

# ORSANCO Monitoring Programs

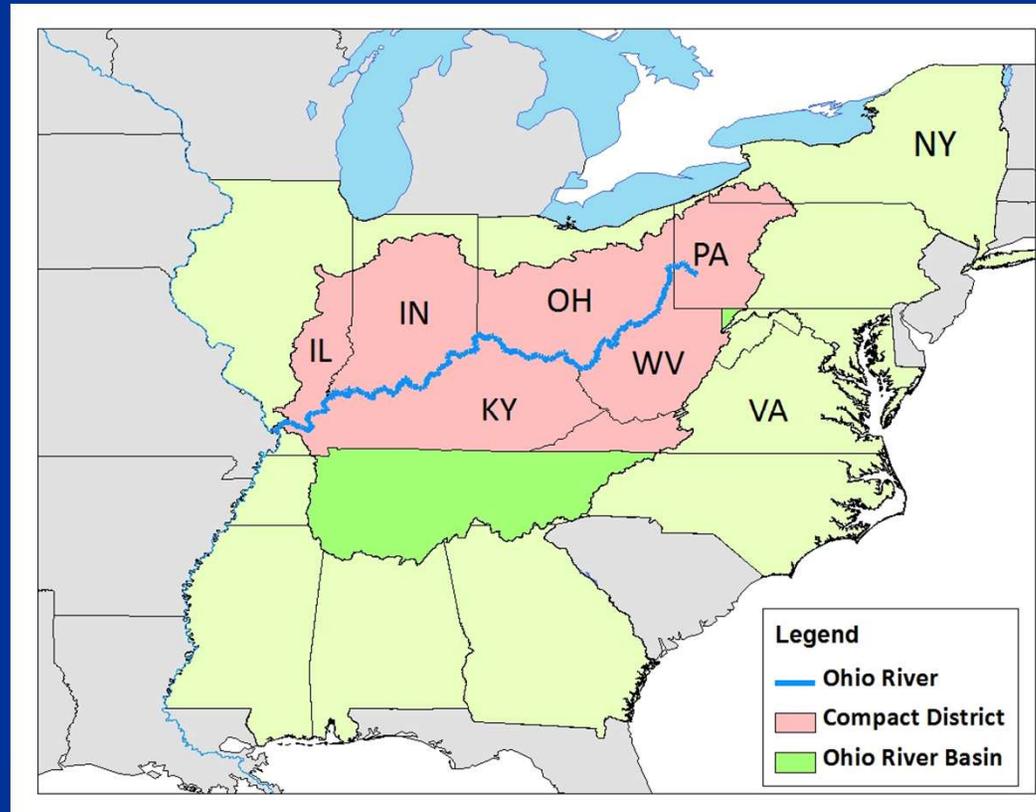


The Ohio River Valley Water Sanitation Commission  
(ORSANCO)



# Ohio River Valley Water Sanitation Commission

- Established by Compact (1948)
- Ratified by Congress
- Eight signatory states
  - IL, IN, NY, KY, OH, PA, VA, WV



# ORSANCO Mission

- Abatement of interstate water pollution in Ohio River Valley compact district.
- Primary focus on Ohio River
- Direct action and coordination of state activities to improve water quality in the Ohio River Basin
- Establish minimum WQ standards
- Wastes discharged in one state shall not “injuriously affect” the waters of another state

# What We Do

- Our mission is to protect the uses of the river.
- We monitor the river to make sure it is:
  1. Safe for drinking water
  2. Safe to recreate
  3. Safe to eat the fish
  4. Safe for aquatic life



# Programs

- Water Quality Monitoring & Assessment
- Biological Programs
- Organics Detection System
- Spill Detection & Notification
- Pollution Control Standards
- Public Involvement & Education
- Special Projects
- Water Resources (i.e. quantity)

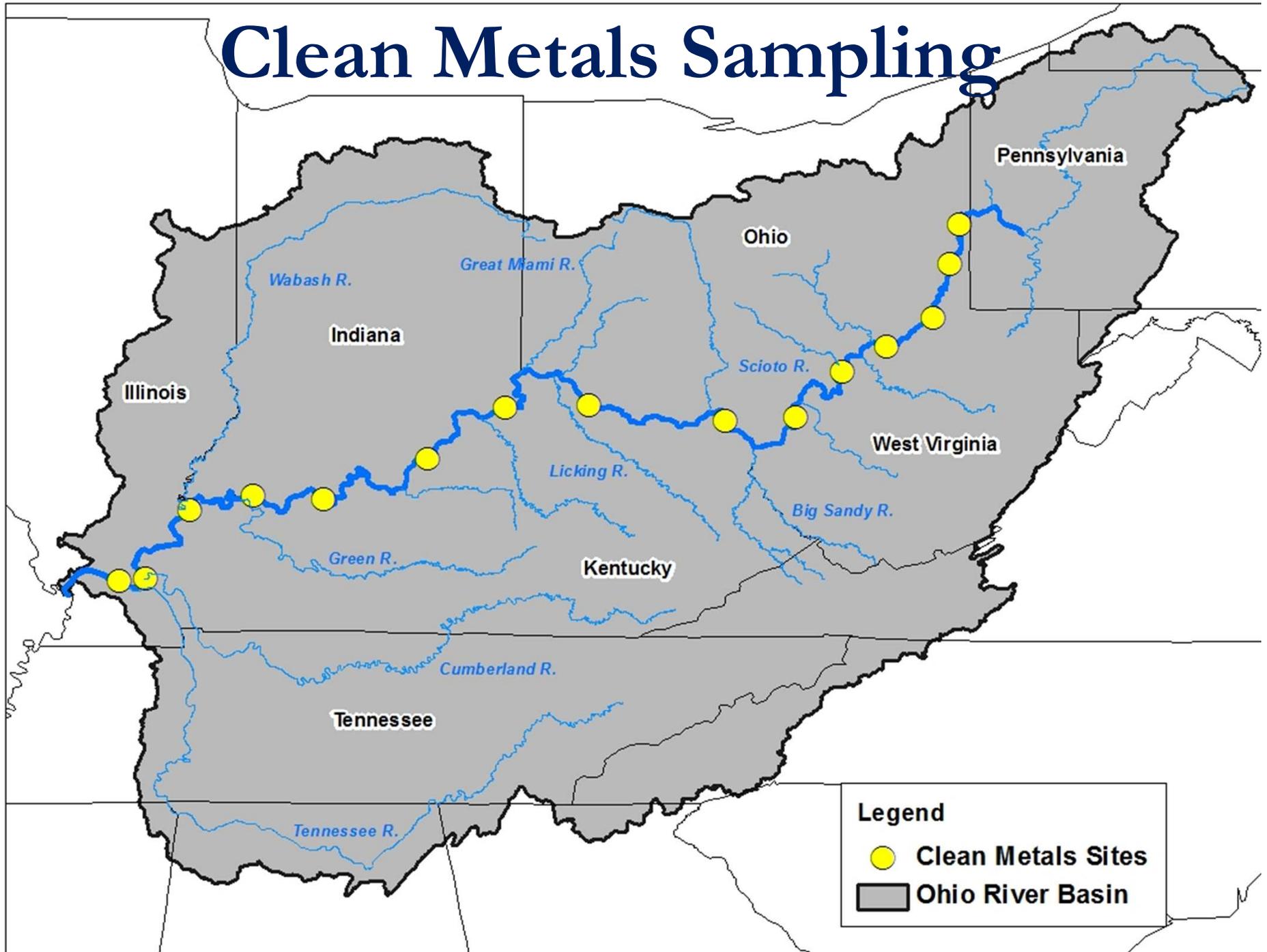


# Monitoring Programs

- Clean Metals
- Bimonthly Sampling
- Contact Recreation
- Algae / Nutrients
- Biological
- Organics Detection System
- Special Projects



# Clean Metals Sampling



# WQC Violations Clean Metals

## Total Iron State Criteria Violations

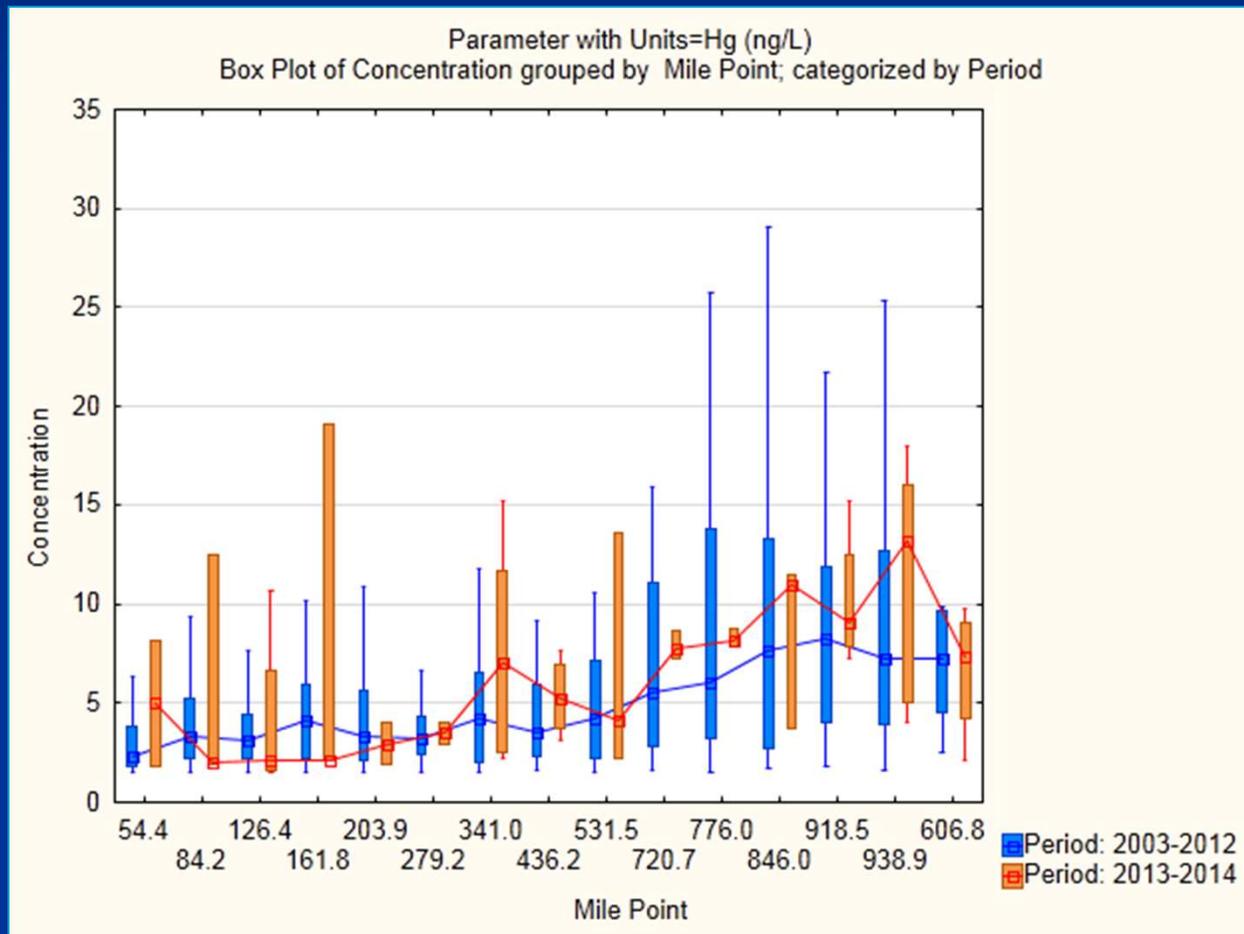
Mile Point	SiteName	# Violations
84.2	Pike Island	1
126.4	Hannibal	1
161.8	Willow Island	1
341.0	Greenup	4
436.2	Meldahl	3
531.5	Markland	1
606.8	McAlpine	2
720.7	Cannelton	5
776.0	Newburgh	5
846.0	J.T. Myers	2
918.5	Smithland	4
938.9	L&D 52	5
<b>Total</b>		<b>34</b>

## Total Mercury Violations

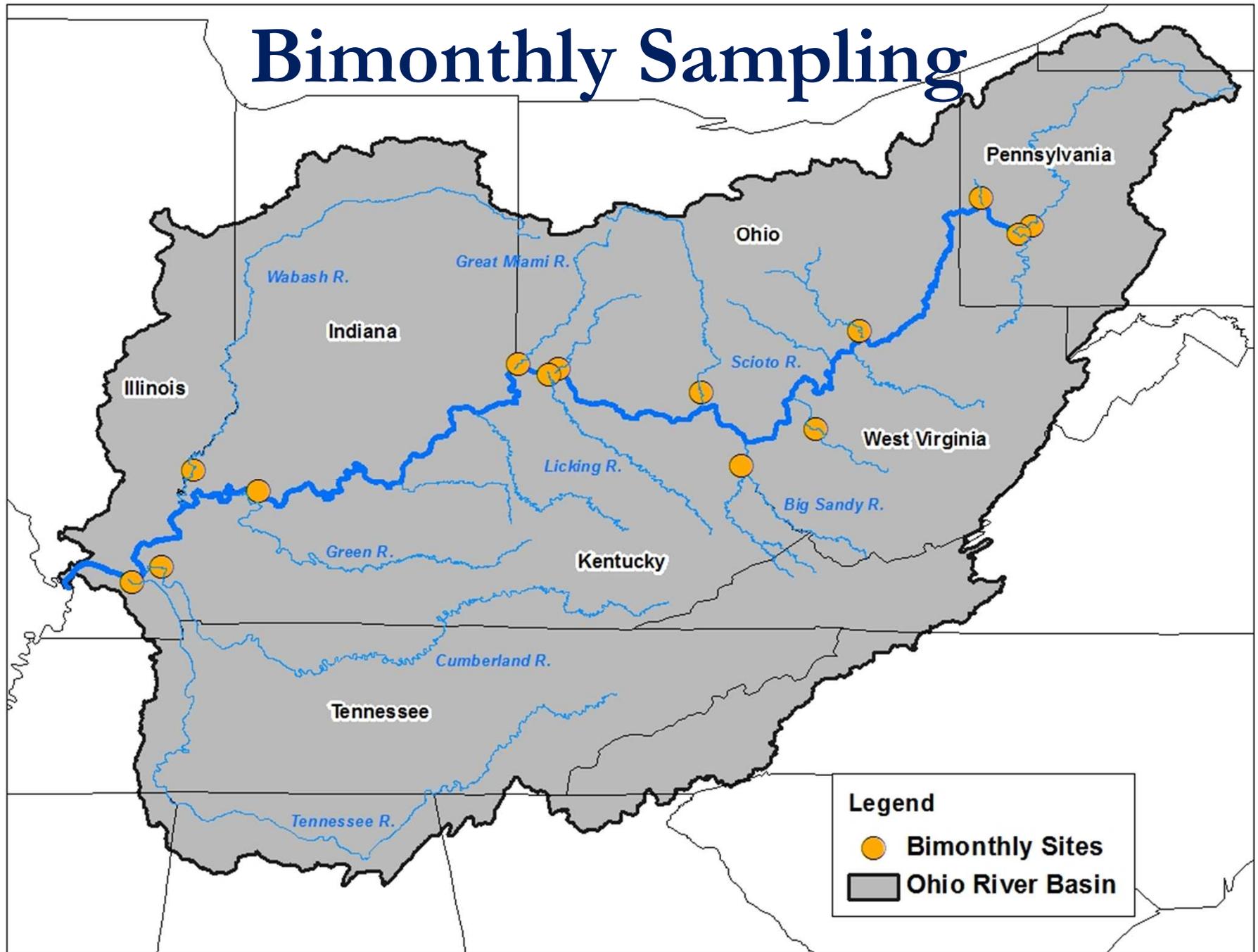
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776.0	Newburgh	1
918.5	Smithland	1
938.9	L&D 52	3
<b>Total</b>		<b>9</b>

- Clean Metals data July 2013-May 2014

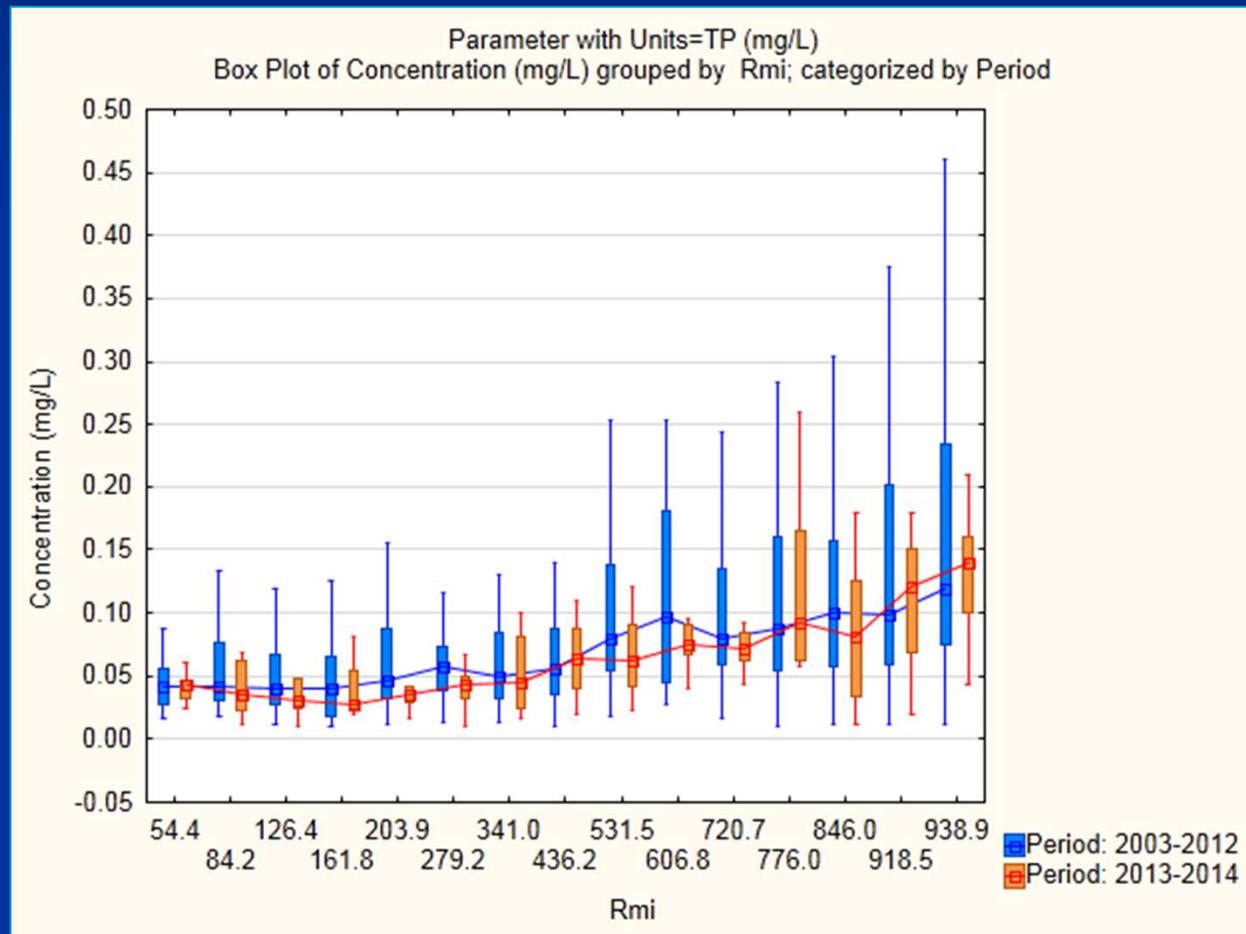
# Clean Metals Sampling 2013-2014 vs Previous Decade: Hg (ng/L)



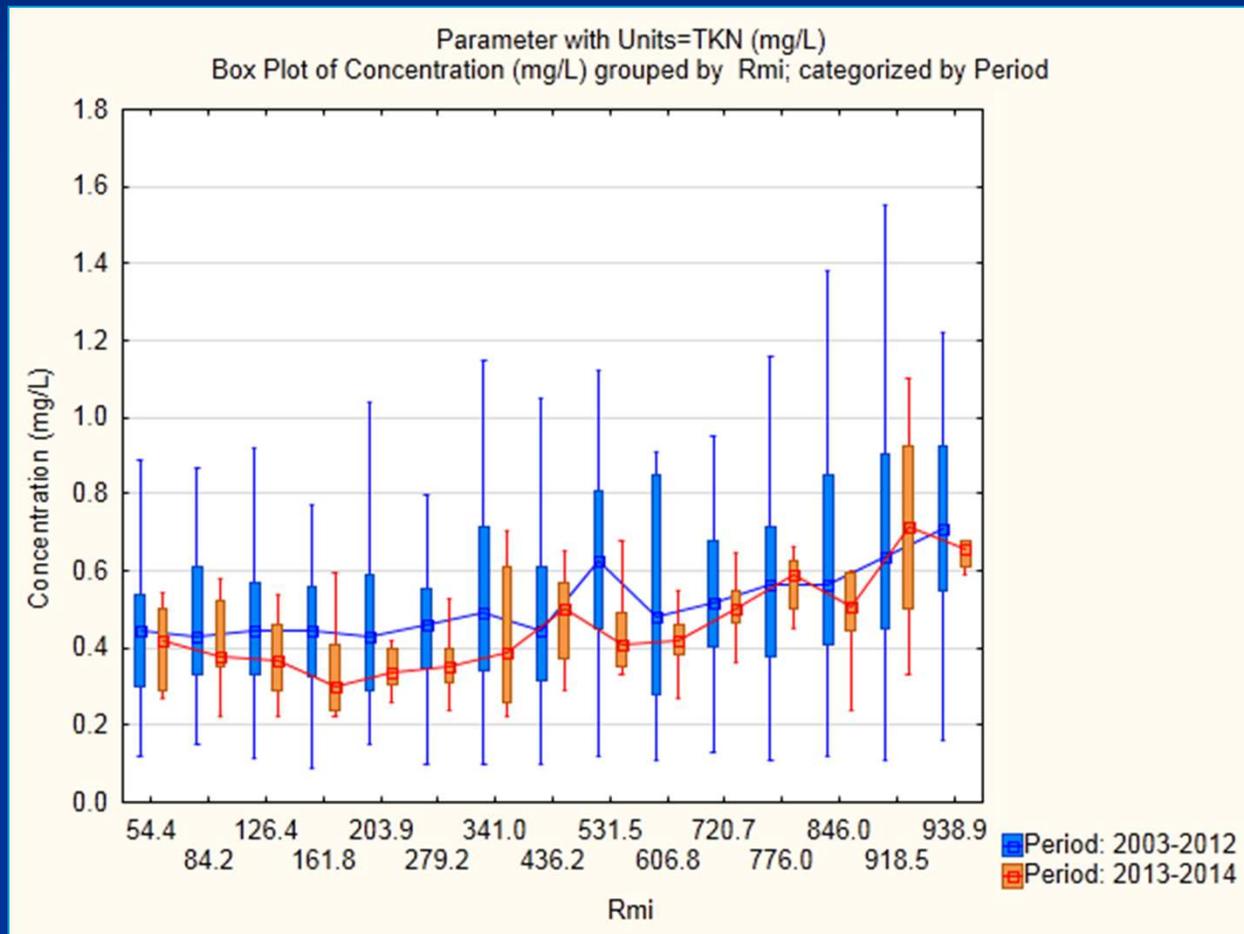
# Bimonthly Sampling



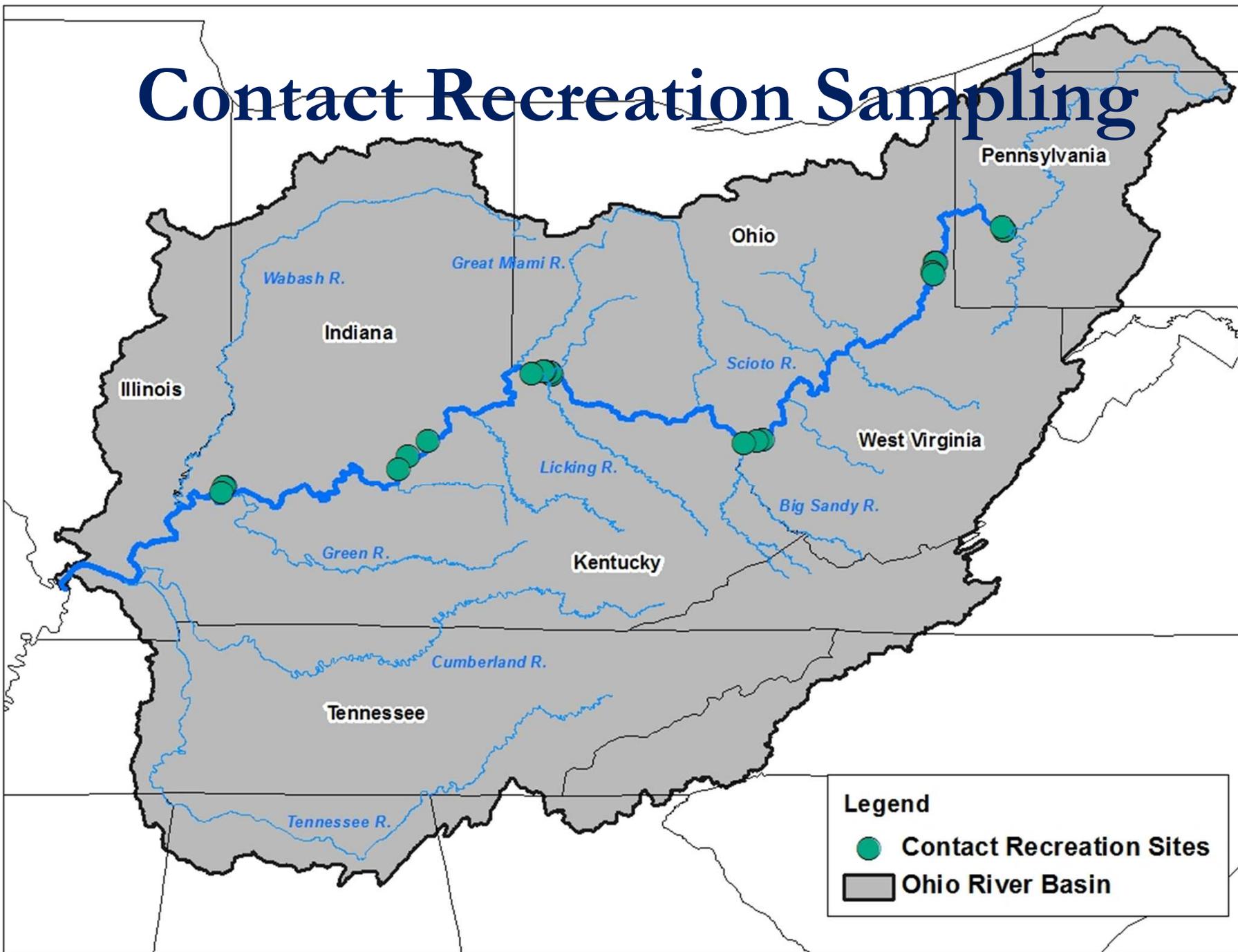
# Bimonthly Sampling 2013-2014 vs Previous Decade: (TP mg/L)



# Bimonthly Sampling 2013-2014 vs Previous Decade: TKN (mg/L)



# Contact Recreation Sampling



# Contact Recreation Monitoring

- Bacteria samples collected in 6 largest CSO communities:  
Pittsburgh, Wheeling, Huntington, Cincinnati, Louisville and Evansville.
- Weekly samples collected Apr 1 - Oct 31.
- Analyze for *E. coli* and fecal coliforms.
- WQS:
  - Monthly GeoMean - 130CFU/100mL
  - Single sample - 240CFU/100mL



Percent Exceeded April-September 2014	Pittsburgh* based on 3 months	Wheeling	Huntington	Cincinnati	Louisville	Evansville
Monthly Geometric Mean	33%	83%	0%	0%	50%	50%
Single Sample Max	33%	50%	10%	10%	17%	27%

# Contact Recreation Monitoring



Additional bacteria monitoring in Cincinnati - analyze for Enterococcus using Enterolert and for *E.coli*/Total Coliform using Colilert at three cross-sectional locations

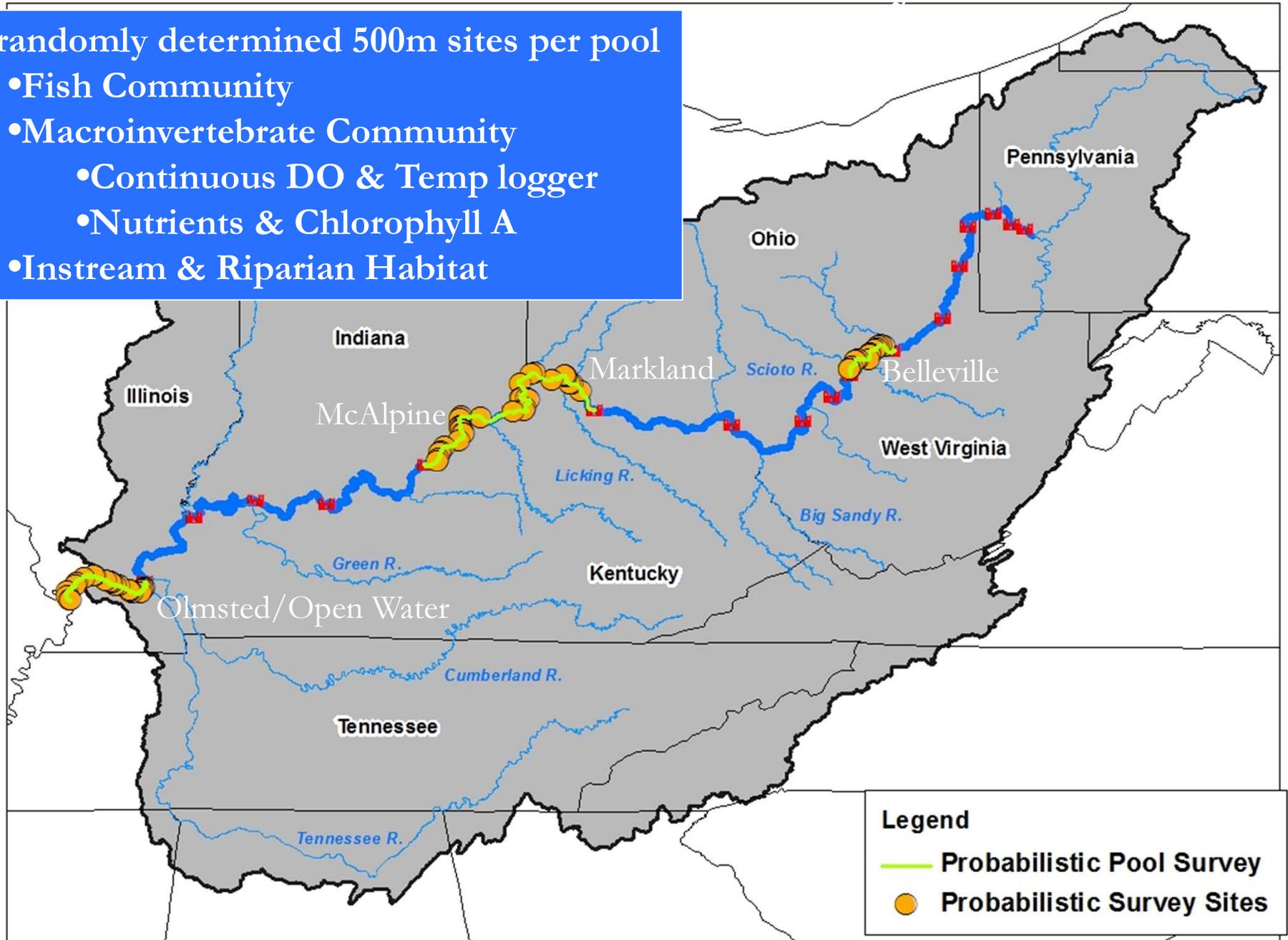
## Special Event Monitoring

Buffalo Trails Multisport Racing  
(Maysville) Cincinnati Triathlon  
The Great Ohio River Swim

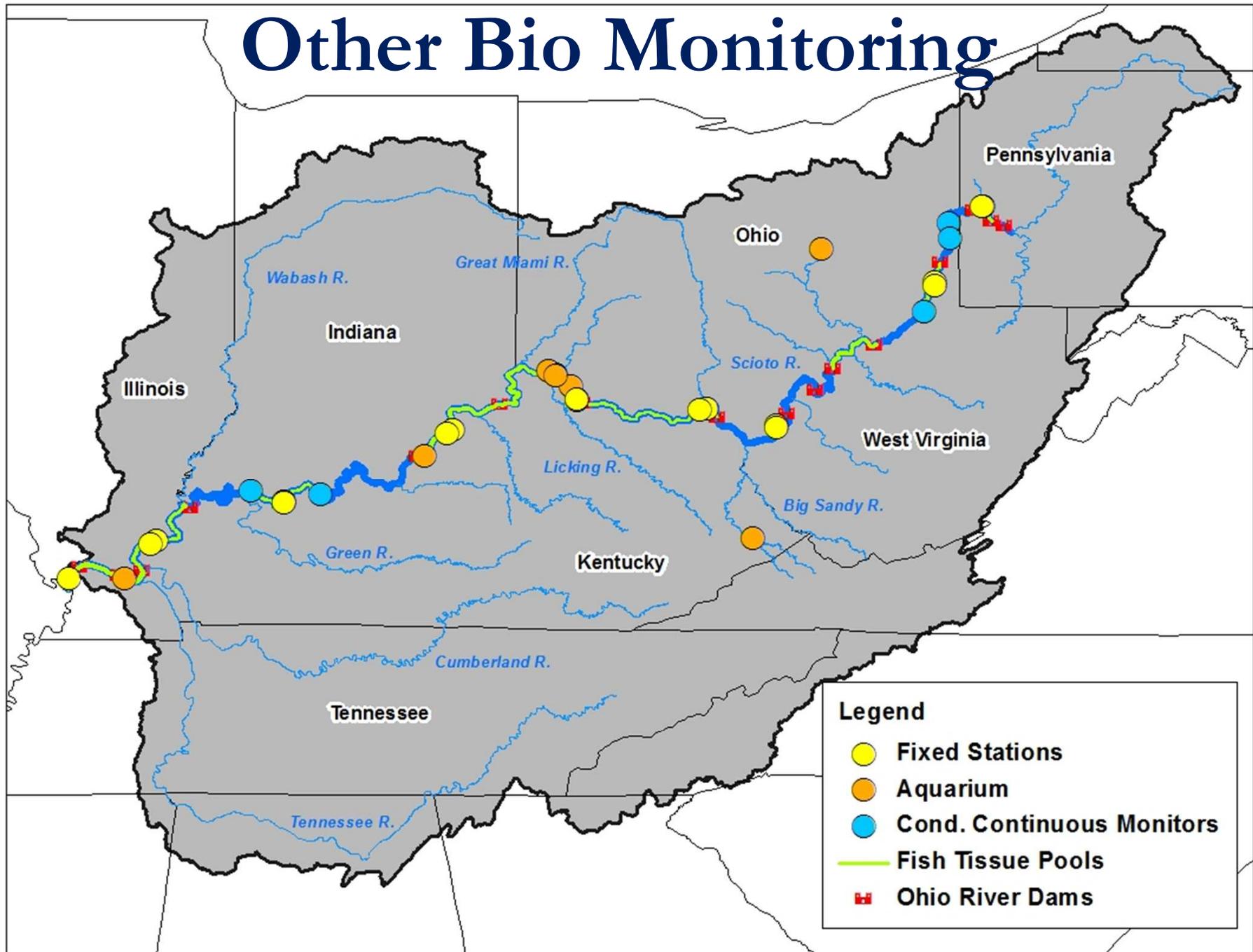


# Probabilistic Pool Survey Sites

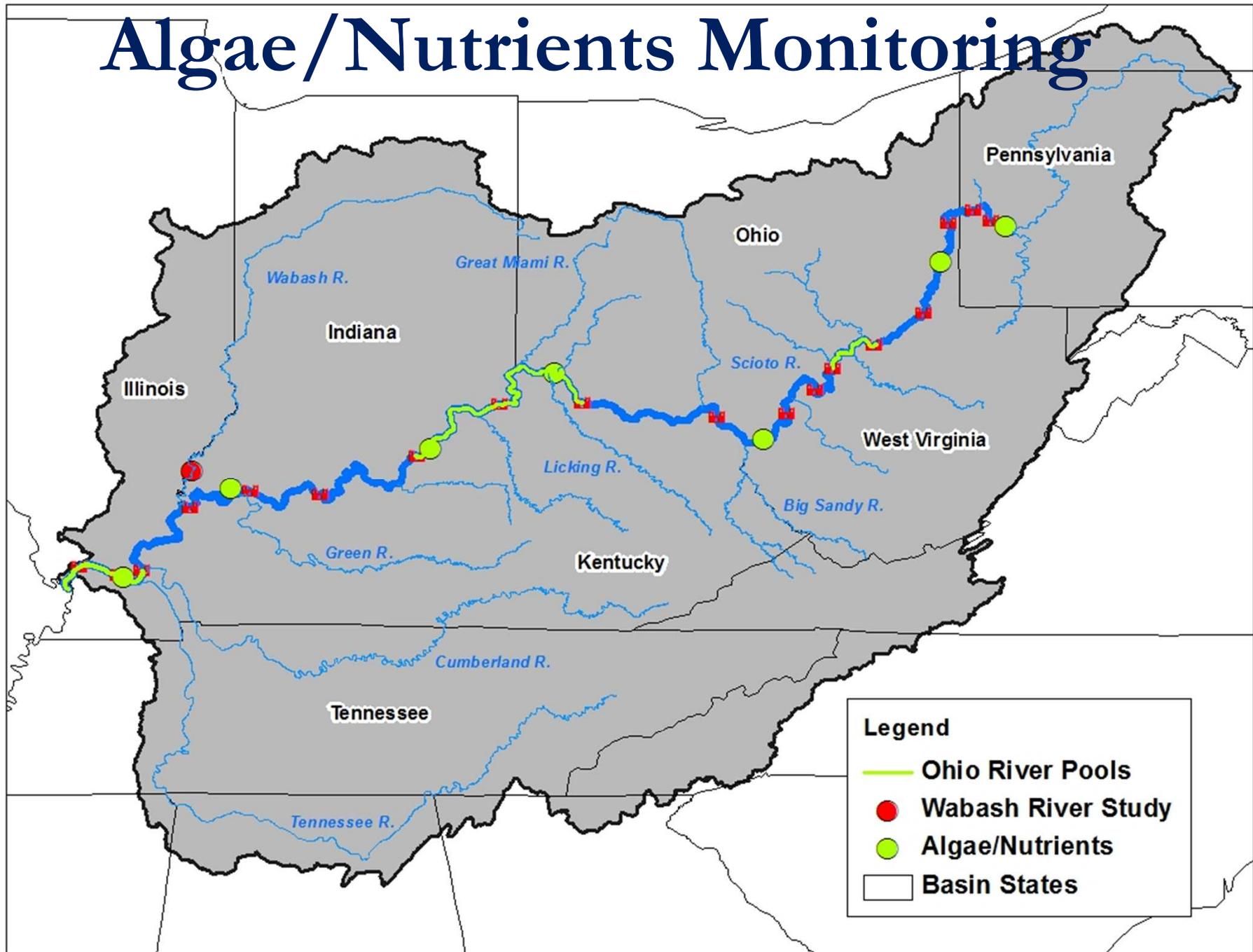
- 15 randomly determined 500m sites per pool
  - Fish Community
  - Macroinvertebrate Community
    - Continuous DO & Temp logger
    - Nutrients & Chlorophyll A
  - Instream & Riparian Habitat



# Other Bio Monitoring

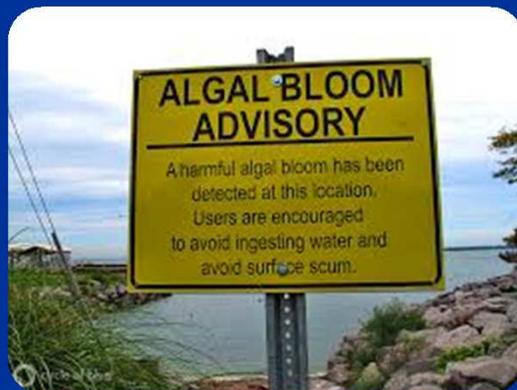


# Algae/Nutrients Monitoring

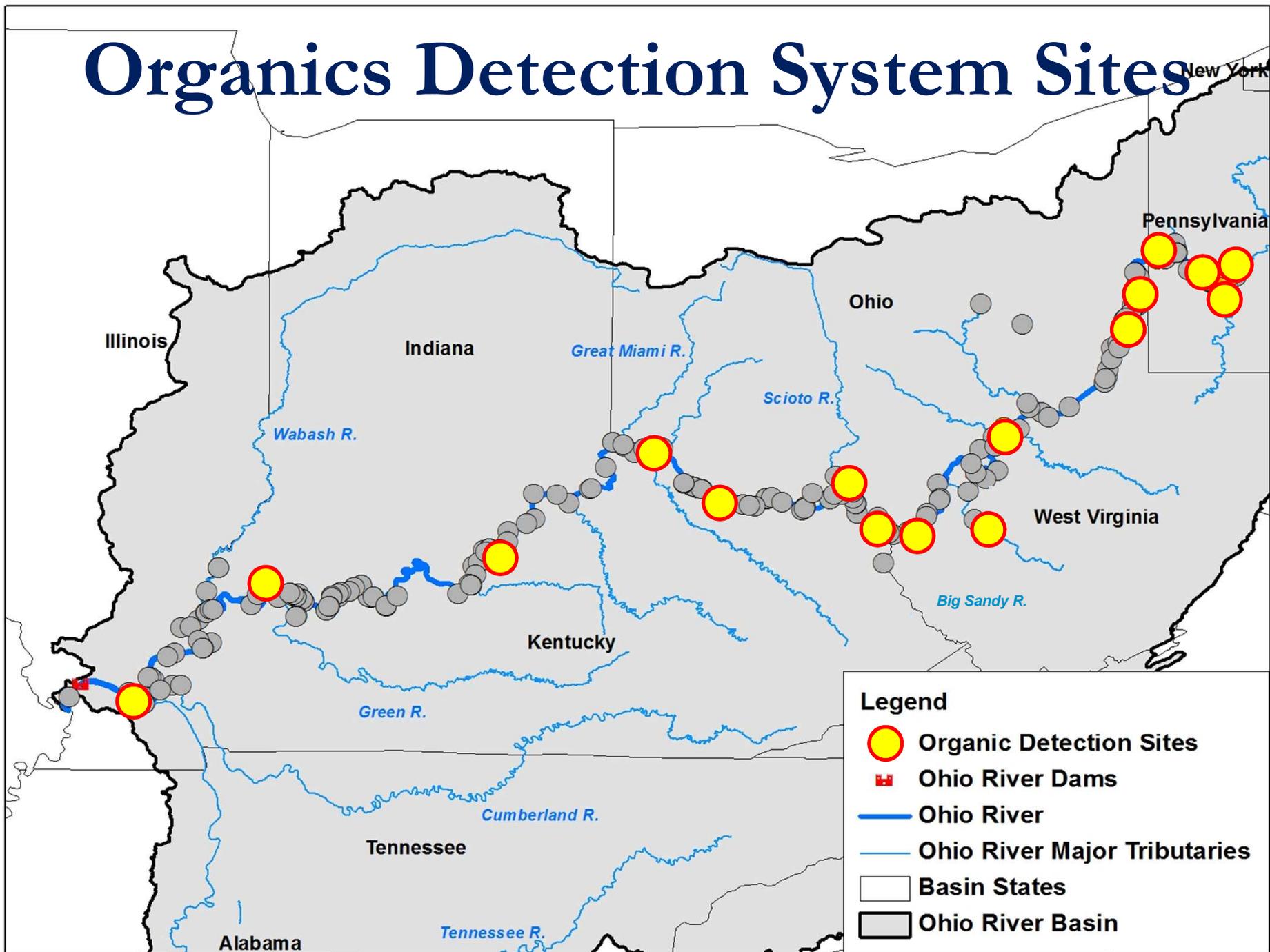


# Algae/Nutrients Program

- Sampling at water plants ended June 30, 2014
- Re-purposed funds to collect nutrients at macroinvertebrate sites
- Sampling for HABs on an “as-needed” basis.
- ORSANCO is working with state agencies to develop an Ohio River HAB Response Plan



# Organics Detection System Sites





# Ohio River Health

- Drinking water: 100% full support
- Aquatic life: 100% full support
- Fish consumption: 100% partial
- Contact recreation:
  - 36% full support
  - 40% partial support
  - 24% non-support



Source: Biennial Assessment of Ohio River Water Quality Conditions: 2009-2013  
(ORSANCO, 2014)

A scenic photograph of a sunset over a wide river. The sun is low on the horizon, casting a warm orange glow across the sky and reflecting on the water. In the foreground, the silhouette of a gazebo with a pointed roof and a central spire is visible on a dark, elevated bank. The sky is filled with soft, wispy clouds, and the overall atmosphere is peaceful and serene.

# Questions?

Contact Information

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