



PUBLIC SESSION 4 // August 19, 2015

1

UPDATE AND RECAP

PIN OAK CIRCLE



PUBLIC EDUCATION

**OUR WATER,
OUR WAY**

Peoria must address problems caused by wet weather. Let's choose solutions that add beauty, save money and protect our beloved waterways.



RAIN GARDENS

City of Peoria
Public Works Department



WHAT IS A RAIN GARDEN?

Rain gardens are shallow depressions planted with perennial plants that are located in an area to collect rain water. Rain gardens can reduce flooding, absorb pollutants and sustain wildlife.



SUMP PUMP INFORMATION

DRAINAGE ASSISTANCE PROGRAM

PEORIA DEPARTMENT

DISCOVER HOW OTHER CITIES ARE TACKLING THESE ISSUES:

Water: Stormwater

You are here: [Water](#) » [Pollution Prevention & Control](#) » [Permitting \(NPDES\)](#) » [Stormwater](#) » [Stormwater Case Studies](#)

Stormwater Case Studies

In 2008, EPA developed a series of stormwater case studies to help Phase II municipal separate storm sewer systems (MS4s) get started on or improve their stormwater management programs. Each case study is a two- to three-page description of how a Phase I or Phase II community has implemented a specific aspect of its stormwater program. The case studies are organized by minimum measure, but they do not necessarily represent all the activities that each community is undertaking to implement that minimum measure. Each case study description includes links to materials that further describe or were developed for the case study and the minimum control measure.

Phase I and Phase II municipal stormwater programs should use these case studies as a tool to generate ideas and help develop and improve their own stormwater programs. Although EPA has reviewed the case studies, they should not be considered officially endorsed by the Agency and are not intended to represent full compliance with EPA's stormwater Phase II minimum control measures. Each community must decide on the appropriate best management practices necessary to meet its unique permit requirements and local conditions.

To View Case Studies, First Select a Minimum Control Measure:

Browse Case Studies by Minimum Control Measure

Pick a minimum control measure:

Minimum Control Measure: Public education and outreach on stormwater impacts

See how you can make a difference... every drop counts.

Save the Rain

ABOUT GREEN PROJECTS PROGRAMS GREEN FUNDS RESOURCES CONTACT ART

Green Projects List

Green Projects showcases Green Infrastructure improvements made in the city of Syracuse.

Please click the links below to view projects. Check back often as new projects are completed and updated on a regular basis.

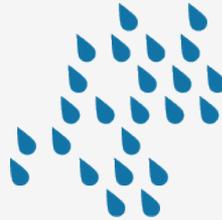
2014 Projects – Ongoing

Project Title	Type of GI Technology	*Cost	**Capture (gal/yr)
Connective Corridor Phases 2 & 3: West Street to Forman Park	Green Street, Infiltration Trench, Porous Pavement, Tree Plantings	\$973,255	10,975,000
Magnarelli Community Center Green Roof	Green Roof	\$304,000	183,000
Vacant Lots at Hughes Magnet School	Bioretention, Infiltration Trench, Tree Trench	\$250,248	1,106,000
Total		\$1,527,504	12,264,000

2013 Projects – Completed

Project Title	Type of GI Technology	*Cost	**Capture (gal/yr)
East Washington Street Green Corridor	Bioswale, Porous Pavement, Underground Infiltration	\$710,162	933,000
I-690 Downspout Disconnection	Infiltration Trench, Rain Garden	\$597,450	1,250,000

STORMWATER UTILITY



WE REACHED GROUP CONSENSUS THAT A STORMWATER UTILITY IS AN EQUITABLE AND RESPONSIBLE WAY TO FUND WET WEATHER MANAGEMENT.

Reasons for supporting a stormwater utility included:

- It serves as a dedicated revenue stream
- All properties participate—if you use the system, you pay
- It provides incentives for responsible actions

CSO Priorities

→ **September 16** // 12:00 – 1:30 p.m.

Stormwater Utility Considerations

→ **October 21** // 12:00 – 1:30 p.m.

Further Discussion as Needed

→ **November 18** // 12:00 – 1:30 p.m.

OUR GOAL

We aim to present a community-informed recommendation to City Council.





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FUTURE PROGRAM COSTS

WE WANT TO GIVE YOU A COMPREHENSIVE VIEW OF STORMWATER FUNDING IN PEORIA.

Budget Item	2015 \$	Fund Source
Stormwater CIP	\$1,050,000	Sewer Fund
Stormwater Operations	\$434,000	General Operations
Street Storm Sewer Reconstruction	\$880,000	Motor Fuel Tax
Equipment Purchase	\$165,000	General Operations
Street Sweeping	\$500,000	General Operations
<i>Total reported at July OneWater meeting</i>	<i>\$3,029,000</i>	
Construction Site Erosion Control	\$75,000	General Operations
Storm Sewer Engineering	\$132,000	Motor Fuel Tax
Stormwater Management Expense	\$3,236,000	

Expenses classified as one of four categories:

\$1,972,000 Capital Improvements
(contracted services)

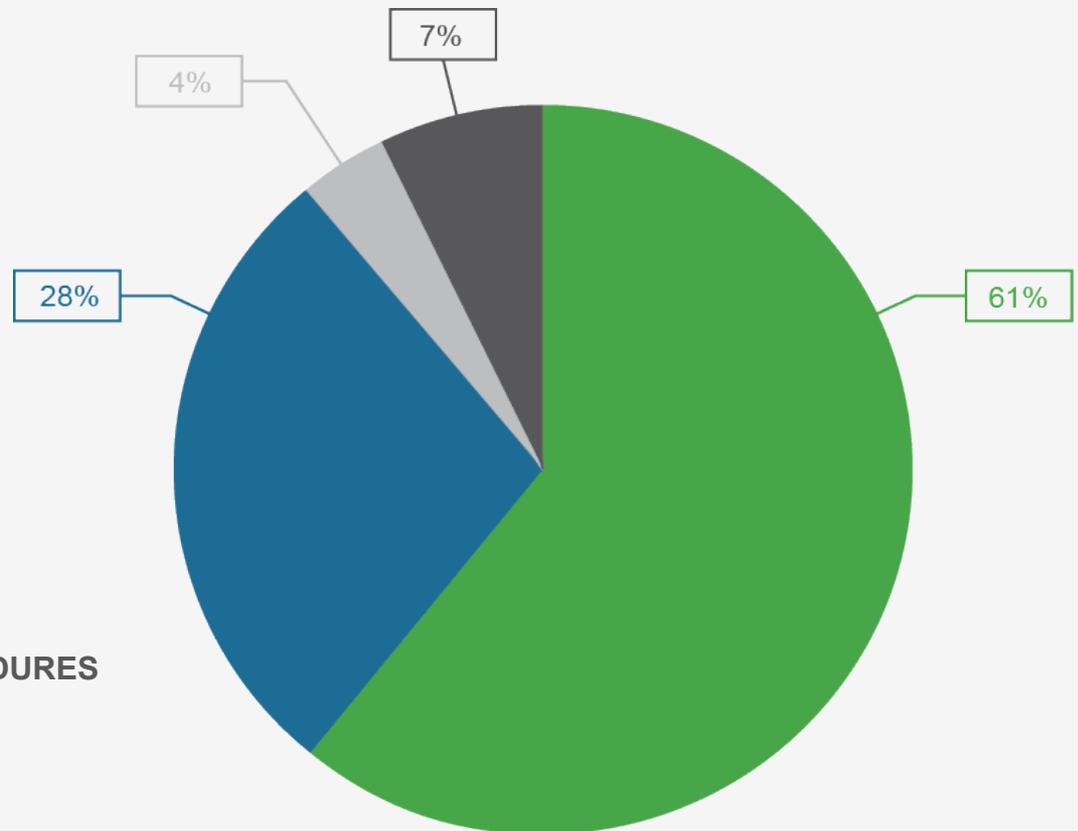
\$905,000 Infrastructure Maintenance
(city operations)

\$134,000 Administration

\$225,000 Regulatory Compliance

\$3,236,000 Total

2015 STORMWATER EXPENSES



- CAPITAL IMPROVEMENTS**
- INFRASTRUCTURE MAINTENANCE**
- STORMWATER ADMINISTRATION
- REGULATORY POLICIES & PROCEDURES

STORMWATER PROGRAM CONSIDERATIONS

- **Mandatory/Reactive**

- Repairing broken things
- Regulatory compliance
- Administrative activities

- **Proactive**

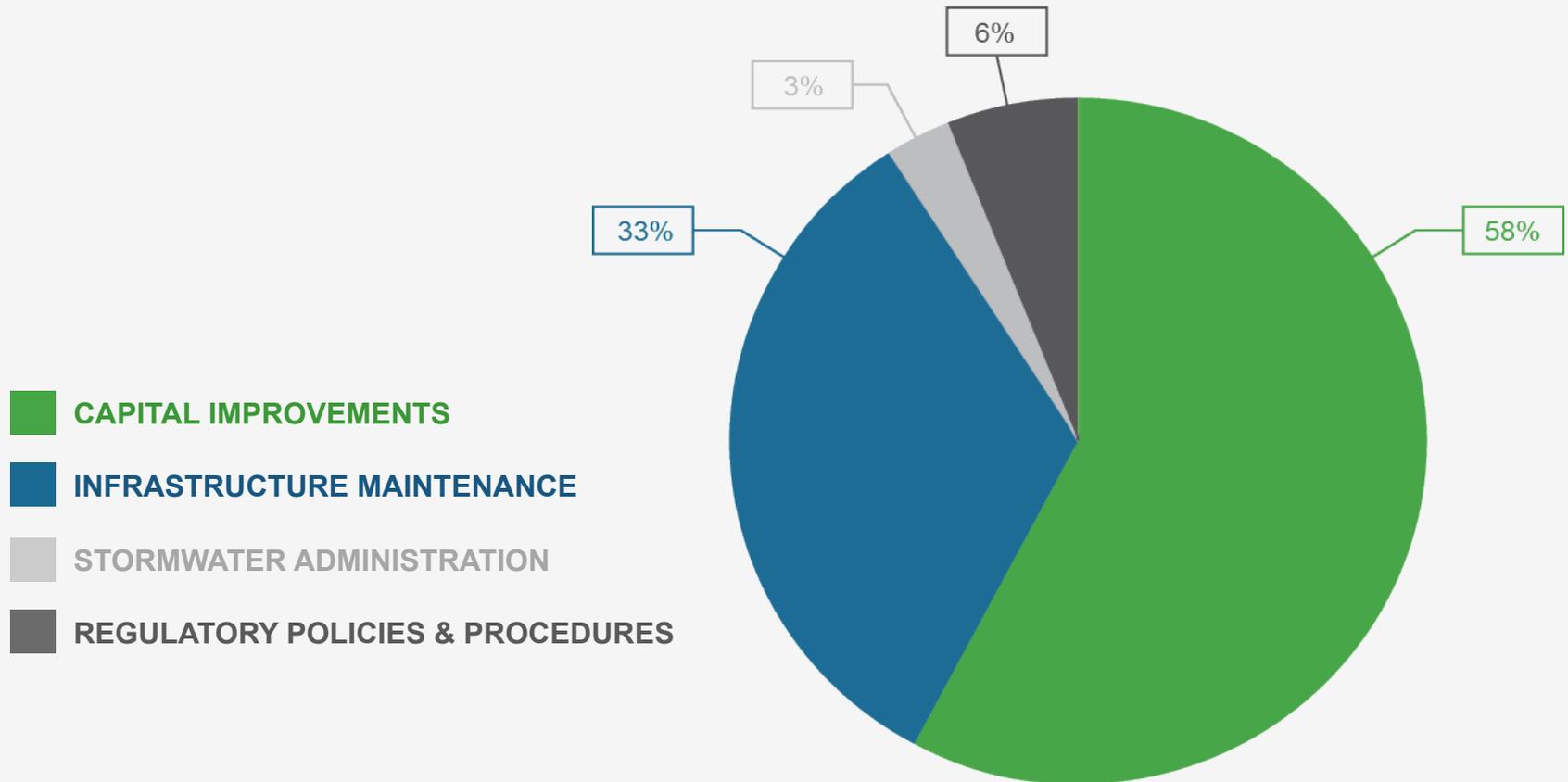
- How much and how quickly do we reinvest in the existing system?
- How often do we inspect and clean?
- Can we begin replacing aging infrastructure before failure?
- Are large streams on private property a public responsibility?
- System planning

THE RECOMMENDED STORMWATER PROGRAM FUND LEVEL IS BASED ON:

- OneWater Committee priorities
- Estimates of system age and condition
- Regulatory requirements

Budget Item	5 Yr. Annual Average	2015 \$
INFRASTRUCTURE SYSTEMS		
System Planning & Asset Management	\$216,000	\$0
Infrastructure Maintenance & Replacement	\$7,464,000	\$2,372,000
Runoff & Pollution Reduction	\$908,000	\$140,000
Stream/Channel Improvements	\$2,030,000	\$0
Public Works Equipment	\$170,000	\$165,000
Private Property Drainage Program	\$212,000	\$200,000
TOTAL CAPITAL & MAINTENANCE EXPENSE	\$11,000,000	\$2,877,000
ADMINISTRATION	\$430,000	\$134,000
REGULATORY COMPLIANCE	\$676,000	\$225,000
TOTAL STORMWATER MANAGEMENT EXPENSE	\$12,106,000	\$3,236,000

PROPOSED ANNUAL STORMWATER PROGRAM





RATE METHODS

WHAT IS A RATE METHOD?

A means to recover stormwater program costs, considering:

- **Equity of the approach**
- **Transparency / ease of understanding**
- **Quality of data**
- **Connection between rate basis and runoff**

WE CONSIDERED SEVERAL METHODS

IMPERVIOUS AREA

GROSS AREA

IMPERVIOUS PLUS PERVIOUS AREA

INTENSITY OF DEVELOPMENT

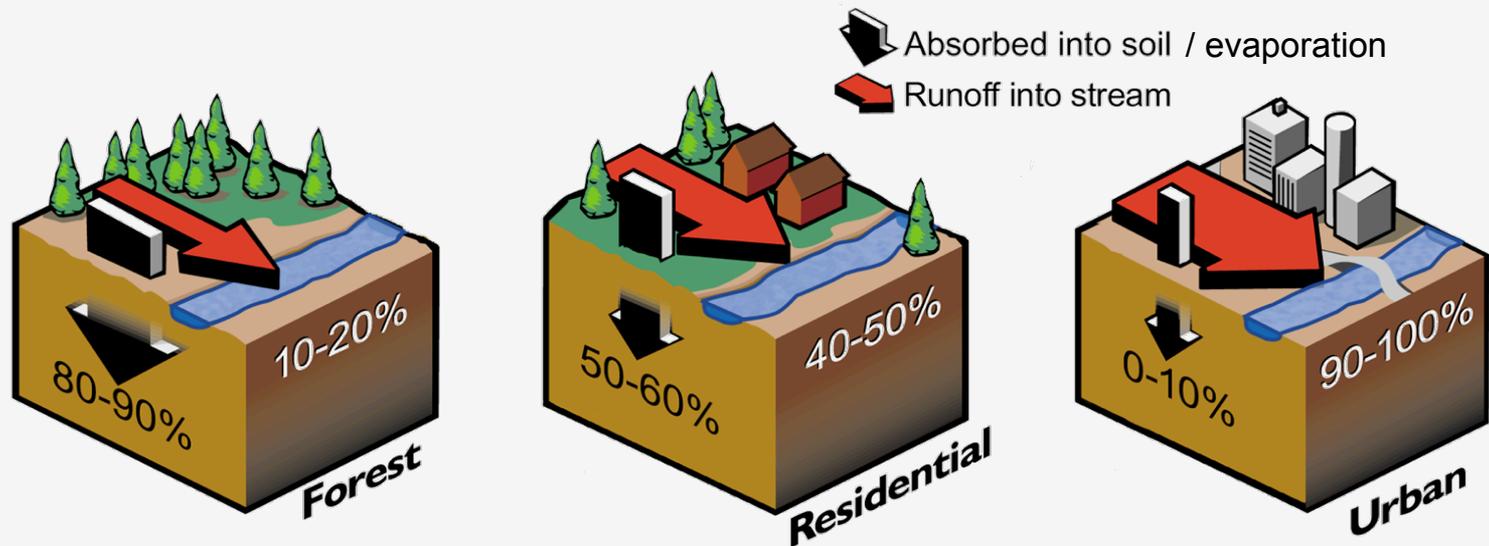
IMPERVIOUS PLUS TOTAL (GROSS) AREA

EFFECTIVE HYDRAULIC AREA

REDUCED IMPERVIOUS AREA

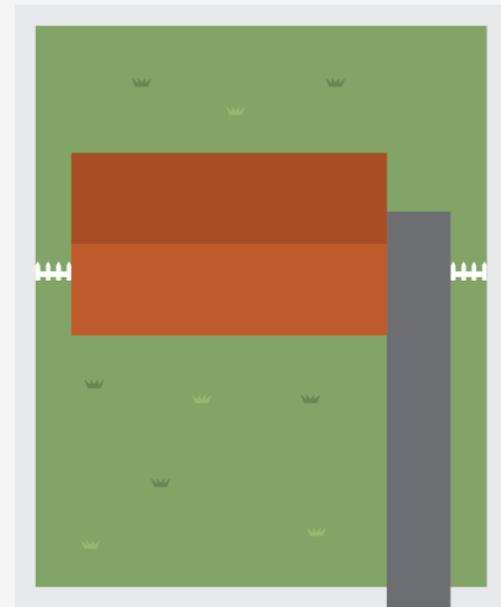
WHAT DO WE MEAN BY IMPERVIOUS AREA?

- Provides a link between stormwater runoff and type of surface area
- City maintains parcel database
- Remember: most ground produces runoff, even pervious surfaces



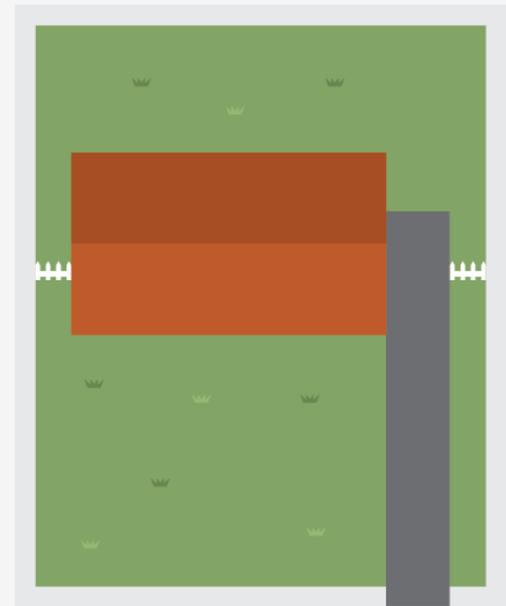
A NOTE ABOUT BILLING UNITS

- Billing unit provides basis for calculating a parcel's cost
- Average residential parcel = 2,600 square feet (SF) of impervious area
- 1 billing unit = 1,000 SF
- $2,600 / 1,000 \text{ SF} = 2.6 \text{ billing units}$



✓ METHOD 1: IMPERVIOUS AREA

- Imperviousness is the only physical parameter per parcel
- Direct correlation to runoff and thus to impact on stormwater costs
- Billing units
 - One billing unit = 1,000 SF of impervious area

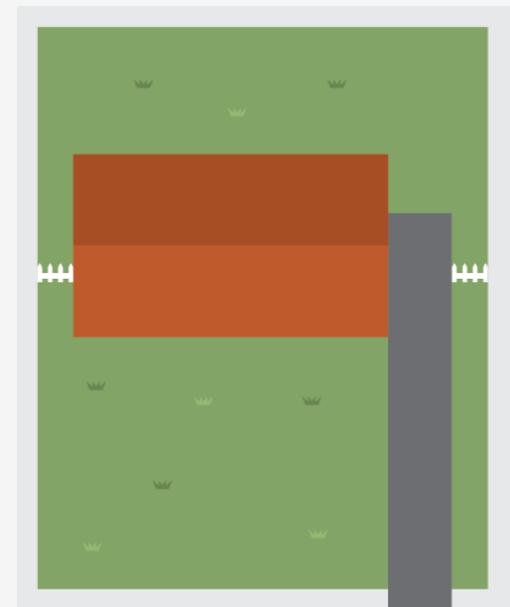


+

 = 2,600 SF Impervious
 = **2.6 Billing Units**

✓ METHOD 2: IMPERVIOUS + PERVIOUS AREA

- **Compound rate structure**
 - Imperviousness for infrastructure-related costs
 - Pervious area component for administrative and regulatory costs
- **Billing units (2 types)**
 - One impervious billing unit = 1,000 SF of impervious
 - One pervious billing unit = 1,000 SF of pervious

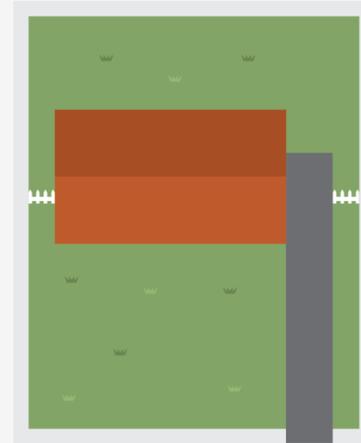


+
 = 2,600 SF Impervious
 = 5,600 SF Pervious

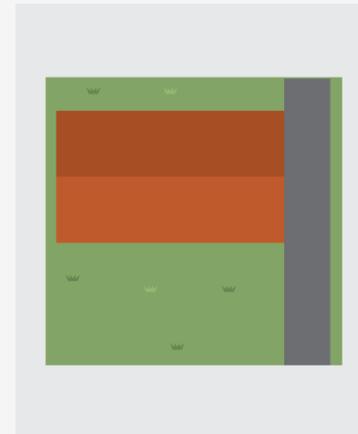
= 2.6 Impervious Billing Units
 = 5.6 Pervious Billing Units

✓ METHOD 3: REDUCED IMPERVIOUS AREA

- Impervious area of parcel calculated
- Impervious area adjusted by percent impervious of parcel
- Reflects lower impact of disconnected impervious area on large parcels
- Billing units
 - One billing unit = 1,000 SF of adjusted impervious area
 - Square footage of impervious divided by total square footage of lot



+
 =
 2,600 SF Impervious
 19% Impervious
= 0.5 Billing Unit



+
 =
 2,600 SF Impervious
 48% Impervious
= 1.2 Billing Units

✓ WE RECOMMEND METHOD 1: IMPERVIOUS AREA

Our recommendation:

- The fee is directly related to runoff contribution
- Easy to understand
- We have detailed data on impervious area
- Has been legally upheld in IL
- Credit program encourages property best management practices

RATE METHOD 1 (IMPERVIOUS AREA): APPLIED

- **MS4 Program = \$12.1 million**
- **DRAFT monthly bill range based on:**
 - 2,600 SF impervious area parcel



-
- **Average residential monthly stormwater bill: \$9–\$13**
 - **If bill includes CSO Operations & Maintenance (O&M): \$14–\$18**
 - **If bill includes CSO O&M and Capital: \$24–\$30**

**Disclaimer: There are many factors affecting the fee assessment.
The figures shown are for discussion purposes and are not a finalized rate.**



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CREDITS & INCENTIVES

WHAT IS A CREDIT?

A credit is an ongoing reduction to the stormwater bill. Sometimes credits are for a limited time and have to be renewed; other times they are ongoing.

WHAT IS AN INCENTIVE?

An incentive is a onetime credit on the stormwater bill for best management practices such as rain barrels.

GROUP ACTIVITY

- Reference handout
 - Breaks out and defines credits in other communities
- As a group, please discuss:
 - What types of specific credits/incentives should staff investigate for Peoria?
 - Be creative :
 - What actions do we want to encourage?
- Fill out and leave handouts – group consensus is not needed



THANK YOU FOR COMING

NEXT SESSION: SEPTEMBER 16 | 12:00 – 1:30