



Stormwater Management Utility Guidebook

June 30, 2026



Stormwater Management Utility Guidebook

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Today's agenda

- I. Welcome
- II. Introduction to Stormwater Management Utilities
- III. Brief Legal History of Stormwater Utilities
- IV. Stormwater Management Utility – Phase 1 Summary
- V. Stormwater Management Utility – Phase 2 Summary
- VI. Brief Overview of Appendices
- VII. Case Study: Ann Arbor
- VIII. Questions

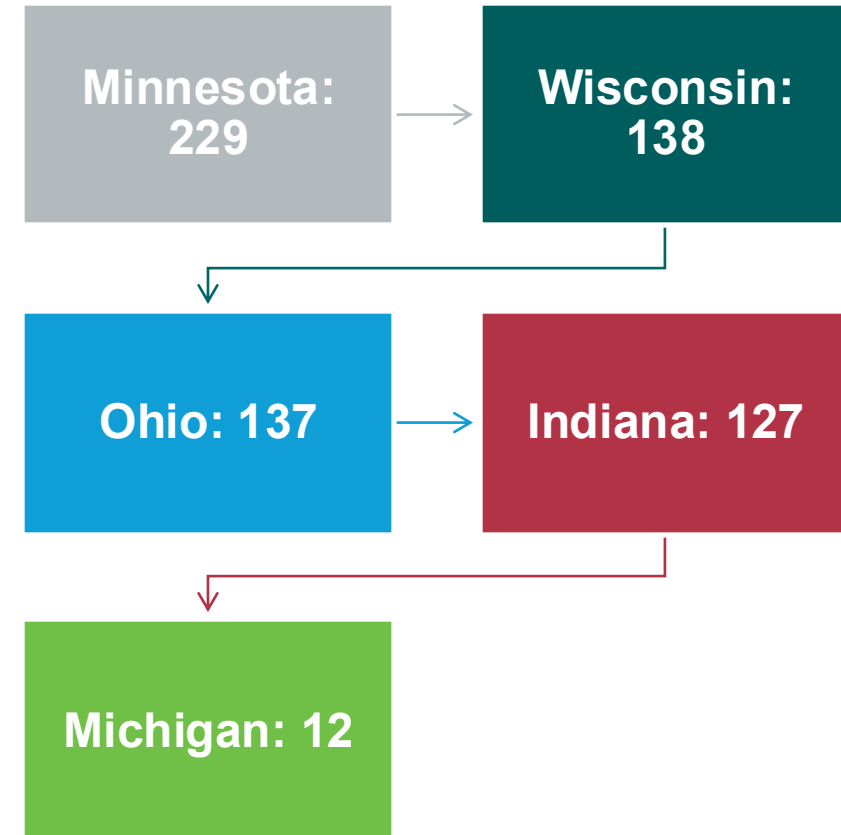
From *Bolt* to *Binns*: A Legal History of Stormwater Utilities in Michigan

Sara Rubino
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Stormwater Utilities

- Formal approach to planning, funding, and managing stormwater infrastructure.
- Administered and funded separately from general funds, ensuring a dedicated revenue source for stormwater management.
- Funds used **only** for the cost of municipal services directly related to the management and treatment of stormwater.
- Many stormwater utilities in all 50 states, plus D.C.*



**Sources: Western Kentucky University Stormwater Utility Survey 2023; University of North Carolina, School of Government Environmental Finance Center, The Geography of Stormwater Utilities*



The Headlee Amendment (Michigan Constitution, 1978)

What it is: A constitutional amendment passed during a wave of taxpayer backlash against rising local government taxes in the late 1970s.

Purpose: To limit the ability of local governments to raise revenue through new taxes without voter approval.

Key provisions:

- Requires **voter approval** for new local taxes or increases in existing tax rates.
- Limits growth in local government revenue to inflation plus population growth.
- Provides taxpayers legal recourse to challenge unauthorized taxes.



What's Bolt got to do with it?

***Bolt v City of Lansing* (456 Mich. 949 (1998))**

[December 28, 1998 – Supreme Court Published Opinion](#)

Fee-funded stormwater utilities are lawful and constitutional provided they meet the *Bolt* criteria.



1. Regulatory

"A user fee must serve a regulatory purpose rather than a revenue-raising purpose."



2. Proportionate

"User fees must be proportionate to the necessary costs of the service."



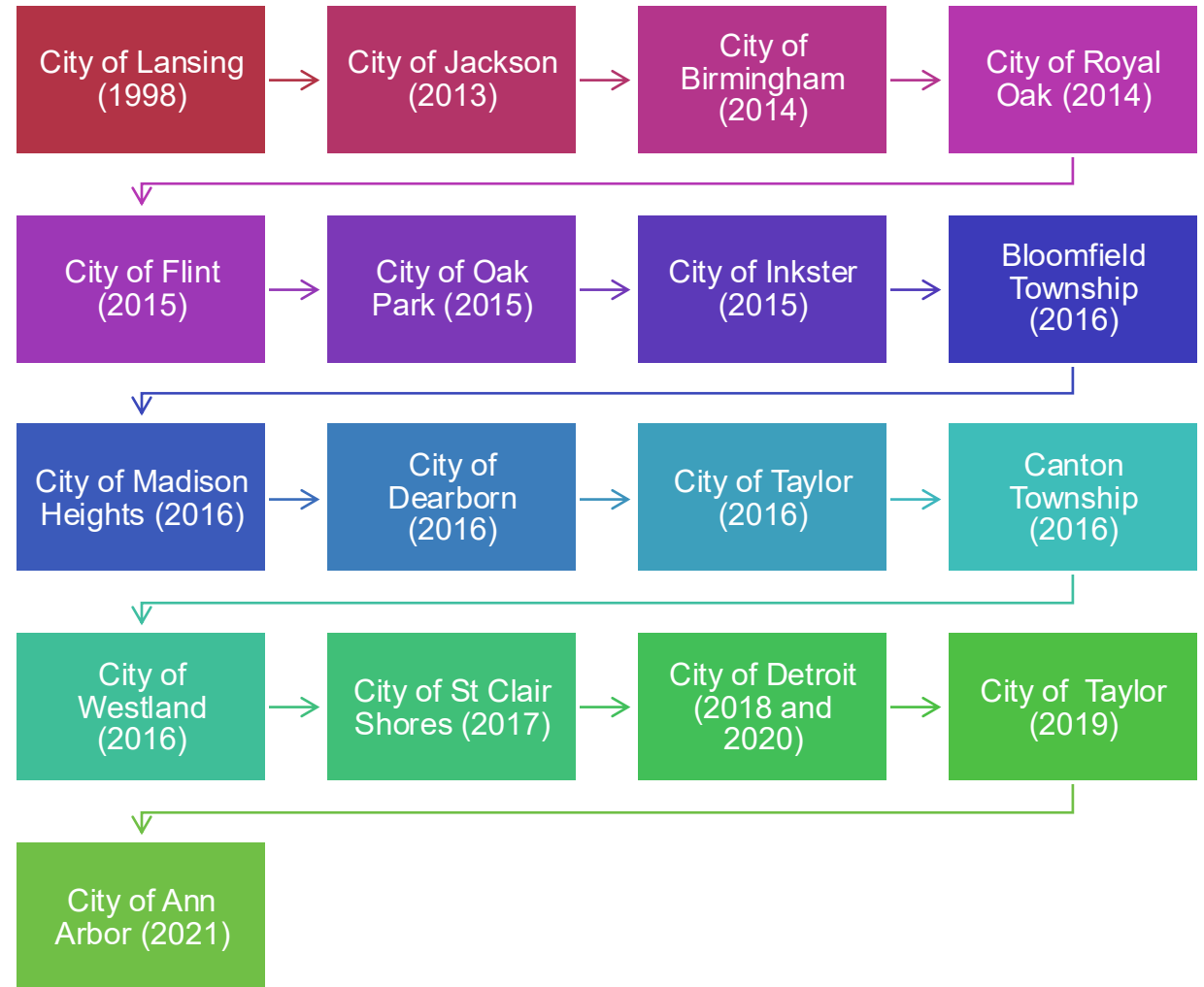
3. Voluntary

"A user fee is voluntary in that users are able to refuse or limit their use of the commodity or service."



Post Bolt Landscape

- Since the *Bolt* decision, the Headlee Amendment has been used to challenge a variety of government fees, including water, sewer, stormwater charges, and many others.
- Post-*Bolt* decisions reflected variability in how proportionality, regulatory purpose, and voluntariness were evaluated.
- Bolt-related litigation drove years of legal uncertainty and extensive court activity.
- But recent judicial trends indicate increasing predictability, deceleration in new cases, and fewer successful challenges.



Case Study – The City of Ann Arbor



***Platt Convenience, Inc. v City
of Ann Arbor, No. 359013***

(Mich. App. Oct 4, 2024)

[October 4, 2024 - Court of
Appeals Published Opinion](#)

Case Study – The City of Detroit



Binns v City of Detroit, No. 337609

and

DAART v City of Detroit, No. 339176

(consolidated cases)

(Mich. Ct. of App. Nov. 14, 2024)

[November 14, 2024 – Court of Appeals
Unpublished Opinion](#)

Case Study – The City of Jackson



Jackson County v City of Jackson

302 Mich App 90 (2013)

August 1, 2013 – Court of Appeals
Published Opinion

Stormwater Management Utility Act

No Mandates

Establishing a utility is optional for local units of government.

No State Funding

Like other utilities (water, sewer, electricity) customers pay a user fee based on usage.

No Uncertainty

Provides step-by-step guidance for municipalities to establish a utility that satisfies *Bolt*.

No Taxes

User fees deposited into an enterprise fund to invest in infrastructure for flooding and to comply with pollution control permits.

[Michigan Senate Bill 441 of 2025](#)



Tips for Developing a Defensible Stormwater Utility

DO	DON'T
Tie fees directly to stormwater management in infrastructure and services	Use fees as general fund revenue substitutes or generators
Establish a clear regulatory purpose	Depend on labels instead of structure
Support rates with a cost-of-service study	Set rates without cost justification
Use rational, engineering-based allocation methods	Ignore proportionality considerations
Dedicate revenue exclusively to stormwater management functions	Comingle revenues with unrelated funds
Provide credits / adjustments where justified	Adopt arbitrary rate structures
Obtain legal and technical guidance	Disregard Bolt factors and related litigation risks
Document your system infrastructure	Fail to have clear records defining your system
Perform a system needs assessment and address in CIP	Refuse to spend time and resources on documenting needs and planning for them



Municipal Checklist

- ✓ Define stormwater services and regulatory objectives
- ✓ Conduct cost-of-service / rate study
- ✓ Select defensible allocation methodology
- ✓ Establish dedicated revenue mechanisms
- ✓ Create credit / adjustment framework
- ✓ Build administrative and technical record
- ✓ Coordinate legal and engineering review
- ✓ Implement transparency and governance policies
- ✓ Monitor and periodically update rates



| **Questions?**

Overview of Stormwater Management Utility Guidebook

Vic Cooperwasser

Dan Christian

Why Are Communities Considering Stormwater Utilities?

Communities are facing increasing demands for stormwater management

- Aging infrastructure
- Flooding and resilience
- Water quality & regulatory compliance
- Asset management
- Funding challenges



Learn more in Section 1.4



Stormwater Utilities Are One Funding Option

A stormwater utility:

- Provides a dedicated funding source for stormwater management
- Supports defined stormwater management services
- Designed to recover the cost of those services
- One option communities may consider

NOT

- A one-size-fits-all solution
- Simply a new fee

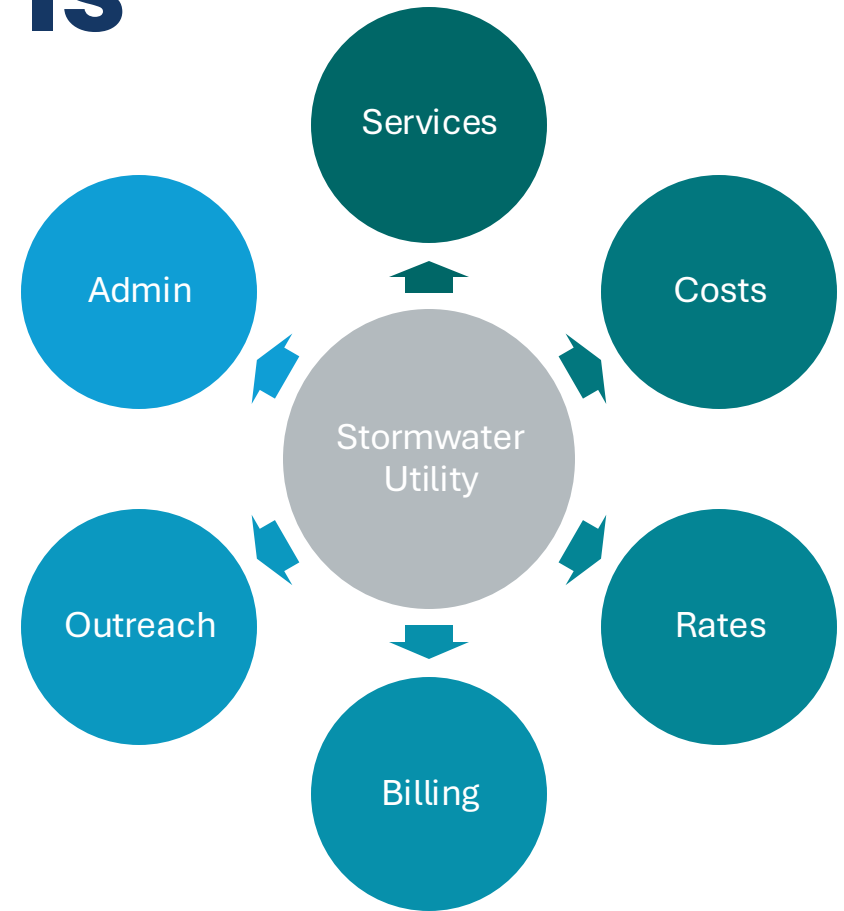
	Water	Wastewater	Stormwater
Service	Drinking water treatment and distribution	Wastewater collection and treatment	Stormwater management services
Proportionality to Service	Metered water use	Water use (proxy)	Impervious area
Opportunity to Influence charges	Use less water	Use less water	Reduce runoff, implement approved credits



Learn more in Section 1.2 & 1.4

A Stormwater Utility Is More Than a Fee

- Stormwater utility is a comprehensive program – not simply a monthly fee
- The fee is the result of:
 - Defining the services a community wants to provide, and
 - Developing a program to support those services



Learn more in Section 3

- **Can a county establish a stormwater utility?** Yes ✓
 - May fund eligible county stormwater management services.
 - Should be structured around county responsibilities and applicable legal authority.
- **Could a stormwater utility complement the Drain Code?** Yes ✓
 - Drain Code and stormwater utilities serve different, but complementary, purposes.
 - A utility may fund broader stormwater management services beyond specific drain projects.
- **Can a township establish a stormwater utility?** Yes ✓
 - Should reflect the township's stormwater services and responsibilities.
- **Are cooperative or multi-jurisdictional stormwater utilities an option?** Yes ✓
 - Communities may choose to develop utilities cooperatively.
 - Shared approaches can be tailored to local governance and needs.
- **What might a cooperative framework look like?** *example*
 - County, authority, or shared entity: *billing, GIS, data management, and utility administration*
 - Individual communities: *local capital projects, O&M, MS4 program components*
 - County or participating communities: *regional planning and projects, MS4 program components*

Michigan stormwater responsibilities are shared among many public entities. Stormwater utilities can be organized in several ways to reflect local responsibilities and governance.

Key Question: What stormwater services need funding, who provides them, and what structure best supports those responsibilities?



The Guidebook Provides the Roadmap

Designed to help communities

- Evaluate feasibility
- Develop a stormwater utility
- Adapt the process to local needs

It is

- ✓ Practical
- ✓ Flexible
- ✓ Process-oriented

Not

- A legal opinion
- A prescriptive manual



Learn more in Section 1.6

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Overall Development Process



Learn more in Section 2, Figure 5

Phase 1 – Where Every Community Starts

- Phase 1 is about determining whether a stormwater utility is appropriate for your community
- Define the problem
- Evaluate the opportunity
- Make an informed decision



Learn more in Section 3

Assemble the Team

Who needs to be at the table, and why?

Early Coordination

- Helps identify issues
- Align priorities
- Avoid costly changes later

Legal counsel should be engaged early and remain involved throughout the development process.



Learn more in Section 3.2

Department / Function	Typical Role
Engineering & Public Works	Define stormwater services, assess infrastructure needs, support capital improvement planning
Planning & Asset Management	Coordinate land use, establish level of service, inventory assets, identify long-term needs
Finance & Budgeting	Develop funding needs, estimate costs, support rate development and financial planning
Environmental Compliance	Identify MS4 permit requirements and other regulatory obligations
GIS & Data Management	Maintain parcel, land cover, impervious area, and billing datasets
Billing & Customer Service	Evaluate billing systems, administer credits and appeals, respond to customer inquiries
Communications	Lead public outreach, stakeholder engagement, and customer education
Legal Counsel	Review legal authority, utility structure, ordinances, and implementation issues



What Stormwater Services Will Your Utility Provide?

Consider services such as:

- **Infrastructure O&M** (CB cleaning, storm sewer inspection, culvert maintenance, street sweeping)
- **Capital improvements** (flood reduction, drainage upgrades, system expansion)
- **Regulatory compliance** (MS4 permits, water quality programs)
- **Planning & asset management** (master planning, condition assessment, GIS)
- **Program administration** (billing, customer service, credits, outreach)



Key Questions:

- What level of service does your community provide today?
- What level of service do you want to provide in the future?



Learn more in Section 3.1 (Service Examples in Section 1.4)

Identify Costs and Funding Needs

What will it cost to provide those services?

- Current expenditures
- Future needs
- Deferred maintenance
- Capital improvements
- Funding gap
- Administrative Costs

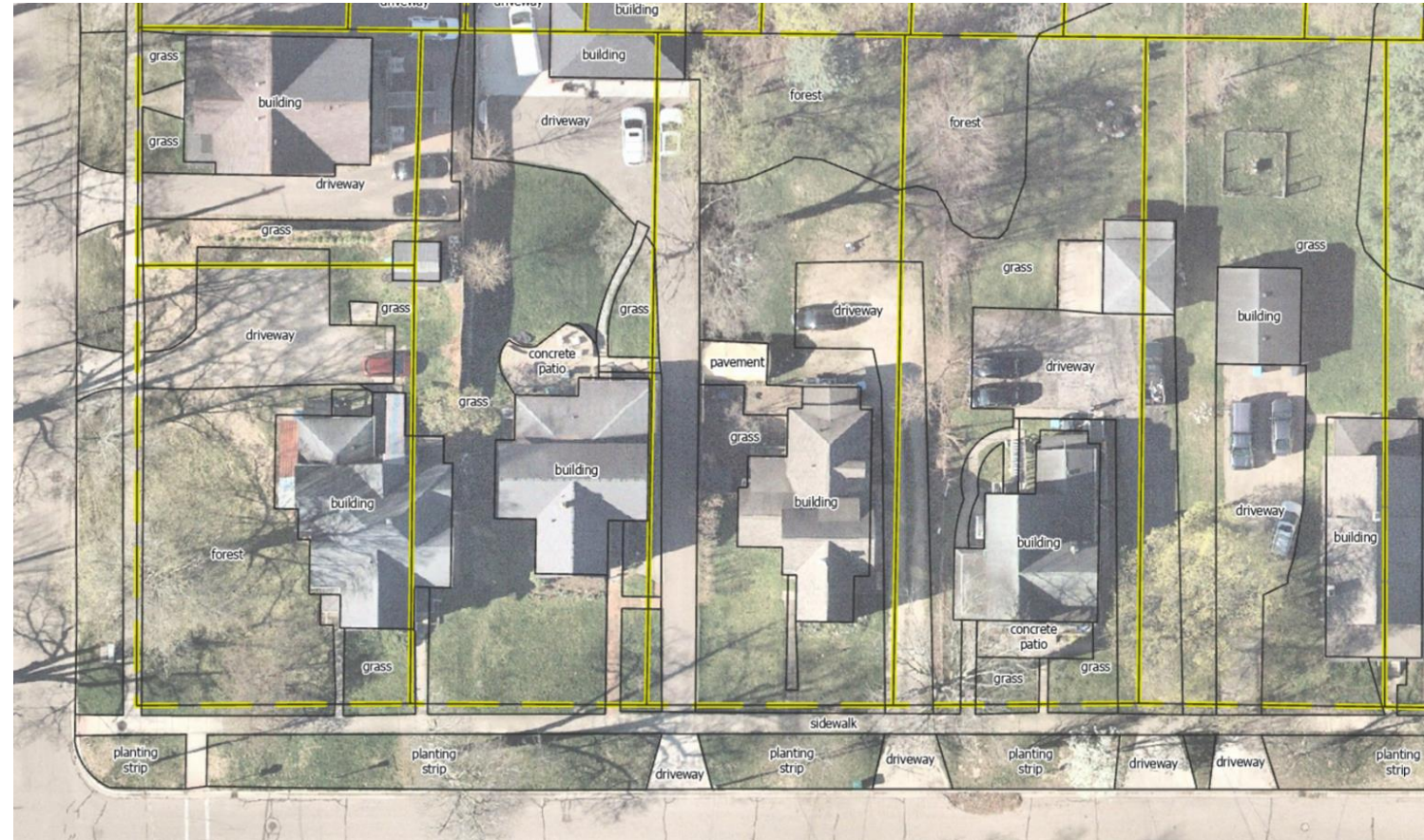


Learn more in Section 3.3

Build the Data Foundation

**Good decisions
require good data**

- Parcels
- Impervious area
- GIS
- Ownership
- Land cover



Learn more in Section 3.4

Evaluate Rate Structure Options

- Consider different rate structures
 - Equivalent Residential Unit (ERU)
 - Impervious Area
 - Equivalent Hydraulic Area (EHA)
 - Tiered Residential, Area-based Nonresidential
 - Intensity of Development
- Planning-level analysis
- Not final rate design



Learn more in Section 3.4 & Appendix D

Can Your Community Support a Stormwater Utility?

Successful implementation depends on administration and public understanding

We need to consider:

- Stakeholder engagement
- Public outreach
- Billing
- Customer Service
- Credits & appeals



Learn more in Section 3.6 & 3.7

Phase 1 Decision Point

By the end of Phase 1, the community has developed the information needed to determine whether it is ready to begin developing a stormwater utility.

- **Proceed** – Ready to begin program development.
- **Refine** – Additional analysis or stakeholder input is needed
- **Pause** – Conditions are not favorable to move forward at this time



Before Moving to Phase 2, Ask:

- ✓ Have we clearly defined the stormwater services we want to provide?
- ✓ Do we understand our funding needs?
- ✓ Is our data adequate?
- ✓ Have we engaged the right departments and stakeholders?
- ✓ Are we ready to begin developing the utility?



Learn more in Section 3.8

Phase 2

Program Development & Implementation

Once a community decides to proceed, Phase 2 turns the feasibility work into an operating utility

- Develop the program framework
- Continue public and stakeholder engagement
- Document rates, billing, credits, and appeals
- Prepare program plan and ordinance
- Adopt, implement, and administer the utility



Learn more in Section 4



Stormwater Utility Program Plan

The Stormwater Utility Program Plan provides the framework for implementing, operating, and managing the utility over the long term.

The Plan brings together

- Stormwater services and level of service
- Funding needs and fee methodology
- Billing and administrative procedures
- Credit, billing adjustments, and appeals
- Implementation framework and responsibilities

Terminology Note

Michigan Senate Bill 441 uses the term **Stormwater Management Plan**. This guidebook uses **Stormwater Utility Program Plan** to distinguish it from stormwater master plans, MS4 Stormwater Management Plans, watershed plans, and other planning documents.



Learn more in Section 4.3 and 2

Ongoing Management

A stormwater utility should be managed as an ongoing program

- Review services and level of service
- Update costs, rates, and capital priorities
- Maintain billing data and credit procedures
- Continue public communication



Learn more in Section 4.4 - 4.6

What Successful Stormwater Utilities Have in Common

- Clear stormwater services
- Documented costs and methodology
- Early legal, financial, and administrative coordination
- Early proactive public outreach and stakeholder engagement
- A practical plan for billing, credits, appeals, and updates



Learn more in Section 3.1 - 3.8, Section 4, & Appendix C

| **Questions?**

Case Study: Ann Arbor

Jennifer Lawson

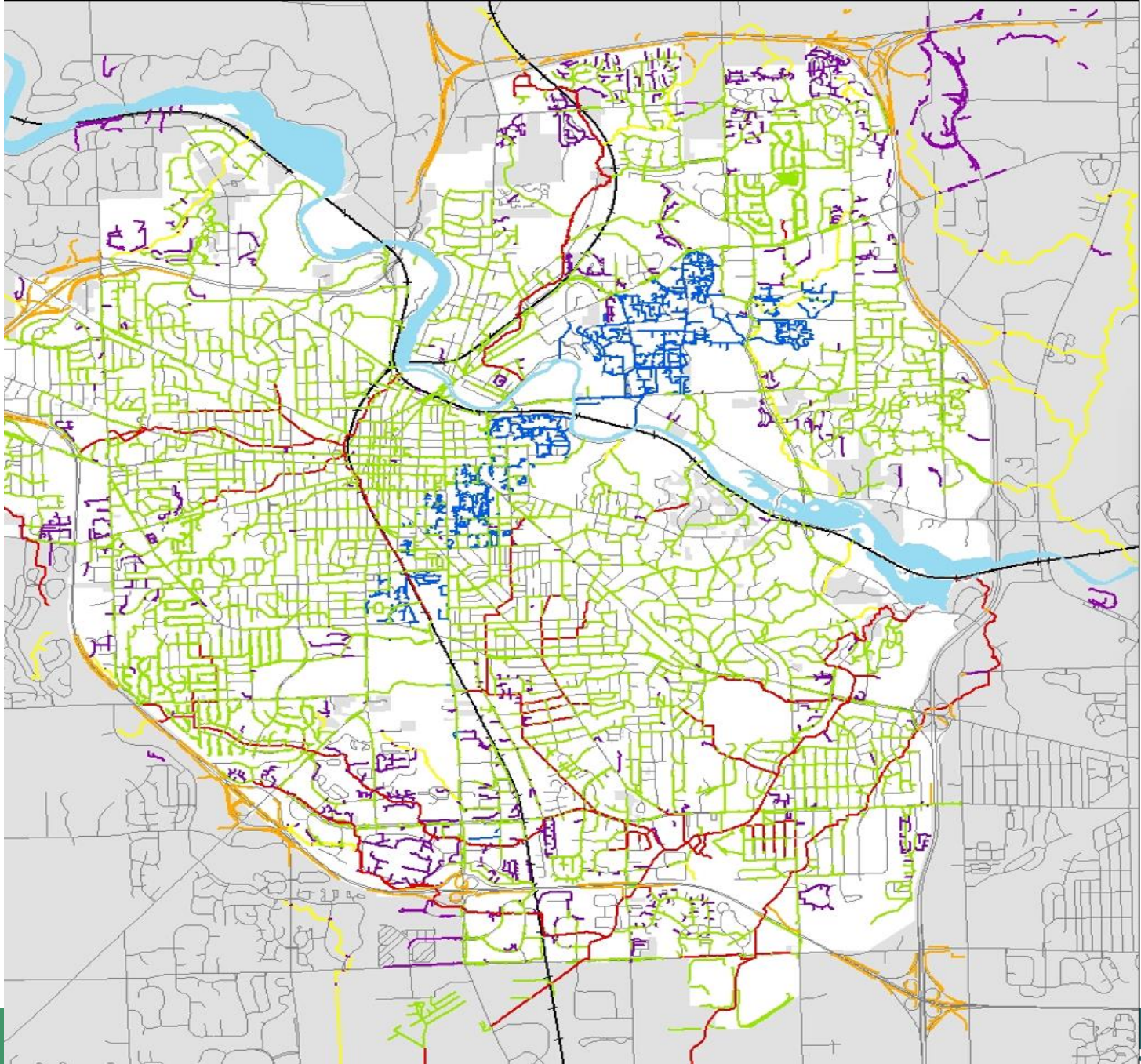
Water Quality Manager, City of Ann Arbor





The Stormwater System

- 231 miles of stormwater mains (pipes)
- 11,238 catch basins / inlets
- 7,053 manholes
- 212 outfalls
- 783 miles of roadway curb and gutters
- 13 surface detention basins



**Storm Network
Ownership**

- City
- U of M
- County Drains
- State/Interstate Highw
- Water of the State
- Private



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	

What are the components?

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





History of the Utility

THE EVOLUTION OF STORMWATER MANAGEMENT

A Timeline of Policy and Practice



Protect Water



Enhance Communities



Build Resilience

Brand Identity

- As stewards of the environment for future generations, our mission is to ensure the health of the Ann Arbor community by providing high-quality drinking water, advanced wastewater recovery and robust stormwater management that protects and preserves the Huron River.



Rate Study/Level of Service (~10 years)

- 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 Meetings
- Online Survey
- 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

Survey Results – Rate Analysis 2017

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%)

Survey Results – Rate Analysis 2017

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

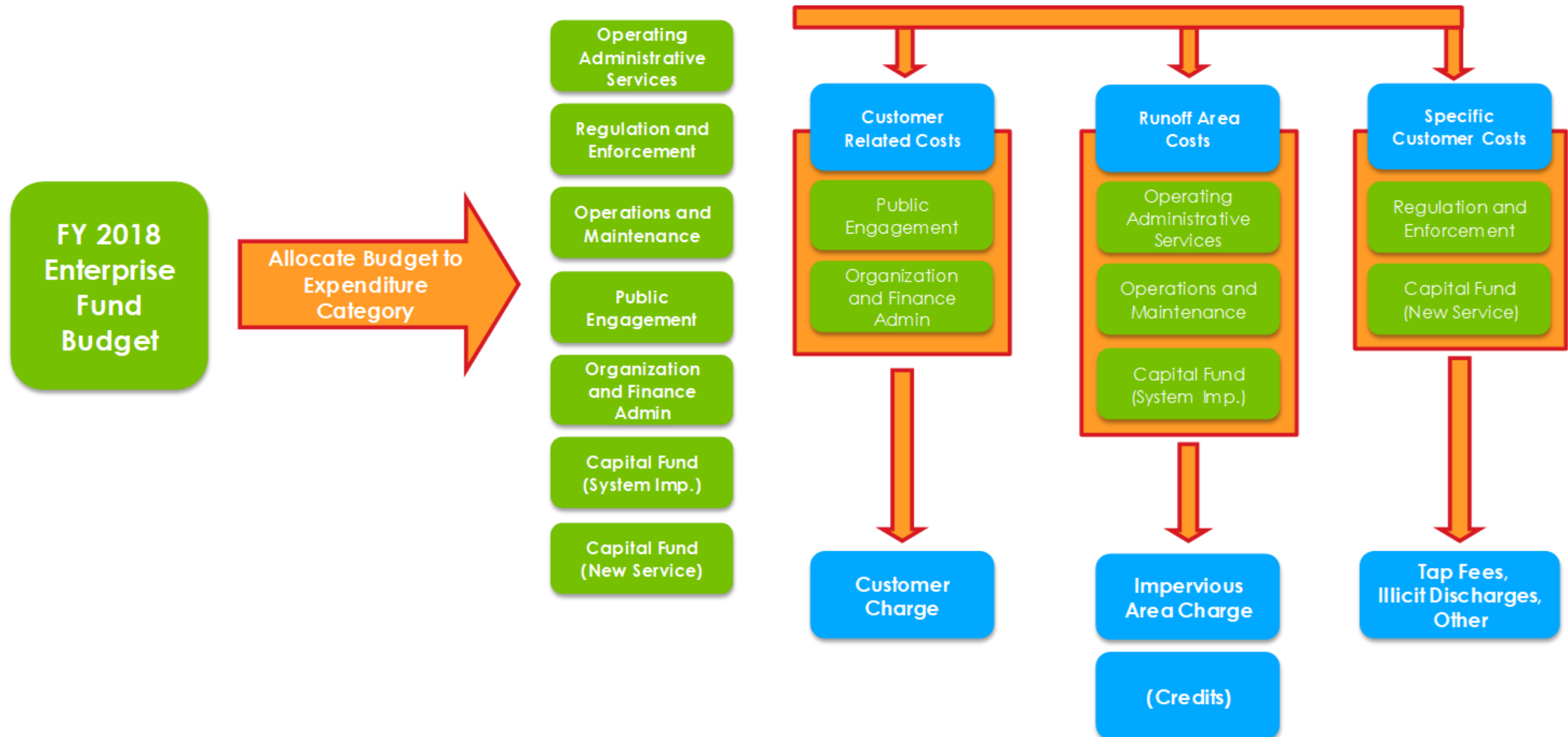
- 47.7%** Unknown
- 18.3%** 0.07 acres (\$28)
- 11%** 0.04 acres (\$16)
- 10.1%** 0.21 acres (\$84)
- 9.2%** 0.12 acres (\$48)
- 3.7%** Not applicable

Dollars and Sense

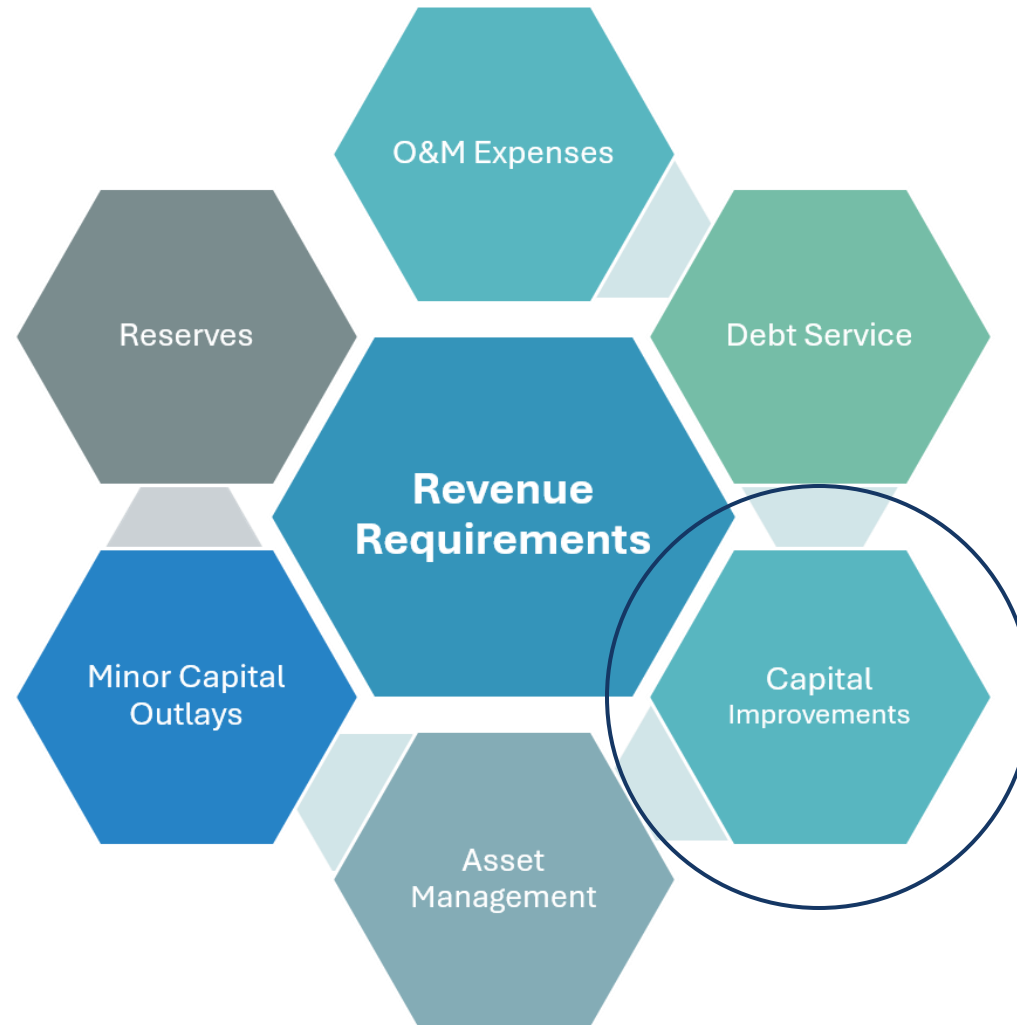
- What we needed for system maintenance
- What we needed for system improvement
- What the public expected from us
- What the regulatory requirements were



Cost Allocation Framework



Revenue Requirements



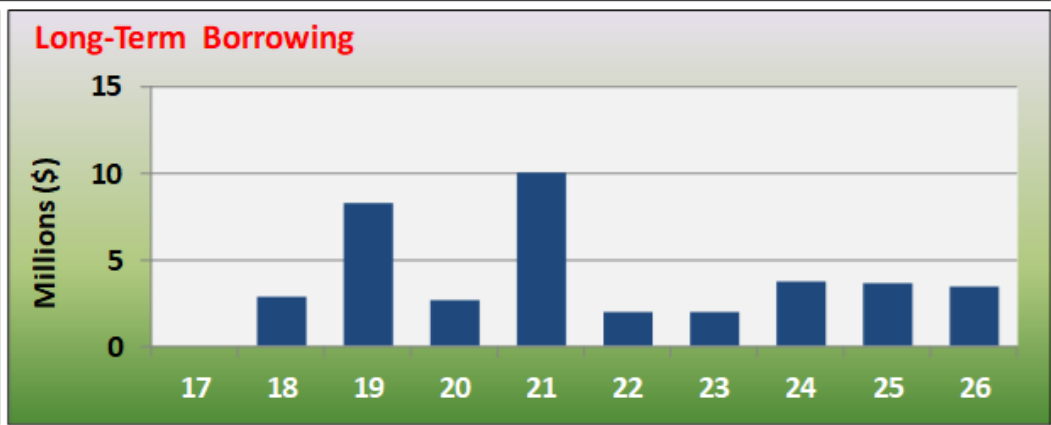
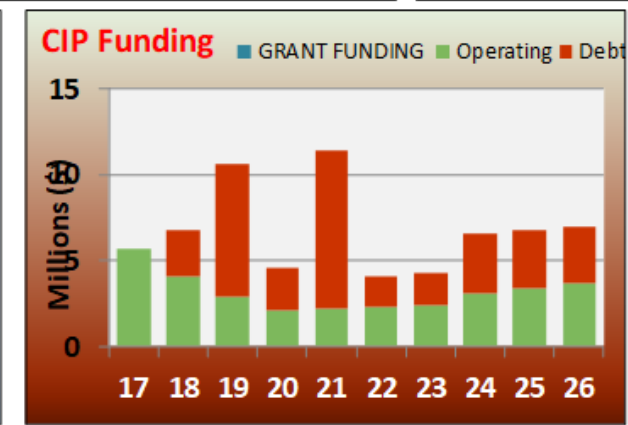
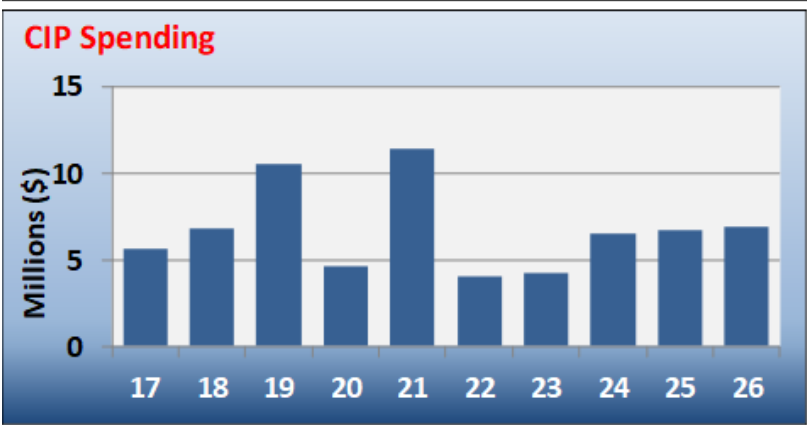
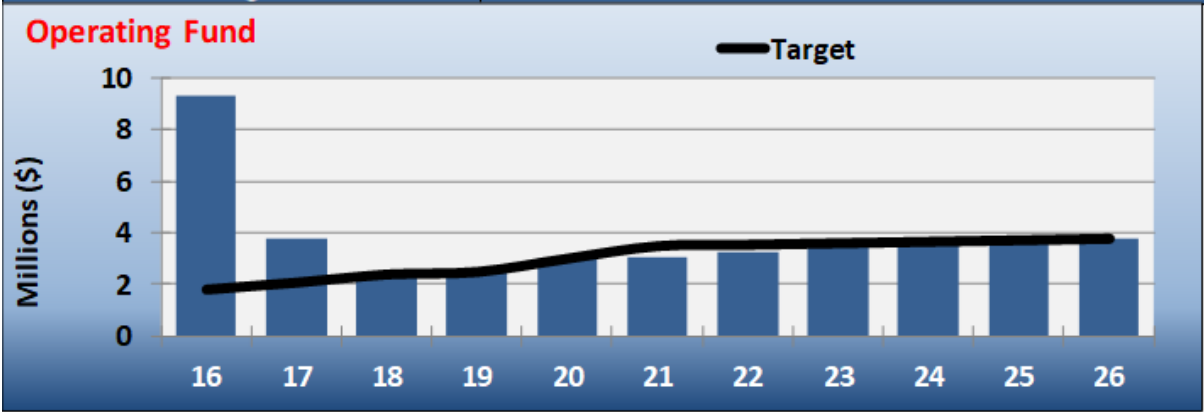
27 FTEs

\$153,326,000M
Over next 10 years

Revenue History

Year	Rate Revenue
2017	\$ 7,131,139.64
2018	\$ 9,126,923.91
2019	\$ 10,467,416.23
2020	\$ 11,709,164.02
2021	\$ 13,043,661.61
2022	\$ 13,733,081.22
2023	\$ 14,394,480.90
2024	\$ 15,039,073.58
2025	\$ 15,351,335.99

	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 Non-LOS Options BMP maint/ins Tree Pruning CCTV Freq. Field Ops. CS Green Inf. Mant. LOS Options Public Eng. OHM Operations Debt Service Res.	
Rate Covenant	19.60	17.59	8.20	5.39	3.66	3.24	3.28	3.22	3.13	3.07		
CIP \$ Redistribution ►	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
CIP Execution % ►	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Base Rate	\$6.77	\$6.77	\$3.91	\$3.99	\$4.07	\$4.15	\$4.24	\$4.32	\$4.41	\$4.50	\$4.59	
2,187 - 4,175 ft ²	\$29.75	\$29.75	\$38.62	\$42.48	\$46.73	\$51.40	\$53.97	\$56.67	\$59.50	\$62.47	\$65.60	
Quarterly Bill	\$36.52	\$42.53	\$46.47	\$50.80	\$55.55	\$58.20	\$60.99	\$63.91	\$66.97	\$70.18		
Change \$		\$6.01	\$3.94	\$4.33	\$4.75	\$2.65	\$2.78	\$2.92	\$3.06	\$3.21		
Change %		16.46%	9.26%	9.31%	9.36%	4.78%	4.78%	4.79%	4.79%	4.80%		



2026 RATES

Single-Family and Two-Family Residential

*Plus a \$4.58 customer service charge per quarter for everyone.

Commercial and other properties (e.g., multi-family, office, institutional, and industrial land uses) are billed directly on the impervious areas at a rate of \$1,025.85 per acre per quarter

Tier #	Measured impervious area	Representative Impervious Area Midpoint of Tier listed on the Water Utilities Bill	Quarterly Charge*
Tier 1	Up to 2,187 square feet	0.03706 acres	\$38.03
Tier 2	> 2,187 to 4,175 square feet	0.06486 acres	\$66.53
Tier 3	> 4,175 to 7,110 square feet	0.11117 acres	\$114.03
Tier 4	> 7,110 square feet	0.19456 acres	\$199.59

A vertical bar graphic on the left side of the slide, transitioning from a light teal color at the top to a dark blue color at the bottom.

Implementation

- Improving data ALL THE TIME
- Credits
- Storm email
- Constant outreach



2323

2335

2341

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Glendaboch Cir

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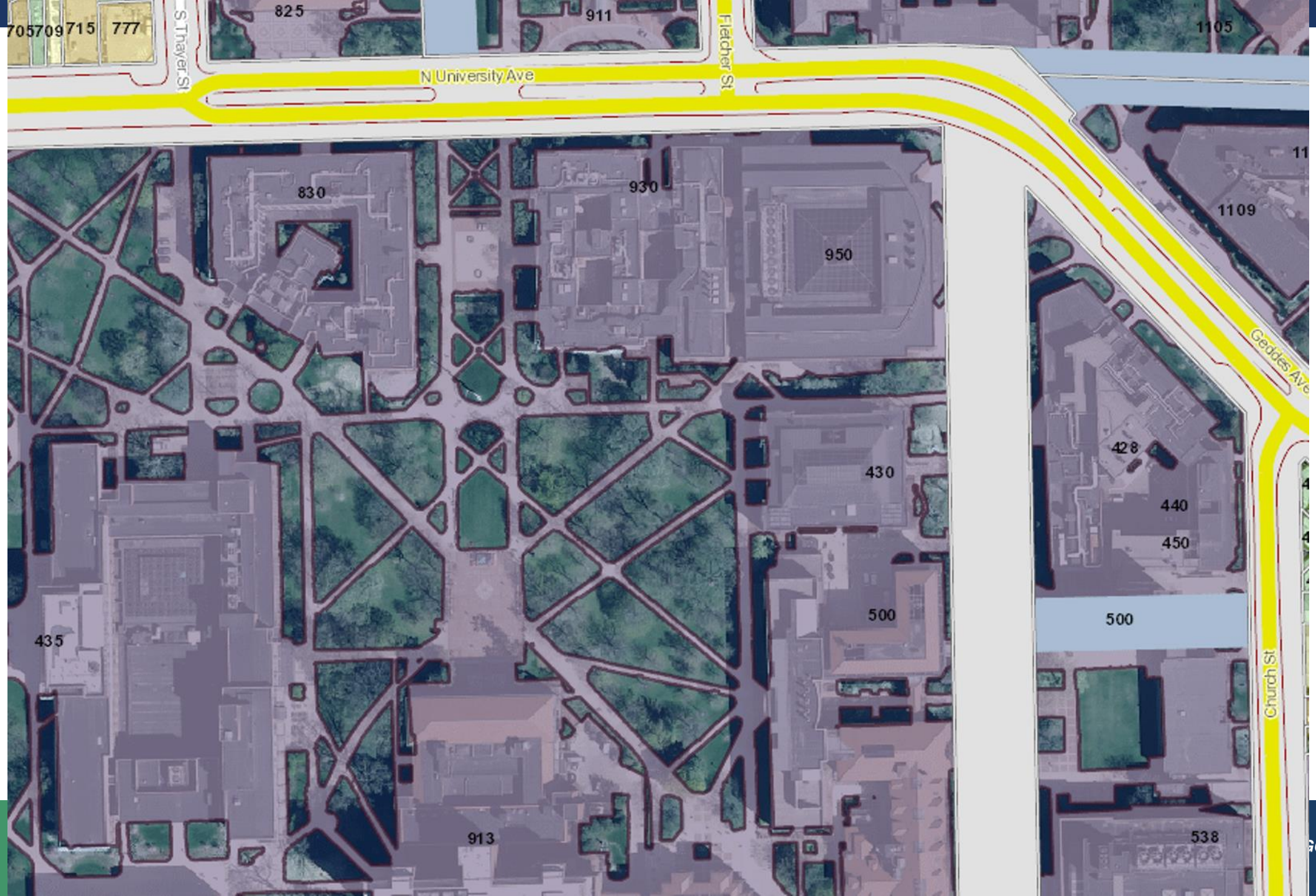
Londonderry Rd

Hawthorn Rd

2405

2514

Shannondale Rd



Credits – Residential

- Rain Garden
 - Installing a [rain garden](#) can result in a savings of \$8.34 per quarter , if the [credit criteria](#) are met.
- Rain Barrel
 - One to five rain barrels (minimum size 35 gallons) can result in a savings of \$4.03 per quarter.
- RiverSafe Home
 - Becoming a RiverSafe Home partner can result in a savings of \$1.52 per quarter, and there is no cost to enroll.
- Cistern
- Detention Basin (part of neighborhood)

Credits – Non-Residential

- Community Partners for Clean Streams Program
- Stormwater Management Systems
 - Development Standards
- Other Approved Stormwater Controls
 - Vegetated Swales and Filter Strips
 - Infiltration and Percolation Basins and Trenches
 - Porous Pavement
 - Extended (Dry) Detention Basins
 - Retention (Wet) Ponds
 - Constructed Wetlands
 - Media Filtration
 - Other Stormwater Treatment System

Appeal Process

- How do I submit an appeal?
 - If you have reason to believe that the impervious area has been incorrectly identified, please take the following steps:
 - Save or print the online stormwater assessment
 - Identify the areas that have been incorrectly identified as impervious (contrasting pen or highlighter works best)
 - Email it to storm@a2gov.org or mail the document to:

City of Ann Arbor – Stormwater
Box 8647
Ann Arbor, MI 48107-8647

- We will review your revisions, and return the results of the analysis to you.

Outreach

- The World Beneath Your Feet – Video Series (https://www.youtube.com/watch?v=97l-H7Q__X4&t=13s)
- Heroes of the Storm – Video Series
- Ann Arbor Water Newsletter
- TikTok/Instagram
- Public Events/Tabling
- Partnership with AAPS
- Partnership with HRWC
- Holistic approach to all things WATER





| **Questions?**

**Thank you
for joining us**



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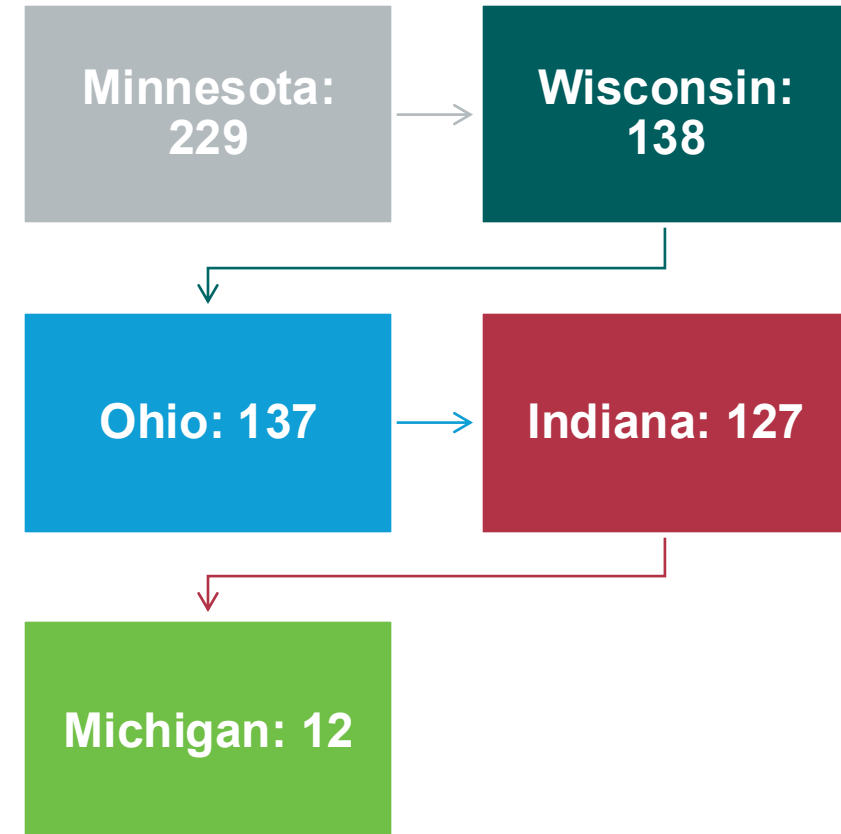
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***Bolt v City of Lansing* (456 Mich. 949 (1998))**

[December 28, 1998 – Supreme Court Published Opinion](#)

Fee-funded stormwater utilities are lawful and constitutional provided they meet the *Bolt* criteria.



1. Regulatory

"A user fee must serve a regulatory purpose rather than a revenue-raising purpose."



2. Proportionate

"User fees must be proportionate to the necessary costs of the service."



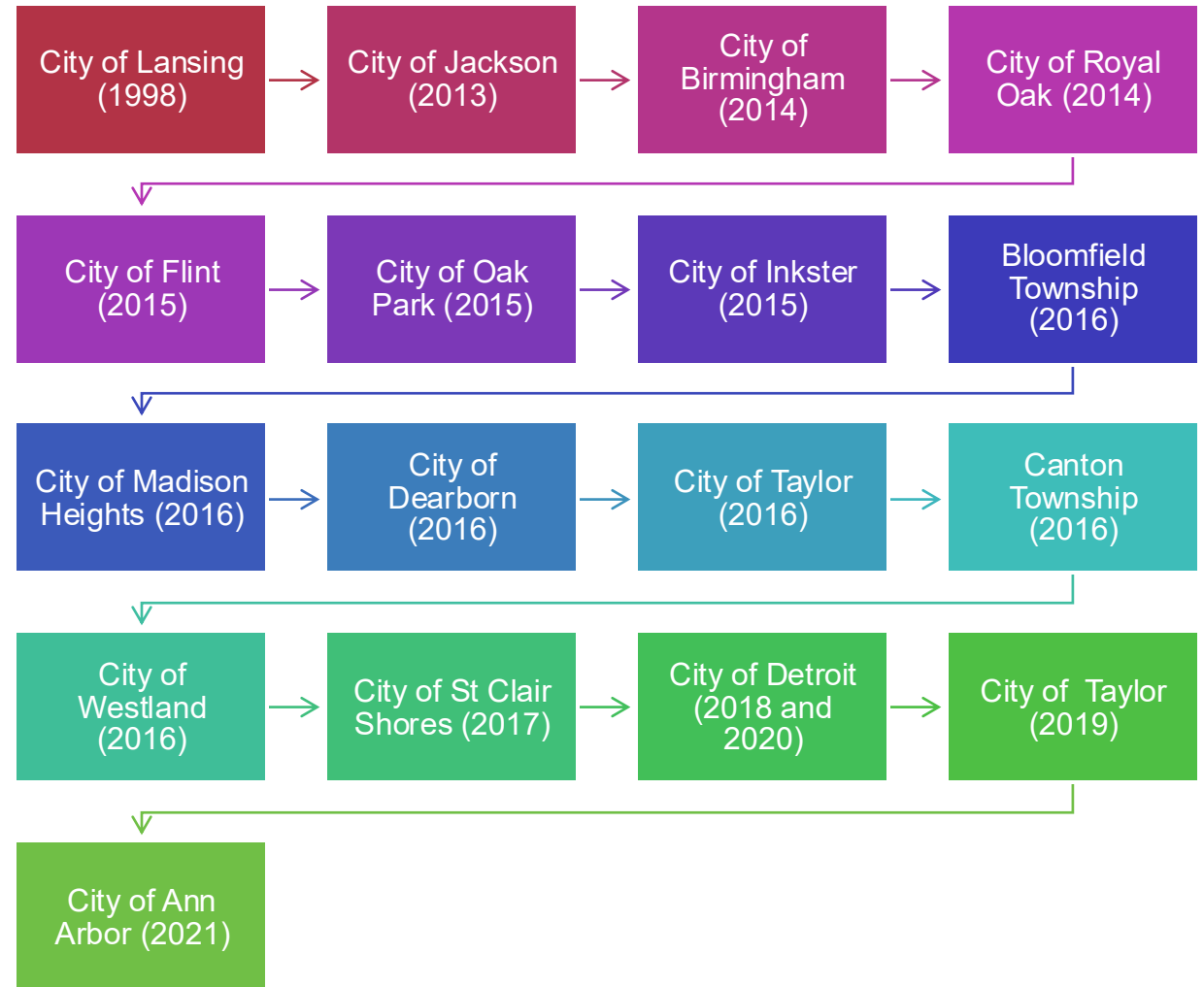
3. Voluntary

"A user fee is voluntary in that users are able to refuse or limit their use of the commodity or service."



Post Bolt Landscape

- Since the *Bolt* decision, the Headlee Amendment has been used to challenge a variety of government fees, including water, sewer, stormwater charges, and many others.
- Post-*Bolt* decisions reflected variability in how proportionality, regulatory purpose, and voluntariness were evaluated.
- Bolt-related litigation drove years of legal uncertainty and extensive court activity.
- But recent judicial trends indicate increasing predictability, deceleration in new cases, and fewer successful challenges.



Case Study – The City of Ann Arbor



***Platt Convenience, Inc. v City
of Ann Arbor, No. 359013***

(Mich. App. Oct 4, 2024)

[October 4, 2024 - Court of
Appeals Published Opinion](#)

Case Study – The City of Detroit



Binns v City of Detroit, No. 337609

and

DAART v City of Detroit, No. 339176

(consolidated cases)

(Mich. Ct. of App. Nov. 14, 2024)

[November 14, 2024 – Court of Appeals
Unpublished Opinion](#)

Case Study – The City of Jackson



Jackson County v City of Jackson

302 Mich App 90 (2013)

August 1, 2013 – Court of Appeals
Published Opinion

Stormwater Management Utility Act

No Mandates

Establishing a utility is optional for local units of government.

No State Funding

Like other utilities (water, sewer, electricity) customers pay a user fee based on usage.

No Uncertainty

Provides step-by-step guidance for municipalities to establish a utility that satisfies *Bolt*.

No Taxes

User fees deposited into an enterprise fund to invest in infrastructure for flooding and to comply with pollution control permits.

[Michigan Senate Bill 441 of 2025](#)



Tips for Developing a Defensible Stormwater Utility

DO	DON'T
Tie fees directly to stormwater management in infrastructure and services	Use fees as general fund revenue substitutes or generators
Establish a clear regulatory purpose	Depend on labels instead of structure
Support rates with a cost-of-service study	Set rates without cost justification
Use rational, engineering-based allocation methods	Ignore proportionality considerations
Dedicate revenue exclusively to stormwater management functions	Comingle revenues with unrelated funds
Provide credits / adjustments where justified	Adopt arbitrary rate structures
Obtain legal and technical guidance	Disregard Bolt factors and related litigation risks
Document your system infrastructure	Fail to have clear records defining your system
Perform a system needs assessment and address in CIP	Refuse to spend time and resources on documenting needs and planning for them



Municipal Checklist

- ✓ Define stormwater services and regulatory objectives
- ✓ Conduct cost-of-service / rate study
- ✓ Select defensible allocation methodology
- ✓ Establish dedicated revenue mechanisms
- ✓ Create credit / adjustment framework
- ✓ Build administrative and technical record
- ✓ Coordinate legal and engineering review
- ✓ Implement transparency and governance policies
- ✓ Monitor and periodically update rates



Why Are Communities Considering Stormwater Utilities?

Communities are facing increasing demands for stormwater management

- Aging infrastructure
- Flooding and resilience
- Water quality & regulatory compliance
- Asset management
- Funding challenges



Learn more in Section 1.4



Stormwater Utilities Are One Funding Option

A stormwater utility:

- Provides a dedicated funding source for stormwater management
- Supports defined stormwater management services
- Designed to recover the cost of those services
- One option communities may consider

NOT

- A one-size-fits-all solution
- Simply a new fee

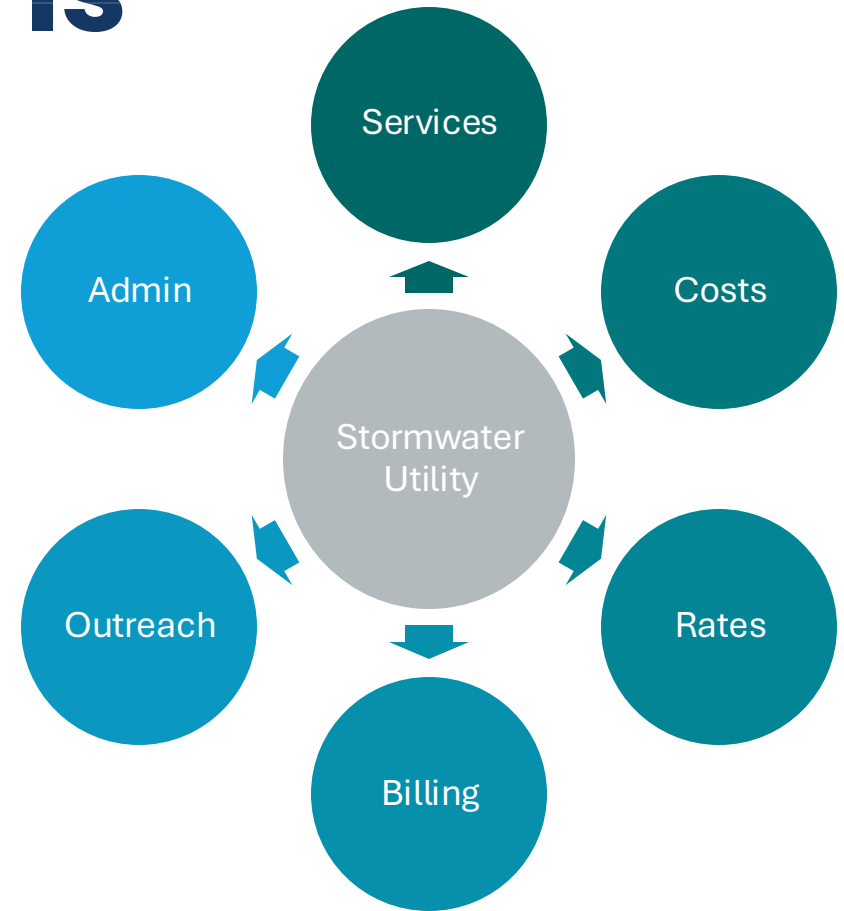
	Water	Wastewater	Stormwater
Service	Drinking water treatment and distribution	Wastewater collection and treatment	Stormwater management services
Proportionality to Service	Metered water use	Water use (proxy)	Impervious area
Opportunity to Influence charges	Use less water	Use less water	Reduce runoff, implement approved credits



Learn more in Section 1.2 & 1.4

A Stormwater Utility Is More Than a Fee

- Stormwater utility is a comprehensive program – not simply a monthly fee
- The fee is the result of:
 - Defining the services a community wants to provide, and
 - Developing a program to support those services



Learn more in Section 3

- **Can a county establish a stormwater utility?** Yes ✓
 - May fund eligible county stormwater management services.
 - Should be structured around county responsibilities and applicable legal authority.
- **Could a stormwater utility complement the Drain Code?** Yes ✓
 - Drain Code and stormwater utilities serve different, but complementary, purposes.
 - A utility may fund broader stormwater management services beyond specific drain projects.
- **Can a township establish a stormwater utility?** Yes ✓
 - Should reflect the township's stormwater services and responsibilities.
- **Are cooperative or multi-jurisdictional stormwater utilities an option?** Yes ✓
 - Communities may choose to develop utilities cooperatively.
 - Shared approaches can be tailored to local governance and needs.
- **What might a cooperative framework look like?** *example*
 - County, authority, or shared entity: *billing, GIS, data management, and utility administration*
 - Individual communities: *local capital projects, O&M, MS4 program components*
 - County or participating communities: *regional planning and projects, MS4 program components*

Michigan stormwater responsibilities are shared among many public entities. Stormwater utilities can be organized in several ways to reflect local responsibilities and governance.

Key Question: What stormwater services need funding, who provides them, and what structure best supports those responsibilities?



The Guidebook Provides the Roadmap

Designed to help communities

- Evaluate feasibility
- Develop a stormwater utility
- Adapt the process to local needs

It is

- ✓ Practical
- ✓ Flexible
- ✓ Process-oriented

Not

- A legal opinion
- A prescriptive manual



Learn more in Section 1.6

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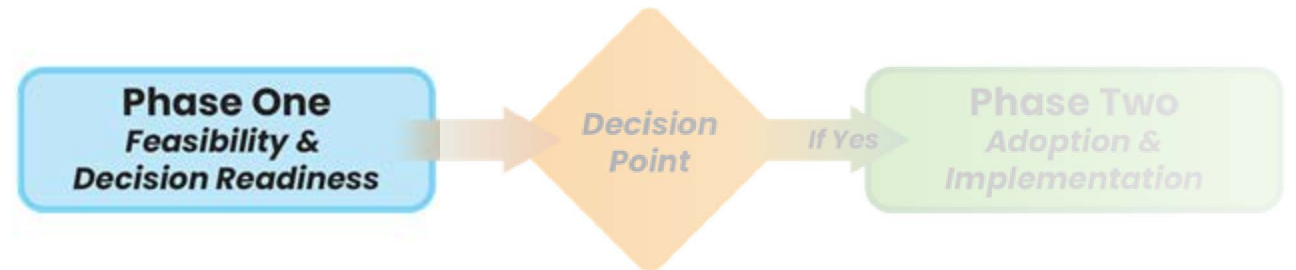
Overall Development Process



Learn more in Section 2, Figure 5

Phase 1 – Where Every Community Starts

- Phase 1 is about determining whether a stormwater utility is appropriate for your community
- Define the problem
- Evaluate the opportunity
- Make an informed decision



Learn more in Section 3

Assemble the Team

Who needs to be at the table, and why?

Early Coordination

- Helps identify issues
- Align priorities
- Avoid costly changes later

Legal counsel should be engaged early and remain involved throughout the development process.



Learn more in Section 3.2

Department / Function	Typical Role
Engineering & Public Works	Define stormwater services, assess infrastructure needs, support capital improvement planning
Planning & Asset Management	Coordinate land use, establish level of service, inventory assets, identify long-term needs
Finance & Budgeting	Develop funding needs, estimate costs, support rate development and financial planning
Environmental Compliance	Identify MS4 permit requirements and other regulatory obligations
GIS & Data Management	Maintain parcel, land cover, impervious area, and billing datasets
Billing & Customer Service	Evaluate billing systems, administer credits and appeals, respond to customer inquiries
Communications	Lead public outreach, stakeholder engagement, and customer education
Legal Counsel	Review legal authority, utility structure, ordinances, and implementation issues



What Stormwater Services Will Your Utility Provide?

Consider services such as:

- **Infrastructure O&M** (CB cleaning, storm sewer inspection, culvert maintenance, street sweeping)
- **Capital improvements** (flood reduction, drainage upgrades, system expansion)
- **Regulatory compliance** (MS4 permits, water quality programs)
- **Planning & asset management** (master planning, condition assessment, GIS)
- **Program administration** (billing, customer service, credits, outreach)



Key Questions:

- What level of service does your community provide today?
- What level of service do you want to provide in the future?



Learn more in Section 3.1 (Service Examples in Section 1.4)

Identify Costs and Funding Needs

What will it cost to provide those services?

- Current expenditures
- Future needs
- Deferred maintenance
- Capital improvements
- Funding gap
- Administrative Costs

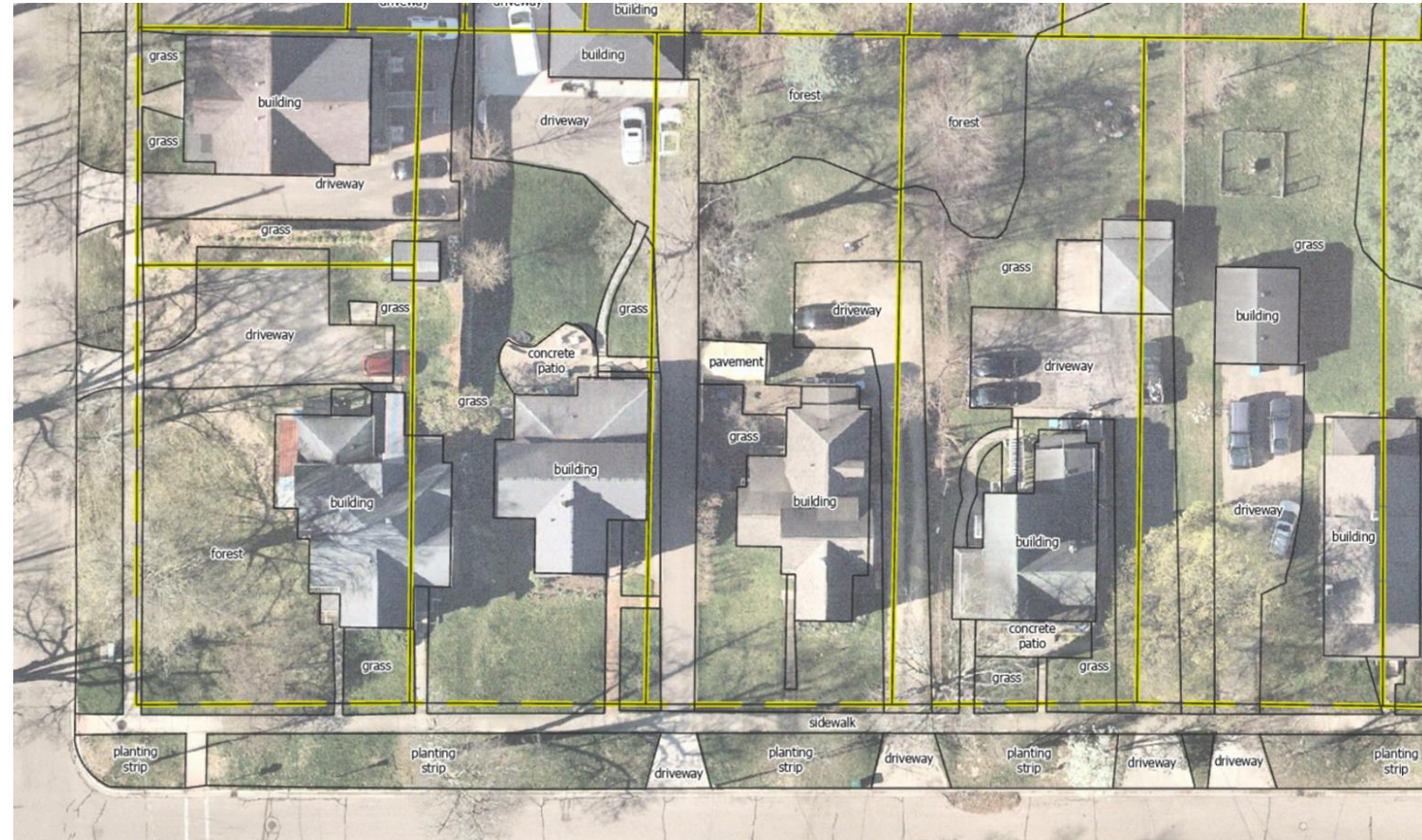


Learn more in Section 3.3

Build the Data Foundation

**Good decisions
require good data**

- Parcels
- Impervious area
- GIS
- Ownership
- Land cover



Learn more in Section 3.4

Evaluate Rate Structure Options

- Consider different rate structures
 - Equivalent Residential Unit (ERU)
 - Impervious Area
 - Equivalent Hydraulic Area (EHA)
 - Tiered Residential, Area-based Nonresidential
 - Intensity of Development
- Planning-level analysis
- Not final rate design



Learn more in Section 3.4 & Appendix D

Can Your Community Support a Stormwater Utility?

Successful implementation depends on administration and public understanding

We need to consider:

- Stakeholder engagement
- Public outreach
- Billing
- Customer Service
- Credits & appeals



Learn more in Section 3.6 & 3.7

Phase 1 Decision Point

By the end of Phase 1, the community has developed the information needed to determine whether it is ready to begin developing a stormwater utility.

- **Proceed** – Ready to begin program development.
- **Refine** – Additional analysis or stakeholder input is needed
- **Pause** – Conditions are not favorable to move forward at this time



Before Moving to Phase 2, Ask:

- ✓ Have we clearly defined the stormwater services we want to provide?
- ✓ Do we understand our funding needs?
- ✓ Is our data adequate?
- ✓ Have we engaged the right departments and stakeholders?
- ✓ Are we ready to begin developing the utility?



Learn more in Section 3.8

Phase 2

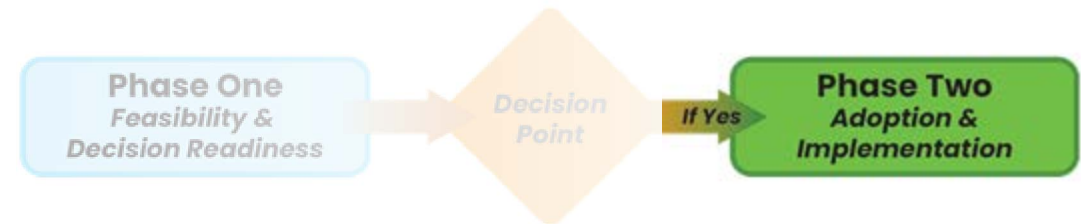
Program Development & Implementation

Once a community decides to proceed, Phase 2 turns the feasibility work into an operating utility

- Develop the program framework
- Continue public and stakeholder engagement
- Document rates, billing, credits, and appeals
- Prepare program plan and ordinance
- Adopt, implement, and administer the utility



Learn more in Section 4



Stormwater Utility Program Plan

The Stormwater Utility Program Plan provides the framework for implementing, operating, and managing the utility over the long term.

The Plan brings together

- Stormwater services and level of service
- Funding needs and fee methodology
- Billing and administrative procedures
- Credit, billing adjustments, and appeals
- Implementation framework and responsibilities

Terminology Note

Michigan Senate Bill 441 uses the term **Stormwater Management Plan**. This guidebook uses **Stormwater Utility Program Plan** to distinguish it from stormwater master plans, MS4 Stormwater Management Plans, watershed plans, and other planning documents.



Learn more in Section 4.3 and 2

Ongoing Management

A stormwater utility should be managed as an ongoing program

- Review services and level of service
- Update costs, rates, and capital priorities
- Maintain billing data and credit procedures
- Continue public communication



Learn more in Section 4.4 - 4.6

What Successful Stormwater Utilities Have in Common

- Clear stormwater services
- Documented costs and methodology
- Early legal, financial, and administrative coordination
- Early proactive public outreach and stakeholder engagement
- A practical plan for billing, credits, appeals, and updates



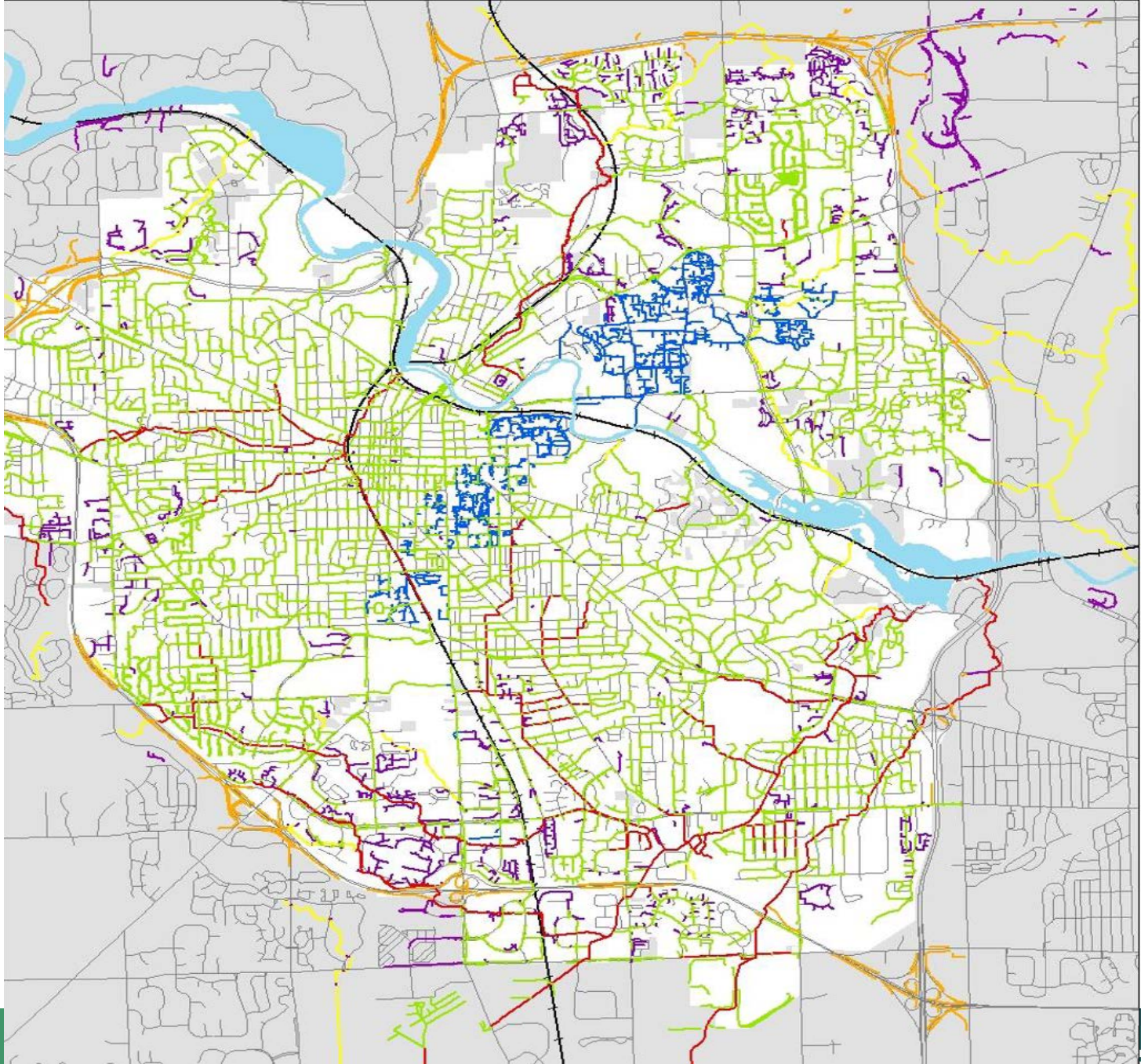
Learn more in Section 3.1 - 3.8, Section 4, & Appendix C





The Stormwater System

- 231 miles of stormwater mains (pipes)
- 11,238 catch basins / inlets
- 7,053 manholes
- 212 outfalls
- 783 miles of roadway curb and gutters
- 13 surface detention basins



**Storm Network
Ownership**

- City
- U of M
- County Drains
- State/Interstate Highw
- Water of the State
- Private



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	

What are the components?

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





History of the Utility

THE EVOLUTION OF STORMWATER MANAGEMENT

A Timeline of Policy and Practice



Protect Water



Enhance Communities



Build Resilience

Brand Identity

- As stewards of the environment for future generations, our mission is to ensure the health of the Ann Arbor community by providing high-quality drinking water, advanced wastewater recovery and robust stormwater management that protects and preserves the Huron River.



Rate Study/Level of Service (~10 years)

- 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 Meetings
- Online Survey
- 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

Survey Results – Rate Analysis 2017

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%)

Survey Results – Rate Analysis 2017

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

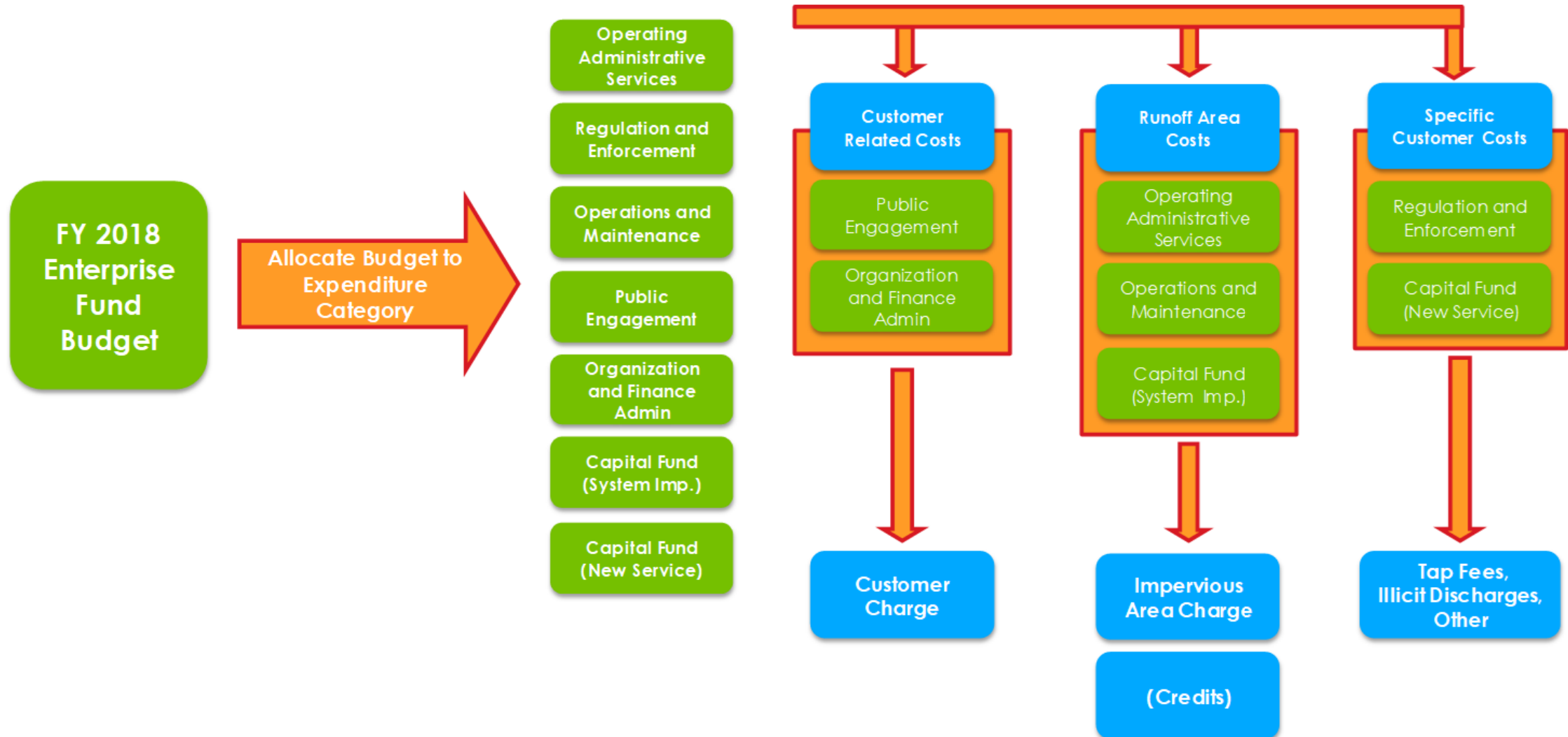
- 47.7%** Unknown
- 18.3%** 0.07 acres (\$28)
- 11%** 0.04 acres (\$16)
- 10.1%** 0.21 acres (\$84)
- 9.2%** 0.12 acres (\$48)
- 3.7%** Not applicable

Dollars and Sense

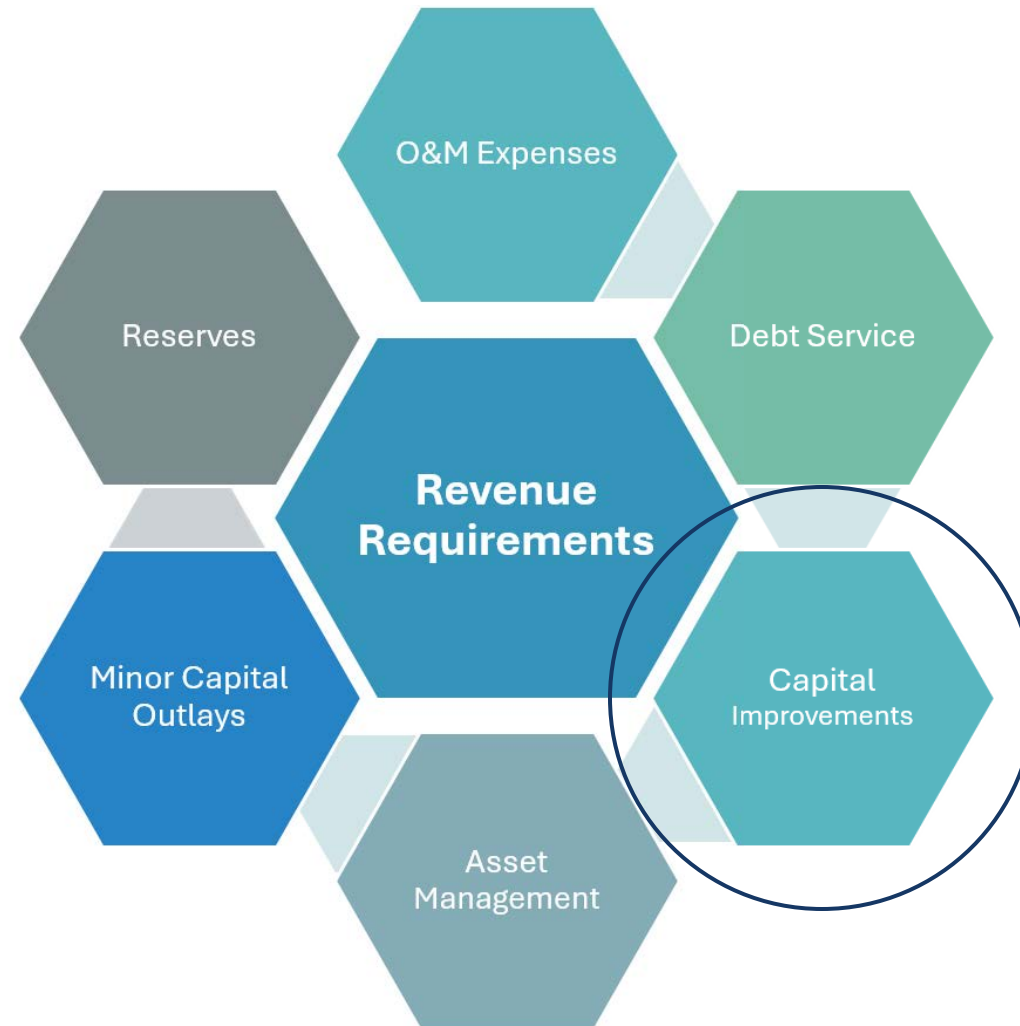
- What we needed for system maintenance
- What we needed for system improvement
- What the public expected from us
- What the regulatory requirements were



Cost Allocation Framework



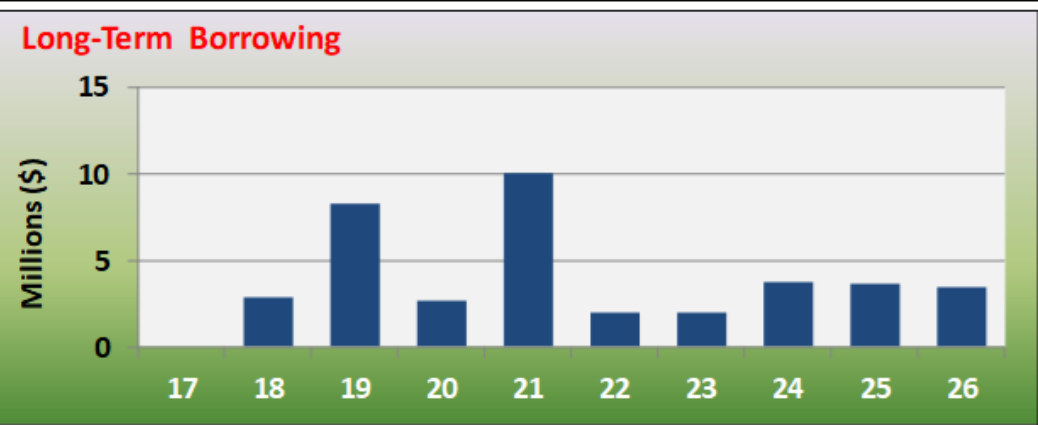
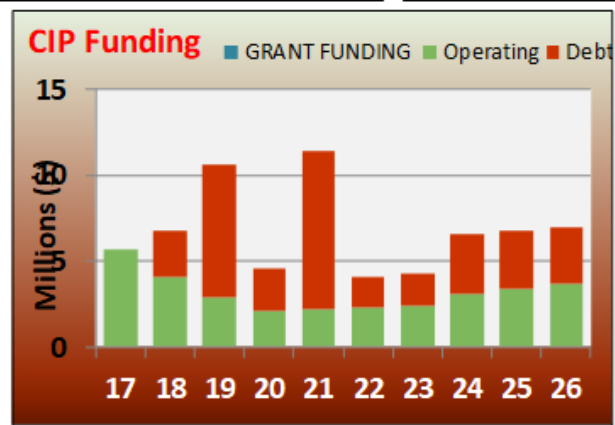
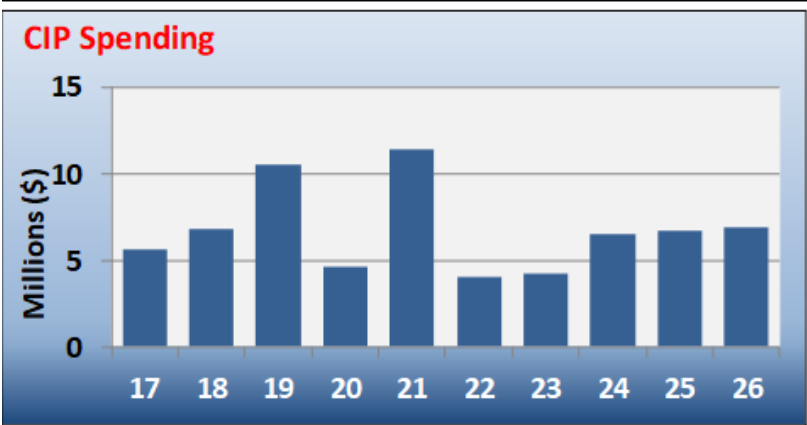
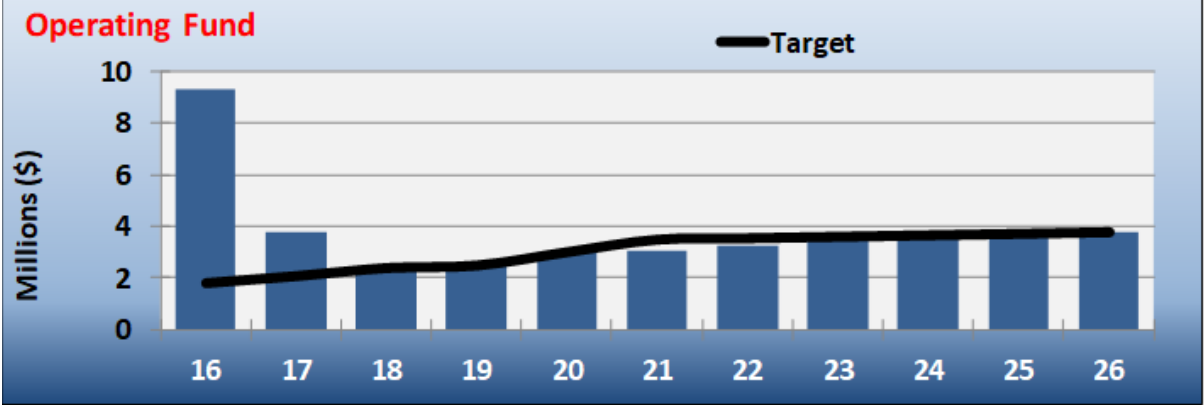
Revenue Requirements



27 FTEs

\$153,326,000M
Over next 10 years

	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 Non-LOS Options BMP maint/ins Tree Pruning CCTV Freq. Field Ops. CS Green Inf. Mant. LOS Options Public Eng. OHM Operations Debt Service Res.	
Rate Covenant	19.60	17.59	8.20	5.39	3.66	3.24	3.28	3.22	3.13	3.07		
CIP \$ Redistribution ▶	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
CIP Execution % ▶	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Base Rate	\$6.77	\$3.91	\$3.99	\$4.07	\$4.15	\$4.24	\$4.32	\$4.41	\$4.50	\$4.59		
2,187 - 4,175 ft2	\$29.75	\$38.62	\$42.48	\$46.73	\$51.40	\$53.97	\$56.67	\$59.50	\$62.47	\$65.60		
Quarterly Bill	\$36.52	\$42.53	\$46.47	\$50.80	\$55.55	\$58.20	\$60.99	\$63.91	\$66.97	\$70.18		
Change \$		\$6.01	\$3.94	\$4.33	\$4.75	\$2.65	\$2.78	\$2.92	\$3.06	\$3.21		
Change %		16.46%	9.26%	9.31%	9.36%	4.78%	4.78%	4.79%	4.79%	4.80%		



A vertical bar graphic on the left side of the slide, transitioning from a light teal color at the top to a dark blue color at the bottom.

Implementation

- Improving data ALL THE TIME
- Credits
- Storm email
- Constant outreach



2323

2335

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1320

Glendaloch Cir

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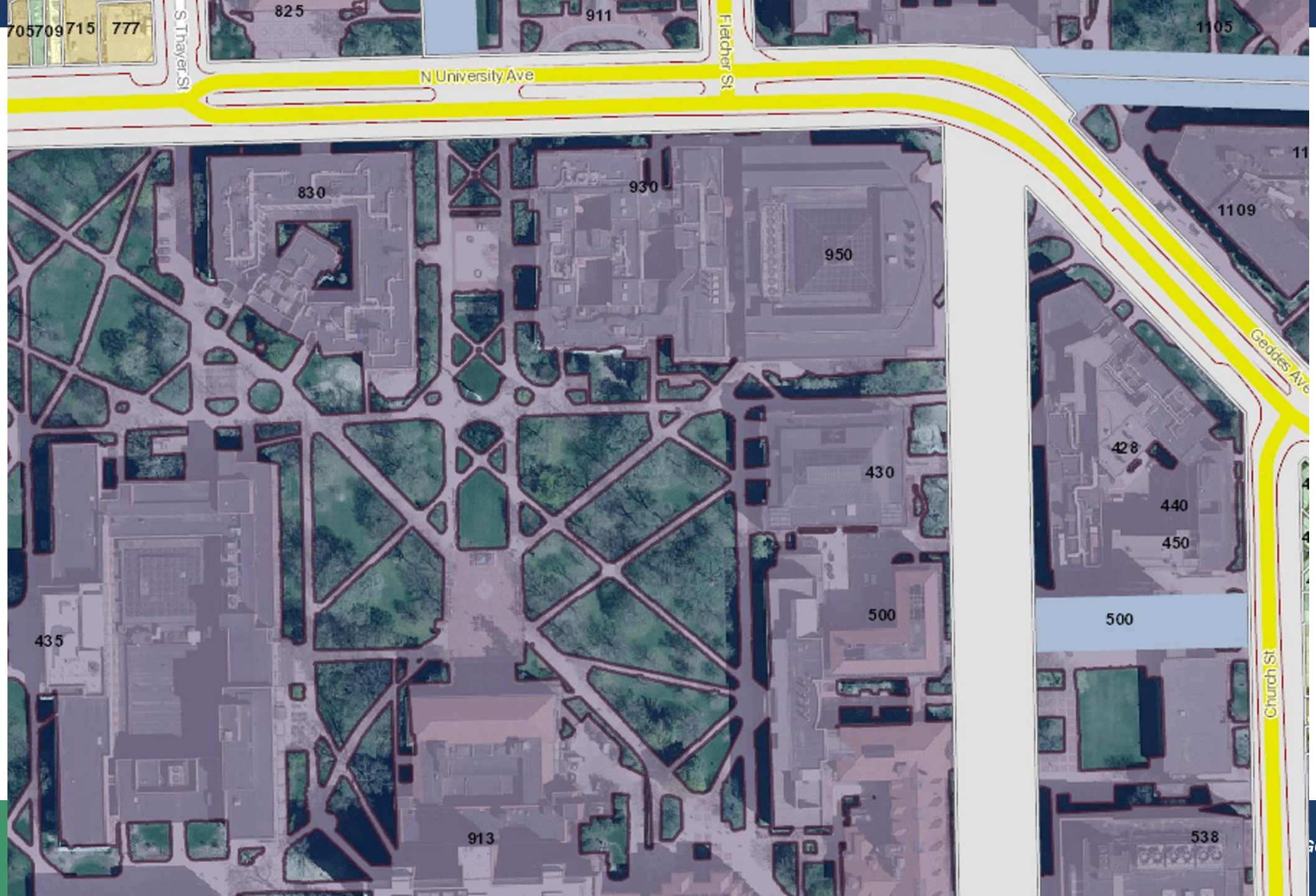
2405

2514

Hawthorn Rd

Londonderry Rd

Shannondale Rd



Credits – Residential

- Rain Garden
 - Installing a [rain garden](#) can result in a savings of \$8.34 per quarter , if the [credit criteria](#) are met.
- Rain Barrel
 - One to five rain barrels (minimum size 35 gallons) can result in a savings of \$4.03 per quarter.
- RiverSafe Home
 - Becoming a RiverSafe Home partner can result in a savings of \$1.52 per quarter, and there is no cost to enroll.
- Cistern
- Detention Basin (part of neighborhood)

Credits – Non-Residential

- Community Partners for Clean Streams Program
- Stormwater Management Systems
 - Development Standards
- Other Approved Stormwater Controls
 - Vegetated Swales and Filter Strips
 - Infiltration and Percolation Basins and Trenches
 - Porous Pavement
 - Extended (Dry) Detention Basins
 - Retention (Wet) Ponds
 - Constructed Wetlands
 - Media Filtration
 - Other Stormwater Treatment System

Appeal Process

- How do I submit an appeal?
 - If you have reason to believe that the impervious area has been incorrectly identified, please take the following steps:
 - Save or print the online stormwater assessment
 - Identify the areas that have been incorrectly identified as impervious (contrasting pen or highlighter works best)
 - Email it to storm@a2gov.org or mail the document to:

City of Ann Arbor – Stormwater
Box 8647
Ann Arbor, MI 48107-8647

- We will review your revisions, and return the results of the analysis to you.

Outreach

- The World Beneath Your Feet – Video Series (https://www.youtube.com/watch?v=97l-H7Q__X4&t=13s)
- Heroes of the Storm – Video Series
- Ann Arbor Water Newsletter
- TikTok/Instagram
- Public Events/Tabling
- Partnership with AAPS
- Partnership with HRWC
- Holistic approach to all things WATER



