



## **MEMORANDUM**

**To:** City of Johnston  
**From:** Rusty Fifield  
**Date:** November 8, 2011  
**Subject:** Funding Plan for Stormwater Utility

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Earlier this year, Northland Strategies worked with City Staff and the Storm Water Utility Subcommittee to define and explore funding options for the establishment of a Stormwater Utility. Initial findings and recommendations this process were presented to the City Council in February. This memorandum updates the proposed funding plan for a stormwater utility assuming a July 1, 2012 start date.

### **Stormwater Management Plan**

The information used in the analysis of stormwater improvements and funding of the improvements through a stormwater utility is grounded in the City's February 2010 Watershed Assessment. The Action Plan section of the report identifies key capital improvement projects. The Action Plan also discusses the use of a stormwater utility and setting the user fee. The Equivalent Residential Units (ERU) used in the projections for this memo are based on the Action Plan.

The Watershed Assessment explains the methodology for calculating ERU for the purposes of a stormwater utility. Every single-family, townhouse and apartment housing unit represents a single ERU. According to the Watershed Assessment, there were 5,727 residential ERU in Spring 2009. Non-residential uses (commercial, industrial, public, school, church) would be assigned ERU based on the area of impervious surface. The Watershed Assessment estimated a total of 10,000 ERU. The projections presented in this memo use 10,000 ERU as the starting point and adds 200 ERU annually to account for future growth.

### **Process**

Northland created a spreadsheet specifically for this project. The spreadsheet is designed to provide the City with the information needed to evaluate funding alternatives. The spreadsheet contains information about planned stormwater improvement projects, means of financing the improvements, fee assumptions and projected revenues and expenses for the Stormwater Utility. The basic model used for the projections was created with input from City Staff to ensure that the projections provided pertinent information.

The Storm Water Utility Subcommittee met twice during this process. The purpose of the meetings was to explain funding options and to obtain feedback and guidance. The proposed funding plan is the result of this review process and the input of the Subcommittee.

The Subcommittee reviewed a series of alternative projections that illustrated options for funding the Utility. These alternatives made several key points about funding to undertake planned capital improvements:

1. A monthly fee of \$6.00 per ERU does not provide enough revenue to undertake planned improvements on a cash-only basis. Some projects must be financed through borrowing.
2. A monthly fee of \$4.00 per ERU does not provide enough revenue to finance planned improvements even if all projects are financed with debt and costs spread over time.
3. The Subcommittee recommended the use of Utility revenues to pay debt service on the 2010B Bonds. This approach uses Utility revenue to pay for storm sewer improvements and frees property taxes for other purposes.
4. In addition to planned capital improvements, the Subcommittee suggested including an annual amount for unplanned improvements.
5. To keep the initial rate low, it is necessary to factor in an annual increase in the fee. The lower the assumed annual percentage change, the higher the starting fee needed to meet all improvement needs. Conversely, seeking a lower starting fee will require commitment to larger rates of annual change.
6. The majority of funding scenarios build a fund balance in the early years of the Utility and use the fund balance to offset future annual operating deficits.

### **Proposed Funding Plan - Assumptions**

The Subcommittee process led to the proposed funding plan contained in this memo. Before discussing the results of this plan, it is important to explain the underlying assumptions.

1. The basic project data (estimated costs and timing) are based on the City's Capital Improvement Plan (CIP). The list of improvement project assumptions appears in Figure 1 on the next page.
2. The plan includes \$150,000/year for unplanned improvements in the years 2013-14 through 2022-23.
3. Project costs increase annually (base year of 2012) using an inflation factor of 2%.
4. All projects are financed with debt. The plan assumes the issuance of general obligation bonds fully supported by Stormwater Utility revenues. Finance expense equal to 2.5% of project costs. Projected debt service is based on an interest rate of 4% with principal and interest paid in equal annual installments over 15 years beginning in the year of issuance.
5. Revenue is calculated using a monthly fee applied to all billing units (ERU). As noted earlier, total ERU begin at 10,000 and grow by 200/year.
6. The Stormwater Utility will begin collecting revenues in July 1, 2012.
7. The plan includes annual operating and maintenance expense equal to 10% of annual revenue.
8. A homeowner's grant program is funded in an amount equal to 1% of annual revenue.

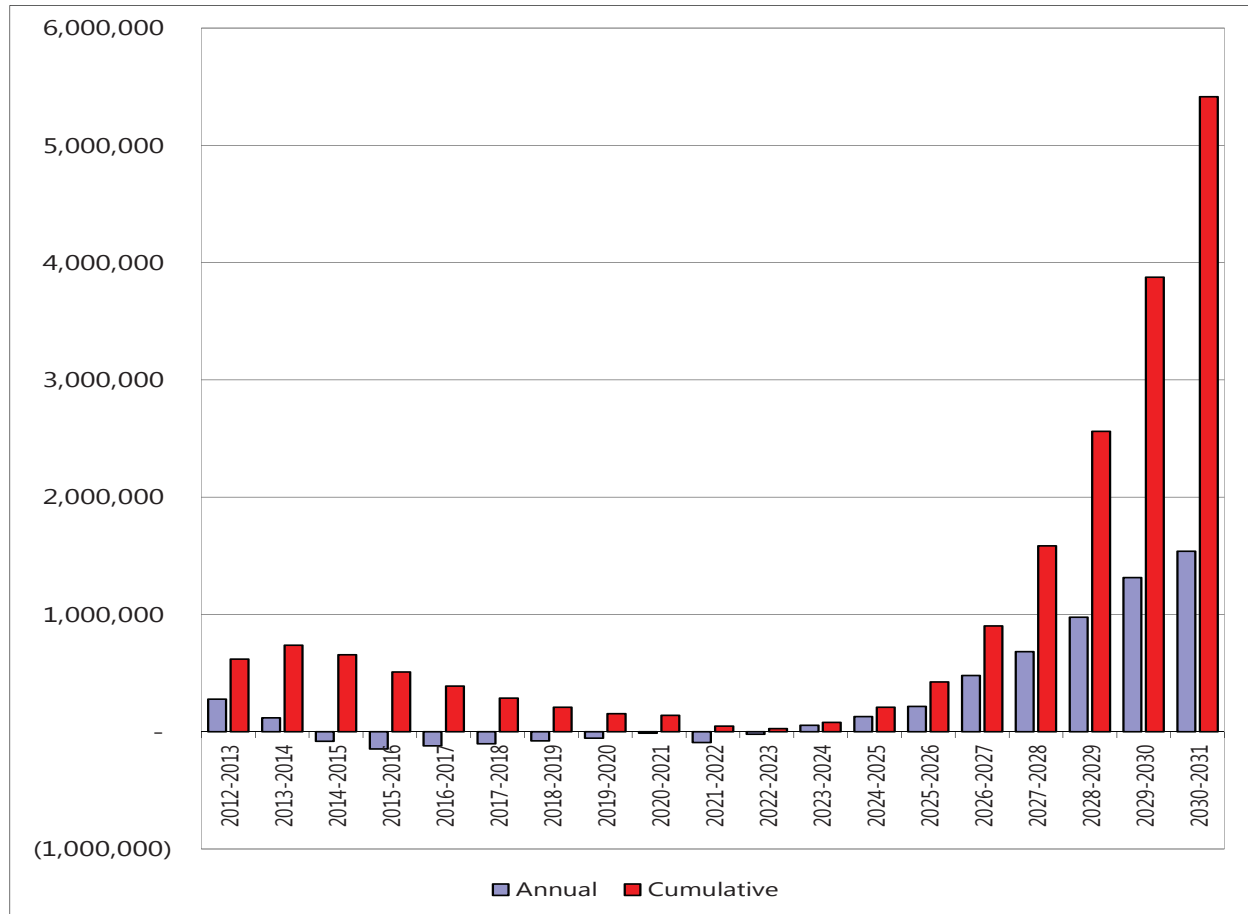
**Figure 1**  
**Storm Sewer Improvement Project Assumptions**

<b>Project</b>	<b>Fiscal Year</b>	<b>Est. Project Cost</b>	<b>Inflation Adjusted Cost</b>	<b>Utility Fund</b>	<b>Bond</b>
G.O. Bonds, Series 2010B	2012 - 2013	970,000	970,000	0%	100%
Water Quality Basin West of 86th	2012 - 2013	925,000	925,000	0%	100%
Augustine Outlet Near Trail	2012 - 2013	135,000	135,000	0%	100%
Unplanned Projects	2013 - 2014	150,000	153,000	0%	100%
Beaver Creek Repair South of 62nd	2013 - 2014	575,000	586,500	0%	100%
Beaver Creek Repair Near Rec Trail	2013 - 2014	290,000	295,800	0%	100%
East of Merle Hay Road Phase 1	2013 - 2014	157,000	160,140	0%	100%
Unplanned Projects	2104 - 2105	150,000	927,485	0%	100%
East of Merle Hay Road Phase 2	2014 - 2015	223,000	232,009	0%	100%
Green Meadows West Channel Repair	2014 - 2015	1,800,000	1,872,720	0%	100%
Unplanned Projects	2015 - 2016	150,000	159,181	0%	100%
East of Merle Hay Road Phase 3	2015 - 2016	212,000	224,976	0%	100%
Beaver Creek Repair Near Augustine	2015 - 2016	2,000,000	2,122,416	0%	100%
Unplanned Projects	2016 - 2017	150,000	162,365	0%	100%
East of Merle Hay Road Phase 4	2016 - 2017	253,000	273,855	0%	100%
Bright Property - Storm Sewer Improve.	2016 - 2017	300,000	324,730	0%	100%
North Glenn Stream Improvements	2016 - 2017	250,000	270,608	0%	100%
Unplanned Projects	2016 - 2017	150,000	162,365	0%	100%
East of Merle Hay Road Phase 5	2017 - 2018	224,000	247,314	0%	100%
Unplanned Projects	2018 - 2019	150,000	168,924	0%	100%
East of Merle Hay Road Phase 6	2018 - 2019	179,000	201,583	0%	100%
Unplanned Projects	2019 - 2020	150,000	172,303	0%	100%
East of Merle Hay Road Phase 7	2019 - 2020	128,000	147,032	0%	100%
Unplanned Projects	2020 - 2021	150,000	175,749	0%	100%
East of Merle Hay Road Phase 8	2020 - 2021	176,000	206,212	0%	100%
Unplanned Projects	2021 - 2022	150,000	179,264	0%	100%
Unplanned Projects	2022 - 2023	150,000	182,849	0%	100%
Newgate Drive Channel Repair	2022 - 2023	1,150,000	1,401,844	0%	100%

### Proposed Funding Plan - Results

The assumptions in the previous section form the foundation for the proposed funding plan. This plan results in an initial monthly fee of \$4.90/ERU. The monthly fee must be increased by 5% each year to fully fund the debt service created by the planned improvement projects. The results of the proposed funding plan appear in the chart below and in the table on the next page.

**Figure 2**  
**Proposed Plan - Projections**



The system runs projected annual operating deficits from from 2015-16 through 2023-24, drawing on accumulated fund balance. The fund balance reaches a low point of \$25,000 in 2023-24 and grows thereafter. This future growth on fund balance is based on a lack of planned capital improvements after 2022-23. The fund balance is not likely to grow as shown in these projections. The City will either undertake additional improvements or avoid future fee increases.

The majority of properties will pay the \$4.90 monthly fee. Some non-residential uses with larger areas of impervious surface (with more than one ERU) will pay larger fees. The table in Figure 4 shows the monthly fee at ERU for sample properties in Johnston.

Figure 3

Proposed Plan - Projections

	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Total ERU	10,000	10,200	10,400	10,600	10,800	11,000	11,200	11,400	11,600	11,800
Monthly Fee (\$/ERU)	4.90	5.15	5.40	5.67	5.96	6.25	6.57	6.89	7.24	7.60
Annual Revenue	588,000	629,748	674,201	721,525	771,895	825,499	882,533	943,208	1,007,743	1,076,374
Start Date	100%									
Rate Increase	10%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Capital Project Expenses	181,136	283,726	482,123	723,209	833,598	855,396	888,561	917,228	951,417	971,269
Maintenance Expenses	58,800	62,975	67,420	72,152	77,190	82,550	88,253	94,321	100,774	107,637
Homeowner Grants	5,880	6,297	6,742	7,215	7,719	8,255	8,825	9,432	10,077	10,764
Total Expenses	245,816	352,998	556,285	802,577	918,507	946,201	985,639	1,020,981	1,062,269	1,089,670
Annual Surplus/(Deficit)	342,184	276,750	117,915	(81,052)	(146,612)	(120,702)	(103,106)	(77,774)	(54,526)	(13,296)
Cumulative Surplus/(Deficit)	342,184	618,934	736,850	655,798	509,186	388,484	285,378	207,605	153,078	139,782
Total ERU	12,000	12,200	12,400	12,600	12,800	13,000	13,200	13,400	13,600	13,800
Monthly Fee (\$/ERU)	7.98	8.38	8.80	9.24	9.70	10.19	10.70	11.23	11.79	12.38
Annual Revenue	1,149,348	1,226,929	1,309,395	1,397,040	1,490,176	1,589,133	1,694,260	1,805,927	1,924,525	2,050,468
Rate Increase	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Capital Project Expenses	1,115,773	1,113,673	1,111,398	1,114,123	1,111,498	935,837	824,760	630,487	398,439	286,912
Maintenance Expenses	114,935	122,693	130,939	139,704	149,018	158,913	169,426	180,593	192,453	205,047
Homeowner Grants	11,493	12,269	13,094	13,970	14,902	15,891	16,943	18,059	19,245	20,505
Total Expenses	1,242,201	1,248,635	1,255,431	1,267,797	1,275,417	1,110,642	1,011,128	829,139	610,137	512,464
Annual Surplus/(Deficit)	(92,853)	(21,706)	53,963	129,242	214,758	478,491	683,131	976,788	1,314,388	1,538,005
Cumulative Surplus/(Deficit)	46,929	25,223	79,186	208,428	423,187	901,678	1,584,809	2,561,597	3,875,986	5,413,990

**Figure 4**  
**Monthly Fee for Sample Properties**

<b>Development Type</b>	<b>Parcel Area</b>	<b>Impervious Area</b>	<b>ERU</b>	<b>Monthly Fee @ \$4.90/ERU</b>
Office Medical	30,000	20,447	4.87	23.86
Convenience Store	47,728	30,666	7.30	35.78
Office and Warehouse	161,629	60,786	14.47	70.92
Office and Warehouse	129,014	79,292	18.88	92.51
Grocery Store	384,072	272,187	67.88	332.64
Light Industrial	1,123,412	637,652	151.82	743.93

**Debt Management**

The capital improvements plan for stormwater utilities requires the use of bonds to undertake needed improvements while keeping the fee as low as possible. The projections assume that the City will issue general obligation bonds and use stormwater utility revenues to pay all principal and interest. This approach provides the lowest cost of debt. These bonds will, however, count against the City’s debt limit. Debt management is an important factor in the City’s ongoing capital improvements planning.

The City has the authority to issue pure revenue bonds for these improvements. With general obligation bonds, the City pledges to levy property taxes to cover any shortfall in stormwater revenues. Revenue bonds are backed solely by stormwater revenues. The use of revenue bonds has several financial implications for the Utility:

- Interest rates will be higher. The difference will depend on the terms of the issue and the operation of the Utility. A range of 20 to 30 basis points should be expected.
- The City will be required to set fees that will create revenues that produce net income in excess of debt service. The scenarios in this memo with ongoing annual deficits would not be viable.
- The bond issue would include a debt service reserve fund. A portion of the bond proceeds would be set aside to make payments in the event of revenue shortfalls.

As a result, higher fees will be required with the use of revenue bonds to finance planned improvements.

## **Next Steps**

This memo is one step in the process of creating a plan to finance stormwater management improvements. It is important that City Council consideration of this information lead to the next steps in this process. There are three basic courses of action:

1. A Stormwater Utility is not desired and Staff should find other means of financing these improvements.
2. The proposed funding plan described in this memo is acceptable and Staff should take steps to establish the Utility pursuant to these terms.
3. Questions need to be answered and/or changes to the proposed plan need to be analyzed, In this case, direction to Staff and the Subcommittee is needed.