Road to Resiliency: Integrated Stormwater Management Planning and Funding

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THE INFORMATION PRESENTED HEREIN IS INTENDED TO BE USED EXCLUSIVELY FOR NJ FUTURE'S STORMWATER UTILITY SEMINAR.

Agenda

I. Stormwater Utility Concept & Trends

II. Stormwater Utility Feasibility & Implementation Overview

III. Stormwater Stakeholder Engagement

IV. Wrap-Up

PART I – STORMWATER UTILITY CONCEPT & TRENDS

Part I - Discussion

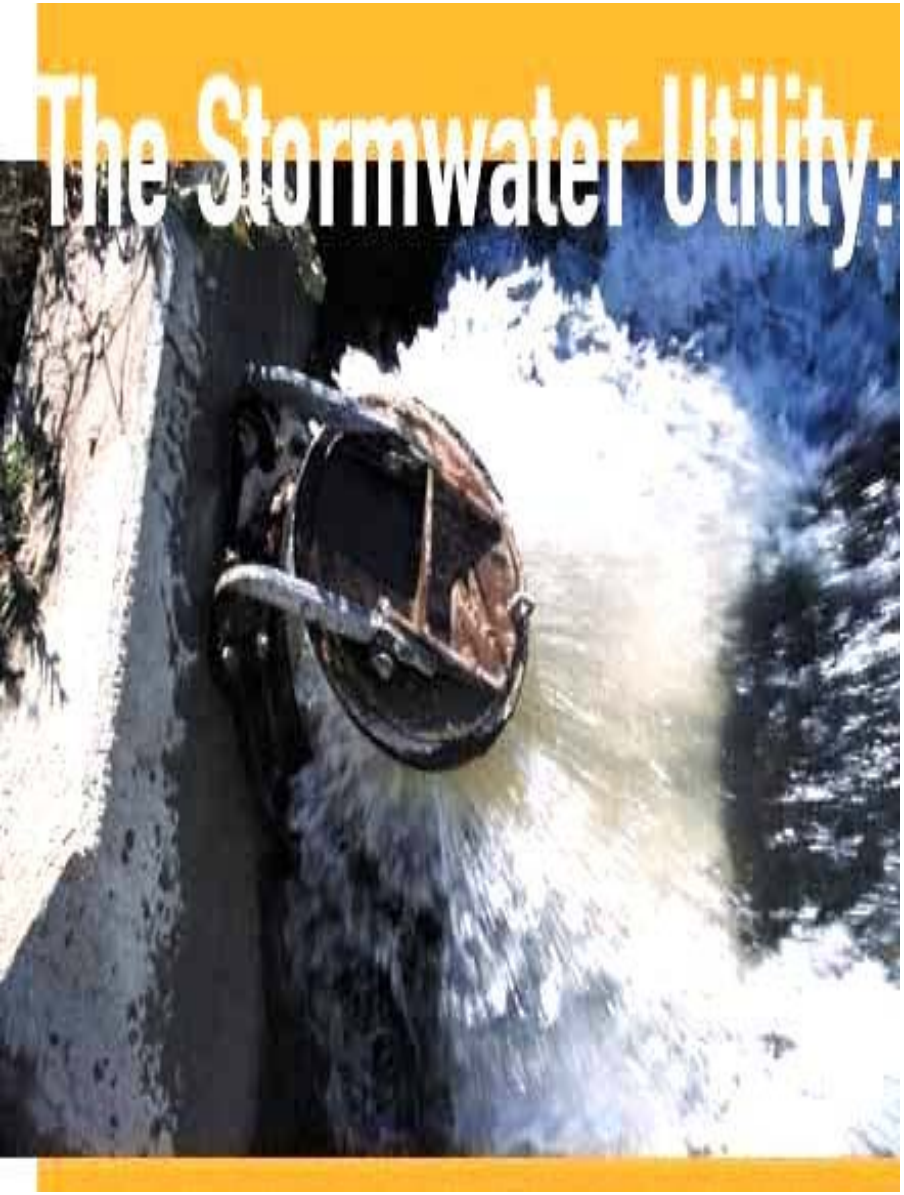
Definition of the Concept

Goals & Drivers

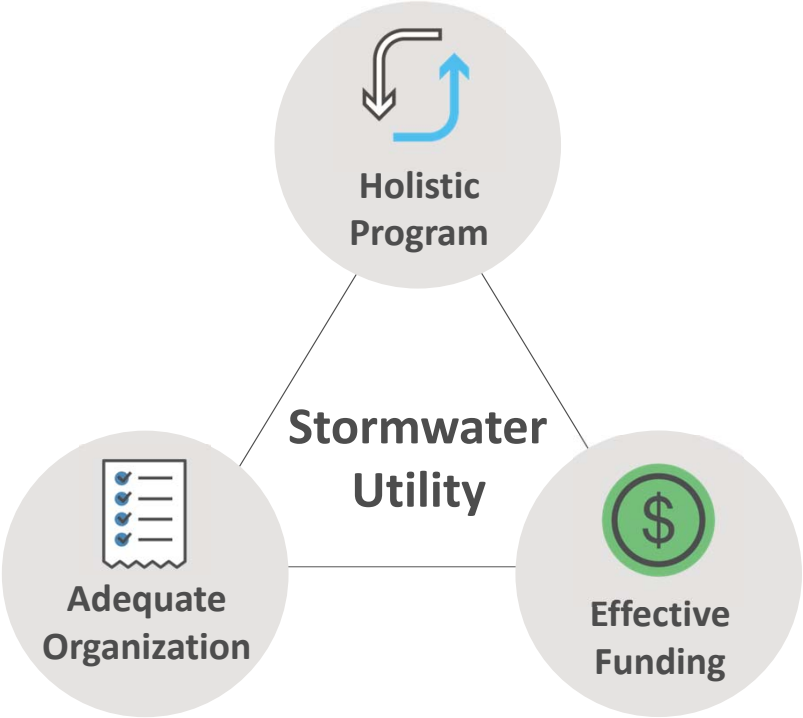
Major Benefits

Common Perceptions

Industry Trends



What is a Stormwater Utility?



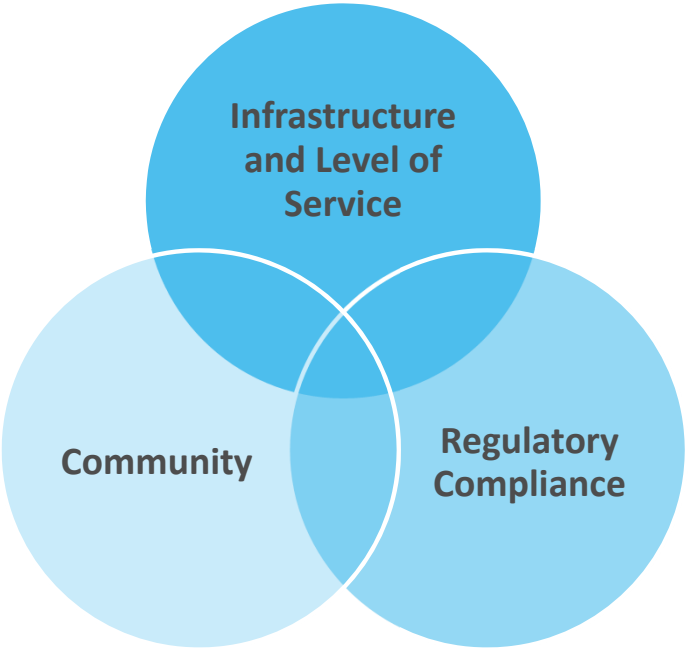
What Drives Communities to Establish a Stormwater Utility?

Common drivers:

- Flooding
- Water Quality
- Deferred maintenance
- Inadequate capital investment
- Regulatory compliance needs
- Strained resources (personnel, equipment, etc.)
- Unclear responsibilities and service requirements
- Insufficient funding
- Lack of dedicated funding source
- Inequitable cost recovery

Program Goal: Build a Resilient Stormwater Program

Stormwater Goals



Objectives

A stormwater program that:

- **Addresses multiple needs**
- **Balances service demands and available resources**
- **Provides a targeted <u>level of service</u>**

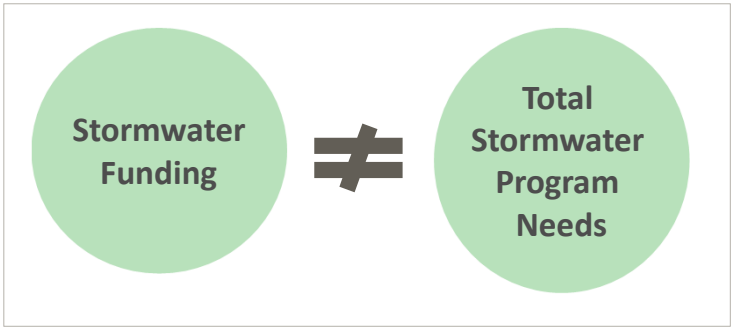
Organizational Goal: Build Service Capacity

Organizational Objectives:

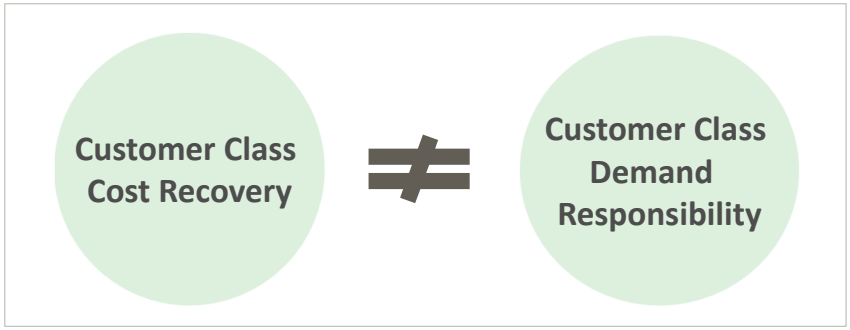
- **A clear organizational structure with defined services**
- **Skilled workforce**
- **Community partnerships**
- **Enabling technology**

Funding Goal: Establish Adequate and Dedicated Funding

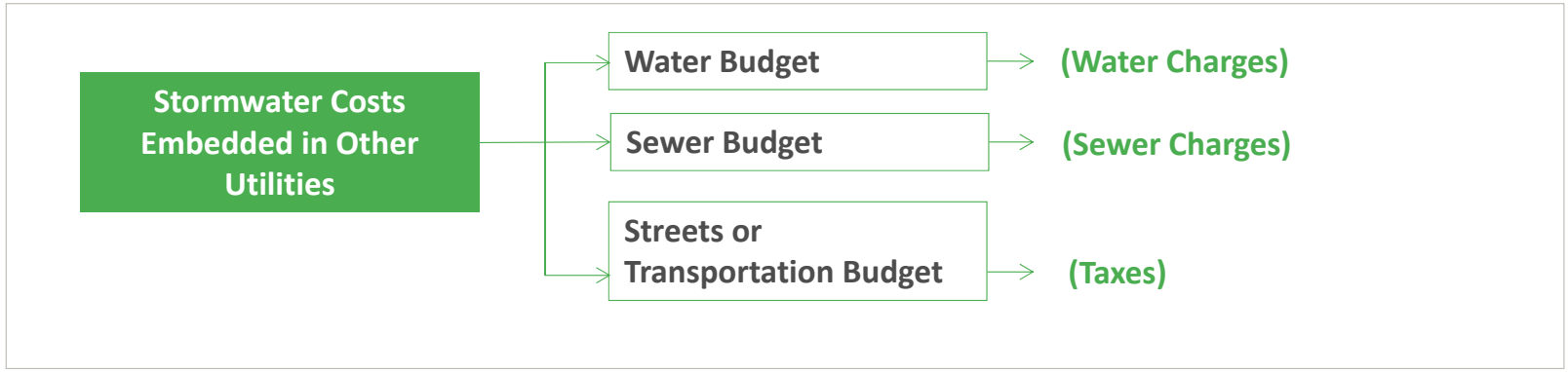
Adequacy



Equity



Transparency



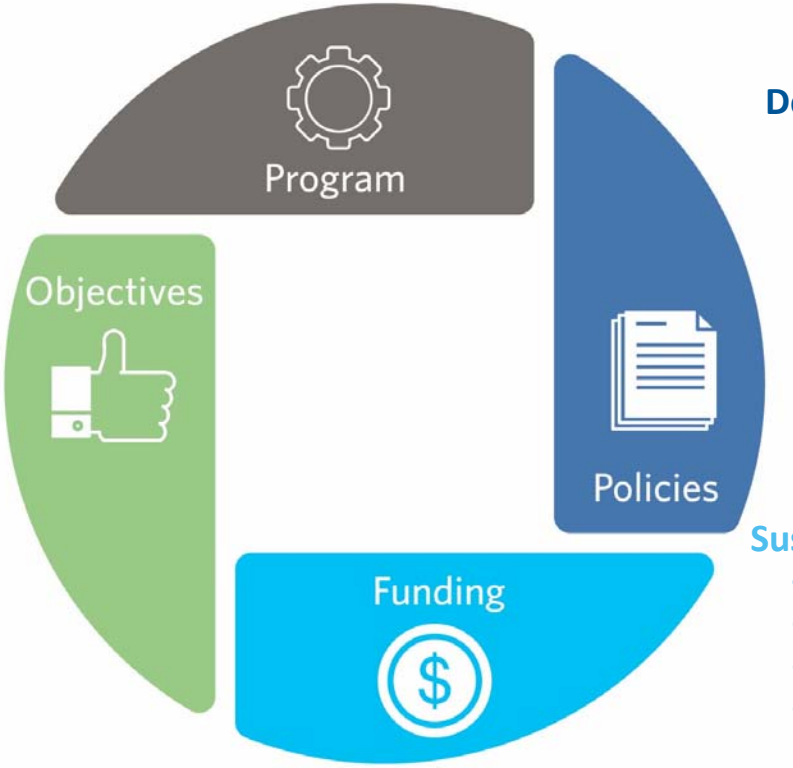
Benefits of a Holistic Stormwater Utility Concept

Transparency & Understanding of Program Costs

- Level of Service Assessment
- Regulatory Compliance
- Capital Program
- Green / Community Initiatives

Address both Utility Obligations & Customer Needs

- Funding Resiliency
- Flooding & Water Quality
- Public Health & Safety
- Neighborhood & Economic Enhancements
- Community Based Partnerships (CBP3s)



Defensible Policies

- Revenue Requirements
- Cost Recovery Basis
- Accounting Practices
- Billing & Collections

Sustainable & Dedicated Funding

- Revenue Stability
- Scalable Funding Structure
- Equitable Cost Recovery
- Incentivizes Best Management Practices

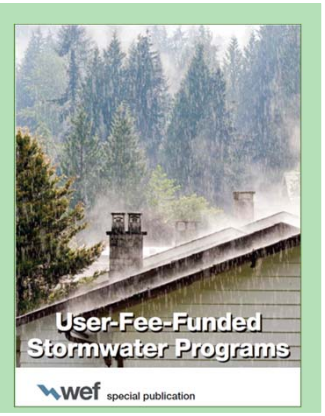
Let's Look at Some Common Perceptions about Stormwater User Fee

- "Every time it rains – we're going to get billed." FALSE
- "Tax-Exempt properties don't have to pay stormwater fees." FALSE
- "Stormwater user fee is a fee for service similar to water and sewer charges." TRUE
- "I have stormwater management on my property – I shouldn't have to pay." FALSE
- "A stormwater utility will address all of our flooding." FALSE
- "We already pay for all of our stormwater costs through stormwater permit fees." FALSE

Let's Clear the Myth: Stormwater "User Fee" is NOT a "Rain Tax"

Services Provided → *Annual Costs Incurred* → $ ← *Costs Recovered through User Fees* ← **Services Received**

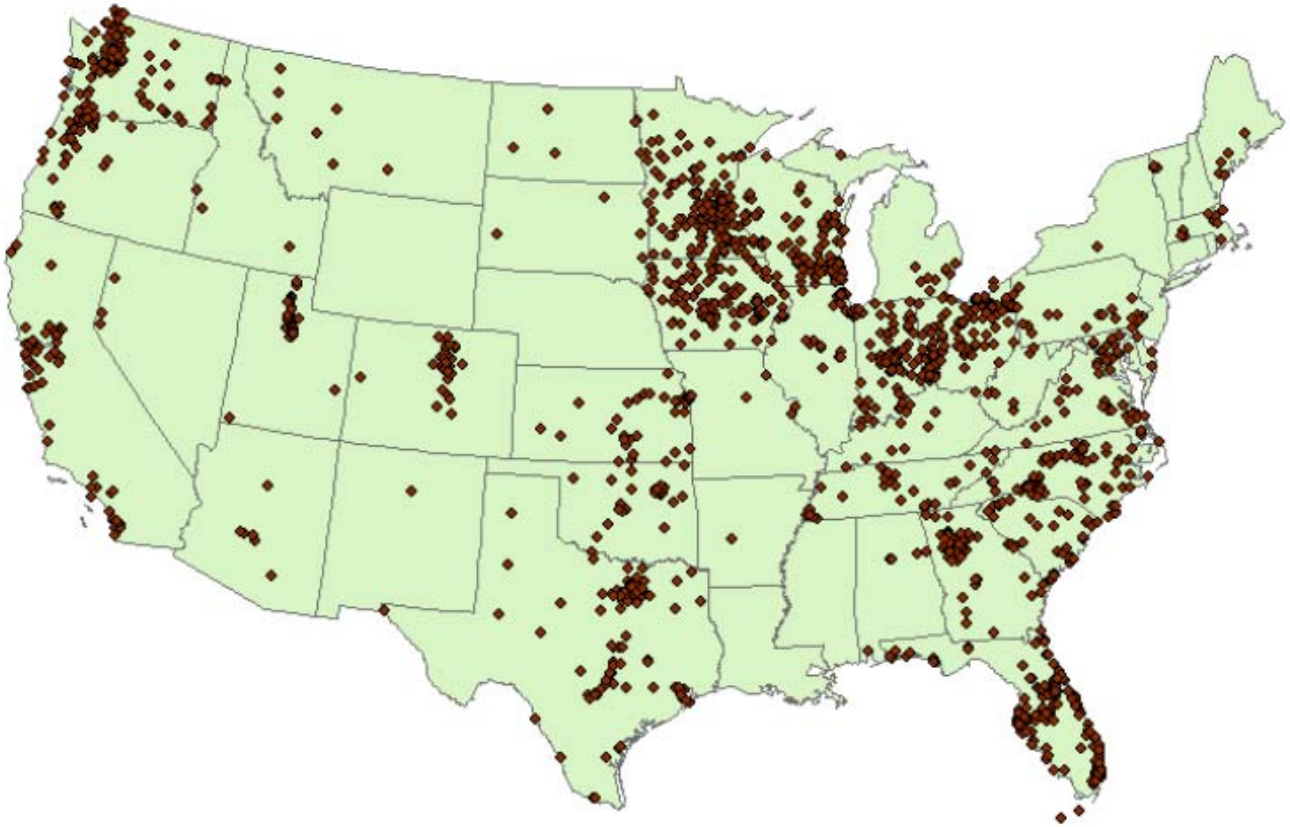
Key Tests of a User Fee



- Fee is assessed to address a regulatory purpose?
- Fee is in exchange for benefits received by the general public?
- Fee has reduction opportunities?
- Fee is a fair approximation of costs incurred in providing services?

Stormwater Utility Trends

The Context – Western Kentucky Survey



1,650+ Stormwater Utilities in the US

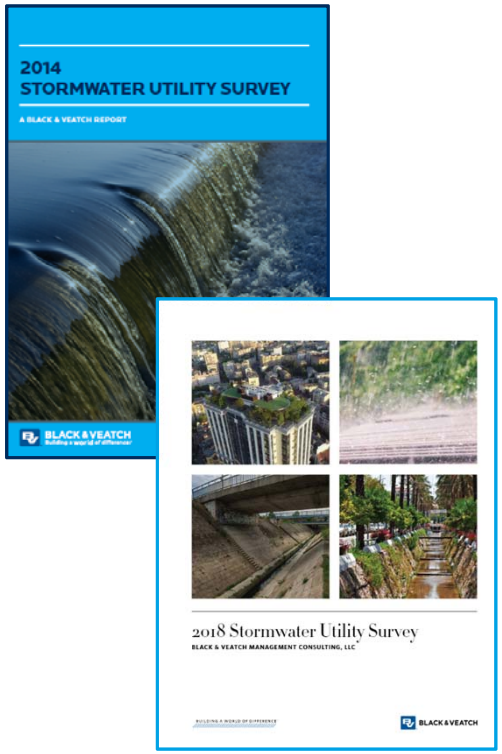
Six States have 100+ Stormwater Utilities

National Median: Single Family Residential Annual Stormwater User Fee: $48.00

Source: Western Kentucky University Survey - 2018

The Context

- **We conduct a biennial survey of stormwater utilities in the United States**
  - Our focus: Municipalities that have implemented a stormwater user fee funding mechanism
- **Share key findings and trends from our 2018 Stormwater Survey**



27 Years Since We Launched Our First Survey!

The Survey Spans Six Focus Areas

1. Organization & Operations

2. Planning

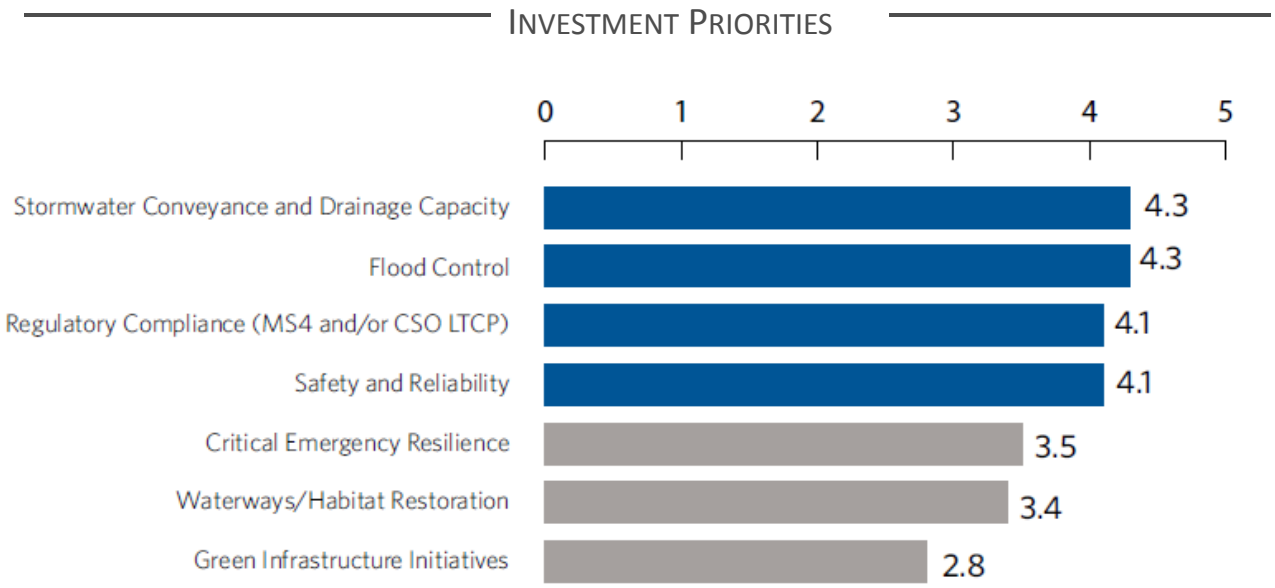
3. Finance & Accounting

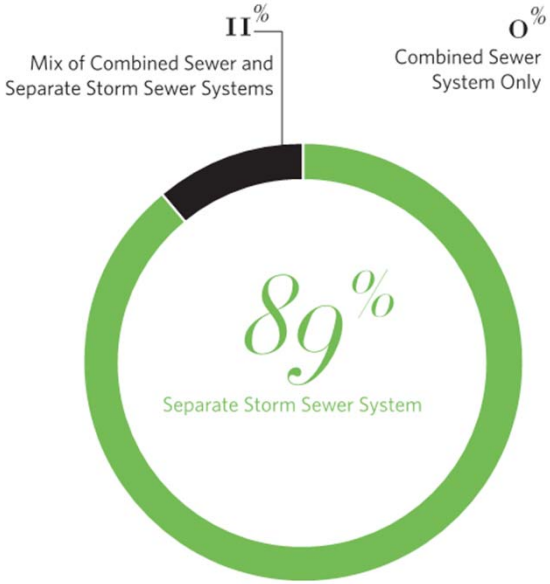
4. Stormwater Rate Structure & Billing

5. Stormwater Credits & Incentives

6. Public Information / Education

Planning: Investment Priorities





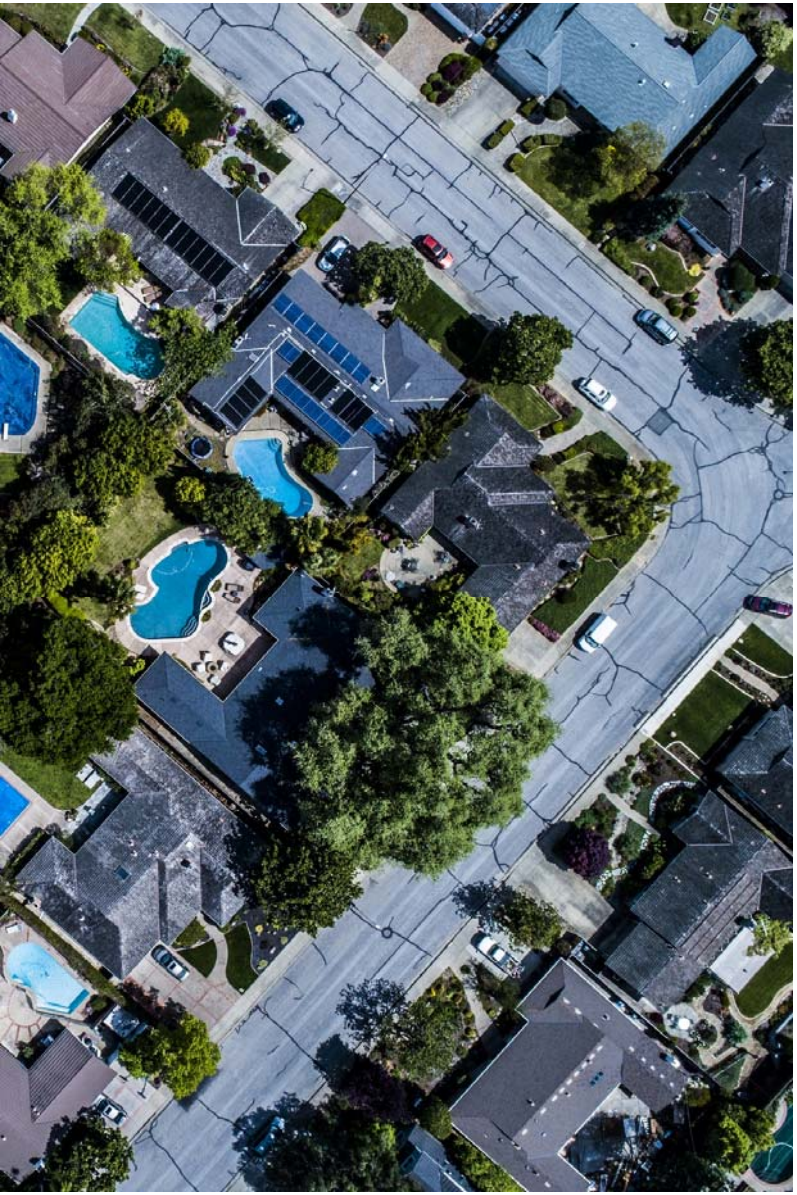
Funding: Key Highlights

Funding Gap has increased over time

- **2002: 61% of the participants indicated funding adequacy**
- **2018: Only 45% of the participants indicated funding adequacy**

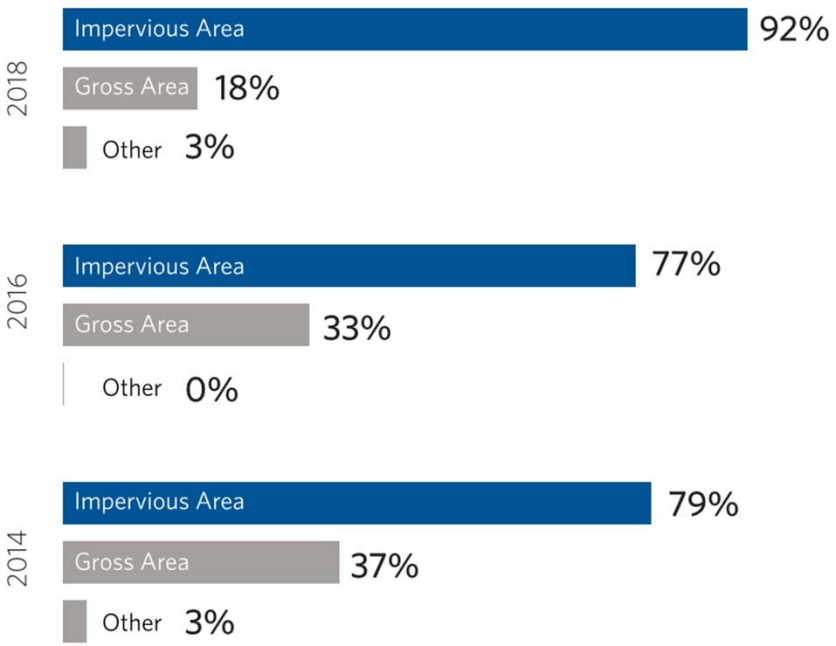
ANNUAL STORMWATER REVENUE PER CAPITA

Median Annual Residential Fee = $65.00
Median Monthly Residential Fee = $5.48



Rate Structure: Fee Basis

Impervious Area is increasingly becoming the prevalent basis for stormwater fees



Part 1 - Q&A

PART II – STORMWATER UTILITY FEASIBILITY FRAMEWORK

Part II - Discussion

Roadmap to Integrated Planning and Stormwater Utility Development

Stormwater Utility Framework

Program Needs Review

Segment A: Utility Organization & Policies

Utility Funding

Segment B: Billing Mechanisms Evaluation

Credits and Incentives

Implementation Tasks

Potential Roadmap to Integrated Planning and Stormwater Utility Development

A phased approach supports successful execution

Benefit: Adequate resources;

Phased budgeting

Effective outreach

Phase 1

Feasibility/Planning

Major Tasks:

1. Program Definition
2. Financial Planning
3. Rate Structure Definition

Phase 2

Implementation

Major Tasks:

1. Enabling Ordinances
2. Business Process Development
3. Billing & Integration
4. Staff Training
5. Customer Notifications

Go-Live

Major Tasks:

1. Bill Issuance
2. Customer Service

Key Components in Stormwater User Fee Development

- Program and Costs
- Stormwater Legislation & Policies
- Financial Plan & Rate Structure
- Parcel Data Management & Billing Mechanism
- Customer Credits & Incentives Program
- Stakeholder Engagement

Segment 1

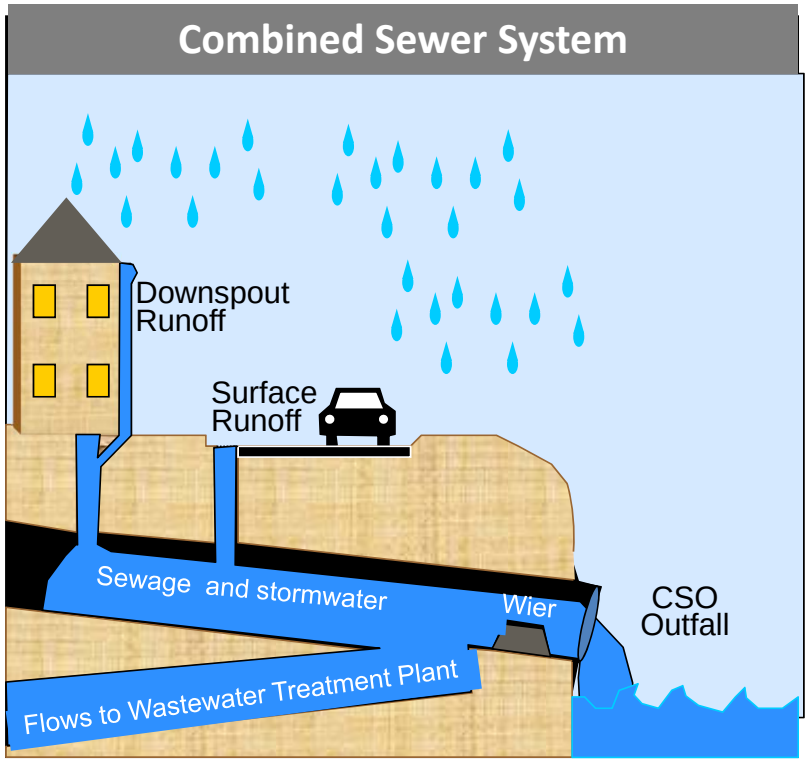
Program Needs Review

Utility Organization & Policies

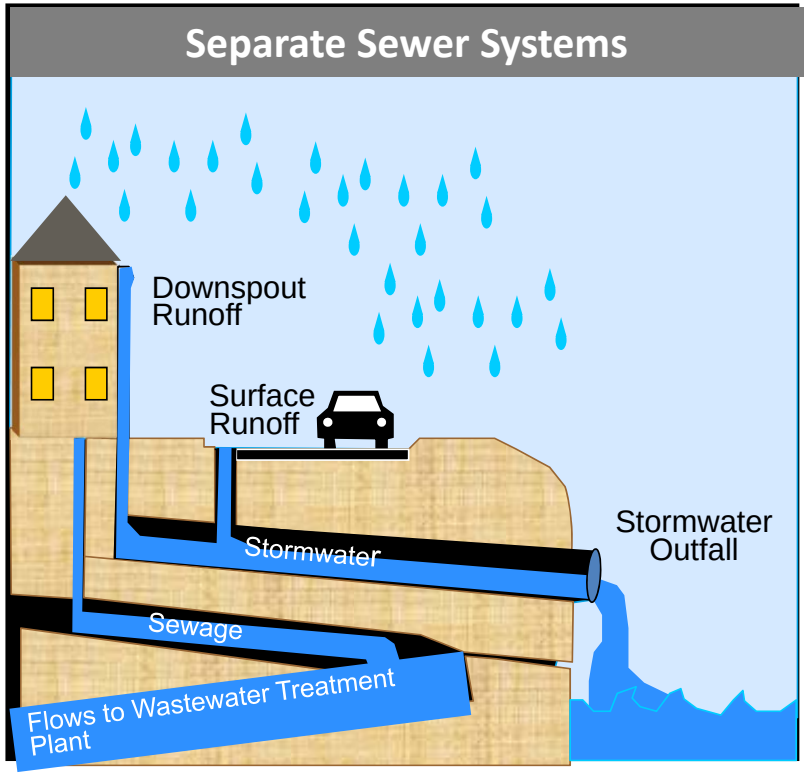
Utility Funding

Program Needs Review: Systems Types

(Examples: Newark; Perth Amboy; Gloucester)



(Examples: New Brunswick; Princeton)



Source: Philadelphia Water Department Advisory Committee Meeting Presentation

Program Needs Review

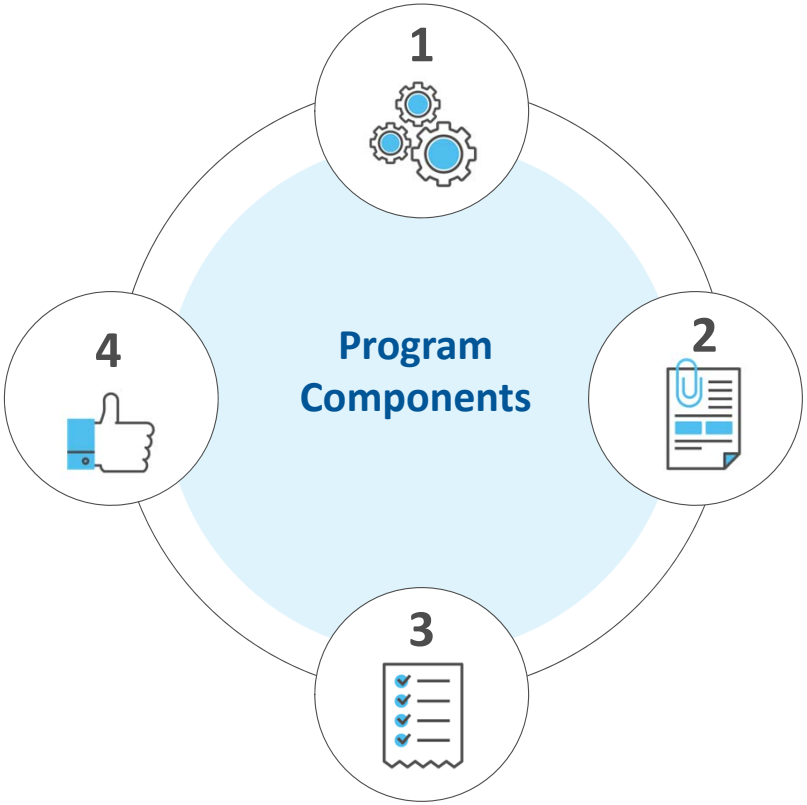
Stormwater Program Components

1 System Operations
- Routine O&M
  - Inspections
  - Cleaning
  - Minor Repairs
- Customer Complaint Response

2 Compliance Requirements
- Public Education
- Illicit Discharge Detection & Elimination (IDDE)
- Development Related
- Tracking/Reporting
- Water quality monitoring

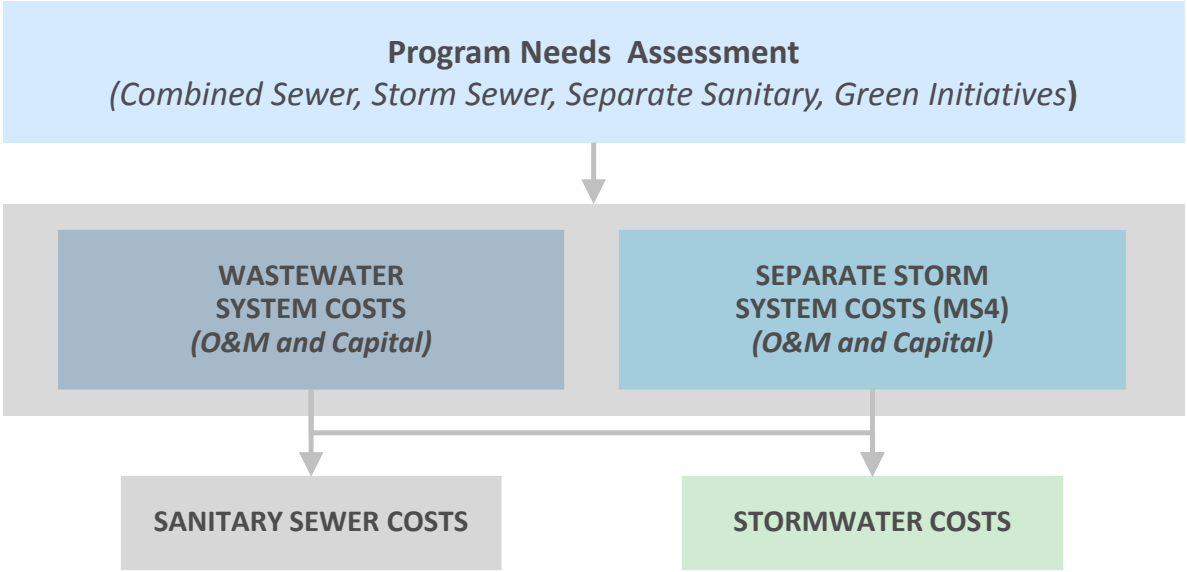
3 System Planning
- Asset Inventory
- Modeling
- Asset Management

4 Capital Improvements
- Flood Mitigation
- Rehab & Replacement
- CSO / Inflow &Infiltration Abatement
- Green Infrastructure



Program Needs Review

Cost Estimation & Defensible Cost Delineation



Organizational Aspects

1. **Organizational Roles & Responsibilities**
   - New Department?
   - Separate utility/authority?
   - Re-organization or consolidation?
   - Delineation of Responsibilities

2. **Jurisdictional Issues**
   - Asset ownership
   - Service area
   - Service delivery and compliance authority

3. **Utility Policies**
   - Program, Funding, and Administration Policies & Procedures

4. **Resources**
   - Technology systems
   - Staffing resources & skill sets

5. **Legislation & Charter**
   - Enabling legislation & charter
   - Stormwater & Rate Ordinances

Organizational capacity influences level of service

Public Works All stormwater responsibilities reside within this department; no water or sewer responsibilities

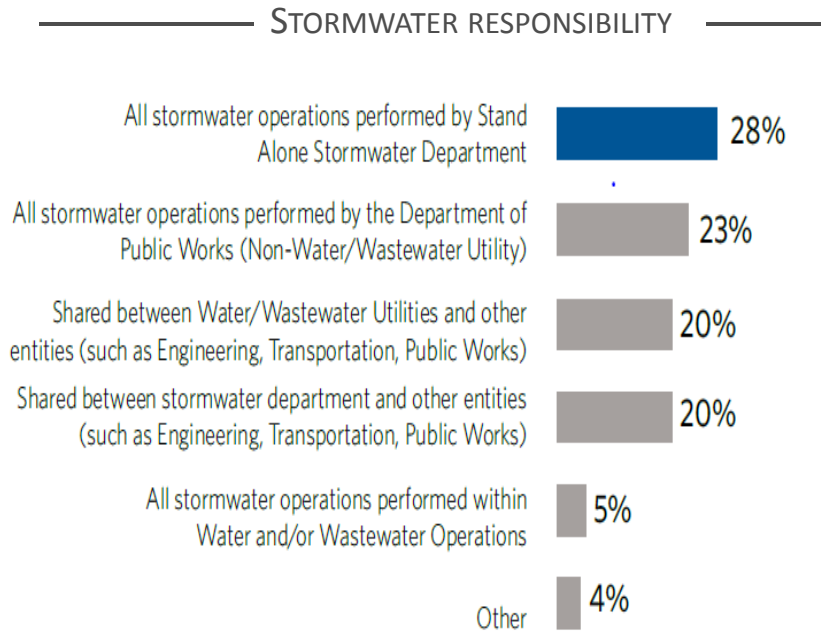
- *Example: New London, CT*

Utilities Stormwater responsibilities are an integral part of water, sewer, and stormwater functions

- *Example: Newark, NJ; Philadelphia Water Department, PA; Wilmington, DE*

Shared Stormwater responsibilities are shared among multiple entities

- *Example: Pittsburgh Water and Sewer Authority and City of Pittsburgh; DC Water & District of Columbia*



User Fee Funding: Three Key Steps

1. Annual Stormwater Revenue Requirements

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2. Impervious Area Units (Billable Units)

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3. Stormwater User Fee Rate ($ / Billable Unit)

1 Projection of Annual Revenue Requirements

What should be included?

- Annual O&M costs
- Annual existing and future debt service
- Annual cash financing of capital
- Annual O&M reserve requirements
- Annual mandatory transfers, if any

Task Output: Multi-year Financial Plan

Fee Basis: Impervious Area

Large Shopping Center

What is impervious area?

Surfaces that restrict stormwater from absorbing into the ground – leading to runoff & pollution.

Examples:

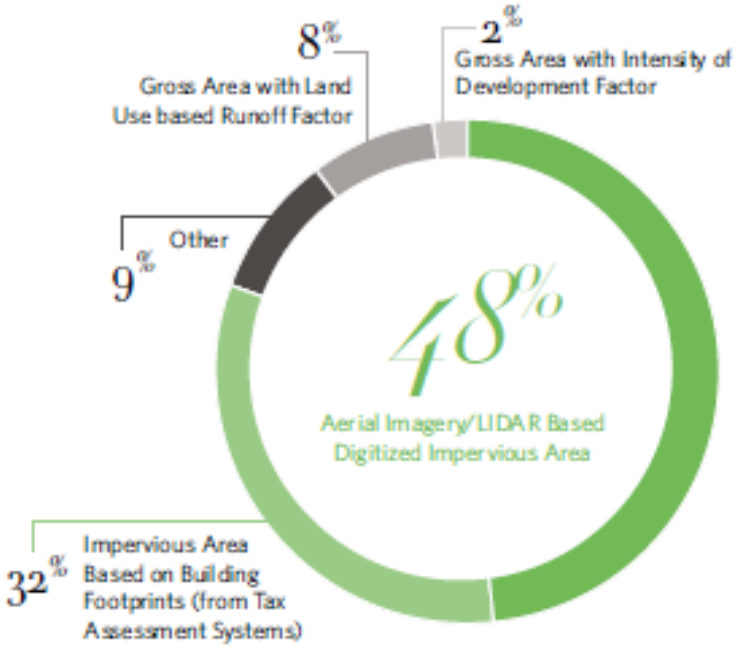
Building, driveways, patios, asphalt and paved surfaces, and other graveled, graded, compacted surfaces, etc.

Single Family Home

How Can We Determine Impervious Area (IA)?

Combination of approaches can be used

- Determine using the footprint of buildings, other structures, and hardscaped areas
  - Data Source: County Tax Assessment Data
- Measure impervious area through digitization
  - Data Source: Aerial Imagery; Spatial Technology Tools
- Estimate IA using the runoff factor approach
  - Data Source: Tax Assessment Data; Industry Accepted Runoff Factors



Source: Black & Veatch 2018 Stormwater Utility Survey

Factors to Consider in Developing Impervious Area (IA)

Data Availability

- Planimetric data
- Aerial / infra-red imagery
- Tax Assessment Data
- Spatial Data

Data Reliability & Development Cost

- Ease of compilation
- Accuracy & Consistency of data
- Cost of developing the IA data

Ongoing Data Management

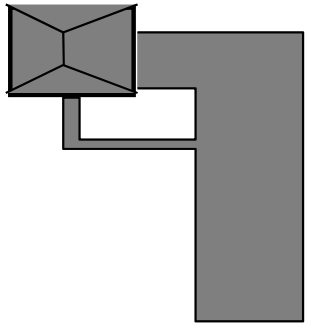
- Parcel data updates
- Ease of generating billing units

System-wide Stormwater Rate

	Water User Fee	Stormwater User Fee
Basis of Fee	Water Usage	Impervious Area
Unit of Measure	100 Cubic Feet (CCF) 1,000 Gallons	500 Square Feet of IA ERU: Equivalent Residential Unit
Rate Structure	Rates by customer classes Tiered Rates	Rates by customer classes Tiered Rates

Enables Equitable Cost Recovery

One Residential Unit = 1 ERU



Impervious Area (Sq. Ft.)	ERUs	Quarterly Fee
0 to 799	1.00	$8.14
800 to 1,299	1.45	$11.80
1,300 to 2,399	2.48	$20.19
2,400 and over	4.40	$35.82

Example: Residential Rate Structure

User Fee Funding: The Basic Equation

1. Annual Stormwater Revenue Requirements

Annual Need = $960,000
Monthly Need = $80,000

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2. Impervious Area Units (Billable Units)

IA = 10,000,000 sf
Billable Units = 20,000 (10,000,000 / 500)

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3. Stormwater User Fee Rate ($ / Billable Unit)

$4.00 per 500 sf per month

Part 2 (Segment 1) - Q&A

Segment 2

Billing Mechanism Evaluation

Credits & Incentives

Implementation Tasks

Billing Mechanisms Evaluation

THREE PRIMARY OPTIONS

ISSUE A STANDALONE SW BILL	ADD TO EXISTING UTILITY BILL	ADD TO PROPERTY TAX BILL

Decisions on selecting a *Billing Mechanism* involves the following considerations:

- ✓ Ability to easily leverage existing billing/cashiering administration processes
- ✓ Ease of Collections and Delinquency Enforcement
- ✓ Cost/Benefit of Billing Software (modification programming versus new software)
- ✓ Ease of ongoing Billing System/Interface Management

Credits & Incentives

Stormwater Credits

Ongoing fee reduction provided to the customer

- Demand reduction through onsite stormwater management
- Utility's cost reduction by other entities performing certain stormwater related activities

Stormwater Incentives

One-time monetary assistance

- Grants / loans
- Design / engineering / consulting assistance
- Resource sharing

Benefits of a Credit Program

Economic benefits

- Provides a mechanism for offering economic incentives to reduce charge
    - Enables a reasonable nexus between impact reduction and reduction in charge
    - Facilitates “buy-in” for the stormwater charge concept

Environmental benefits

- Fosters eco-friendly green initiatives
- Promotes sustainable land use / development
- Enhances aesthetic appeal
- Encourages BMP Retrofits

Key Implementation Tasks

- Credit & Appeals Program Design
- Billing Database Development and Integration
- Business Process Workflows
- Public Notifications & Education Info
- Operations & Credit Manuals & Customer FAQs
- Staff Training & Customer Service
- Go-Live Plan

Part 2 (Segment 2) - Q&A

PART III – STORMWATER STAKEHOLDER ENGAGEMENT

Part III - Discussion

Benefits of Stakeholder Engagement

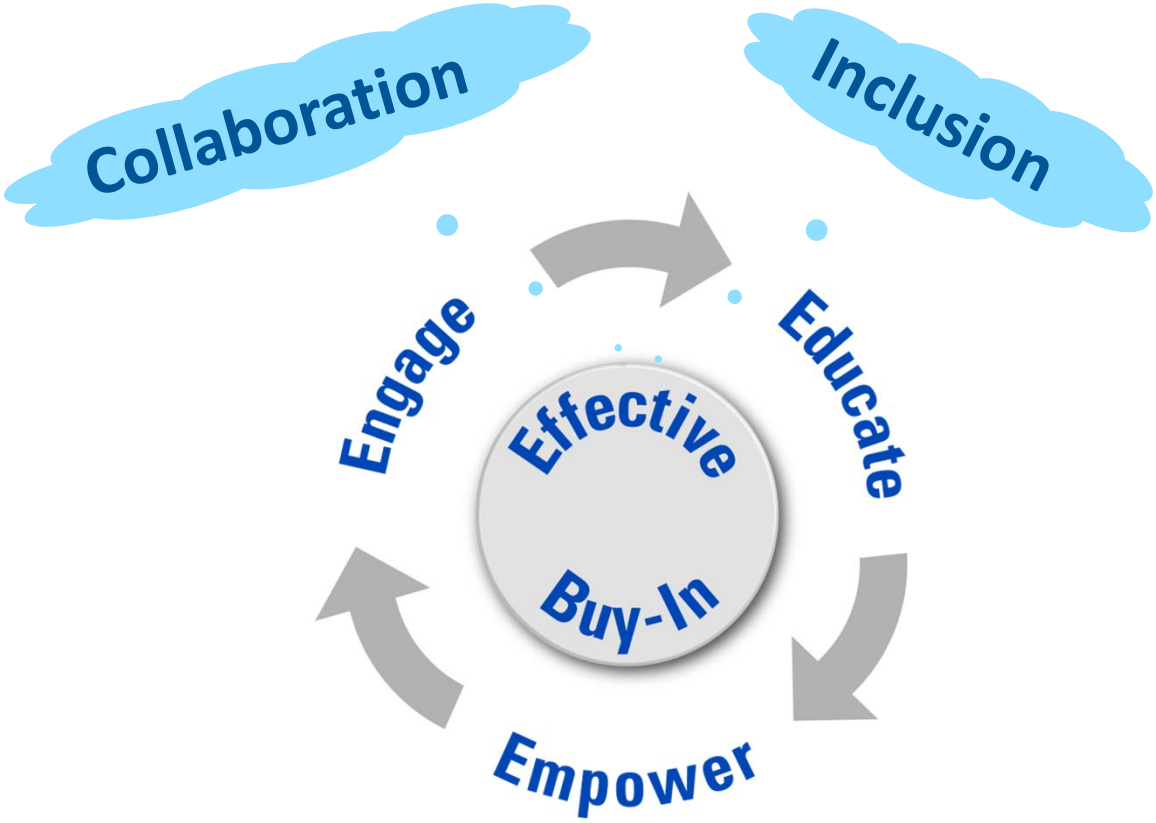
Decision and Approval Process

Role of Stormwater Stewards

The Outreach Balancing Act

Consistent Messaging

Why is Stakeholder Engagement Process a Vital Component?



Opportunity for Input

Define Program & Level of Service

Fosters Credibility & Trust in the Process

Build A Shared Vision

Stormwater Utility Journey: Decisions and Approvals

Pre-Study Phase Decisions

- Feasibility Study Needed?
- What is an affordable study cost & scope of ?
- What resources/expertise do we need and procure for the feasibility study?
- What should be the study timeline?

Feasibility Study Phase Decisions

- Is the user fee viable?
- Approve the stormwater rate ordinance & effective date?
- What resources/expertise do we need and procure for implementation management?
- What should be the implementation timeline?

Implementation Phase Decisions

- Billing Approach
- Composition of the Implementation Task Team
- Timing of public outreach & notifications
- Fail-safe launch strategies

Pre-Study Phase Engagement

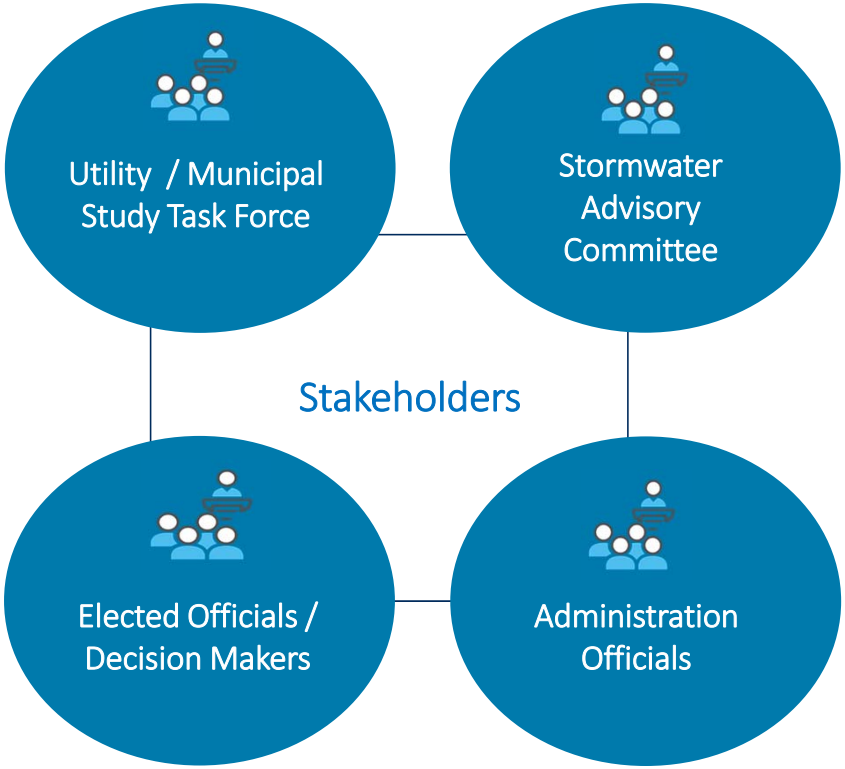
Who are the typical Stakeholders?

Some Key Goals for the Stormwater Stewards

i. Learn about the community needs
ii. Learn the facts about User Fee Funding Concept
iii. Examine how other communities have addressed needs & funding
iv. Understand what guidance resources are available
v. Explore opportunities for Multi-community collaboration

Feasibility Phase Engagement

Who are the typical Stakeholders?

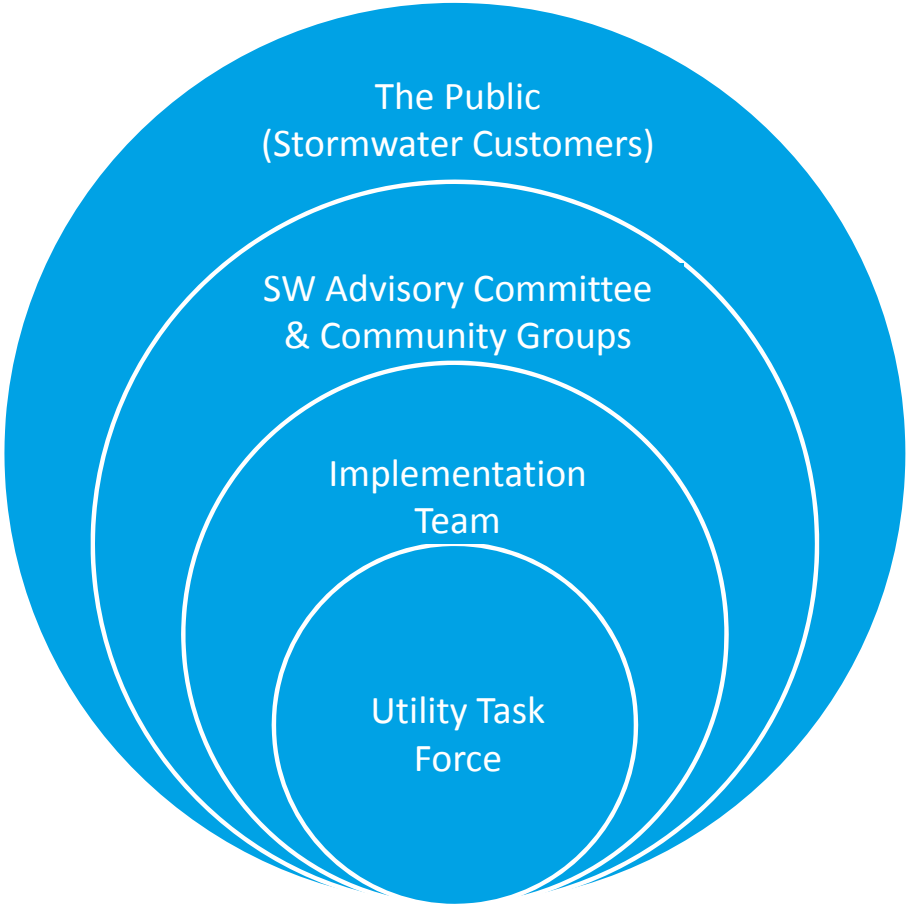


Key Goals

i. Perform the Due Diligence analysis
ii. Deliberate the findings
iii. Evaluate the pros and cons of alternatives
iv. Develop informed recommendations
v. Decide on "Path forward"

Implementation Phase Engagement

Who are the typical Stakeholders?



Key Goals

i. Coordinated execution of tasks
ii. Consistent communication & progress updates
iii. Adequate outreach materials and notifications
iv. Broader community awareness and acceptance

Role of Stormwater Stewards

Pre-Study Phase

- **Understand:** The drivers and risks of inaction
- **Define:** The scope and timeline for a study
- **Support:** Make a Compelling Case for Action & Risks of Inaction

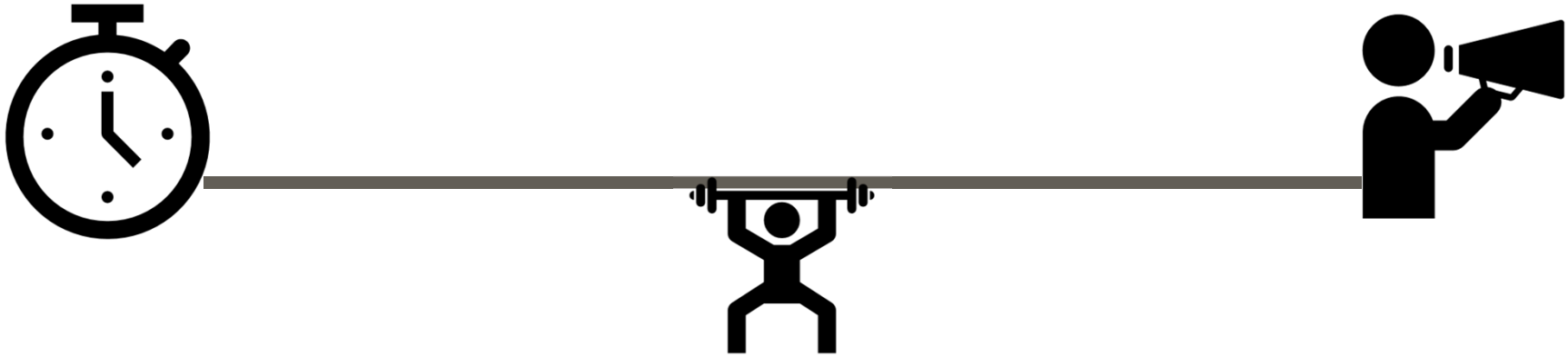
Feasibility Phase

- **Understand:** Study approach and process
- **Collaborate:** To give input into program, policies, strategies
- **Review:** Study findings, cost/benefits
- **Feedback:** SW Mgmt program and funding roadmap
- **Support:** Elected Officials decision

Implementation Phase

- **Understand:** Key Steps in the process
- **Collaborate:** To refine policies & process
- **Communicate:** Help spread information
- **Support:** Champion the cause/benefits

Stakeholder Involvement Challenge



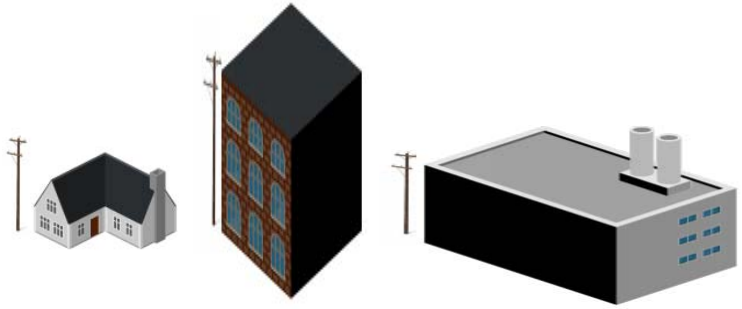
- **Premature Conversations**
  - Create misperceptions
  - Dissemination of inaccurate or incomplete information
  - Frustration about not having the answers
- **Inadequate Communication**
  - Create misperceptions
  - Cause skepticism and mistrust about the process
  - Adversely affect ability to understand concerns & potential pitfalls

What are the Consistent Messages for the Community?

Stormwater Management is NOT about one property OR one neighborhood
"It is about our entire Community'"

Capital investments are critical to safety and public health
"We pay now or pay a price later"

Deferred Maintenance of the system leads to costly failures
"We are responsible for our Community's assets"



Stormwater User Fee is NOT about just raising money
"It is about equity – each property paying its fair share'"

Other communities have established sustainable funding and program
"We need to collaborate to develop a lasting & reliable solution"

Part 3 - Q&A

PART IV – WRAP-UP

The Road Ahead in New Jersey …..

Collaboration among Municipalities/Utilities

Potential Areas of Collaboration

- Similar Fee Methodology
- Impervious Area Development
- Sharing of Resources
- Stakeholder Engagement & Public Education

Thank You!

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