



Public Works & Utilities
Stormwater Management

Cost of Service Analysis

September 27, 2016



Why do a COSA?

- Stormwater Utility Fund deficit projected for year 2020.
- Renewal and replacement rate of \$950,000 is eroding Stormwater Utility Fund.
- Funding for Flood Control (levee) CIP projects shifted to the Stormwater Utility Fund in 2015 – eroding fund \$500,000 annually.
- Shifted Hot Spot funding (\$600,000 annually) to cover renewal and replacement of failing infrastructure.
- No funds available for large improvement projects – like Bleckley and others.

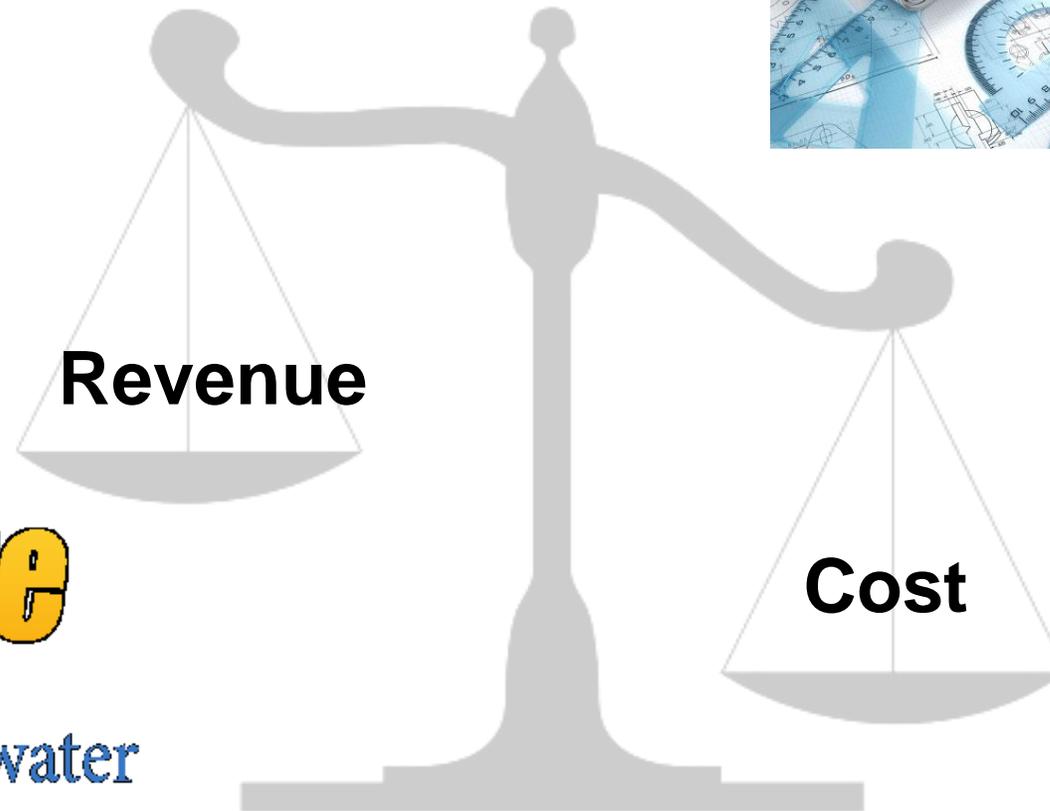
Why do a COSA?

- The existing ERU structure has remained the same since being adopted in 1992.
- The current ERU rate has remained unchanged since 2007.
- Additional revenue is needed to stabilize the Stormwater Utility Fund, maintain levee certification, keep pace with renewal and replacement, and fund utility improvements.

Fund Imbalance

- Residential ERU by account
- Commercial ERU by impervious area

Rate Structure
Stormwater

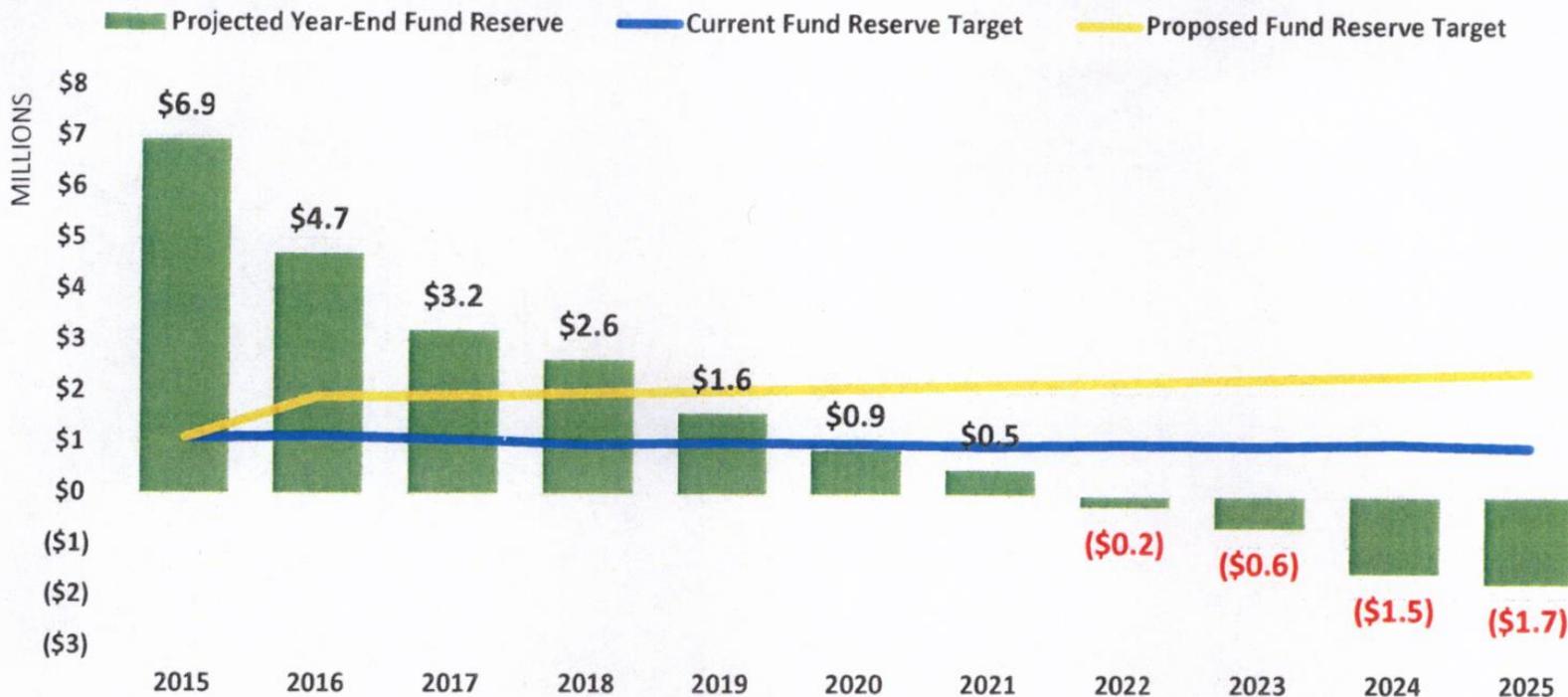


- Flood Control
- Operations
- Infrastructure Repairs
- CIP Projects



Current Fund Trajectory

Sc. #1: Baseline without Rate Increases



- Costs are outpacing revenue
- Fund deficit year 2020
- Fund reserve target \$1,000,000

History of Stormwater ERU Utility Rate

Year	Type of Change	Fee
1992	Utility formed	\$1.78
1993	Fee reduced	\$1.66
1995	Fee reduced	\$1.21
1999	Fee increased	\$1.27
2001	Fee increased	\$1.32
2002	Fee increased	\$1.35
2003	Fee increased	\$1.40
2004	Fee increased	\$1.45
2005	Fee increased	\$1.50
2006	Fee increased	\$1.75
2007	Fee increased	\$2.00

What Stormwater Funds Cover

- 1,214 miles of stormwater system and 108 miles of levee maintained
- 68,000 drainage structures maintained
- Maintenance required to meet the MS4 permit compliance
- Levee maintenance required to keep Corps certification
- Stormwater system maintenance paid 100% by City ERU
- Levee operating budget paid 50% City General Fund and 50% County
- Levee CIP projects paid 50% City ERU and 50% County

AMEC COSA Report Considerations

- Personnel expenses
- Capital outlay
- System repairs (Deferred maintenance \$24.7M)
- Baseline CIP commitment
- Flood Control (levees) CIP
- New Capital Improvements (\$56M)

AMEC Proforma Tool

Option 3 - Different Fees for Residential and Commercial and Option 4 - Add in Program Components												
Line #		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
		Year 0	1	2	3	4	5	6	7	8	9	10
Existing	Expenditures											
	Personal Services	\$ 2,606,973	\$ 2,684,160	\$ 2,760,974	\$ 2,840,207	\$ 2,921,942	\$ 3,006,260	\$ 3,093,248	\$ 3,182,995	\$ 3,275,595	\$ 3,373,925	\$ 3,475,371
	Capital Outlay (Equipment)	\$ 81,774	\$ 655,000	\$ 685,000	\$ 190,000	\$ 50,000	\$ 1,127,020	\$ 800,000	\$ 723,000	\$ 330,000	\$ 566,000	\$ 733,000
	Debt Service	\$ 3,516,824	\$ 3,491,704	\$ 2,748,917	\$ 2,742,982	\$ 2,731,563	\$ 2,519,288	\$ 1,910,235	\$ 1,901,411	\$ 1,893,834	\$ 1,877,042	\$ 1,218,026
	Hotspot	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000
	Other	\$ 3,249,091	\$ 3,333,428	\$ 3,416,765	\$ 3,502,184	\$ 3,589,739	\$ 3,679,482	\$ 3,771,469	\$ 3,865,756	\$ 3,962,400	\$ 4,061,460	\$ 4,162,996
	Baseline CIP	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
	Subtotal	\$ 10,904,662	\$ 11,614,293	\$ 11,061,656	\$ 10,725,373	\$ 10,743,243	\$ 11,782,050	\$ 11,024,952	\$ 11,123,162	\$ 10,911,828	\$ 11,328,427	\$ 11,039,394
New	Flood Control Operations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Deferred Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	NEW Capital Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Total: Expenses	\$ 10,904,662	\$ 11,614,293	\$ 11,061,656	\$ 10,725,373	\$ 10,743,243	\$ 11,782,050	\$ 11,024,952	\$ 11,123,162	\$ 10,911,828	\$ 11,328,427	\$ 11,039,394
	Other Revenues											
	Estimated Under-Spending of Budget	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Other Fees and Charges	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Interest Income	\$ 82,182	\$ 76,668	\$ 62,150	\$ 54,790	\$ 63,461	\$ 77,373	\$ 85,826	\$ 92,983	\$ 103,823	\$ 115,577	\$ 126,643
	G.O. Bonded Funds											
Total: Other Revenues	\$ 82,182	\$ 76,668	\$ 62,150	\$ 54,790	\$ 63,461	\$ 77,373	\$ 85,826	\$ 92,983	\$ 103,823	\$ 115,577	\$ 126,643	
Service Fee Revenue Requirement	\$ 10,822,480	\$ 11,537,625	\$ 10,999,506	\$ 10,670,584	\$ 10,679,783	\$ 11,704,676	\$ 10,939,126	\$ 11,030,180	\$ 10,808,005	\$ 11,212,850	\$ 10,912,751	
Revenue Reduction Allowances + Debt												
Bad Debt	\$ 90,000	\$ 90,000	\$ 122,784	\$ 123,030	\$ 123,276	\$ 123,522	\$ 123,770	\$ 124,017	\$ 124,265	\$ 124,514	\$ 124,763	
Offsets and Credits	\$ 43,619	\$ 46,457	\$ 66,493	\$ 126,704	\$ 171,892	\$ 235,641	\$ 220,499	\$ 222,463	\$ 218,237	\$ 226,569	\$ 220,788	
Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total: Revenue Reduction Allowances	\$ 133,619	\$ 136,457	\$ 211,278	\$ 251,734	\$ 295,168	\$ 359,163	\$ 344,269	\$ 346,480	\$ 342,502	\$ 351,082	\$ 345,551	
Adjusted Service Fee Revenue Requirement	\$ 10,956,099	\$ 11,674,082	\$ 11,210,783	\$ 10,922,318	\$ 10,974,950	\$ 12,063,840	\$ 11,283,395	\$ 11,376,660	\$ 11,150,506	\$ 11,563,932	\$ 11,258,301	
Calculated Service Fee Needed												
ERU Revenue Requirement	\$ 10,956,099	\$ 11,674,082	\$ 11,210,783	\$ 10,922,318	\$ 10,974,950	\$ 12,063,840	\$ 11,283,395	\$ 11,376,660	\$ 11,150,506	\$ 11,563,932	\$ 11,258,301	
Number of ERUs	425,548	426,399	427,252	428,107	428,963	429,821	430,680	431,542	432,405	433,270	434,136	
Calculated Monthly Charge per ERU	\$ 2.15	\$ 2.28	\$ 2.19	\$ 2.13	\$ 2.13	\$ 2.34	\$ 2.16	\$ 2.20	\$ 2.15	\$ 2.22	\$ 2.16	
Service Fee Recommendation												
Recommended Monthly Charge per ERU	See Right	See Right	See Right	See Right	See Right	See Right	See Right	See Right	See Right	See Right	See Right	
Estimated Annual ERU Revenue	\$ 12,253,922	\$ 12,278,430	\$ 12,302,986	\$ 12,327,592	\$ 12,352,248	\$ 12,376,952	\$ 12,401,706	\$ 12,426,509	\$ 12,451,362	\$ 12,476,265	\$ 12,501,218	
Beginning Balance	\$ 8,218,161	\$ 7,115,471	\$ 5,314,505	\$ 5,643,427	\$ 7,048,701	\$ 8,425,998	\$ 8,739,111	\$ 9,857,422	\$ 10,907,271	\$ 12,208,127	\$ 13,120,460	
Operating Margin	\$ 1,297,823	\$ 604,348	\$ 1,092,203	\$ 1,405,274	\$ 1,377,297	\$ 313,112	\$ 1,118,311	\$ 1,049,850	\$ 1,300,856	\$ 912,333	\$ 1,242,916	
Ending Balance	7115471	5374505	5,643,427	7,048,701	8,425,998	8,739,111	9,857,422	10,907,271	12,208,127	13,120,460	14,363,377	
Ending Balance/ERU Rev Requirement	65%	46%	50%	65%	77%	72%	87%	96%	109%	113%	128%	

Make Adjustments Here Only

\$ -	Estimated Historic Budget Underspending		
10	# Years to Carry Underspending		
see below	User Fee		
\$ 950,000	Deferred maintenance and maybe some Hotspots		
0	Flood Control Operations	0% % of max	
0	Deferred Maintenance	0% % of max	
0	NEW Capital Improvements	0% % of max	
\$ -	2.00 Residential Fee		
\$ 2.00	Commercial Fee		
135,631	Residential ERUs	Factor	0.7182
289,917	Commercial ERUs		
\$ 1.25	Base Rate Per Account		
120,642	Residential # Accounts		
15,409	Commercial # Accounts		
-	"1" = Residential Flat Rate, "0" = Residential IA-based ERUs		
425,548	Current ERU Estimate - Residential IA ERU Estimate		
410,559	Current ERU Estimate - Residential Flat Rate		

<- Insert New G.O. Bond Issuance Year by Year here

ERU	Base Rate
Annual inflation	Annual inflation
0.000	0.000

- Considers all expenditures
- Explores various revenue strategies
- Vary assumptions to analyze numerous options
- Establishes a fund trajectory

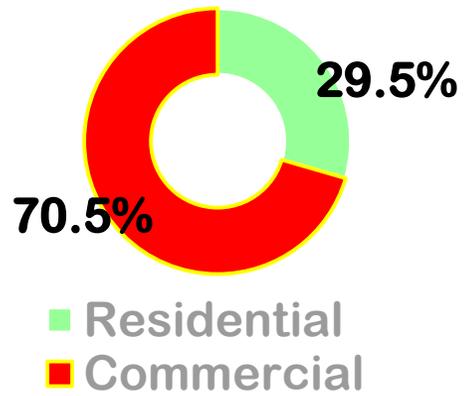
New Revenue Considerations

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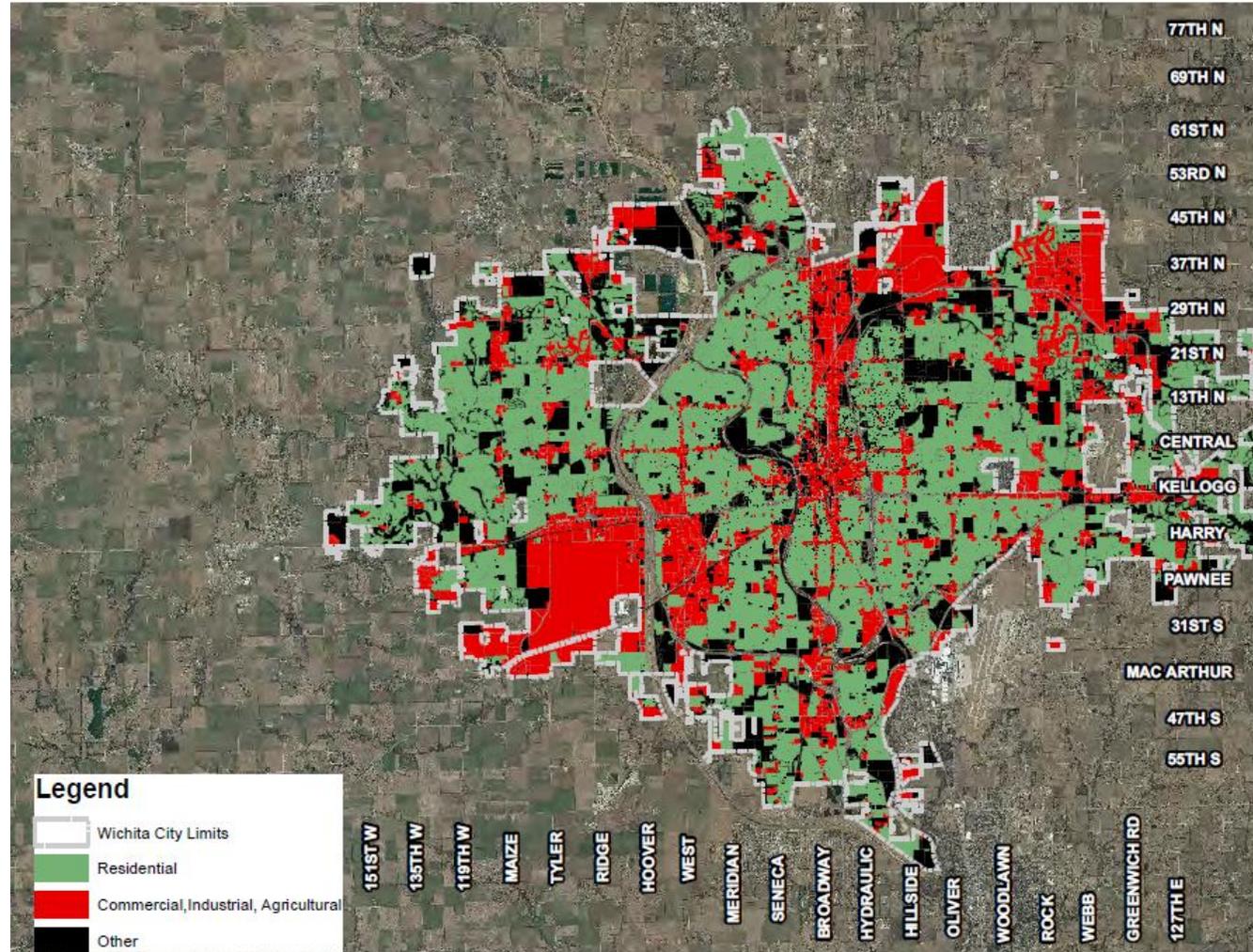
- Commercial ERU structure stays the same
- Residential ERU's restructured based on area of impervious area, similar to commercial
- A base rate planned for both residential and commercial beginning January 2017
- Residential rates restructured into tiers beginning January 2018

Need to Consider ERU Equity

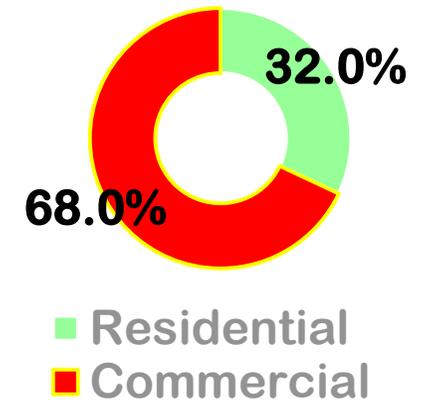
Current ERU



Commercial Customers currently provide 13% of the accounts and 70.5% of the revenue



Proposed ERU



Residential tiers would shift 2.5% of ERU from Commercial to Residential

Stormwater COSA Options

Option 1 – Do nothing

Fund Sustainability



Rate Equity



Drainage Improvements



Fund Impact:

Unsustainable – financial cliff in year 2020

Revenue strategy:

Unchanged; current \$2.00 ERU all customers

Service level:

(Status quo) \$950,000 renewal and replacement; no drainage improvements

Customer impact: No change. All customers currently pay \$2.00 per ERU. All residential customers are charged 1-ERU regardless of lot size and pay \$2.00 per month. Commercial bills are calculated based on square feet of impervious surfaces on the lot.

Stormwater COSA Options

Option 2 –Combination Residential Rate Classes and \$0.50 Base Rate

Fund Sustainability



Rate Equity



Drainage Improvements



Fund Impact:

Fund stability – avoids financial cliff

Revenue strategies:

\$2.00 ERU all customers; 4-step Residential Rate Classes; \$0.50 Base Rate all customers

Service level:

(Status quo) \$950,000 renewal and replacement; no drainage improvements

Residential Rate Class	Number of ERU	Monthly Bill	Customer Impact
Class 1	0.5 ERU	\$1.50	Monthly bill decreases By \$0.50
Class 2	1.0 ERU	\$2.50	Monthly bill increases by \$0.50
Class 3	2.0 ERU	\$4.50	Monthly bill increases by \$2.50
Class 4	3.0 ERU	\$6.50	Monthly bill increases by \$4.50

Stormwater COSA Options

Option 3 – Combination Residential Rate Classes and \$1.00 Base Rate

Fund Sustainability



Rate Equity



\$600,000 Drainage Improvements



Fund Impact:

Fund stability – avoids financial cliff

Revenue strategies:

4-step Residential Rate Classes; \$1.00 Base Rate all customers

Service levels:

(Increased) \$950,000 renewal and replacement; Adds \$600,000 annual revenue for new drainage improvement projects

Residential Rate Class	Number of ERU	Monthly Bill	Customer Impact
Class 1	0.5 ERU	\$2.00	Monthly bill unchanged
Class 2	1.0 ERU	\$3.00	Monthly bill increases by \$1.00
Class 3	2.0 ERU	\$5.00	Monthly bill increases by \$3.00
Class 4	3.0 ERU	\$7.00	Monthly bill increases by \$5.00

Stormwater COSA Options

Option 4 - Combination Residential Rate Classes and \$1.50 Base Rate

Fund Sustainability



Rate Equity



\$1,400,000 Drainage Improvements



Fund Impact:

Fund stability – avoids financial cliff

Revenue strategies:

4-step Residential Rate Classes; \$1.50 Base Rate all customers

Service levels:

(Increased) \$950,000 renewal and replacement; Adds \$1,400,000 annual revenue for new drainage improvements

Residential Rate Class	Number of ERU	Monthly Bill	Customer Impact
Class 1	0.5 ERU	\$2.50	Monthly bill increased by \$0.50
Class 2	1.0 ERU	\$3.50	Monthly bill increases by \$1.50
Class 3	2.0 ERU	\$5.50	Monthly bill increases by \$3.50
Class 4	3.0 ERU	\$7.50	Monthly bill increases BY \$5.50

Customer Impact Residential

Current

- All residential customers are charged \$2.00 for 1 ERU
- Everyone pays the same regardless of impervious area

Monthly Bill

- All residential customers pay \$2.00

Recommended

- Residential customers charged based on impervious area
- Residential customers pay \$1.50 base fee

Class	ERU	Base Rate	Total Bill
1	\$1.00	\$1.50	\$2.50
2	\$2.00	\$1.50	\$3.50
3	\$4.00	\$1.50	\$5.50
4	\$6.00	\$1.50	\$7.50

Customer Impact Commercial

Current

- Commercial customers are charged based on impervious area
- Customers pay differing amounts

Monthly Bill – 5 Largest Customers

▪ No. 1	pays	\$13,782
▪ No. 2	pays	\$ 3,977
▪ No. 3	pays	\$ 3,625
▪ No. 4	pays	\$ 3,582
▪ No. 5	pays	\$ 3,184

Recommended

- Maintain current ERU structure
- Add \$1.50 base rate

Monthly Bill Results

- All commercial customers pay \$1.50 more for the base rate

Failing Infrastructure

\$950,000 annual R&R holds failure rate steady – does not gain ground



PUBLIC SAFETY

Storm sewer collapse
1st Street Bridge

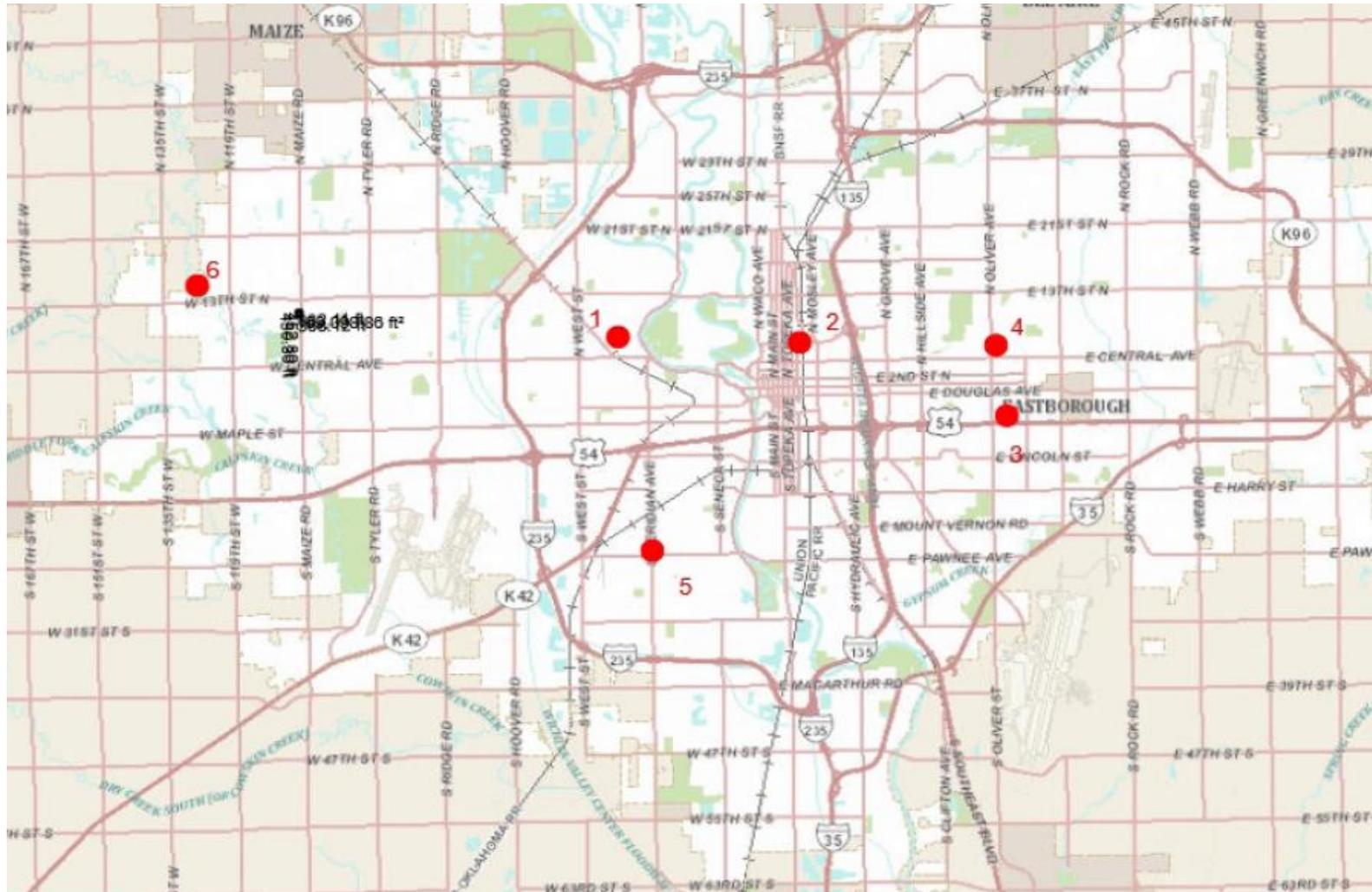


Channel armor collapse
I-135 Canal

FLOOD PROTECTION



CIP Project Site Map



1. 9th St N Outfall Phase I
2. Murdock & Wabash SWS Improvements
3. Bleckley Drain – Kellogg to Douglas
4. Bleckley Drain – Douglas to 13th St N
5. Meridian Drainage Outfall Phase 2
6. Cowskin Creek land acquisition for flood control

CIP Project Examples

AMEC report identified \$56,000,000 in future CIP needs.

Example CIP Drainage Project	Annual Funding from COSA	Project Cost	Years to Accumulate Funds
9 th North Outfall Phase I	\$1,400,000	\$6,000,000	4.3
Murdock & Wabash SWS improvements	\$1,400,000	\$2,200,000	1.6
Bleckley Drain – Kellogg to Douglas	\$1,400,000	\$5,000,000	3.6
Bleckley Drain Douglas to 13 th Street N.	\$1,400,000	\$5,000,000	3.6
Meridian Drainage Outfall Phase II	\$1,400,000	\$5,000,000	3.6
Land Acquisition for Cowskin Creek flood control	\$1,400,000	\$2,000,000	1.4

Recommendation: Option 4

- Establishes \$1.50 Base Rate for all customers and restructures residential ERUs into 4 rate classes based on impervious area.
- Provides some rate equity
- Revenue stabilizes the Stormwater Utility Fund
- Sustains current utility operations
- Provides \$950,000 annually for renewal and replacement of existing utility infrastructure
- Accumulates \$1.4 million annually to fund needed drainage system improvements.

Discussion



Stormwater Cost of Service Analysis

Public Works & Utilities/Stormwater Management

Serving You, In Many Ways, Every Day

