



CITY OF PADUCAH

Comprehensive Stormwater Master Plan Phase II

Public Meeting

Tuesday, May 21, 2019
3:00 - 5:00 p.m.

Paducah Convention Center



Recent Local Flooding



Main Entrance Western Baptist Hospital



Hinkleville Road

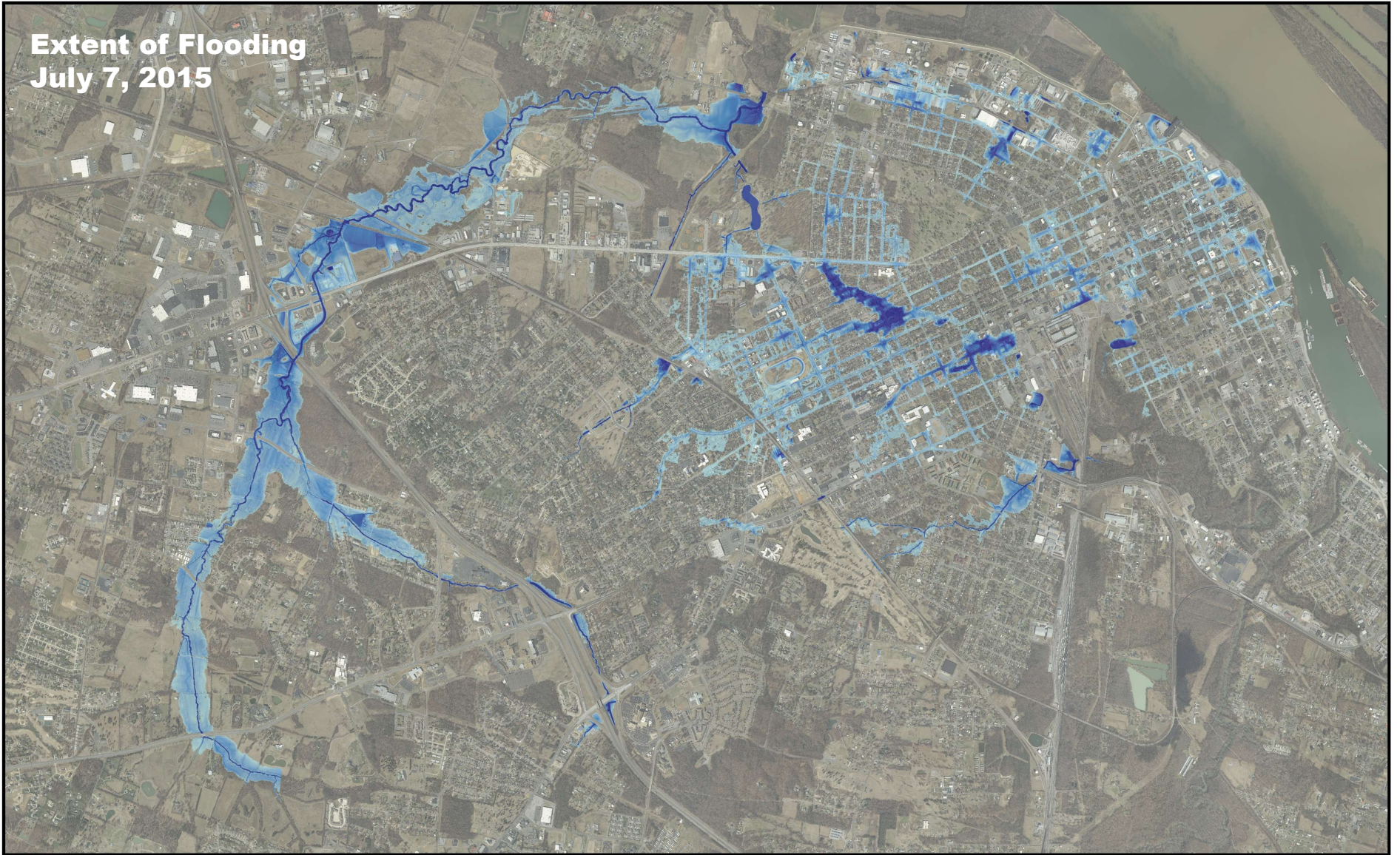


Buckner Lane Circle



Harrison St.

**Extent of Flooding
July 7, 2015**



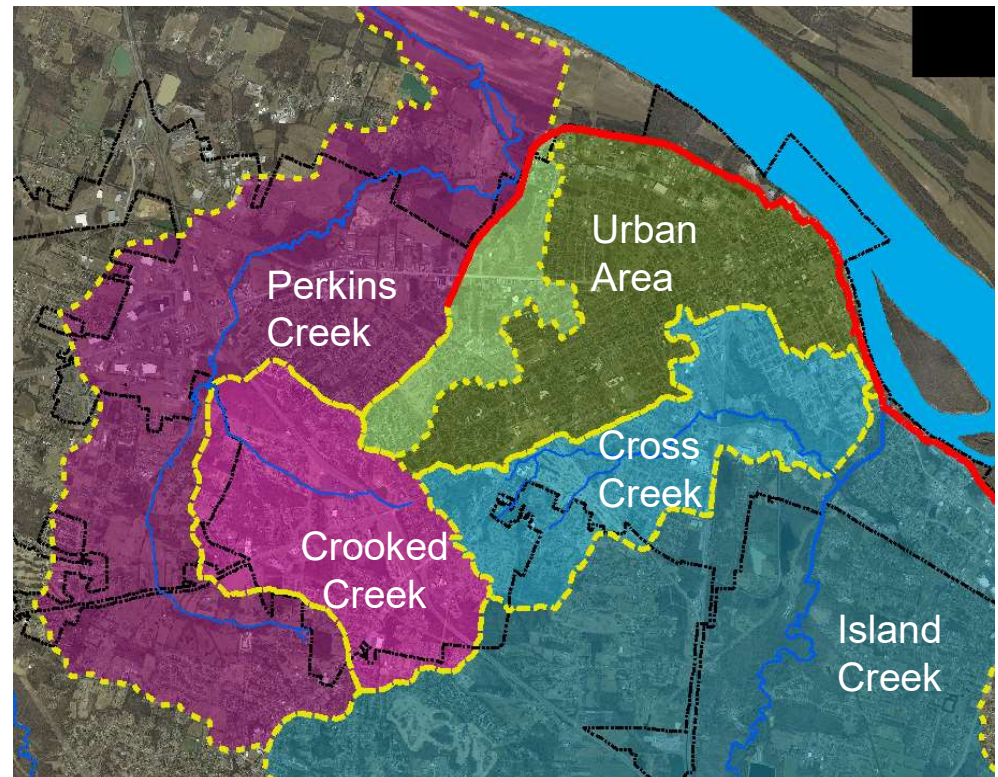
Comprehensive Stormwater Master Plan

Phase I

- Identify projects to mitigate local flooding in Paducah

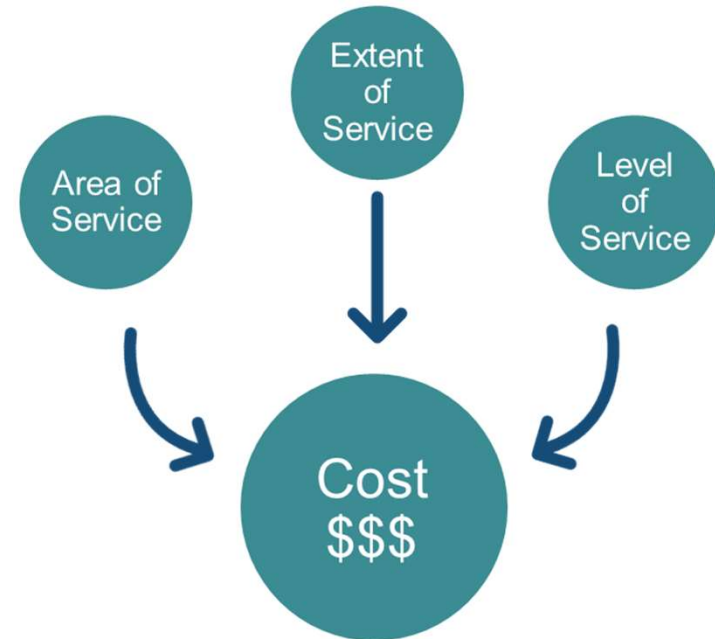
Phase II

- Develop a funding strategy for Paducah's Stormwater Management Program



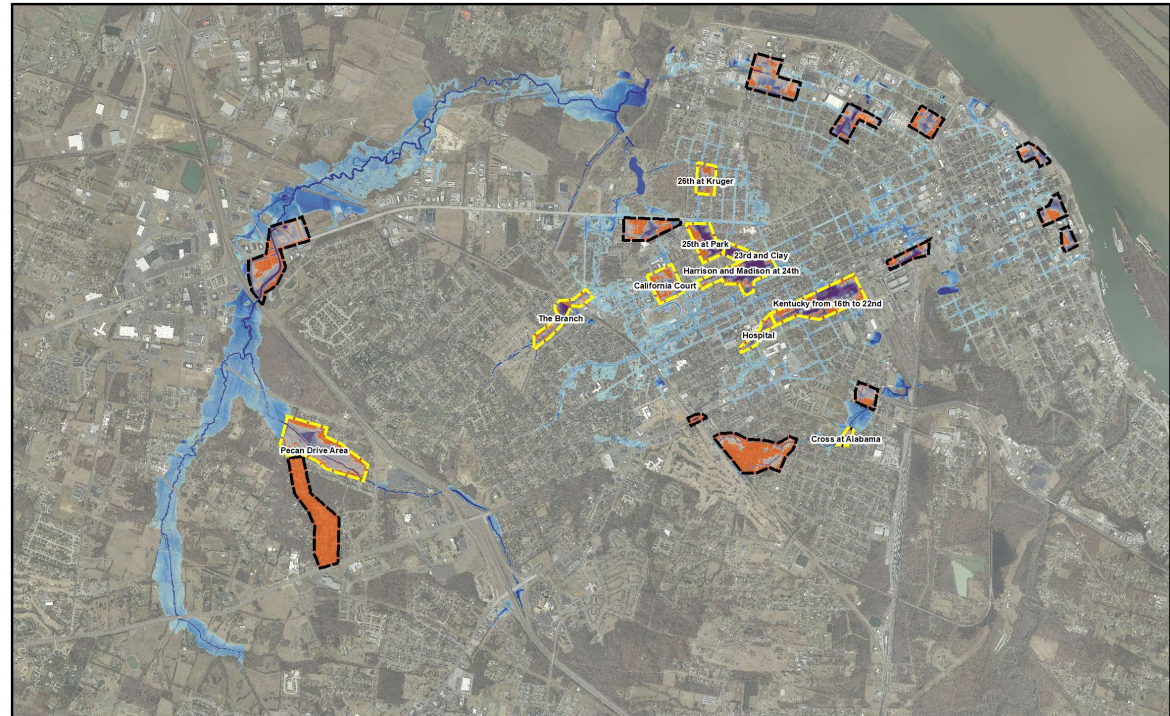
Stormwater Program Elements

- **System Improvements**
 - Flood Mitigation Projects
 - System Operation and Maintenance
 - Infrastructure Repair and Replacement
- **Floodwall Protection System**
- **Regulatory Compliance (MS4)**
- **Program Administration**



Flood Mitigation Projects

- 10 project areas prioritized
- \$43 million in capital needs identified
- Proposed rate of \$6.13/ERU provides for \$600,000/year to be applied to a portion of the flood mitigation projects

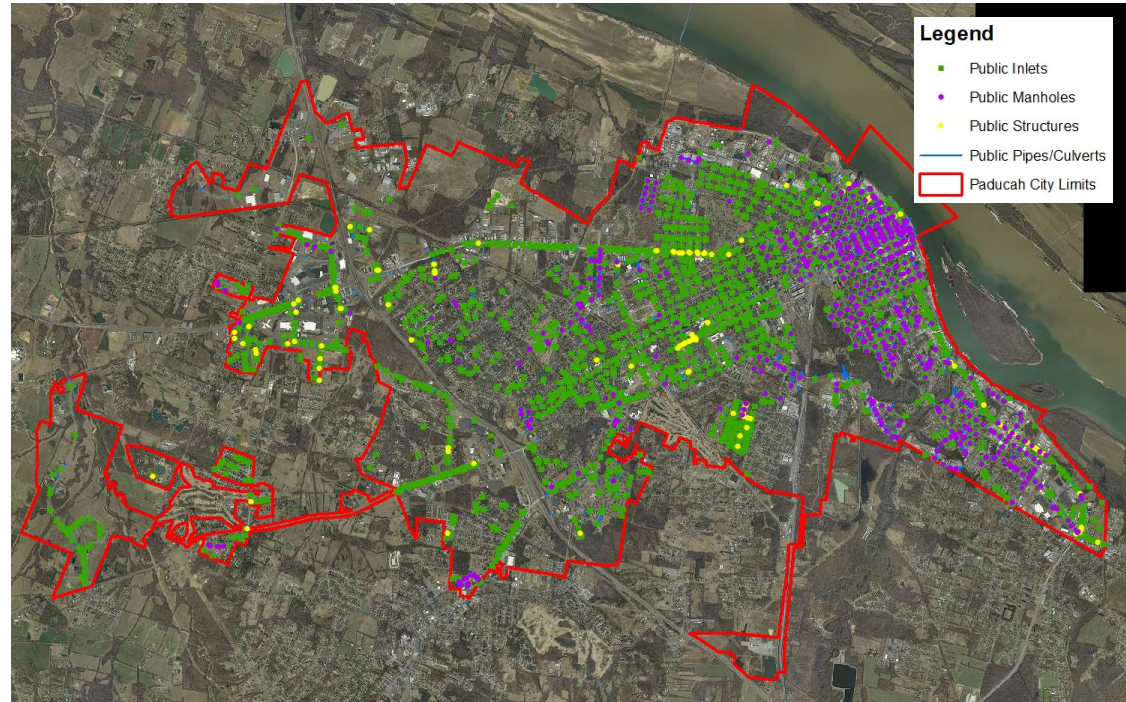


Stormwater Infrastructure Assets

Public Infrastructure

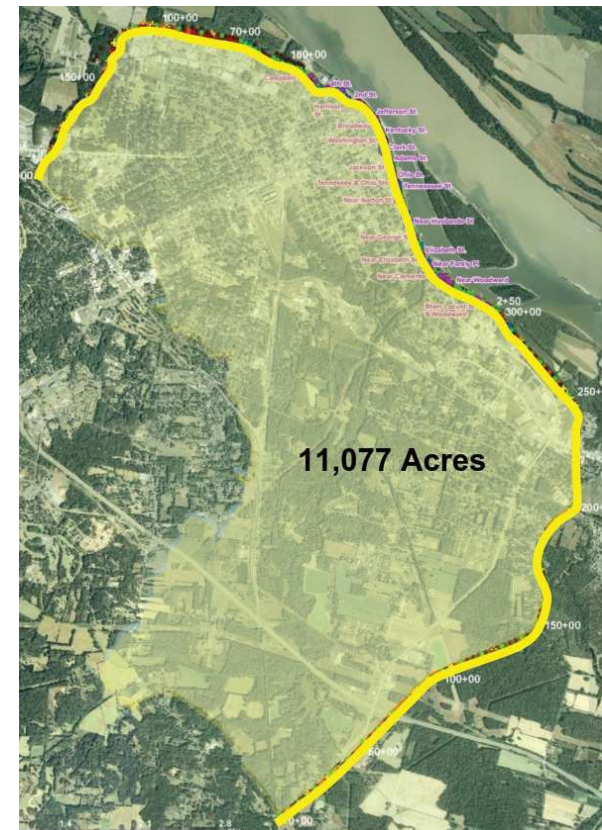
- 353,589 linear feet of pipes and culverts
- 5,049 structures (manholes, inlets, etc.)

\$82,000,000
In Public
Assets



Floodwall Protection System

- ~ 11,000 acres (5,090 acres within the City limits)
- ~ 20,000 people
- ~ \$1.2 billion in assets
- ~ \$750,000 in annual maintenance



MS4 Phase II Permit Compliance

Minimum Control Measures (MCM)

- MCM #1 – Public Education and Outreach
- MCM #2 – Public Involvement / Participation
- MCM #3 – Illicit Discharge Detection / Elimination
- MCM #4 – Construction Site Runoff Control
- MCM #5 – Post-Construction Runoff Control
- MCM #6 – Pollution Prevention and Good Housekeeping

Other Requirements

- Annual Reporting
- Forms and Documentation
- Regulation Development

KPDES

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT

Permit No.: KY0200000
At No.: 35050

AUTHORIZATION TO DISCHARGE UNDER THE KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

Pursuant to Authority in KRS 224,
Small Municipal Separate Storm Sewer Systems (sMS4)

are authorized to discharge stormwater runoff from a small Municipal Separate Storm Sewer System (MS4) to receiving waters of the Commonwealth in accordance with effluent limitations, monitoring requirements and other conditions set forth in PARTS I, II, III, and IV hereof. The permit consists of this cover sheet, a table of contents, and PART I 4 pages, PART II 13 pages, PART III 2 pages, PART IV 1 page.

This permit shall become effective on April 1, 2010.
This permit and the authorization to discharge shall expire at midnight, March 31, 2015.

March 1, 2010
Date Signed

Sandra L. Grusecky, Director
Division of Water

DEPARTMENT FOR ENVIRONMENTAL PROTECTION
Division of Water, 200 Fair Oaks Lane, Frankfort, Kentucky 40601
Printed on Recycled Paper



Establishing a Dedicated Stormwater Revenue Stream

Stormwater Infrastructure Fee – A fee established for the purpose of managing stormwater and imposing charges for the recovery of costs connected with such stormwater management”

WHERE?

Area of Service

WHAT?

Extent of Service

HOW OFTEN?

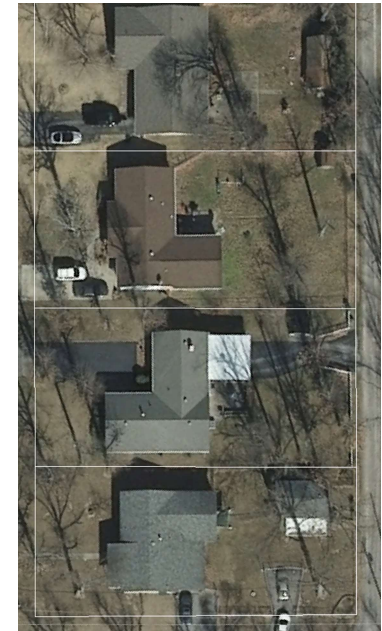
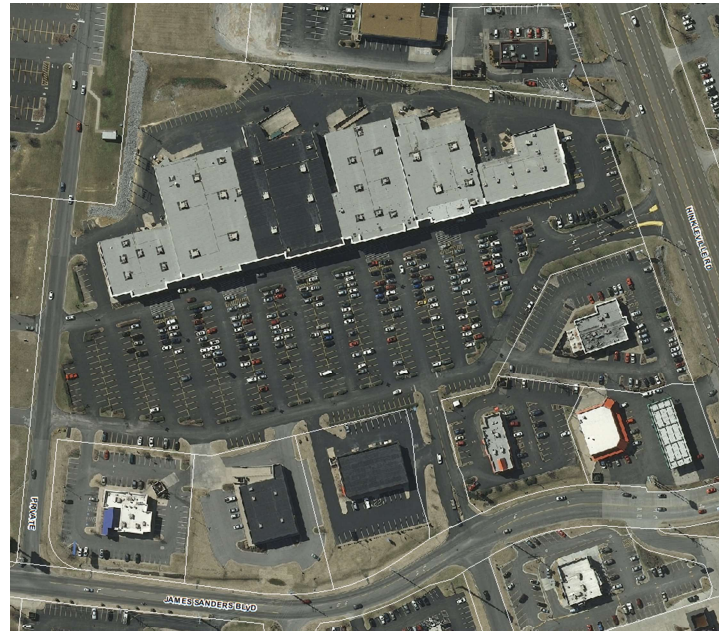
Level of Service



Basis of Stormwater Infrastructure Fee

Impervious Area:

- Most commonly used approach in the U.S.
- High degree of technical accuracy and legal defensibility
- Easily understood by public and elected officials



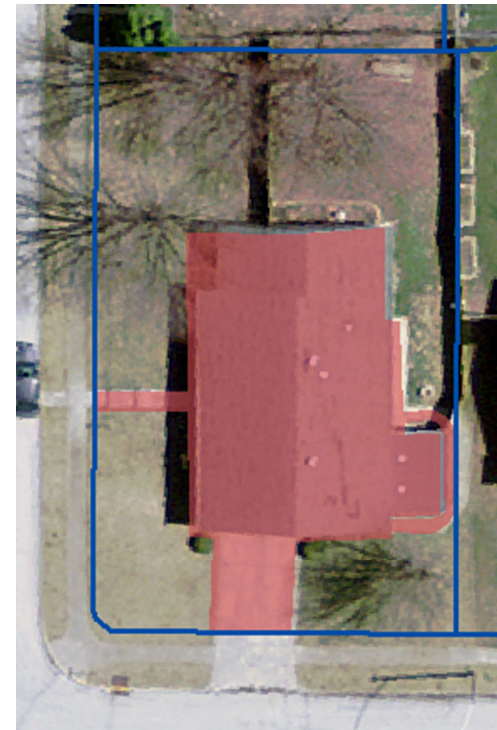
Two User Classifications

- **Residential** – one single-family detached home or duplex occupying real estate on one parcel in which the inside and outside of the structure is owned by the same entity.
- **Non-residential** – all other parcels such as condominiums, multi-family dwellings of three families or greater, commercial, industrial, and institutional facilities.
- **All** developed properties within the City will pay the Stormwater Infrastructure Fee. Exempt properties include:
 - Roadway Right-of-Way
 - Undeveloped Parcels
 - Railroad Lines



How is a Fee Calculated?

- Calculate impervious area on a “typical” residential property
- Establish the Equivalent Residential Unit (ERU) with a statistical sample of residential properties
- Results of Paducah analysis
 - ERU = 3,500 ft²

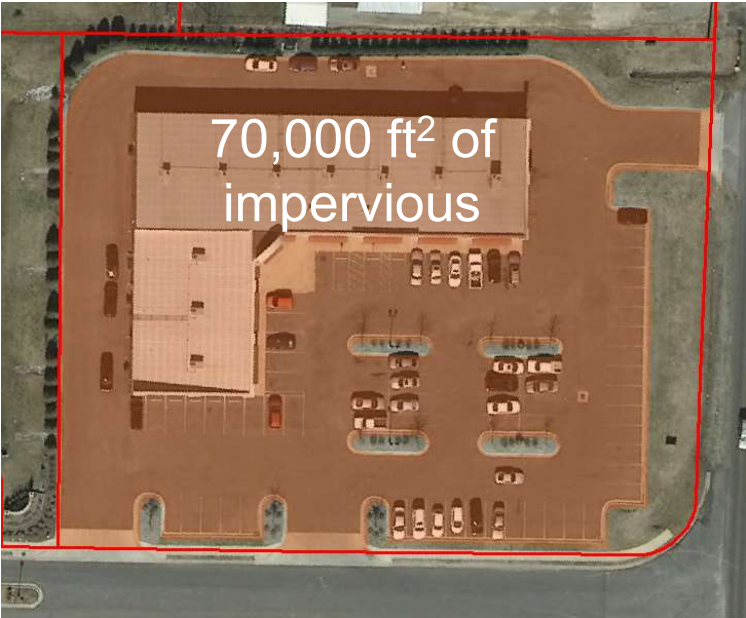


**3,500 ft² of Impervious Area
= Equals 1.0 ERU**



City of Paducah Comprehensive Stormwater Master Plan

How is a Fee Calculated for Non-Residential Properties?



 = 1 ERU in Paducah
(3,500 ft²)

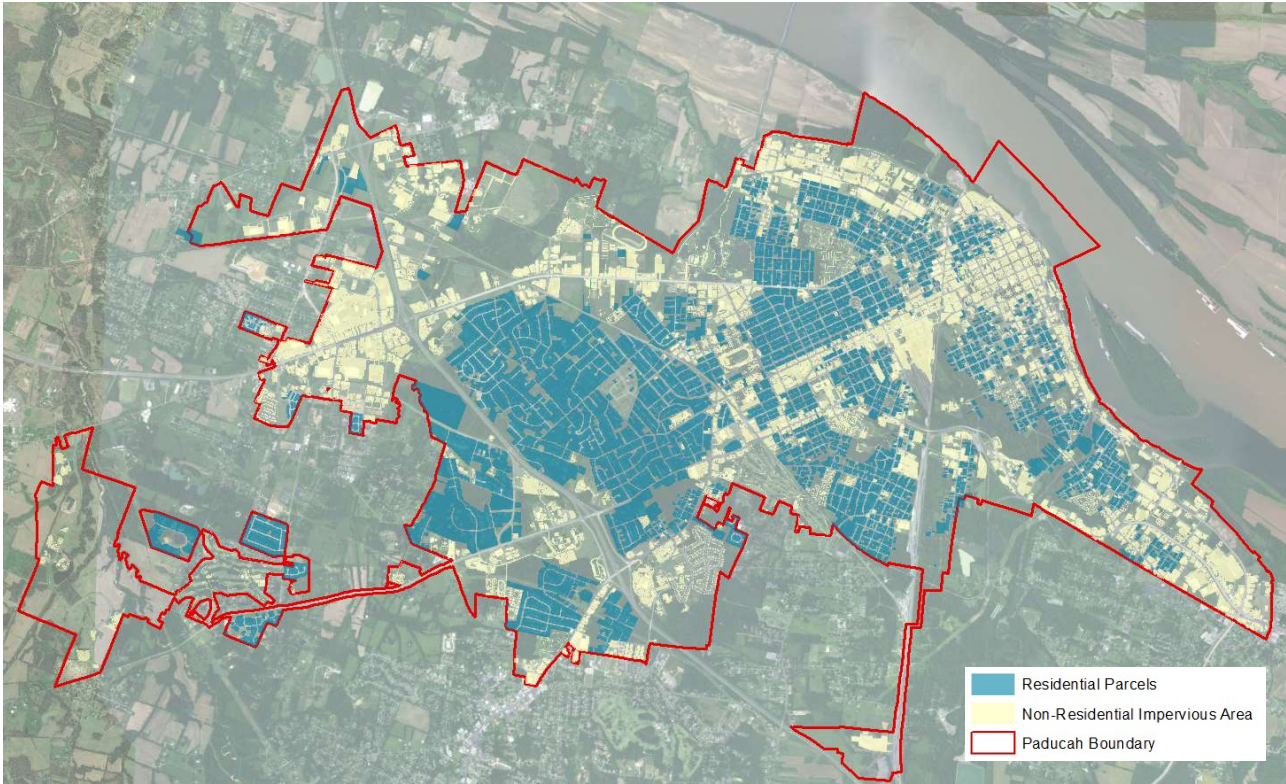


$$\frac{70,000 \text{ ft}^2 \text{ Impervious}}{3,500 \text{ ft}^2 / 1 \text{ ERU}} = 20 \text{ ERUs}$$



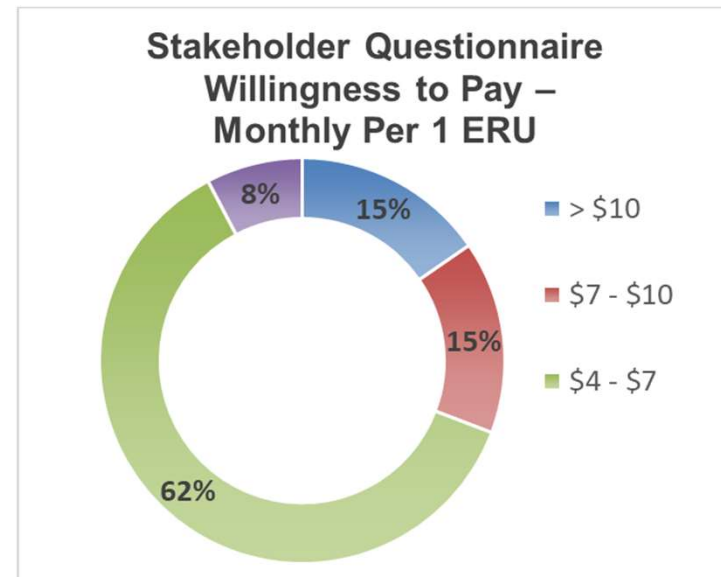
Impervious Area Analysis

Non-Residential
Impervious Plus
Residential Parcels =
36,919 ERUs



Stormwater Infrastructure Program Development

- Three Stakeholder Group Meetings
 - Stormwater Program Elements
 - Level and extent of service
 - Timeline for implementing flood mitigation projects
 - Willingness to pay
- Coordination with City Staff



Recommended Rate =

**\$6.13 per ERU
per Month**



Stormwater Infrastructure Program Development

Recommended Stormwater Program	
Monthly Cost Per Residential ERU	\$6.13
Total Number of ERUs	36,919
Total Annual Program Cost	\$2,715,490

A credit policy will be available for non-residential properties that build and maintain stormwater controls beyond existing design requirements.



Paducah's Annual Stormwater Program Budget

Paducah Annual Stormwater Program Cost of Service	
System Improvements	\$1,647,282
<i>Flood Mitigation/CIP Projects</i>	\$600,000
<i>System Operation and Maintenance</i>	\$230,754
<i>Infrastructure Repair and Replacement</i>	\$816,528
Floodwall Protection System	\$750,000
Regulatory Compliance (MS4)	\$20,000
Program Administration (Staffing and Billing)	\$298,208
Total Annual Stormwater Program Cost	\$2,715,490
Monthly Cost per Residential ERU	\$6.13



Information Stations



Questions

