RESILIENT NJ
RESILIENT RARITAN RIVER AND BAY COMMUNITIES

APPENDIX L:
GREEN INFRASTRUCTURE FOR STORMWATER MANAGEMENT PROGRAM DEVELOPMENT

August 12, 2022

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Key Points

This appendix is a copy of the project team's presentation to the Steering Committee on the feasibility of implementing a stormwater utility in the Raritan River and Bay Communities (RRBC) region. Further discussion of this topic is included in the Feasibility of Implementing a Stormwater Utility memo.

Next steps include:

- Further exploring the feasibility of implementing a regional stormwater utility
- Middlesex County establishing a dedicated funding source for a regional stormwater utility

Key insights from this analysis include:

- Reliable stormwater funding helps increase resilience by allowing municipal agencies to address issues related to aging infrastructure, increasing flooding problems, and increasing regulatory requirements for stormwater management and pollution reduction
- A stormwater utility operates similarly to any other utility, such as a water or electric utility. This is an especially valuable tool as part of a watershed approach for flood resilience, as it facilitates implementation of stormwater management practices for new and redeveloped areas, creates incentives for retrofits on private property, and provides dedicated funding for beneficial public stormwater projects and maintenance activities
- Middlesex County and the participating municipalities must first ensure there is leadership and commitment to evaluate the feasibility of a regional stormwater utility among the interested member communities and then develop a regional concept or model for funding

STORMWATER UTILITY OVERVIEW

Stormwater Management

The Raritan River drains an area of more than 1,000 square miles, which covers a broad range of land uses and environmental resources. Development has greatly increased the amount of impervious surface within the region and has altered traditional drainage patterns.

- RRBC experiences localized flooding and additional stormwater-related problems such as sedimentation build up.

- Additionally, storm sewer systems within the region are not sized to manage the extreme storms experienced more frequently over the past few years.

- A dedicated stormwater funding, such as a stormwater utility, can be used to solve these issues by implementing capital improvement projects and best management practices, paying for administration and operations services, meeting permit-required minimum control measures, and performing ongoing operations and maintenance activities.

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Stormwater Requirements

In RRBC there are a number of regulations and policies at the Federal, State, county and local levels which govern Municipal Separate Storm Sewer Systems (MS4).

FEDERAL		• **Clean Water Act** and Phase II Stormwater Regulations (1999) • US EPA delegates permitting authority to most states • US EPA provides MS4 permit guidance and monitors compliance
STATE		• NJDEP issued final stormwater rules on February 2, 2004 • NJDEP issued NJPDES MS4 general permits authorizing stormwater discharges for Tier A and Tier B municipalities • NJDEP issues local permits and ensures compliance
COUNTY		• County review agency provides review and approval to Municipal Stormwater Management Plan submittals • Determines if Municipal Stormwater Management Plan and ordinances conform with NJ Administrative Code 7:8-4.4
LOCAL	RARITAN RIVER AND BAY COMMUNITIES	• Tier A MS4 General Permit (effective 01/01/2018) • Develop, update, implement and enforce MS4 stormwater program and prepare annual report

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NJ Enabling Legislation

Clean Stormwater and Flood Reduction Act (2019)

The Clean Stormwater and Flood Reduction Act of 2019 allows the establishment of Stormwater Utilities by governing bodies at the county, municipality, or municipal level.

- A stormwater utility operates much like an electric or water utility.
- A utility may collect fees related to the control and treatment of stormwater to be used to fund a municipal stormwater management program.
- Stormwater utilities can be implemented at the local or regional (combination of local, county, and/or municipal authority) level.
- Stormwater utilities are established through shared services agreements between participating entities.

Stormwater Utilities

What can they help address?

AGING INFRASTRUCTURE

REQUIREMENTS

Increasing regulatory/LTCP/MS4 permit requirements and pollution reduction

FLOODING

Increasing flooding issues

UTILITY

Recognition of stormwater as a true utility like water, power, etc.

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Stormwater Utilities

The scope of the program and services provided by a stormwater utility should be tailored to the needs of the community. Potential services provided by a stormwater utility include:

Administrative

- MS4 Permit administration/reporting
- Stormwater fee billing and collections
- Review of credit applications and appeals
- Public education and outreach

O&M

- Stormwater system inspections and repairs
- Outfall inspections/illicit connection inspections
- Inspection of private BMPs
- Review and inspection of construction site stormwater controls
- Stormwater system utility mark outs
- Street sweeping
- Leaf collection

Capital

- MS4 pollutant reduction projects
- CSO long-term control plan projects
- Projects to reduce flooding
- System expansion

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Steps to Develop and Implement a Stormwater Utility

Program Review & Revenue Requirements

Organization & Staffing

Endorsement from Elected Officials / Management

Rate Structure

Credits & Appeals

Billing Requirements

Public Outreach / Community Support

SWU Implementation / Ordinance

More information about this special publication available here.

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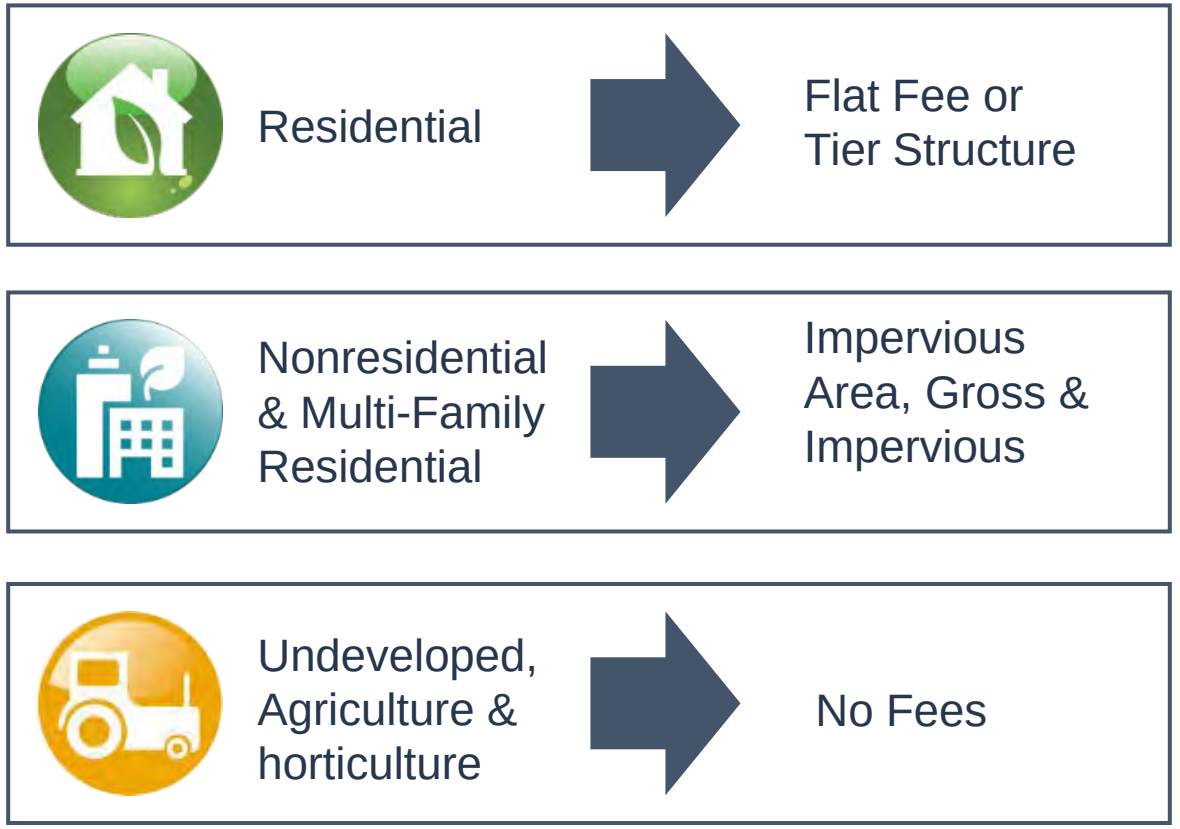
Typical Rate Structures

Rate structures should work to balance precision and simplicity

NJ Enabling Legislation requires that fees shall be "…based on a fair and equitable approximation of the proportionate contribution of stormwater runoff…"

Fee structures should be accurate, fair, and defensible. They should also be representative of local conditions. For example, nonresidential and residential areas may demand different rate structures.



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Enabling Legislation Requires Credits

Credits can be used to provide incentives to implement best management practices and reduce a property's stormwater fee. These credits can improve equity during implementation and reward properties that manage stormwater on their own property or minimize impervious areas.

- Types of credits may include:
  - Storage (e.g., ponds)
  - Infiltration practices (e.g., rain gardens, porous pavement)
  - Other vegetative practices (e.g., riparian buffers, wetlands)
- Possibly allowed credits include:
  - Education Programs (for schools)
  - Fertilizer Management Programs
  - NPDES or MS4 Permit Holders
  - Innovation
- Maximum credit for a property is typically capped

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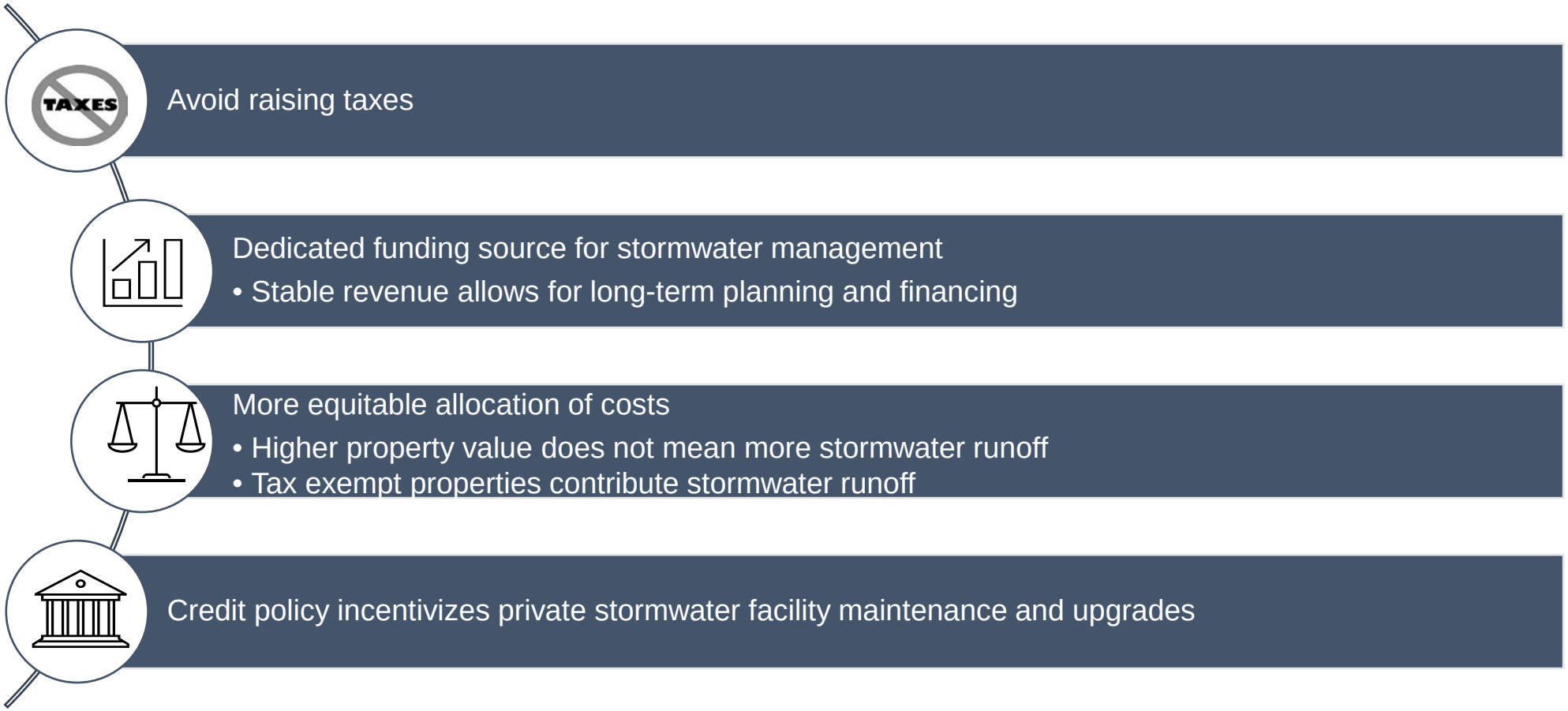
Benefits of Stormwater Fees

Stormwater utility fees reduce the pressure to raise taxes, provide a dedicated funding source for stormwater management, create a more equitable allocation of costs because higher property values do not necessarily contribute higher amounts of stormwater runoff.



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REGIONAL APPROACH

Drivers of a Regional Approach

There are a number of reasons that a regional approach to stormwater management may make sense in RRBC.

- 560 jurisdictions in NJ with similar stormwater requirements
- Lack of funding for addressing stormwater needs
- Economies of scale for stormwater utility implementation
- Stormwater problems do not follow municipal boundaries
- Cost sharing of compliance and project costs
- It works for other sectors (Water, Sewer, Electricity)

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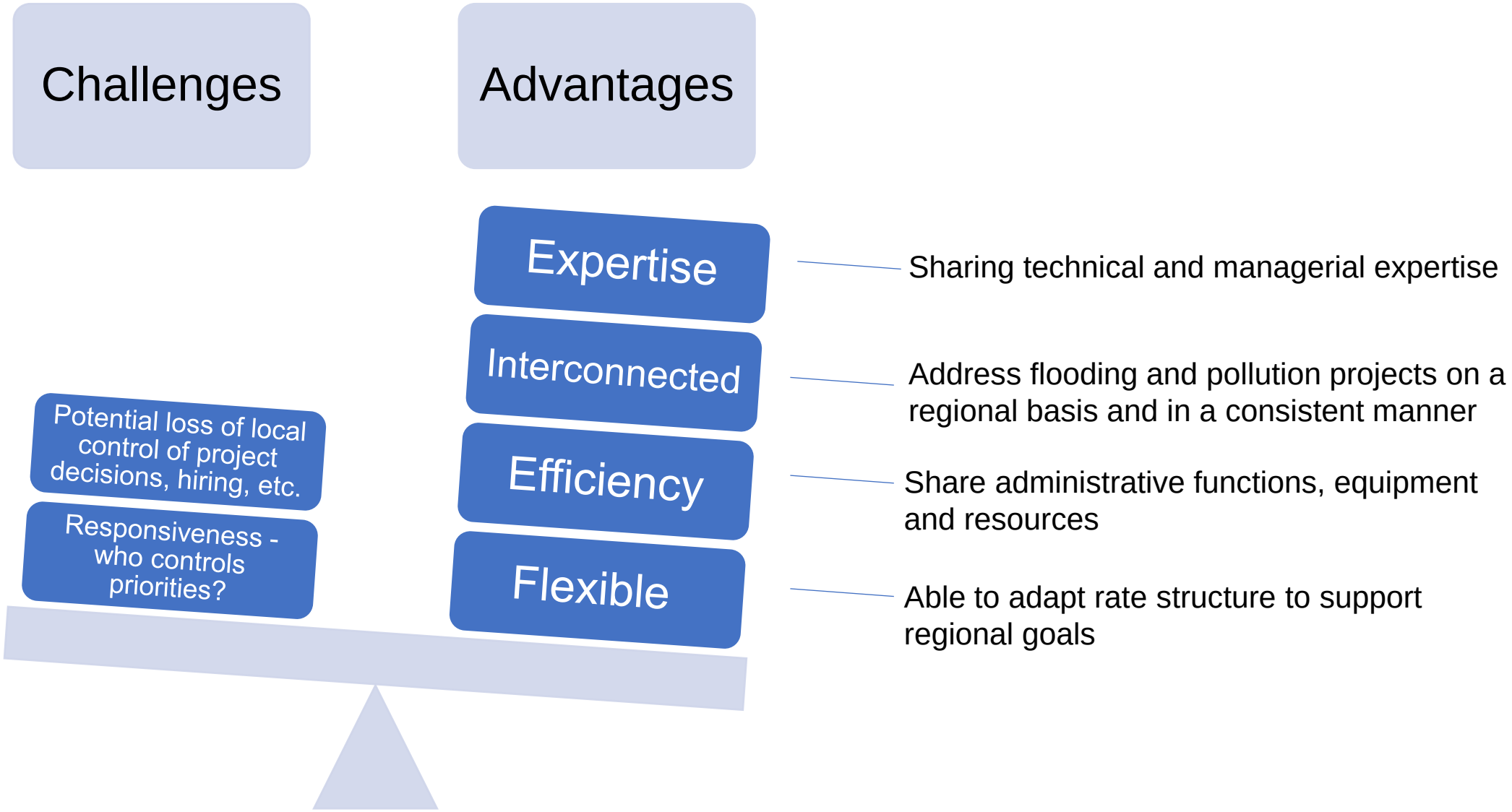
Regional Stormwater Utility

A regional approach can consist of an existing regional authority or County agency providing stormwater services or consist of several communities pooling together to form a new stormwater utility.



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Benefits of Regional Cooperation

AGREEMENTS

Leverage existing cooperation and regional agreements

ACCEPTANCE

Improve acceptance by having a uniform stormwater funding approach and policies

OPPORTUNITIES

Create opportunities for developing watershed solutions and reduce project costs

REDUCE COSTS

Streamline program implementation to reduce regulatory compliance and O&M costs

FUNDING

Increase access to grants and innovative funding sources

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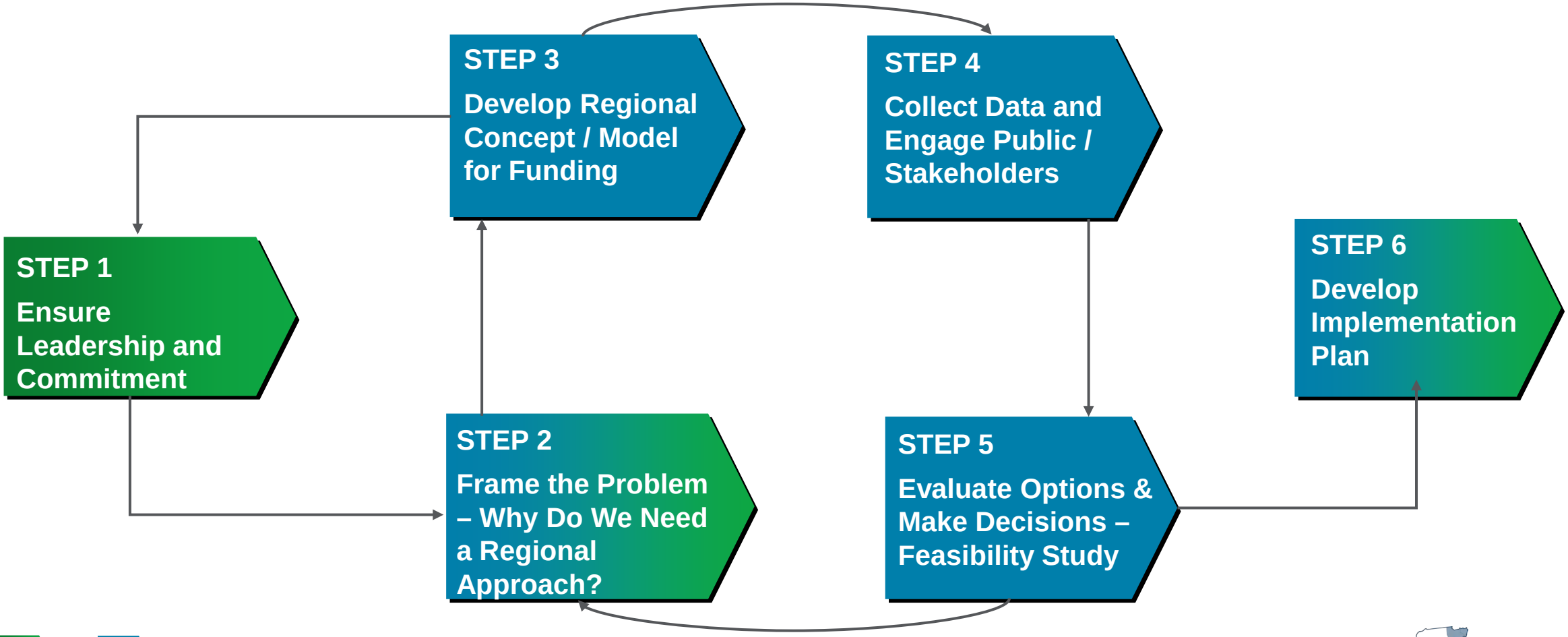
Regional Approach Decision Process



Adapted from: Decision Facilitation Guidebook, CH2M Hill

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CASE STUDIES

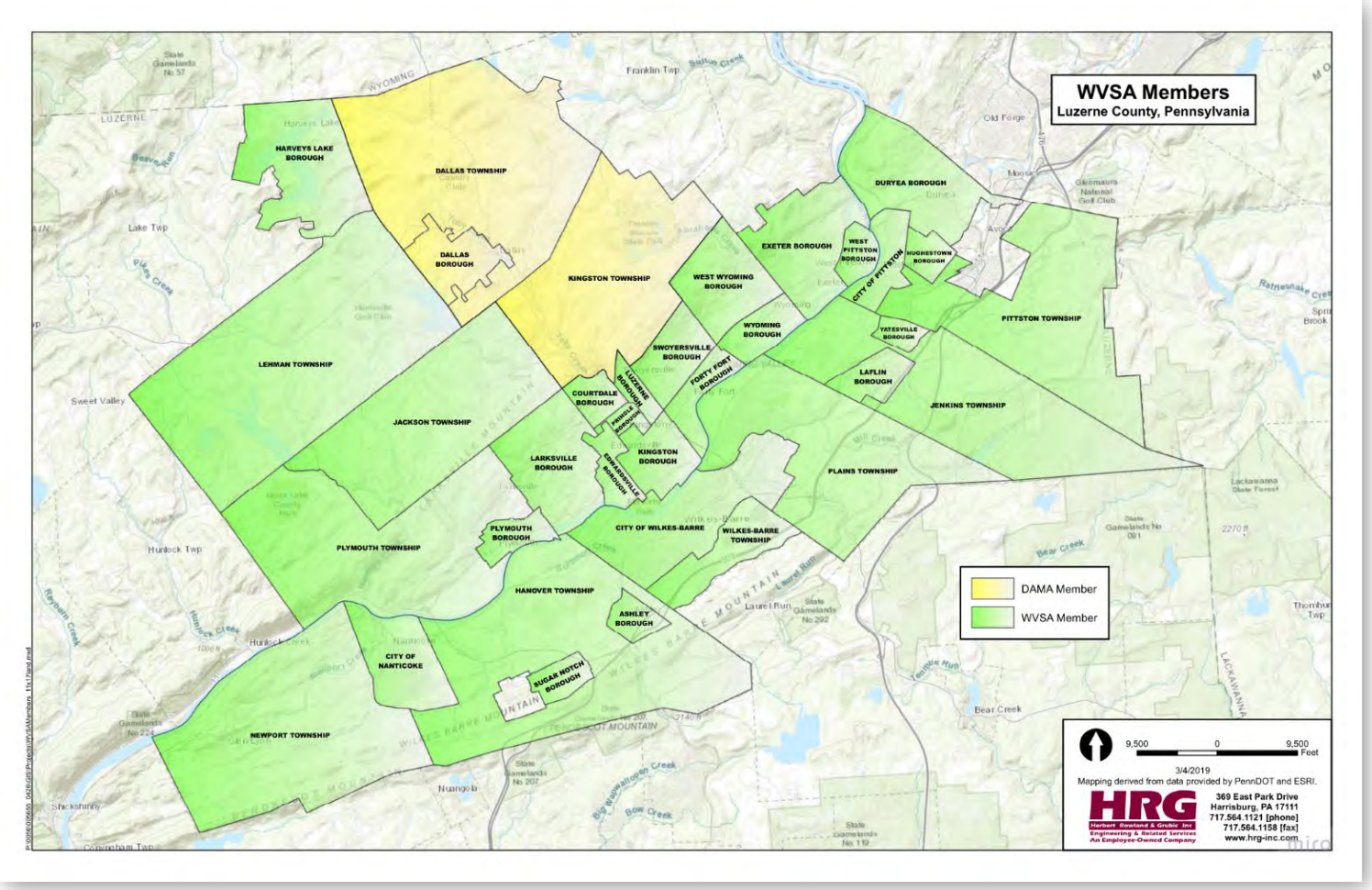
Wyoming Valley, PA
Wyoming Valley Sanitary Authority (WVSA)

Regional Stormwater Management Program

- Established in 2019
- 32 Member Communities
- Regional effort to meet MS4 permitting requirements while providing greater cost efficiencies, strategic partnerships and more equitable distribution of costs for services.

WVSA acts as MS4 Permit Administrator and provides support to all municipalities.

- Prepared regional Pollution Reduction Plan (PRR) and watershed based PRPs for submission to EPA
- O&M of BMPs installed by WVSA
- Mapping activities
- Regional training
- Develop standard ordinances



Stormwater Utility Fee Structure

WVSA used high-resolution aerial photography to determine the Impervious Area (IA) of each parcel.

GIS measurements were cross-referenced with existing county parcel records.

Monthly Charge **Tier IA Range (sq. ft.)** 0—99	**$0.00**
Monthly Charge **Tier IA Range (sq. ft.)** 100—499	**$1.00**
Monthly Charge (Average Property) **Tier IA Range (sq. ft.)** 500—6,999	**$4.80**
Monthly Charge **Tier IA Range (sq. ft.)** 7, 000 >	**$4.80 + $1.70 per 1,000 sq. ft. IA over 7,000**

Services Provided Through Fee Revenue

$8.6M in annual fees collected by WVSA's Regional Stormwater Management Program are used to fund:

Permit-required Minimum Control Measures

- Public education and outreach
- Public involvement/ participation
- Illicit discharge detection and elimination
- Construction site stormwater runoff control
- Construction stormwater management for new development and redevelopment
- Pollution prevention
- Good housekeeping/document retention

Capital Improvements / Best Management Practices

- Stream bank restoration
- Water quality improvement in detention basins
- Community rain gardens
- Regional stormwater parks
- Ongoing pollution reduction projects

Regional Mapping of Stormwater Systems

- Stormwater inlets
- Manhole piping
- Outfall inspections

Administration and Operations Services

- Catch basin cleaning and repair
- Outfall inspection reporting
- Street sweeping
- Regulatory compliance
- Annual audits

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Revenue and Funding Opportunities

In addition to the services listed on the previous slide, WVSA's Regional Stormwater Management Program fees are also used in the following applications:

- Aging infrastructure repairs: "savings account" for each of the 32 partner municipalities
  - In 2019, $1 million of the $8.6 million in revenue was put into these accounts for stormwater projects (pipe repairs, sewer separation, etc.)
- Leverage stormwater utility fees: received 5 grants thus far totaling $453,000
- Cost savings:
  - Instead of 32 towns each buying an excavator, 3-4 can be used for the entire region as needed
  - Lower costs associated with a regional approach to stormwater management is evident when comparing stormwater fees charged in other areas

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Charlotte-Mecklenburg County Stormwater Services, NC

- Joint municipal/county stormwater utility for: City of Charlotte and the surrounding towns of Cornelius, Davidson, Huntersville, Matthews, Mint Hill and Pineville and Mecklenburg County
- Stormwater fees are based on impervious area per property which is measured through aerial photography
- Four different fee credits are offered for qualifying property owners
- For example, a property owner may receive a credit if they have significantly reduced the amount of runoff through a stormwater control measure or a pond that captures and contains it.

Stormwater Utility Fee Structure

Charlotte-Mecklenburg County Stormwater Services

Detached Single-Family Residential properties are in one of four billing tiers based on impervious surface. Each property in the tier is billed the same amount.

Tier 1: <2,000 square feet of impervious surface
Tier 2: 2,000 to 2,999 square feet of impervious surface
Tier 3: 3,000 to 4,999 square feet of impervious surface
Tier 4: 5,000 or more square feet of impervious surface

Other properties (commercial buildings; attached homes such as duplexes, triplexes and apartments; multiple single-family structures on one parcel) are billed for actual amount of impervious area.

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Services Provided Through Fee Revenue

Fees collected through Charlotte-Mecklenburg County Stormwater Services are used for:

- Repairing public storm drainage infrastructure
- Reducing flood risks
- Improving surface waters
- Reducing pollution