

New Jersey's Pathway to Stormwater Resilience through Stormwater Utilities

New Jersey Society of
Municipal Engineers Meeting

September 14, 2022

This material is for the exclusive use during the
September 14th NJSME General Meeting Session Only.
Please do not reproduce without permission



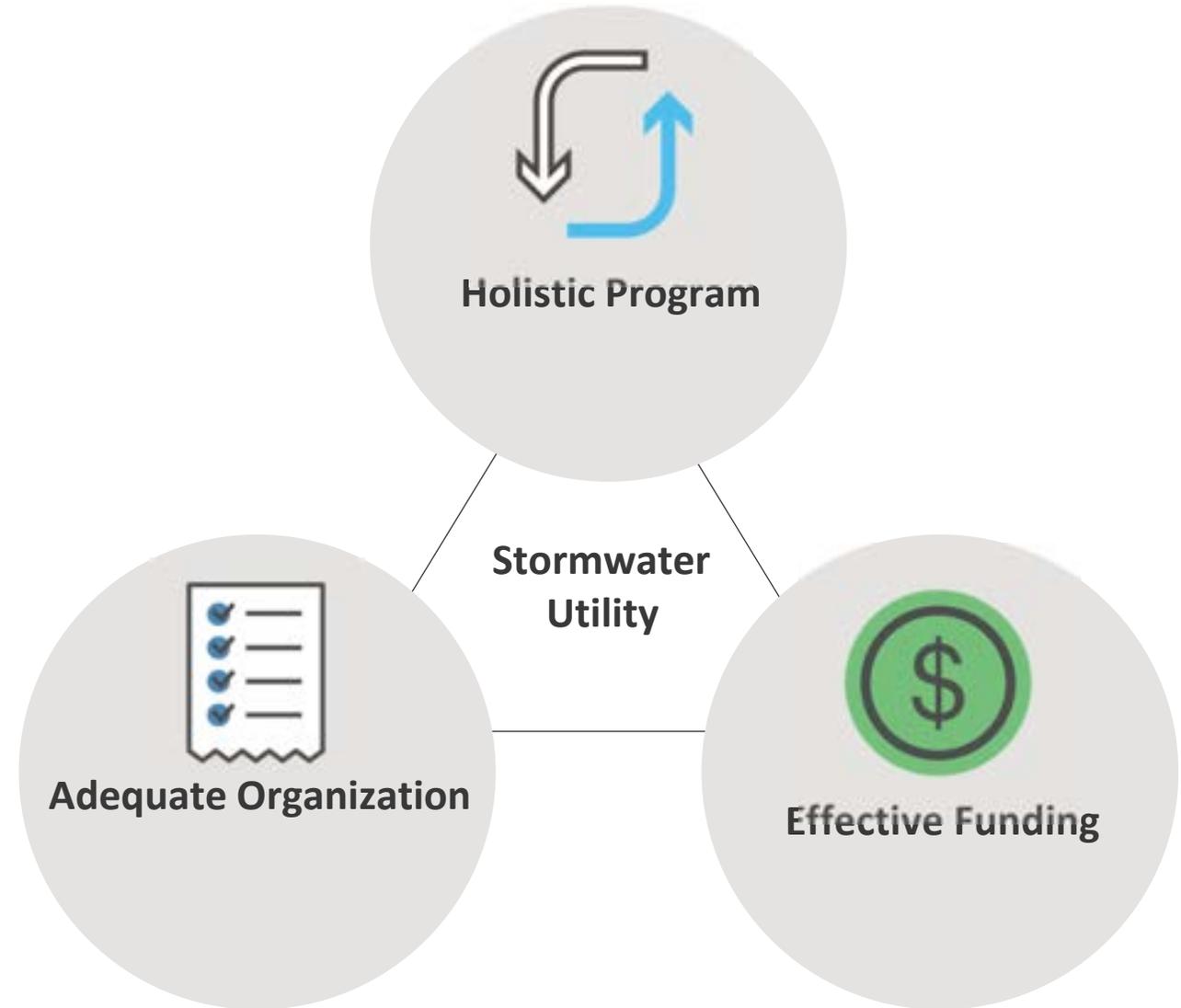
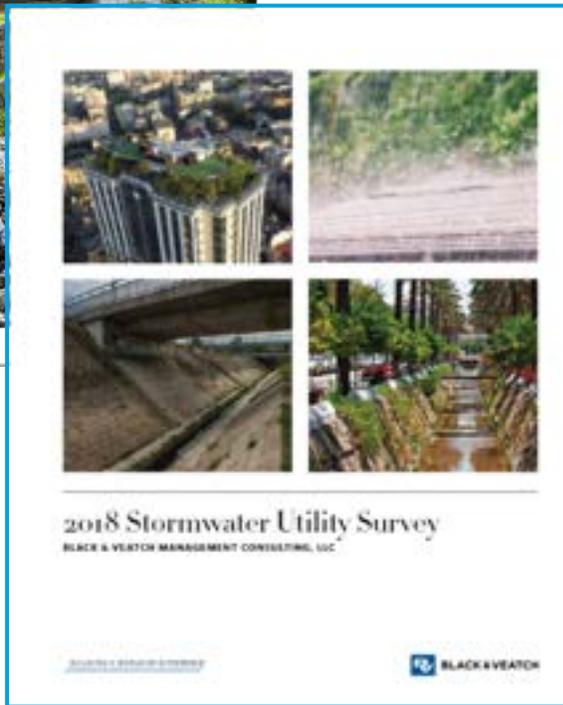
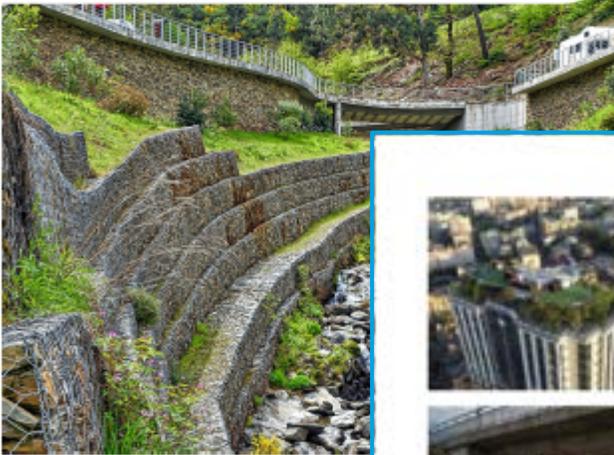


Discussion

- 1 The Stormwater Utility Concept
- 2 Stormwater Utility: Why Now?
- 3 Stormwater Utility Development Approach
- 4 Implementation Path
- 5 Case Study: A Success Story
- 6 Q&A

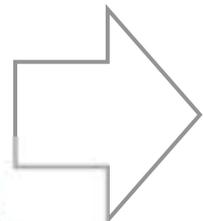
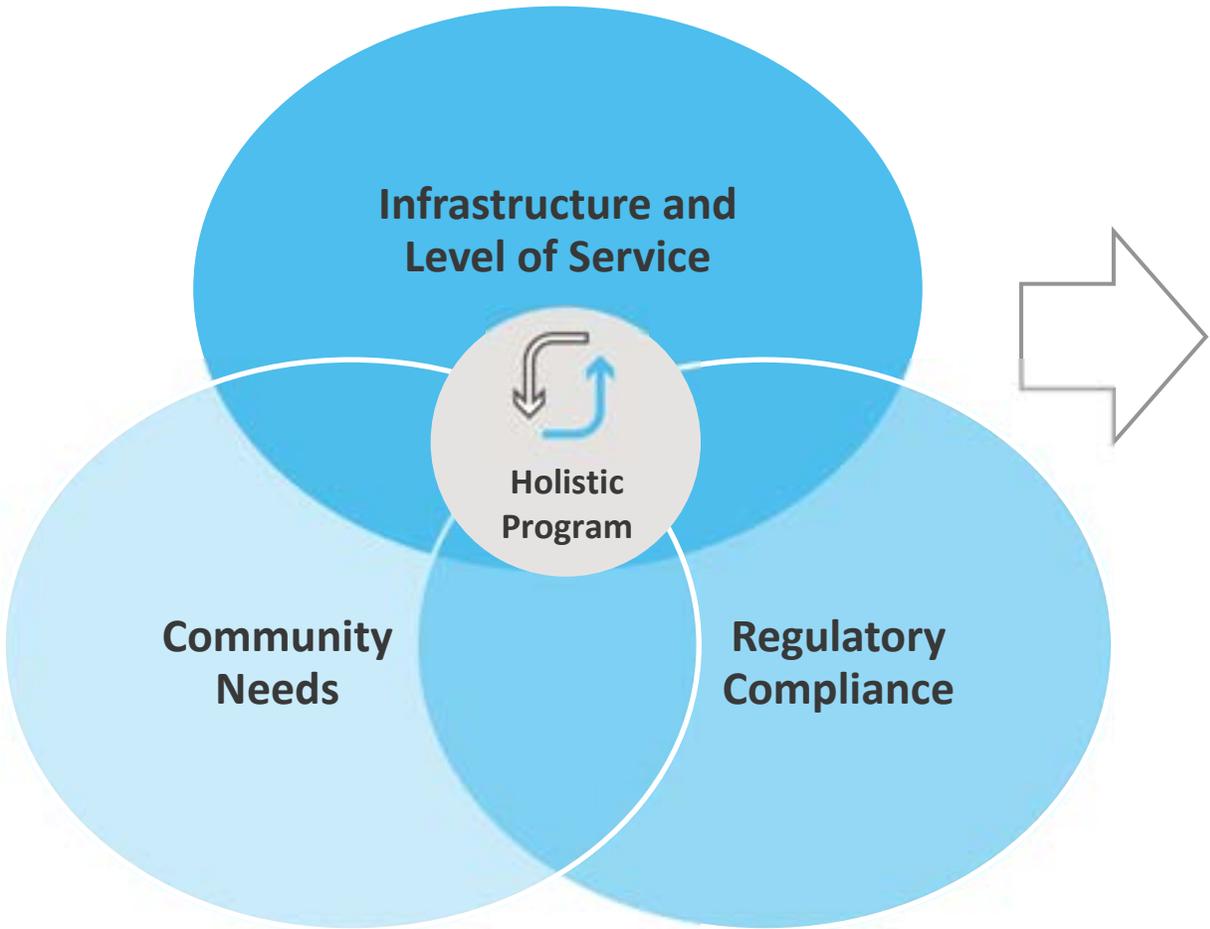
1 – Stormwater Utility Concept

What is a Stormwater Utility?



The Program Goals Drive Actionable Objectives

Program Goals



Key Aspects of Stormwater Organization



1. Organizational Roles & Responsibilities

- New Department?
- Re-organization or consolidation?
- Delineation of Responsibilities



4. Resources

- Technology systems
- Staffing resources & skill sets



2. Jurisdictional Issues

- Asset ownership
- Service area
- Service delivery and compliance authority



5. Legislation & Ordinances

- Enabling legislation & charter
- Stormwater & Rate Ordinances

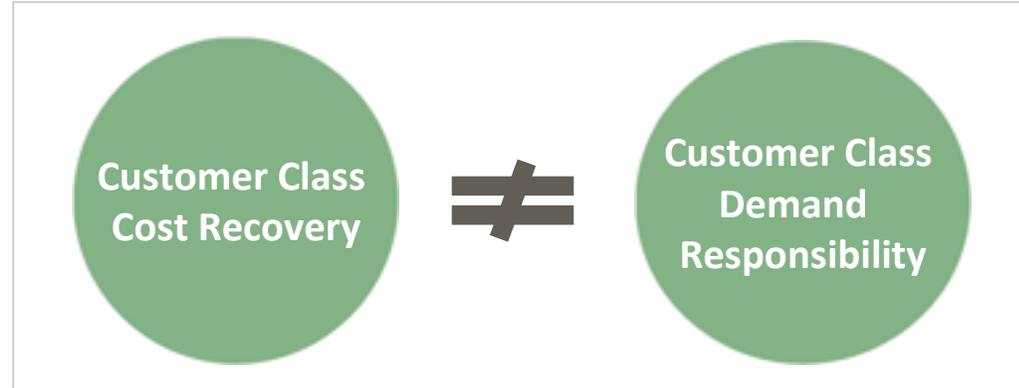
The Common Stormwater Funding Challenges



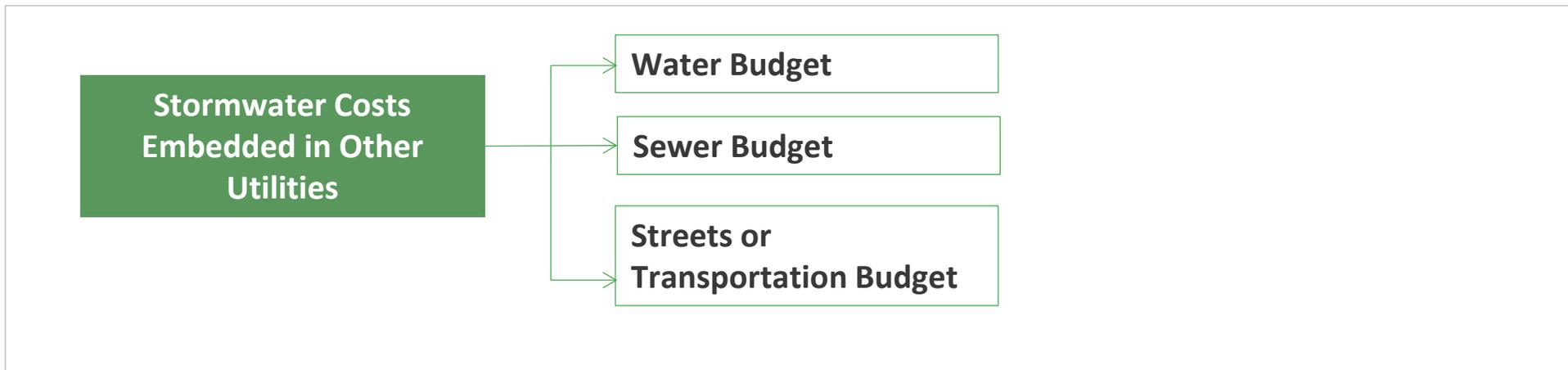
Adequacy Gap



Equity Gap



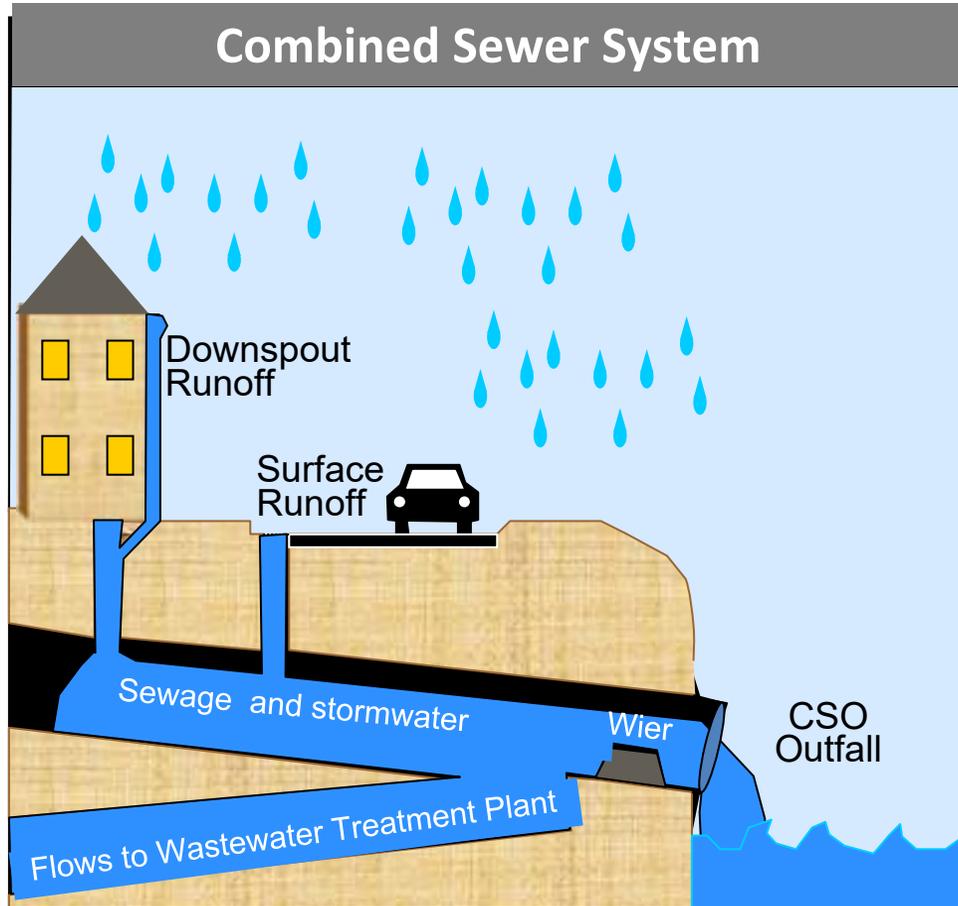
Transparency Gap



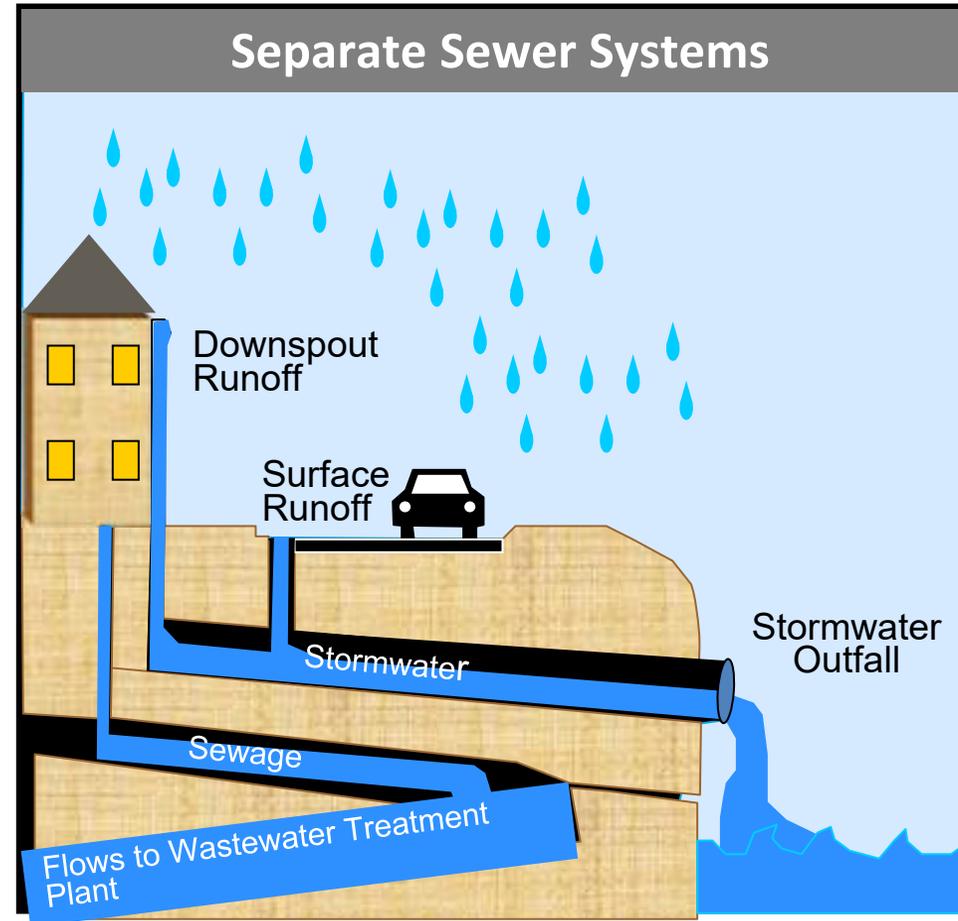
2 – Stormwater Utility: Why Now?

Types of Stormwater Systems in New Jersey

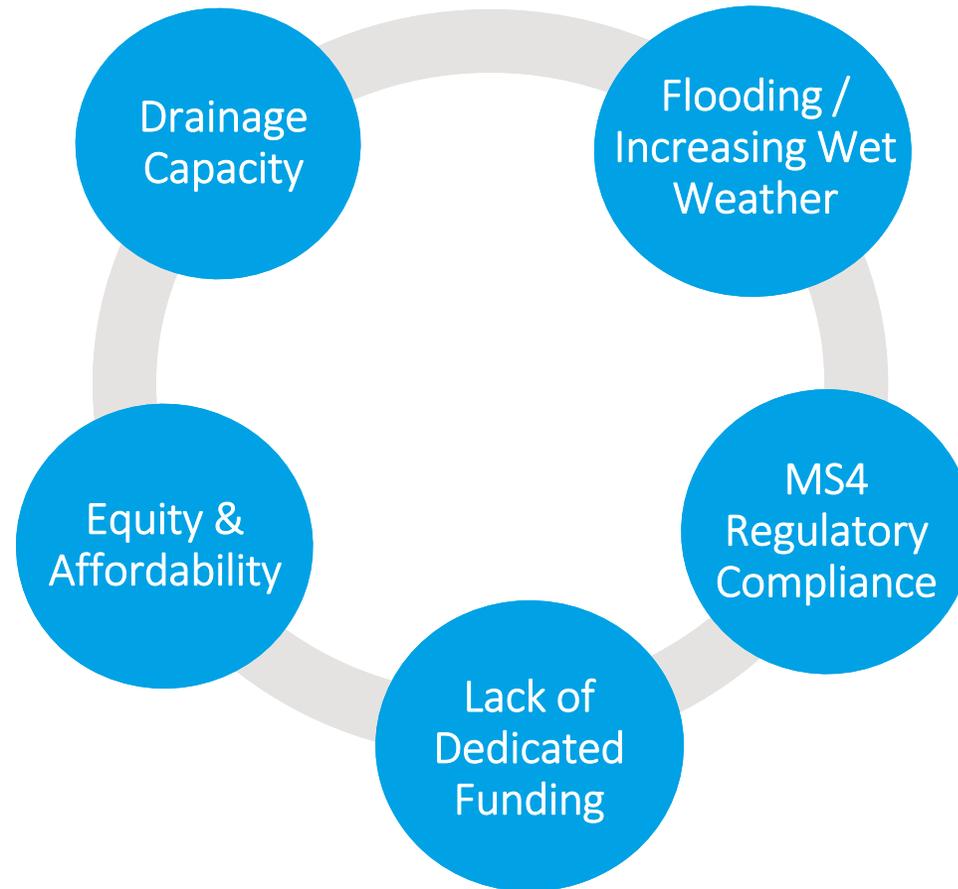
(Examples: Newark; Perth Amboy; Gloucester)



(Examples: New Brunswick; Princeton)



The Key Drivers for Stormwater Utility in New Jersey



New Jersey's Enabling Legislation

The Clean Stormwater and Flood Reduction Act (P.L.2019, c. 42 (C.40A:26B-1 et al.))

Key Features of the Act

- Enacted in 2018 by the State Legislature
- Authorizes the establishment of stormwater programs and assessment of stormwater user fees and charges to recover stormwater management costs
- Provides guidelines on accounting, charge responsibility, enforcement, credits, and administrative procedures
- Assures a reasonable level of defensibility to establishing user fees and charges

Clears the Myth: Stormwater “User Fee” is NOT a “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?



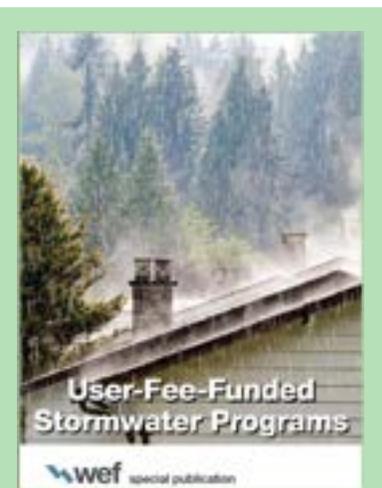
Fee is in exchange for benefits received by the general public?



Fee has reduction opportunities?



Fee is a fair approximation of costs incurred in providing services?



3 – Stormwater Utility Development Approach

Six 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



Key Components in Stormwater Utility Development

- Program and Costs
- Stormwater Utility Policies
- Financial Plan & Rate Structure
- Customer Credits & Incentives Program
- Stakeholder Engagement

DECISION POINT:
Is stormwater user funding a viable solution?

NO

YES

Implementation Phase

Major Components of Stormwater Program



1 System Operations

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

2 Compliance Requirements

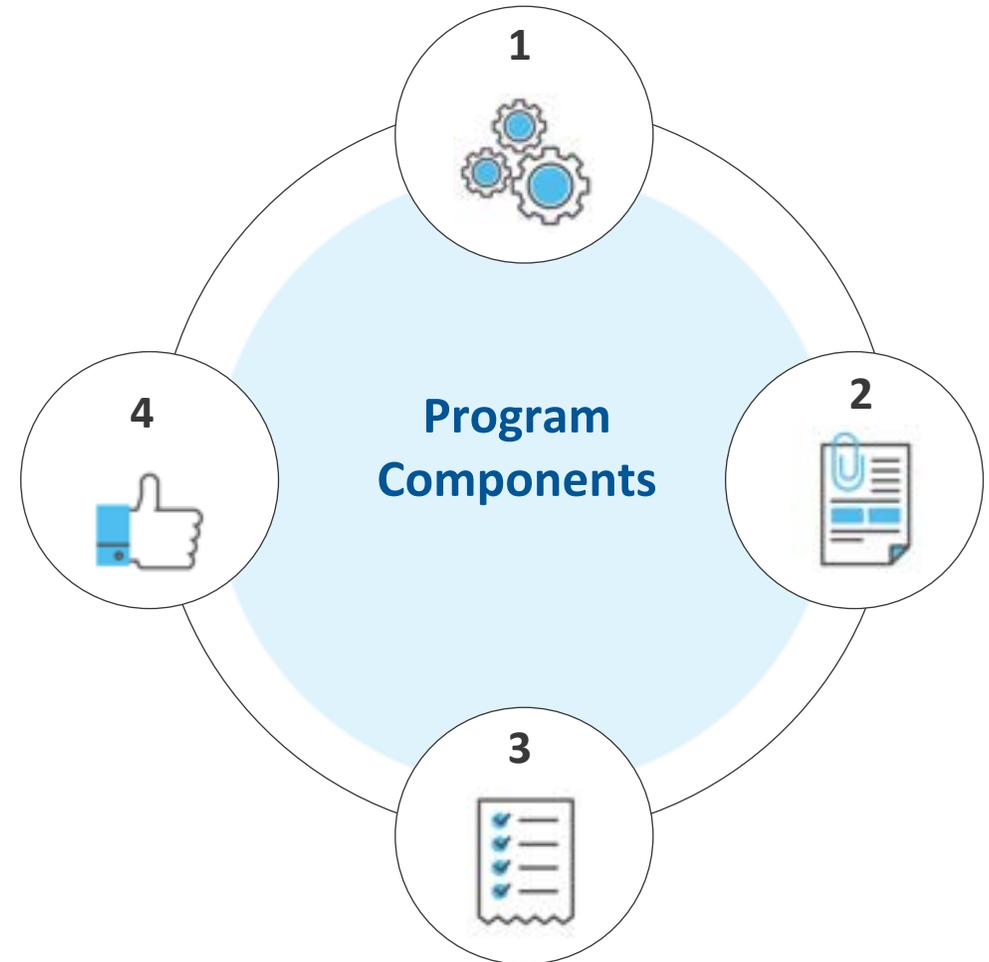
- Public Education
- IDDE
- Development Related
- Tracking/Reporting
- Water quality monitoring

3 System Planning

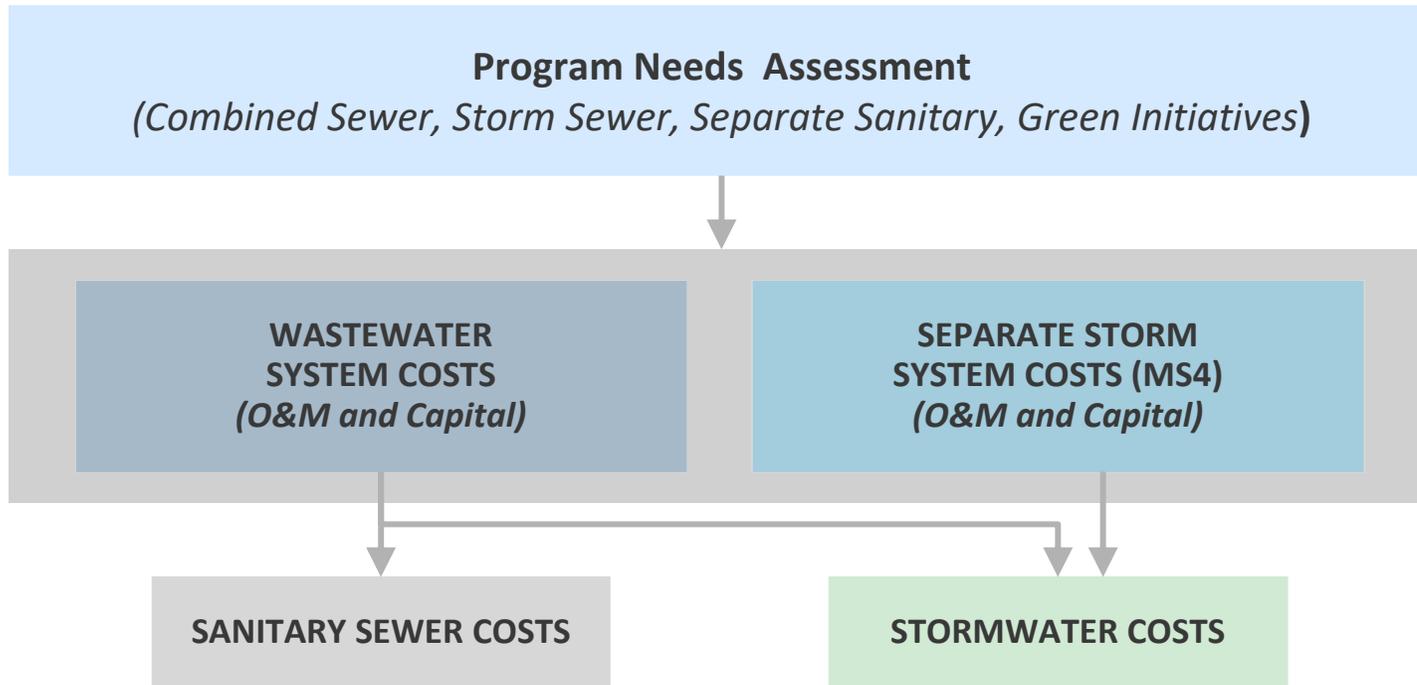
- Asset Inventory
- Modeling
- Asset Management

4 Capital Improvements

- Flood Mitigation
- Rehab & Replacement
- CSO / I&I Abatement
- Green Infrastructure



The Evolving Paradigm of Stormwater Management



 Holistic assessment of current, future O&M and capital costs, including any one-time costs need to be evaluated.

KEY POLICY CONSIDERATIONS

Cost Inclusions & Exclusions

Costs to be recovered via a stormwater user fee

Customer Classification

Customers classification for equitable cost recovery

Credits & Incentives

Opportunities fee reduction

Basis for assessing the stormwater charge

Stormwater rate structure to recover costs

Billing mechanism and billing policies

User Fee Basis

Rate Structure

Billing Considerations

The Stormwater Financial Plan



**Projection
of annual
O&M costs**



**Projection of
annual
existing and
future debt
service**



**Projection of
annual cash
financing of
capital**



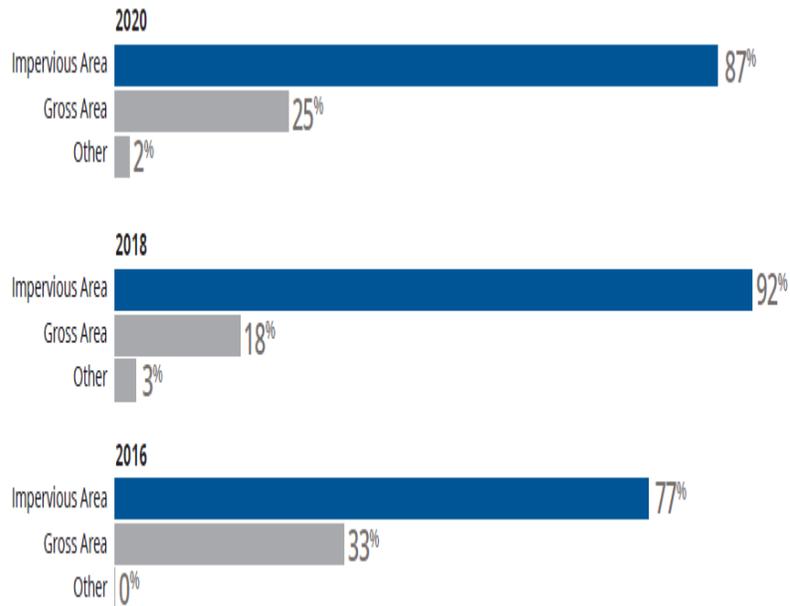
**Projection of
annual O&M
reserve
requirements**



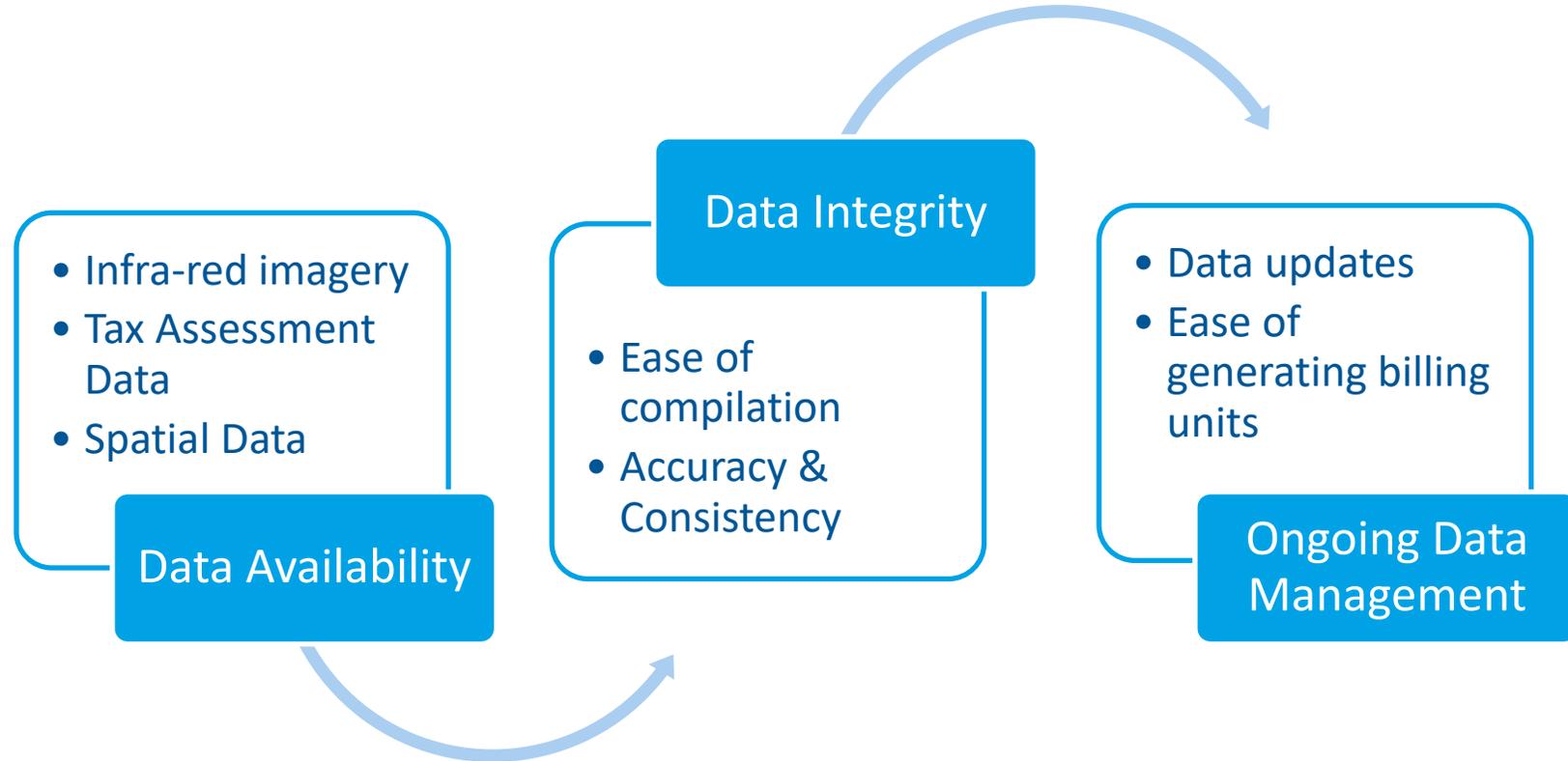
**Projection of
annual
mandatory
transfers, if any**

A Financial Plan provides a reasonable forecast to design an evolving fee program

The Basis for Determination of Charges



Source: Black & Veatch 2021 Stormwater Utility Survey

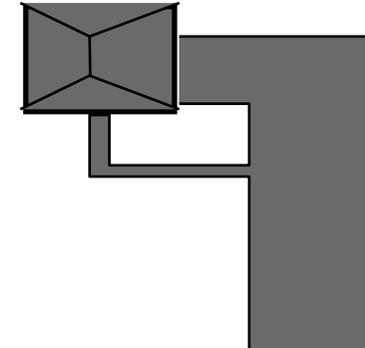


The Stormwater Rate Structure

	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 ERU: Equivalent Residential Unit
Rate Structure	Rates by customer classes Tiered Rates	Rates by customer classes Tiered Rates

Equity in Cost Recovery:
Users Pay According to What They Use!!!

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

The Role of Credits and 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

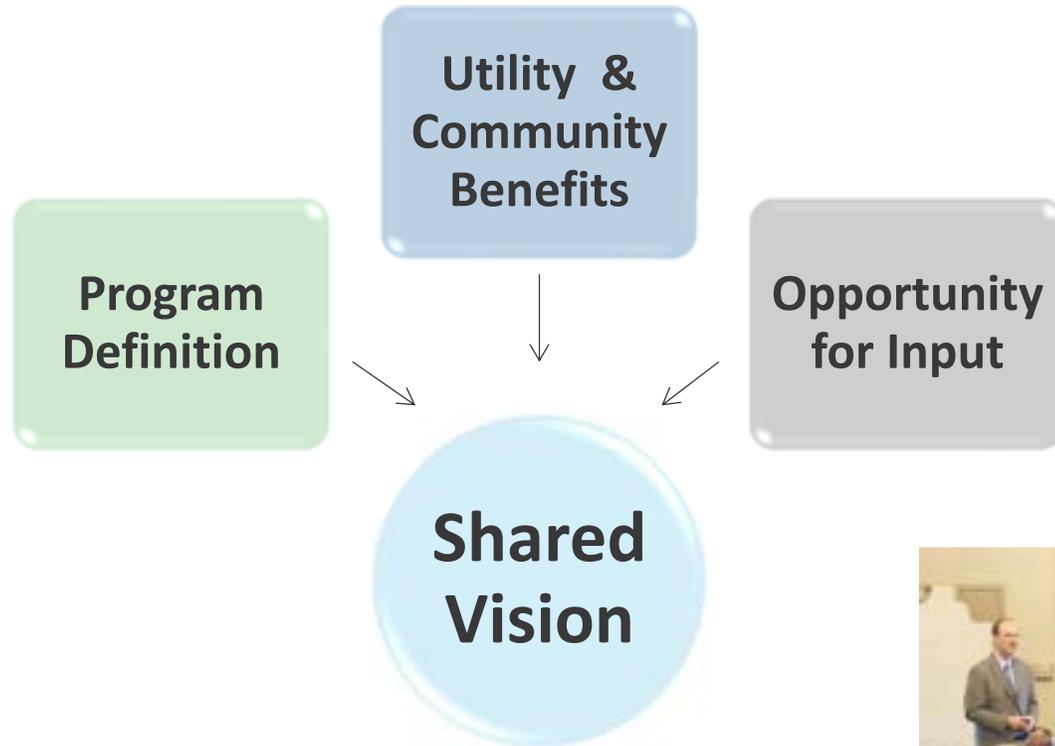
Economic Benefits

- 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

Stakeholder Engagement as a Vital Inclusion

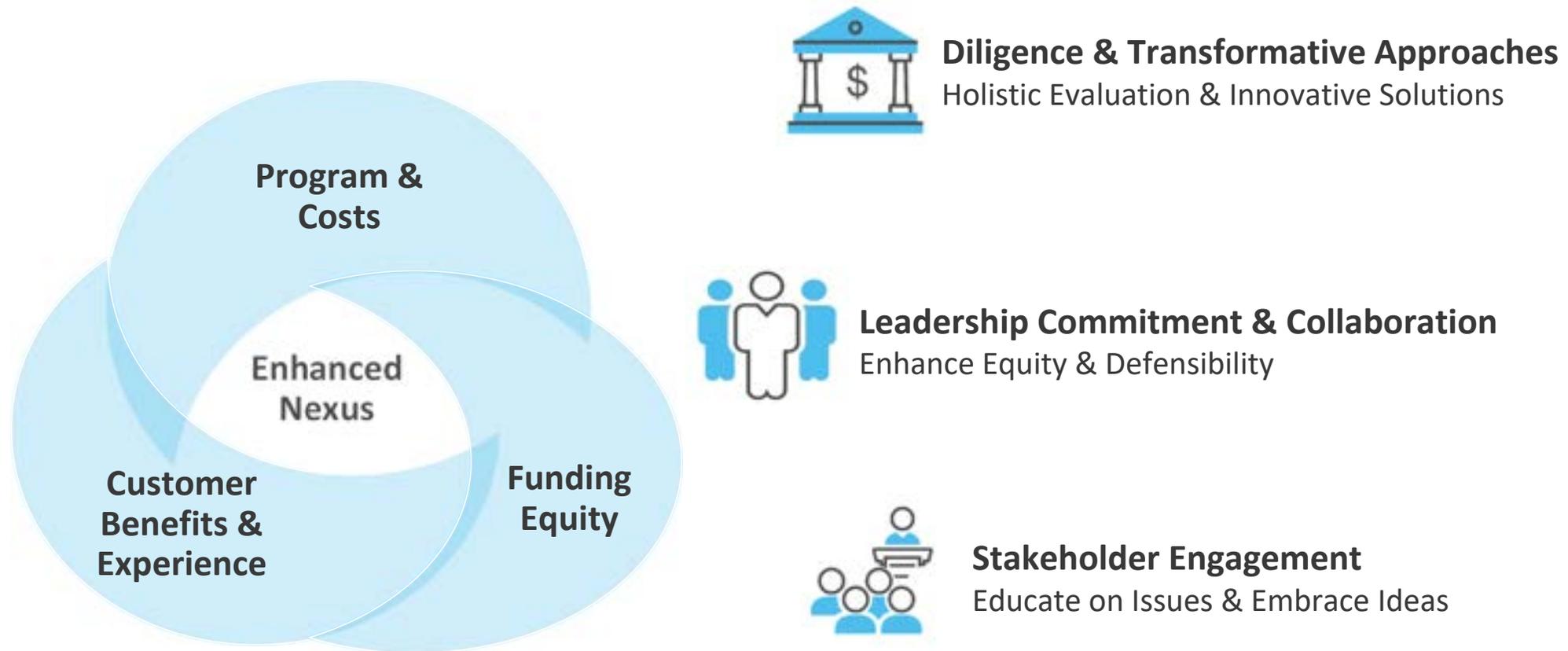


4 – Implementation Path

Components of User Fee Implementation

- Stormwater Rate Ordinances
- Parcel Data Management Systems & Processes
- Billing Integration
- Operations & Credit Manuals & Customer FAQs
- Staff Training & Customer Service
- Go-Live Plan

The Road Ahead for Sustainable Stormwater Management



Never too Late to Start!

Every incremental improvement strengthens the Stormwater Management value chain

5 – A Success Story

Newark, Delaware: Enhancing the Program-Cost-Benefit Nexus



How Did We Enhance Nexus and Achieve Stated Objectives?

Reviewed existing services and defined O&M and Capital program needs



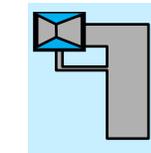
Program

Delineated O&M and capital costs and developed a financial plan tactically managing fund balances & transfers



Costs

Designed an impervious area based rate structure effectively leveraging available data



User Fees

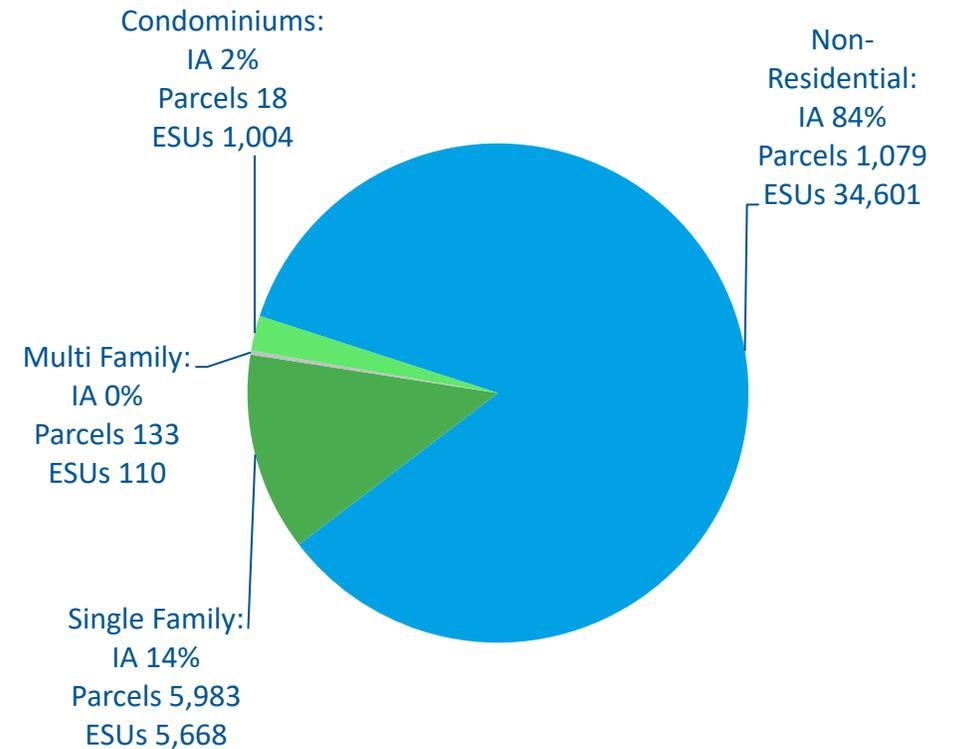
Complemented the rate structure with mechanisms for ongoing fee reductions, one-time incentives, and robust stakeholder outreach



Benefits

Newark's Compelling Case for Action

Bill Component	2017 Monthly Charge Without SW Charge	2018 Monthly Charge Without SW Charge	2018 Monthly Charge With SW Charge
Water	\$30.17	\$30.17	\$30.17
Wastewater		\$42.83	
Sewer	\$32.30		\$32.30
Stormwater			\$2.89
Total Charge	\$62.47	\$73.00	\$65.36
Difference from FY 2017 (%)		\$10.53 (16.9%)	\$2.89 (4.6%)



City transitioned to an Impervious Area based stormwater fee in January 2018!!!

Black & Veatch's Stormwater Utility Expertise

Examples of our Nationwide Experience and Local Presence

Our Diverse Services

- Concept to Launch Utility Implementation
- Stormwater Financial Planning
- Stormwater Rate Structure Transition
- Billing Integration & Data Management
- Inclusive and Effective Stakeholder Engagement



Concept to Launch Studies

Newark, NJ
Hoboken, NJ
New London, CT
Wilmington, DE
Newark, DE
Springfield, OH
Jonesboro, AR



Program Planning & CIP Prioritization

Newark, NJ
Winter Haven, FL
Goodyear, AZ
Tulsa, OK
Hannibal, MO
Unified Govt, KS



Rate Structure Transition

Philadelphia, PA
Takoma Park, MD
Delray Beach, FL
Unified Govt, KS
Cincinnati MSD, OH
Olathe, KS

Thank You!



Prabha Kumar

Phone: 913-458-1538

Mobile: 302-660-9465

Email: Kumarpn@bv.com



Leah Gaffney

Phone: 215-928-2209

Mobile: 215-514-2714

Email: GaffneyLJ@bv.com