



City of Peoria Clean Water Efforts

Governor's Conference on the
Management of the Illinois River

October 4, 2007



What do you call dinner and a movie with an unemployed guy?

- An unfunded man-date!



Agenda

- Clean Water Act & NPDES Requirements
- Peoria Stormwater Program
- Peoria CSO Program
 - River Monitoring Results
- Questions



Clean Water Act & Wet Weather

■ Stormwater Control Requirements

- Medium and large cities must obtain a National Pollutant Discharge Elimination System (NPDES) permit, and
- Develop a stormwater management program designed to prevent harmful pollutants from being washed into waterways.



■ Combined Sewer Overflow (CSO) Control

- CSOs are subject to NPDES permit requirements, including both technology-based and water-quality based requirements of the Clean Water Act
- Not subject to secondary treatment requirements that apply to wastewater treatment plants

Peoria Stormwater Program



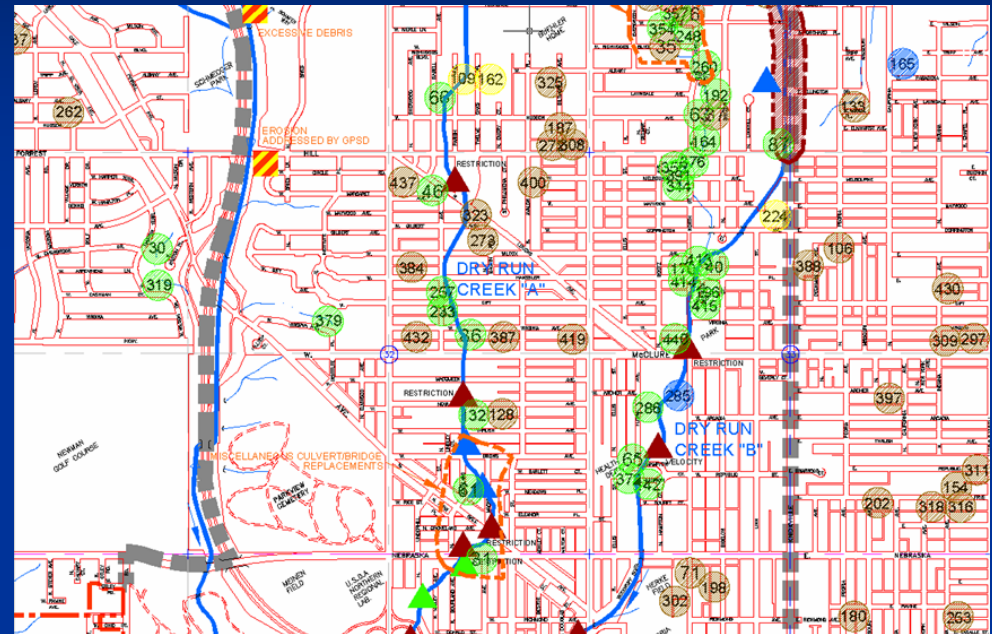
Six Minimum Control Measures

- Public Education
- Public Involvement



Six Minimum Control Measures (continued)

- Illicit Discharge
- Construction Sites



Six Minimum Control Measures (continued)

- Post Construction Controls
- Good Housekeeping



Stormwater Program Recommendation

- Keep up with the paperwork!

<http://go.to/funpic>

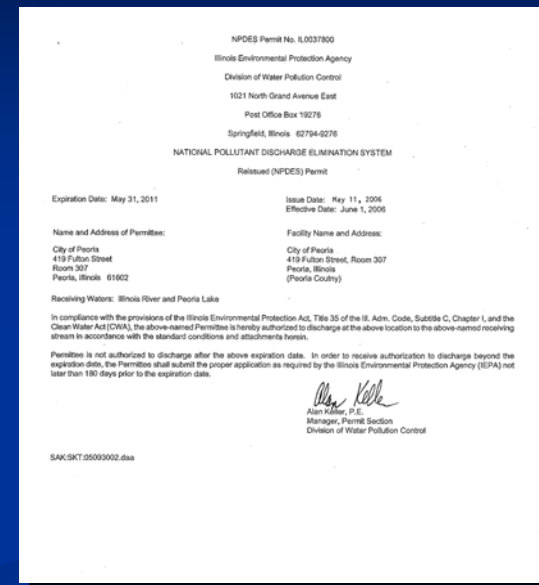


Peoria Combined Sewer Overflow Program



NPDES CSO Permit Requirements

- Permit Issued June 1, 2006
- Requires city to develop CSO Long-Term Control Plan by Dec. 1, 2008
- First steps in developing plan:
 - Water quality study of Illinois River during wet and dry weather conditions
 - Study current conditions in collection system and GPSD wastewater treatment plant
 - Public outreach and involvement



NPDES Permit No. IL037800
Illinois Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand Avenue East
Post Office Box 19278
Springfield, Illinois 62794-0278

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
Released (NPDES) Permit

Expiration Date: May 31, 2011 Issue Date: May 11, 2006
Effective Date: June 1, 2006

Name and Address of Permittee: Facility Name and Address:
City of Peoria City of Peoria
419 Fulton Street 419 Fulton Street, Room 307
Room 307 Peoria, Illinois
Peoria, Illinois 61602 (Peoria County)

Receiving Waters: Illinois River and Peoria Lake

In compliance with the provisions of the Illinois Environmental Protection Act, Title 35 of the Ill. Adm. Code, Subtitle C, Chapter I, and the Clean Water Act (CWA), the above-named Permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the standard conditions and attachments herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the Permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.

Alan Keller
Alan Keller, P.E.
Manager, Permit Section
Division of Water Pollution Control

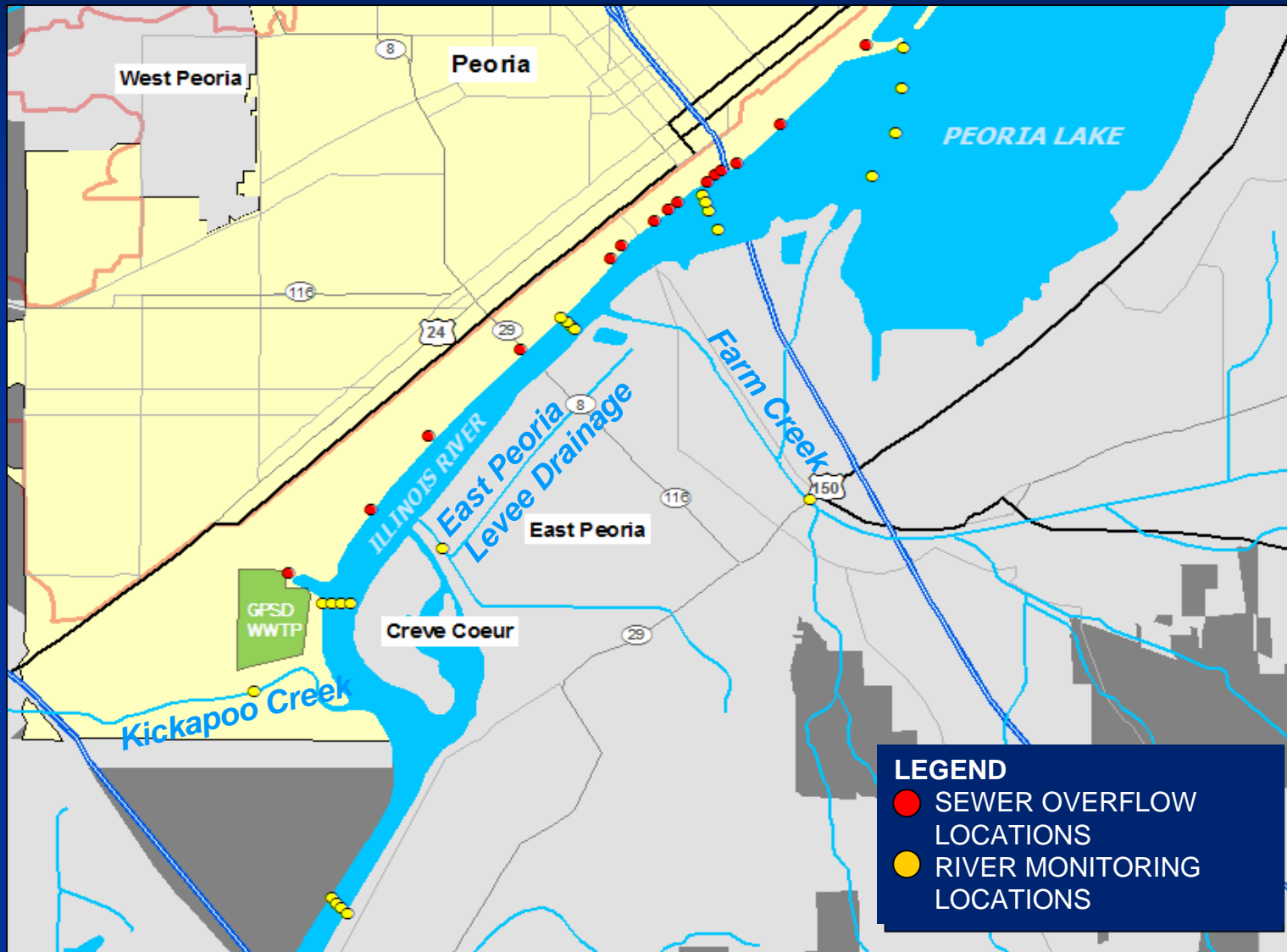
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LTCP River Sampling Events

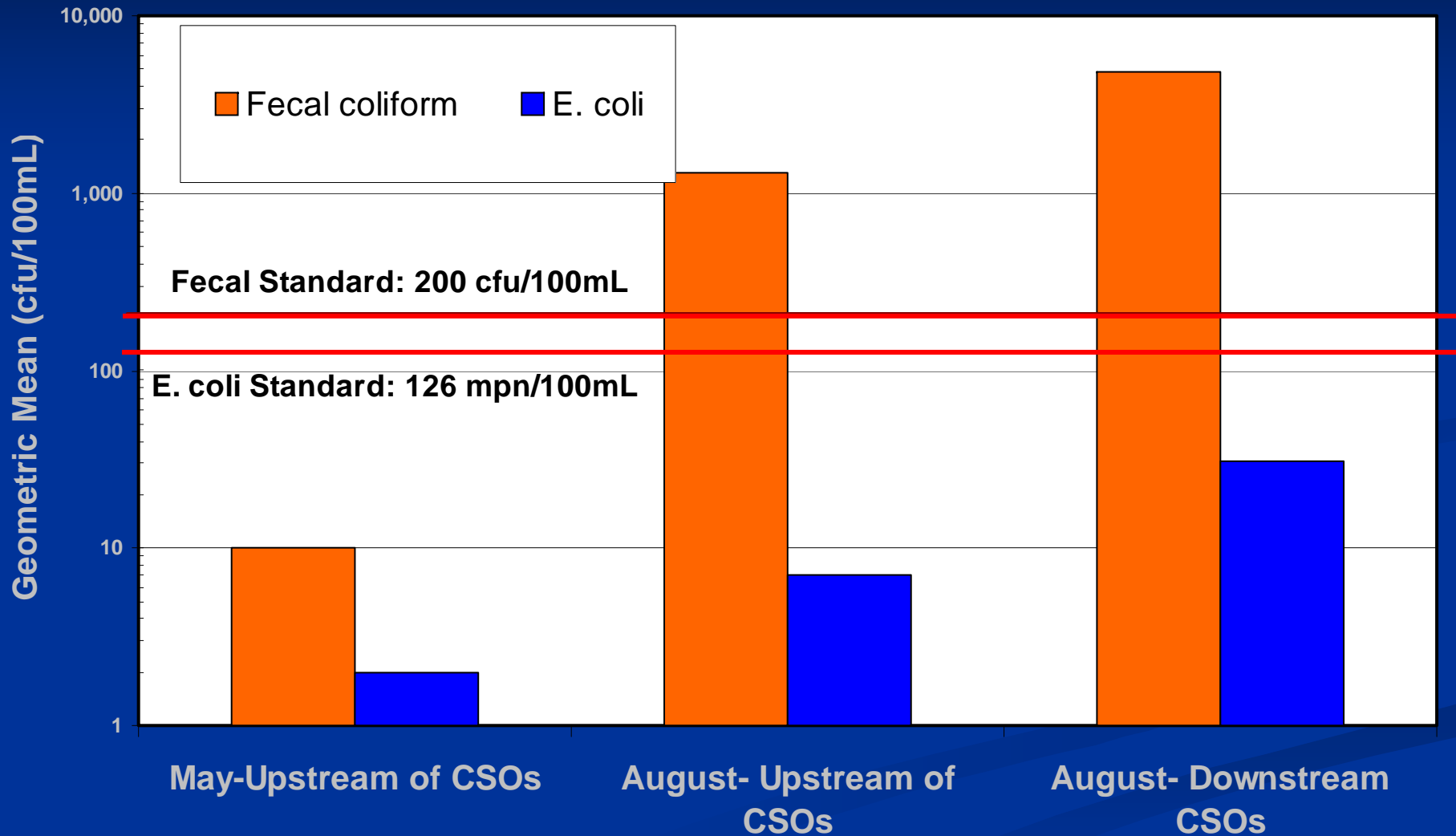
- Three “baseline runs” (no rainfall and no combined sewer overflows occurring)
- Three “storm event runs” to collect bacteria samples:
 - Just before a combined sewer overflow
 - During a combined sewer overflow
 - Approximately 24 hours after the overflow ends



River Monitoring Locations

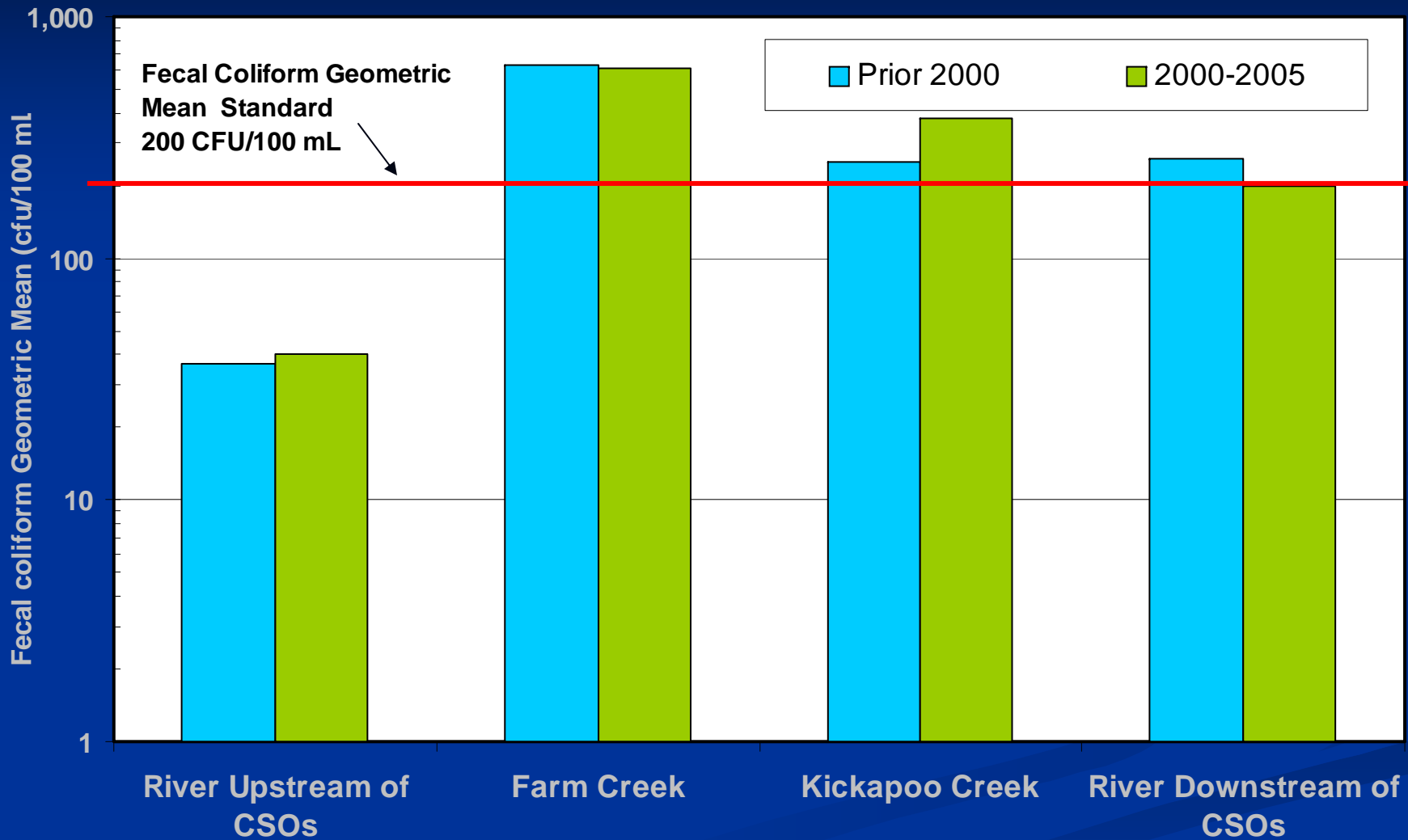


River Bacteria Concentrations- Dry Weather



Data Source: Peoria CSO LTCP sampling

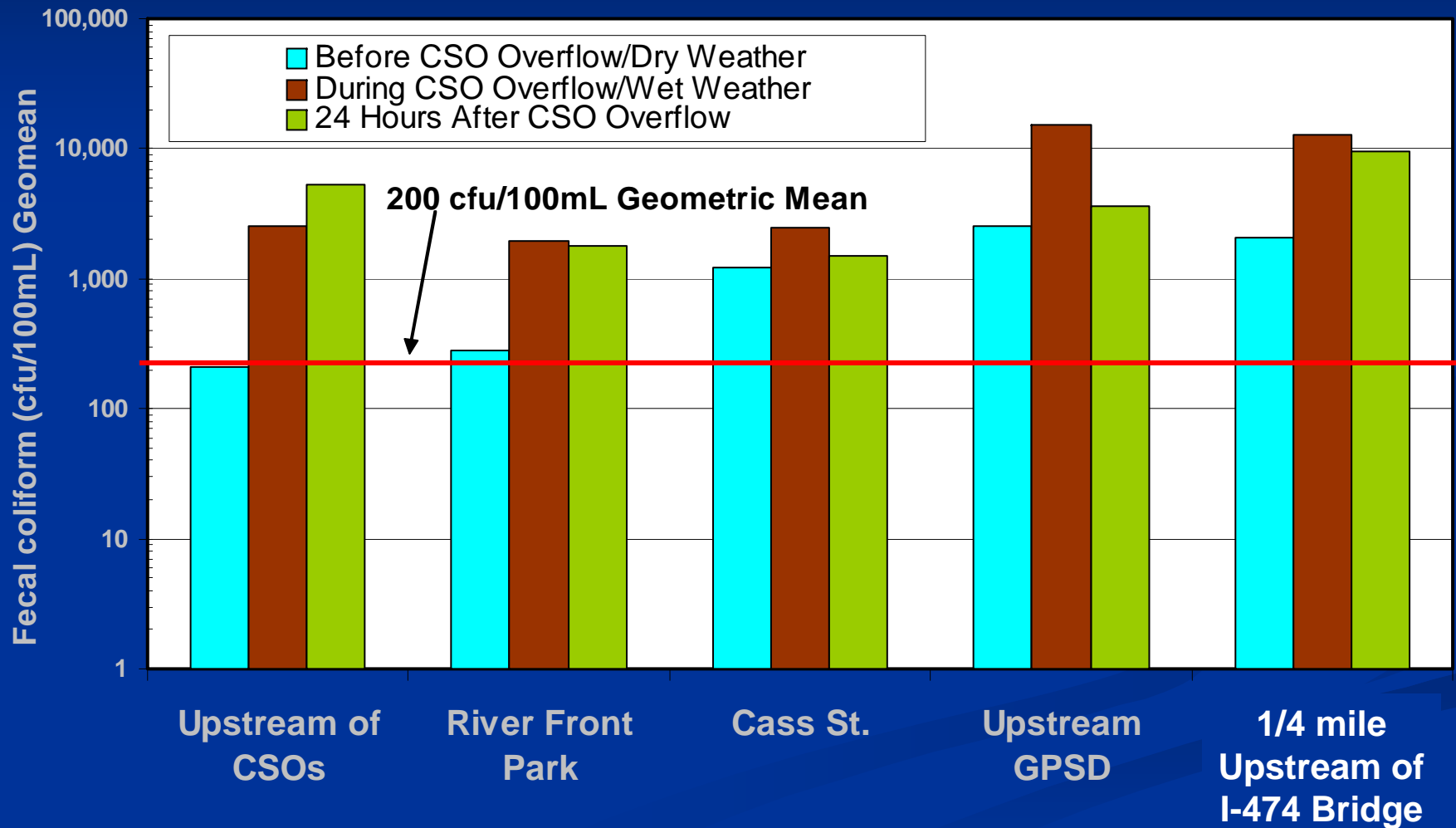
Historical Fecal Coliform Measurements



Data Source: Illinois EPA Storet database

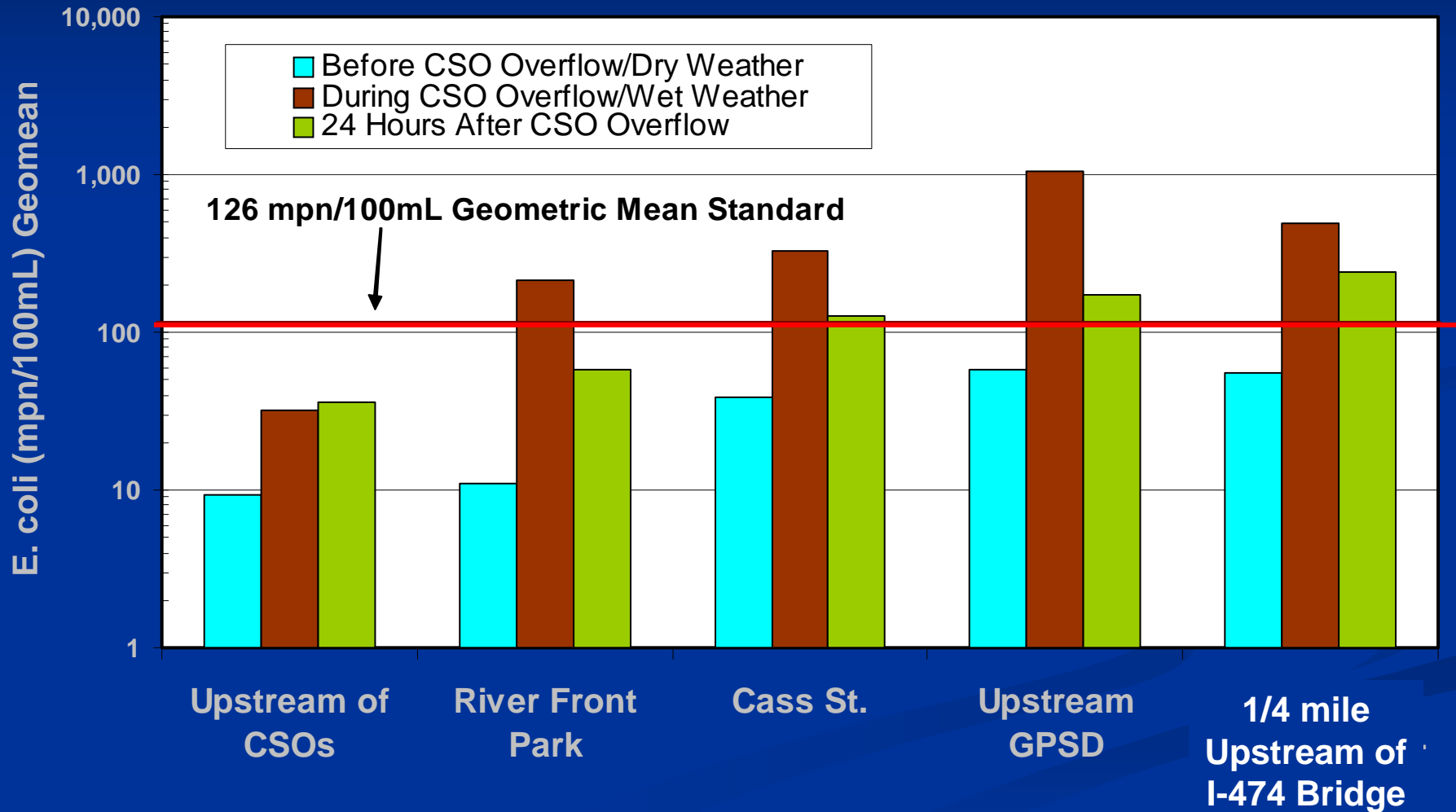
Fecal Coliform During Varying Conditions

April- July 2007



E. Coli During Varying Conditions

April-July 2007



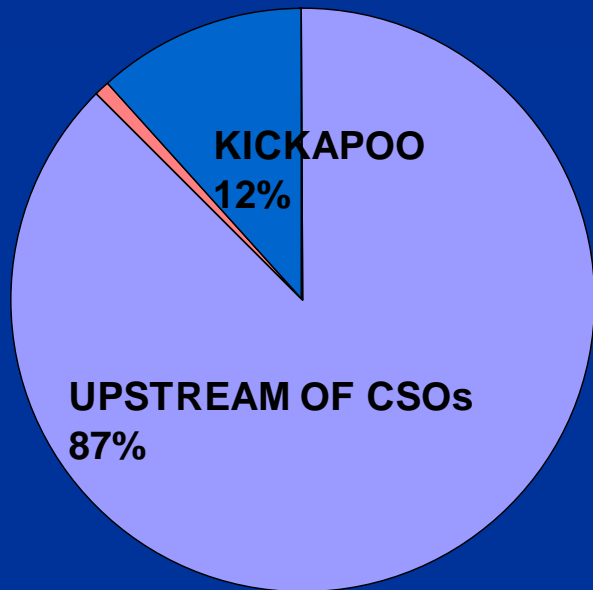
June 2007 Storm Event Bacteria Contributions (mpn/100 mL)

	Upstream of CSOs	Stormwater	Peoria CSOs	GPSD WWTP	East Peoria WWTP	Farm Creek	Kickapoo Creek	East Peoria Levee Drainage
<i>E. coli</i> Minimum	4	2,420	1,000			1,120	435	185
<i>E. coli</i> Maximum	397	>2,420,000	>2,420,000			24,196	24,196	2,420
<i>E. coli</i> Geomean	39	258,396	117,201	7	11	4,084	3,379	900
Fecal Coliform Minimum	10	10,000	1,000	0	0	600	480	56,000
Fecal Coliform Maximum	>60,000	>6,000,000	>6,000,000	200	50	>54,000	>60000	>60000
Fecal Coliform Geomean	3,405	1,903,180	1,804,440	14	23	57,524	55,699	59,178

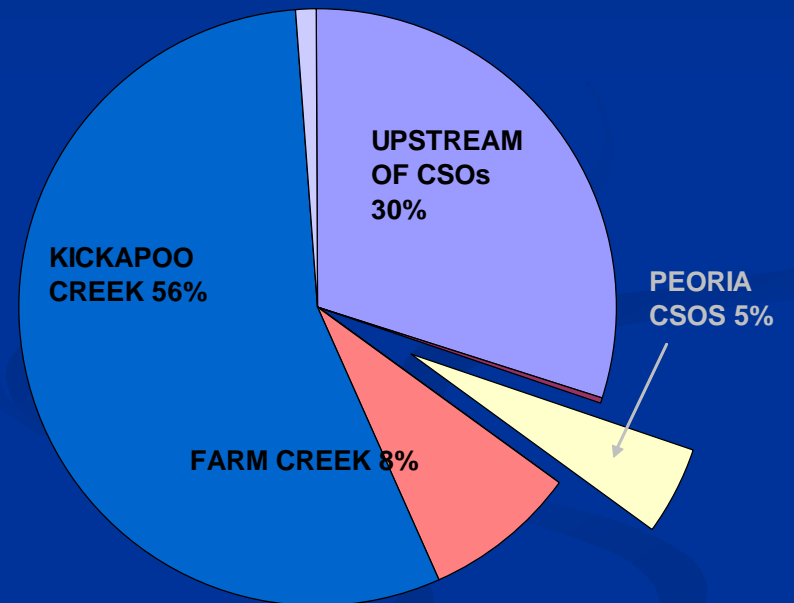
Stormwater bacteria concentrations unusually high; used more typical values from literature for loadings analysis on following slides.

Percent Fecal Coliform Contributions

Fecal Coliform % Dry Weather August



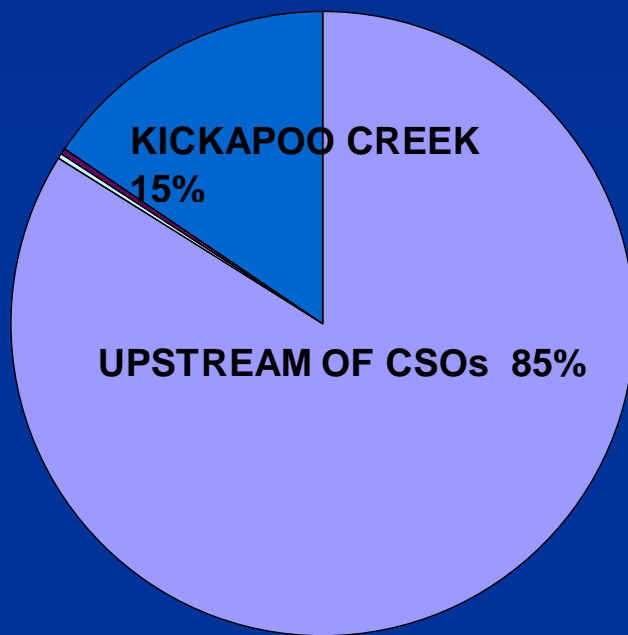
Fecal Coliform % Wet Weather June



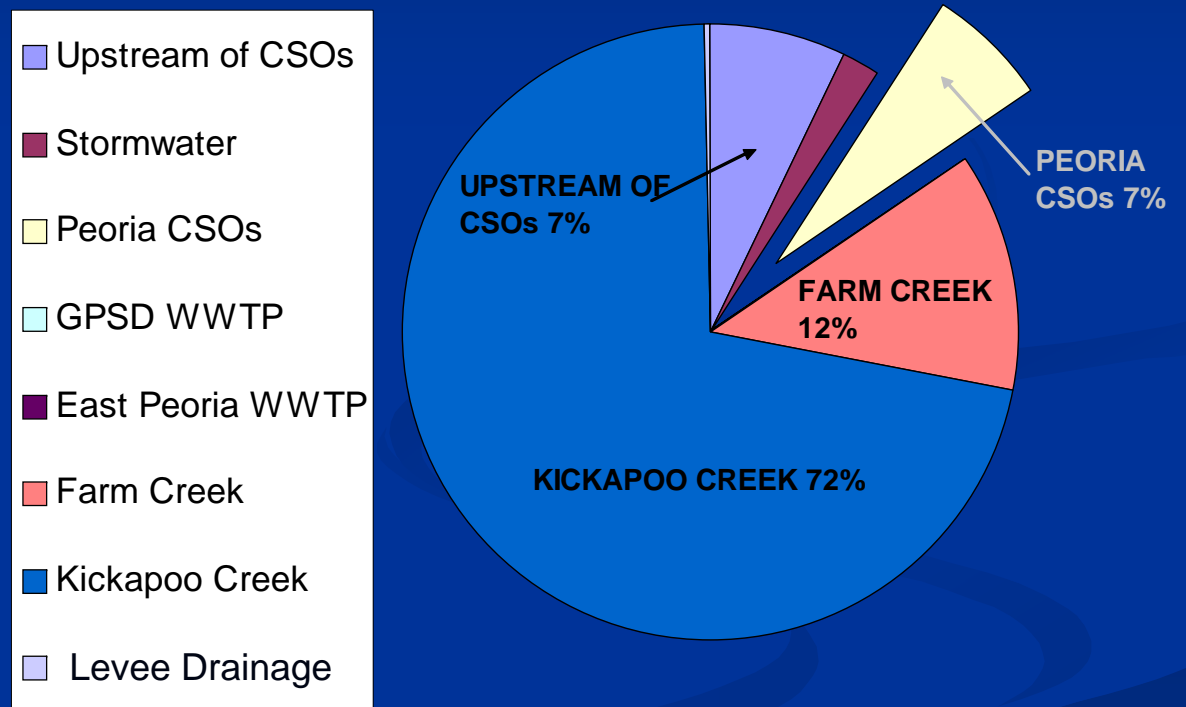
- Upstream of CSOs
- Stormwater
- Peoria CSOs
- GPSD WWTP
- East Peoria WWTP
- Farm Creek
- Kickapoo Creek
- Levee Drainage

Percent *E. Coli* Contributions

E. Coli % Dry Weather August



E. Coli % Wet Weather June



Preliminary Results Summary: General Key Observations

- Elevated bacteria found in Illinois River during dry weather and CSO storm events
- Tributaries and stormwater runoff carry high bacteria levels that are not related to CSOs
- Upstream sources continue to contribute bacteria to the river following a storm event
- During dry and wet weather, bacteria concentrations appeared to increase as you move downstream



Farm Creek

Preliminary Results Summary: General Key Observations Cont'd

- Peoria CSOs contributed approximately 5% of fecal coliform load and 7% of *E. coli* load during June storm event.
 - % contribution from CSOs, however, will vary from event to event
- Other sources account for majority of bacteria load in Illinois River
- In study area, eliminating Peoria CSOs will reduce bacteria load to river but not likely allow Illinois River to meet fecal coliform bacteria water quality standards

Questions?

