

## MEMORANDUM

TO: McCray Coates  
Cathy Ball

FROM: Joel Storrow *JLS*  
Dennie Martin

DATE: March 21, 2014

RE: Stormwater Utility Financial Analysis

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### BACKGROUND

The City of Asheville endured its wettest year on record in 2013. The rainfall was especially heavy during the summer months, resulting in flooding in low lying areas and landslides along the steeper mountain slopes. Private property damage was extensive in some cases, causing owners to request that the City take a more proactive approach to mitigate future impacts. In response to these citizen concerns, a public forum was held on November 20, 2013 to solicit feedback on planning, stormwater and other related services which the City provides. Much of the input centered on a desire for the City to ramp up stormwater maintenance activities and increase capital investment in stormwater infrastructure. Such services are provided by the City's Stormwater Services Division and paid for by fees and charges generated through the City's stormwater utility enterprise fund.

Launched in 2005, the City Stormwater Utility Fund was established to address two (2) fundamental objectives:

1. Compliance with a Federal mandate requiring communities of a certain size to address the quantity and quality of stormwater discharged to surface waters.
2. Provide a source of revenue to upgrade City-owned stormwater infrastructure in the interest of the safety and welfare of the public.

The utility was created after an extensive stakeholders' process, which recommended an initial charge of \$2.34 per month for a typical residential single-family household. Multi-family residential, commercial, industrial and institutional properties were assessed a higher fee based upon their relative amount of impervious area, which generates the stormwater runoff.

In order to address the citizen concerns from the 2013 rain events and best sustain the stormwater program going forward, the City engaged engineering consultant McGill Associates and financial consultant Martin-McGill to conduct a financial analysis to recommend alternatives for increasing revenue to meet these maintenance and capital investment objectives.

### THE FUTURE STORMWATER PROGRAM

The initial 2005 Equivalent Residential Unit (ERU) rate was established at \$2.34 per month based on the average single-family residential impervious area of 2,442 square feet. This supported a minimal program calculated in large part to fund new stormwater initiatives, rather than to replace established operational function housed in the Public Works Department. The initial rate remains in effect and does not now sustain the present day program. The current program budget is \$3.65 million, summarized as follows:

• Total operating expenditures	\$ 2,913,323
• Debt service	94,400
• Capital outlay (from the draft Capital Improvements Plan)	641,000
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Total 2014 Budget	\$ 3,648,723

The current stormwater program is focused on the following objectives:

- Maintaining compliance with the six minimum measures mandated in the City's stormwater National Pollution Discharge Elimination System (NPDES) permit.
- Implementing smaller scale capital improvement projects.
- Managing two crews that perform specific maintenance functions, such as cleaning catch basins, storm drains and culverts, including some construction activities.
- Minimal planning activities.

The original financial analysis prepared for the stormwater program in 2005 recommended gradual increases in the ERU rate, which would have progressed to a current rate of approximately \$3.15 per month. However, the 2008 recession and other factors worked to prevent the initial financial strategy from being implemented. Further, several internal operational changes in the program would have probably necessitated that the rate would have accelerated beyond what was anticipated in 2005.

Most other larger municipalities in North Carolina have a stormwater utility enterprise fund. These stormwater programs are based on widely varying objectives; however, all these programs must comply with the minimum measures prescribed in their respective NPDES permits. Asheville's ERU rate falls on the low end of comparable municipalities:

• Asheville	\$2.34
• Concord	\$4.30
• Durham	\$4.50
• Fayetteville	\$3.00
• Chapel Hill	\$3.25
• Winston-Salem	\$4.50
• Greenville	\$5.70
• Raleigh	\$4.00
• Wilmington	\$6.45
• High Point	\$2.00

The Fiscal Year 2015, beginning July 1, 2014, is recommended as a transitional year for the City's stormwater program. McGill Associates, Martin-McGill and City staff have prepared a draft Capital Improvements Plan (CIP) and an updated financial analysis which recognize the following programmatic and fiscal changes, which would begin the process of moving the program from a status-quo mode toward a more community responsive and pro-active program. These modifications are summarized as follows:

- A proposed budget that fully complies with City's general fund charges guidelines.
- The addition of two (2) key staff positions to ramp up stormwater maintenance and enable City crews to undertake more capital improvements, in accordance with recent City Council directives.
- Initiate a strategic system-wide modeling project to simulate stormwater flow characteristics and inventory stormwater infrastructure as the essential basis for future capital planning.
- Capitalize local stormwater improvements, including:
  - Biltmore Avenue Bridge flood mitigation project
  - Town Branch stormwater improvements
  - Replace or add equipment / vehicles to support key program enhancements
  - Implement other stormwater capital improvements as priorities are identified and resources are available

This conceptual 2015 budget represents the first step in transitioning the stormwater program toward a status that would enable the City to manage compounding issues related to changes in the community and the climate. The present challenge is to determine a correct strategic program direction for the Asheville of the future. Three (3) alternative program directions were identified by the consultants and the City's staff:

1. Continue a **minimal program** to sustain operational levels attained in the proposed FY 2015 budget.
2. A **strategic program** that would accomplish overdue planning objectives and undertake a measured plan for implementing identified local capital improvements.
3. A **visionary program** of capital improvements that would enable the City to address major future community needs.

Each of these alternative program directions would necessitate an ERU rate increase above the current \$2.34.

A major shortcoming in the current program is the absence of a proactive stormwater planning element. The program start-up in 2005 began a well-conceived program of planning, beginning with two strategic watershed projects in the Chunn's Cove (Ross Creek) and southern Hendersonville Road (Dingle Creek) areas. However, the financial resources proved inadequate to continue this level of watershed planning with the ERU rate remaining unchanged. Therefore, no comparable planning initiatives have been undertaken since, except for the important Swannanoa Flood Risk Management Study, of which Lake Craig and Biltmore Avenue Bridge mitigation measures are keystone projects. Developing the research and stormwater modeling to support watershed strategic planning and capital projects development is essential to the continued success of the program. Each of the above summarized program direction options would be accompanied by essential planning elements and related capital improvement plans.

A summary of the key features of each of the three (3) alternative program directions follows:

1. **Minimal sustainable program:**
  - Maintain the program at fiscal year 2015 objectives.
  - Conduct essential watershed planning and formulate a 10-year CIP that is based on current levels of capital investment.
  - ERU rate at \$3.20 in FY 2015, ranging to \$4.53 in FY 2024.
  - A summary of the financial analysis and related CIP is presented in Appendix A.

**2. Strategic program of capital improvements:**

- Conduct strategic research and planning and formulate a 10-year CIP that implements key capital improvements with demonstrated local benefits.
- ERU rate at \$3.50 in FY 2015, ranging to \$5.50 in FY 2024.
- A summary of the financial analysis and related CIP is presented in Appendix B.

**3. Visionary program of capital improvements:**

- Conduct strategic research and planning and formulate a 10-year CIP that implements projects having local and community-wide benefits.
- ERU rate at \$4.00 in FY 2015, ranging to \$6.00 in FY 2014.
- A summary of the financial analysis and related CIP is presented in Appendix C.

McGill Associates and Martin-McGill fully understand the enormous fiscal issues that must be managed by local government. Further, we believe that continuing with a minimal program direction may result in larger and more complex future stormwater problems, without the fundamental knowledge and planning to cope with such problems. Therefore, it is our recommendation that the future direction for the program be approached incrementally, with **Alternative 2 - Strategic Program of Capital Improvements** being adopted in the FY 2015 year of transition. As the City achieves its fundamental planning objectives, the Community will then be better equipped to understand how better to invest future capital and attain a more enlightened vision of the most appropriate program path to pursue.

SUMMARY

The present stormwater program is faced with two key issues:

1. Increased cost to sustain the current program.
2. The growing need to plan and invest in a future program that addresses new demands on the City, such as the challenges brought on by the 2013 rainfall events.

Asheville has a very complex stormwater physiography. Increased rates, densities and complexity of development have dramatically accelerated future stormwater management issues. The correct strategic direction for the City's stormwater program must find the appropriate balance among the many relevant stormwater issues that face the community. Recent events have pointed to the need to step-up the program to address new challenges raised by these changing environmental conditions. Following a "business-as-usual" path is not a prudent approach. The program should be re-energized with a new direction and fresh policy directives.

A new more assertive direction for the City's stormwater program is warranted. Fiscal Year 2015 should be viewed as a transitional year when a new vision for this program is implemented that equips the Community to manage future issues. The stormwater utility provides the means to secure the financial resources to manage needed changes in the program. The Community has demonstrated its support for more action to prevent crises and better manage this essential City infrastructure.

**CITY OF ASHEVILLE - STORMWATER FUND  
FINANCIAL ANALYSIS SUMMARY  
MINIMAL SUSTAINABLE PROGRAM, ERU FEES RANGING FROM \$3.20 TO \$4.53**

	ESTIMATE 2014	YEAR 1 2015	YEAR 2 2016	YEAR 3 2017	YEAR 4 2018	YEAR 5 2019	YEAR 6 2020	YEAR 7 2021	YEAR 8 2022	YEAR 9 2023	YEAR 10 2024
STORMWATER REVENUE INCREASE	0%	37%	0%	17%	0%	0%	10%	0%	0%	10%	0%
STORMWATER FEE	\$2.34	\$3.20	\$3.20	\$3.74	\$3.74	\$3.74	\$4.12	\$4.12	\$4.12	\$4.53	\$4.53
TOTAL REVENUE FROM FEES	\$2,992,723	\$4,037,456	\$4,077,320	\$4,775,199	\$4,824,391	\$4,874,035	\$5,387,749	\$5,443,967	\$5,498,696	\$6,081,638	\$6,142,684
NEW DEBT SERVICE	\$0	\$0	\$100,954	\$201,908	\$440,926	\$679,943	\$679,943	\$679,943	\$871,157	\$1,062,371	\$1,062,371
CAPITAL OUTLAY	\$660,000	\$1,450,000	\$206,000	\$650,000	\$4,219,000	\$660,000	\$232,000	\$596,000	\$261,000	\$627,000	\$294,000
OPERATING COSTS	\$3,033,085	\$3,529,342	\$3,620,673	\$3,714,743	\$3,811,635	\$3,911,434	\$4,029,227	\$4,135,104	\$4,244,157	\$4,356,482	\$4,472,176
NET INCOME	-\$568,762	-\$283,087	\$62,494	\$124,548	\$352,831	-\$377,342	\$446,579	\$32,920	\$122,382	\$35,785	\$314,137
UNRESTRICTED CASH AND INVESTMENTS	\$803,071	\$519,984	\$582,478	\$707,026	\$1,059,857	\$682,515	\$1,129,094	\$1,162,013	\$1,284,396	\$1,320,180	\$1,634,317
UNRESTRICTED CASH AND INVESTMENTS / TOTAL EXPENDITURES	21%	10%	15%	15%	13%	13%	23%	21%	24%	22%	28%

**CAPITAL IMPROVEMENTS PLAN**

BMPS AND FLOOD CONTROL			300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
WATERSHED STUDIES				350,000		350,000		350,000		350,000	
FAIRWAY DRIVE STORMWATER IMPROVEMENTS	180,000										
SMITH MILL CREEK WATERSHED ANALYSIS	100,000										
WESTOVER DRIVE STORMWATER IMPROVEMENTS	180,000										
BILTMORE AVENUE BRIDGE FLOOD MITIGATION PROJECT ^		1,092,500									
TOWN BRANCH STORMWATER		115,000									
LAKE SHORE STORMWATER IMPROVEMENTS			230,000								
SHILOH ROAD STORMWATER IMPROVEMENTS			225,400								
DRUID DRIVE STORMWATER IMPROVEMENTS				258,750							
UNANTICIPATED DRAINAGE SYSTEM NEEDS			230,000	230,000		230,000					
LAKE CRAIG DAM REHABILITATION					10,000,000						
OTHER CAPITAL RECOMMENDATIONS						500,000	500,000	500,000	500,000	500,000	500,000
PHASE 1 HYDRAULIC MODEL		500,000									
EQUIPMENT / VEHICLES	200,000	200,000	206,000	300,000	219,000	310,000	232,000	246,000	261,000	277,000	294,000
<b>ANNUAL CAPITAL TOTALS</b>	<b>660,000</b>	<b>1,907,500</b>	<b>1,191,400</b>	<b>1,438,750</b>	<b>10,749,000</b>	<b>1,460,000</b>	<b>1,032,000</b>	<b>1,396,000</b>	<b>1,061,000</b>	<b>1,427,000</b>	<b>1,094,000</b>

**CITY OF ASHEVILLE - STORMWATER FUND  
FINANCIAL ANALYSIS SUMMARY  
STRATEGIC PROGRAM, ERU FEES RANGING FROM \$3.50 - \$5.50**

	ESTIMATE 2014	YEAR 1 2015	YEAR 2 2016	YEAR 3 2017	YEAR 4 2018	YEAR 5 2019	YEAR 6 2020	YEAR 7 2021	YEAR 8 2022	YEAR 9 2023	YEAR 10 2024
STORMWATER REVENUE INCREASE	0%	50%	5%	5%	5%	5%	5%	5%	5%	5%	5%
STORMWATER FEE	\$2.34	\$3.50	\$3.68	\$3.87	\$4.07	\$4.28	\$4.50	\$4.73	\$4.97	\$5.23	\$5.50
TOTAL REVENUE FROM FEES	\$2,992,723	\$4,392,003	\$4,651,098	\$4,928,155	\$5,220,165	\$5,533,180	\$5,862,319	\$6,214,767	\$6,585,788	\$6,980,718	\$7,399,983
NEW DEBT SERVICE	\$0	\$0	\$100,954	\$201,908	\$440,926	\$679,943	\$679,943	\$679,943	\$751,648	\$823,354	\$823,354
CAPITAL OUTLAY	\$660,000	\$1,850,000	\$606,000	\$1,050,000	\$4,619,000	\$1,060,000	\$632,000	\$1,796,000	\$1,461,000	\$1,827,000	\$1,494,000
OPERATING COSTS	\$3,033,085	\$3,529,342	\$3,620,673	\$3,714,743	\$3,811,635	\$3,911,434	\$4,029,227	\$4,135,104	\$4,244,157	\$4,356,482	\$4,472,176
NET INCOME	-\$568,762	-\$328,539	\$236,272	-\$122,496	\$348,604	-\$118,197	\$521,148	-\$396,280	\$128,982	-\$26,117	\$610,453
UNRESTRICTED CASH AND INVESTMENTS	\$803,071	\$474,532	\$710,804	\$588,308	\$936,912	\$818,715	\$1,339,864	\$943,584	\$1,072,566	\$1,046,449	\$1,656,902
UNRESTRICTED CASH AND INVESTMENTS / TOTAL EXPENDITURES	21%	9%	16%	12%	11%	14%	25%	14%	17%	15%	24%

**CAPITAL IMPROVEMENTS PLAN**

BMPS AND FLOOD CONTROL			300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
WATERSHED STUDIES				350,000		350,000		350,000		350,000	
FAIRWAY DRIVE STORMWATER IMPROVEMENTS	180,000										
SMITH MILL CREEK WATERSHED ANALYSIS	100,000										
WESTOVER DRIVE STORMWATER IMPROVEMENTS	180,000										
BILTMORE AVENUE BRIDGE FLOOD MITIGATION PROJECT ^		1,092,500									
TOWN BRANCH STORMWATER		115,000									
LAKE SHORE STORMWATER IMPROVEMENTS			230,000								
SHILOH ROAD STORMWATER IMPROVEMENTS			225,400								
DRUID DRIVE STORMWATER IMPROVEMENTS				258,750							
UNANTICIPATED DRAINAGE SYSTEM NEEDS			230,000	230,000		230,000					
LAKE CRAIG DAM REHABILITATION					10,000,000						
OTHER IMPROVEMENTS		400,000	400,000	400,000	400,000	400,000	400,000	1,200,000	1,200,000	1,200,000	1,200,000
PHASE 1 HYDRAULIC MODEL		500,000									
EQUIPMENT / VEHICLES	200,000	200,000	206,000	300,000	219,000	310,000	232,000	246,000	261,000	277,000	294,000
<b>ANNUAL CAPITAL TOTALS</b>	<b>660,000</b>	<b>2,307,500</b>	<b>1,591,400</b>	<b>1,838,750</b>	<b>11,149,000</b>	<b>1,360,000</b>	<b>932,000</b>	<b>2,096,000</b>	<b>1,761,000</b>	<b>2,127,000</b>	<b>1,794,000</b>

**CITY OF ASHEVILLE - STORMWATER FUND  
FINANCIAL ANALYSIS SUMMARY  
VISIONARY PROGRAM, ERU FEES RANGING FROM \$4.00 TO \$6.00**

<b>FINANCIAL ANALYSIS 2014</b>	<b>ESTIMATE 2014</b>	<b>YEAR 1 2015</b>	<b>YEAR 2 2016</b>	<b>YEAR 3 2017</b>	<b>YEAR 4 2018</b>	<b>YEAR 5 2019</b>	<b>YEAR 6 2020</b>	<b>YEAR 7 2021</b>	<b>YEAR 8 2022</b>	<b>YEAR 9 2023</b>	<b>YEAR 10 2024</b>
STORMWATER REVENUE INCREASE	0%	71%	5%	5%	5%	5%	5%	5%	5%	5%	5%
STORMWATER FEE	\$2.34	\$4.00	\$4.19	\$4.38	\$4.58	\$4.79	\$5.01	\$5.24	\$5.48	\$5.73	\$6.00
TOTAL REVENUE FROM FEES	\$2,992,723.00	\$4,987,532	\$5,258,957	\$5,547,480	\$5,849,955	\$6,168,281	\$6,502,411	\$6,857,349	\$7,232,158	\$7,627,959	\$8,045,938
NEW DEBT SERVICE	\$0	\$0	\$100,954	\$201,908	\$440,926	\$679,943	\$679,943	\$679,943	\$751,648	\$823,354	\$823,354
CAPITAL OUTLAY	\$660,000	\$1,950,000	\$706,000	\$1,150,000	\$5,719,000	\$2,160,000	\$1,732,000	\$2,096,000	\$2,161,000	\$2,527,000	\$2,194,000
OPERATING COSTS	\$3,033,085	\$3,529,342	\$3,620,673	\$3,714,743	\$3,811,635	\$3,911,434	\$4,029,227	\$4,135,104	\$4,244,157	\$4,356,482	\$4,472,176
NET INCOME	-\$568,762	\$166,990	\$744,130	\$396,829	-\$121,606	-\$583,096	\$61,241	-\$53,698	\$75,353	-\$78,876	\$556,408
UNRESTRICTED CASH AND INVESTMENTS	\$803,071	\$970,061	\$1,714,191	\$2,111,020	\$1,989,414	\$1,406,318	\$1,467,559	\$1,413,861	\$1,489,214	\$1,410,338	\$1,966,747
UNRESTRICTED CASH AND INVESTMENTS / TOTAL EXPENDITURES	21%	17%	38%	41%	20%	21%	23%	20%	21%	18%	26%

**CAPITAL IMPROVEMENTS PLAN**

BMPS AND FLOOD CONTROL			300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
WATERSHED STUDIES				350,000		350,000		350,000		350,000	
FAIRWAY DRIVE STORMWATER IMPROVEMENTS	180,000										
SMITH MILL CREEK WATERSHED ANALYSIS	100,000										
WESTOVER DRIVE STORMWATER IMPROVEMENTS	180,000										
BILTMORE AVENUE BRIDGE FLOOD MITIGATION PROJECT ^		1,092,500									
TOWN BRANCH STORMWATER		115,000									
LAKE SHORE STORMWATER IMPROVEMENTS			230,000								
SHILOH ROAD STORMWATER IMPROVEMENTS			225,400								
DRUID DRIVE STORMWATER IMPROVEMENTS				258,750							
UNANTICIPATED DRAINAGE SYSTEM NEEDS			230,000	230,000							
LAKE CRAIG DAM REHABILITATION					10,000,000						
OTHER IMPROVEMENTS		500,000	500,000	500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,900,000	1,900,000	1,900,000
PHASE 1 HYDRAULIC MODEL		500,000									
EQUIPMENT / VEHICLES	200,000	200,000	206,000	300,000	219,000	310,000	232,000	246,000	261,000	277,000	294,000
<b>ANNUAL CAPITAL TOTALS</b>	<b>660,000</b>	<b>2,407,500</b>	<b>1,691,400</b>	<b>1,938,750</b>	<b>12,249,000</b>	<b>2,460,000</b>	<b>2,032,000</b>	<b>2,396,000</b>	<b>2,461,000</b>	<b>2,827,000</b>	<b>2,494,000</b>