

# A Citywide Approach to Green Infrastructure

EXPLORING STORMWATER UTILITY  
CREDITS AND GRANTS

APRIL 2018



## **FOCUS: Stormwater utility credits and grants**

- **Background**
  - Stormwater overview
  - Green infrastructure
  - Stormwater utility
- **Credits & Grants**
- **FAQ & Discussion**



# CITYWIDE STORMWATER PROBLEMS

# EVERY PART OF PEORIA SUFFERS FROM STORMWATER PROBLEMS.

## UNDERSTANDING CITYWIDE STORMWATER ISSUES

For perspective, here are GIS maps showing completed stormwater issues plotted citywide:

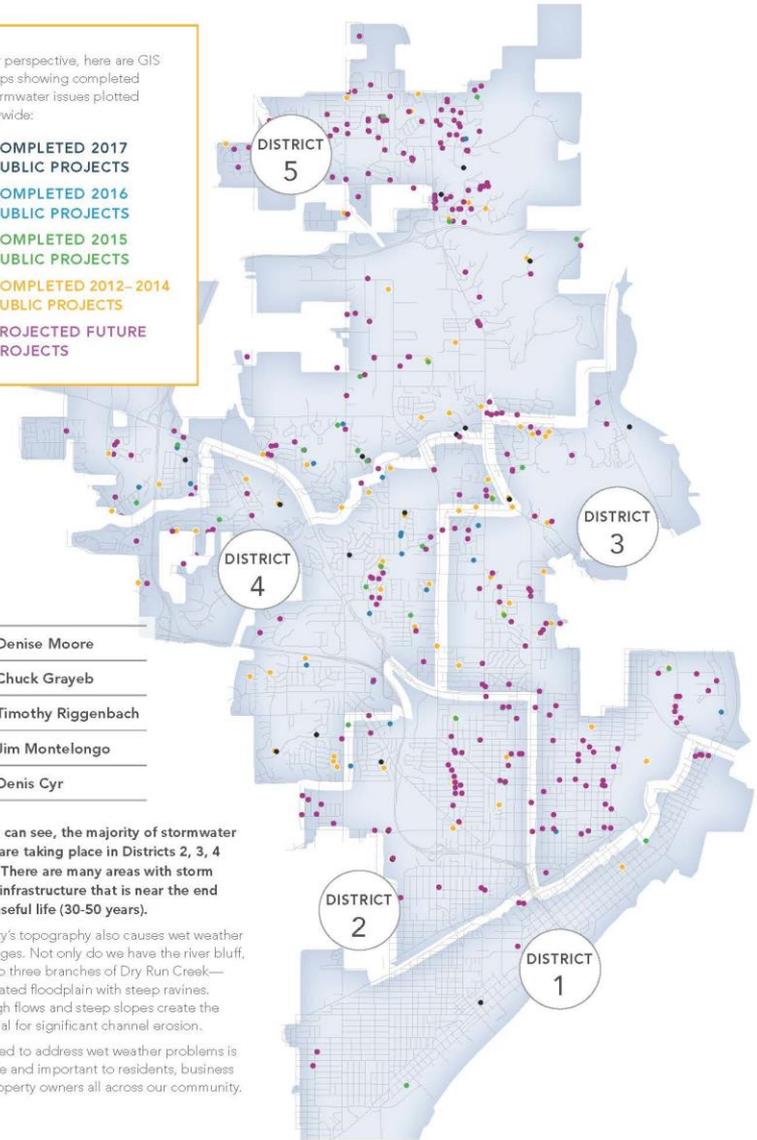
- COMPLETED 2017 PUBLIC PROJECTS
- COMPLETED 2016 PUBLIC PROJECTS
- COMPLETED 2015 PUBLIC PROJECTS
- COMPLETED 2012–2014 PUBLIC PROJECTS
- PROJECTED FUTURE PROJECTS

- 1 Denise Moore
- 2 Chuck Grayeb
- 3 Timothy Riggerbach
- 4 Jim Montelongo
- 5 Denis Cyr

As you can see, the majority of stormwater issues are taking place in Districts 2, 3, 4 and 5. There are many areas with storm sewer infrastructure that is near the end of its useful life (30-50 years).

The City's topography also causes wet weather challenges. Not only do we have the river bluff, but also three branches of Dry Run Creek—a regulated floodplain with steep ravines. The high flows and steep slopes create the potential for significant channel erosion.

The need to address wet weather problems is citywide and important to residents, business and property owners all across our community.



ALLEN & ALTA RD. CULVERT: \$1.2 MILLION



THIS SINKHOLE CAUSED BY  
FLOODING WAS 20 FEET  
DEEP

MERLE AND KNOXVILLE: \$500k



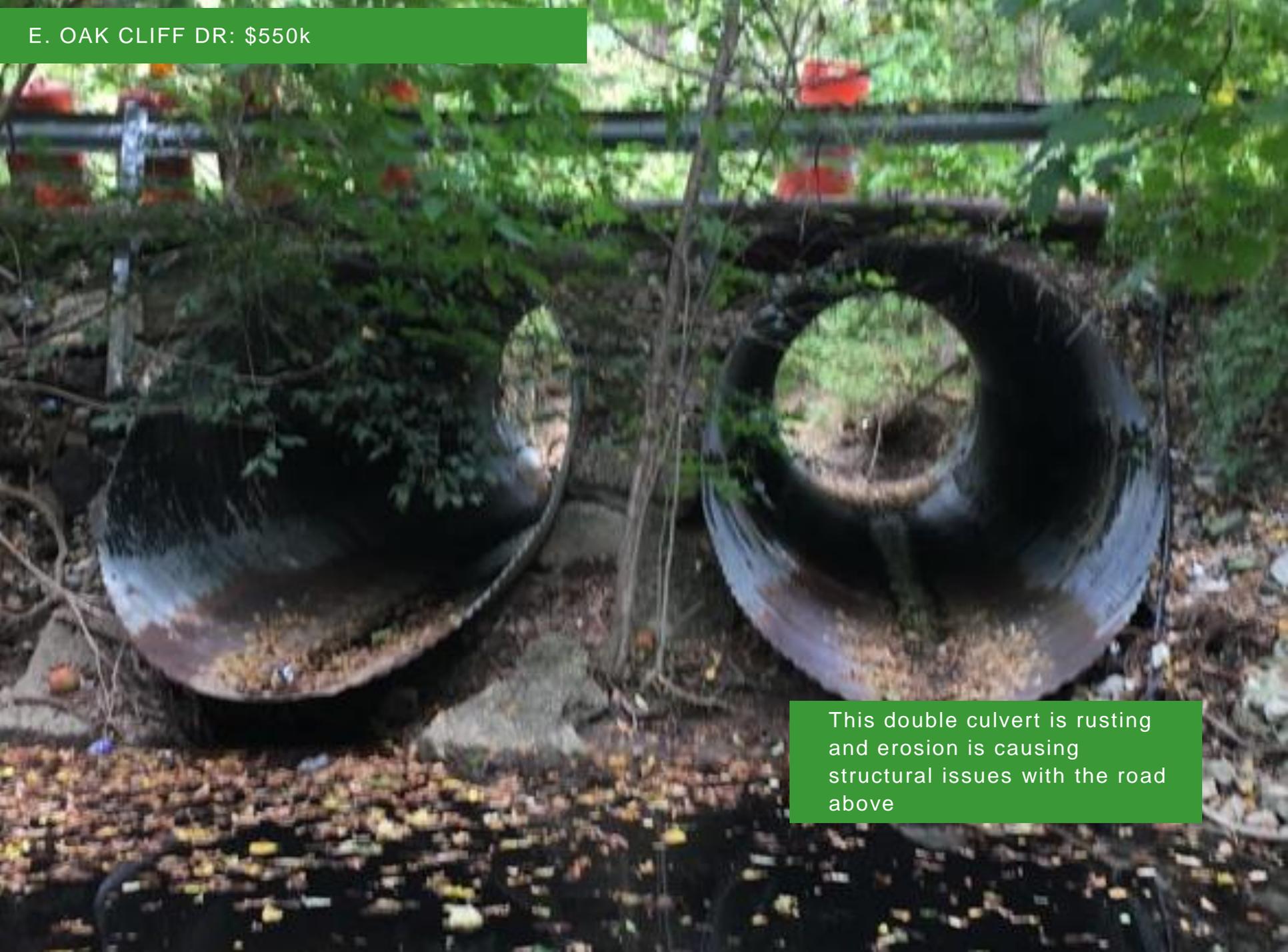
This culvert is rusting and the erosion on the end is causing the wall and road above to collapse

W. FLORENCE AVE: \$80k



The concrete along this creek is deteriorating and causing issues with the nearby houses

E. OAK CLIFF DR: \$550k



This double culvert is rusting and erosion is causing structural issues with the road above

436

PROJECT BACKLOG,  
INCL. 10 HIGH-SEVERITY & EVEN MORE  
REPAIRS TO BE IDENTIFIED THROUGH TV

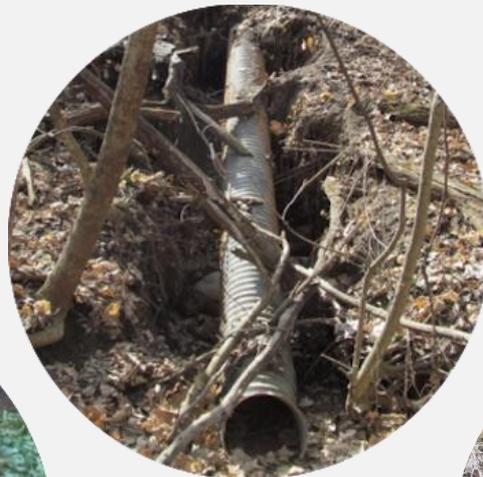
8,100 INLETS  
840 OUTFALLS

120

MILES OF STORM SEWERS  
MAPPED SO FAR—ABOUT 65%



**PIN OAK OUTFALL:**  
\$27,250



**MAPLE RIDGE PIPE  
REPAIRS AND LINING:**  
\$60,420



**LACK OF MAINTENANCE  
CLEANING REDUCES CAPACITY**



**FLOODING DUE TO  
BLOCKED INLET**



## CSOs and Green Infrastructure



**renew EVANSVILLE**

What is a CSO?

**We are not alone.** 700+ communities have combined sewers. Settlements range from millions to billions.  
**But Peoria is among the last** in the U.S. *(the last large city in Illinois)* that still must develop control plans.

# 100% **green** infrastructure

Other cities are using green infrastructure as part of their CSO plans.

**PEORIA WILL DO EVEN MORE.**



**RAIN GARDENS**



**BUMPOUTS**



**GREEN ALLEYS**



## STORMWATER UTILITY

# Stormwater utility



**A STORMWATER UTILITY IS A PUBLIC UTILITY ORGANIZED AS A SEPARATE ENTERPRISE IN THE SAME FASHION AS THE WATER UTILITY, SEWER UTILITY OR PARKING UTILITY.**

A stormwater utility is an equitable and responsible way to fund wet weather management.

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

## What is stormwater infrastructure? Do I use it?



DITCHES



CREEKS



PIPES &  
CULVERTS



PONDS &  
LAKES



CURBS &  
GUTTERS



INLETS &  
MANHOLES



WETLANDS



OCEANS



RAIN  
GARDENS



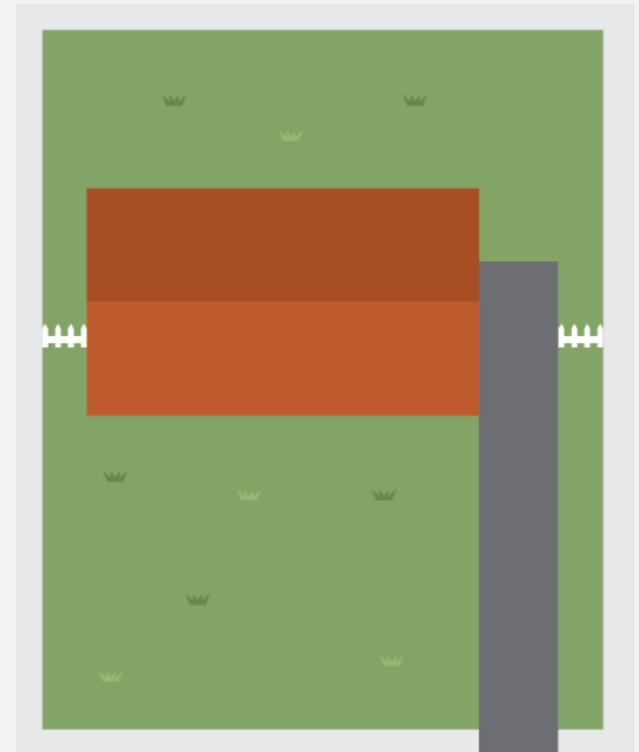
BIOSWALES

## The rate is based on impervious area

- Impervious area makes it hard for stormwater to be absorbed by the ground
- Each fee correlates to runoff and thus the impact on stormwater costs
- Billing units are set per 1,000 SF of impervious area

### We recommend this method because:

- The fee is directly related to runoff
- We have detailed data on impervious area
- Has been legally upheld in IL
- Credit program encourages property owners to minimize runoff



$$\text{Brown Area} + \text{Grey Area} = 2,600 \text{ SF Impervious} \\ = \mathbf{2.6 \text{ Billing Units}}$$

## Average residential rate in 2018

- **Average monthly residential bill range based on:**
  - 2,600 SF impervious area parcel
- **One billing unit of 1,000 sf impervious area = \$3.00**

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**Average residential monthly stormwater bill: \$7.80**

The stormwater utility goes into effect June 1, 2018.

## Sample monthly business rate

STORMWATER (\$8M)		PARCEL AREA (SF)	IMPERVIOUS AREA (SF)	BILLING UNITS	ANTICIPATED RATE
Large	Car Dealership	135,504.6	106,988.9	107.0	\$321.00
Medium	Fast Food Restaurant	53,085.6	39,886.1	39.9	\$119.70
Small	Small Shop (No Parking Lot)	2,310.9	2,005.9	2.0	\$6.00

*\*Please note that these rates were calculated for specific businesses and may not represent the average rate for each category*

The stormwater utility goes into effect June 1, 2018.

## Stormwater utility rate adjustment schedule

- 2018-2019 \$3/1,000 sf impervious area
- 2020 \$4/1,000 sf impervious area
- 2021 \$5/1,000 sf impervious area
  
- All rate increases are effective January 1
- After Jan 1, 2021, rate increases shall match the cost of inflation as determined by the United States Department of Labor Midwest Urban Area Consumer Price Index
- Financial studies will be performed to determine the costs associated with the SWU and make recommendations for rate adjustments if needed

## What will the stormwater utility pay for?



- System planning and asset management
- Infrastructure maintenance & replacement
- Runoff and pollution reduction
- Stream/channel improvements
- Public Works equipment
- Private property drainage program
- Stormwater capital & maintenance expenses
- Citywide green infrastructure construction and maintenance



## Credits & Grants

## Exploring new ideas

- To find creative and smart solutions for Peoria, we worked hard to learn from other communities
  - Researched similar utilities
  - Traveled to learn from other Public Works teams
  - Attended professional conferences





- Bike Peoria
- Heart of Illinois Sierra Club
- Unity Point Health
- Peoria Park District
- Peoria Chamber of Commerce
- Catholic Diocese of Peoria
- League of Women Voters of Greater Peoria
- Huber Commercial Inc.
- Illinois Black Chamber of Commerce
- West Central Illinois Building & Construction Trades Council
- OSF Saint Francis Medical Center
- Archer Daniels Midland Company
- Laborers' Local 165
- Farnsworth Group
- The PIPCO Companies
- Tri-County Regional Planning Commission

## We are currently exploring:

### **CREDITS**

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.

### **GRANTS**

A grant is a one-time reimbursement for installing, constructing, or maintaining a best management practices.

## GRANTS

- **Rain Barrel**
  - \$50/barrel limit of 2
  - Has to be emptied within 72 hours



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## GRANTS

- **Natural Area Maintenance**
  - Maintenance for undisturbed natural areas such as prairies, forestland, bluffs, etc.



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## GRANTS

- **Green Infrastructure Grant (Rain Garden & Permeable Pvt)**
  - Infiltrate 1 inch storm \$1.50/sf
    - **Maximum grant is \$1,500**
  
  - Infiltrate 2.61 inch storm \$3.50/sf
    - **Maximum grant is \$3,500**



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## GRANTS

- **Private Property Drainage Assistance Program**
  - Existing program – reimburse 75% up to max of \$7,500
  - Ideal for smaller, private property projects that don't require engineering help
  - First come first serve funding
  - Required to pay prevailing wage



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# GRANTS

- **Stormwater Infrastructure Investment Grant**
  - New program – reimburse 75% up to max of \$100,000
  - Intended for larger projects
  - Requires professional engineering services
  - Grants are awarded based on a competitive process
  - Required to pay prevailing wage



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## CREDITS

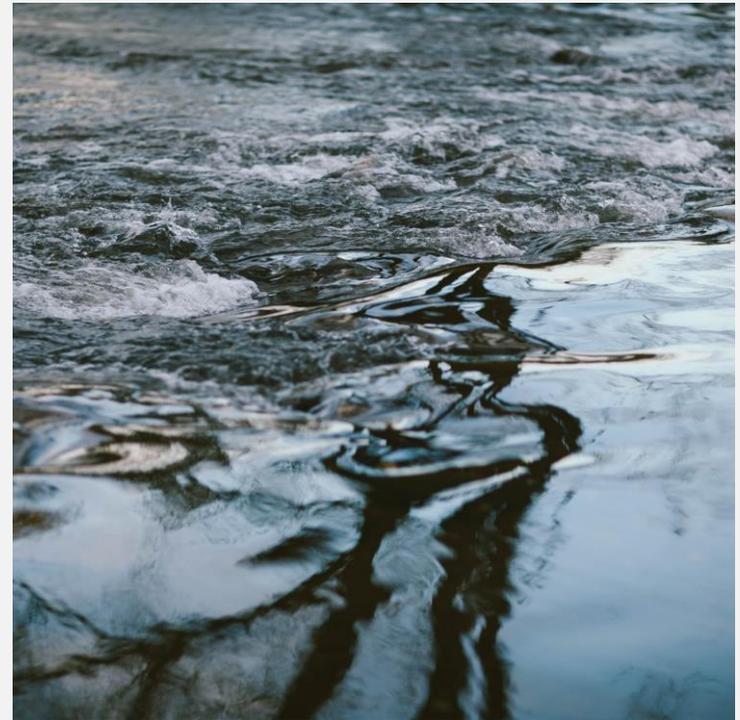
- **Rate Reduction (detention)**
  - 10% credit if meet current ordinance requirements for rate reduction
  - 25% credit if meet current ordinance and designed to accommodate the 100 year/24 hour storm event
  - Detention already required by ordinance for newer large construction projects



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## CREDITS

- **Volume Reduction (infiltration)**
  - 5% credit if meet current ordinance requirement to capture 1 inch storm
  - 15% credit if capture 2.61 inch CSO storm
  - Already required by ordinance for newer large construction projects



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## CREDITS

- **Water Quality**
  - 10% credit if you can remove 75% total suspended solids (TSS)
  - Would be open to other water quality improvements as well



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## CREDITS

- **Direct Discharge**
  - 90% credit if discharge into Illinois River



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## CREDITS

- **Education**
  - \$5/student, one grade per facility, suggested grades 3, 6, & 9
  - Inspired by recycling programs



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## CREDITS

- **Innovation**
  - Will be evaluated on a case by case basis
  - Want to encourage innovative ways to handle stormwater runoff





## How to apply

### 1. Prepare the appropriate forms

Download from city site or pick up hard copy from Public Works

### 2. Submit forms, fees and attachments to the Public Works Department

### 3. City will review application within 30 working days and notify applicant of credit or grant determination, including identification of deficiencies if the application is incomplete or not approved

### 4. If the credit or grant is denied, the applicant may address identified deficiencies and resubmit a revised application

### 5. If a credit or grant is denied, the applicant may appeal the determination following guidelines in Article IV of Chapter 31 of the City of Peoria Code of Ordinances

## Application Fees

Grant or Credit	Fee
Rain Barrel Grants	\$0
Green Infrastructure Grants and initial credit application	\$40
Private Property Drainage Assistance Grant	\$0
Stormwater Infrastructure Investment Grant	\$1,500
Credits (initial application)	\$250
Credits (secondary application)	\$125
Green Infrastructure Credit (secondary application)	\$20

Each awarded credit has a term of four years, at which time the credit expires. Credits can be renewed.



## Maintaining Credits



Inspections



Maintenance



Annual reporting

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## A Whole City Goes Green

We must tackle this ongoing challenge together.



If every property owner commits to stormwater maintenance, the cumulative effect would forever change our city.





FAQ

**Can my existing best management practice be used?**

**What about brick or gravel?**



**What about cisterns?**

**What if I drain my  
downspouts to grass?**

# What about low income residents?

**If I drain to a creek, ravine or lake, am I exempt?**

**If I drain to Peoria Heights or the  
County, am I exempt?**

## UPDATES IN THE COMING MONTHS

- Launch of new stormwater website
  - Able to view your property's impervious surface area
- Credit Manual meetings
  - Friday, April 27 at 11 AM at the Main branch library
- Informational mailings, including a sample bill
- Utility goes into effect June 1, first bill will be sent in late summer or early fall

## **For additional information:**

**Sign up for e-alerts: [Peoriagov.org](http://Peoriagov.org)**

**Visit: [OneWaterPeoria.com](http://OneWaterPeoria.com)**

**Call: Peoria Public Works 309-494-8800**

**Email:**

**Andrea Klopfenstein**

**[aklopfenstein@peoriagov.org](mailto:aklopfenstein@peoriagov.org)**



**Thank you for your time.**