

# STORMWATER UTILITY RATE UPDATE



## Stormwater Utility Rate Update

*November 2019*

**PREPARED FOR:**

**City of Fitchburg**  
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## STORMWATER UTILITY RATE UPDATE

### INTRODUCTION

The City of Fitchburg created its own stormwater utility in 2002. Stormwater utilities serve three main goals: 1) reduce or prevent flooding 2) improve water quality 3) comply with certain federal and state regulations. Charging users of the stormwater systems through adequate rates provides the funding needed to achieve these goals.

The rates were last updated in 2013. Since then, the City has had hundreds of new users added to its stormwater system, and the utility needs more infrastructure to service the needs of the whole system. Given these changes, the stormwater utility needs to revise its rates.

When the utility was created, the City divided the utility's service area into two, an urban service area and a rural service area. The rates for all the properties are based on equivalent runoff units (ERUs), which the utility defines as 3,700 square feet of impervious surface area. Each single-family property in both the urban and rural areas is assigned 1 ERU. Each multi-family and non-residential property is assigned ERUs based on how much impervious surface area it has. For instance, if a business has 7,400 square feet of impervious area, then it would be assigned 2 ERUs (7,400 divided by 3,700 equals 2).

City properties pay all 3 components of the stormwater rates. The first component is the City-wide rate per ERU, which pays for aspects of the utility that benefit everyone. The second component is the urban base rate per ERU, which pays for aspects of the utility that benefit only City users. The third component is the urban intensity rate per billing unit, which pays for the increased costs of properties that have higher intensity of development. This intensity is measured by the percentage of the property that has impervious surface; the higher the percentage, the greater the intensity. Rural properties pay only the first component, the City-wide rate per ERU.

The study that follows analyzes and updates the City's stormwater utility rates. It does so with the following goals in mind:

- 1) Review and update user rates for a 2020 test year so that the utility is collecting adequate revenues to fund the utility and so that rates are fair and equitable for all customer classes.
- 2) Prepare a 5-year analysis of cash flow to estimate potential changes in user rates in future years due to planned capital improvement projects.
- 3) Analyze the current definition of an ERU to see whether it accurately reflects the impervious surface area of the average single-family home in Fitchburg.
- 4) Review the existing stormwater credit policy and methodology to see whether any changes are needed.

### RATE UPDATES FOR 2020

Table 1 compares the current rates to the proposed rates. If the proposed rates are adopted, the City-wide rate charged to everyone will rise by 17 percent. The urban base rate will decline by 58 percent, and the urban intensity rate will increase by 18 percent. The changes are explained in detail below.

**Table 1 - Summary of Existing and Proposed Storm Water Utility Rates**

	Billing Frequency	City-wide			Urban Service Area			Proposed Urban Service Area			Intensity		
		Current Rate/ERU	Proposed Rate/ERU	Change	Current Base Rate/ERU	Proposed Base Rate/ERU	Change	Current Base Rate/ERU	Proposed Base Rate/ERU	Change	Current Rate (ERU X Intensity Factor)	Proposed Rate (ERU X Intensity Factor)	Change
Urban Residential	Quarterly	\$9.71	\$11.37	17%	\$5.56	\$2.34	-58%	\$5.56	\$2.34	-58%	\$4.23	\$5.00	18%
Urban Duplex (per unit)	Quarterly	\$9.71	\$11.37	17%	\$5.56	\$2.34	-58%	\$5.56	\$2.34	-58%	\$4.23	\$5.00	18%
Urban Multi-family	Quarterly	\$9.71	\$11.37	17%	\$5.56	\$2.34	-58%	\$5.56	\$2.34	-58%	\$4.23	\$5.00	18%
Urban Non-residential	Quarterly	\$9.71	\$11.37	17%	\$5.56	\$2.34	-58%	\$5.56	\$2.34	-58%	\$4.23	\$5.00	18%
Rural Residential	Annual	\$38.83	\$45.48	17%	\$0.00	\$0.00	N/A	\$0.00	\$0.00	N/A	\$0.00	\$0.00	N/A
Rural Multi-family	Quarterly	\$9.71	\$11.37	17%	\$0.00	\$0.00	N/A	\$0.00	\$0.00	N/A	\$0.00	\$0.00	N/A
Rural Non-residential	Quarterly	\$9.71	\$11.37	17%	\$0.00	\$0.00	N/A	\$0.00	\$0.00	N/A	\$0.00	\$0.00	N/A
Rural Duplex (per unit)	Annual	\$38.83	\$45.48	17%	\$0.00	\$0.00	N/A	\$0.00	\$0.00	N/A	\$0.00	\$0.00	N/A

Notes  
Source for current rates is the Stormwater Utility Rate Update prepared for the City of Fitchburg dated July 26, 2013

Table 2 below shows the impact the proposed rate changes would have on sample properties. In the urban service area, a single-family home or duplex owner would see charges decline slightly. While urban base costs have gone up by 10 percent since the last rate update, the urban ERUs have increased by over 30 percent, more than offsetting the increase in costs. Also, costs within the urban service area have shifted away from urban base costs and toward the urban intensity costs by spreading the costs among more users. Since multi-family residential and nonresidential users pay most of the urban intensity costs, single-family home and duplex owners would see their urban-related costs decline.

Nonresidential properties with high urban intensity factors would see a slight increase. These costs are rising because the concentration of the impermeable surface on the nonresidential and multifamily properties has gone up since the last rate update. Those without high urban intensity factors would see a slight decrease for the same reasons as the residential users.

Users of the stormwater system in the rural service area will see their rates rise by 17 percent. The costs allocated to the rural service area have risen by well over 25 percent since the last rate update. The increase in the number of rural users softens the impact of the increase by spreading the costs among more rate payers.

Property	Billing Frequency	Intensity Base ERUs	Intensity Factors	Billing Units with Intensity Factors	Current Charge	Proposed Charge	Change
<b>Urban Service Area</b>							
Single-family Home	Quarterly	1	1	1.0	\$19.50	\$18.71	-4.1%
Duplex (Total Property)	Quarterly	1	1	1.0	\$19.50	\$18.71	-4.1%
Non-residential	Quarterly	5	2.9	14.5	\$137.69	\$141.06	2.4%
Non-residential	Quarterly	10	1.7	17.0	\$224.61	\$222.10	-1.1%
<b>Rural Service Area</b>							
Single-family Home	Annual	1	N/A	N/A	\$38.83	\$45.48	17.1%
Duplex (Total Property)	Annual	1	N/A	N/A	\$38.83	\$45.48	17.1%
Non-residential	Quarterly	5	N/A	N/A	\$48.55	\$56.85	17.1%
Non-residential	Quarterly	10	N/A	N/A	\$97.10	\$113.70	17.1%
<b>Notes</b>							
Duplexes are charged 0.5 ERUs per dwelling unit.							

Table 3 below shows the ERUs and billing units for each customer class. ERUs have risen by over 25 percent since the last rate update, with the largest increase coming from urban nonresidential and urban multifamily users. Rural non-residential ERUs have risen by more than 15 percent while the other rural customer classes' ERUs have mainly stayed flat.

<b>Table 3 - Summary of 2020 Proposed ERUs and Billing Units</b>		
<b>Customer Class</b>	<b>Base ERUs</b>	<b>Billing Units with Intensity Factors</b>
Urban Residential	4,050.0	4,050.0
Urban Duplex	553.0	553.0
Urban Multi-family	3,351.6	4,970.7
Urban Non-residential	6,940.2	13,875.4
Rural Residential	163.0	0.0
Rural Multi-family	78.3	0.0
Rural Residential Annual	680.0	0.0
Rural Non-residential	941.7	0.0
Rural Duplex Annual	2.0	0.0
<b>Totals</b>	<b>16,759.8</b>	<b>23,449.1</b>
<b>Summary for Rate Calculations</b>	<b>Base ERUs</b>	<b>Billing Units with Intensity Factors</b>
Rural Base	1,865.0	0.0
Urban Base	14,894.8	0.0
Urban Intensity	0.0	23,449.1
Urban Allocation Factor	89%	
Urban Intensity Allocation Factor	36%	
<b>Notes</b>		
ERUs & Billing Units with Intensity Factors per City of Fitchburg on Nov 1, 2019		

Table 4 details costs and the allocations between the three rate components for a 2020 test year. The total cost for the utility has risen by 4 percent per year since 2013. The methodology used for cost allocations remains consistent with the prior study. Depreciation and interest expense were allocated to the urban service area because the capital assets are predominantly in this area. The maintenance expenses for culverts were allocated to the urban service area for the same reason. Since the sweeper operates in the urban area, fuel for the sweeper was allocated only to this area. Non-administrative labor charges were allocated between the rural and urban areas based on 2017 records of employee time spent working in each area. Equipment and operating supplies were allocated based on 2017 records of equipment use.

Table 4 - Allocation of Costs to Service Areas									
New Account Number	Account Description	Total 2020 Budget	Rural Allocation	Rural Cost	Total Urban Allocation	Urban Base Allocation	Urban Base Cost	Urban Intensity	Urban Intensity Cost
<b>Administrative &amp; General Expenses</b>									
604-5903-110	General Acctg Wages	\$29,622	11%	\$3,296	89%	56%	\$16,722	32%	\$9,604
604-5903-115	General Acctg OT	\$123	11%	\$14	89%	56%	\$69	32%	\$40
604-5903-120	General Acctg PT/S	\$1,120	11%	\$125	89%	56%	\$632	32%	\$363
604-5903-131	General Acctg FICA	\$2,376	11%	\$264	89%	56%	\$1,341	32%	\$770
604-5903-132	General Acctg WRS	\$2,021	11%	\$225	89%	56%	\$1,141	32%	\$655
604-5903-135	General Acctg Longevity	\$196	11%	\$22	89%	56%	\$111	32%	\$64
604-5903-160	General Acctg Health	\$8,853	11%	\$985	89%	56%	\$4,998	32%	\$2,870
604-5903-161	General Acctg Life	\$70	11%	\$8	89%	56%	\$40	32%	\$23
604-5903-162	General Acctg Disab	\$165	11%	\$18	89%	56%	\$93	32%	\$53
604-5903-163	General Acctg Dent	\$653	11%	\$73	89%	56%	\$369	32%	\$212
604-5905-310	Cust Exp Office Supp	\$7,000	11%	\$779	89%	56%	\$3,952	32%	\$2,269
604-5920-110	Admin & Gen Wages	\$106,197	11%	\$11,817	89%	56%	\$59,950	32%	\$34,430
604-5920-115	Admin & Gen OT	\$1,367	11%	\$152	89%	56%	\$772	32%	\$443
604-5920-120	Admin & Gen PT/Seas	\$8,946	11%	\$995	89%	56%	\$5,050	32%	\$2,900
604-5920-131	Admin & Gen FICA/M	\$8,913	11%	\$992	89%	56%	\$5,032	32%	\$2,890
604-5920-132	Admin & Gen WRS	\$6,826	11%	\$760	89%	56%	\$3,853	32%	\$2,213
604-5920-160	Admin & Gen Health	\$17,338	11%	\$1,929	89%	56%	\$9,788	32%	\$5,621
604-5920-161	Admin & Gen Life	\$178	11%	\$20	89%	56%	\$100	32%	\$58
604-5920-162	Admin & Gen Disability	\$535	11%	\$60	89%	56%	\$302	32%	\$173
604-5920-163	Admin & Gen Dental	\$1,249	11%	\$139	89%	56%	\$705	32%	\$405
604-5921-310	Office Supp & Exp	\$4,000	11%	\$445	89%	56%	\$2,258	32%	\$1,297
604-5923-210	Professional Services	\$256,500	11%	\$28,543	89%	56%	\$144,798	32%	\$83,159
604-5923-290	Outside Services Employed	\$12,000	11%	\$1,335	89%	56%	\$6,774	32%	\$3,890
604-5925-572	Insurance Isf Allocation	\$8,865	11%	\$986	89%	56%	\$5,004	32%	\$2,874
604-5926-110	Paid Time Off	\$12,213	11%	\$1,359	89%	56%	\$6,894	32%	\$3,960
604-5926-131	PTO FICA/Med	\$936	11%	\$104	89%	56%	\$528	32%	\$303
604-5926-132	PTO WRS	\$826	11%	\$92	89%	56%	\$466	32%	\$268
604-5926-135	Benefits Longevity	\$18	11%	\$2	89%	56%	\$10	32%	\$6
604-5926-160	Health Insurance	\$2,481	11%	\$276	89%	56%	\$1,401	32%	\$804
604-5926-161	Life Insurance	\$22	11%	\$2	89%	56%	\$12	32%	\$7
604-5926-162	Disability	\$64	11%	\$7	89%	56%	\$36	32%	\$21
604-5926-163	Dental Insurance	\$180	11%	\$20	89%	56%	\$102	32%	\$58
604-5930-213	Permits & Fees	\$4,400	11%	\$490	89%	56%	\$2,484	32%	\$1,427
604-5930-245	Computer Related Expenses	\$4,300	11%	\$478	89%	56%	\$2,427	32%	\$1,394
604-5930-250	Pub Notices, Ads	\$4,000	11%	\$445	89%	56%	\$2,258	32%	\$1,297
604-5930-320	Subscriptions, Dues	\$630	11%	\$70	89%	56%	\$356	32%	\$204
604-5926-323	Uniforms	\$450	11%	\$50	89%	56%	\$254	32%	\$146
604-5930-325	Misc Training/Staff D	\$6,000	11%	\$668	89%	56%	\$3,387	32%	\$1,945
604-5930-330	Misc Vehicle Use Reim	\$350	11%	\$39	89%	56%	\$198	32%	\$113
604-5930-345	Public Education & Outreach	\$13,870	11%	\$1,543	89%	56%	\$7,830	32%	\$4,497
604-5930-389	Admin Fees	\$16,800	11%	\$1,869	89%	56%	\$9,484	32%	\$5,447
604-5930-570	IT OPERATING ISF	\$14,690	11%	\$1,635	89%	56%	\$8,293	32%	\$4,763
604-5930-573	IT CAPITAL ISF ALLO	\$1,245	11%	\$139	89%	56%	\$703	32%	\$404
604-5930-922	Rents	\$2,515	11%	\$280	89%	56%	\$1,420	32%	\$815
604-5932-335	Transportation Expense	\$5,500	11%	\$612	89%	56%	\$3,105	32%	\$1,783
604-5932-355	Sweeper Fuel	\$14,500	0%	\$0	100%	64%	\$9,210	36%	\$5,290
<b>Total Administrative &amp; General Expenses</b>		<b>\$591,103</b>	<b>11%</b>	<b>\$64,163</b>	<b>89%</b>	<b>57%</b>	<b>\$334,711</b>	<b>33%</b>	<b>\$192,229</b>
<b>Operating Expenses</b>									
604-5601-110	Hwy Crew Wages	\$46,873	16%	\$7,579	84%	53%	\$24,959	31%	\$14,335
604-5601-115	Hwy Crew OT	\$867	16%	\$140	84%	53%	\$462	31%	\$265
604-5601-131	Hwy Crew FICA/Med	\$3,673	16%	\$594	84%	53%	\$1,956	31%	\$1,123
604-5601-132	Hwy Crew WRS	\$3,241	16%	\$524	84%	53%	\$1,726	31%	\$991
604-5601-135	Hwy Crew Longevity	\$273	16%	\$44	84%	53%	\$145	31%	\$83
604-5601-160	Hwy Crew Health	\$14,545	16%	\$2,352	84%	53%	\$7,745	31%	\$4,448
604-5601-161	Hwy Crew Life	\$123	16%	\$20	84%	53%	\$65	31%	\$38
604-5601-162	Hwy Crew Disability	\$292	16%	\$47	84%	53%	\$155	31%	\$89
604-5601-163	Hwy Crew Dental	\$1,069	16%	\$173	84%	53%	\$569	31%	\$327
604-5601-240	Maint by Oth-Inlet Rep	\$1,000	0%	\$-	100%	64%	\$635	36%	\$365
604-5601-340	Oper Materials & Supp	\$5,000	17%	\$835	83%	53%	\$2,646	30%	\$1,519
604-5601-350	Maint Supp- Inlet Rep	\$29,700	0%	\$-	100%	64%	\$18,865	36%	\$10,835
604-5601-355	Equipment Expense	\$50,000	17%	\$8,348	83%	53%	\$26,457	30%	\$15,195
<b>Total Operating Expenses</b>		<b>\$156,656</b>	<b>13%</b>	<b>\$20,655</b>	<b>87%</b>	<b>55%</b>	<b>\$86,387</b>	<b>32%</b>	<b>\$49,613</b>
<b>Total Operating &amp; Maintenance Expenses</b>		<b>\$747,759</b>	<b>11%</b>	<b>\$84,819</b>	<b>89%</b>	<b>56%</b>	<b>\$421,098</b>	<b>32%</b>	<b>\$241,843</b>
<b>Capital Related Expenses</b>									
604-5403-530	Depreciation	\$600,000	0%	\$-	100%	64%	\$381,118	36%	\$218,882
604-5430-532	Interest to Debt to Municipality	\$22,865	0%	\$-	100%	64%	\$14,524	36%	\$8,341
<b>Total Capital Related Expenses</b>		<b>\$622,865</b>	<b>0%</b>	<b>\$-</b>	<b>100%</b>	<b>64%</b>	<b>\$395,642</b>	<b>36%</b>	<b>\$227,223</b>
<b>Total Revenue Requirements</b>		<b>\$1,370,624</b>	<b>6%</b>	<b>\$84,819</b>	<b>94%</b>	<b>60%</b>	<b>\$816,740</b>	<b>34%</b>	<b>\$469,065</b>

Notes  
 Source for costs is 2020 adopted City of Fitchburg Stormwater Utility Budget  
 All operating expenses split by 2017 allocation of employee time and equipment between Urban and Rural except Maintenance for Inlet Repair  
 Maintenance for Inlet Repair allocated all to Urban per city engineering in meeting on Nov 1, 2019

Tables 5a and 5b below show how the rates are calculated based on the costs and the ERUs or billing units for each rate component. All customer classes are billed quarterly except the rural residential and rural duplex classes, which are billed annually.

Table 5a - Calculation of User Rates by Service Area				
Service Area	Costs	Units (ERUs or Billing Units)	Annual	Rate per Unit
Rural Base	\$84,819	1,865.0		\$45.48
Urban Base	\$816,740	14,894.8		\$54.83
Urban Intensity	\$469,065	23,449.1		\$20.00

  

Table 5b - Summary of Proposed Stormwater User Rates					
Customer Class	Billing Frequency	City-wide Rate/ERU	Urban Service Area Base Rate/ERU	Urban Service Area Intensity Rate (ERU X Intensity Factor)	
Urban Residential	Quarterly	\$11.37	\$2.34		\$5.00
Urban Duplex	Quarterly	\$11.37	\$2.34		\$5.00
Urban Multi-family	Quarterly	\$11.37	\$2.34		\$5.00
Urban Non-residential	Quarterly	\$11.37	\$2.34		\$5.00
Rural Residential	Annual	\$45.48	\$0.00		\$0.00
Rural Multi-family	Quarterly	\$11.37	\$0.00		\$0.00
Rural Non-residential	Quarterly	\$11.37	\$0.00		\$0.00
Rural Duplex (per unit)	Annual	\$45.48	\$0.00		\$0.00

Table 6 verifies that the proposed rates would collect the amount needed to fully fund the utility during the 2020 test year.

Table 6 - Revenue Check						
	City-wide Annual Rate/ERU	Urban Service Area Annual Rate/ERU	Urban Service Area Annual Intensity Rate	Base ERUs	Billing Units with Intensity Factors	Total Calculated Annual Revenues
Urban Residential	\$45.48	\$9.35	\$20.00	4,050.0	4,050.0	\$303,092
Urban Duplex (per unit)	\$45.48	\$9.35	\$20.00	553.0	553.0	\$41,385
Urban Multi-family	\$45.48	\$9.35	\$20.00	3,351.6	4,970.7	\$283,213
Urban Non-residential	\$45.48	\$9.35	\$20.00	6,940.2	13,875.4	\$658,116
Rural Residential	\$45.48	\$0.00	\$0.00	843.0	0.0	\$38,339
Rural Multi-family	\$45.48	\$0.00	\$0.00	78.3	0.0	\$3,561
Rural Non-residential	\$45.48	\$0.00	\$0.00	941.7	0.0	\$42,828
Rural Duplex (per unit)	\$45.48	\$0.00	\$0.00	2.0	0.0	\$91
Total Calculated Revenue						\$1,370,624
Total Utility Expenses (from Table 4)						\$1,370,624
Difference						\$0

**FIVE-YEAR PROJECTIONS**

Table 7 below lists the utility’s capital improvement projects for the next five years. Most of the capital expense will be cash-financed, although the 2022 stormwater study and most of the Lake Barney project work in 2023 and 2024 will be financed by debt.

<b>Project</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Total</b>
<b>Joint Projects with other City Depts</b>						
#1012 IT Technology Upgrade	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$5,500
#2014 GIS System	\$7,500			\$11,250	\$4,000	\$22,750
#3101 PW Equip Replacement	\$14,500		\$185,000			\$199,500
#3319 Street Resurfacing	\$8,000	\$5,000	\$6,000	\$6,000	\$6,000	\$31,000
#3494 Lacy Rd (Fitchrona to Sem)		\$353,100				\$353,100
#3495 Lacy /Seminole Intersection		\$66,657	\$377,723			\$444,380
<b>Stormwater Projects</b>						
#4702 Storm Pond Dredging	\$650,000	\$375,000	\$366,000	\$305,000	\$118,000	\$1,814,000
#4705 Uptown Wet Pond	\$35,000	\$350,000	\$37,000	\$25,000	\$10,000	\$457,000
#4708 Greenway Resoration	\$10,000					\$10,000
#4711 Traceway Re-Route				\$34,000	\$225,000	\$259,000
#4713 Fitchrona Rd Improvements	\$35,000	\$56,500				\$91,500
#4714 Drainage/Flooding Improvements	\$36,050	\$37,132	\$38,245	\$39,393	\$40,575	\$191,395
#4716 Bike Roundabout Repairs		\$150,000				\$150,000
#4717 Curry Ct Flooding				\$40,000	\$45,000	\$85,000
#4718 Lake Barney	\$60,000	\$60,000	\$60,000	\$350,000	\$900,000	\$1,430,000
#4719 Schuman Dr Upsizing (debt)	\$0					\$0
#4720 Seminole Glen	\$12,000					\$12,000
#4721 Stormwater Pump	\$100,000					\$100,000
#4722 TMDL Modeling	\$65,000					\$65,000
#4723 Stormwater Study	\$75,000		\$797,100			\$872,100
<b>Total</b>	<b>\$1,109,150</b>	<b>\$1,454,489</b>	<b>\$1,868,168</b>	<b>\$811,743</b>	<b>\$1,349,675</b>	<b>\$6,593,225</b>
Cash-financed capital expenditures	\$1,109,150	\$1,454,489	\$1,071,068	\$511,743	\$449,675	
Debt-financed capital expenditures	\$0	\$0	\$797,100	\$300,000	\$900,000	
<b>Notes</b>						
Source for projects is approved City of Fitchburg 2020-2029 Capital Improvement Plan						
2023 financing for Lake Barney project comes from \$300K of debt and \$50K of rates; all of 2024 for project is debt financed						
Stormwater study costs in 2022 will be all debt-financed						
Uptown Pond project will be assessed						
All other projects will be financed by rates						

Table 8 projects cash flows for the utility for the next five years. The utility has accumulated a significant cash reserve, which would allow it to run a negative cash flow for several years. While the utility does not have an official cash-reserve policy, Ruckert & Mielke (R/M) recommends that the utility keeps cash reserves of at least 50 percent of annual O&M expenses to address shortfalls in collection, emergency repairs, and other unforeseen disruptions to cash flow.

Even with a cash-reserve target of 50 percent of annual O&M expenses, the utility is projected to have enough cash flow that another rate increase will not be needed given the assumptions made. However,

each year, Fitchburg should compare actuals to the forecast to determine whether a rate increase is warranted since several assumptions were used to project the revenues and expenses shown above.

	2020	2021	2022	2023	2024
<b>Revenues</b>					
User Rates	\$1,370,624	\$1,385,701	\$1,400,944	\$1,416,354	\$1,431,934
Interest Income	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Stormwater Grants	\$0	\$0	\$0	\$0	\$0
Forfeited Discounts	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500
Misc. Revenues	\$3,050	\$3,050	\$3,050	\$3,050	\$3,050
Permit Revenues	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000
<b>Total Revenues</b>	<b>\$1,434,174</b>	<b>\$1,449,251</b>	<b>\$1,464,494</b>	<b>\$1,479,904</b>	<b>\$1,495,484</b>
<b>Expenses</b>					
Operating & Maintenance	\$747,759	\$777,669	\$808,776	\$841,127	\$874,772
<b>Net before Debt Service</b>	<b>\$686,415</b>	<b>\$671,582</b>	<b>\$655,717</b>	<b>\$638,777</b>	<b>\$620,712</b>
<b>Debt Service</b>					
Repayment of Sodfather Advance	\$78,805	\$77,126	\$75,448	\$73,819	\$72,137
New Borrowing	\$0	\$0	\$61,278	\$84,341	\$153,529
<b>Subtotal Debt Service</b>	<b>\$78,805</b>	<b>\$77,126</b>	<b>\$136,726</b>	<b>\$158,160</b>	<b>\$225,666</b>
Capital Improvement Projects (Cash-financed)	\$1,109,150	\$1,454,489	\$1,071,068	\$511,743	\$449,675
<b>Total Cash Expenditures</b>	<b>\$1,935,714</b>	<b>\$2,309,285</b>	<b>\$2,016,570</b>	<b>\$1,511,030</b>	<b>\$1,550,113</b>
<b>Net Cash Flow</b>	<b>(\$501,540)</b>	<b>(\$860,034)</b>	<b>(\$552,077)</b>	<b>(\$31,126)</b>	<b>(\$54,629)</b>
<b>Cash Reserve Balances</b>					
Beginning of Year Balance	\$2,546,334	\$2,044,795	\$1,184,761	\$632,684	\$601,558
Cash Flow	(\$501,540)	(\$860,034)	(\$552,077)	(\$31,126)	(\$54,629)
End of Year Balance	\$2,044,795	\$1,184,761	\$632,684	\$601,558	\$546,928
Cash Reserve as % of Annual O&M	273%	152%	78%	72%	63%
<b>Notes</b>					
Sodfather debt schedule provided by City of Fitchburg staff on November 4, 2019					
Revenue comes from 2020 budget except User Rates					
Cash balance for start of 2020 as of 9/30/19 provided by City Accounting					
Misc. Revenues include farm land lease and p-card rebate					
User rates are grown by the annual population growth rate from the Department of Administration					
Beginning cash balance per 2018 City of Fitchburg Comprehensive Annual Financial Report					
New debt assumed at 4% interest, 20-year term, and even repayments					
Operating and maintenance expenses grown at 4% per City of Fitchburg Engineering in Nov 1, 2019 meeting					

**ANALYSIS OF CURRENT ERU DEFINITION**

R/M analyzed data regarding impervious surfaces on single-family parcels to determine whether the current ERU definition matches the current reality of these parcels' impervious surface area. Given that Fitchburg has seen some new home construction since the last rate update, the analysis made sense to perform. Table 9 below shows a summary of impervious-surface data on the City's single-family homes.

The average impervious surface area for a single-family home is 3,960 square feet, which is well within 10 percent of the current ERU definition of 3,700 square feet. Over 47 percent, or almost half of the parcels, have impervious surface areas that measure less than 3,700 square feet. Of the areas for parcels that are more than 3,700 square feet, over two-thirds of them fall within 1.25 times the ERU definition, and almost 90 percent fall within 1.5 times the ERU definition.

Since the average is only slightly higher than the current definition and the vast majority of parcels have area between 0.5 and 1.5 times this definition, R/M recommends that Fitchburg continue using its existing definition.

**Table 9 - Summary of Existing Single Family Parcel Data**

	<b>Total Parcels (In Analysis)</b>	<b>Percent of Total</b>	
Total Single-family Parcels	4,314	-	
Avg. Sq. Feet Impervious of Building Footprint	2,663	-	
Avg. Sq. Feet Impervious of all Impervious Area	3,960	-	
Parcels 0-925 Sq Feet (0.25 ERU)	0	0%	
Parcels 926-1,850 Sq Feet (0.50 ERU)	0	0%	
Parcels 1,851-2,775 Sq Feet (0.75 ERU)	219	5.1%	
Parcels 2,776-3,700 Sq Feet (1.00 ERU)	1,835	42.5%	
Parcels Greater than 3,700 Sq Feet (>1 ERU)	2,260	52.4%	
<b>Analysis of Parcels Greater than 1.00 ERUs (2,260 Parcels):</b>			
	<b>Total Parcels (In Analysis)</b>	<b>Percent of Parcels &gt; 1 ERU</b>	<b>Percent of Total Parcels</b>
Parcels 3,701-4,625 (1.25 ERU)	1,525	67.5%	35.4%
Parcels 4,626-5,500 (1.5 ERU)	444	19.6%	10.3%
Parcels 5,501-6,475 (1.75 ERU)	156	6.9%	3.6%
Parcels 6,476-7,400 (2.00 ERU)	61	2.7%	1.4%
Parcels Greater than 7,400 Sq Feet (> 2 ERU)	74	3.3%	1.7%
<b>Notes</b>			
All data was provided by Fitchburg City Engineering on November 13, 2019			

## STORMWATER UTILITY CREDIT POLICY REVIEW

The utility offers credits in several ways. For single-family and duplex property owners, they can earn one-time credits for rain barrels or cisterns. They can earn ongoing fixed credits by adding rain gardens or other biofiltration facilities, installing pervious pavement, and pledging to be Fitchburg Creek Supporters. By pledging to be Fitchburg Creek Supporters, property owners commit to performing at least 34 of 57 listed activities that reduce runoff, improve water quality, or both.

Multi-family and nonresidential property owners can also earn a small one-time credit for rain barrels or cisterns, as well as by pledging to be Fitchburg Creek Supporters. They can earn credits for private rain gardens or other biofiltration facilities that control water quality. However, their credit is not a fixed dollar amount but is instead up to 25 percent of their ERUs. They can further earn up to a 25 percent credit by installing private stormwater detention facilities that control water quantity. The last way in which they can earn credit is by installing pervious pavement, which reduces their ERUs by the hard surface area that drains to the approved pervious pavement.

R/M reviewed the utility's credit policy and methodology to ensure that they are consistent with best practices. This review included comparing Fitchburg's policy and practices to what others have in place, including the Cities of Sun Prairie, Oshkosh, Watertown, Greenfield, and Monona.

The credit amounts offered by Fitchburg line up with its peers. Several of the peers' credit amounts for nonresidential users max out at 65 percent. The credit amounts offered by Fitchburg and others incent users of the stormwater system to reduce runoff and improve water quality while not being so high as to underfund the utility.

Few utilities offer residents the option to lower their rates through pledging to certain actions. The Fitchburg Creek Supporters stands out as a rarity, although R/M supports it because it incents residential users to reduce costs on the system like the credit policy for nonresidential users.

Other utilities list their policies and make their credit applications available online, just as Fitchburg does. All require nonresidential applicants to provide specified proof of the measures they have taken to reduce runoff and/or improve water quality. Unlike Fitchburg, several utilities charge fees for evaluating nonresidential applications because of the work involved, with the lowest observed fee being \$150.

Like Fitchburg, several peer communities require that the nonresidential property owners who have received credits enter maintenance agreements. As part of the maintenance agreement, the creditors must allow the municipality to inspect the stormwater facilities if the municipality decides inspection is needed. One peer requires that creditors submit evidence annually that they are maintaining the facilities. Fitchburg would benefit from adding this last requirement because it would allow the utility to keep current on which privately owned facilities continue to reduce costs for the stormwater system without needing to conduct time-consuming on-site inspections.

## RECOMMENDATIONS

R/M recommends that Fitchburg take following steps:

- 1) Adopt the proposed fees for 2020.
- 2) Establish a cash-reserve target for the stormwater utility.
- 3) Create a credit application fee of \$150 for nonresidential users.

- 4) Add a requirement that all nonresidential users who have been granted stormwater credits must submit evidence annually that the facilities are being maintained. The evidence should be of a substance and form specified by the utility.

The first step would ensure the utility will have adequate funding in 2020. The second step would help the utility be prepared for unexpected events that drain cash. The third step would recognize the level of effort that City staff undertake when they evaluate nonresidential credit applications. City Engineering is currently working on developing language for the last step; R/M recommends that the City adopt the addition to the credit policy when City Engineering has finished.

Finally, Fitchburg should compare actuals to the forecast each year and make adjustments, including possibly rate increases, if needed.