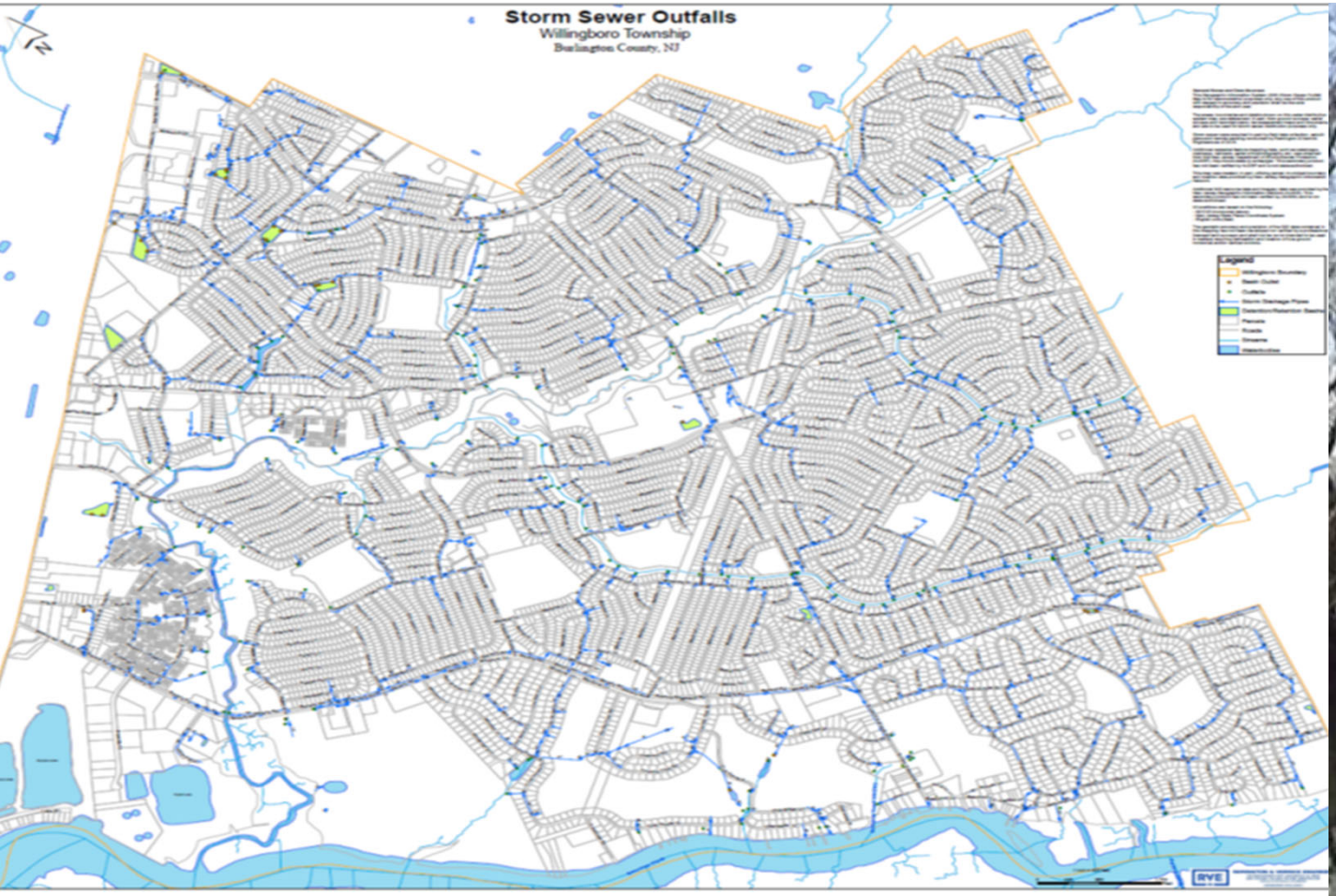
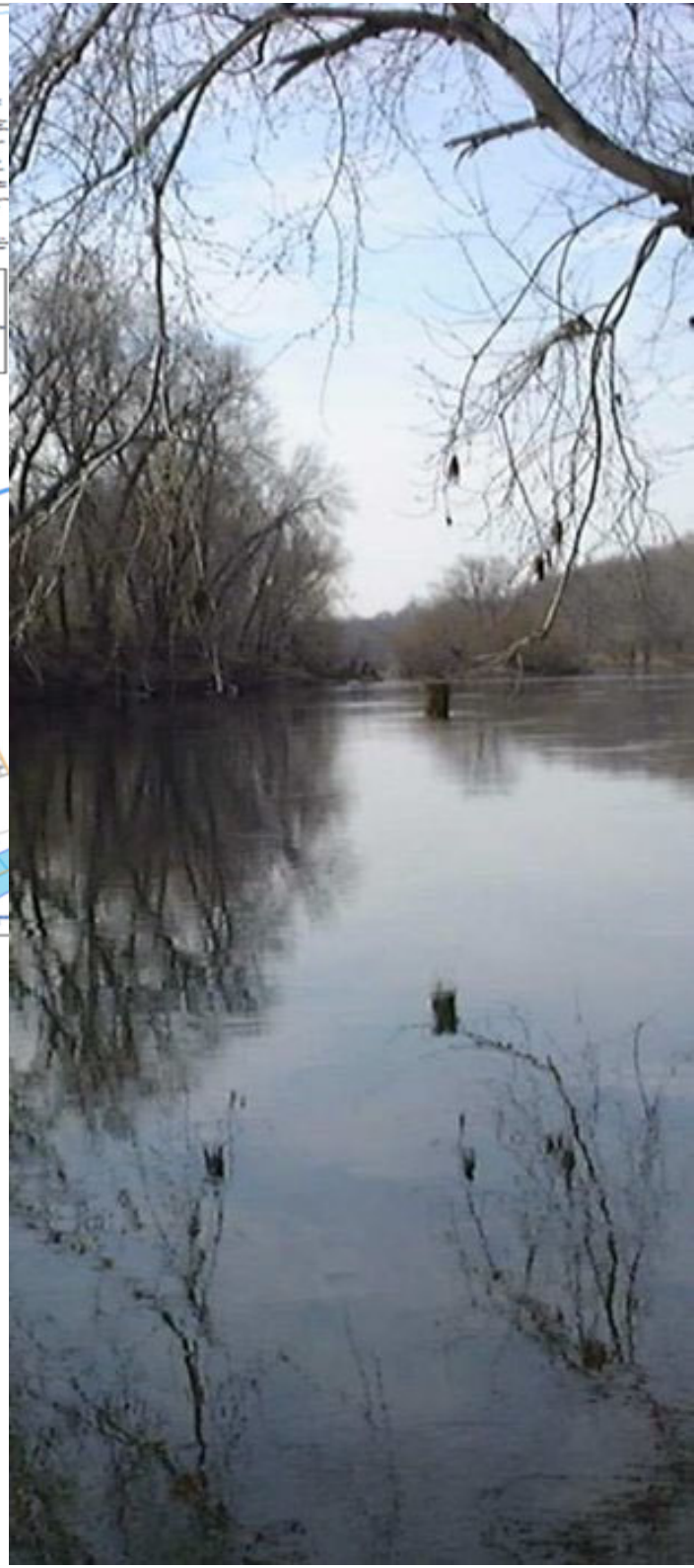


Willingboro Township Stormwater Program and Funding Study

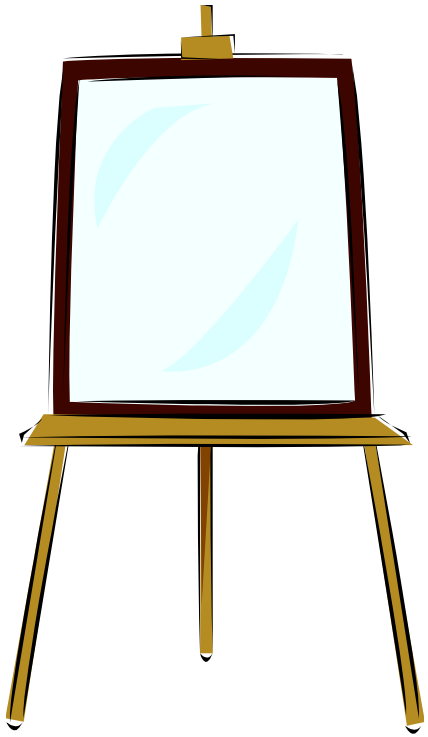
Elizabeth Treadway – Senior Vice President

Water Resource Planning
WSP USA

March 18, 2025



Overview of Presentation



- Stormwater Drivers for Change
- Program Assessment
  - Current program
  - Future program needs and costs
- Stormwater Utility Fee
  - What is a utility fee?
  - What would it mean for Willingboro?
  - Next steps

Purpose of the Stormwater Program and Funding Study

The study, funded by NJDEP at request of Willingboro, is designed to answer key questions:

- What should a future stormwater program look like to meet external (federal and state) requirements and community goals?
- What funding option(s) will best meet the Township's long-term needs?
- How could a utility function in Willingboro Township?

Stormwater Feasibility Study Establishes Legal Foundation

FIVE KEY AREAS OF DUE DILIGENCE:

1. **Governance and inter-municipal consensus**
2. **Program concept and the compelling case**
3. **Public and political education and support**
4. **Financial policies and documents**
5. **Database development and accuracy and customer service**

Stormwater Drivers for Change

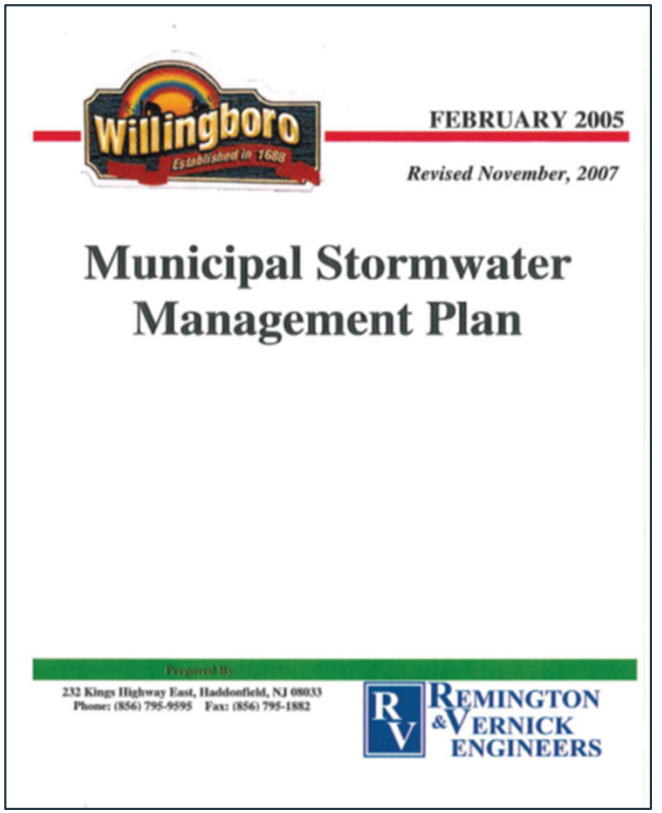
A Piecemeal, Aging Stormwater System

- Most of the Township's stormwater infrastructure dates to 1960's
- A significant system:
  - 1,286 stormwater drainage inlets,
  - 210 stormwater outfalls
  - Approximately forty miles of drainage pipe,
  - Sixteen ditches/channels that total approximately two miles in length.
- Built with the idea of getting water off the roadway and properties as fast as possible
- The Stormwater Management Plan identifies contributors to water quality impacts.

An Aging Stormwater System

"…erosion and sedimentation can destroy habitat from which some species cannot adapt. In addition to increases in runoff peaks, volumes, and loss of groundwater recharge, land development often results in the accumulation of pollutants on the land surface that runoff can mobilize and transport to streams."

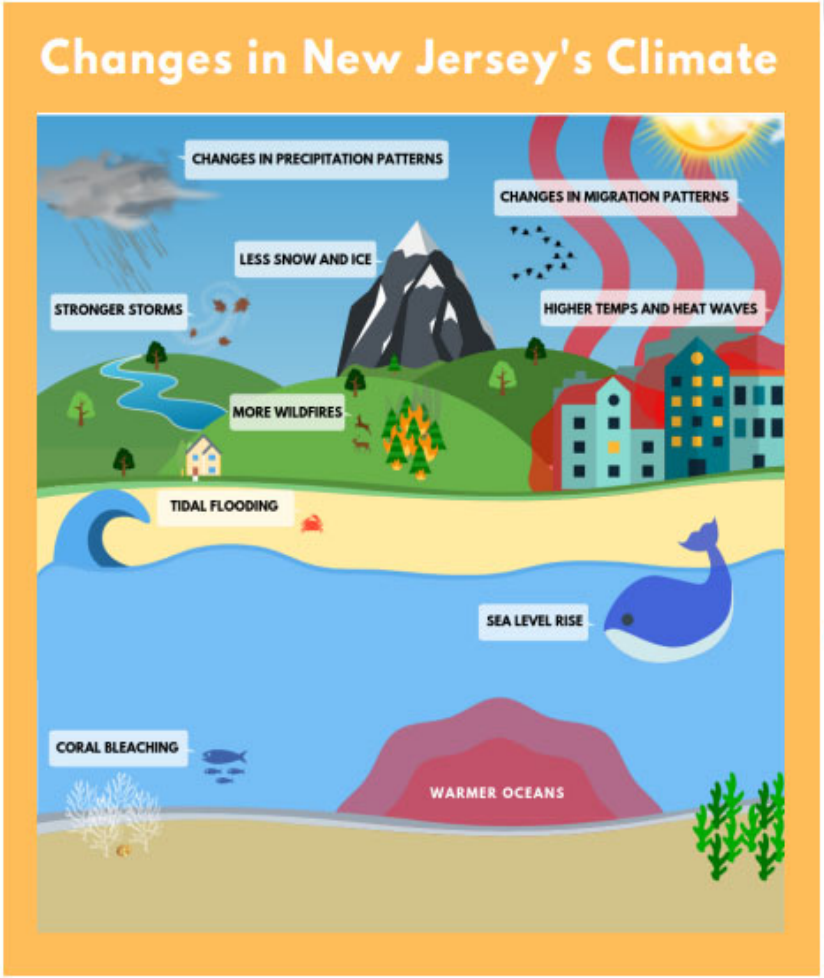
"Since the Township has been mostly developed for several decades, there has not been a significant increase in impervious cover to the extent that local groundwater recharge is significantly decreasing. Increases in impervious area can… decrease opportunities for infiltration, which reduces stream base flow and groundwater recharge."



Climate Change

Increased rain and extreme events are further stressing the system:

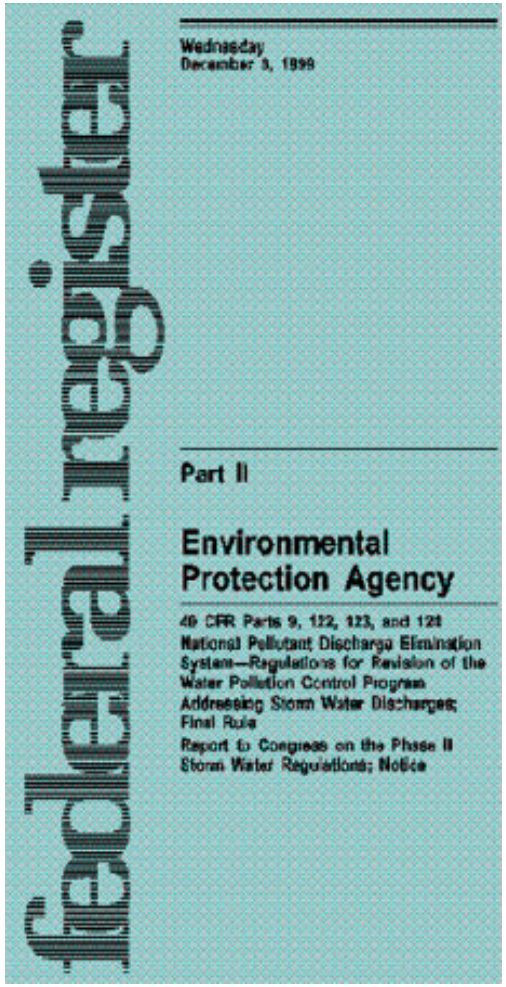
- New Jersey has experienced an upward trend of 4.1 inches (9%) in precipitation per 100 years
- Since 1980, the state has sustained 42 extreme weather events



Water Quality Requirements

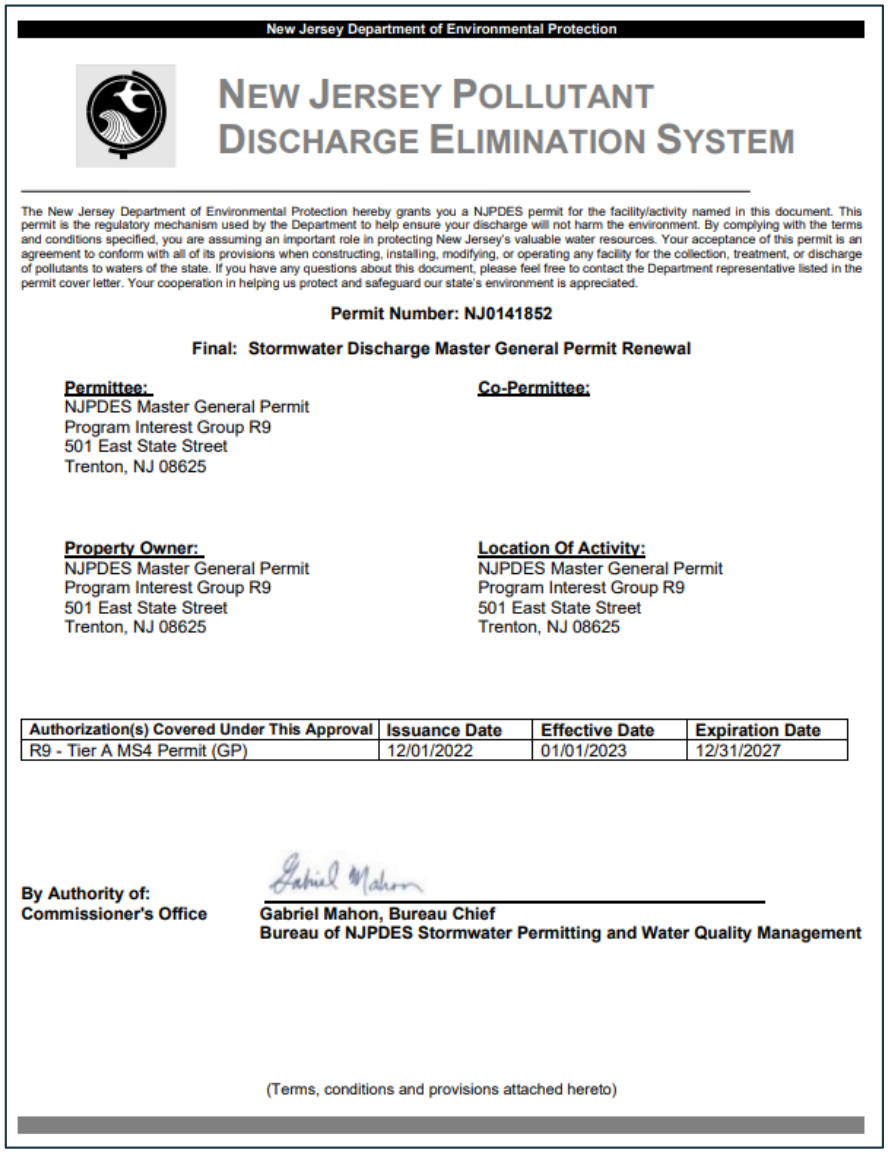
Municipal Separate Storm Sewer System Permit (MS4):

- Regulates the stormwater outfalls –
- First issued by NJDEP in 2004; oversight by U.S. EPA



NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

New Permit, Bigger Challenges



New Jersey Department of Environmental Protection

NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM

The New Jersey Department of Environmental Protection hereby grants you a NJPDES permit for the facility/activity named in this document. This permit is the regulatory mechanism used by the Department to help ensure your discharge will not harm the environment. By complying with the terms and conditions specified, you are assuming an important role in protecting New Jersey's valuable water resources. Your acceptance of this permit is an agreement to conform with all of its provisions when constructing, installing, modifying, or operating any facility for the collection, treatment, or discharge of pollutants to waters of the state. If you have any questions about this document, please feel free to contact the Department representative listed in the permit cover letter. Your cooperation in helping us protect and safeguard our state's environment is appreciated.

Permit Number: NJ0141852

Final: Stormwater Discharge Master General Permit Renewal

Permittee:
NJPDES Master General Permit
Program Interest Group R9
501 East State Street
Trenton, NJ 08625

Co-Permittee:

Property Owner:
NJPDES Master General Permit
Program Interest Group R9
501 East State Street
Trenton, NJ 08625

Location Of Activity:
NJPDES Master General Permit
Program Interest Group R9
501 East State Street
Trenton, NJ 08625

Authorization(s) Covered Under This Approval	Issuance Date	Effective Date	Expiration Date
R9 - Tier A MS4 Permit (GP)	12/01/2022	01/01/2023	12/31/2027

By Authority of:
Commissioner's Office

Gabriel Mahon

Gabriel Mahon, Bureau Chief
Bureau of NJPDES Stormwater Permitting and Water Quality Management

(Terms, conditions and provisions attached hereto)

New permit effective 2023 has significant changes:

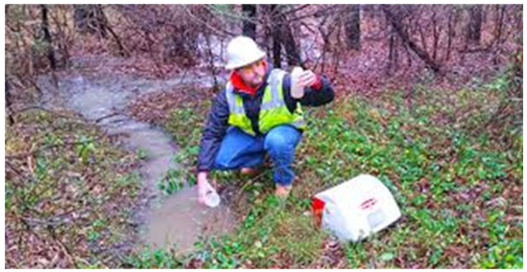
- Mapping of all stormwater infrastructure
- Enhanced street sweeping (every four months)
- New infrastructure cleaning and maintenance requirements
- Training and other good housekeeping practices
- Watershed Studies and Implementation Plans

Stormwater Management Challenges

Burlington County starting to collect damage assessments following intense storm and floods

Identified Issues and Actions

- **Illicit Discharge Tracking**
  - Dry weather screening is mandated in permit.
  - 20% of all outfalls must be screened annually.
  - Documentation on in-field water quality testing is important.



- **Inlets and Catch Basin Maintenance**
  - Backyard swale/ditch cleaning is required by the MS4 permit, through an inventory and inspection program
  - Maintenance protocols should be documented.
  - Inventory and inspection will identify issues at specific locations.

- **Conveyance System Maintenance**
  - Garfield Drive (debris clogging inlet grates requires targeted oversight and sweeping as needed),
  - Millstone Lane (flooding and erosion issues),
  - Debris removal from the 15+ drainage ditches throughout the Township requires more frequent attention
  - Berkshire Lane drainage issue
  - Babbit Lane – slip-lining project

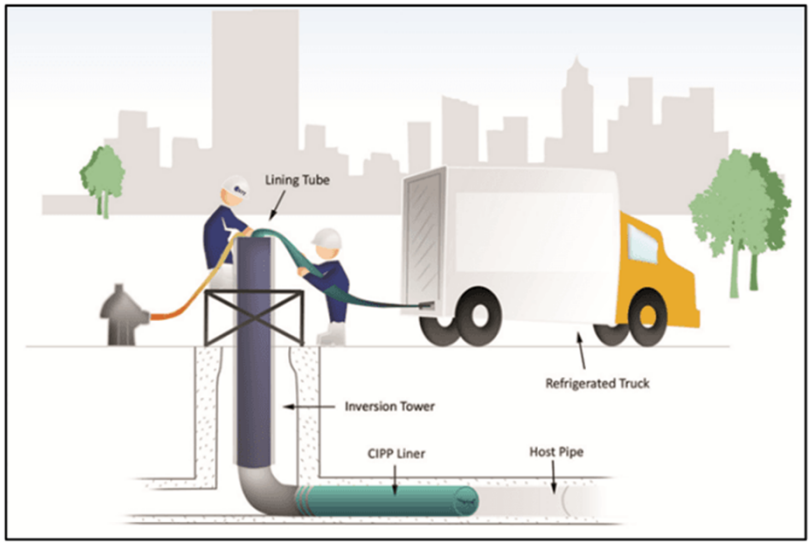
Identified Issues and Actions

- **Street Sweeping**
  - Frequency of sweeping increased 50% by new MS4 permit
  - Creates need for an additional sweeper and equipment operator.
- **Private Stormwater Management Facilities**
  - Mandate inspection (or certification by property owner of a completed 3rd party inspection), annually.
  - Must annually update inventory and obtain status reports from owners
- **Mapping**
  - Must be fully updated and maintained on an annual basis. Key support for the Watershed Management Plans.
- **Planning**
  - The Municipal Stormwater Management Plan has not been updated since 2007 and should be reviewed and revised to meet changes in State requirements including new criteria (2025).
  - Watershed Management Plans are mandated and must be completed by 12/31/2027.

Identified Issues and Actions

Capital Improvements

- Watershed Plans – Implementation to address specific improvements necessary to meet goals
- MS4 Permit mandates retrofit of all storm drain inlets - underway
- Evaluation of public properties to identify potential issues for protection of runoff from exposure to pollutants
- Establish a 5-to-10-year CIP Plan for Watershed Plan implementation and address aging infrastructure (e.g., pipe rehabilitation by sliplining and replacement of failing corrugated pipe)
- Maintain equipment replacement schedule to ensure effective performance



Pipelining process


Storm sewer pipe collapse

Corrugated pipe failure

Estimated Future Stormwater Cost Summary

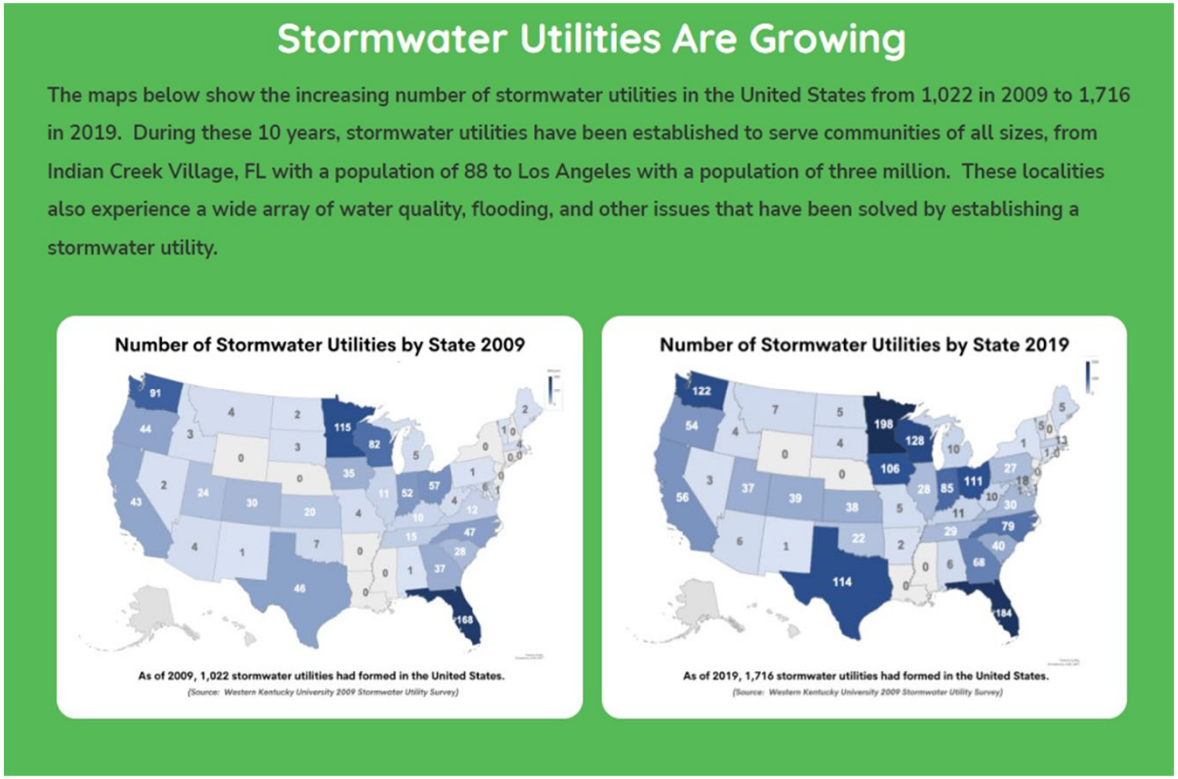
Current Estimated Program Cost			
		Total FY24 Program Cost	**$954,800**
Estimated Additional Expenses			
Personnel	Equipment Operator		
	Maintenance Worker (2)		
	Educational Specialist		
	GIS Technician		
	MS4 Program Coordinator (Township Engineer)		
		Total Additional Personnel	**$460,000**
Expenses	Engineering Services		
	Watershed Planning/Implementation		
	Public Education		
	MS4 Compliance Activities		
		Total Additional Expenses	**$90,000**
Capital	New Sweeper		
	Capital Priority Projects (e.g. slip lining)		
	Corrugated Pipe Replacement Program		
		Total Additional Capital	**$1,500,000**
Total Current and New Program Cost			**$3,034,800**

What is a Stormwater Utility?

Is this a new thing? Yes and no…

Stormwater utilities are only new to New Jersey (New Brunswick and Maplewood)

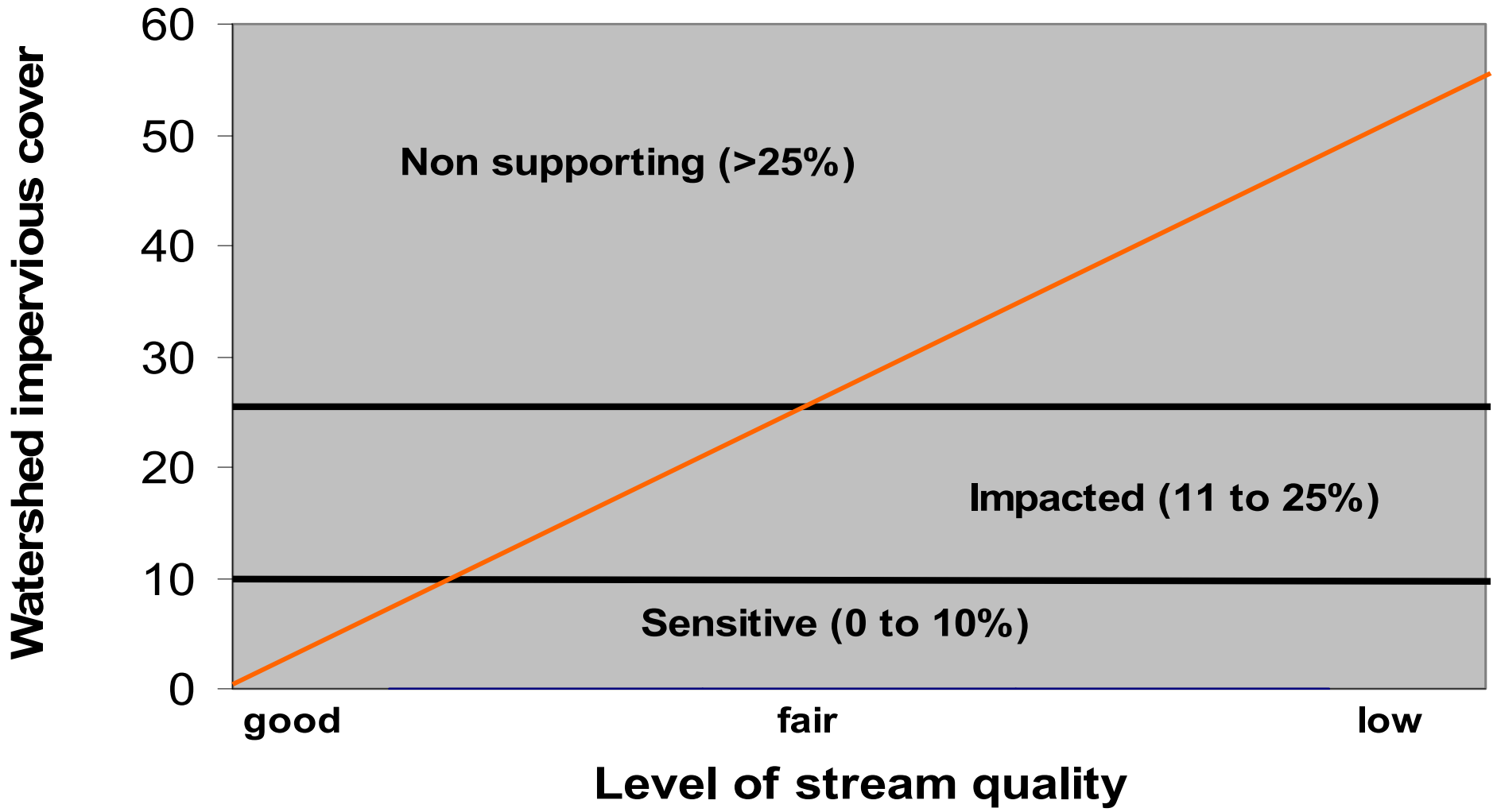
2,500+ nationwide going back to the early 1970s



Stormwater Utility Fees

- It is both a fee and program of services, much in the same way that one pays for water or sewer service
- Authorized by New Jersey Clean Stormwater and Flood Reduction Act (CSAFRA) in 2019
- May be a separate authority or kept part of the Township's departmental structure
- Based on the amount of impervious surface (hard) cover on a property

The Impervious Cover Model



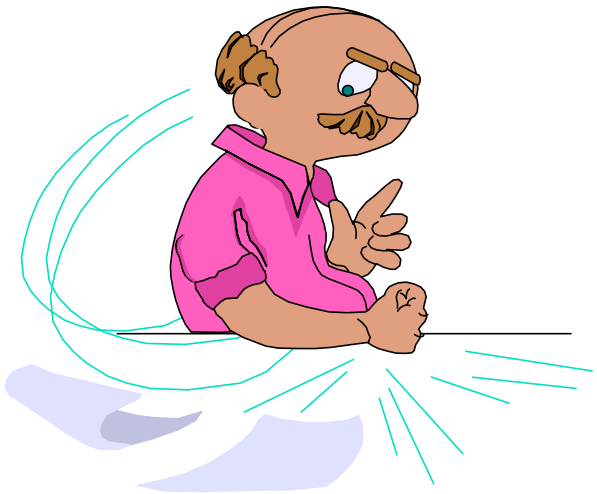
How might residents benefit from a stormwater utility?

- Provides a dedicated revenue source for stormwater purposes
- Stability allows for long-term engineering and CIP planning
- Distributes cost based on impact rather than property value
- Tax-exempt properties pay their fair share
- Requires “credits” to incentivize private investment in stormwater improvements

Not everyone will love the idea…

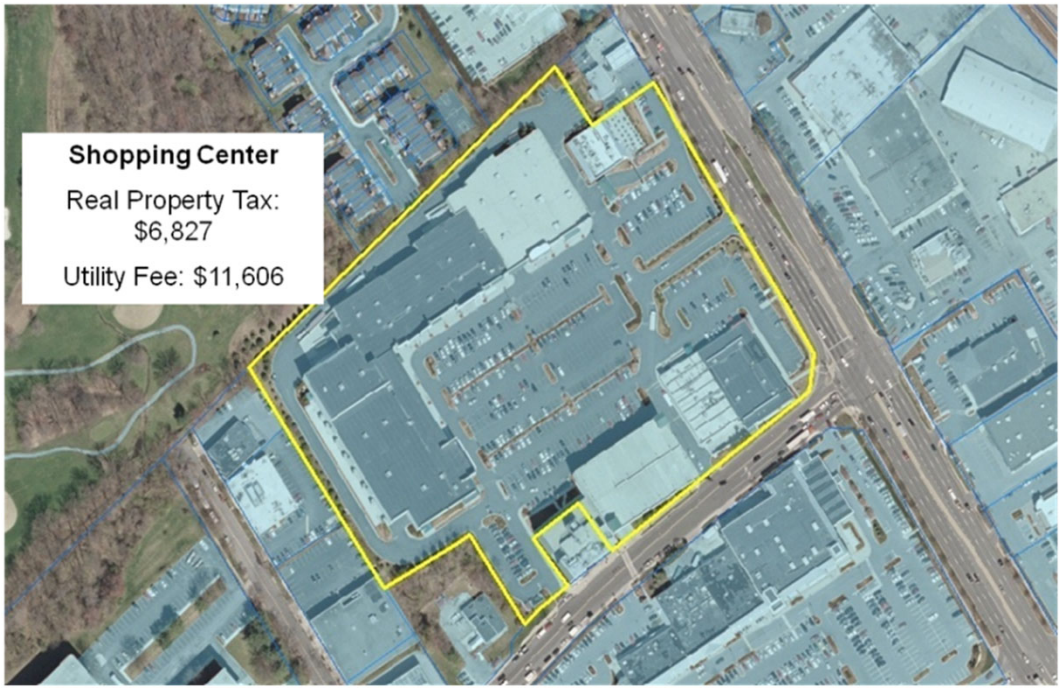
Those who will look at this with a skeptical eye include:

- Tax exempt properties
- People with large paved areas with lower land valuation
- Potentially anybody who doesn't see the value in changing the basis of revenue



How do real property tax and user fees compare?

Real Property Tax	User Fee
• Cost is distributed based on property value • Can be accounted for separately but is not legally segregated • Does not generate revenue from tax exempt properties • Billing infrastructure exists	• Cost is distributed based on impervious area • Legally separate enterprise fund • All properties are billable (tax exempt, federal, state) • Credit (fee reduction) required for stormwater activities • Maintenance of impervious area mapping; additional billing preparation



Real Estate Tax versus Utility Fee Approach – Dealing with Differing Perspectives

If we know more resources are required to support the program, <u>what funding option(s) best meet the Township's long-term needs</u>?

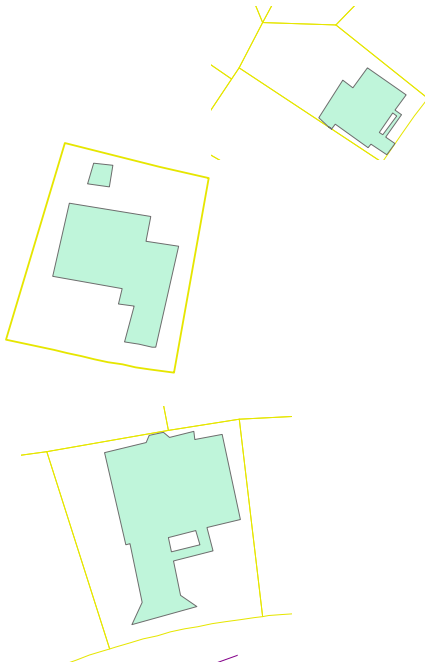
Preliminary Impact Analysis for Willingboro

The question: How are costs distributed among properties in the Township.

Equivalent Residential Unit (ERU) Approach

Policy determined by supporting data.

ANY Single Family Detached House
One Billing Unit

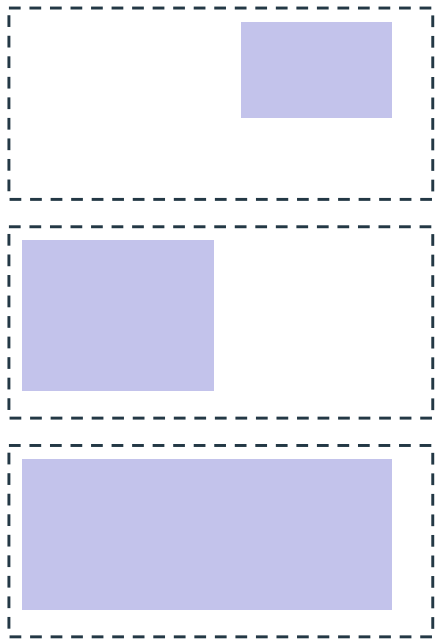


1 ERU

1 ERU

1 ERU

Properties Other Than SFD Lots
Based on Median SFD in a Billing Unit

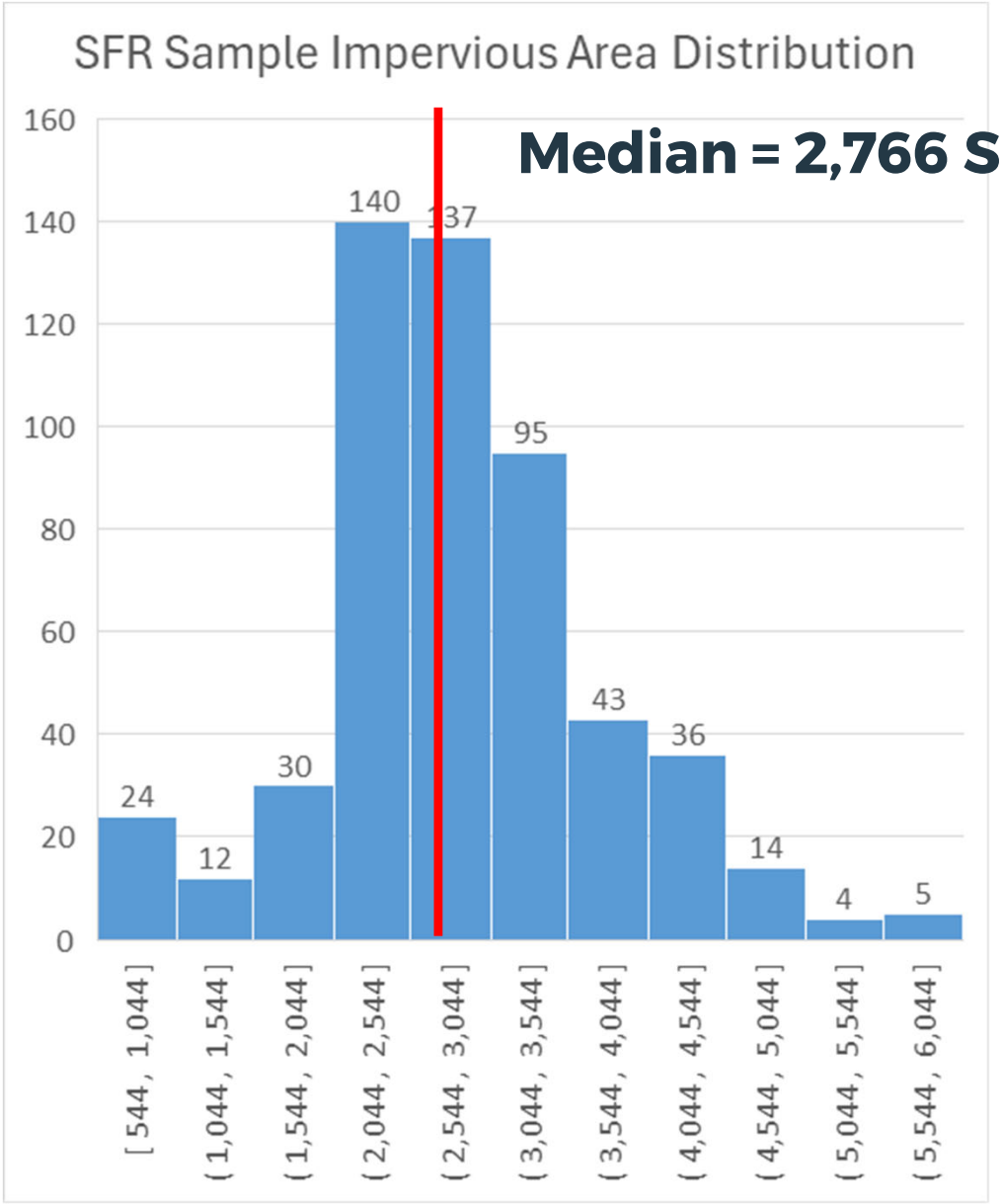


1 ERU

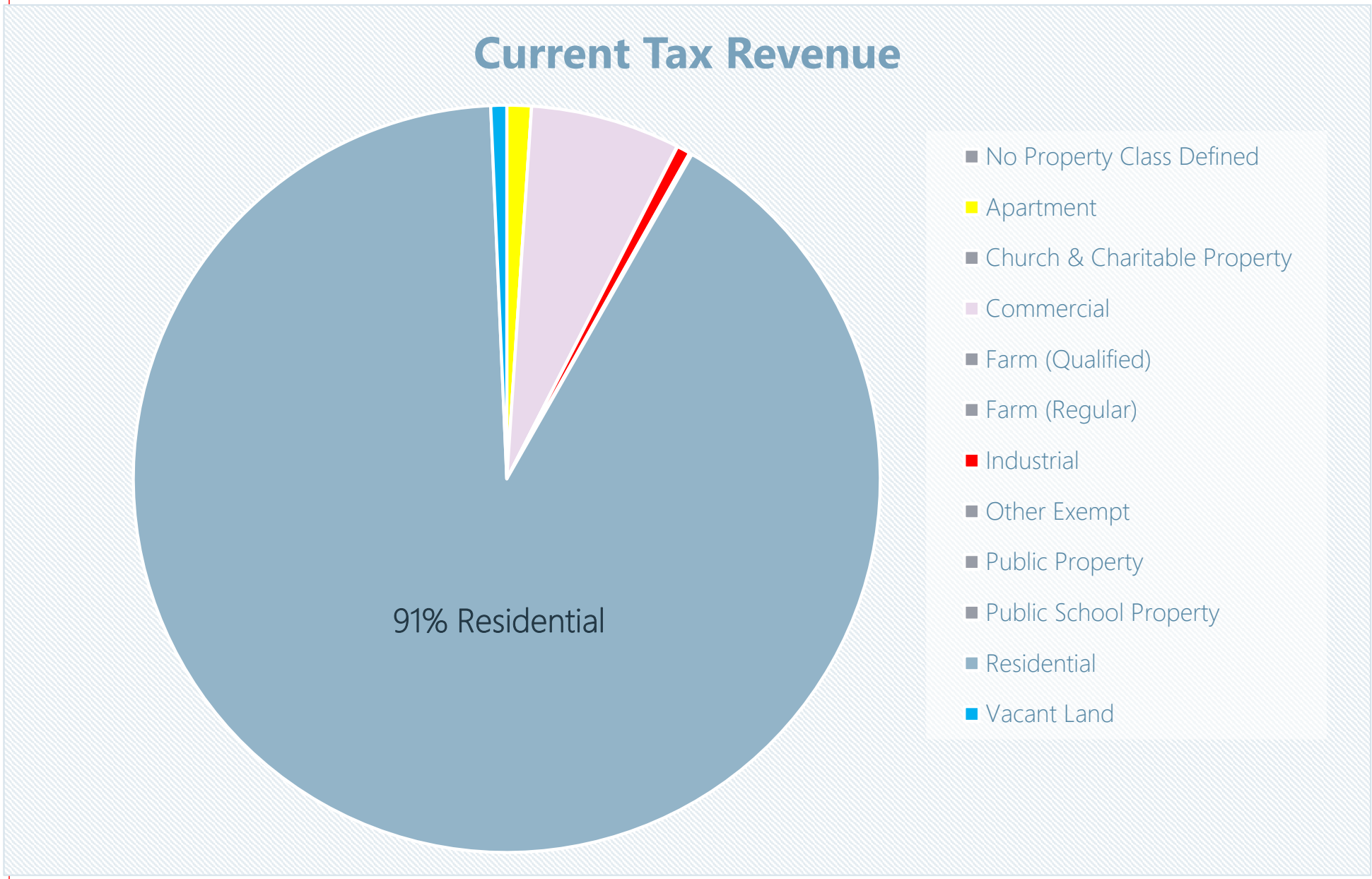
2 ERUs

3 ERUs

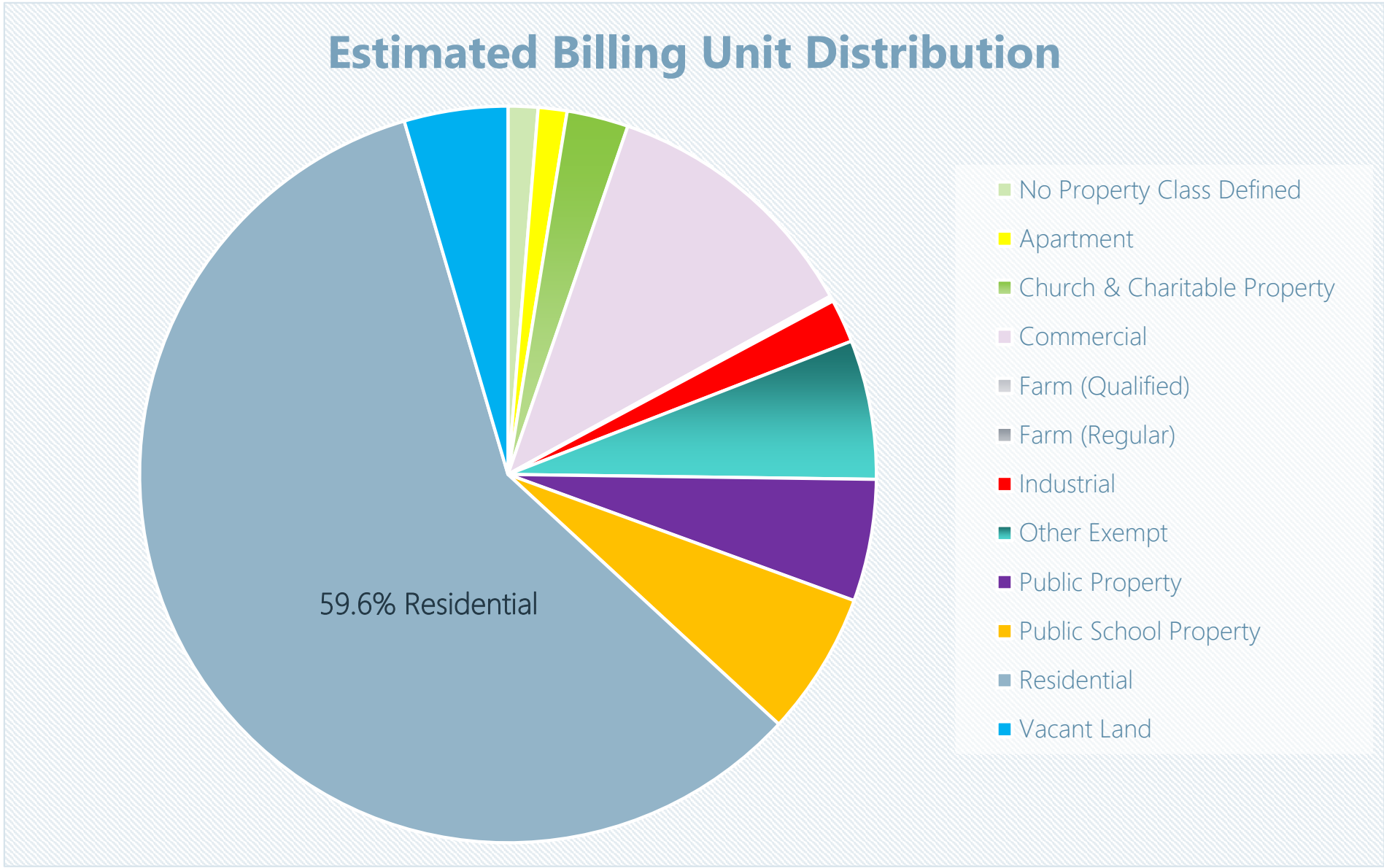
Single Family Impervious Area Distribution



Distribution – Real Property Tax



Distribution – Stormwater Utility



What's Next?

It is worth the time and resources to get the process right…

Leadership Discussions

- Is there support by the Council to make this change?
- Engage with both internal and external leadership in the community

Public Engagement

- Public understanding is key to program success
- Stormwater Advisory Committee
- Engage the public at-large on their own turf

Key Policy Decision Points

- There are still many decision points
- Is the program the right fit?
- Design a rate structure that meets the community's needs and expectations

Next phases in utility development

Phase II	Phase III
Expand Public Engagement	Ordinance Development
Finalize Scope and Cost of Program	Master Account File Development
Refine Impervious Area Mapping	Implementation
Develop Credit Policy	
Finalize Rate Structure	
Finalize Cash Flow and Rate Models	

Looking forward to your questions!

Elizabeth Treadway, WSP USA
(336) 210-9011
elizabeth.treadway@wsp.com