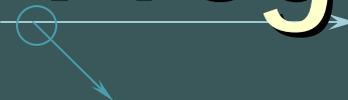


# Funding Stormwater Programs



Nikos Singelis  
Stormwater Program  
U.S. EPA

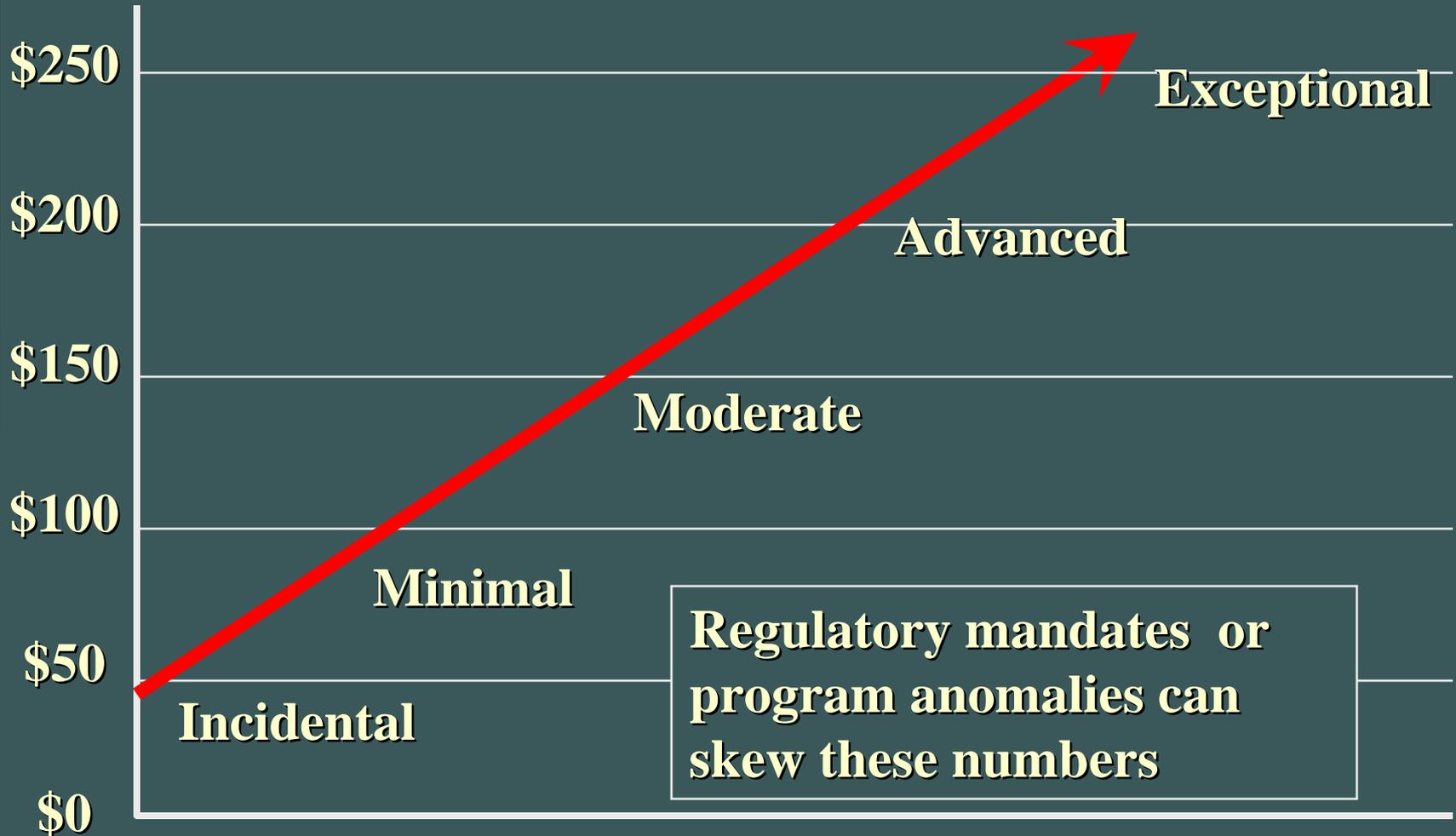


# Topics for This Module

- Stormwater Program Costs
- Stormwater Utilities
- Clean Water State Revolving Fund
- Additional Funding Strategies
- How can you determine what will work for your community?

# Stormwater Program Costs

*\$/Dev. Acre/Year*





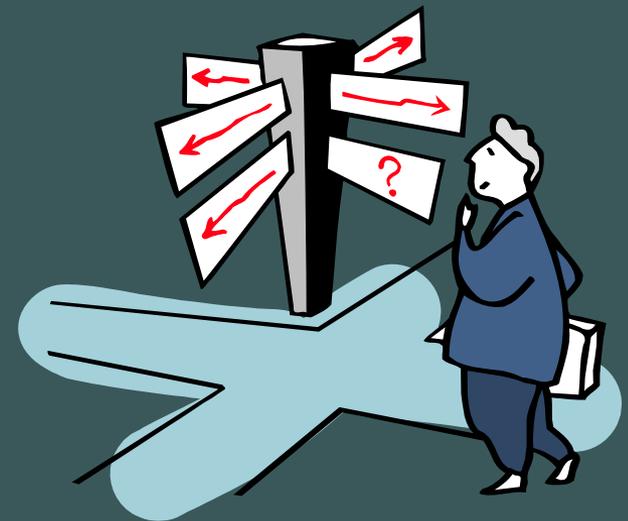
# Factors Affecting Cost

- How detailed of a program do you want?
- How detailed of a program does your State want you to have?
- What are you already doing in terms of stormwater?
- Are you discharging to an impaired water?
- What is your climate (both politically and weather-wise)?



# What Type of Funding Sources Exist?

- Utilities
- CWSRF
- Fees
- Taxes
- Grants
- Debt Financing
- General Fund
- Local Improvement Districts
- Developer Participation





# Topics for This Module

- Stormwater Program Costs
- *Stormwater Utilities*
- Clean Water State Revolving Fund
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# Stormwater Utilities

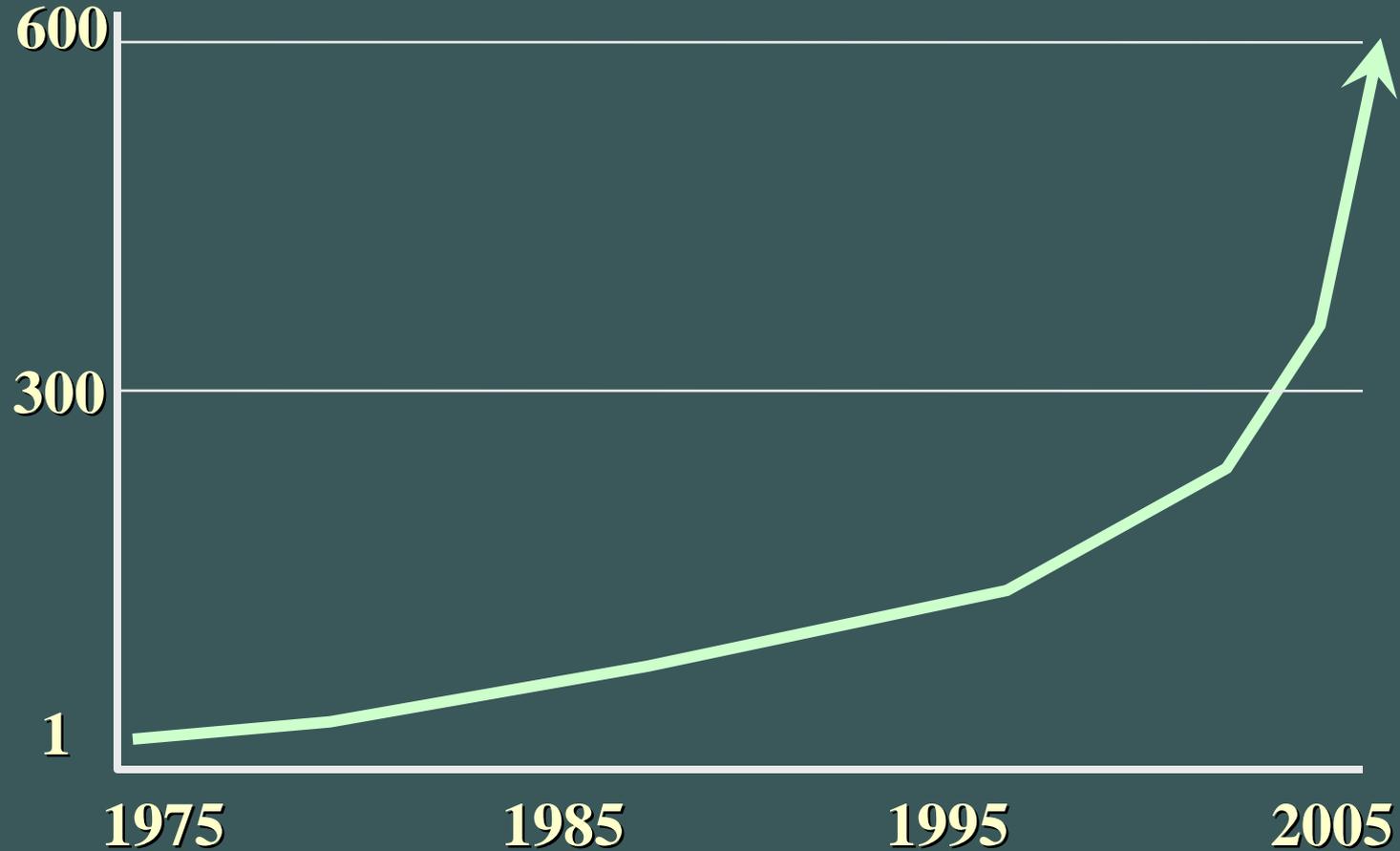
## *What is it?*

- An enterprise fund that can provide a stable source of funding for stormwater operations and capital projects
  - User fee

## *How is the fee determined?*

- Based on the need for stormwater facility services
  - Amount of runoff generated by the property
  - Size of the property
  - Amount of impervious surface
- Charges Taxable and Tax-exempt Property
- Bills Are Proportional to Area, Not Billable Flow

# Growth of Stormwater Utilities



# Stormwater Utility Advantages

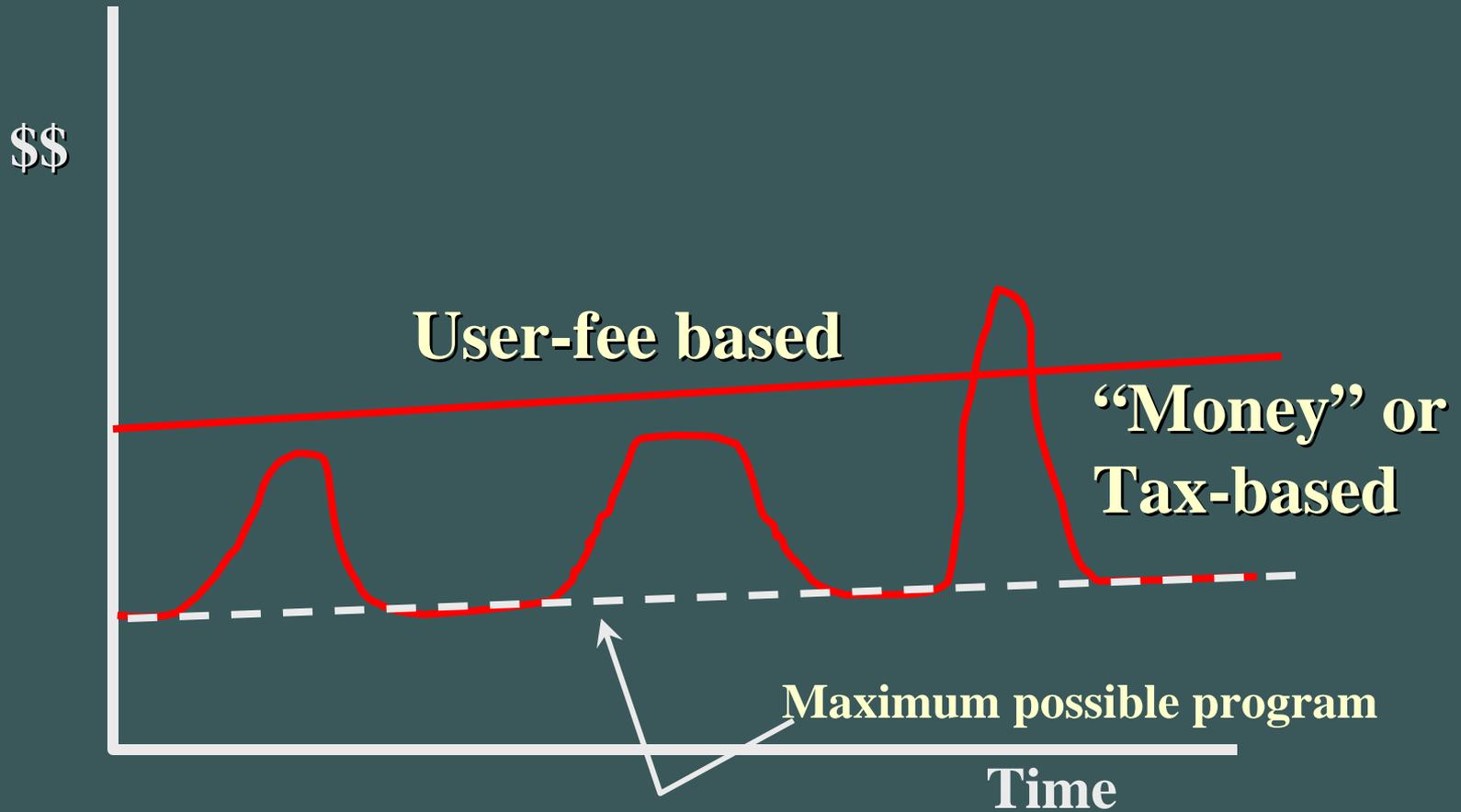
- Fair and Equitable
- Dedicated Dollars - Stable and Predictable
- Larger Customer Base  
(Taxable and Tax-Exempt Property)
- Incentivize Behavior Through Credits
- Cheaper for Residential Property than a Tax

# Stormwater Utility Disadvantages

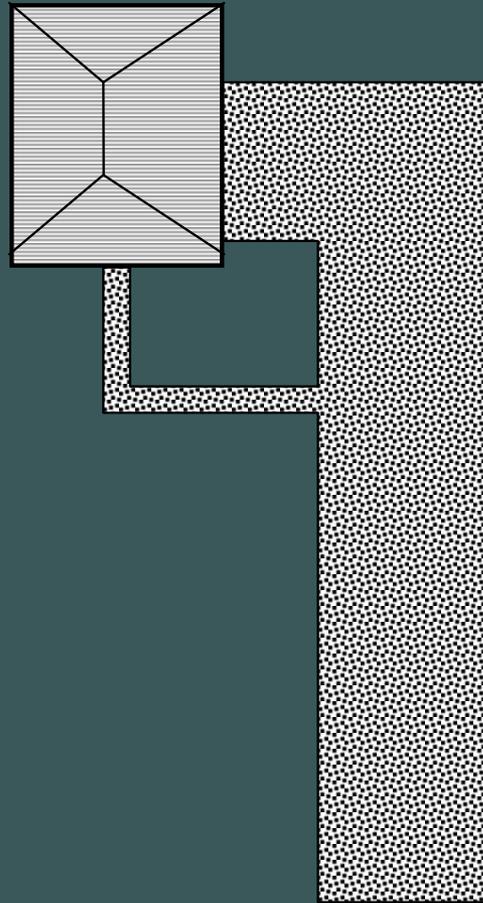
- Establish Legal Authority
- High Implementation and Administration Costs
- New Billing System to Maintain
- Bill is Not Tax-Deductible
- Visible Fee = More Opposition
- Vulnerable to Legal Challenge

# Stable

## Utility vs. Tax or "Money" Funding



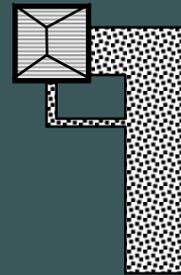
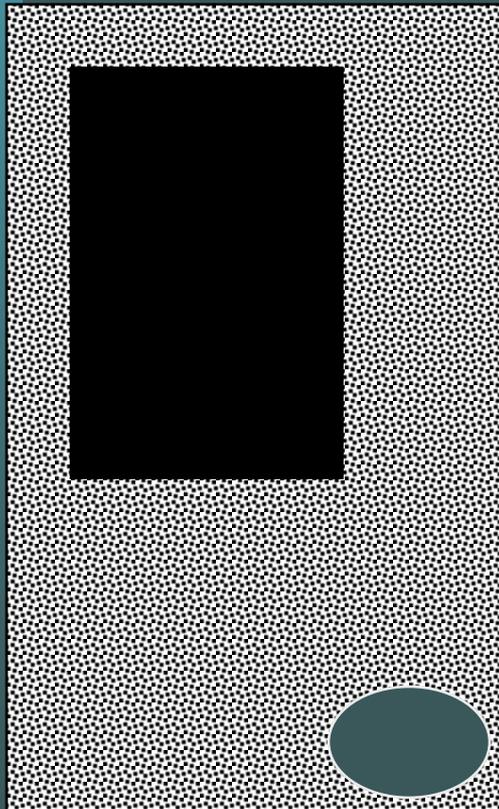
# Equitable: How a Fee is Calculated



**Equals 1.0  
ERU**

**Say it is  
2500 sq ft**

# How a Fee is Calculated



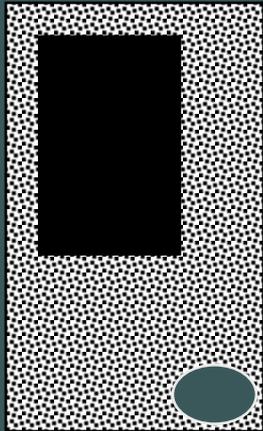
**= 1 ERU**

**= 40 ERUs less credit**

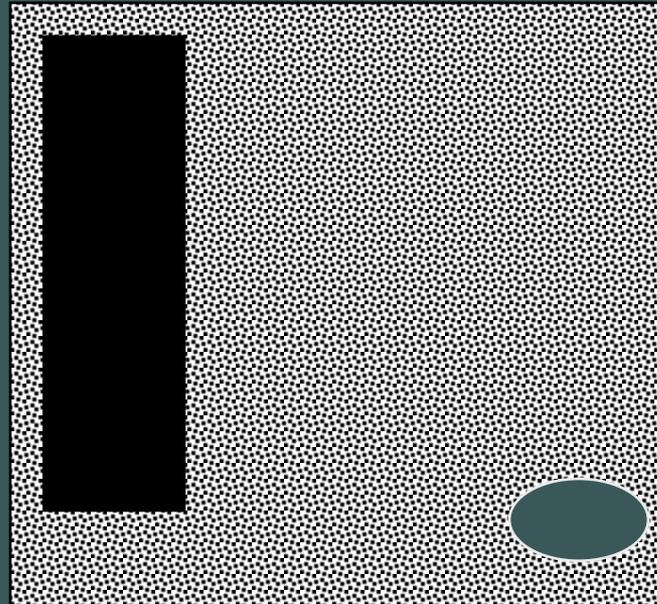
Rate structures can reflect a number of different things...not just impervious area

# Typical Properties

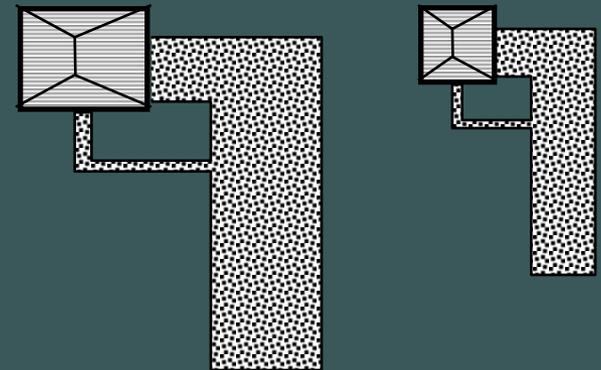
## \$4.00/month charge



Fast Food  
\$62.72/mo  
less credit



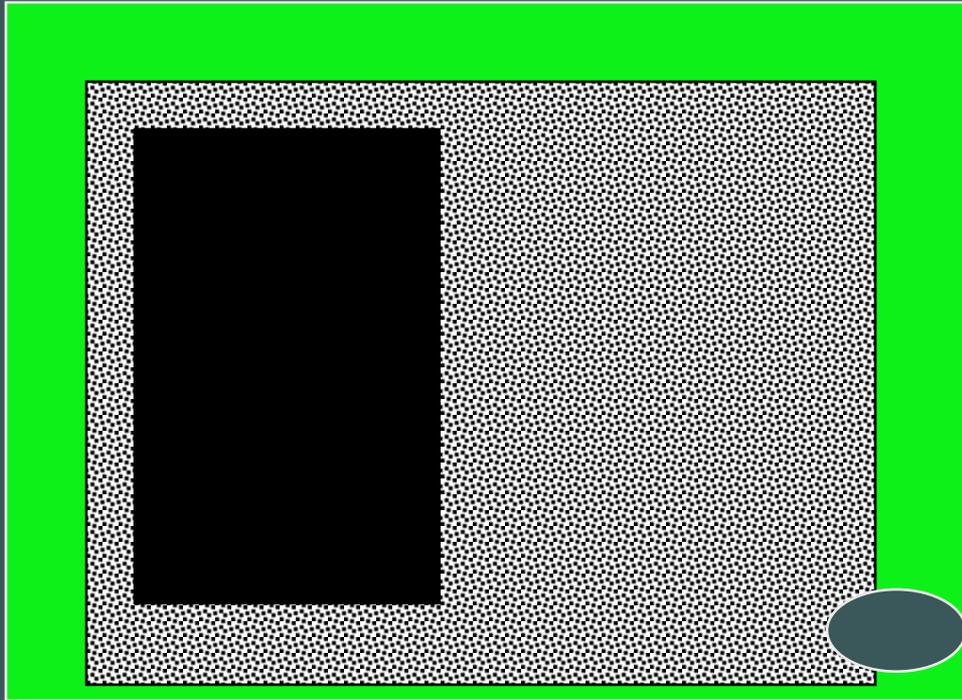
200,000 sq ft shopping  
700,000 sq ft impervious  
\$1121.20/mo  
less credit



2 tiers residential

Large Res. \$5.50/mo  
Small Res. \$2.50/mo

# Typical Commercial Building



60% parking  
40% office  
10 ERUs  
\$4/mo/ERU

10,000 sq ft  
commercial bldg

Say rental is \$18/sq ft/yr or \$180,000/yr  
User fee is \$40/mo or \$480/yr  
this is less than 5 cents per sq ft per year  
not counting credit (0.26%)

# Past Rate Methodologies

- Impervious Area (54%)
- Impervious Area and Gross Area (21 %)
- Gross Area/Intensity of Development (16 %)
- Others (9 %)
  - impervious area and % of imperviousness, water meter size, flat rates, zoning class

# Newer methods include:

- Allocation of charges according to program costs categories - rational nexus matching
- Allocation of cost according to pollution estimates - pollution modeling
- Development of secondary or ancillary fees and charges - shifting costs to special services and demand users
- Imaginative credits to encourage/reward good behavior

# Steps in Creating a Stormwater Utility

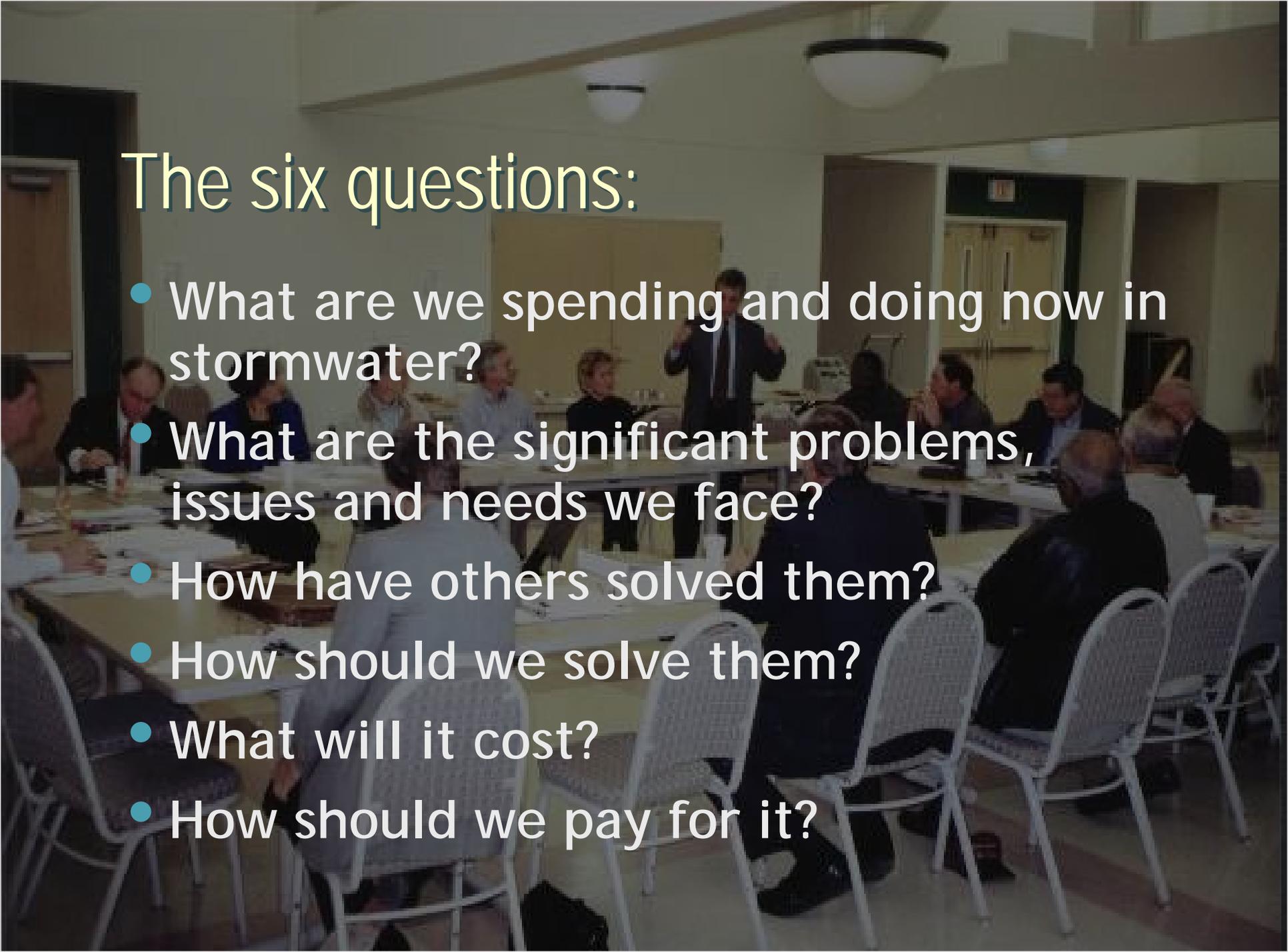
A. Feasibility Study

B. Development

C. Implementation

## A. Feasibility Study

A feasibility study takes a group of staff and citizens on a walk through all the key aspects of utility development without committing to utility development until all concerned agree it is the right way to go.

A man in a dark suit and tie stands at the front of a large meeting room, gesturing with his hands as if presenting. He is surrounded by several long tables where other people, mostly men in business attire, are seated. The room has a high ceiling with recessed lighting and large windows in the background. The overall atmosphere is professional and focused.

# The six questions:

- What are we spending and doing now in stormwater?
- What are the significant problems, issues and needs we face?
- How have others solved them?
- How should we solve them?
- What will it cost?
- How should we pay for it?

## B. Development

1. Billing System
2. Public Information Program
3. Ordinance
4. Credits/Exemptions

# 1. Billing System

- Collect Data from City Departments
- Define User Categories
- Align Water/Sewer Account Numbers with Tax Assessor Property ID Numbers
- Input Property Area Data
- Calculate Final Billable Area and Fees

## 2. Public Information Program

- Identify Key Users and Groups
- Establish Advisory Committee
- Website
- Pamphlets and Presentations
- Meet with Citizen Groups, Key Users/Groups and the Media
- Mail Pamphlets Prior to Billing with Each Customer's Proposed Bill

# 3. Ordinance

- Technical:
  - Ongoing Fee Method
    - ERU
    - ID
    - EHA
  - System Development Charge Method
  - Annual Rate Review
- Legal:
  - Legal Authority
  - Regulatory Purpose
  - Fees Proportional to Cost of Service
  - Credits Available
  - Appeals Process

# 4. Credits/Exemptions

- Credit Manual:
  - Policy/Credits Available/Procedures
  - Maximum Credit %
  - Retention/Detention
  - Educational
  - Maintenance
  - Industrial NPDES
- Exemptions:
  - Undeveloped Land
  - Roads
  - Properties that Discharge Directly to Waterways

## C. Implementation

1. Initiate Billing
2. Telephone Hot Line, e-mail Service and Website (FAQs)
3. Address Legal Challenges
4. Maintain Master Account File
5. Manage the Stormwater System

# Stormwater Utility Administration

- Often Same Staff as Water and Sewer:
  - City Manager
  - Engineering
  - Public Works
  - Finance
  - Billing
- Plus:
  - Assessing
  - GIS

# Bill Format

- Add line on Water/Sewer Bill (Usual Method)
- Add to Property Tax Bill (Separate “Non Ad Valorem Charge”)
- Send Stand Alone Bill

# Stormwater Utility Benefits

- Dedicated Funding Source
- Possible Property Tax Reduction
- Fee is Proportional to Cost of Service
- Lower Residential Cost



# Topics for This Module

- Stormwater Program Costs
- Stormwater Utilities
- *Clean Water State Revolving Fund*
- Additional Funding Strategies
- How can you determine what will work for your community?



# CWSRF Funding for Stormwater

- Take Away Message
  - Funding is available for stormwater infrastructure
  - \$5 Billion each year and growing
  - Reliable funding
  - Low interest loans
  - Flexible tool

# What Can You Fund?

- Traditional Stormwater Conveyance Infrastructure
  - pipes
  - Inlets
  - road side ditches
- Capital to maintain infrastructure
  - street sweepers
  - storm drain pumper trucks
- Traditional Stormwater Treatment
  - wet ponds
  - dry ponds
  - manufactured devices



# What can you fund?

## Green Infrastructure

- Construction
  - Vegetated Buffers
  - Compost Blankets
  - Mulching
  - Grass Lined Channels
  - Straw Wattles
  - Compost Filter Sock

## Green Infrastructure

- Post Construction
  - Green Roofs
  - Eliminate Curbs/Gutters
  - Vegetated Swales
  - Bioretention Cells
  - Riparian Buffers

# Did you know?

- The CWSRFs cannot fund land for wastewater treatment systems, unless it is integral to the treatment process
- This has eliminated CWSRF funding for right-of-ways
- If communities use right-of-ways for green infrastructure and the land is integral to the stormwater treatment process, then it is eligible for CWSRF funding

# CWSRF Eligibility

- Publicly-owned 212 projects
  - 212 2(B) “any other method or system for preventing, abating, reducing, storing treating, separating, or disposing of municipal waste, including stormwater runoff...”
- Publicly or privately-owned 319 and 320 projects
  - Implement approved 319 Nonpoint Source Management Plans or the 9 Element Watershed Plans required by the 319 program
  - Develop and implement 320 Comprehensive Conservation Management Plans for National Estuaries

# CWSRF/Stormwater Eligibility

## Stormwater Project Eligibility Clean Water State Revolving Fund

CWSRF Authority	Publicly Owned Project						Privately Owned Project					
	Specifically Required by an NPDES Permit		Not Specifically Required by an NPDES Permit		Unregulated Project		Specifically Required by an NPDES Permit		Not Specifically Required by an NPDES Permit		Unregulated Project	
	Phase I/Phase II Muni Storm water Area	Construction Permit >1 acre *	Phase I/Phase II Muni Storm water Area	Construction Permit >1 acre *	Unregulated Community	Construction <1 acre **	Phase I/Phase II Muni Storm water Area	Construction Permit >1 acre *	Phase I/Phase II Muni Storm water Area	Construction Permit >1 acre *	Unregulated Community	Construction <1 acre **
212	✓	✓	✓	✓	✓	✓						
319	n/a	n/a	✓	✓	✓	✓	n/a	n/a	✓	✓	✓	✓
320	✓	✓	✓	✓	✓	✓	n/a	✓	✓	✓	✓	✓

- ✓ Eligible
- \* or construction sites in a common plan of development
- \*\* and the construction site is not in a common plan of development

# CWSRF Stormwater Projects

- City of Rockville, MD
- \$1.4 million CWSRF loan funded the planning, design, and restoration of the main stem of Watts Branch
- Restoration included
  - enhancement of existing wetlands
  - restoring a stream buffer
  - stabilizing 4,000 feet of eroding stream bank
  - upgrading storm drain outfalls.
- Project helps reduce pollution in streams and the Chesapeake Bay, and enhances aquatic habitat.
- First project in Maryland to benefit from a 0% interest rate CWSRF loan - a part of the Governor's effort to encourage more non-point source projects.



# CWSRF Stormwater Projects

- City of Fort Collins, CO
- The City of Fort Collins obtained a \$9.9 million loan from the CWSRF to upgrade its stormwater system and increase capacity to provide an adequate level of protection.
- Major components of the upgrade included
  - reinforced concrete pipes
  - grated curb inlet systems
  - a water quality treatment pond system.
- The city found that installing a new system using innovative construction methods and materials while maintaining much of the existing stormwater system was the most cost effective option to meet their needs.

# CWSRF Stormwater Projects

- The Nature Conservancy, San Francisco, CA
- The Nature Conservancy used \$17 million in CWSRF loans to partially finance the acquisition of three properties that provided significant watershed restoration and preservation.
- Project conserved the watersheds by protecting the land from
  - Overgrazing
  - urban encroachment
  - vineyard conversion.
- As one of its achievements, the project protected the Palo Corona Ranch from imminent development that would have increased sedimentation and stormwater runoff, and threatened to impair coastal and aquatic resources.

# CWSRF Stormwater Projects

- The City of Port Townsend, Washington
- \$400,000 CWSRF loan at 0% interest to purchase an area called the Winona Wetlands, a critical stormwater basin for the area that also provides a valuable wildlife habitat.
- Paid back in 5 years with a portion of the city's \$5 per household stormwater utility fee.
- The City's purchase protects the wetlands from further development which would have resulted in stormwater management problems as well as destruction of the wetlands.



# Topics for This Module

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# Additional Funding Strategies

## Fees

- Impact fees
  - Charges a fee to developers for impact on stormwater system
- Plan review and inspection fees
- Fee-in-lieu of on-site construction
- System development fees/connection charges
  - One time charges assessed at the time of development



# Additional Funding Strategies

- Grants
  - Federal, state, or local
- Revenue Bonds
  - Infrastructure improvement, asset management
- General Fund
- Taxes
  - Special purpose local option sales tax

# Additional Funding Strategies

- Local Improvement Districts
  - Individual properties benefited by stormwater projects are assessed to fund the project
- Developer Participation
  - Developers construct needed facilities as a condition of development, and bear associated costs



# Topics for This Module

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- Stormwater Utilities
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- Additional Funding Strategies
- *How can you determine what will work for your community?*



# How Can You Determine What Will Work for Your Community?

## 1. Evaluate your needs

- How much of your program needs are for planning?
- How much of your program needs are for capital improvement?
- How much of your program needs are for O&M?



# How Can You Determine What Will Work for Your Community?

2. Consider using a combination of programs
  - SRF Loan to assist with planning
  - SRF to cover retrofits/upgrades
  - Utility to cover maintenance
  - Fees to cover specific operating costs
  - General Fund for operating and capital improvements

# How Can You Determine What Will Work for Your Community?

## 3. Other factors

- Politics
- Fairness/Equity
- Administrative Simplicity
- Ease of Implementation
- Legality
- Future!!



# Get the Public Involved!

- When deciding an approach to fund stormwater, public education and involvement is key!
- If the public is educated and know what the money is being spent on, there is a better chance they will support the program.

# Resources

- Guidance for Municipal Stormwater Funding, NAFSMA  
<http://www.nafsma.org/Guidance%20Manual%20Version%202X.pdf>
- EPA's Financing a Municipal Stormwater Program  
Webcast (Stormwater Utilities 201)  
<http://www.epa.gov/npdes/training>
- Internet Guide to Financing Stormwater Management  
<http://stormwaterfinance.urbancenter.iupui.edu/>
- Catalog of Federal Funding Sources for Watershed  
Protection  
<http://cfpub.epa.gov/fedfund/>
- EPA Clean Water State Revolving Fund Program (SRF)  
<http://www.epa.gov/owm/cwfinance/cwsrf/index.htm>