

Paying For Stormwater – Engaging The Community

Presented by:
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1 Stormwater System Overview



City's Stormwater System

231 miles of stormwater mains

11,000 catch basins / inlets

7,053 manholes

212 outfalls

783 miles of roadway curb and gutters

2 surface detention basins

Stormwater ultimately goes to Huron River

None receives advanced treatment

Sanitary goes directly to Wastewater Treatment Plant

What is Stormwater Management?

- Asset Management
 - Operations
 - Maintenance Scheduling/Work Orders
 - Asset Inventory
- Capital Improvements
- Regulatory Programming & Enforcement
 - State/Federal Water Quality Regulations
 - Floodplain Programming and Implementation
- Forestry (Street Trees)
- Green Streets Policy
 - Capital investment of public stormwater system
 - Green infrastructure
- Public Education & Outreach

What is a Stormwater Utility?

- A dedicated funding source to support an administrative organization that plans, designs, constructs and maintains a stormwater management system, sediment and flood control programs and projects, and provides education.
 - Functions like the City's water and wastewater utilities
- Customers' fee are based on Impervious Area

Age of the Stormwater System

Decade Constructed	Feet of Main	Miles of Main	Percent of Total
1900s	410	0.08	0.03%
1910s	52,545	9.95	4.29%
1920s	135,768	25.71	11.09%
1930s	40,451	7.66	3.30%
1940s	37,775	7.15	3.09%
1950s	197,359	37.38	16.12%
1960s	303,638	57.51	24.80%
1970s	149,789	28.37	12.24%
1980s	69,027	13.07	5.64%
1990s	114,035	21.60	9.32%
2000s	60,835	11.52	4.97%
2010s	6,689	1.27	0.55%
unknown	55,837	10.58	4.56%
TOTAL	1,224,158	231.85	

21.8%

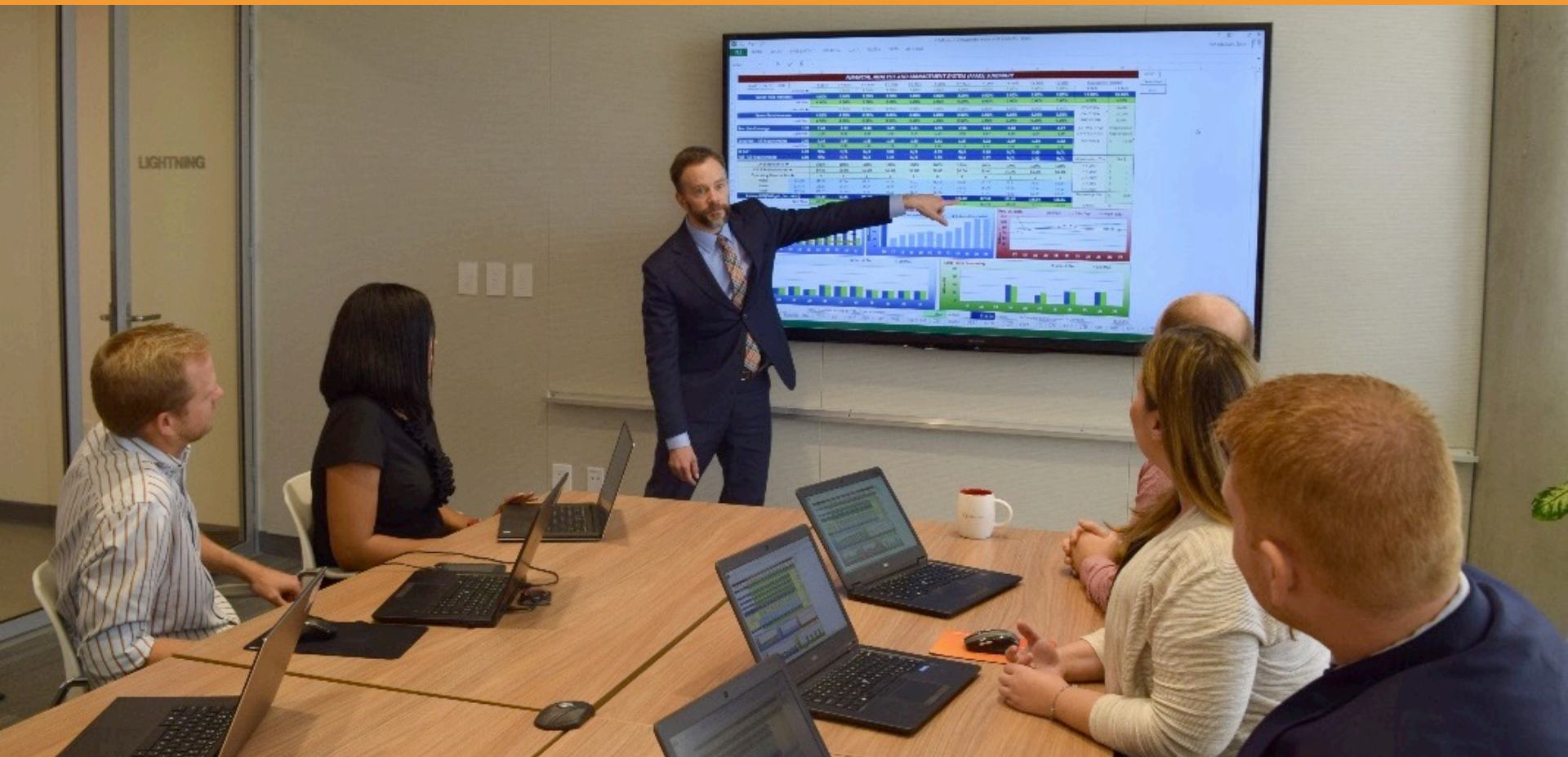
53.2%

25%

Funding Challenges

- While revenues have increased, the stormwater system faces significant funding challenges
- Current revenues are insufficient to address:
 - Capital funding needs
 - Aging infrastructure
 - System improvements
 - Addition of Funding of Green Streets Policy & Street Trees
 - Increasing regulatory requirements
 - Community level of service expectations

2 Rate Study Overview



Study Objectives

- **Projection of full cost of service**
 - Develop multi-year financial management plan
 - Integrate desired level of service (LOS) and system needs
- **Evaluate stormwater cost allocation and fee structure**
- **Engage community stakeholders**
 - Solicit input and comments regarding community expectations related to stormwater service
- **Develop dynamic model for future use**
 - Long-term sustainability & ongoing financial management

Public Engagement

- **Town Hall Meeting**
 - June 14, 2016
- **Online Survey**
 - August 2016
- **Advisory Group**
 - Served as sounding board and briefed at all key points in study

Advisory Group

Invited a cross-section representative from various community sectors to be a part of the Advisory Group

- ✓ University of Michigan
- ✓ Residents
- ✓ Apartment owners
- ✓ Rental owners
- ✓ Climate Adaptation experts
- ✓ Public Education Experts
- ✓ Washtenaw County Water Resources Commissioner's Office
- ✓ Huron River Watershed Council

Areas of Importance in SW Utility

Indicate which areas funded by the stormwater utility are most important?

1. O&M of Infrastructure (91.7%)
2. Capital Improvements to Utility (70.6%)
3. Urban Forestry and Street Tree Programs (60.6%)
4. Regulatory Compliance (53.2%)
5. Green Streets Policy (39.4%)
6. Stormwater Utility Education & Outreach (29.4%)

Important Principles of SW Utility

Which of the following principles of stormwater management are most important to you?

1. Protect public health, safety, welfare, and environment
2. Utilize green infrastructure when feasible (tied for #2)
3. Consider climate change and resiliency (tied for #2)
4. Educate and inform the public about stormwater management
5. Provide an understandable, equitable rate structure
6. Cross-collaborate with other agencies and leverage all available resources
7. Use incentives to guide desired behaviors
8. Encourage shared responsibility

Quarterly SW Utility Residential Rate

Indicate the residential rate that you currently pay per quarter for stormwater services.

47.7% Unknown

18.3% 0.07 acres (\$28)

11% 0.04 acres (\$16)

10.1% 0.21 acres (\$84)

9.2% 0.12 acres (\$48)

3.7% Not applicable

#1 Concern Regarding Stormwater

Indicate the number one concern that you have regarding stormwater.

1. Flooding of dwellings and structures (47.7%)
2. Pollution of our rivers and streams (25.7%)
3. Maintaining stormwater infrastructure (13.8%)
4. Preservation of floodplains (8.3%)
5. Flooding of roads (1.8%)
6. Streambank erosion control and restoration (1.8%)
7. Public education and outreach (0.9%)

Approach to the Rate Study



Revenue Requirements

- O&M Expenses
- Debt Service
- Capital Improvements
- Asset Management
- Minor Capital Outlays
- Reserves

Cost Allocation & Fee Design

- Review customer types
- Fair/Equitable
- Compare Allocations to Current Revenues
- Evaluate Objectives
- Identify Options That Recover Req. Revenue

Credits & Incentives

- Evaluate and update Stormwater credits
- Evaluate potential new credits and incentives

Advisory Group Active Participation

3 Revenue Requirements



Revenue Requirement Components



Stormwater O&M Budget Increases

Best Management Practices (\$200k / year)

- Increased stormwater BMP inspection and illicit discharge elimination inspections

Tree Pruning (\$700k / year)

- Increased pruning & maintenance of the 43,000 right of way trees

CCTV Frequency (\$700k / year)

- Increased frequency - 20% of the system every 5 years, the rest 20 year cycle

Field Operations (\$150k / year)

- additional stormwater work associated with street resurfacing

Green Infrastructure (\$200k / year)

- Provide funding for the maintenance requirements of existing and new green infrastructure

Public Engagement (\$150k / year)

- List of initiatives and plan - TBD

Enhance Proactive Asset Management (\$870k / year)

- Maintenance/Inspection and Condition Assessment
- Provides increased funding for City & WCWRC rehabilitation and emergency repairs

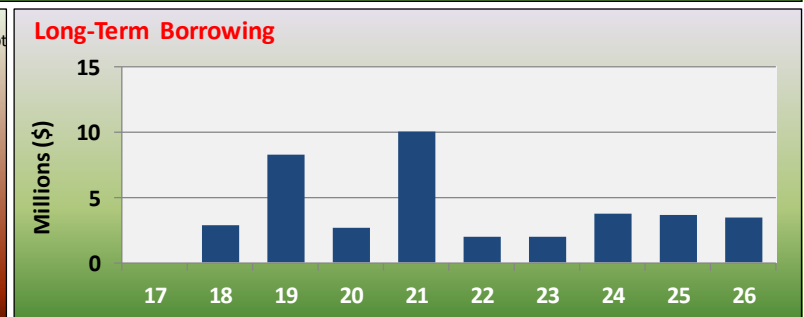
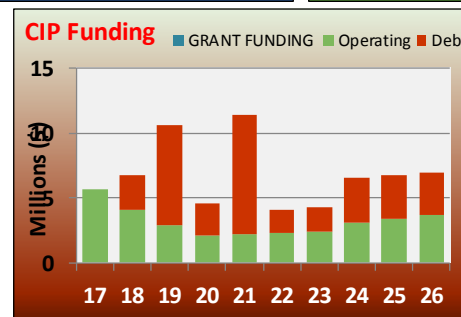
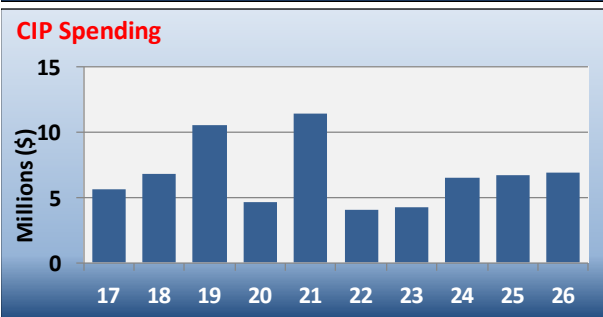
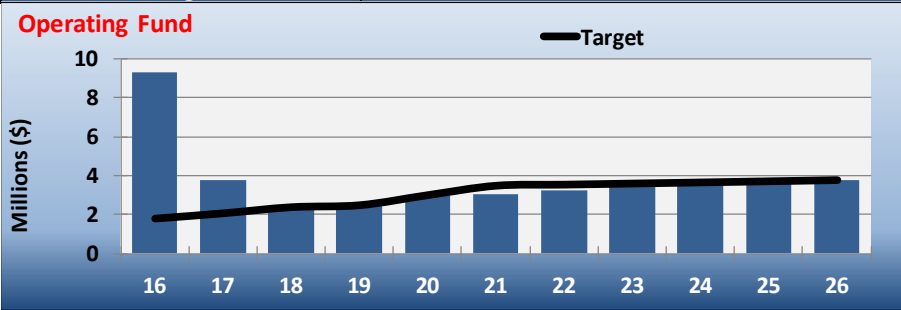
Budgetary Increase Plan

	FY 2018	FY 2019	FY 2020	FY 2021
Tree Pruning	\$700,000	\$700,000	\$700,000	\$700,000
Public Engagement	\$150,000	\$150,000	\$150,000	\$150,000
		Best Management Practices		
		\$200,000	\$200,000	\$200,000
		Field Ops		
		\$150,000	\$150,000	\$150,000
		Green Inf. Mant.		
		\$200,000	\$200,000	\$200,000
			System Repair and R&R	
			\$920,000	\$920,000
				Sewer Inspection & Cleaning
				\$650,000
Yearly Total	\$ 850,000	\$ 550,000	\$ 920,000	\$ 650,000
Cumulative Total	\$ 850,000	\$ 1,400,000	\$ 2,320,000	\$ 2,970,000

- ▶ Total O&M Enhancements = \$2.97M; FY 2017 O&M Budget = \$5.22M
- ▶ Plan recommended by Advisory Group due to funding & practical limitations as well as the prioritization of and coordination with other key initiatives

Stormwater Financial Plan - Example

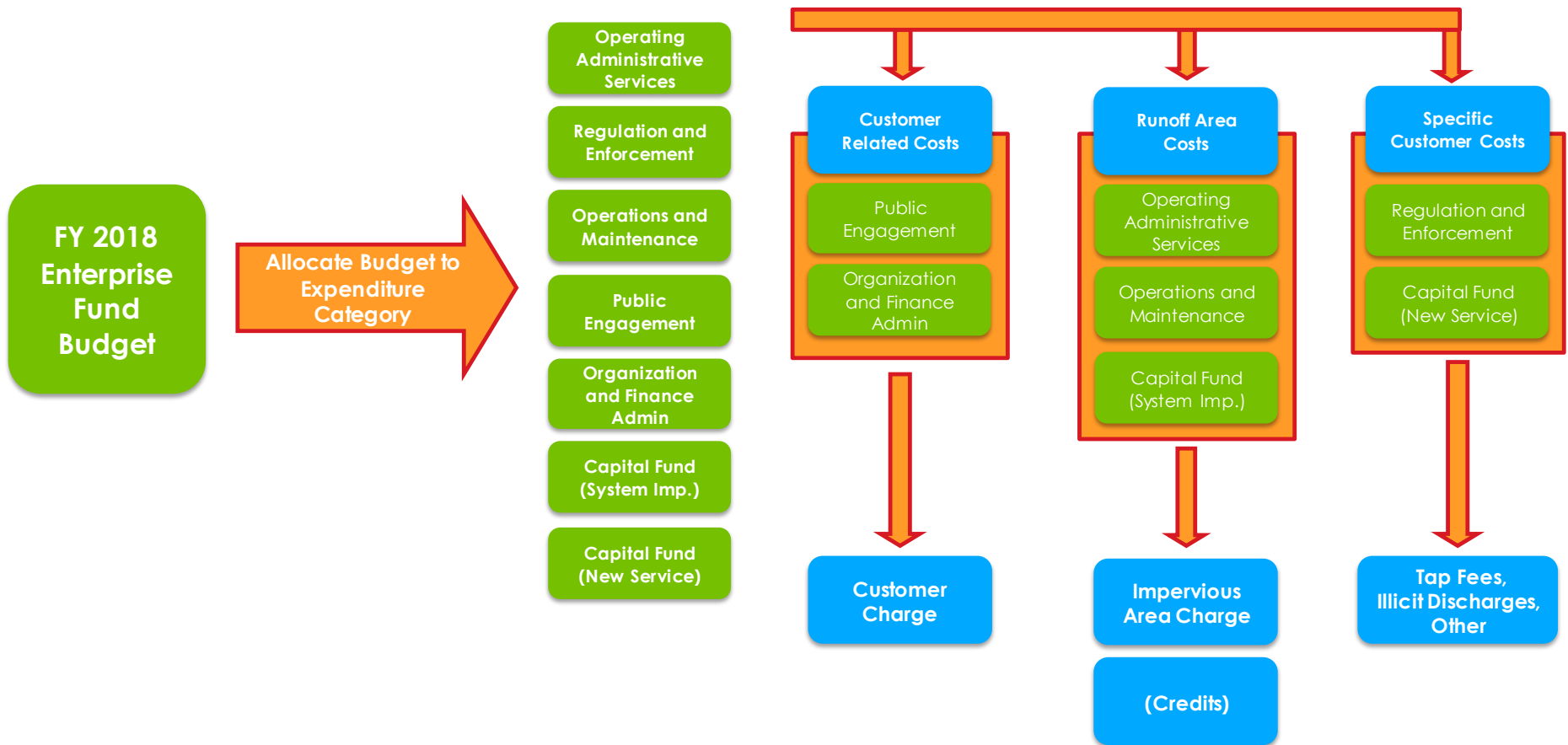
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Cumulative Change		
Impervious Area Charges	0.00%	35.00%	10.00%	10.00%	10.00%	5.00%	5.00%	5.00%	5.00%	5.00%	59.38%	92.18%	
Administrative Charges	0.00%	-42.19%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	Option		Start Year
Rate Covenant	19.60	17.59	8.20	5.39	3.66	3.24	3.28	3.22	3.13	3.07	Non-LOS Options		
CIP \$ Redistribution ►	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	BMP maint/ins	\$ 200,000	FY 2021
CIP Execution % ►	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	Tree Pruning	\$ 100,000	FY 2019
											CCTV Freq.	\$ 650,000	FY 2021
											Field Ops. CS	\$ 150,000	FY 2019
											Green Inf. Mant.	\$ 200,000	FY 2018
Base Rate	\$6.77	\$6.77	\$3.91	\$3.99	\$4.07	\$4.15	\$4.24	\$4.32	\$4.41	\$4.50	LOS Options		
2,187 - 4,175 ft2	\$29.75	\$29.75	\$38.62	\$42.48	\$46.73	\$51.40	\$53.97	\$56.67	\$59.50	\$62.47	Public Eng.	\$ 150,000	FY 2018
Quarterly Bill	\$36.52	\$42.53	\$46.47	\$50.80	\$55.55	\$58.20	\$60.99	\$63.91	\$66.97	\$70.18	OHM	3	FY 2020
Change \$		\$6.01	\$3.94	\$4.33	\$4.75	\$2.65	\$2.78	\$2.92	\$3.06	\$3.21	Operations		
Change %		16.46%	9.26%	9.31%	9.36%	4.78%	4.78%	4.79%	4.79%	4.80%	Debt Service Res.	\$1,500,000	



4 Cost Allocation & Fee Design



Cost Allocation Framework



Cost Based Fee Schedule (Quarterly)

(Includes 28% revenue increase for FY18)

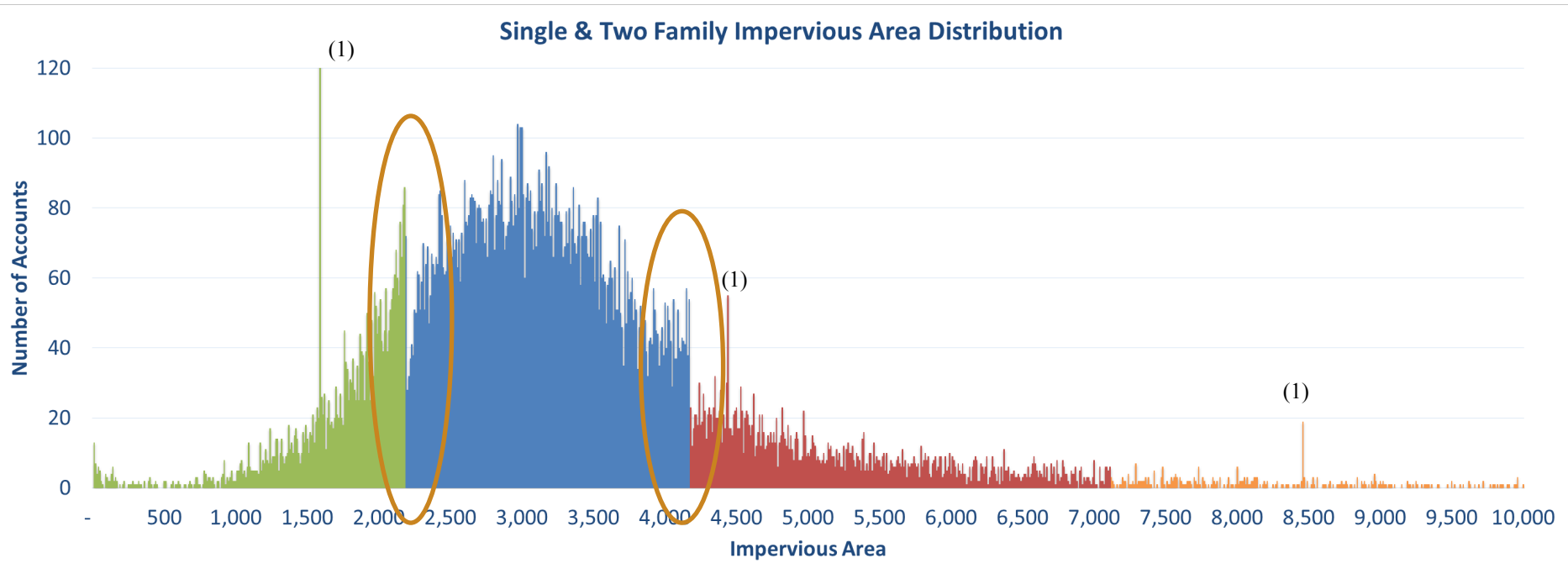
Residential	Cost Based	Current
Customer Charge	\$3.91	\$6.77
Impervious Charges		
Up to 2,187 square feet	\$22.07	\$17.00
> 2,187 to 4,175 square feet	\$38.62	\$29.75
> 4,175 to 7,110 square feet	\$66.20	\$51.00
> 7,110 square feet	\$115.85	\$89.25

Non-Residential	Cost Based	Current
Customer Charge	\$3.91	\$6.77
Impervious Charge Per Acre	\$595.45	\$425.00

Fee Structure Evaluation

- **As part of prior study (2007) the City adopted a tiered structure for residential properties**
 - Tiers were developed based on the statistical distribution of impervious area within the residential customer class
 - Reviewed the impacts and appropriateness of the current residential fee structure
 - Current statistical distribution of residential impervious area
- **Evaluated changes in impervious area per parcel since the 2007 study and resulting impacts of the fee structure**

Current Single & Two-Family Impervious Area Distribution



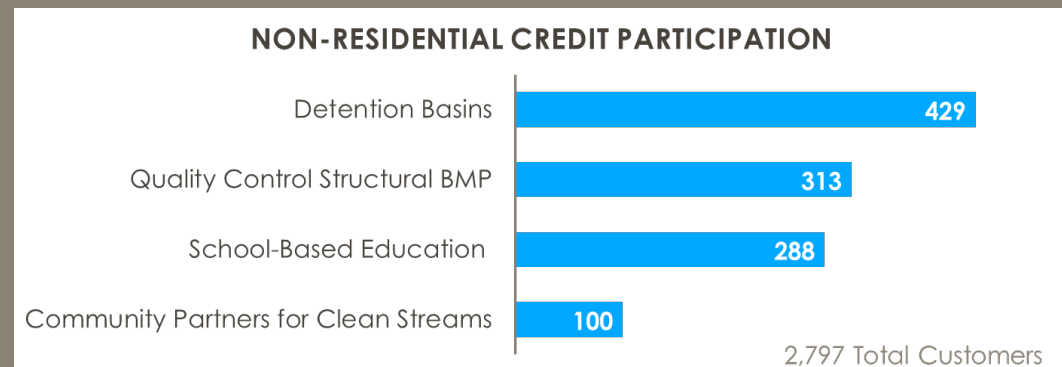
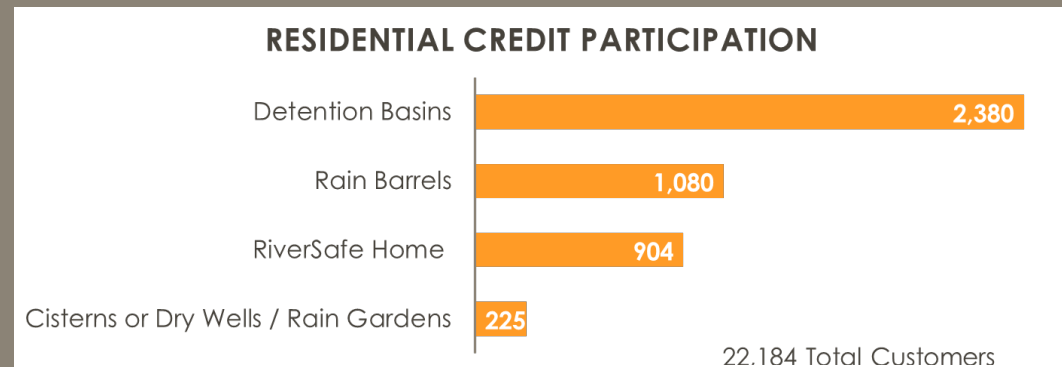
- ✓ Fee structure has resulted in reductions/awareness of impervious area
- ✓ Statistical analysis revealed that current tiers are still appropriate

5 Credits & Incentives



Stormwater Credit Background

- ▶ Intended to reflect reductions of stormwater through detention or retention stemming from parcel-specific investments
- ▶ Key element of a stormwater user fee structure, as it allows consumers to control their “use of the system” (Bolt vs. Lansing)
- ▶ Last evaluated in 2007
 - ▶ Adjusted annually consistent with rates



Potential Additional Credits/Incentives

Two additional credit opportunities were identified

1. **Green roofs** - offered as a reduction in impervious area based upon the area of the roof
2. **Tree canopy credits** - offered as a reduction in impervious area based on specific tree canopy (typically non-residential)

Specific details/program parameters would need to be established

- Communities have offered rebates for tree planting in addition to or in place of tree canopy credits
- Typically just residential customers

Questions & Discussion

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