

TECHNICAL MEMORANDUM

To: Edward Schenk, Stormwater Section Director – City of Flagstaff, AZ
From: Sanjay Gaur, Founder/President – Water Resources Economics, LLC
Date: October 16, 2025
Re: Stormwater Financial Plan Review Technical Memorandum

INTRODUCTION

Water Resources Economics LLC (WRE) was engaged by the City of Flagstaff (City) in 2025 to conduct a review of the City’s Stormwater Financial Plan. The purpose of the study is to compare the financial projections from the prior rate study with the current projections, which are based on the City’s most recent financial and customer data. WRE completed the City’s Stormwater Rate Study in 2023, in which the City adopted stormwater rates up to Fiscal Year (FY) 2028. This technical memorandum summarizes the data, assumptions, and conclusions of the Stormwater Financial Plan Review.

GROWTH IN EQUIVALENT RESIDENTIAL UNITS

The City’s stormwater utility rate is assessed on an Equivalent Residential Unit (ERU) basis. The 2023 Stormwater Rate Study assumed approximately 98,255 ERUs in FY 2022, with a 1% increase in ERUs per year due to new development. Based on the assumptions from the prior study, the estimated units in FY 2026 were approximately 102,245 ERUs. City staff provided updated ERU data for FY 2026 at the beginning of this study, which resulted in an increase in ERUs compared to the prior projections due to an internal audit of impervious surface area and due to greater growth than previously anticipated. For FY 2026, the actual units are equal to 112,507 ERUs, which is an increase of 10,262 ERUs compared to the prior projections. For this study, WRE maintained a 1% increase in ERUs per year for new development.

The growth in ERUs resulted in stormwater utility rate revenues that were greater than the prior study projections. The estimated ERUs per year are multiplied by the stormwater utility rate (a monthly charge per ERU) to determine the estimated stormwater rate revenues per year, which is shown in **Table 1**.

Table 1: Calculated Stormwater Rate Revenues

Calculated Rate Revenue	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
ERU Count	112,507	113,632	114,768	115,916	117,075
Monthly Stormwater Rate per ERU	\$5.88	\$6.59	\$7.38	\$7.38	\$7.38
Estimated Stormwater Rate Revenues	\$7,938,494	\$8,986,024	\$10,163,889	\$10,265,528	\$10,368,183

FIVE-YEAR FINANCIAL ESTIMATES

The five-year financial estimates form the basis for the current year projections, which will be compared to the prior study projections in a later section. City staff provided the updated five-year financial data and estimates for FY 2026 through FY 2030, which is shown in **Table 2**. The stormwater service charge revenues

are equal to the calculated rate revenues developed in **Table 1**. The miscellaneous non-rate revenues and transfers in are derived from the City’s most recent five-year budget. The five-year operating expenses, debt service, rate funded capital improvement plan (CIP) costs, and transfers out are also derived from the City’s most recent five-year budget. The net revenue is equal to total revenues less operating expenses, and the net cash flow is equal to total revenues plus transfers in less expenses, debt service, rate funded CIP, and transfers out.

Table 2: Five-Year Stormwater Cash Flow Projections

Cash Flow Projections	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Revenues					
Stormwater Service Charge	\$7,938,494	\$8,986,024	\$10,163,889	\$10,265,528	\$10,368,183
Contributions	\$125,000	\$1,375,000	\$0	\$0	\$0
Miscellaneous	\$0	\$1,190,000	\$6,359,170	\$2,345,000	\$50,000
All Other Revenues	\$167,173	\$82,293	\$83,028	\$97,393	\$111,137
Total - Revenues	\$8,230,667	\$11,633,317	\$16,606,087	\$12,707,921	\$10,529,320
Transfers In	\$4,980,830	\$0	\$0	\$0	\$0
Expenses					
Operating Expenses	\$2,574,852	\$3,170,077	\$3,249,484	\$3,331,039	\$3,414,804
Operating Capital	\$165,000	\$70,000	\$70,000	\$70,000	\$70,000
Indirect Expenses	\$388,263	\$397,970	\$407,919	\$418,117	\$428,570
Contingency	\$2,000,000	\$0	\$0	\$0	\$0
Total - Expenses	\$5,128,115	\$3,638,047	\$3,727,403	\$3,819,156	\$3,913,374
Debt Service	\$1,359,131	\$2,642,863	\$2,812,430	\$2,913,830	\$2,992,187
Rate Funded CIP	\$6,730,142	\$5,636,879	\$8,927,575	\$5,483,988	\$2,900,000
Transfers Out	\$1,074,942	\$94,572	\$97,562	\$100,909	\$104,652
Net Revenue	\$3,102,552	\$7,995,270	\$12,878,684	\$8,888,765	\$6,615,946
Net Cash Flow	(\$1,080,833)	(\$379,044)	\$1,041,117	\$390,038	\$619,107

PRIOR RATE STUDY COMPARISON

The next step in the study is to compare the current projections with the prior rate study projections to evaluate the overall financial impact on the City’s stormwater utility. Although the five-year financial plan projections for this study are for FY 2026 through FY 2030, the comparisons to the prior rate study are from FY 2026 through FY 2028, since FY 2028 was the last year of the prior study. All comparisons will show the total impact over three years.

Table 3 shows the stormwater rate revenue comparison between the current and the prior rate study projections. The current projections are based on the calculations in **Table 1**, which are derived from a higher ERU count than was projected in the prior rate study. This change in ERUs results in an increase to stormwater rate revenues of approximately \$4.0 million in three years.

Table 3: Stormwater Revenue Comparison

Revenue Comparison	FY 2026	FY 2027	FY 2028	Total
Stormwater Service Charges				
Prior Study Projections	\$6,766,024	\$7,653,728	\$8,657,896	\$23,077,648
Current Projections	\$7,938,494	\$8,986,024	\$10,163,889	\$27,088,407
Difference (\$)	\$1,172,470	\$1,332,296	\$1,505,993	\$4,010,759
Difference (%)	17%	17%	17%	17%

Table 4 shows the stormwater expense comparison between the current year and the prior rate study projections. The three-year projections for current operating expenses and debt service both show a reduction compared to the prior rate study projections. Total operating expenses are approximately \$0.3 million less than prior study projections; total debt service costs are approximately \$1.2 million less than prior study projections. However, the rate funded CIP costs have increased substantially compared to the prior study, resulting in an increase of \$5.1 million over three years. Total expenses over three years have increased by approximately \$3.6 million, primarily due to the impact of increased rate funded CIP.

Table 4: Stormwater Expense Comparison

Expense Comparison	FY 2026	FY 2027	FY 2028	Total
Operating Expenses				
Prior Study Projections	\$4,497,229	\$4,560,226	\$3,781,159	\$12,838,614
Current Projections	\$5,128,115	\$3,638,047	\$3,727,403	\$12,493,565
Difference (\$)	\$630,886	(\$922,179)	(\$53,756)	(\$345,049)
Difference (%)	14%	-20%	-1%	-3%
Debt Service				
Prior Study Projections	\$1,358,130	\$3,321,624	\$3,321,190	\$8,000,944
Current Projections	\$1,359,131	\$2,642,863	\$2,812,430	\$6,814,424
Difference (\$)	\$1,001	(\$678,761)	(\$508,760)	(\$1,186,520)
Difference (%)	0%	-20%	-15%	-15%
Rate Funded CIP				
Prior Study Projections	\$2,224,412	\$6,790,674	\$7,172,501	\$16,187,587
Current Projections	\$6,730,142	\$5,636,879	\$8,927,575	\$21,294,596
Difference (\$)	\$4,505,730	(\$1,153,795)	\$1,755,074	\$5,107,009
Difference (%)	203%	-17%	24%	32%
Total Expenses				
Prior Study Projections	\$8,079,771	\$14,672,524	\$14,274,850	\$37,027,145
Current Projections	\$13,217,388	\$11,917,789	\$15,467,408	\$40,602,585
Difference (\$)	\$5,137,617	(\$2,754,735)	\$1,192,558	\$3,575,440
Difference (%)	64%	-19%	8%	10%

CAPITAL PROJECTS COMPARISON

The City’s prior rate study included CIP spending of approximately \$16.2 million between FY 2026 to FY 2028, which was assumed to be funded entirely by rates. The City’s current capital spending plan includes CIP spending of approximately \$61.4 million in the same timeframe, with approximately \$19.4 million being funded by debt proceeds and approximately \$20.7 million being funded by grant proceeds. The current year projections assume that approximately \$21.3 million of the three-year CIP is to be funded by rates. **Table 5** shows the comparison of the City’s capital funding plan between the current year and prior study projections.

Table 5: Stormwater CIP Comparison

Capital Funding Plan	FY 2026	FY 2027	FY 2028	Total
Prior Study Projections				
Debt Funded	\$0	\$0	\$0	\$0
Grant Funded	\$0	\$0	\$0	\$0
Rate Funded	\$2,224,412	\$6,790,674	\$7,172,501	\$16,187,587
Total - Capital Financing Plan	\$2,224,412	\$6,790,674	\$7,172,501	\$16,187,587
Current Projections				
Debt Funded	\$16,000,000	\$2,125,000	\$1,275,000	\$19,400,000
Grant Funded	\$2,700,000	\$14,193,251	\$3,825,000	\$20,718,251
Rate Funded	\$6,730,142	\$5,636,879	\$8,927,575	\$21,294,596
Total - Capital Financing Plan	\$25,430,142	\$21,955,130	\$14,027,575	\$61,412,847

The difference in capital spending is a result of three types of changes: changed projects, added projects, and deferred projects. Changed projects are defined as projects that are included in the prior study and the current year projections with a change in costs. Added projects are defined as projects that are included in the current year projections but not in the prior study. Deferred projects are defined as projects that were included in the prior study but were deferred to a timeframe after FY 2028 in the current year projections.

The changes in the Rio de Flag project resulted in the largest differences between the prior study and the current year projections. The prior study assumed zero CIP costs on the Rio de Flag project from FY 2026 to FY 2028, whereas the current year projections assume project costs of approximately \$25.9 million due to changes in overall project requirements and increases in construction costs over time. Other changed projects include the following, which resulted in a cost increase of approximately \$5.6 million over three years:

- Spot Improvements
- Stormwater Capital Reserve
- Fanning Wash at Steves Boulevard
- Fanning Wash Diversion
- Fanning Wash Channel Capacity Improvements
- Future Capital Projects

Added projects included the following, which resulted in a cost increase of approximately \$21.6 million between FY 2026 and FY 2028:

- Side Drain Lateral Santa Fe Avenue
- Big Fill Lake
- Meade Lane Project
- Shadow Mountain Detention Basin

Deferred projects included the following, which resulted in a cost decrease of approximately \$7.9 million over three years:

- Side Drain Lateral North Downtown
- Steves Wash at Soliere Avenue
- Columbia Circle
- Switzer Canyon Flood Detention Structure
- Mobile Haven Drainage Ditch Improvement
- Shadow Mountain-Monte Vista Drainage
- Smokerise Neighborhood Drainage

The increase in rate funded CIP between the prior study and the current year projections is equal to approximately \$5.1 million over the three-year comparison period, which is a result of the Rio de Flag project (increase of \$25.9 million), changed projects (increase of \$5.6 million), added projects (increase of \$21.6 million), and deferred projects (decrease of \$7.9 million) less debt proceeds (\$19.4 million) and grant proceeds (\$20.7 million).

CONCLUSION

The final step in this study is to compare the overall changes in projected revenues and expenses (operating expenses, debt service, and rate funded CIP) to evaluate the net financial impact between the City's prior study projections and the current projections, which are based on most recent financial and customer data.

Table 6 shows the comparison of stormwater rate revenues and total expenses over the three-year period, derived from the comparisons shown in **Table 3** and **Table 4**. The increase in ERUs in the current projections resulted in an increase of approximately \$4.0 million in stormwater rate revenues over three years. However, the increase in rate revenues is offset by the increase in total expenses over three years, equal to approximately \$3.6 million. The increase in total expenses in the current projections is due to an increase in rate funded CIP; operating expenses and debt service projections decreased overall from the prior study.

The net financial impact over the three-year period is equal to a net increase of approximately \$0.4 million to the stormwater utility. Overall, the City’s stormwater utility is in a similar financial position between the current projections and the prior study projections, with the increase in rate revenues due to growth being offset by increased CIP spending.

Table 6: Stormwater Revenues vs. Expenses

Revenues vs. Expenses	FY 2026	FY 2027	FY 2028	Total
Stormwater Service Charges				
Prior Study Projections	\$6,766,024	\$7,653,728	\$8,657,896	\$23,077,648
Current Projections	\$7,938,494	\$8,986,024	\$10,163,889	\$27,088,407
Difference (\$)	\$1,172,470	\$1,332,296	\$1,505,993	\$4,010,759
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Total Expenses				
Prior Study Projections	\$8,079,771	\$14,672,524	\$14,274,850	\$37,027,145
Current Projections	\$13,217,388	\$11,917,789	\$15,467,408	\$40,602,585
Difference (\$)	\$5,137,617	(\$2,754,735)	\$1,192,558	\$3,575,440
Difference (%)	64%	-19%	8%	10%
Net Difference (\$)	(\$3,965,147)	\$4,087,031	\$313,435	\$435,319