

# FUNDING OPTIONS FOR STORMWATER UTILITIES

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# Agenda

- ❖ Need for Adequate Stormwater Funding
- ❖ Stormwater User Fees

## Survey Data:

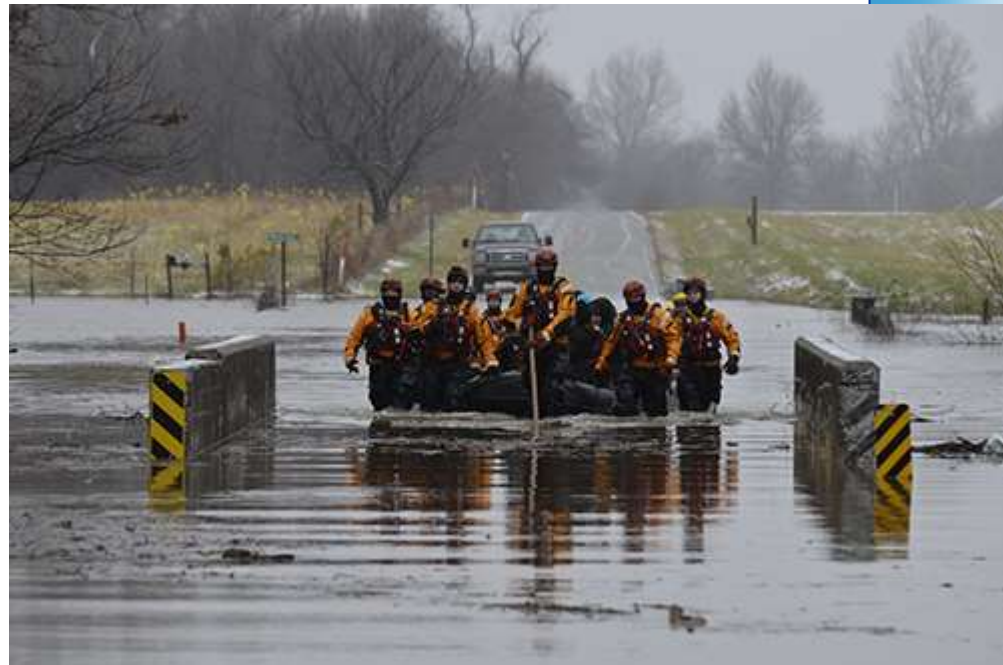
- Western Kentucky University (2012) – 1,314 Respondents
- Combined Southeast Stormwater Association (2013) and Florida Stormwater Association (2014) Stormwater Utility Surveys – 207 Respondents

# Changes That Demand Attention

- Classically:
  - Drainage Problem Solutions (e.g., Flood Control) Need Funding
  - Maintenance of Drainage Facilities Need Funding
  - Very Tangible Results
- Today
  - Economy
  - Aging Infrastructure
  - Regulatory Compliance
  - Focus on Water Quality
    - Not Very Tangible
    - Improvements Take Time To See

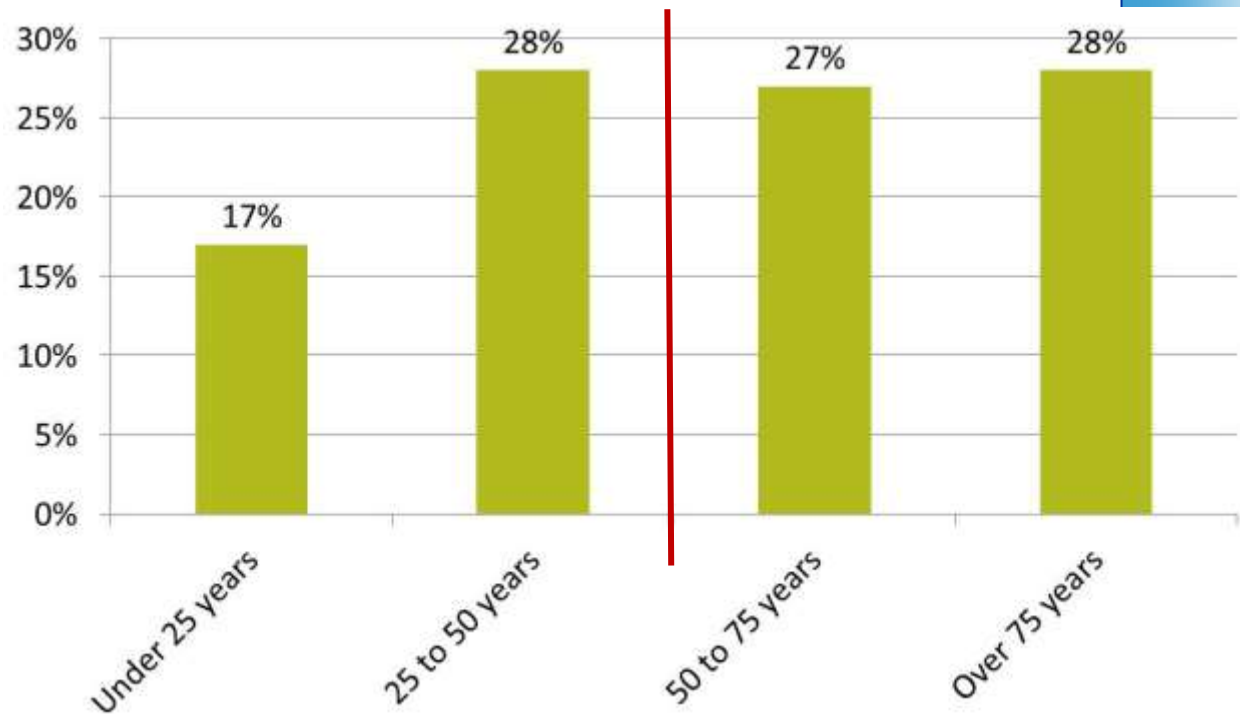
# Economy

- Extreme Pressure on Tax Revenues
  - Stormwater Activities Do Not Compete Well with Other Tax-Funded Programs
  - Change in Stormwater Funding Source(s) Replace General Fund to Pay for Stormwater Activities



# Aging Infrastructure

- Stormwater Infrastructure
  - Design Life – 30 to 50 years
  - Significant portion may be over 50 years
- Choices:
  - Wait until failure
  - Proactive replacement



Example:  
Hutchinson, KS,  
Storm Sewer Pipes in  
2014

# Water Quality & Environment

- Focus on Water Quality Standards:
  - Pollutant Load Reductions(New TMDLs)
- New Paradigm on NPDES Municipal Separate Storm Sewer System Permits (MS4s)
  - TMDLs and Numeric Criteria on MS4 Permits
- Changes in EPA's Approach to Dealing with Stormwater

# New Demands Means New Funding Needs

- Federal and State Demands of Higher Level WQ Controls
- No Meaningful Federal Funding
- Burden will be Borne by Local Sources



# One of the common ways to generate stormwater funding is a stormwater utility fee.

- ❖ Stormwater Management Solution
  - Stable, Predictable Funding Mechanism
  - Long-Term Programmatic Approach
  - Enables Resolution of Chronic Problems
  - Facilitates Planning and Construction Programs
- ❖ A Relatively Recent Development
  - 1973: First Utility in US - Bellevue, Washington
  - 1,500 to 2,000 Utilities in the United States (W. Kentucky University, 2012)



# A Stormwater Utility Fee is a User Fee not a Tax

## ❖ Legally different

### – Tax:

- Based on valuation (property, income, sales, etc.)
- Used for any legislatively authorized activity
- Goes to General Fund

### – User Fee:

- Based on service provided to the customer
- The fee must be proportional to the service provided
- Revenues dedicated to stormwater services
- Existing examples: water, wastewater, garbage, electricity

## ❖ Stormwater service is based on control of stormwater runoff generated by urban development

# Benefits = Charge

- ❖ Management of Runoff Benefits Owners and Tenants
- ❖ Benefit Relates to Property's Contribution to the Problem
- ❖ Fee or Assessment Relates to Runoff
- ❖ Common Proxy for Runoff is Impervious Area

**Customer receives services from the utility in relationship to their runoff (impervious area).**

# Benefits of Stormwater User Fees

- ❖ Programmatic Stability
- ❖ Enables a Long-Term View
- ❖ Supports TMDL Implementation
- ❖ Facilitates NPDES Compliance
- ❖ Can Encourage Good Behavior
- ❖ Unit Costs Decrease as Routine Service Increases

## Data – WKU Survey (2012)

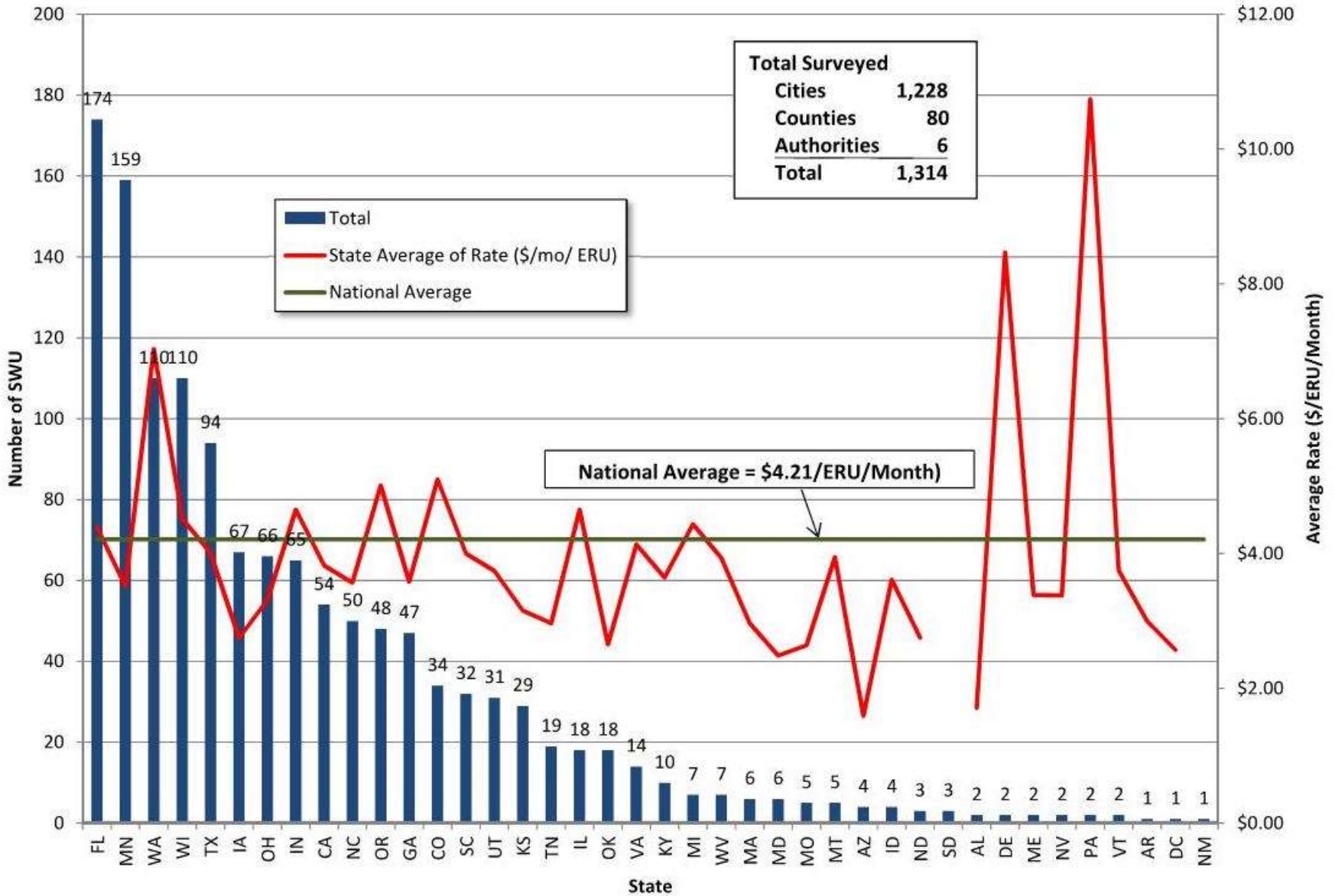
1,314 Respondents:

1,228 Cities (93.5%)

80 Counties (6.1%)

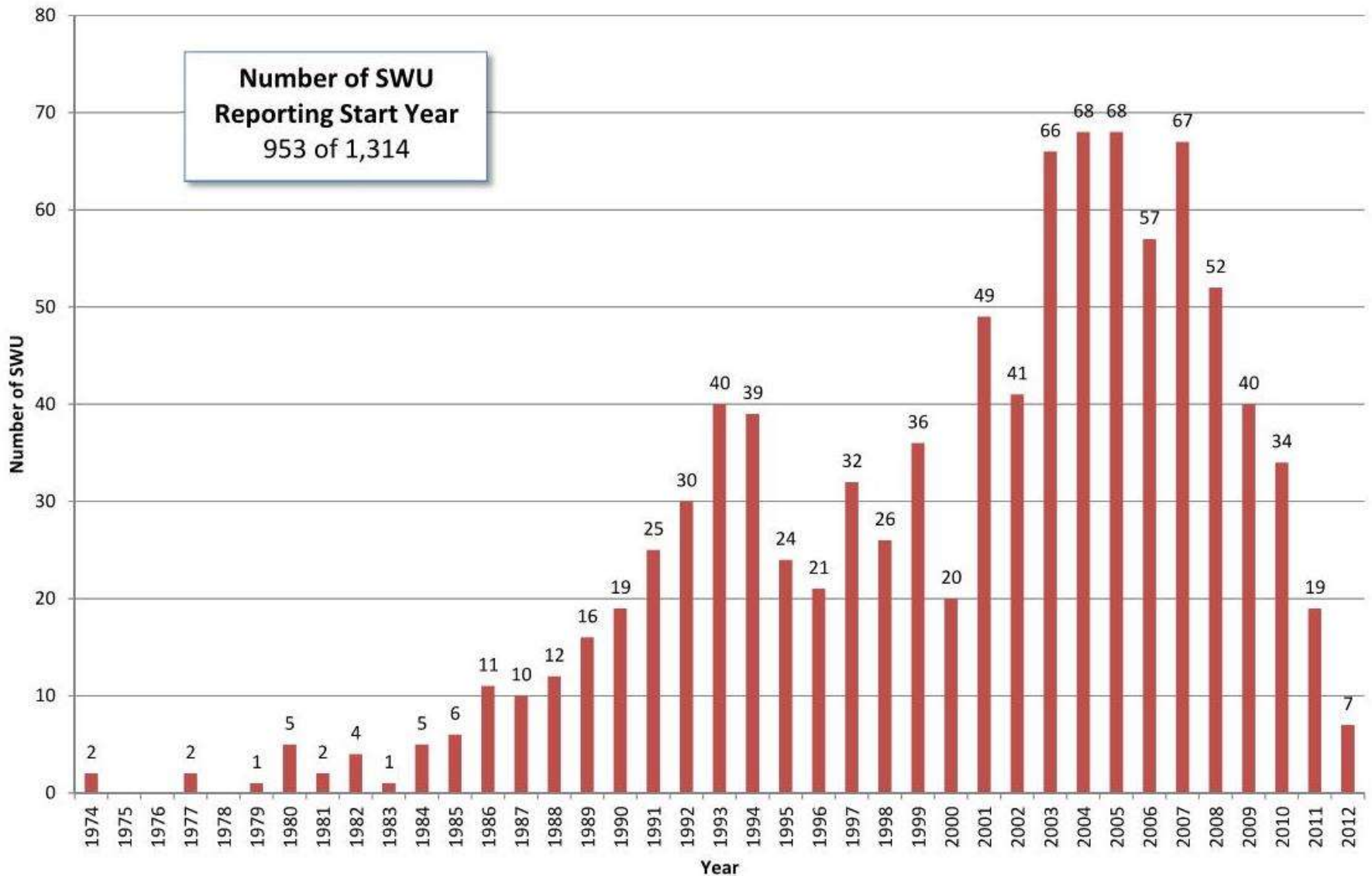
6 Authorities (<1%)

# Summary of Stormwater Utilities in US



# Stormwater Utilities in the US

## Year of Start (WKU, 2012)



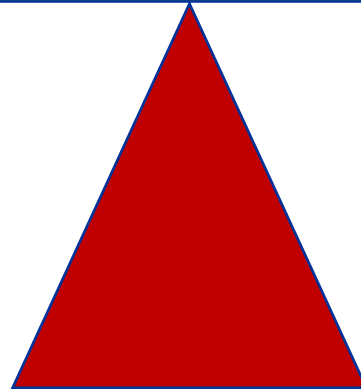
# Tradeoffs

**Simplicity**

**Equity**



Perfect Simplicity would be the same fee for all customers.



Perfect Equity would require a runoff study for each individual customer.

Goal – Reasonable Equity

# Service Areas

- ❖ Related to Benefit (e.g., Rural versus Urban)
- ❖ Potential Benefits
  - Management (e.g., planning, regulation)
  - Operations
  - Capital Improvements
- ❖ Existing and Future

# Charge Alternatives

- ❖ Management & Operations
- ❖ Operations Only
- ❖ CIP Only
- ❖ All Programs Each with Different Service Areas
- ❖ Combinations
- ❖ Existing Programs versus Expanded Program



# Base Unit Definition

- ❖ X Square Feet of Impervious Area
- ❖ Single Family Unit Equivalent (Median Impervious for SFU Only)
- ❖ Dwelling Unit Equivalent (Median Impervious for SFU, Condo, Apartments, and Mobile Homes)
- ❖ Effective Impervious Area (Impervious and Pervious)

## SESWA/FSA Survey

SFU Equiv – 57%

DU Equiv – 25%

Other – 9%

Unknown – 9%

## WKU Survey

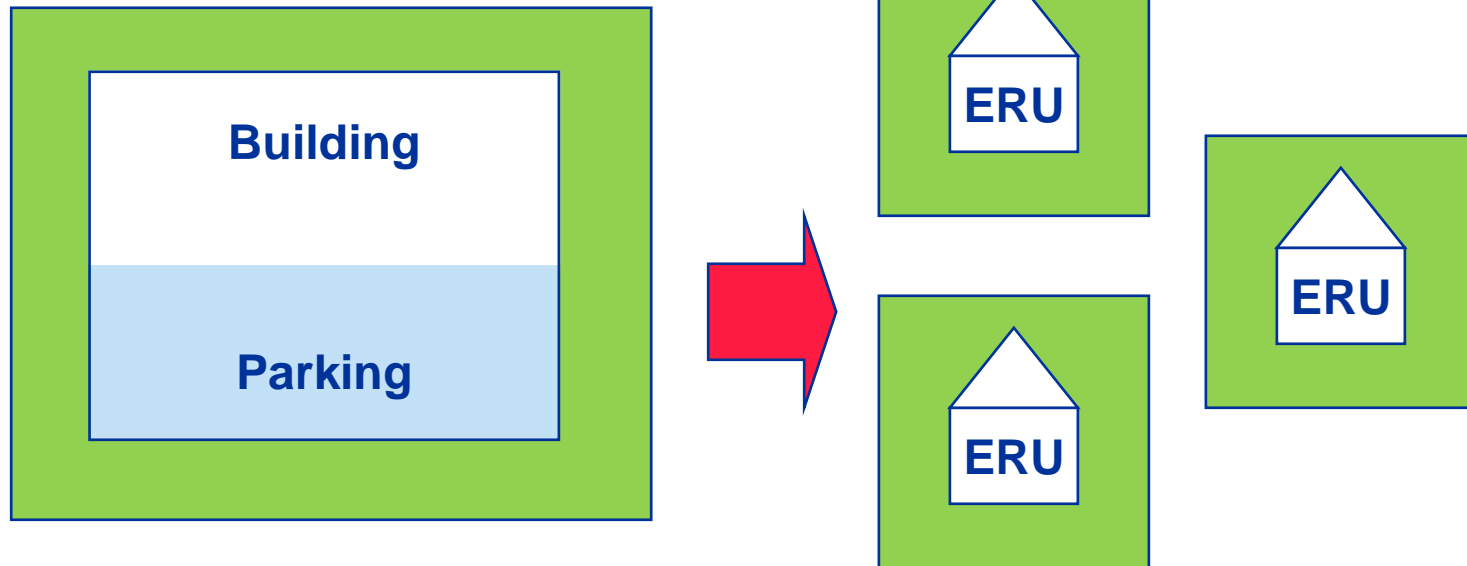
ERU – 49%

Not ERU – 24%

Other – 26%

Unknown – 1%

# Billing Unit Calculation



Example – Impervious Area of  
Non-Residential Customer  
Represents 3 Billing Units so  
Pays 3 Times Rate

**ERU = Equivalent Runoff Unit**  
a.k.a., billing unit

# Rate Structure - Non-Residential Fees

## ❖ Base Structure:

ERUs = Impervious Area / ERU Impervious Area

## ❖ Alternatives:

- Actual Impervious Area (75%)
- Gross & Impervious Area (10%)
- Intensity of Development \* (4%)
- Other Measures (11%)

\* Intensity of Development = % Imperviousness  
Assigned based on Parcel Type

Note: Non-Residential includes Commercial, Industrial, Agricultural, Institutional, Governmental, and Miscellaneous

# Potential Exemptions

- ❖ Public Roads (76%)
- ❖ Railroad ROW (61%)
- ❖ Undeveloped (60%)
- ❖ Agricultural (58%)
- ❖ Public Parks (32%)
- ❖ Government Properties (21%)
- ❖ Airport Runways and Taxiways (17%)
- ❖ No Discharge to MS4 (15%)
- ❖ Water Front (3%)
- ❖ Other (20%)

Survey Results in Parenthesis Representing Number of Respondents Saying Yes to Question (FSA/SESWA)

# Credits and Adjustments

## ❖ Reason – Reduction in Runoff

- Not Connected
- Stormwater Facilities
- Private Maintenance
- Incentives
- Water Quality

## SESWA/FSA Survey:

- ❖ 52% Have Credits
- ❖ Maximum Credit Allowed = 100%
- ❖ Average Credit Allowed = 26% of Fee
- ❖ Average % of Accounts w/Credit = 5.6%

# SWU and CSOs

Are there municipalities with CSOs, a portion of which are paid for by Stormwater Utilities? Yes.

Examples:

- Portland ME
- Springfield OH
- Lynchburg VA
- Richmond VA
- Nashville TN
- Chattanooga TN
- Philadelphia PA

## Factors to Consider:

- Fee used for stormwater component of CSO only
- Separate accounting of revenues
- Funds can be used for shared services but share must be reasonably related to stormwater management

# Summary and Lessons Learned

- Stormwater User Fee
  - Fee must be proportional to benefit/ service received
- State Legislation authorizing stormwater enterprise funding is very important
- CSOs and Stormwater Utilities
  - Yes, Stormwater fee must be related to stormwater component only

# Stormwater Runoff is Natural but.....

## What Urbanization Does To Runoff is Not Natural

