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Introduction

Hendersonville engaged WithersRavenel to prepare a capital improvement plan and financial plan based on known and projected stormwater needs for the City. Based on these plans, WithersRavenel modeled various rate structures for the City to support informed decision making associated with determining if revenue would be sufficient to fund the program based on certain parameters and assumptions. The City is faced with the challenge of paying for increased costs to comply with state and federal stormwater quality mandates as well as ongoing maintenance for its aging system. While, the current stormwater rate structure generates some revenue, it is not adequate to meet the City's drainage and regulated stormwater program requirements, nor does it reflect the demands that stormwater runoff places on repairing/replacing public infrastructure.

It is imperative that the stormwater program continue to address community needs and adhere to National Pollutant Discharge Elimination System (NPDES) requirements. The City operates the Stormwater Fund as a separate, self-supporting enterprise with revenues and expenditures accounted for separately from its General fund and Water and Sewer fund.

WithersRavenel assisted the City in defining the current Level of Service, helped facilitate an informed decision making process with City Council where Council was able to determine the level of service it desires to achieve in the future, and ascertaining an appropriate Level of Service to achieve in the future. Consequently, WithersRavenel updated and prioritized the stormwater Capital Improvements Plans (CIP) as well as reviewed the order and timing in which projects may be completed. In addition to the CIP, the analysis addresses project financing and future stormwater fees. In conducting this study, WithersRavenel examined the past and present fees, reviewed previously prepared studies and growth projections, and analyzed the financial impact projected changes would have on the fund and parcel owners. The following objectives were identified for the study:

- Establish a "Council Awareness" protocol.
- Provide community outreach support.
- Classify and analyze the Impervious Surface database.
- Project and prioritize 10-year capital improvement needs.
- Develop an operating budget.
- Project revenues and expenditures over ten years.
- Model stormwater fees that fund operating and capital costs.
- Develop an updated draft ordinance that reflects the goals, assumptions and policies that are inherent to the creation of the Stormwater Enterprise Fund

Certain assumptions have been made by the City with respect to conditions that may occur in the future. While these assumptions are reasonable for the purposes of this study, they are dependent upon future events and actual conditions may differ from those assumed. In addition, information has been used and relied upon which has been provided by others. This information includes, among other things, audited financial statements, annual operating budgets, capital improvement project plans, impervious surface data, and parcel information. While this information is deemed reliable, the information has not been independently verified and no assurances are offered with respect thereto. To the extent that actual future conditions differ from those assumed herein or provided by others, the actual results may differ from those anticipated.

This analysis addresses revenue requirements, the impervious surface database, levels of service, the financial analysis, the CIP summary, debt service requirements, new debt packages, stormwater fees, and presents findings and conclusions.

Impervious Surface Database

The City of Hendersonville provided WithersRavenel a database containing all parcels within the city limits and extraterritorial jurisdiction (ETJ). The information included, among other data, impervious surfaces, parcel uses, and nonresidential category when applicable. One can ascertain if each parcel is residential or nonresidential and what type of business operates on the parcel. The databases were grouped into two primary categories: residential parcels and nonresidential parcels and then further subdivided using the City designations. The residential parcel list was grouped to determine the average residential impervious surface of 3,000 square feet. The database also yielded a total count of 8,287 residential parcels.

The list of nonresidential parcels consists of 1,427 tracts. The range of square footages per parcel varied more than the residential list, ranging from 0 to 1,320,034 square feet with an average of approximately 33,000 square feet per parcel. A count of parcels by use is depicted in the below table. As shown the most common categories are Commercial and Government.

Table 1 Non-Residential Parcel Counts by Category

Land_Use	Ţ	LAND_CLASS IT	Total	
■ Commercial		COMMERCIAL	785	
		COMMERCIAL-CONDO	147	
		BANKS	22	
		CONVENIENCE STORES	20	
		FAST FOOD RESTAURANTS	18	
		RESTAURANTS	13	
		UTILITIES	9	
		AUTO DEALERSHIP	9	
		MOTEL	8	
		TRANSPORTATION	7	
		SUPERMARKET	7	
		MINI WAREHOUSES	7	
		STRIP SHOPPING CENTER	5	
		CELLULAR TOWER	5	
		DRUG STORES	5	
		COMMERCIAL-LI	3	
		HOME IMPROVEMENT CENTER	3	
		DRIVE-THRU BANKS	2	
		WAREHOUSE DISCOUNT SUPER	2	
			1	
		MULTI-USE CONVENIENCE STO	1	
		CAMPS	1	
		HOTEL	1	
		RECREATIONAL	1	
Commercial Total			1,082	
■ Governmental		GOVERNMENTAL	115	
		EDUCATIONAL	9	
		POST OFFICE	1	
		FIRE DEPARTMENT	1	
Governmental Total			126	
■ Industrial		INDUSTRIAL	20	
Industrial Total			20	
■Medical		MEDICAL	8	
		HOSPITAL	1	
Medical Total			9	
Religious		CHURCH	45	
		RELIGIOUS	34	
		CEMETARY	1	
Religious Total			80	
■Unknown			1	
Unknown Total			1 107	
■ Vacant		COMMERCIAL VACANT LAND		
		INDUSTRIAL VACANT LAND	2	
Vacant Total			109	
Grand Total			1,427	

This information serves as the foundation for stormwater fee development. As new impervious surfaces are created it will be important for the City to periodically update this database.

Revenue Requirement

The current revenue requirement for the Stormwater Fund consists of the costs required to assure the adequacy and continuity of reliable services and includes costs associated with operations, maintenance, NPDES permit compliance, and financing of capital improvements. The revenue requirement for the program consists of the following cost components.

- Operating Expenses: The operation costs, equipment, utilities, personnel, and other expenses
 necessary to operate the stormwater program and maintain facilities. Also included are the costs
 incurred from staffing. These costs consist of items such as salaries, retirement programs,
 insurance plans, and other benefits for the employees.
- Capital Outlay: One-time expenses paid with available funds to purchase items such as equipment and vehicles.
- Transfer Out: Reimbursement to the general fund for services assisting the stormwater program.

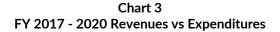
The total of all the above items is the required revenue for the fund and is shown in the following table for the budgeted fiscal year FY 2020. These costs must be funded through fees and serve as the basis for helping project the financial status of the fund in the future.

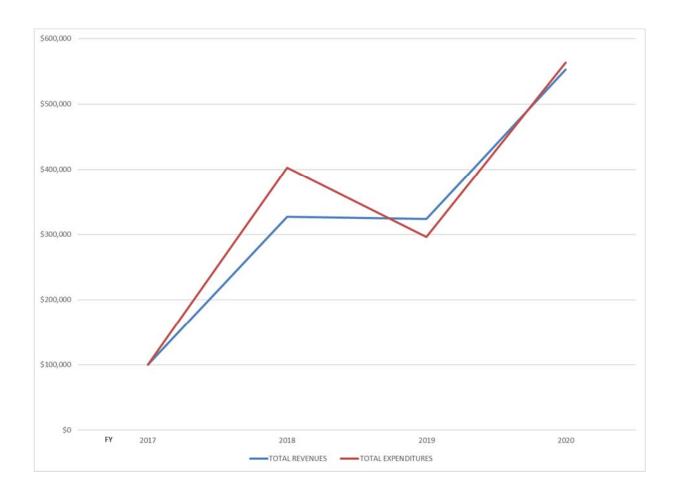
TABLE 2
Revenue Requirement

OPERATING COSTS	\$ 303,552
CAPITAL OUTLAY	\$ 229,600
TRANSFER OUT	\$ 30,000
TOTAL	\$ 563,152

Financial History

In conducting the financial analysis, the City's audited financial statements from FY 2017 to FY 2018 were compiled along with Estimated Year End and Budget reports for FY 2019 and FY 2020. FY 2017 financial activity only included a transfer from the Environmental Service fund to pay miscellaneous costs. Fee revenue and additional expenses started in FY 2018. Non-recurring capital outlays were separated from other expenditures to ensure the costs used for projections were consistent with prior years. Historical trends for each of the line items were analyzed to anticipate how each revenue and expenditure would change over the next ten years. As shown in Charts 2 and 3, the stormwater fund's revenues have exceeded its expenditures before accruals in FY 2019 but did not in FY 2018. They are expected to be the same in FY 2020. Fee revenue gradually increased during this period however so did Salaries and Benefits, Professional Services and Capital Outlay at a similar rate. As a result, Unrestricted Net Assets remained relatively low, as shown in Chart 3.





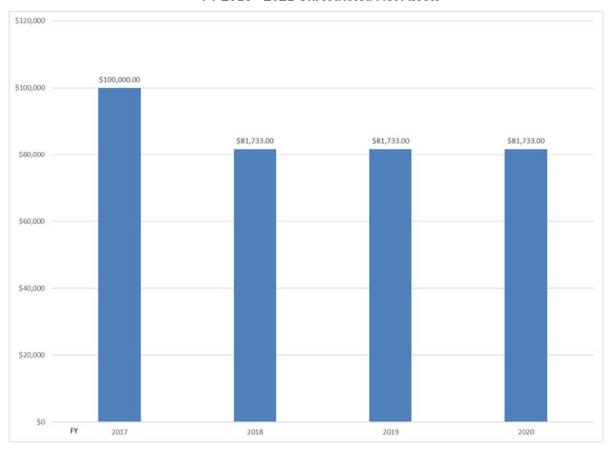
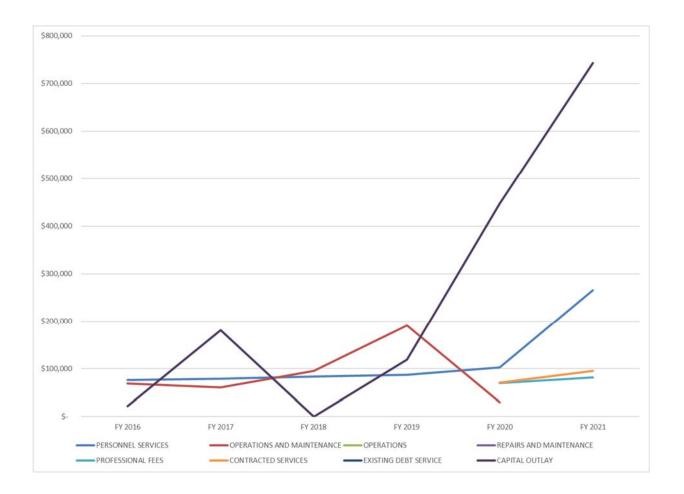


Chart 4
FY 2016 - 2021 Unrestricted Net Assets

The following chart provides the historical growth of expenditures as shown in the annual audits, year-end estimate, and budget. Chart 4 shows that most expenses began in FY 2018 or FY 2019, replacing the Uncategorized costs from FY 2017. Salaries and Benefits has been the largest operating expenditure and continues to experience growth. However, Capital Outlay has also increased greatly over the last year and is projected to continue as depicted on the following chart.

Chart 5
FY 2016 - 2021 Stormwater Expenditures



Levels of Service

Hendersonville's stormwater program Level of Service is a measure of the quality of stormwater service that it provides to its citizens. It can be reflected by the amount of flood control, the quality of water, and the extent of operations. Furthermore, efforts can be graded from A to F for program management activities, NPDES compliance activities, and capital improvement projects. For example, a grade of an "A" in program management activities would include comprehensive planning and full implementation capabilities whereas a grade of "F" would represent no planning and no implementation capabilities. An "A" for National Pollutant Discharge Elimination System (NPDES) compliance activities would include exemplary permit compliance and fully preventative routines, but a grade of "F" would indicate noncompliance and less than a full response to all complaints. Lastly, a capital improvements plan with an "A" grade would have activities forecast within the next 10 years but those of a lesser grade would forecast needs for many decades. Level of Service is quite subjective and should simply be used as a roadmap to help guide decision making regarding the service a community desires to provide to its citizens.

After discussion with city staff, it was determined that the stormwater program is currently at a B level for non-O&M related NPDS compliance but at a D level for operations and maintenance program NPDES compliance. Furthermore, the capital improvements plan was graded F. These grades are based upon the fact that there is only partial proactive planning with only one basin study being identified and scoped. Capital assets are only repaired or replaced once they are broken, a reactive approach. The permit compliance is proactive since the City is performing several the measures in addition to the County performing a measure. However, operations and capital planning are only responsive. A summary of the status is shown in the below chart. The current fee of \$3 per month per parcel does not generate enough money currently to maintain a minimum level of service.

Chart 6
Current Levels of Service

Level of	Program Management	NPDES Compl	iance Activities	Capital Improvement	
Service	Activities	Non-O&M Related Compliance Activities	Operation and Maintenance Program Activities	Projects	
A or 5	Comprehensive Planning + Full Implementation Capabilities	Exemplary Permit Compliance	Fully Preventative/ 100% Routine	10-year Plan	
B or 4	Pro-Active Planning + Systematic CIP Implementation Capabilities	Pro-Active Permit Compliance	Mixture of Routine and Inspection Based	20-year Plan	
C or 3	Priority Planning + Partial CIP Implementation Capabilities	Minimal Permit Compliance	Inspection Based	40-year Plan	
D or 2	Reactionary Planning + Minimal CIP Implementation Capabilities	Below Minimum Permit Compliance	Responsive Only (Complaint-based)	50-year Plan	
F or 1	No Planning + No CIP Implementation Capabilities	Non-Compliance	Less than full response to all complaints	75-year or More Plan	

City staff and the Council reviewed the efforts that would be necessary for various levels of service. Level "A" would require over \$70 million in capital projects over the next 10 years plus the addition of 13 new full-time employees and over \$1,000,000 in equipment costs. This effort would require a residential rate of approximately \$12.00 per month. A level "B" service would require approximately \$53 million in capital projects over the next 10 years plus the addition of seven full-time employees and some contract service. These efforts will require a residential fee of approximately \$5 per for the first year of operations. Level "C" would require approximately \$36 million in capital projects over the next 10 years with minimal use of contract add services and only one new full-time employee. The cost for this level of service would approximate \$3.50 per month. Levels D&F were reviewed but determined to be below the desired standard of care the City desires to provide.

After several meetings with City staff and the Council, it was decided that the City wishes to pursue Level "C" for the stormwater program. The following proposed capital improvements and future operational costs are based upon that level of service for the future.

Capital Improvements Plan

The Capital Improvements Plan reflects the fund's planned asset equipment and capital improvements for the current year and next ten years. Discussions with City staff about current and desired Levels of Service developed a CIP containing projects of various priorities. As is illustrated in Table 7, there are eight capital improvement projects proposed for the fund through FY 2030 by the City staff. Due to the financial hardships that these projects may place upon the fund, the analysis assumes that each improvement is planned to be paid either by a capital outlay / paygo in a specific fiscal year or by new debt issuances resulting in annual debt service payments.

This leads to the matter of financing over \$38.5 million of projects found in the proposed Capital Improvements Plans. The yearly costs exceed \$1,000,000 during some years, which may place pressure upon the fund budget. The largest projects include:

- \$11,626,000 for Mud Creek improvements
- \$10,090,000 for other watersheds improvements
- \$7,393,000 for Wash Creek improvements
- \$4,961,000 for Brittain Creek improvements

TABLE 7 CITY OF HENDERSONVILLE - STORMWATER FUND CAPITAL IMPROVEMENTS PLAN - LOS C

PROJECT DESCRIPTION	FY 2020	CUMULATIVE	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
	COST	COST	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Additional Sub watershed Stormwater Improvements		2,850,000	150,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
Stormwater Vehicle Replacement (SUV)	30,000	30,000	30,000									
New imagery	25,000	145,000	25,000		27,000		29,000		31,000		33,000	
Wash Creek	6,377,474	7,393,000					7,393,000					
Brittain Creek	3,915,942	4,961,000								4,961,000		
Mud Creek	8,650,790	11,626,000										11,626,000
Devils Fork	1,141,746	1,446,000								1,446,000		
Other Watersheds	6,386,067	10,090,000		2,000,000						8,090,000		
<u>TOTAL</u>	26,527,018	38,541,000	205,000	2,300,000	327,000	300,000	7,722,000	300,000	331,000	14,797,000	333,000	11,926,000

YEARS 11+
2031+
<u>0</u>
•

DEBT PACKAGES

ANNUAL DEBT
ANNUAL CAPITAL OUTLAY

<u>35,516,000</u>		2,000,000			7,393,000			14,497,000		11,626,000
<u>35,516,000</u>	\$0	\$2,000,000	\$0	\$0	\$7,393,000	\$0	\$0	\$14,497,000	\$0	\$11,626,000
3,025,000	\$205,000	\$300,000	\$327,000	\$300,000	\$329,000	\$300,000	\$331,000	\$300,000	\$333,000	\$300,000

TABLE 8 **CITY OF HENDERSONVILLE - STORMWATER FUND** FINANCIAL ANALYSIS - LOS C - \$5.00 RESIDENTIAL FEE - 5 YEAR INCREASES

PREVIOUS: FEED 1.00 2.		AUDIT		ESTIMATE		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
FEB 1	LINE ITEM	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
FEED 10 24150 2017 1000 1000 1000 1000 1000 1000 100	REVENUES:														
PERMITS OF CAME 1,000 1,00		0	241.568	320.737	325.000	326,625	328.258	329.899	331.549	333.207	334.873	336.547	338.230	339.921	341,621
MOSPERATING RECOMES 1				•		•	•	•	•		•	•	•	•	1,093
METHIN NOME 1				.,	1,010	.,0.0	.,	.,	.,	.,	.,	.,	.,002	1,000	.,000
NAMER'NOLE PROCEEDS 2 28.00 100,000 27.10 22.907 52.70 228.48 337.07 344.19 350.07 356.19 356.49	NONOPERATING INCOME:														
DEST PROCECOS 10,000 27,100 25,000 25,	INVESTMENT INCOME	0	19	2,180	750	817	7,770	13,244	17,466	21,918	22,492	31,247	39,726	41,151	35,179
MASCELANCIUS 100.00 22.00 100.00 32.00 100.00 32.00 100.00 32.00 100.00 32.00 100.00 32.00 100.00 32.00 100.00 32.00 100.00 32.00 100.00 32.00 100.00 32.00 100.00	INSURANCE PROCEEDS		52,943												
TRANSFER N 100.00 327,130 323,987 552,790 328,488 337,078 364,191 358,496 368,71 379,038 382,190 382,105 382,190 382,	DEBT PROCEEDS				226,000										
SUBTOR ARVENUES 100,000 327,130 323,987 552,790 126,488 337,078 344,199 360,676 366,191 358,436 368,371 379,038 382,140 3	MISCELLANEOUS			70											
NEW SOURCES OF REVENUE: REVENUE FROM FEE INCREASE 100.000 327,130 323,987 552,790 1,466,350 1,420,330 1,432,967 1,444,187 1,455,773 2,615,478 2,637,189 2,683,707 2,673,227 2,669 2,773,007 2,773,	TRANSFER IN	100,000	32,600												
REVENUE FROM FEE INCREASE 100.00 327.13 33.987 552.79 1.406.350 1.409.350 1.429.330 1.432.867 1.444.187 1.099.982 2.279.042 2.289.327 2.279.080 2.291.067 2.2799.0799.0799.0799.0799.0799.0799.079	SUBTOTAL REVENUES	100,000	327,130	323,987	552,790	328,488	337,078	344,199	350,076	356,191	358,436	368,871	379,038	382,160	377,893
REVENUE FROM FEE INCREASE 100.00 327.13 33.987 552.79 1.406.350 1.409.350 1.429.330 1.432.867 1.444.187 1.099.982 2.279.042 2.289.327 2.279.080 2.291.067 2.2799.0799.0799.0799.0799.0799.0799.079	NEW SOLIDOES OF DEVENUE.														
PREMINTENS 10,000 327,130 323,987 582,70						1 077 863	1 083 252	1 088 668	1 09/ 111	1 000 582	2 257 042	2 268 327	2 279 669	2 201 067	2,291,067
TOTAL REVENUES 100,000 327,130 323,887 \$52,790 1,406,350 1,420,330 1,432,867 1,444,167 1,455,773 2,615,478 2,637,198 2,658,707 2,673,227 2,68							1,003,232	1,000,000	1,034,111	1,033,302		2,200,321	2,273,003	2,231,007	2,291,00
SALARIS AND BENEFTS 168,307 146,545 110,000 173,868 241,000 221,000 211,000 212,000 220,000 230,000 300,000 314,000 318,000 31		100,000	327,130	323,987	552,790		1,420,330	1,432,867	1,444,187	1,455,773		2,637,198	2,658,707	2,673,227	2,668,960
SALARIES AND BENEFITS 168,307 146,548 173,868 173,868 173,868 173,688 173,688 17															
PROFESSIONAL SERVICES 110,000 105,700 105,000 112,000 1115,000 122,000 122,000 126,000 130,0			450 207	440 545	472.000	244 000	254 000	204 000	274 000	202.000	202.000	205.000	247.000	220.000	343,00
MAINTENANCE AND REPAIR SIPPLIES 5,16 1,180 1,190 200 210 220 230 240 250 260 270 SIPPLIES 5,16 1,184 1,1500			158,307												142,00
SUPPLIES 6,916 15,840 16,000			'	110,000	,	,	,	,	•	•	,	,	,	•	28
CONTRACTED SERVICES 100.00 15.907 2.521 3.568 3.770 3.880 4.000 4.170 4.710 4.850 4.700 5.000				6.916											16,000
PERMITS LICENSES AND FEES 100,000 15,907 2,521 3,855 3,770 3,808 4,000 4,850 4,000 4,850 4,000 4,100 4,240 4,240 4,370 4,400 4,400	CONTRACTED SERVICES			,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	,	,	•	•	,	,	,	•	68,00
TOTAL OPERATING EXPENDITURES 100,000 174,214 265,982 303,552 424,400 439,650 454,920 470,190 487,470 504,760 523,050 541,360 560,670 5 TRANSFER OUT EXISTING DEBT SERVICE 149,515 30,000 30,000 29,555 191,111 191,111 194,311 37,654	PERMITS LICENSES AND FEES				4,308	4,440	4,570	4,710	4,850	5,000	5,150	5,300	5,460	5,620	5,79
EXISTING DEBT SERVICE EXISTING DEBT SERVICE 149,515 30,000 30,000 30,000 37,654 37,6	OTHER	100,000	15,907	2,521	3,656	3,770	3,880	4,000	4,120	4,240	4,370	4,500	4,640	4,780	4,92
EXISTING DEBT SERVICE NEW DEBT SERVICE 17,928 0 229,600 300,000 327,000 300,000 329,000 300,	TOTAL OPERATING EXPENDITURES	100,000	174,214	265,982	303,552	424,400	439,650	454,920	470,190	487,470	504,760	523,050	541,360	560,670	579,99
EXISTING DEBT SERVICE NEW DEBT SERVICE 179,208 100,009 179,208 100,000 179,208	TRANSFER OUT		149 515	30 000	30 000										
NEW DEBT SERVICE CAPITAL OUTLAY P\$\text{0}\$ \text{0}\$ \t			140,010	00,000	33,555		37.654	37.654	37.654	37.654	37.654	37.654	37,654		
CAPITAL OUTLAY 79,208 0 229,600 205,000 300,000 327,000 300,000 329,000 300,000 329,000 300,000 331,000 300,000 333,000 330,000 333,000 330,00						0	· · · · · · · · · · · · · · · · · · ·							2.376.803	2,969,95
REVENUES OVER EXPENDITURES 0 75,807 28,005 -10,362 776,950 547,471 422,183 445,233 57,319 875,513 847,943 142,516 -597,246 -1,114	CAPITAL OUTLAY		79,208	0	229,600	205,000	•	•		•		· · · · · · · · · · · · · · · · · · ·			300,000
ACCRUAL ADJUSTMENTS 0 369,564 NET INCOME 10 293,757 28,005 -10,362 776,950 547,471 422,183 445,233 57,319 875,513 847,943 142,516 597,246 -1,12 UNRESTRICTED NET ASSETS 100,000 81,733 81,733 81,733 776,950 1,324,421 1,746,603 2,191,836 2,249,155 3,124,668 3,972,611 4,115,127 3,517,881 2,33 UNRESTRICTED / TOTAL EXPENDITURES 100.00% 20.28% 27.61% 14.51% 123.44% 151.73% 172.81% 219.41% 160.83% 179.58% 222.03% 163.55% 107.56% 6 RESIDENTIAL FEE NEW DEBT FOR CAPITAL PROJECTS: LOAN AMOUNT 2,000,000 7,393,000 14,497,000 116,67 PAYMENT 2,000,000 7,393,000 7,393,000 14,497,000 116,67 PAYMENT 95,555 353,220 739,626 55 ANNUAL PAYMENTS 191,111 7,064,40 14,79,522 1,115 RATE 6.00%	TOTAL EXPENDITURES	100,000	402,937	295,982	563,152	629,400	872,859	1,010,685	998,955	1,398,455	1,739,965	•	2,516,191	3,270,473	3,849,943
ACCRUAL ADJUSTMENTS 0 369,564 NET INCOME 10 293,757 28,005 -10,362 776,950 547,471 422,183 445,233 57,319 875,513 847,943 142,516 597,246 -1,12 UNRESTRICTED NET ASSETS 100,000 81,733 81,733 81,733 776,950 1,324,421 1,746,603 2,191,836 2,249,155 3,124,668 3,972,611 4,115,127 3,517,881 2,33 UNRESTRICTED / TOTAL EXPENDITURES 100.00% 20.28% 27.61% 14.51% 123.44% 151.73% 172.81% 219.41% 160.83% 179.58% 222.03% 163.55% 107.56% 6 RESIDENTIAL FEE NEW DEBT FOR CAPITAL PROJECTS: LOAN AMOUNT 2,000,000 7,393,000 14,497,000 116,67 PAYMENT 2,000,000 7,393,000 7,393,000 14,497,000 116,67 PAYMENT 95,555 353,220 739,626 55 ANNUAL PAYMENTS 191,111 7,064,40 14,79,522 1,115 RATE 6.00%	DEVENUES OVER EXPENDITURES	•	75 007	20.005	40.202	770 050	547 474	400 400	445.000	F7 240	075 540	0.47.040	440.546	507.046	4 400 00
NET INCOME 0 293,757 28,005 -10,362 776,950 547,471 422,183 445,233 57,319 875,513 847,943 142,516 -597,246 -1,11 UNRESTRICTED NET ASSETS 100,000 81,733 81,733 81,733 776,950 1,324,421 1,746,603 2,191,836 2,249,155 3,124,668 3,972,611 4,115,127 3,517,881 2,33 UNRESTRICTED / TOTAL EXPENDITURES 100.00% 20.28% 27.61% 14.51% 123.44% 151.73% 172.81% 219.41% 160.83% 179.58% 222.03% 163.55% 107.56% 6 RESIDENTIAL FEE \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 5.00 \$ 9.00				20,005	-10,362	776,950	347,471	422,103	445,233	57,319	0/5,513	047,343	142,516	-557,246	-1,180,98
UNRESTRICTED NET ASSETS UNRESTRICTED / TOTAL EXPENDITURES 100,000 100				28 005	-10 362	776 950	547 471	422 183	445 233	57 319	875 513	847 943	142 516	-597 246	-1,180,98
UNRESTRICTED / TOTAL EXPENDITURES 100.00% 20.28% 27.61% 14.51% 123.44% 151.73% 172.81% 219.41% 160.83% 179.58% 222.03% 163.55% 107.56% 6 RESIDENTIAL FEE NEW DEBT FOR CAPITAL PROJECTS: LOAN AMOUNT LOAN AMOUNT PAYMENT ANNUAL PAYMENTS ANNUAL PAYMENTS ANNUAL PAYMENTS RATE 100.00% 20.28% 27.61% 14.51% 123.44% 151.73% 172.81% 151.73% 172.81% 151.73% 172.81% 151.73% 172.81% 151.73% 160.83% 179.58% 179.58% 179.58% 179.58% 179.58% 107.56% 163.55% 107.56		-		,		•			,	,	•	•		,	2,336,897
NEW DEBT FOR CAPITAL PROJECTS: LOAN AMOUNT 2,000,000 7,393,000 14,497,000 11,60 PAYMENT 95,555 353,220 739,626 5 ANNUAL PAYMENTS 191,111 706,440 1,479,252 1,10 RATE 5.00% 5.00% 6.00%	UNRESTRICTED / TOTAL EXPENDITURES	100.00%	20.28%	27.61%		123.44%	151.73%	172.81%	219.41%	160.83%	179.58%	222.03%	163.55%	107.56%	60.70%
LOAN AMOUNT 2,000,000 7,393,000 14,497,000 11,60 PAYMENT 95,555 353,220 739,626 50 ANNUAL PAYMENTS 191,111 706,440 1,479,252 1,10 RATE 5.00% 5.00% 6.00%	RESIDENTIAL FEE				\$	5.00 \$	5.00 \$	5.00 \$	5.00 \$	5.00 \$	9.00 \$	9.00 \$	9.00 \$	9.00 \$	9.00
PAYMENT 95,555 353,220 739,626 55 ANNUAL PAYMENTS 191,111 706,440 1,479,252 1,18 RATE 5.00% 5.00% 6.00%	NEW DEBT FOR CAPITAL PROJECTS:														
ANNUAL PAYMENTS 191,111 706,440 1,479,252 1,18 RATE 5.00% 5.00% 6.00%															11,626,00
5.00% 5.00% 6.00%															593,15
															1,186,300 6.00%
15 10 10 15	TERM						15			15			15		15

ASSUMPTIONS: 0.5% ANNUAL CUSTOMER GROWTH

Financial Analysis

Each of the columns in the financial model shown in Table 8 represents the City's stormwater fund revenues and expenditures for a specific fiscal year. Revenues and expenditures from past audited years appear in columns on the left side of the table followed by adjacent columns on the right showing projections for the current fiscal year and ten additional years thereafter. Each row in the table shows a revenue or expense line item from the audit and/or projections. Revenues are listed in the top portion of the table followed by operating expenses, capital outlays, and debt payments.

After discussions with City staff, they assumed that stormwater revenues will not be negatively affected by COVID-19. In fact, impervious surfaces and fee revenue are projected by City staff to increase at an average annual rate of 1/2% over the next ten years. Regarding expenditures, Salaries and Benefits are projected to increase to \$241,000 in FY 2021 due to a new hire and continue increasing thereafter by an average annual rate of 4%. Contracted Services are projected to start in FY 2021 and are expected to increase at an average annual rate of 3%. All other operating costs including the more prominent Professional Services and Supplies are expected to increase at an average annual rate of 3%.

Several notable line items are highlighted in yellow including capital outlay, debt, and new revenue sources. Also highlighted are each fiscal year's net income or loss followed by projected Unrestricted Net Assets. The proposed stormwater revenue increases over the next ten years are also highlighted in the table. These increases are high enough to yield feasible operations for the fund, yet not so high as to create excessive fund balance or violate statutes. The impacts on the fund are shown in Chart 9.

\$4,500,000 \$4,000,000 \$3,500,000 \$3,000,000 \$2,500,000 \$2,000,000 \$1,500,000 \$1,000,000 \$500,000 \$0 FY 2021 2028 2029 2030 2022 2023 2024 2025 2026 2027 TOTAL OPERATING EXPENDITURES EXISTING DEBT SERVICE NEW DEBT SERVICE CAPITAL OUTLAY TOTAL REVENUES

Chart 9
Projected Revenues and Expenditures

The current stormwater fee of \$3.00 for all parcel owners within the City and ETJ is high enough to support feasible operations but may not be adequate for funding future increases in operating costs and capital needs.

Findings

The following characteristics stand out when analyzing the City's FY 2020 stormwater fee and those charged by other municipalities.

- The fee of \$3.00 is charged to property owners each month on the water and sewer bill. The fee does not vary by parcel impervious surface or use.
- Residential and non-residential parcels yield approximately \$25,000 and \$2,000 of revenue per month respectively.
- Area municipalities charge monthly stormwater fees that range from \$1.80 to \$15.44 and average \$4.61. However, any comparison of fees should consider how thoroughly each municipality addresses its stormwater needs, whether the fee fully supports stormwater operations, and NPDES requirements through its Levels of Service.

Chart 10
Area Municipality Stormwater Fees

NAME	3000 SQ FT FEE
CHARLOTTE	\$15.44
PINEVILLE	\$5.59
ASHEVILLE	\$5.20
MECKLENBURG CO	\$5.15
BELMONT	\$5.00
CORNELIUS	\$4.80
HUNTERSVILLE	\$4.80
DALLAS	\$4.52
GASTONIA	\$3.25
BESSEMER CITY	\$3.07
CRAMERTON	\$3.00
KINGS MTN	\$2.50
MT HOLLY	\$2.50
SHELBY	\$2.50
RANLO	\$1.80

To analyze the present stormwater rates and the impact of any changes a financial model was created that shows the impact of various fee modifications. In considering changes to fees, the objectives are to maintain positive revenue generation for the fund yet not create excessive fund balances.

Outcomes

During the spring of 2020, various fee structure options were presented to City Council in three workshops. The Council considered residential fees that ranged from \$3.50 to \$12 per month and fee increase frequencies that varied from annual to once every five years. Furthermore, the Council considered charging non-residential rates in tiers versus ERUs. The options were based upon the aforementioned level of service discussions by Council and the magnitude and timing of projects in the proposed Capital Improvements Plan.

The Council opted to implement the following stormwater fee increase. It is modeled to finance system growth, inflation, and future capital needs. The stormwater fee is proposed to change twice over the next decade. Additionally, its application to non-residential parcel owners is proposed to change to the Equivalent Residential Unit (ERU) method. This method creates a monthly charge based upon actual impervious surface. Each nonresidential parcel's impervious surface area is divided by the average residential area of 3,000 square feet to yield a residential multiplier, which in turn is multiplied by the \$5.00 fee to yield the charge. For example, a parcel of 9,000 square feet of impervious surface is three times larger than the typical residential size of 3,000. Therefore, their monthly charge would be three times the \$5.00 fee or \$15.00. The fee would remain unchanged until FY 2026. This was one scenario considered by the City where the City minimized the number of fee increases during the 10 year planning period and instead did two healthy increases to fund the City's stormwater needs. The proposed fees will maintain a minimal fund balance, support capital needs, and address growing operating costs while considering growth within the City. See table below:

TABLE 11
Proposed Stormwater Fees

FISCAL YEAR	STORM WATER FEE
2021	\$5.00 with ERU
2026	\$9.00 with ERU

Conclusions

Based upon our analysis, we have concluded that the Stormwater Fund recovers its system costs through current revenues and has maintained a positive fund balance. However, the stormwater fees will not be enough for future increases in operating costs, permit compliance requirements, and planned capital projects. The proposed stormwater fee will prepare for the phase-in of additional operating and capital costs associated with the CIP. The increases are estimated from the current fiscal year's data and projections of future events. If revenues decline due to various factors, fees may need to increase further to replace the lost revenue. Possible risks include, but are not limited to, the following:

- Unexpected economic decline.
- Operating costs growing at unsustainable levels exceeding those projected.
- Higher than projected CIP cost estimates.
- Regulatory changes.

Due to the multiple factors facing the City, underlying model assumptions may change year over year. It would be prudent for the City to review and assumptions, make necessary updates and rerun the model annually using updated information to determine if adjustments are required to meet established financial objectives.