14,858)	(18,824)	(23,329)	(28,394)	(34,041)	(40,293
Cumulative % Loss Due to Price Elasticity Response			0.00%	-1.26%	-2.09%	-2.99%	-3.94%	-4.94%	-5.98%	-7.05%	-8.16%	-9.31%	-10.50%	-11.72%	-12.98%	-14.28

Fort Collins-Loveland Water District 2017 Rate & Fee Study Forecast Billed Consumption - New Consolidated Rate Design

		Actual	Estimated						Projected	d Price Elasticity F	actors					
Item		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Annual Revenue Increases				4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
% Decline in Consumption Due to Price Elasticity	,	ו														
TIER 1	1.0%		0.0%	1.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
TIER 2	2.0%	-	0.0%	2.9%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.4%
TIER 3	3.0%	-	0.0%	4.4%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%
	3.3,1															
Irrigation, FCLWD Rates																
All Use	100.0%	336,712	286,914	288,344	299,537	304,392	310,203	316,297	322,567	328,987	335,546	342,244	349,080	356,054	363,170	370,429
Total	100.0%	336,712	286,914	288,344	299,537	304,392	310,203	316,297	322,567	328,987	335,546	342,244	349,080	356,054	363,170	370,42
Forecast Demand Before Elasticity Adjustment		336,712	286,914	292,652	298,505	304,475	310,564	316,776	323,111	329,573	336,165	342,888	349,746	356,741	363,876	371,19
Annual Loss Due to Price Elasticity Response		0	0	(4,307)	1,032	(83)	(361)	(479)	(544)	(587)	(618)	(644)	(667)	(687)	(706)	(72
Annual % Loss Due to Price Elasticity Response			0.00%	-1.47%	0.35%	-0.03%	-0.12%	-0.15%	-0.17%	-0.18%	-0.18%	-0.19%	-0.19%	-0.19%	-0.19%	-0.20
Cumulative Loss Due to Price Elasticity Response			0	(4,307)	(3,275)	(3,358)	(3,719)	(4,198)	(4,743)	(5,329)	(5,948)	(6,592)	(7,259)	(7,945)	(8,651)	(9,37
Cumulative % Loss Due to Price Elasticity Response			0.00%	-0.75%	-0.37%	-0.28%	-0.25%	-0.23%	-0.22%	-0.22%	-0.21%	-0.21%	-0.21%	-0.21%	-0.21%	-0.20
Irrigation, City Rates																
All Use	100.0%	64,085	60,457	60,759	62,179	63,334	64,531	65,765	67,031	68,327	69,654	71,011	72,397	73,813	75,259	76,73
All osc	100.070	04,003	00,437	00,733	02,173	03,334	04,331	03,703	07,031	00,327	05,054	71,011	72,337	75,015	73,233	70,73
Total	100.0%	64,085	60,457	60,759	62,179	63,334	64,531	65,765	67,031	68,327	69,654	71,011	72,397	73,813	75,259	76,73
Forecast Demand Before Elasticity Adjustment		64,085	60,457	61,667	62,900	64,158	65,441	66,750	68,085	69,447	70,835	72,252	73,697	75,171	76,675	78,20
Annual Loss Due to Price Elasticity Response		04,085	0	(908)	(721)	(824)	(910)	(985)	(1,054)	(1,119)	(1,181)	(1,241)	(1,300)	(1,358)	(1,415)	(1,47
Annual % Loss Due to Price Elasticity Response		U	0.00%	-1.47%	-1.15%	-1.28%	-1.39%	-1.48%	-1.55%	-1.61%	-1.67%	-1.72%	-1.76%	-1.81%	-1.85%	-1.88
Cumulative Loss Due to Price Elasticity Response			0.00%	(908)	(1,628)	(2,452)	(3,362)	(4,347)	(5,401)	(6,520)	(7,702)	(8,943)	(10,243)	(11,600)	(13,016)	(14,48
Cumulative % Loss Due to Price Elasticity Response			0.00%	-0.75%	-0.89%	-0.99%	-1.08%	-1.15%	-1.22%	-1.27%	-1.32%	-1.37%	-1.41%	-1.45%	-1.49%	-1.52
Residential, Multi-Unit - FCLWD																
All Use	100.0%	67,869	71,665	72,022	73,706	75,074	76,494	77,956	79,456	80,994	82,567	84,175	85,818	87,497	89,211	90,96
Total	100.0%	67,869	71,665	72,022	73,706	75,074	76,494	77,956	79,456	80,994	82,567	84,175	85,818	87,497	89,211	90,963
Forecast Demand Before Elasticity Adjustment		67,869	71,665	73,098	74,560	76,051	77,572	79,124	80,706	82,320	83,967	85,646	87,359	89,106	90,888	92,70
Annual Loss Due to Price Elasticity Adjustment Annual Loss Due to Price Elasticity Response		07,803	71,003	(1,076)	(854)	(977)	(1,078)	(1,168)	(1,250)	(1,327)	(1,400)	(1,471)	(1,541)	(1,609)	(1,677)	(1,74
Annual % Loss Due to Price Elasticity Response		ŭ	0.00%	-1.47%	-1.15%	-1.28%	-1.39%	-1.48%	-1.55%	-1.61%	-1.67%	-1.72%	-1.76%	-1.81%	-1.85%	-1.88
Cumulative Loss Due to Price Elasticity Response			0	(1,076)	(1,930)	(2,907)	(3,985)	(5,153)	(6,402)	(7,729)	(9,129)	(10,600)	(12,141)	(13,751)	(15,428)	(17,17
Cumulative % Loss Due to Price Elasticity Response			0.00%	-0.75%	-0.89%	-0.99%	-1.08%	-1.15%	-1.22%	-1.27%	-1.32%	-1.37%	-1.41%	-1.45%	-1.49%	-1.52
Residential, Multi-Unit - City Rates																
All Use	100.0%	24,315	25,019	25,144	25,732	26,209	26,705	27,215	27,739	28,276	28,825	29,386	29,960	30,546	31,145	31,75
Total	100.0%	24,315	25,019	25,144	25,732	26,209	26,705	27,215	27,739	28,276	28,825	29,386	29,960	30,546	31,145	31,75
Forecast Demand Before Elasticity Adjustment		24,315	25,019	25,519	26,030	26,550	27,081	27,623	28,175	28,739	29,314	29,900	30,498	31,108	31,730	32,3
Annual Loss Due to Price Elasticity Response		0	0	(376)	(298)	(341)	(376)	(408)	(436)	(463)	(489)	(514)	(538)	(562)	(586)	(60
Annual % Loss Due to Price Elasticity Response			0.00%	-1.47%	-1.15%	-1.28%	-1.39%	-1.48%	-1.55%	-1.61%	-1.67%	-1.72%	-1.76%	-1.81%	-1.85%	-1.88
Cumulative Loss Due to Price Elasticity Response			0	(376)	(674)	(1,015)	(1,391)	(1,799)	(2,235)	(2,698)	(3,187)	(3,701)	(4,239)	(4,801)	(5,386)	(5,99
Cumulative % Loss Due to Price Elasticity Response			0.00%	-0.75%	-0.89%	-0.99%	-1.08%	-1.15%	-1.22%	-1.27%	-1.32%	-1.37%	-1.41%	-1.45%	-1.49%	-1.52
Annual Use (All Classes)																
After Price Elasticity Adjustment		3,194,549	2,969,100	2,933,149	2,986,454	3,012,854	3,041,875	3,072,293	3,103,728	3,135,997	3,168,996	3,202,659	3,236,944	3,271,822	3,307,273	3,343,28
Before Price Elasticity Adjustment		514,119	2,969,100	3,002,932	3,037,191	3,071,882	3,107,011	3,142,586	3,178,611	3,215,094	3,252,041	3,289,459	3,327,355	3,365,736	3,404,607	3,443,97
% Difference		521.36%	0.00%	-2.32%	-1.67%	-1.92%	-2.10%	-2.24%	-2.36%	-2.46%	-2.55%	-2.64%	-2.72%	-2.79%	-2.86%	-2.9
Cumulative Use (All Classes)																
Cumulative Total Use - After Price Elasticity Adjustment		3,194,549	6,163,649	9,096,798	12,083,252	15,096,106	18,137,982	21,210,275	24,314,003	27,450,001	30,618,997	33,821,655	37,058,599	40,330,421	43,637,694	46,980,97
Cumulative Total Use - Before Price Elasticity Adjustment		514,119	3,483,219	6,486,151	9,523,342	12,595,224	15,702,236	18,844,821	22,023,433	25,238,527	28,490,568	31,780,028	35,107,383	38,473,118	41,877,726	45,321,70
% Difference		521.36%	76.95%	40.25%	26.88%	19.86%	15.51%	12.55%	10.40%	8.76%	7.47%	6.42%	5.56%	4.83%	4.20%	3.66

Fort Collins-Loveland Water District 2017 Rate & Fee Study

Test Year 2018 Unit Cost of Service - New Consolidated Rate Design

		Volumetric	Fixed		Volumetric		Customer Se	rvice	Private Fire	9	
	Revenue	Revenue	Revenue		Max Day	Max Hour	Equivalent		Equivalent		
Item	Requirement	Requirement	Requirement	Base	Extra Capacity	Extra Capacity	Meters	Bills	Connections	Bills	Public Fire
Customer Class Units of Service											
Residential, FCLWD Rates				2,037,673	8,375	4,718	14,190	170,255	0	0	2,102
Residential, City Rates				203,090	675	417	1,946	23,347	0	0	288
Commercial, FCLWD Rates				442,709	1,320	857	982	6,952	0	0	145
Commercial, City Rates				21,744	65	42	44	162	0	0	7
Irrigation, FCLWD Rates				309,077	2,053	976	245	1,464	0	0	0
Irrigation, City Rates				65,117	433	206	37	255	0	0	0
Multi-Unit, FCLWD Rates				77,258	79	98	260	3,121	0	0	39
Multi-Unit, City Rates				27,080	28	34	154	1,848	0	0	23
Subtotal				3,183,749	13,028	7,349	17,856	207,404	0	0	2,603
Private Fire				0	0	0	0	0	0	0	0
Public Hydrants				0	450	3,150	0	0	0	0	0
Total System Units of Service Before Adjustment for Outside City Multiplier				3,183,749	13,478	10,499	17,856	207,404	0	0	2,603
Total system of the service service rajustification outside etcy mattiplier				3,103,7 13	25,170	10,133	17,030	207,101	0		2,000
Capital Cost Revenue Requirement	\$14,928,077	\$14,635,524	\$292,553	\$9,997,705	\$2,383,075	\$2,254,744	\$292,553	\$0	\$0	\$0	\$0
Unit Cost of Service	ψ1.,320,077	ψ1.,033,32·	Ų232,333	\$3.1402	\$176.8092	\$214.7532	\$16.3836	\$0.0000	\$0.0000	\$0.0000	\$0.0000
				*******	7-1-1-1-1	,	,	70.000	7	*******	7-1
O&M Revenue Requirement	\$10,094,826	\$9,186,035	\$908,791	\$3,897,508	\$3,753,344	\$1,535,183	\$891,443	\$17,348	\$0	\$0	\$0
Unit Cost of Service	7-0,00 ,,020	+-,,	*****	\$1.2242	\$278.4745	\$146.2185	\$49.9229	\$0.0836	\$0.0000	\$0.0000	\$0.0000
ome cost of service				V1.22.12	Q270.1715	ψ11012103	Ų 13.3223	φ0.0050	φο.σσσσ	φυ.υυυυ	φο.σσσσ
Non-Rate Revenue Offset	\$14,082,246	\$13,952,908	\$129,338	\$12,026,641	\$1,506,313	\$419,954	\$127,738	\$1,600	\$0	\$0	\$0
Unit Cost of Service	\$11,002,210	\$13,332,300	V123,000	\$3.7775	\$111.7589	\$39.9985	\$7.1536	\$0.0077	\$0.0000	\$0.0000	\$0.0000
onit cost of service				Ş3.7773	Ş111.7505	\$33.3303	Ş7.1330	\$0.0077	Ç0.0000	Ç0.0000	\$0.0000
Net Revenue Requirement from Rates	\$10,940,657	\$9,868,651	\$1,072,005	\$1,868,572	\$4,630,106	\$3,369,973	\$1,056,257	\$15,748	\$0	\$0	\$0
Unit Cost of Service Before Adjustment for Outside City Multiplier	, ,,, ,,,	, , , , , , ,	. ,. ,.	\$0.5869	\$343.5248	\$320.9732	\$59.1529	\$0.0759	\$0.0000	\$0.0000	\$0.0000
					·				·		
Customer Class Units of Service FCLWD Rates											
Residential, FCLWD Rates				2,037,673	8,375	4,718	14,190	170,255	0	0	2,102
Commercial, FCLWD Rates				442,709	1,320	857	982	6,952	0	0	145
Irrigation, FCLWD Rates				309,077	2,053	976	245	1,464	0	0	0
Multi-Unit, FCLWD Rates				77,258	79	98	260	3,121	0	0	39
Subtotal				2,866,717	11,828	6,650	15,676	181,792	0	0	2,286
Private Fire				0	0	0	0	0	0	0	0
Public Hydrants				0	409	2,850	0	0	0	0	0
Total Units of Service at FCLWD Rates Before Adjustment for Outside City Multiplier				2,866,717	12,236	9,500	15,676	181,792	0	0	2,286
Customer Class Units of Service City Rates											
- I				203,090	675	417	1,946	23,347	0	0	288
Residential, City Rates					65	417 42			0	0	200
Commercial, City Rates Irrigation, City Rates				21,744 65,117	433	206	44 37	162 255	0	0	/
Multi-Unit, City Rates				27,080	28	34	154	1,848	0	0	23
Wuiti-Offit, City Nates				27,080	20	34	134	1,040	U	U	23
Subtotal				317,032	1,200	700	2,180	25,612	0	0	317
Private Fire				0	0	0	0	0	0	0	0
Public Hydrants				0	41	300	0	0	0	0	0
Total Units of Service, City Rates Before Adjustment for Outside City Multiplier				317,032	1,242	1,000	2,180	25,612	0	0	317
Total Office of Service, City Nates before Aujustinent for Outside City Multiplier				317,032	1,242	1,000	2,180	23,012	U	U	517

Fort Collins-Loveland Water District 2017 Rate & Fee Study Test Year 2018 Unit Cost of Service - New Consolidated Rate Design

		Volumetric	Fixed		Volumetric		Customer Se	rvice	Private Fire	9	
	Revenue	Revenue	Revenue		Max Day	Max Hour	Equivalent		Equivalent		
Item	Requirement	Requirement	Requirement	Base	Extra Capacity	Extra Capacity	Meters	Bills	Connections	Bills	Public Fire
City Volumetric Rate Multiplier	161.54%										
Unit Cost of Service, FCLWD Rates After Adjustment for OC Multiplier				\$0.5530	\$325.0933	\$303.2081	\$59.1529	\$0.0759	\$0.0000	\$0.0000	\$0.0000
Unit Cost of Service, City Rates After Adjustment for OC Multiplier				\$0.8933	\$525.1507	\$489.7977	\$59.1529	\$0.0759	\$0.0000	\$0.0000	\$0.0000
Customer Class Revenue Requirement, FCLWD Rates											
Residential, FCLWD Rates	\$6,132,304	\$5,280,009	\$852,296	\$1,126,876	\$2,722,731	\$1,430,402	\$839,368	\$12,927	\$0	\$0	\$0
Commercial, FCLWD Rates	992,543	933,955	58,588	244,828	429,229	259,899	58,060	528	,0 0	0	0,
Irrigation, FCLWD Rates	1,149,120	1,134,519	14,601	170,926	667,529	296,064	14.490	111	0	0	0
Multi-Unit, FCLWD Rates	113,862	98.239	15,623	42.725	25,690	29,824	15,386	237	0	0	0
Mark only receive naces	110,002	30,233	15,025	12,723	23,030	23,021	13,500	237	· ·	ŭ	
Private Fire	0	0	0	0	0	0	0	0	0	0	0
Public Hydrants	996,985	996,985	0	0	132,814	864,171	0	0	0	0	0
Total Revenue Requirement, FCLWD Rates	9,384,814	8,443,706	941,108	1,585,354	3,977,992	2,880,359	927,305	13,803	0	0	0
Customer Class Revenue Requirement, City Rates	057.004	740 407	446.050	404 400	254.557	204.454	445.005	4 770			
Residential, City Rates	857,294	740,437	116,858	181,429	354,557	204,451	115,085	1,773	0	0	0
Commercial, City Rates	76,711	74,101	2,609	19,425	34,056	20,621	2,597	12	0	0	0
Irrigation, City Rates	388,297	386,116	2,182	58,172	227,183	100,761	2,162	19	0	0	0
Multi-Unit, City Rates	64,873	55,625	9,249	24,192	14,546	16,887	9,108	140	0	0	0
Private Fire	0	0	0	0	0	0	0	0	0	0	0
Public Hydrants	168,667	168,667	0	0	21,772	146,895	0	0	0	0	0
Total Revenue Requirement, City Rates	1,555,843	1,424,945	130,897	283,218	652,114	489,614	128,952	1,945	0	0	0
Total	\$10,940,657	\$9,868,651	\$1,072,005	\$1,868,572	\$4,630,106	\$3,369,973	\$1,056,257	\$15,748	\$0	\$0	\$0

Fort Collins-Loveland Water District 2017 Rate & Fee Study

Test Year 2018 Unit Cost of Service - New Consolidated Rate Design

				Revenue F	Requirement by Cu	stomer Class Befor	e Reallocation of	Public Fire Protection	on Costs						
	Total			Volum	etric					Customer Servi	ce		Private F	ire	
	Revenue		Max Day	Max Hour	Total Before	RTS Adj.	Total Ater	Equivalent		Total Before	RTS	Total Ater	Equivalent		
Customer Class	Requirement	Base	Extra Capacity	Extra Capacity	RTS Adj.	to Base	RTS Adj.	Meters	Bills	RTS Adj.	Adjustment	RTS Adj.	Connections	Bills	Public Fire
Customer Classes at FCLWD Rates															
Residential	\$6,132,304	\$1,126,876	\$2,722,731	\$1,430,402	\$5,280,009	\$453,004	\$4,827,005	\$839,368	\$12,927	\$852,296	\$453,004	\$1,305,300	\$0	\$0	\$0
Commercial	992,543	244,828	429,229	259,899	933,955	98,421	835,534	58,060	528	58,588	98,421	157,009	0	0	0
Irrigation	1,149,120	170,926	667,529	296,064	1,134,519	68,712	1,065,807	14,490	111	14,601	68,712	83,314	0	0	0
Multi-Unit	113,862	42,725	25,690	29,824	98,239	17,176	81,063	15,386	237	15,623	17,176	32,798	0	0	0
Private Fire	0	0	0	0	0		0	0	0	0	0	0	0	0	0
Public Hydrants	996,985	0	132,814	864,171	996,985		996,985	0	0	0	0	0	0	0	0
Total Customer Classes at FCLWD Rates	9,384,814	1,585,354	3,977,992	2,880,359	8,443,706	637,312	7,806,394	927,305	13,803	941,108	637,312	7,806,394	0	0	0
Customer Classes at City Rates															
Residential	857,294	181,429	354,557	204,451	740,437	72,934	667,503	115,085	1,773	116,858	72,934	189,792	0	0	0
Commercial	76,711	19,425	34,056	20,621	74,101	7,809	66,292	2,597	12	2,609	7,809	10,418	0	0	0
Irrigation	388,297	58,172	227,183	100,761	386,116	23,385	362,731	2,162	19	2,182	23,385	25,567	0	0	0
Multi-Unit	64,873	24,192	14,546	16,887	55,625	9,725	45,899	9,108	140	9,249	9,725	18,974	0	0	0
	- ,,	,	- ,,		,	-,	,	-,		-,	-,	,			_
Private Fire	0	0	0	0	0		0	0	0	0	0	0	0	0	0
Public Hydrants	168,667	0	21,772	146,895	168,667		168,667	0	0	0	0	0	0	0	0
Total Customer Classes at City Rates	1,555,843	283,218	652,114	489,614	1,424,945	113,853	1,311,092	128,952	1,945	130,897	113,853	1,311,092	0	0	0
Total System Revenue Requirement	\$10,940,657	\$1,868,572	\$4,630,106	\$3,369,973	\$9,868,651	\$751,166	\$9,117,486	\$1,056,257	\$15,748	\$1,072,005	\$751,166	\$1,823,171	\$0	\$0	\$0

check \$0

	Selection of Public Fire Allocation Methodology
1	Public Fire Reallocated on MD & MH Extra Capacity Volumes
2	Public Fire Reallocated on Equivalent Meters
2	Selection

		Revenue Requirer	ment by Customer	Class After Realloo	ation of Public Fire	Protection Costs				
			Volumetric			Customer Service		Privat	e Fire	
	Total Revenue	Base After RTS	Max Day Extra	Max Hour Extra	Equivalent			Equivalent		
Customer Class	Requirement	Adj.	Capacity	Capacity	Meters	Bills	RTS Adjustment	Connections	Bills	Public Fire
Customer Classes at FCLWD Rates										
Residential	\$7,049,071	\$673,872	\$2,722,731	\$1,430,402	\$1,756,135	\$12,927	\$453,004	\$0	\$0	\$0
Commercial	1,055,957	146,407	429,229	259,899	121,475	528	98,421	0	0	0
Irrigation	1,149,120	102,214	667,529	296,064	14,490	111	68,712	0	0	0
Multi-Unit	130,666	25,550	25,690	29,824	32,190	237	17,176	0	0	0
Total Customer Classes at FCLWD Rates	9,384,814	948,042	3,845,178	2,016,189	1,924,289	13,803	637,312	0	0	0
Customer Classes at City Rates										
Residential	1,010,390	108,495	354,557	204,451	268,180	1,773	72,934	0	0	0
Commercial	80,165	11,616	34,056	20,621	6,052	12	7,809	0	0	0
Irrigation	388,297	34,787	227,183	100,761	2,162	19	23,385	0	0	0
Multi-Unit	76,990	14,467	14,546	16,887	21,225	140	9,725	0	0	0
Total Customer Classes at City Rates	1,555,843	169,364	630,342	342,719	297,619	1,945	113,853	0	0	0
Total System Revenue Requirement	\$10,940,657	\$1,117,406	\$4,475,520	\$2,358,908	\$2,221,909	\$15,748	\$751,166	\$0	\$0	\$0

Public F	ire Allocation Facto	ors
% of Max Day	% of Max Hour	
Extra Capacity	Extra Capacity	% of
Demand	Demand	Equivalent
		·
85.7%	83.2%	92.0%
13.5%	15.1%	6.4%
0.8%	1.7%	1.7%
100.0%	100.0%	100.0%
87.9%	84.5%	90.8%
8.4%	8.5%	2.0%
3.6%	7.0%	7.2%
100.0%	100.0%	100.0%

check

Fort Collins-Loveland Water District 2017 Rate & Fee Study Test Year 2018 Unit Cost of Service - New Consolidated Rate Design

Comparison of Tes	st Year Revenue at	Existing Rates vs. CO	OS	
	Test Year 2018			
	Revenue at	Test Year 2018		
Customer Class	Existing Rates	Cost of Service	\$ Change	% Change
Customer Classes at FCLWD Rates				
Residential	\$6,519,867	\$7,049,071	\$529,203	8.1%
Commercial	1,164,573	1,055,957	(108,616)	-9.3%
Irrigation	912,392	1,149,120	236,728	25.9%
Multi-Unit	445,798	130,666	(315,132)	-70.7%
Total Customer Classes at FCLWD Rates	9,042,631	9,384,814	342,183	3.8%
Customer Classes at City Rates				
Residential	922,399	1,010,390	87,991	9.5%
Commercial	93,319	80,165	(13,154)	-14.1%
Irrigation	275,984	388,297	112,313	40.7%
Multi-Unit	185,528	76,990	(108,539)	-58.5%
Total Customer Classes at City Rates	1,477,231	1,555,843	78,611	5.3%
Total System Revenue Requirement	\$10,519,862	\$10,940,657	\$420,794	4.0%
check	\$0	\$0		

Average	Average		
per Kgal	per Kgal		
Revenue	cos	\$ Change	% Change
\$3.42	\$3.70	\$0.28	8.1%
\$2.81	\$2.55	(\$0.26)	-9.3%
\$3.15	\$3.97	\$0.82	25.9%
\$6.17	\$1.81	(\$4.36)	-70.7%
\$3.37	\$3.50	\$0.13	3.8%
\$4.85	\$5.32	\$0.46	9.5%
\$4.59	\$3.94	(\$0.65)	-14.1%
\$4.53	\$6.37	\$1.84	40.7%
\$7.32	\$3.04	(\$4.28)	-58.5%
\$4.98	\$5.24	\$0.26	5.3%
\$3.53	\$3.67	\$0.14	4.0%

Fort Collins-Loveland Water District 2017 Rate & Fee Study Cost of Service Rates - New Consolidated Rate Design

RTS Adjustment to Class COS	40.20%
Test Year Fixed Revenue Contribution	27.66%

	Service Charge Rate Design													
				Annual		Existing	Monthly	Monthly	Monthly	Monthly	Calculated	Existing		
	Revenue			Unit Cost	Meter	Price	Capacity	Billing	Public Fire	RTS	Monthly	Fixed		%
COS Component	Requirement	U	nits of Service	of Service	Size	Equivalency	Charge	Component	Component	Component	Charge	Charge	Difference	Difference
Meters	\$1,056,257	17,856	Equivalent Meters	\$59.15	5/8 and 3/4"	1.00	\$4.93	\$0.08	\$5.44	\$3.51	\$13.95	\$13.40	\$0.55	4.10%
Billing and Collection	15,748	207,404	Bills	0.08	1"	1.46	7.20	0.08	7.94	5.12	20.33	19.53	0.80	4.10%
Public Fire	1,165,652	17,856	Equivalent Meters	65.28	1.5"	2.60	12.81	0.08	14.13	9.11	36.12	34.70	1.42	4.09%
Readiness to Serve Adjustment	751,166	17,856	Equivalent Meters	42.07	2"	3.97	19.57	0.08	21.60	13.92	55.17	53.00	2.17	4.09%
Total COS	\$2,988,823				3"	7.63	37.62	0.08	41.52	26.75	105.96	101.80	4.16	4.09%
Check	\$0				4"	15.27	75.27	0.08	83.07	53.53	211.94	203.60	8.34	4.10%

			Reside	ntial, FCLWD Rates -	Volumetric Rate Des	ign					Re	sidential, FCLWD	Rates, Service Charge R	evenue
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	1 to 8	835,239	43.80%	1.000	\$1,500,194	\$1.796	32.10%	\$1.560	\$0.236	15.14%	Size	Billable Units	Charge	Revenue
Block 2	8 to 22	562,015	29.47%	1.417	\$1,430,053	2.545	30.60%	2.210	0.335	15.14%	5/8 and 3/4"	14,185	\$13.95	\$2,374,538
Block 3	Over 22	509,870	26.74%	1.904	\$1,743,524	3.420	37.30%	2.970	0.450	15.14%	1"	3	20.33	761
Block 4											1.5"		36.12	0
Block 5											2"		55.17	0
											3"		105.96	0
		1,907,123	100.00%	Forecast	\$4,673,771	\$2.451	100.00%				4"		211.94	0
	Check 0				\$4,673,771	\$1.80	Rounded Rate					14,188		2,375,299
					\$0	\$2.55	Rounded Rate					Total	Revenue Requirement	7,049,071
						\$3.42	Rounded Rate					Net Volumetric	Revenue Requirement	\$4,673,771

			Comm	ercial, FCLWD Rates -	Volumetric Rate De	sign					Co	mmercial, FCLWD	Rates, Service Charge Re	evenue
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	All Use	414,346	100%	1.000	\$907,685	2.191	100.00%	\$1.560	\$0.631	40.43%	Size	Billable Units	Charge	Revenue
Block 2		0		1.000	\$0	2.191	0.00%	2.210	(0.019)	-0.88%	5/8 and 3/4"	381	\$13.95	\$63,729
Block 3		0		1.000	\$0	2.191	0.00%	2.970	(0.779)	-26.24%	1"	100	20.33	24,451
Block 4											1.5"	55	36.12	23,713
Block 5											2"	31	55.17	20,836
											3"	10	105.96	12,898
		414,346	100.00%	Forecast	\$907,685	\$2.191	100.00%				4"	1	211.94	2,646
	Check	0		Target	\$907,685	\$2.20	Rounded Rate					578		148,273
				Difference	\$0	\$2.20	Rounded Rate					Total	Revenue Requirement	1,055,957
						\$2.20	Rounded Rate					Net Volumetric	Revenue Requirement	\$907,685

			Irrigat	ion, FCLWD Rates - '	Volumetric Rate Desig	gn					1	rrigation, FCLWD	Rates, Service Charge Re	venue
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	All Use	289,275	100%	1.000	\$1,076,637	\$3.722	100.00%	\$1.560	\$2.162	138.58%	Size	Billable Units	Charge	Revenue
Block 2		0		1.000	\$0	3.722	0.00%	2.210	1.512	68.41%	5/8 and 3/4"	108	\$13.95	\$18,113
Block 3		0		1.000	\$0	3.722	0.00%	2.970	0.752	25.31%	1"	47	20.33	11,422
Block 4											1.5"	56	36.12	24,351
Block 5											2"	28	55.17	18,597
											3"	0	105.96	0
		289,275	100.00%	Forecast	\$1,076,637	\$3.722	100.00%				4"		211.94	0
-	Check	0		Target	\$1,076,637	\$3.73	Rounded Rate					239		72,483
				Difference	\$0	\$3.73	Rounded Rate					Tota	Revenue Requirement	1,149,120
						\$3.73	Rounded Rate					Net Volumetrio	Revenue Requirement	\$1,076,637

			Multi-l	Unit, FCLWD Rates - \	/olumetric Rate Desi	gn					N	Iulti-Unit, FCLWD F	Rates, Service Charge Rev	enue
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	All Use	72,308	100%	1.000	\$87,125	\$1.205	100.00%	\$1.560	(\$0.355)	-22.76%	Size	Billable Units	Charge	Revenue
Block 2		0		1.000	\$0	1.205	0.00%	2.210	(1.005)	-45.48%	5/8 and 3/4"	260	\$13.95	\$43,541
Block 3		0		1.000	\$0	1.205	0.00%	2.970	(1.765)	-59.43%	1"	0	20.33	0
Block 4											1.5"		36.12	0
Block 5											2"		55.17	0
											3"		105.96	0
		72,308	100.00%	Forecast	\$87,125	\$1.205	100.00%				4"		211.94	0
	Check	0		Target	\$87,125	\$1.21	Rounded Rate					260		43,541
				Difference	\$0	\$1.21	Rounded Rate					Total	Revenue Requirement	130,666
						\$1.21	Rounded Rate					Net Volumetric	Revenue Requirement	\$87,125

Fort Collins-Loveland Water District 2017 Rate & Fee Study Cost of Service Rates - New Consolidated Rate Design

RTS Adjustment to Class COS	40.20%
Test Year Fixed Revenue Contribution	27.66%

			Resid	ential, City Rates - V	olumetric Rate Desig	ŗn					Resid	ential, No Patio, C	City Rates - Service Charg	e Revenue
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	1 to 8	116,595	61.34%	1.000	\$357,546	\$3.067	52.22%	\$2.730	\$0.337	12.33%	Size	Billable Units	Charge	Revenue
Block 2	8 to 22	38,648	20.33%	1.308	\$154,984	4.010	22.64%	3.570	0.440	12.33%	5/8 and 3/4"	1,946	\$13.95	\$325,685
Block 3	Over 22	34,836	18.33%	1.612	\$172,175	4.942	25.15%	4.400	0.542	12.33%	1"		20.33	0
Block 4											1.5"		36.12	0
Block 5											2"		55.17	0
											3"		105.96	0
		190,079	100.00%	Forecast	\$684,705	\$3.602	100.00%				4"		211.94	0
	Check	0		Target	\$684,705	\$3.07	Rounded Rate					1,946		325,685
				Difference	\$0	\$4.02	Rounded Rate					Total	Revenue Requirement	1,010,390
						\$4.95	Rounded Rate					Net Volumetric	Revenue Requirement	\$684,705

			(Commercial, City Ra	ates, Service Charge Rev	venue								
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	All Use	933	4.58%	1.000	\$3,390	\$3.635	4.58%	\$2.730	\$0.905	33.16%	Size	Billable Units	Charge	Revenu
Block 2		731	3.59%	1.000	\$2,658	3.635	3.59%	3.570	0.065	1.83%	5/8 and 3/4"	3	\$13.95	\$522
Block 3		18,687	91.82%	1.000	\$67,934	3.635	91.82%	4.400	(0.765)	-17.38%	1"	1	20.33	254
Block 4											1.5"	6	36.12	2,706
Block 5											2"	2	55.17	1,378
											3"	1	105.96	1,323
		20,351	100.00%	Forecast	\$73,983	\$3.635	100.00%				4"		211.94	0
	Check	k 0		Target	\$73,983	\$3.64	Rounded Rate					14		6,182
				Difference	\$0	\$3.64	Rounded Rate				Total Revenue Requiremen		Revenue Requirement	80,165
						\$3.64	Rounded Rate				Net Volumetric Revenue Requirement			\$73,983

			Irriga	ation, City Rates - Vo	olumetric Rate Design	1					Irrigation, City Rates, Service Charge Revenue			enue
Consumption			Distribution		Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	All Use	1,647	2.70%	1.000	\$10,165	\$6.171	2.70%	\$2.730	\$3.441	126.05%	Size	Billable Units	Charge	Revenue
Block 2		1,377	2.26%	1.000	\$8,500	6.171	2.26%	3.570	2.601	72.86%	5/8 and 3/4"	14	\$13.95	\$2,264
Block 3		57,921	95.04%	1.000	\$357,434	6.171	95.04%	4.400	1.771	40.25%	1"	8	20.33	2,031
Block 4											1.5"	17	36.12	7,215
Block 5											2"	1	55.17	689
											3"		105.96	0
		60,945	100.00%	Forecast	\$376,099	\$6.171	100.00%				4"		211.94	0
	Check	0		Target	\$376,099	\$6.18	Rounded Rate					40		12,199
				Difference	\$0	\$6.18	Rounded Rate					Total	Revenue Requirement	388,297
						\$6.18	Rounded Rate					Net Volumetric	Revenue Requirement	\$376,099

•			Mu	lti-Unit, City Rates - Vo	olumetric Rate Desig	n	·	·	·	·		Multi-Unit, City Ra	ites, Service Charge Reve	enue
Consumption			Distribution	Proposed	Forecast	Calculated	Revenue	Existing	Dollar	%			Monthly	
Block	Proposed Blocks	Billed Usage	of Usage	Steepness	Revenue	Rates	Distribution	Rates	Change	Change	Meter		Service	
Block 1	All Use	25,345	100%	1.000	\$51,214	\$2.021	100.00%	\$2.730	(\$0.709)	-25.98%	Size	Billable Units	Charge	Revenue
Block 2		0		1.000	\$0	2.021	0.00%	3.570	(1.549)	-43.40%	5/8 and 3/4"	154	\$13.95	\$25,776
Block 3		0		1.000	\$0	2.021	0.00%	4.400	(2.379)	-54.08%	1"		20.33	0
											1.5"		36.12	0
											2"		55.17	0
											3"		105.96	0
		25,345	100.00%	Forecast	\$51,214	\$2.021	100.00%				4"		211.94	0
	Check	: 0	•	Target	\$51,214	\$2.03	Rounded Rate					154		25,776
				Difference	\$0	\$2.03	Rounded Rate					Total	Revenue Requirement	76,990
						\$2.03	Rounded Rate					Net Volumetric	Revenue Requirement	\$51,214

Appendix C: Rate Design
Page C-6
3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study

Summary and Forecast of Cost of Service Rates - New Consolidated Rate Design

Summar	y of Volumetric R	ates - New Consolic	dated Rate Design	ı
Customer Class	Existing	Calculated	\$ Change	% Change
Residential, FCLWD Rate	s - Volumetric Ra	te Design		
1 to 8	1.560	1.800	0.240	15.38%
8 to 22	2.210	2.550	0.340	15.38%
Over 22	2.970	3.420	0.450	15.15%
Commercial, FCLWD Rate				
1 to 8	1.560	2.200	0.640	41.03%
8 to 15	2.210	2.200	(0.010)	-0.45%
Greater than 15	2.970	2.200	(0.770)	-25.93%
Irrigation, FCLWD Rates -	Volumetric Rate	Design		
1 to 8	1.560	3.730	2.170	139.10%
8 to 15	2.210	3.730	1.520	68.78%
Greater than 15	2.970	3.730	0.760	25.59%
Greater than 13	2.570	5.750	0.700	25.5570
Multi-Unit, FCLWD Rates	- Volumetric Rat	e Design		
1 to 8	1.560	1.560	0.000	0.00%
8 to 15	2.210	1.560	(0.650)	-29.41%
Greater than 15	2.970	1.560	(1.410)	-47.47%
Residential, City Rates - \	/alumatria Data F	Nosian		
1 to 8	2.730	3.070	0.340	12.45%
8 to 15	3.570	4.020	0.450	12.61%
Greater than 15	4.400	4.950	0.550	12.50%
Commercial, City Rates -	Volumetric Rate	Design		
1 to 8	2.730	3.640	0.910	33.33%
8 to 15	3.570	3.640	0.070	1.96%
Greater than 15	4.400	3.640	(0.760)	-17.27%
Irrigation City Batas Va	lumatria Bata Da	cian		
Irrigation, City Rates - Vo			2.450	126 270/
1 to 8	2.730	6.180	3.450	126.37%
8 to 15	3.570	6.180	2.610	73.11%
Greater than 15	4.400	6.180	1.780	40.45%
Multi-Unit, City Rates - V	olumetric Rate D	esign		
1 to 8	2.730	2.730	0.000	0.00%
8 to 15	3.570	2.730	(0.840)	-23.53%
Greater than 15	4.400	2.730	(1.670)	-37.95%

			For	ecast Volun	netric Rates	at Financial	Plan Increa	ses					
Customer Class	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Residential, FCLWD Rates - Vol	umetric Rate	Design											
1 to 8	\$1.80	\$1.88	\$1.96	\$2.04	\$2.13	\$2.22	\$2.31	\$2.41	\$2.51	\$2.62	\$2.73	\$2.84	\$2.96
8 to 22	2.55	2.66	2.77	2.89	3.01	3.14	3.27	3.41	3.55	3.70	3.85	4.01	4.18
Over 22	3.42	3.56	3.71	3.86	4.02	4.19	4.36	4.54	4.73	4.92	5.12	5.33	5.55
Commercial, FCLWD Rates - Vo	olumetric Rat	e Design											
1 to 8	2.20	2.29	2.38	2.47	2.57	2.68	2.78	2.90	3.01	3.13	3.26	3.39	3.52
8 to 22	2.20	2.29	2.38	2.47	2.57	2.68	2.78	2.90	3.01	3.13	3.26	3.39	3.52
Over 22	2.20	2.29	2.38	2.47	2.57	2.68	2.78	2.90	3.01	3.13	3.26	3.39	3.52
Irrigation, FCLWD Rates - Volu	metric Rate D)esign											
1 to 8	3.73	3.88	4.03	4.20	4.36	4.54	4.72	4.91	5.10	5.31	5.52	5.74	5.97
8 to 22	3.73	3.88	4.03	4.20	4.36	4.54	4.72	4.91	5.10	5.31	5.52	5.74	5.97
Over 22	3.73	3.88	4.03	4.20	4.36	4.54	4.72	4.91	5.10	5.31	5.52	5.74	5.97
Multi-Unit, FCLWD Rates - Volu	umetric Rate	Design											
1 to 8	1.56	1.62	1.69	1.75	1.82	1.90	1.97	2.05	2.13	2.22	2.31	2.40	2.50
8 to 22	1.56	1.62	1.69	1.75	1.82	1.90	1.97	2.05	2.13	2.22	2.31	2.40	2.50
Over 22	1.56	1.62	1.69	1.75	1.82	1.90	1.97	2.05	2.13	2.22	2.31	2.40	2.50
Residential, City Rates - Volum	etric Rate De	sign											
1 to 8	3.07	3.19	3.32	3.45	3.59	3.74	3.88	4.04	4.20	4.37	4.54	4.73	4.92
8 to 22	4.02	4.18	4.35	4.52	4.70	4.89	5.09	5.29	5.50	5.72	5.95	6.19	6.44
Over 22	4.95	5.15	5.35	5.57	5.79	6.02	6.26	6.51	6.77	7.05	7.33	7.62	7.93
Commercial, City Rates - Volun	netric Rate D	esign											
1 to 8	3.64	3.79	3.94	4.09	4.26	4.43	4.61	4.79	4.98	5.18	5.39	5.60	5.83
8 to 22	3.64	3.79	3.94	4.09	4.26	4.43	4.61	4.79	4.98	5.18	5.39	5.60	5.83
Over 22	3.64	3.79	3.94	4.09	4.26	4.43	4.61	4.79	4.98	5.18	5.39	5.60	5.83
Irrigation, City Rates - Volumet	ric Rate Desi	gn											
1 to 8	6.18	6.43	6.68	6.95	7.23	7.52	7.82	8.13	8.46	8.80	9.15	9.51	9.89
8 to 22	6.18	6.43	6.68	6.95	7.23	7.52	7.82	8.13	8.46	8.80	9.15	9.51	9.89
Over 22	6.18	6.43	6.68	6.95	7.23	7.52	7.82	8.13	8.46	8.80	9.15	9.51	9.89
Multi-Unit, City Rates - Volume	etric Rate Des	sign											
1 to 8	2.73	2.84	2.95	3.07	3.19	3.32	3.45	3.59	3.74	3.89	4.04	4.20	4.37
8 to 22	2.73	2.84	2.95	3.07	3.19	3.32	3.45	3.59	3.74	3.89	4.04	4.20	4.37
Over 22	2.73	2.84	2.95	3.07	3.19	3.32	3.45	3.59	3.74	3.89	4.04	4.20	4.37

			Forec	ast Monthly	Service Cha	arges at Fina	incial Plan Ir	ncreases					
Customer Class	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
5/8 and 3/4"	\$13.95	\$14.51	\$15.09	\$15.69	\$16.32	\$16.97	\$17.65	\$18.36	\$19.09	\$19.86	\$20.65	\$21.48	\$22.33
1"	20.33	21.14	21.99	22.87	23.78	24.73	25.72	26.75	27.82	28.94	30.09	31.30	32.55
1.5"	36.12	37.56	39.07	40.63	42.26	43.95	45.70	47.53	49.43	51.41	53.47	55.61	57.83
2"	55.17	57.38	59.67	62.06	64.54	67.12	69.81	72.60	75.50	78.52	81.67	84.93	88.33
3"	105.96	110.20	114.61	119.19	123.96	128.92	134.07	139.44	145.01	150.81	156.85	163.12	169.65
4"	211.94	220.42	229.23	238.40	247.94	257.86	268.17	278.90	290.05	301.66	313.72	326.27	339.32

Fort Collins-Loveland Water District 2017 Rate & Fee Study

Summary and Forecast of Cost of Service Rates - District vs. City Rate Differentials

	Existing Rate Structure		
Rate/Charge	Existing District	Existing City	Differential
Monthly Base Charge			
5/8" and 3/4"	\$13.40	\$13.40	
1"	19.53	19.53	
1.5"	34.7	34.7	
2"	53	53	
3"	101.8	101.8	
4"	203.6	203.6	
Multi Unit Base Charge per Unit	\$13.40	\$13.40	
Volume Rate per Kgals			
1 to 8	\$1.56	\$2.73	75%
8 to 15	\$2.21	\$3.57	62%
Greater than 15	\$2.97	\$4.40	48%

New	Consolidated Rate Stru	ucture - Residential	
Rate/Charge	District Residential	City Residential	Differential
Monthly Base Charge			
5/8" and 3/4"	\$13.95	\$13.95	
1"	20.33	20.33	
1.5"	36.12	36.12	
2"	55.17	55.17	
3"	105.96	105.96	
4"	211.94	211.94	
Volume Rate per Kgals			
1,000 to 8,000	\$1.80	\$3.07	70.6%
8,000 to 22,000	\$2.55	\$4.02	57.6%
Greater than 22,000	\$3.42	\$4.95	44.7%

	onsolidated Rate St	ructure - Non-Residential	
Rate/Charge	Residential	City Non-Residential	Diffential
Monthly Base Charge			
5/8" and 3/4"	\$13.95	\$13.95	
1"	20.33	20.33	
1.5"	36.12	36.12	
2"	55.17	55.17	
3"	105.96	105.96	
4"	211.94	211.94	
Volume Rate per Kgals			
Commercial	\$2.20	\$3.64	65.5%
Irrigation	\$3.73	\$6.18	65.7%
Multi-Unit	\$1.21	\$2.03	67.8%

Fort Collins-Loveland Water District 2017 Rate & Fee Study 2018 District Residential Monthly Bill Impacts

			District Resid	ential - 3/4" Meter				
		Existing Rate Structure		New Co	onsolidated Structure		Difference	
	Service Charge	Volumetric	Total	Service Charge	Volumetric	Total		
Kgals	Component	Component	Bill	Component	Component	Bill	\$	%
1	\$13.94	\$1.62	\$15.56	\$13.95	\$1.80	\$15.75	\$0.19	1.23%
2	\$13.94	\$3.24	17.18	13.95	3.60	17.55	0.37	2.15%
3	\$13.94	\$4.87	18.80	13.95	5.40	19.35	0.55	2.91%
4	\$13.94	\$6.49	20.43	13.95	7.20	21.15	0.72	3.55%
5	\$13.94	\$8.11	22.05	13.95	9.00	22.95	0.90	4.09%
6	\$13.94	\$9.73	23.67	13.95	10.80	24.75	1.08	4.56%
7	\$13.94	\$11.36	25.29	13.95	12.60	26.55	1.26	4.97%
8	\$13.94	\$12.98	26.92	13.95	14.40	28.35	1.43	5.33%
9	\$13.94	\$15.28	29.21	13.95	16.95	30.90	1.69	5.77%
10	\$13.94	\$17.58	31.51	13.95	19.50	33.45	1.94	6.15%
11	\$13.94	\$19.87	33.81	13.95	22.05	36.00	2.19	6.48%
12	\$13.94	\$22.17	36.11	13.95	24.60	38.55	2.44	6.76%
13	\$13.94	\$24.47	38.41	13.95	27.15	41.10	2.69	7.01%
14	\$13.94	\$26.77	40.71	13.95	29.70	43.65	2.94	7.239
15	\$13.94	\$29.07	43.00	13.95	32.25	46.20	3.20	7.43%
16	\$13.94	\$32.16	46.09	13.95	34.80	48.75	2.66	5.76%
17	\$13.94	\$35.25	49.18	13.95	37.35	51.30	2.12	4.319
18	\$13.94	\$38.33	52.27	13.95	39.90	53.85	1.58	3.029
19	\$13.94	\$41.42	55.36	13.95	42.45	56.40	1.04	1.889
20	\$13.94	44.51	58.45	13.95	45.00	58.95	0.50	0.869
21	\$13.94	47.60	61.54	13.95	47.55	61.50	(0.04)	-0.06
22	\$13.94 \$13.94	50.69	64.63	13.95	50.10	64.05	(0.58)	-0.89
23	\$13.94	53.78	67.71	13.95	53.52	67.47	(0.24)	-0.36
24	\$13.94 \$13.94	56.87	70.80	13.95	56.94	70.89	0.09	0.129
25	\$13.94	59.96	73.89	13.95	60.36	74.31	0.42	0.127
26	\$13.94	63.04	76.98	13.95	63.78	77.73	0.75	0.377
27	\$13.94	66.13	80.07	13.95	67.20		1.08	1.359
	•					81.15		
28	\$13.94	69.22	83.16	13.95	70.62	84.57	1.41	1.70
29	\$13.94	72.31	86.25	13.95	74.04	87.99	1.74	2.02
30	\$13.94	75.40	89.34	13.95	77.46	91.41	2.07	2.32
31	\$13.94	78.49	92.42	13.95	80.88	94.83	2.41	2.60
32	\$13.94	81.58	95.51	13.95	84.30	98.25	2.74	2.86
33	\$13.94	84.67	98.60	13.95	87.72	101.67	3.07	3.119
34	\$13.94	87.76	101.69	13.95	91.14	105.09	3.40	3.349
35	\$13.94	90.84	104.78	13.95	94.56	108.51	3.73	3.569
36	\$13.94	93.93	107.87	13.95	97.98	111.93	4.06	3.769
37	\$13.94	97.02	110.96	13.95	101.40	115.35	4.39	3.96
38	\$13.94	100.11	114.05	13.95	104.82	118.77	4.72	4.149
39	\$13.94	103.20	117.14	13.95	108.24	122.19	5.05	4.329
40	\$13.94	106.29	120.22	13.95	111.66	125.61	5.39	4.48
41	\$13.94	109.38	123.31	13.95	115.08	129.03	5.72	4.64
42	\$13.94	112.47	126.40	13.95	118.50	132.45	6.05	4.79
43	\$13.94	115.55	129.49	13.95	121.92	135.87	6.38	4.939
44	\$13.94	118.64	132.58	13.95	125.34	139.29	6.71	5.06
45	\$13.94	121.73	135.67	13.95	128.76	142.71	7.04	5.19
46	\$13.94	124.82	138.76	13.95	132.18	146.13	7.37	5.319
47	\$13.94	127.91	141.85	13.95	135.60	149.55	7.70	5.439
48	\$13.94	131.00	144.93	13.95	139.02	152.97	8.04	5.549
49	\$13.94	134.09	148.02	13.95	142.44	156.39	8.37	5.659
50	\$13.94	137.18	151.11	13.95	145.86	159.81	8.70	5.769

Fort Collins-Loveland Water District 2017 Rate & Fee Study 2018 District Annual Bill Impacts

		Annual E	Bills		
	Existing Rate	New Consolidated			
District Residential Customers - 3/4"	Structure	Structure	\$ Change	% Change	
Low Usage (48 Kgals Annual Use)					
Volume Rates	\$77.88	\$86.40	\$8.52	10.9%	
Base Charge	167.23	167.40	0.17	0.1%	
Total Bill	\$245.11	\$253.80	\$8.69	3.5%	
Medium Usage (192 Kgals Annual Use)					
Volume Rates	\$385.88	\$417.60	\$31.72	8.2%	
Base Charge	167.23	167.40	0.17	0.1%	
Total Bill	\$553.11	\$585.00	\$31.89	5.8%	
High Usage (300 Kgals Annual Use)					
Volume Rates	\$719.47	\$724.32	\$4.85	0.7%	
Base Charge	167.23	167.40	0.17	0.1%	
Total Bill	\$886.70	\$891.72	\$5.02	0.6%	
High Usage (8,400 Kgals Annual Use)					
Volume Rates	\$2,387.42	\$2,571.12	\$183.70	7.7%	
Base Charge	167.23	167.40	0.17	0.1%	
Total Bill	\$2,554.66	\$2,738.52	\$183.86	7.2%	

		Annual Bi	lls		
	Existing Rate	New Consolidated			
District Commercial Customers	Structure	Structure	\$ Change	% Change	
Low Usage (3/4", 24 Kgals Annual Use)		· · ·			
Volume Rates	\$38.87	\$64.69	\$25.82	66.4%	
Base Charge	167.23	167.40	0.17	0.1%	
Total Bill	\$206.11	\$232.09	\$25.99	12.6%	
Medium Usage (1", 595 Kgals Annual Use)					
Volume Rates	\$1,630.50	\$1,606.36	(\$24.15)	-1.5%	
Base Charge	243.73	243.96	0.23	0.1%	
Total Bill	\$1,874.24	\$1,850.32	(\$23.92)	-1.3%	
High Usage (3", 3,427 kgals Annual Use)					
Volume Rates	\$10,378.15	\$9,252.90	(\$1,125.25)	-10.8%	
Base Charge	1,270.46	1,271.52	1.06	0.1%	
Total Bill	\$11,648.61	\$10,524.42	(\$1,124.19)	-9.7%	

		Annual B	lls		
	Existing Rate	New Consolidated			
District Multi-Unit Customers	Structure	Structure	\$ Change	% Change	
Low Usage (3/4", 2 Units, 117 Kgals Annual Use)					
Volume Rates	\$215.41	\$182.45	(32.95)	-15.3%	
Base Charge	334.46	167.40	(167.06)	-49.9%	
Total Bill	\$549.87	\$349.85	(200.02)	-36.4%	
Medium Usage (2", 20 Units, 569 Kgals Annual Use)					
Volume Rates	\$1,549.50	\$887.21	(662.29)	-42.7%	
Base Charge	3,344.64	662.04	(2,682.60)	-80.2%	
Total Bill	\$4,894.14	\$1,549.25	(3,344.89)	-68.3%	
High Usage (1 1/2", 70 Units, 3,377 Kgals Annual Use)					
Volume Rates	\$10,223.07	\$5,267.80	(4,955.27)	-48.5%	
Base Charge	11,706.24	433.44	(11,272.80)	-96.3%	
Total Bill	\$21,929.31	\$5,701.24	(16,228.07)	-74.0%	

		Annual E	Bills		
	Existing Rate	New Consolidated			
District Irrigation Customers	Structure	Structure	\$ Change	% Change	
Low Usage (3/4", 117 Kgals Annual Use)					
Volume Rates	\$283.64	\$493.78	\$210.14	74.1%	
Base Charge	167.23	167.40	0.17	0.1%	
Total Bill	\$450.87	\$661.18	\$210.31	46.6%	
Medium Usage (1", 1,070 Kgals Annual Use)					
Volume Rates	\$3,220.09	\$4,528.00	\$1,307.92	40.6%	
Base Charge	243.73	243.96	0.23	0.1%	
Total Bill	\$3,463.82	\$4,771.96	\$1,308.14	37.8%	
Medium Usage (2", 3,910 Kgals Annual Use)					
Volume Rates	\$11,972.34	\$16,537.54	\$4,565.20	38.1%	
Base Charge	661.44	662.04	0.60	0.1%	
Total Bill	\$12,633.78	\$17,199.58	\$4,565.80	36.1%	

Appendix D Fort Collins Loveland Water District Rate Study Plant Investment Fees

Fort Collins-Loveland Water District 2017 Rate & Fee Study

Plant Investment Fee Calculation Under Industry Accepted Approaches

Treatment Component	
Asset Valuation	
Treatment	\$34,852,589
Transmission Mains	24,434,059
Treated Water Storage	8,076,605
Pumps	2,453,602
CWIP - Treated Water Storage	4,062,297
Total Value of Existing Infrastructure	73,879,152
Existing Treatment Plant Capacity	
Soldier Canyon Existing Capacity (MGD)	45.0
FCLWD Ownership Share in Existing Capacity	35.651%
FCLWD Share of Soldier Canyon Existing Capacity (MGD)	16.043
Capacity Purchased from City of Fort Collins (MGD)	5.0
Total Capacity (MGD)	21.04
Total Capacity (Gallons)	21,043,000
Single Family Residential Equivalent Capacity Demand	
Annual Demand (Residential, No Patio, FCLWD Rates)	183,379
GPD Demand (Residential No Patio, FCLWD Rates)	502.41
Max Day Peaking Factor (Residential, No Patio, FCLWD Rates)	2.51
GPD Max Day Demand (Residential No Patio, FCLWD Rates)	1,258.95
Single Family Residential Equivalent Units that Can be Served	16,715
Single Family Residential PIF - Treatment Component	\$4,420
Source of Supply Component	
Asset Valuation	
	\$6,406,589
Asset Valuation Source of Supply Existing Source of Supply Capacity	
Asset Valuation Source of Supply Existing Source of Supply Capacity Acre Feet per Year	17,699
Asset Valuation Source of Supply Existing Source of Supply Capacity Acre Feet per Year Weighted Firm Yield	17,699 50.00%
Asset Valuation Source of Supply Existing Source of Supply Capacity Acre Feet per Year Weighted Firm Yield Acre Feet Per Year - Actual Firm Yield	17,695 50.00% 8,850
Asset Valuation Source of Supply Existing Source of Supply Capacity Acre Feet per Year Weighted Firm Yield	17,699 50.00%
Asset Valuation Source of Supply Existing Source of Supply Capacity Acre Feet per Year Weighted Firm Yield Acre Feet Per Year - Actual Firm Yield Gallons per Year - Actual Firm Yield Single Family Residential Equivalent Capacity Demand	17,69 <u>5</u> 50.00% 8,850 2,883,618,425
Asset Valuation Source of Supply Existing Source of Supply Capacity Acre Feet per Year Weighted Firm Yield Acre Feet Per Year - Actual Firm Yield Gallons per Year - Actual Firm Yield	17,695 50.00% 8,850
Asset Valuation Source of Supply Existing Source of Supply Capacity Acre Feet per Year Weighted Firm Yield Acre Feet Per Year - Actual Firm Yield Gallons per Year - Actual Firm Yield Single Family Residential Equivalent Capacity Demand Annual Demand (Residential, No Patio, FCLWD Rates) Single Family Residential Equivalent Units that Can be Served	17,699 50.00% 8,850 2,883,618,425 183,379 15,725
Asset Valuation Source of Supply Existing Source of Supply Capacity Acre Feet per Year Weighted Firm Yield Acre Feet Per Year - Actual Firm Yield Gallons per Year - Actual Firm Yield Single Family Residential Equivalent Capacity Demand Annual Demand (Residential, No Patio, FCLWD Rates)	17,695 50.00% 8,850 2,883,618,425 183,379

Incremental Cost Approach	
Treatment Component Asset Valuation	
Asset Valuation Treatment	\$59,866,273
Transmission Mains	28,429,300
Treated Water Storage	28,429,300
Pumps	125,000
i unips	123,000
Add: Borrowing Costs on Future Debt	33,751,389
Total Value of Planned Growth-Related Infrastructure	122,171,962
Future Treatment Plant Capacity	
Soldier Canyon Incremental Capacity (MGD)	15.0
FCLWD Ownership Share in Incremental Capacity	46.667%
FCLWD Share of Soldier Canyon Incremental Capacity (MGD)	7.0
Incremental Capacity Purchased from City of Fort Collins (MGD)	5.0
Incremental NISP Treatment Capacity (MGD)	7.0
Total Capacity (MGD)	19.0
Total Capacity (Gallons)	19,000,000
Single Family Residential Equivalent Capacity Demand	
Annual Demand (Residential, No Patio, FCLWD Rates)	183,379
GPD Demand (Residential No Patio, FCLWD Rates)	502.41
Max Day Peaking Factor (Residential, No Patio, FCLWD Rates)	2.51
GPD Max Day Demand (Residential No Patio, FCLWD Rates)	1,258.95
Single Family Residential Equivalent Units that Can be Served	15,092
Single Family Residential PIF - Treatment Component	\$8,095
Source of Supply Component	
Asset Valuation Source of Supply	\$67,067,299
Add: Borrowing Costs on Future Debt	25,600,541
Total Value of Planned Growth-Related Infrastructure	92,667,840
Total value of Flamica Growth Related Illinastracture	32,007,040
Future Source of Supply Capacity	
NISP Acre Feet per Year	3,000
Other Acre Feet per Year	2.00
Tatal Assa Fast san Wasa	
Total Acre Feet per Year	3,000
Total Acre Feet per Year Firm Yield Assumption	
·	100.00%
Firm Yield Assumption	3,000 100.00% 3,000 977,553,000
Firm Yield Assumption Acre Feet Per Year - Actual Firm Yield Gallons per Year - Actual Firm Yield	100.00%
Firm Yield Assumption Acre Feet Per Year - Actual Firm Yield Gallons per Year - Actual Firm Yield	100.009 3,000 977,553,000
Firm Yield Assumption Acre Feet Per Year - Actual Firm Yield Gallons per Year - Actual Firm Yield Single Family Residential Equivalent Capacity Demand	100.009 3,000 977,553,000
Firm Yield Assumption Acre Feet Per Year - Actual Firm Yield Gallons per Year - Actual Firm Yield Single Family Residential Equivalent Capacity Demand Annual Demand (Residential, No Patio, FCLWD Rates) Single Family Residential Equivalent Units that Can be Served	100.00% 3,000 977,553,000 183,379 5,331
Firm Yield Assumption Acre Feet Per Year - Actual Firm Yield Gallons per Year - Actual Firm Yield Single Family Residential Equivalent Capacity Demand Annual Demand (Residential, No Patio, FCLWD Rates)	100.009 3,000 977,553,000 183,379
Firm Yield Assumption Acre Feet Per Year - Actual Firm Yield Gallons per Year - Actual Firm Yield Single Family Residential Equivalent Capacity Demand Annual Demand (Residential, No Patio, FCLWD Rates) Single Family Residential Equivalent Units that Can be Served	100.009 3,000 977,553,000 183,379 5,331

Hybrid Approach	
Treatment Component	
Asset Valuation	
Treatment	\$94,718,861
Transmission Mains	52,863,359
Treated Water Storage (Includes Timnath Tank CWIP)	8,076,605
Pumps	2,578,602
CWIP - Treated Water Storage	\$4,062,297
Add: Borrowing Costs on Future Debt	33,751,389
Total Value	196,051,114
Treatment Plant Capacity	
Solder Canyon (MGD)	23.043
City of Fort Collins (MGD)	10.000
NISP Treatment Plant (MGD)	7.000
Total MGD	40.043
Total Gallons	40,043,000
Single Family Residential Equivalent Capacity Demand	
Annual Demand (Residential, No Patio, FCLWD Rates)	183,379
GPD Demand (Residential No Patio, FCLWD Rates)	502.41
Max Day Peaking Factor (Residential, No Patio, FCLWD Rates)	2.506
GPD Max Day Demand (Residential No Patio, FCLWD Rates)	1258.95
Single Family Residential Equivalent Units that Can be Served	31,807
Single Family Residential PIF - Treatment Component	\$6,164
Source of Supply Component	
Asset Valuation	
Source of Supply	\$73,473,888
Add: Borrowing Costs on Future Debt	25,600,541
Total Value	99,074,429
Source of Supply Capacity	
Existing Firm Yield	8,850
Incremental Acre Feet Firm Yield	3,000
Total Acre Feet Firm Yield	11,850
Gallons per Year - Actual Firm Yield	3,861,171,425
Single Family Residential Equivalent Capacity Demand	
Annual Demand (Residential, No Patio, FCLWD Rates)	183,379
Single Family Residential Equivalent Units that Can be Served	21,056
Single Family Residential PIF - Source of Supply Component Single Family Residential Equivalent PIF - Total	\$4,705 \$10,869

Fort Collins-Loveland Water District 2017 Rate & Fee Study

Plant Investment Fee Calculation Under Industry Accepted Approaches

	Residential Water Plant Investment Fee Schedule (Excluding Meter Cost)									
Square Footage Range	Required CB-T Share	Annual Allotment (Gallons)	Water Resource Cost	Infrastructure PIF	Total	Existing	\$ Change			
<= 6,000	0.524	85,366	\$14,252	\$10,869	\$25,121	\$32,000	(\$6,879)			
6,001-7,000	0.762	124,161	20,728	10,869	31,597	32,000	(403)			
7,001-8,000	0.803	130,795	21,836	10,869	32,705	32,000	705			
8,001-9,000	0.888	144,623	24,144	10,869	35,014	32,000	3,014			
9,001-10,000	1.015	165,405	27,614	10,869	38,483	32,000	6,483			
10,001-11,000	1.078	175,672	29,328	10,869	40,197	32,000	8,197			
11,001-12,000	1.145	186,587	31,150	10,869	42,019	32,000	10,019			
>12,000	1.776	289,338	48,304	10,869	59,173	32,000	27,173			

Appendix D: Plant Investment Fees Page D-3 3/16/2018

Fort Collins-Loveland Water District 2017 Rate & Fee Study Commercial and Irrigation PIFS Calculated Using 2016 3/4" Demand

			Calculated Co	mmercial				
Meter Size	Design GPM	Design GPM Ratio	Infrastructure Component	Total C-BT Shares	Water Cost	Total PIF	Existing PIF	\$ Difference
3/4"	10	1	\$10,869	2.14	58,141	69,010	32,000	37,010
1"	25	2.5	27,173	5.34	145,352	172,525	80,000	92,525
1 1/2"	50	5	54,346	10.69	290,704	345,050	160,000	185,050
2"	80	8	86,953	17.10	465,126	552,080	256,000	296,080
3"	175	17.5	190,211	37.41	1,017,463	1,207,674	560,000	647,674
4"	300	30	326,075	64.13	1,744,223	2,070,298	962,000	1,108,298
6"	625	62.5	679,324	133.60	3,633,798	4,313,122	2,000,000	2,313,122

Based on annual 3/4" irrigation usage of 331,670 gallons, CB-T annual firm yield of 162,926 gallons, 5% water loss

			Calculated In	rigation				
Meter Size	Design GPM	Design GPM Ratio	Infrastructure Component	Total C-BT Shares	Water Cost	Total PIF	Existing PIF	\$ Difference
3/4"	10	1	\$10,869	4.65	126,615	137,484	32,000	105,484
1"	25	2.5	27,173	11.64	316,538	343,711	80,000	263,711
1 1/2"	50	5	54,346	23.27	633,077	687,422	160,000	527,422
2"	80	8	86,953	37.24	1,012,923	1,099,876	256,000	843,876
3"	175	17.5	190,211	81.46	2,215,768	2,405,979	560,000	1,845,979
4"	300	30	326,075	139.65	3,798,460	4,124,535	962,000	3,162,535
6"	625	62.5	679,324	290.94	7,913,457	8,592,781	2,000,000	6,592,781
Based on annua	I 3/4" irrigat	tion usage o	of 722,299 gallons, CB	T annual firm yield o	f 162,926 gallon:	s, 5% water loss		

Fort Collins-Loveland Water District 2017 Rate & Fee Study Commercial and Irrigation PIFS Calculated at 1.0 C-BT Shares for a 3/4" Meter

			Recommende	d Commercial				
Meter Size	Design GPM	Design GPM Ratio	Infrastructure Component	Total C-BT Shares	Water Cost	Total PIF	Existing PIF	\$ Difference
3/4"	10	1	\$10,869	1.00	27,200	38,069	32,000	6,069
1"	25	2.5	27,173	2.50	68,000	95,173	80,000	15,173
1 1/2"	50	5	54,346	5.00	136,000	190,346	160,000	30,346
2"	80	8	86,953	8.00	217,600	304,553	256,000	48,553
3"	175	17.5	190,211	17.50	476,000	666,211	560,000	106,211
4"	300	30	326,075	30.00	816,000	1,142,075	962,000	180,075
6"	625	62.5	679,324	62.50	1,700,000	2,379,324	2,000,000	379,324
Based on annua	3/4" irrigat	ion usage o	f 331,670 gallons, (CB-T annual firm y	ield of 162,926 gallon	s, 5% water loss	•	•

			Recommend	ed Irrigation				
Meter Size	Design GPM	Design GPM Ratio	Infrastructure Component	Total C-BT Shares	Water Cost	Total PIF	Existing PIF	\$ Difference
3/4"	10	1	\$10,869	1.00	27,200	38,069	32,000	6,06
1"	25	2.5	27,173	2.50	68,000	95,173	80,000	15,17
1 1/2"	50	5	54,346	5.00	136,000	190,346	160,000	30,34
2"	80	8	86,953	8.00	217,600	304,553	256,000	48,55
3"	175	17.5	190,211	17.50	476,000	666,211	560,000	106,21
4"	300	30	326,075	30.00	816,000	1,142,075	962,000	180,07
6"	625	62.5	679,324	62.50	1,700,000	2,379,324	2,000,000	379,32

Fort Collins-Loveland Water District 2017 Rate & Fee Study

Calculatin of Commercial and Irrigtion Water Resource Surcharge

Growth in New Connections													
Annual Growth in 3/4"	Projected												
Equivalent Meters	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Residential	316	323	329	336	342	349	356	363	371	378	386	393	401
Commercial	20	21	21	21	22	22	23	23	24	24	25	25	26
Irrigation	6	6	6	6	6	6	6	6	6	7	7	7	7
MU	8	8	8	9	9	9	9	9	10	10	10	10	10
Total	350	357	364	372	379	387	394	402	410	418	427	435	444

PIF Receipts if Commercial and Irrigation CB-T Set > 1.0 for a 3/4" Equivalent Meter (i.e., Set at Actual 2016 Consumption)														
Revenue from Growth in		Projected												
Equivalent Meters (C&I > 1.0)	PIF	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Residential	\$32,705	\$10,347,199	\$10,554,143	\$10,765,226	\$10,980,531	\$11,200,141	\$11,424,144	\$11,652,627	\$11,885,680	\$12,123,393	\$12,365,861	\$12,613,178	\$12,865,442	\$13,122,751
Commercial	69,010	1,387,554	1,415,305	1,443,611	1,472,483	1,501,933	1,531,972	1,562,611	1,593,863	1,625,741	1,658,256	1,691,421	1,725,249	1,759,754
Irrigation	137,484	758,901	774,079	789,560	805,351	821,458	837,888	854,645	871,738	889,173	906,957	925,096	943,598	962,470
MU	32,705	265,539	270,849	276,266	281,792	287,428	293,176	299,040	305,020	311,121	317,343	323,690	330,164	336,767
Total (C&I > 1.0)		\$12,759,193	\$13,014,377	\$13,274,664	\$13,540,158	\$13,810,961	\$14,087,180	\$14,368,923	\$14,656,302	\$14,949,428	\$15,248,417	\$15,553,385	\$15,864,453	\$16,181,742
Cumulative Total (C&I > 1.0)		\$12,759,193	\$25,773,570	\$39,048,234	\$52,588,391	\$66,399,352	\$80,486,532	\$94,855,455	\$109,511,757	\$124,461,185	\$139,709,602	\$155,262,987	\$171,127,439	\$187,309,181

PIF Receipts if Commercial and Irrigation CB-T Set = 1.0 for a 3/4" Equivalent Meter (i.e., Set at EQR)														
Revenue from Growth in		Projected												
Equivalent Meters (C&I = 1.0)	PIF	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Residential	\$32,705	\$10,347,199	\$10,554,143	\$10,765,226	\$10,980,531	\$11,200,141	\$11,424,144	\$11,652,627	\$11,885,680	\$12,123,393	\$12,365,861	\$12,613,178	\$12,865,442	\$13,122,751
Commercial	38,069	765,441	780,750	796,365	812,292	828,538	845,109	862,011	879,251	896,836	914,773	933,068	951,730	970,764
Irrigation	38,069	210,138	214,341	218,628	223,000	227,460	232,009	236,650	241,383	246,210	251,134	256,157	261,280	266,506
MU	32,705	265,539	270,849	276,266	281,792	287,428	293,176	299,040	305,020	311,121	317,343	323,690	330,164	336,767
Total (C&I = 1.0)		\$11,588,317	\$11,820,084	\$12,056,485	\$12,297,615	\$12,543,567	\$12,794,439	\$13,050,327	\$13,311,334	\$13,577,561	\$13,849,112	\$14,126,094	\$14,408,616	\$14,696,788
Cumulative Total (C&I = 1.0)		\$11,588,317	\$23,408,401	\$35,464,886	\$47,762,501	\$60,306,068	\$73,100,507	\$86,150,834	\$99,462,168	\$113,039,728	\$126,888,840	\$141,014,934	\$155,423,550	\$170,120,338

Difference in PIF Receipts													
Difference (C&I > 1.0) vs (C&I = 1.0)	\$1,170,876	\$1,194,293	\$1,218,179	\$1,242,543	\$1,267,393	\$1,292,741	\$1,318,596	\$1,344,968	\$1,371,867	\$1,399,305	\$1,427,291	\$1,455,837	\$1,484,953
Cumulative Difference (C&I > 1.0) vs (C&I = 1.0)	\$1,170,876	\$2,365,169	\$3,583,348	\$4,825,890	\$6,093,284	\$7,386,025	\$8,704,621	\$10,049,590	\$11,421,457	\$12,820,762	\$14,248,053	\$15,703,889	\$17,188,843

Annual Demand													
	Projected												
Annual Demand (kgals)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Residential	2,097,202	2,109,543	2,124,637	2,141,188	2,158,687	2,176,880	2,195,625	2,214,833	2,234,447	2,254,427	2,274,745	2,295,380	2,316,316
Commercial	434,697	440,894	447,986	455,602	463,597	471,904	480,483	489,314	498,382	507,680	517,203	526,949	536,916
Irrigation	350,220	358,579	365,477	372,578	379,857	387,306	394,919	402,698	410,641	418,751	427,029	435,477	444,098
MU	97,653	99,112	100,753	102,502	104,332	106,228	108,183	110,193	112,256	114,369	116,532	118,745	121,007
Total Annual (kgals)	2,979,772	3,008,128	3,038,852	3,071,870	3,106,473	3,142,317	3,179,211	3,217,038	3,255,726	3,295,227	3,335,509	3,376,550	3,418,337
Cumulative (kgals)	2,979,772	5,987,900	9,026,752	12,098,622	15,205,095	18,347,413	21,526,623	24,743,662	27,999,388	31,294,616	34,630,125	38,006,675	41,425,012
Cumulative Commercial and Irrigation	784,917	1,584,390	2,397,853	3,226,032	4,069,487	4,928,696	5,804,099	6,696,111	7,605,134	8,531,565	9,475,797	10,438,223	11,419,237

Required Rate per Kgal to Recover PIF Shortfall													
Required Annual Rate per Kgal	\$1.49	\$1.49	\$1.50	\$1.50	\$1.50	\$1.50	\$1.51	\$1.51	\$1.51	\$1.51	\$1.51	\$1.51	\$1.51
Required Cumulative Rate per Kgal	\$1.49	\$1.49	\$1.49	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.51