



# Radnor Township

Developing a Sustainable Stormwater  
Program – Then and Now

Marlou Church Gregory

Board of Commissioners Meeting  
January 18, 2012

# Topics to be Covered

- Review of findings from 2008 study
- Benefits of a dedicated stormwater fee
- The Approach
- The Process

The Past.....

# Stormwater Concerns

Presented May 12, 2008

- Complying with water quality regulations
- Aging infrastructure
- Increased flooding
- Stream erosion & sedimentation
- Funding inequities



# Compelling Case / Needs (2008)

- **Aging Infrastructure**
  - Many of the pipes are made of terra cotta and have outlived their design life
  - Many pipes are buried in inaccessible areas
  - Most of the older pipes are located in the older, high density area, of the township



# Compelling Case / Needs

(2008)

## ■ Flooding

- Increase in number of flooding events and associated complaints
- Increase in rainfall events
- Increase in build out
- Radnor Middle School - \$2 Million Project



# Compelling Case / Needs (2008)

## ■ Erosion

- Lack of riparian protection
- Increased sedimentation
- Culvert blockages
- Negative water quality impact





# Compelling Case / Needs (2008)

- **Funding Equity**
  - Those whose actions have the most negative effect are not the same as those suffering the consequences
  - Need to link costs to impact





# Compelling Case / Needs (2008)

- **Water Quality**
  - Federal Requirements
  - State Requirements
  - Potential Fines
- **Health and Safety**



# Identified Stormwater Program Priorities (2008)

- Master Planning – holistic view
- Infrastructure Replacement - planned
- Capital Improvements – increased and planned
- GIS – improved data and updated flood maps
- Education and Outreach – various stakeholders
- Inspection and Enforcement – increased manpower
- Operations and Maintenance – scheduled inspection and maintenance
- Water Quality – testing and monitoring
- Stream Restoration – public/private approach

# 2008 Projected Costs

## ■ 2008 Costs

- Engineering - \$730,000
- Operations - \$500,000
- CIP - \$720,000
- Administration - \$50,000

## ■ Total – Approx \$2 Million

## ■ Future (Order of Magnitude) Estimates

- Continue current activities
- 4 major basin studies over 8 years
- Increase CIP to support study results
- Replace existing pipes @ .5 miles/year
- Conduct sector specific outreach education & training
- Public education
- Increased GIS
- Increase inspection capability
- Increase maintenance
- Public/Private partnership for stream restoration

## ■ Total – Approx \$4.8 Million (plus pipe replacement cost – TBD)

**Program Cost Determines the Fee.**



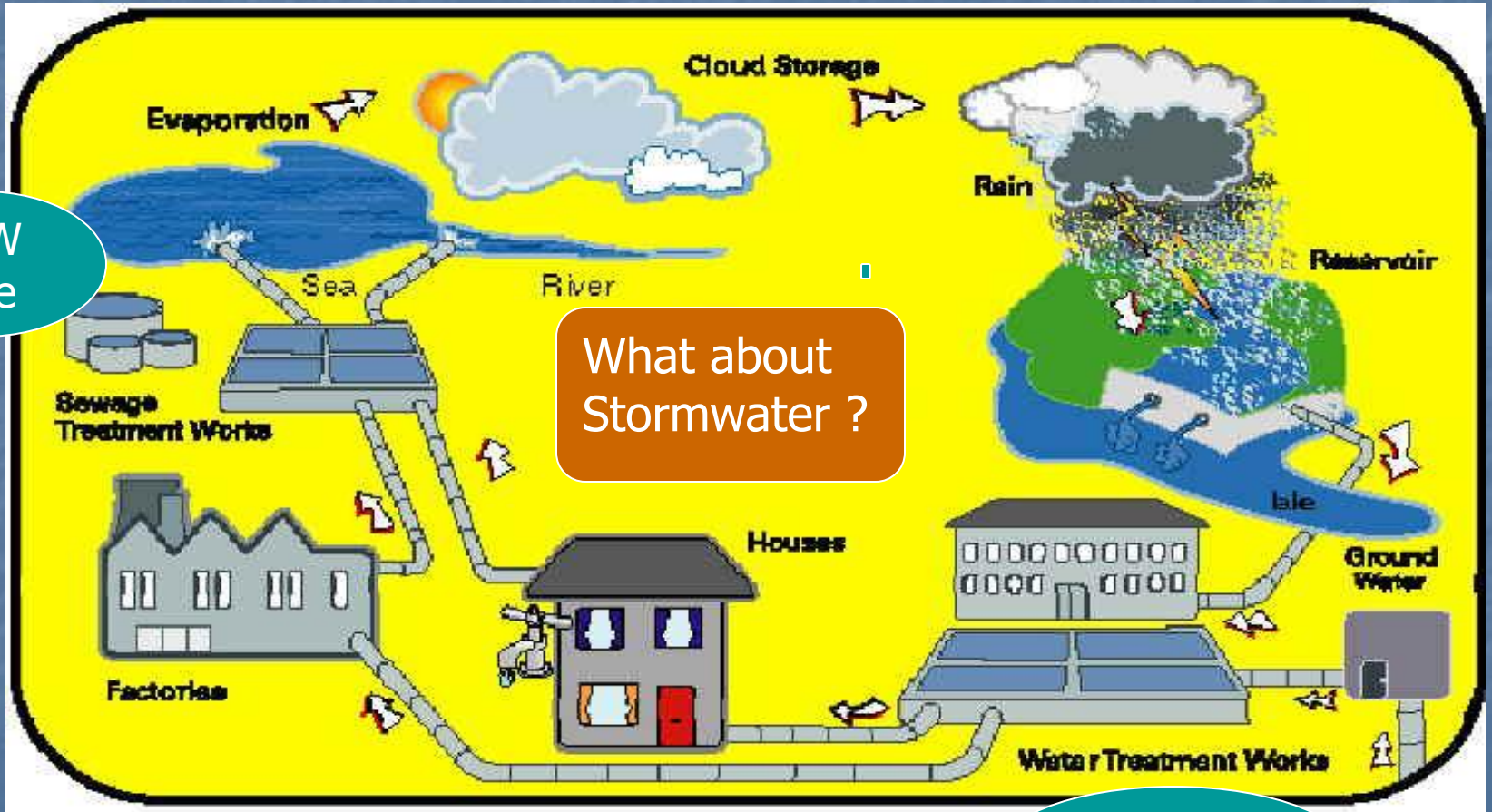
# What would an Enhanced Stormwater Program with Sustainable Financing do for Radnor Township?

- Replace aging infrastructure in a **planned** manner
- **Decrease** traffic safety occurrences
- **Improve** ability and capability to address flooding
- **Decrease** levels of stream erosion, sedimentation, and pollution loading
- **Stay compliant** with regulatory requirements
- **Improve** water quality
- Provide an **equitable** funding strategy

Moving Forward.....

# The Approach

## Three Water Services



WW  
Fee

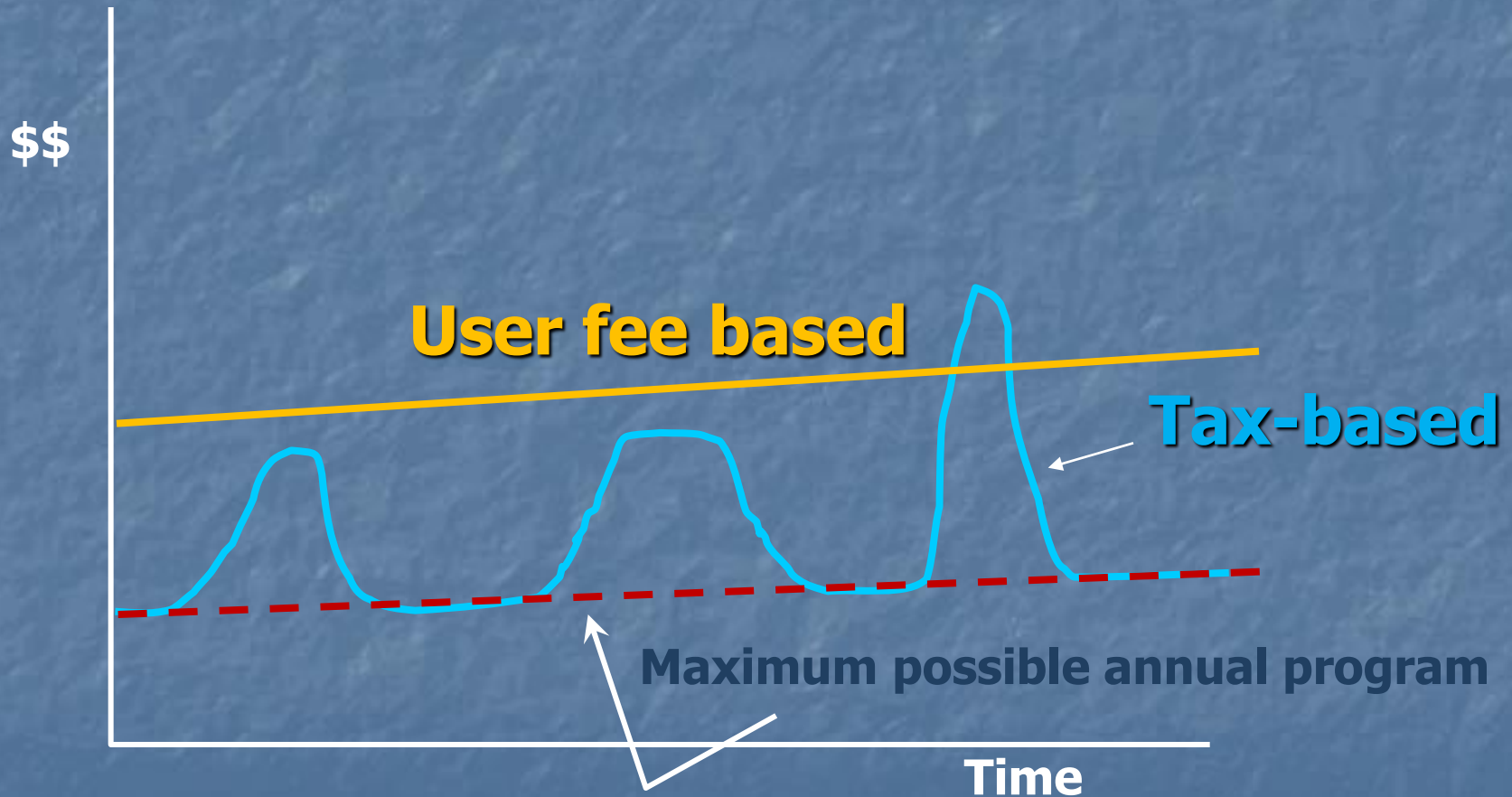
What about  
Stormwater ?

Drinking Water  
Fee



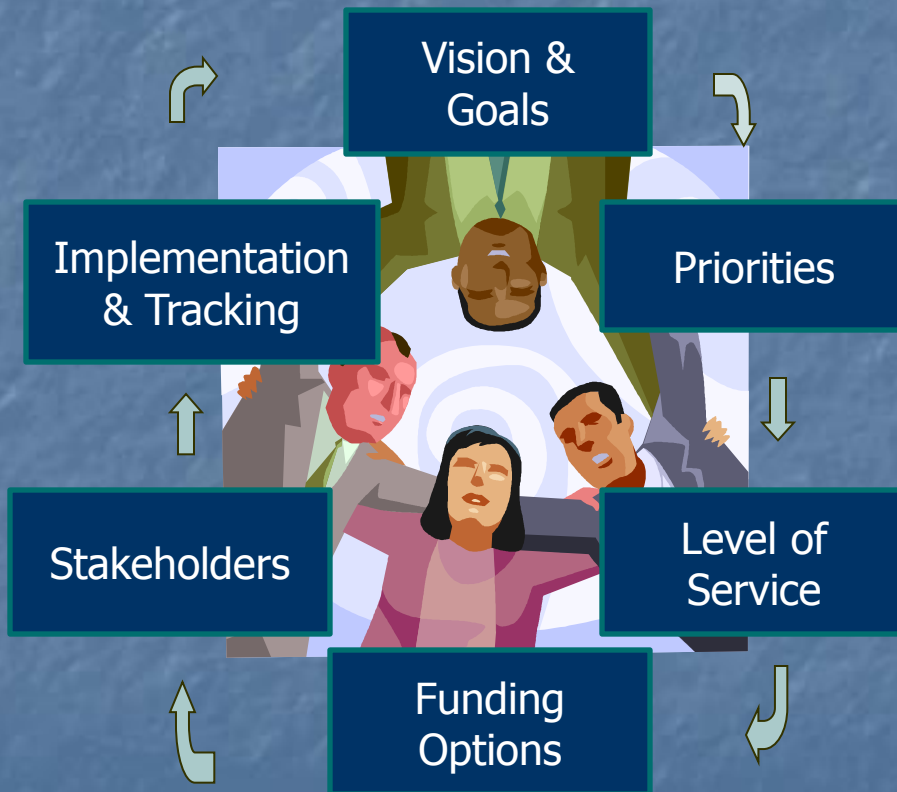
# The Approach

## Stable Fee vs. Tax Funding



# The Approach

## Developing A Business Plan



- Comprehensive planning & due diligence
- Evaluate and maximize existing resources
- Define gaps & identify solutions
- Create a sustainable strategy
- Public as client – involve and educate
- More policy and planning than engineering
- On-going process

# The Process

## Developing an Enhanced SW Program and Sustainable Financing Strategy

### What

- Planning
- Policy
- Finance

### How

- Participatory
- Facilitated
- Iterative

### Tools

- Technical input
  - Engineering
  - Finance
  - GIS
- "Know how"



# The Process

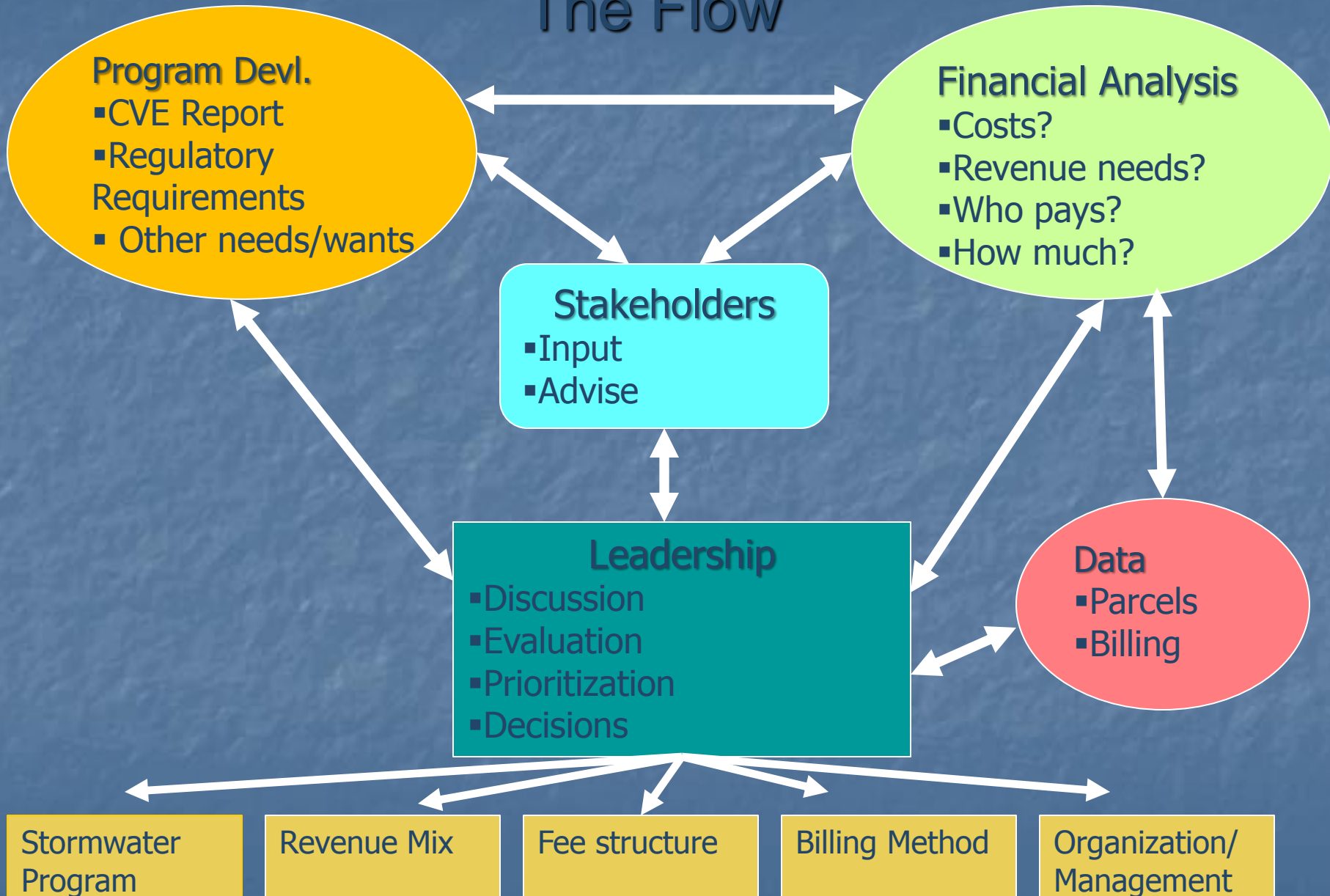
## The Tracks

<b>PROGRAM TRACK</b>	<b>PUBLIC TRACK</b>	<b>FINANCE TRACK</b>	<b>DATA TRACK</b>
Problems, Needs, Goals	Define PI&E Plan	Funding Legal Issues	Data Analysis & Data Policy
Program Priorities and Objectives	"Internal" Phase	Funding Policy Issues	Development/ Update
Resource Analysis	Stakeholder Phase	Develop Finance Model	Master Acct File & Billing Data
Organizational Issues	Public Phase	Rate Study/ Cash Flow Analysis	Billing System Development
Implementation Steps	Implementation Phase	Develop Rate Ordinance	Inquiry/Complaint Response

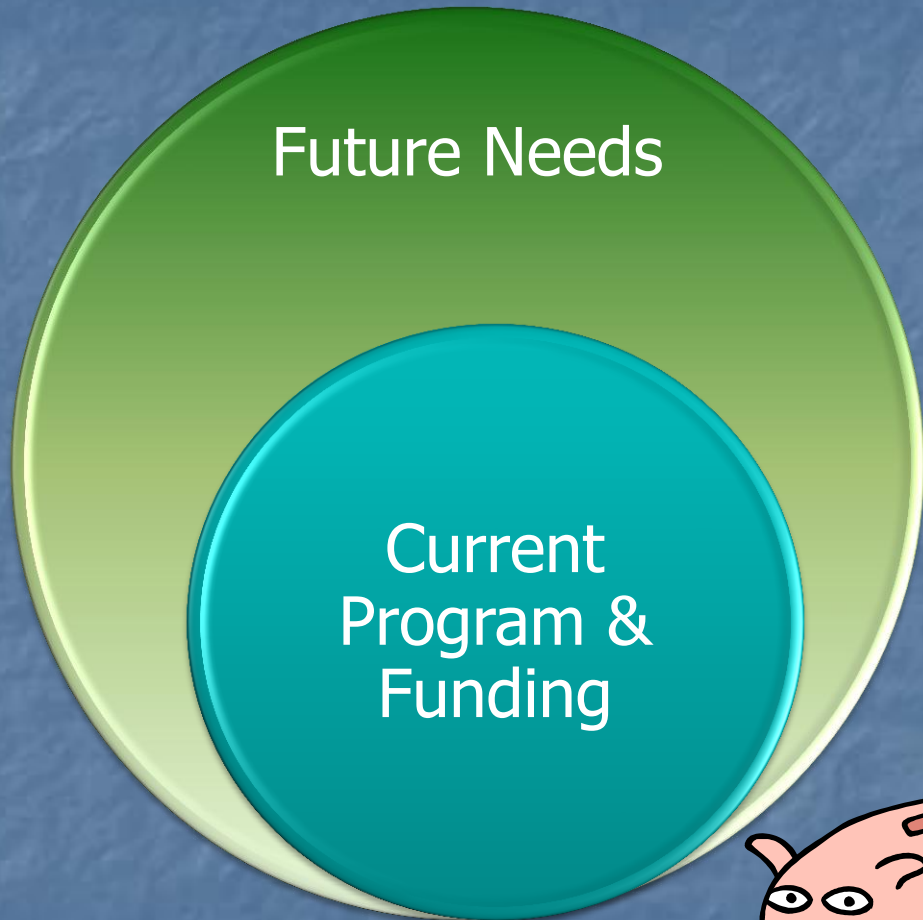
SW Fee Implementation & Customer Service

# The Process

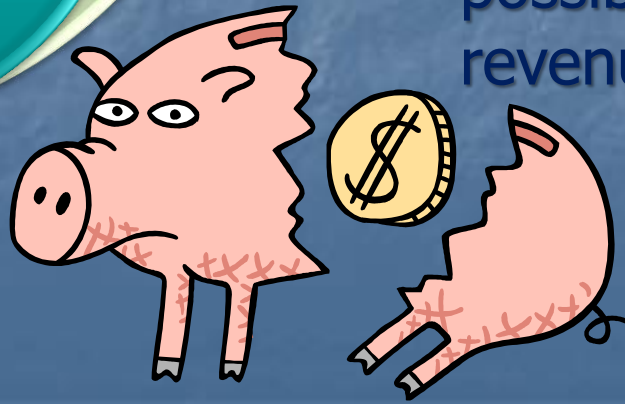
## The Flow



# Developing the Program

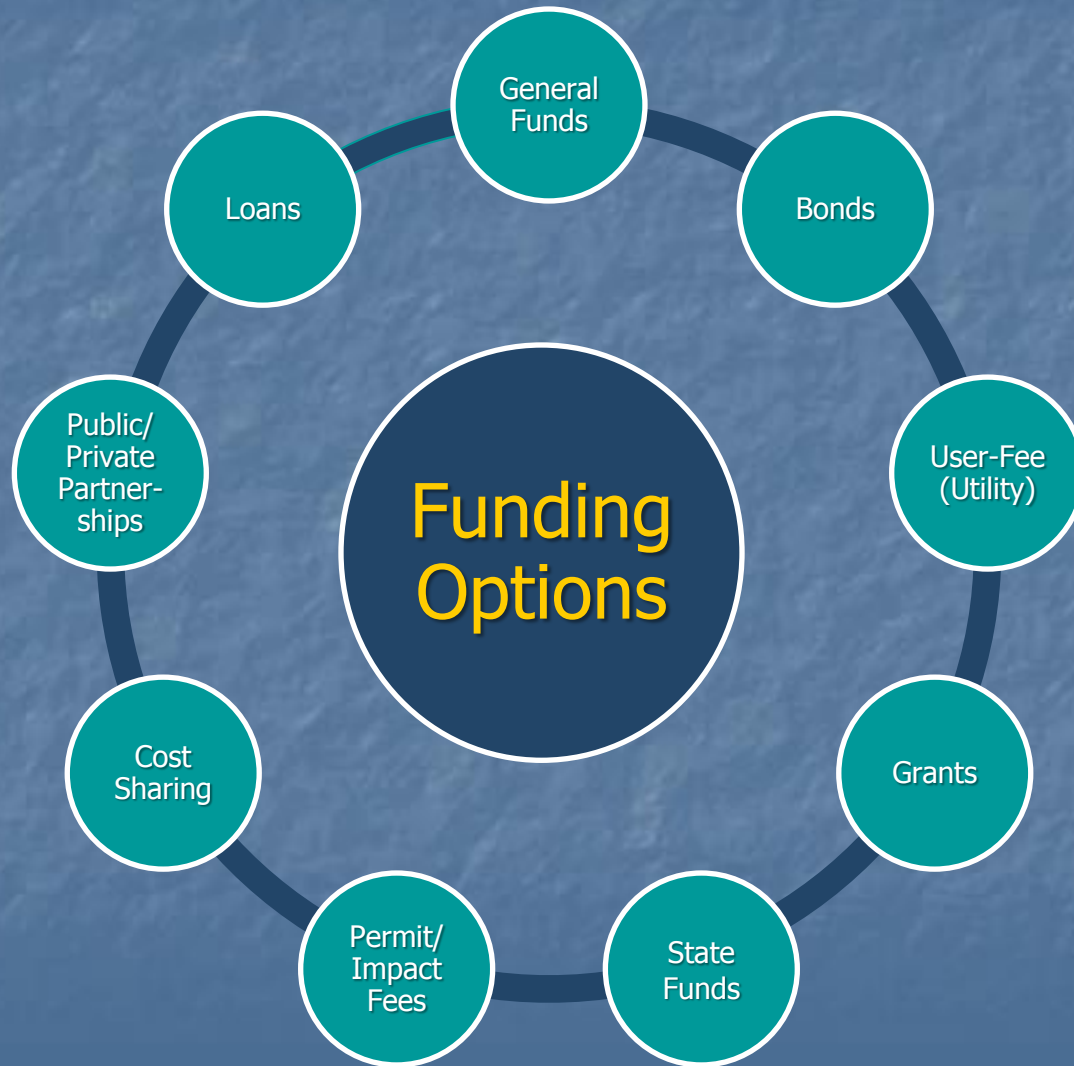


- Understand current programs, costs, and revenue streams
- Understand future needs
- Evaluate options for filling the gap
- Determine funds needed, by function, to identify possible/optimal revenue source

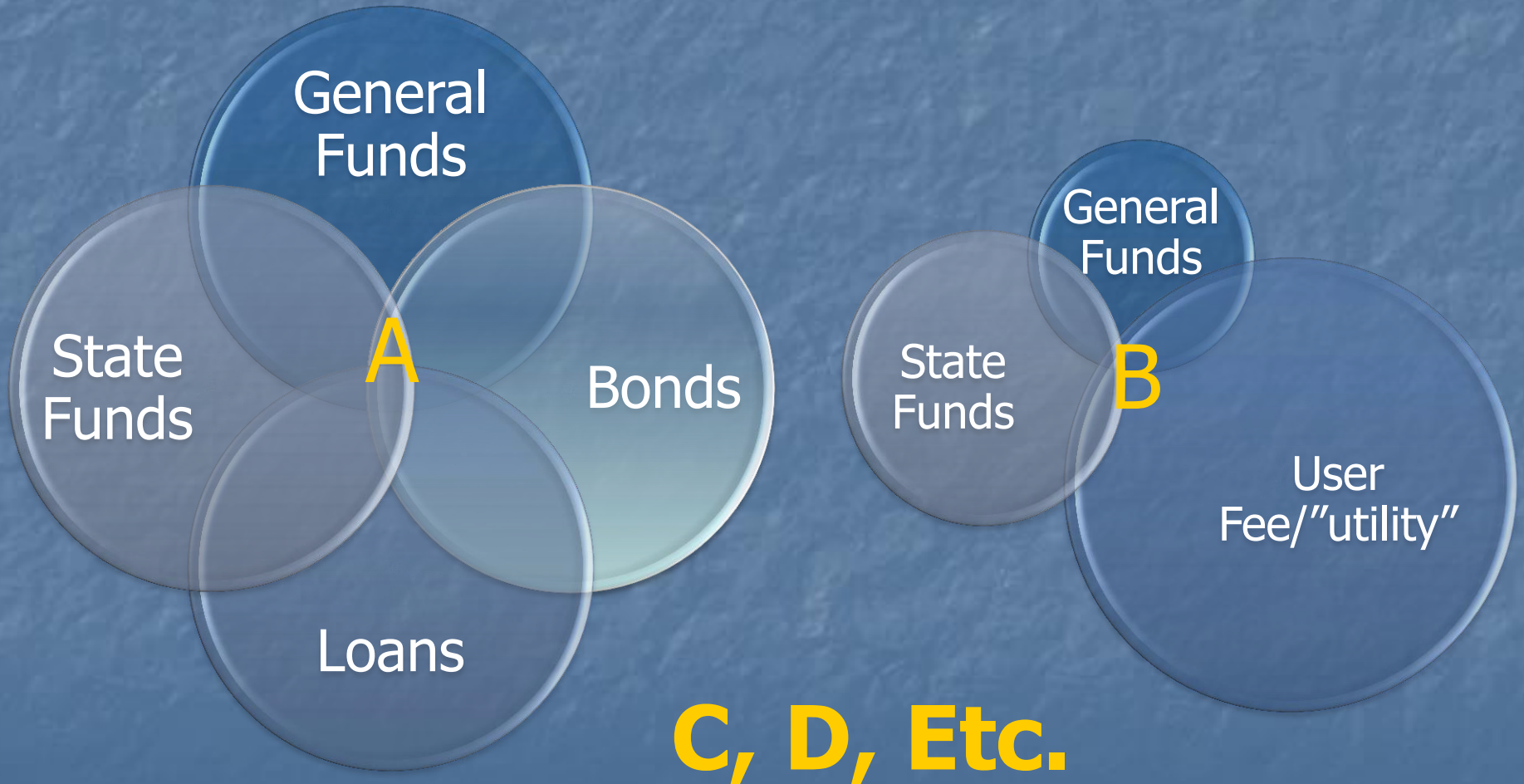




# Identify & Evaluate Funding Options



# Combinations of Funding Options



# Funding Evaluation Considerations

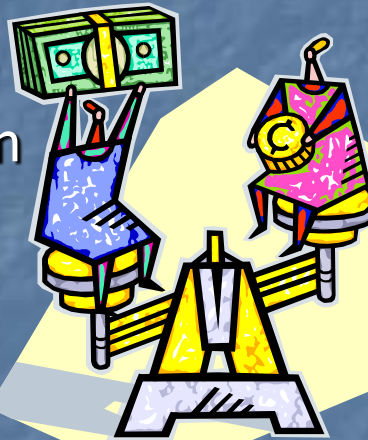
## General Fund

### ■ Pros

- No need for change
- Less media attention

### ■ Cons

- Financing Shortfalls
- Competition between programs/departments
- Variable by year
- Inequitably Apportioned



## Dedicated Fee

### ■ Pros

- Adequate
- Flexible
- Stable
- Equitable

### ■ Cons

- Perception
- Political Will
- Stakeholder acceptance



# Funding Evaluation Considerations

	General Funds	User-Fee
Who Pays?	Taxed Properties	Everyone Pays
Basis of Contribution (\$)	Property Value	Contribution to Runoff
Credits for On-site Management	None	Consideration of Treatment

- Program needs are still the same
- Everyone pays something in the end
- Fees may provide a more equitable or flexible distribution of cost than tax revenue

# Legal Considerations

- Fair and reasonable
- Not illegally discriminatory or confiscatory
- Costs substantially related to provision of facilities and services
- Legal by charter or legislation
- Proper procedures followed – rational nexus

# The Process

## How We Do It





# Potential Pitfalls

- Municipality not understanding and implementing the **entire process**.
- Not involving the **community** early enough or in the right ways.
- Not being able to **explain the program** and how that translates into the **funding strategy** or rates.
- Not preparing **elected officials** to answer questions and handle complaints.
- Trying to take short cuts and doing it the convenient and inexpensive way, not **the right way**.

# Why Should Radnor Move Forward?

- Replace aging infrastructure in a **planned** manner
- **Decrease** traffic safety occurrences
- **Improve** ability and capability to address flooding
- **Decrease** levels of stream erosion, sedimentation, and pollution loading
- **Stay compliant** with regulatory requirements
- **Improve** water quality
- Provide an **equitable** funding strategy

# Why Should Radnor Move Forward with AMEC?

- AMEC is a recognized national leader in this field – and we are in your own backyard.
- Only firm to implement SW fee in PA.
- We understand and wrote the process most commonly used for developing stormwater fees.
- AMEC staff are nationally known experts in stormwater management, policy development and stakeholder facilitation; and leader in PA working with PEC.
- We specialize in stormwater fee development and billing as a service line.
- AMEC knows how to help you avoid the pitfalls.





# Questions?

For more information:  
Marlou Church Gregory  
[Marlou.gregory@amec.com](mailto:Marlou.gregory@amec.com)  
610-828-8100

