



*Investing in clean water resources.*

# ***Renew Evansville***

May 2013



# Agenda

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- **Regulatory Background**
- Evansville Consent Decree
- Sewer System Overview
- Overflow Control Planning and Challenges
- Integrated Overflow Control Planning (IOCP)
- Financial Capability
- Proposed IOCP
- Questions

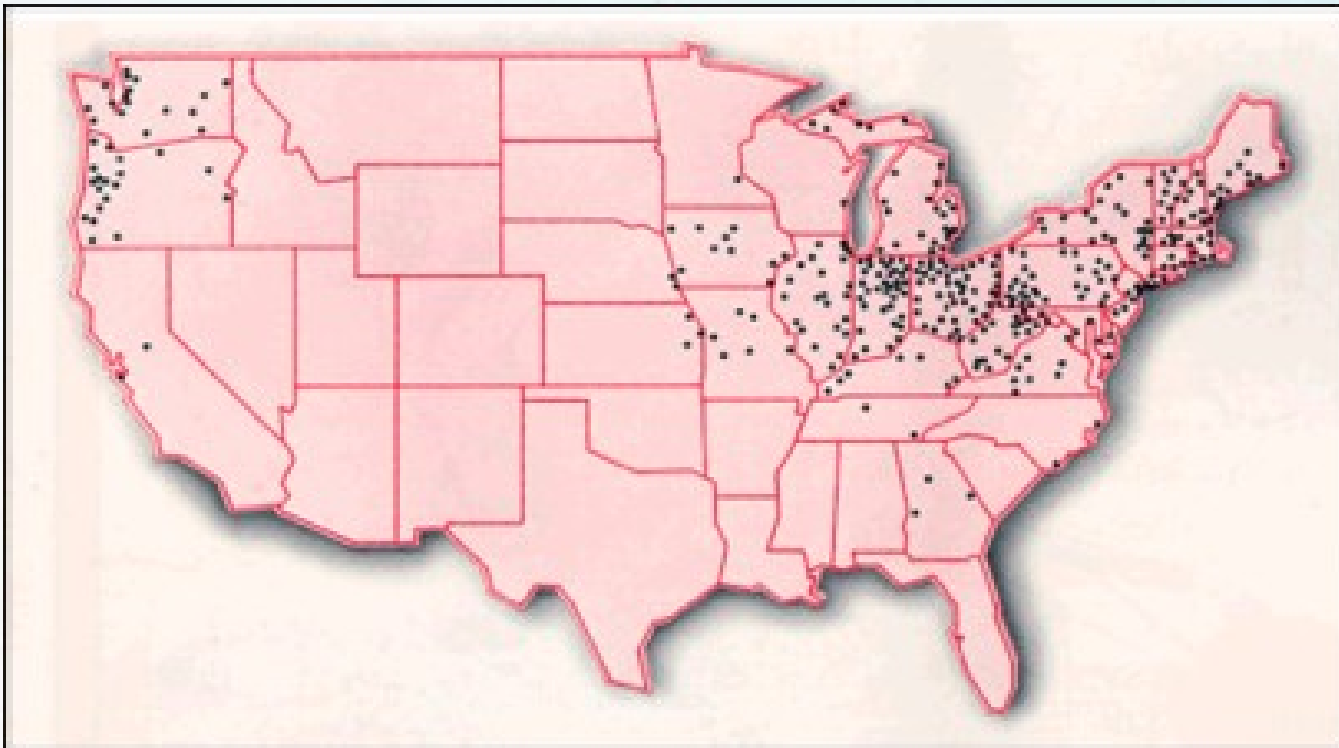
# Clean Water Act of 1972

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- Enforced by the EPA and the Indiana Department of Environmental Management
- Cities are obligated to develop plans to address Combined Sewer Overflows (CSO's) or face significant EPA fines
- Overflows in separate sanitary system prohibited
- Nearly 1,000 U.S. cities pursued by the EPA through enforcement actions (consent decrees)

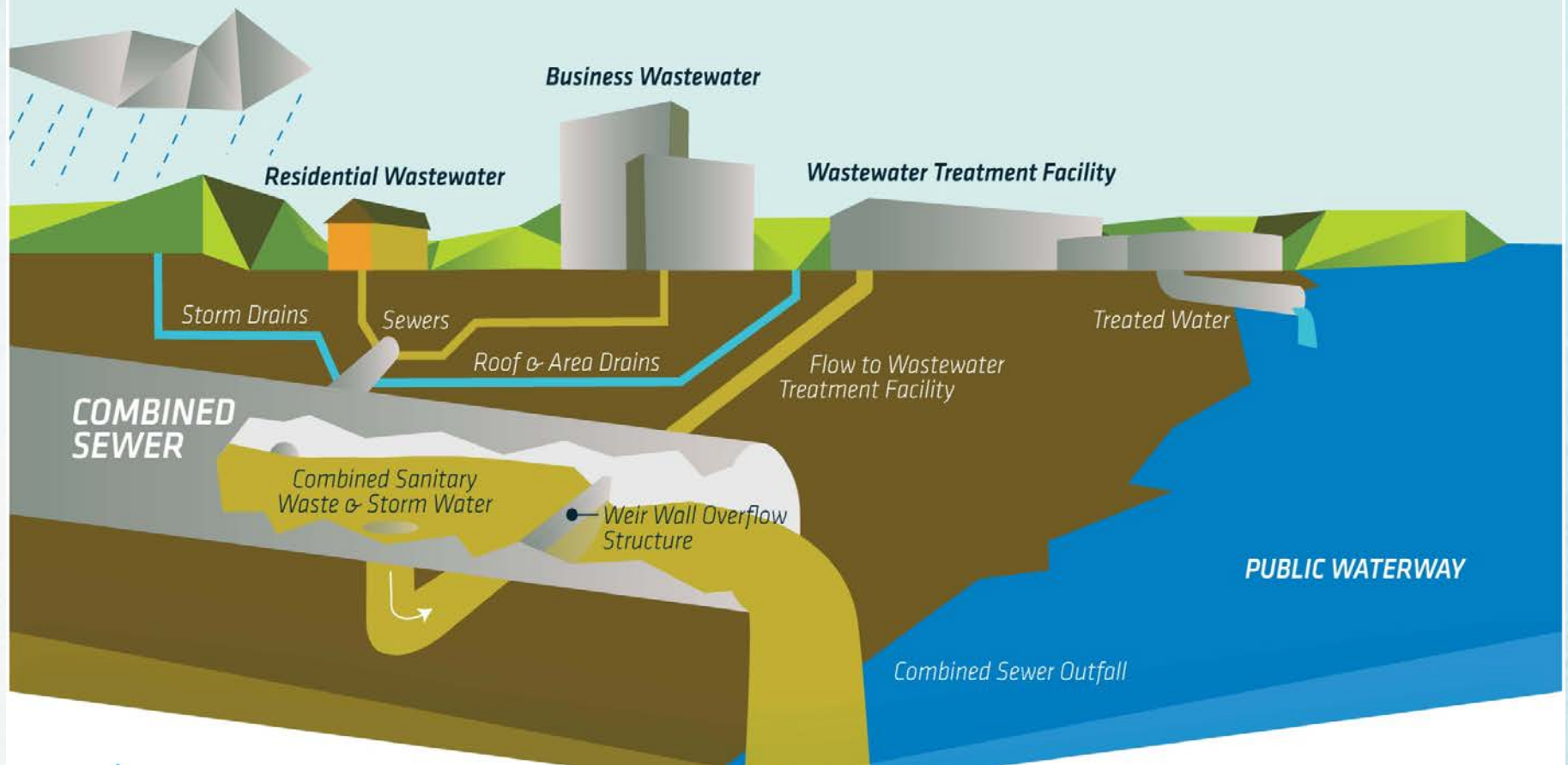
# National CSO Map (Source EPA - Illustration)

Nearly 1,000 U.S. cities with CSO's pursued by the EPA to enforce the Clean Water Act and Federal CSO Policy





# COMBINED SEWER OVERFLOWS



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# Consent Decree Negotiations

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- **September 2009**
  - EPA files suit after several years of discussions.
  - EPA demanded 6 months to develop a plan and implement in 10 years– Totally unreasonable
- **November 2010**
  - settlement reached with EPA, DOJ and IDEM
- **June 2011**
  - Federal court approves consent decree that will comply with Clean Water Act of 1972, CSO Policy of 1994
- Requirements:
  - Two years to develop an Integrated Overflow Control Plan (IOCP) by Nov. 30, 2012, but **extended to May 31, 2013**
- Fines and penalties for non-compliance

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# Evansville's wastewater collection and treatment systems

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- Two Wastewater Treatment Plants
  - East WWTP peak wet-weather capacity: 26 mgd
  - West WWTP peak wet-weather capacity: 37 mgd
- Collection System
  - 833 miles of sewers
  - 60% combined and 40% separate storm/sanitary
  - 50% West and 50% East
  - 90 lift stations

# Evansville's CSOs

- 22 CSO Outfalls
  - Average annual overflow volume ~2.0 billion gallons
  - Typical Year CSO activations and % capture
    - ~ 50 days of CSO activations in Typical Year
    - ~ 35% of total wet-weather flow
- Receiving Streams
  - Ohio River
  - Pigeon Creek
  - Bee Slough



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# Federal CSO and % capture Policy

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- CSOs must be addressed because of federal mandates
  - It's not **if** we fix our system, it's **how** and over what time frame
- Federal CSO policy requires in a typical year:
  - 0-12 days of activation/year
  - 75%-100% capture,
  - Most programs end up in the 90%-98% capture range

# Unique challenges – CSO volume

City	Average Year CSO Volume
Evansville	2.0 Billion Gallons (BG)
Fort Wayne	1.1 BG
South Bend	0.9 BG
Indianapolis	7+ BG
Louisville, KY	4 BG
Milwaukee, WI	9 BG
Omaha, NE	3.5 BG



# Unique challenges - Bee Slough

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- Three large CSO outfalls
  - Accounts for ~70% of the City's total CSO volume discharged to Ohio River
- City's most upstream discharge to the Ohio River sensitive area
- Bee Slough impacted by River levels and Levee Authority Pumping Requirements
- Eyesore and health risk
- 100% CSO control solution targeted

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# Integrated Overflow Control Plan (IOCP)

- Two capital plans:
  - CSO long-term control plan
  - Sanitary sewer remedial measures plan



# Specific IOCP planning goals

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- Address Bee Slough through Wetland Technology
- Maximize underutilized existing infrastructure
- Incorporate green infrastructure where possible
- Optimize Pigeon Creek Sewer Main
- Better controls at Treatment Plants
- “Right size” CSO controls to increase capture and treatment of CSOs system-wide
- Reduce rainwater that enters the separate sewer system
- Provide redundancy and backup power at 7<sup>th</sup> Avenue Lift Station



# Why a wetland for Bee Slough?

- Natural treatment processes
- No supplemental energy requirements for treatment
- Uses no chemicals, produces no residuals
- Provides food sources and habitat for animals
- Educational opportunities
- Aesthetic value





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# Financial issues:

## Rates and existing debt

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- Sewer Rates
  - No federal and state grant money available
  - Projects will be funded by future rate increases
  - Current average in-city rate based on 3,859 gallons of water usage is \$26.30/month. Out-of-city rate is \$35.50/month
  - Current existing debt fully paid in 2031
    - Existing debt payments are \$12 million/year until July 31, 2023
    - Then Debt payments are \$11 million/year until July 31, 2031

## Financial issues: Financial capability

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- EPA has pushed communities to spend to the very limits of affordability as quickly as possible
- Ongoing source of frustration and financial struggle for cities across country
- US Conference of Mayors and communities have been aggressively pursuing change in EPA's approach to CSO programs but no changes are eminent

# Financial Issues: EPA's likely preferred IOCP too costly

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- EPA likely will want no more than 4 combined sewer overflows per year
  - 4 days of CSO activations = up to \$815M
  - 0 days of CSO activations = up to \$916M
- High level of control in the sanitary system
- Evansville needs more than a 20 year IOCP to lessen rate impacts

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# Summary of Proposed IOCP: 28 year program

System	CSO Long Term Control Plan	Sanitary Sewer Remediation Plan	Total
West	\$ 259M	\$ 22M	
East	\$ 235M	\$ 22M	
<b>Total</b>	<b>\$ 496M</b>	<b>\$ 44M</b>	<b>\$ 540M</b>

- 92% capture; 12 days of CSO activations in Typical Year

# Summary of IOCP: First 20 years

Projects (1 <sup>st</sup> 20 years)	Cost (M\$)
Bee Slough improvement Projects	\$150
West Side Storage Projects	\$99
Sewer Separation	\$28
Green Infrastructure and System Optimization	\$21
SSO Abatement Projects	\$44
Treatment Plant Modifications	\$31
<b>Total</b>	<b>\$373</b>

- Achieves ~70% capture with ~50 activations

# Summary of IOCP: Years 21 to 28

*Time needed to reach approvable level of control:*

Projects (Years 21 to 28)	Cost (\$M)
7 <sup>th</sup> Avenue LS Replacement	\$109
<u>Downtown Storage</u>	\$58
Total	\$167

**Total Proposed IOCP Cost Over 28 years: \$540M**

**Achieves 92% capture of flow and 12 days of CSO activations in Typical Year**

## Proposed IOCP: Rate Impacts by 2033 and 2040

- Approximate funding capability if rates increased to and never exceed at 2% Median Household Income:

Years (Year)	Cost	In-City Residential Rate *	Outside City Residential Rate *
20 (2033)	\$373 Million	\$85.30	\$115.20
28 (2040)	\$540 Million	\$87.10	\$117.60

- The final plan submitted to EPA will likely result in “in-city” monthly rate increases (\*) of \$7.45, \$2.65, and \$2.85 the first three years to begin funding the IOCP. Subsequent increases through duration of IOCP to reach and maintain a 2% MHI threshold
- \* Based on Average Residential Water Usage per month of 3,826 gallons

# How Much Things Cost – 1985 vs 2013

Item	1985	2013	Change
Average Cost of new house	\$ 89,330	\$ 279,000	312%
1 gallon of gas	\$ 1.09	\$ 3.65	335%
Movie Ticket	\$ 2.75	\$ 8.75	318%
US Postage Stamp	\$ 0.22	\$ 0.46	209%
Bacon per pound	\$ 1.65	\$ 5.00	303%
Interest Rates Year End - Federal Reserve	10.75%	0.15%	
Mortgage Rate - Fixed	12.25%	~3.50%	



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# What's next

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- Final plan was submitted to the EPA, Department of Justice and Indiana Department of Environmental Management on May 31.
- EPA will either ...
  - Accept Evansville's Plan
  - Reject the Plan, or
  - Seek modification
- Plan may be revised based upon future discussions with EPA
- Timeline uncertain as when EPA will respond.
- Potential for dispute resolution that could lead to returning to Federal Court.
- Evansville will not agree to a plan that is unfair to rate payers and not reasonable

# Questions?

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- **Thank you for your time.**