

# ORSANCO

## Interstate Collaboration to Protect the Ohio River

The Ohio River Valley Water Sanitation Commission



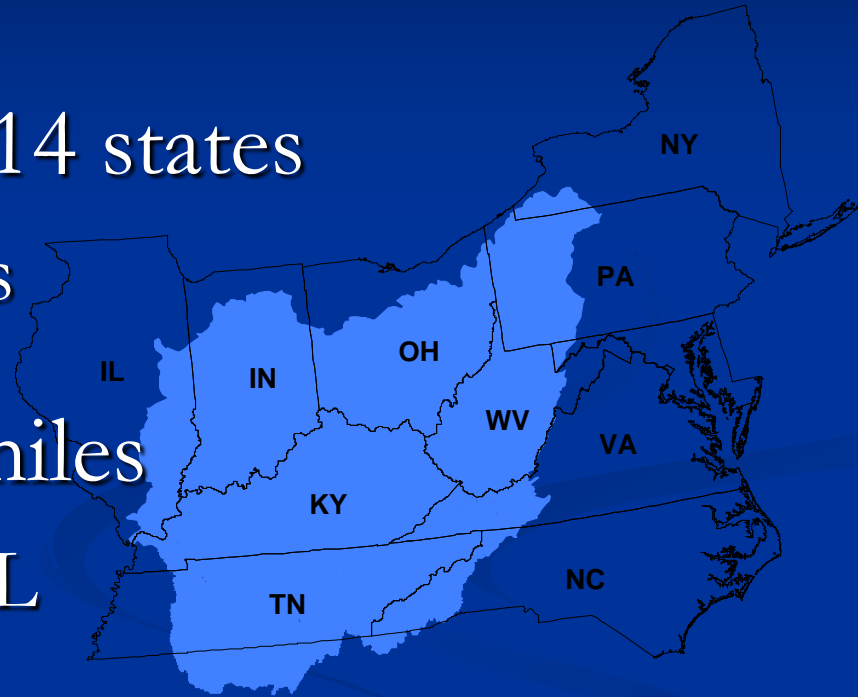
# Outline

- Ohio River Background
- What is ORSANCO?
- How Does it Function?
- Examples of Current Collaborative Efforts



# Ohio River Basin

- Basin covers portions of 14 states
  - Over 200,000 square miles
- Mainstem stretches 981 miles
  - Pittsburgh, PA to Cairo, IL
- Home to over 25 million people



# Diverse Uses

- Water Supply
- Food Source
- Aquatic life
- Recreation
- Agriculture
- Wastewater
- Navigation
- Energy



# What is ORSANCO?

- Ohio River Valley Water Sanitation Commission
  - In 1920s and 1930s the Ohio River was very polluted
  - Problem was too big for just one city or state to fix
  - Created ORSANCO in 1948, bringing 8 states together to protect the river



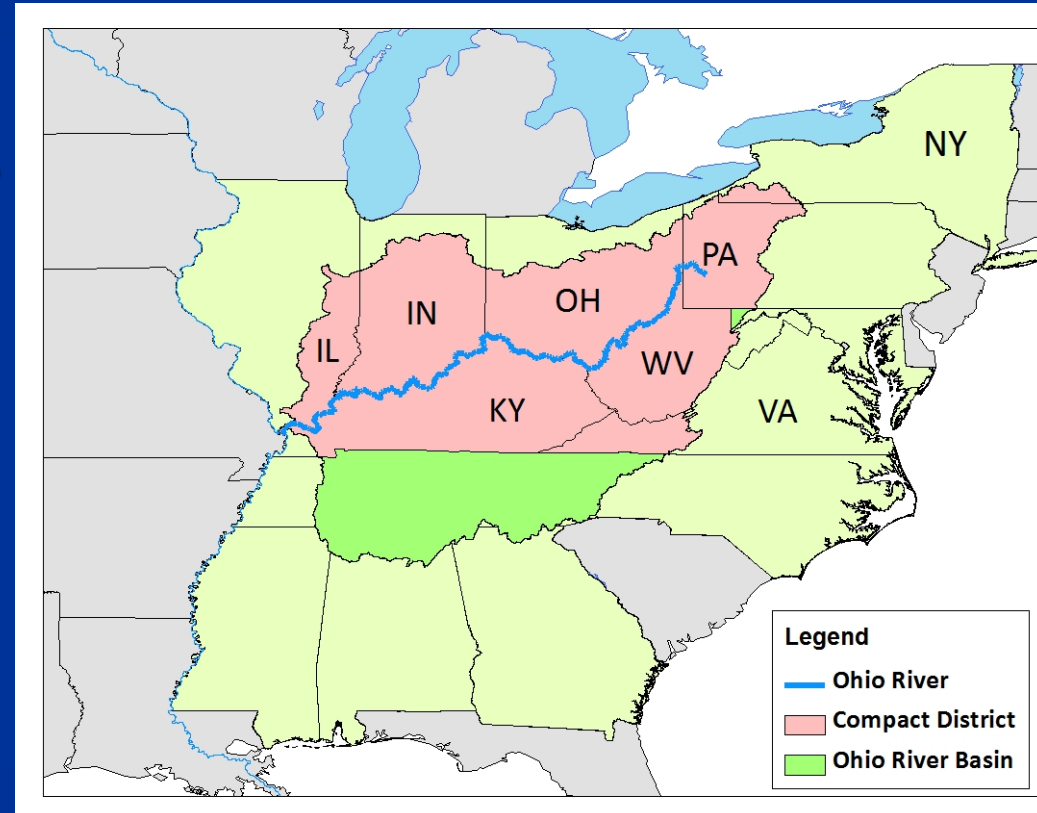
# Ohio River Valley Water Sanitation Commission

- 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

# How the Commission Operates

- 3 Commissioners from each state
- 3 federal Commissioners
- Funding
  - States
  - US EPA
- 20 person staff
- Numerous inter-agency and stakeholder advisory committees





# What We Do

- Our mission is to protect the river to make sure it safe to use.
- We work to ensure the Ohio River is:
  1. Safe for drinking water
  2. Safe to recreate
  3. Safe to eat the fish
  4. Supports a healthy aquatic ecosystem

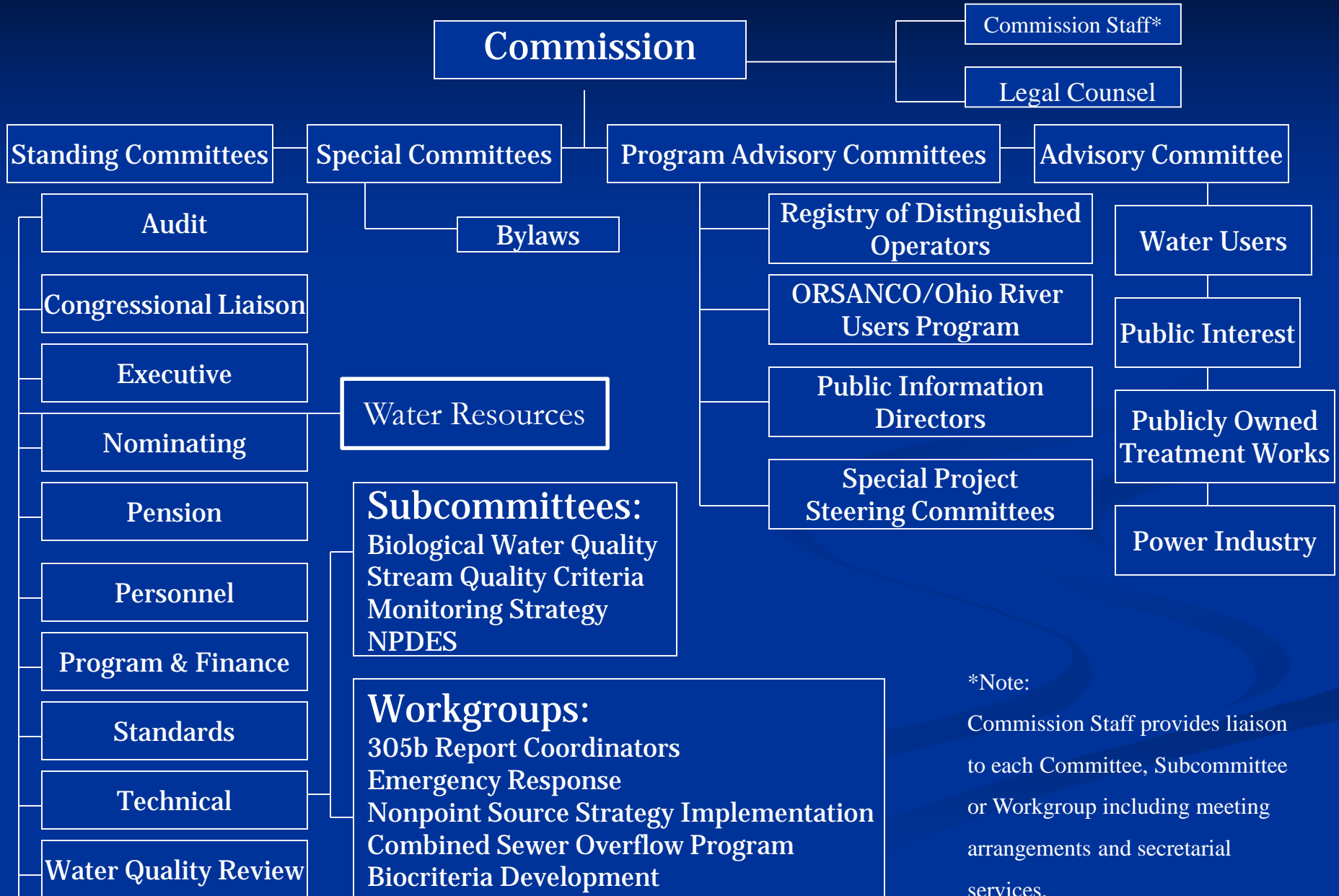


# Programs

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



# ORSANCO Committee Structure



**\*Note:**  
Commission Staff provides liaison to each Committee, Subcommittee or Workgroup including meeting arrangements and secretarial services.

# Challenges and Solutions

- Competing Uses
- Diverse Interests
- Multi-jurisdictions
  - Federal / state/ municipal
- Shared Problem Recognition
  - Identify common needs among stakeholders
  - Need for one voice
- Engage Stakeholders
  - Give stakeholders a seat at the table
- Communication is key to achieving buy-in
  - Problem definition, challenges, limitations, options, benefits of solution



# Collaborative Efforts to Address Current Issues

- Bacteria TMDL
- Spill Modeling and Source Water Protection
- Mercury Bioaccumulation in Fish
- Harmful Algal Blooms

# Bacteria TMDL

- Approximately two thirds of the Ohio River listed as impaired due to bacteria levels.
- EPA Region 5 leading effort to complete TMDL for entire length of the Ohio River.
- ORSANCO's Role
  - Conducted extensive river-wide bacteria monitoring
  - TMDL Workgroup serves as forum for states and federal agencies to discuss approach, review TMDL documents, and coordinate activities.

# Spill Modeling

- Ohio River Spill Modeling System
  - Developed in 2001
  - Based on USGS BLTM model
  - Uses USACE CASCADE flows
- Predicts plume time-of-travel
  - Leading edge; peak; trailing edge
- Estimates pollutant concentration
- Utilized to:
  - Inform water utilities and others of spill location
  - Inform sampling crews where to monitor
- 2014 Elk River spill highlighted model limitations
- Spill model upgrade
  - Working with US EPA, NWS, USACE, and drinking water utilities to improve modeling capabilities.



# Mercury Studies

- Effort underway to better understand mercury conditions in the Ohio River
- Monitoring Efforts
  - Routine bi-monthly sampling on Ohio and tribs
  - Completed 1 BAF and 2 more underway to better understand Hg bioaccumulation in fish
  - Initiated 1-year tributary monitoring program
- Formed Mercury Workgroup
  - Representatives from states, federal agencies and other Hg experts.



A photograph of a river with green water and a rocky, vegetated bank. The water is a vibrant green color, and the bank is covered in dense green foliage and rocks. The text "2015 Ohio River HAB Event" is overlaid on the image in a white, serif font with a drop shadow.

# 2015 Ohio River HAB Event

# 2015 HAB Timeline

- Aug 19 reported as paint spill (Wheeling, WV) (ORM 84)
- Week of 9/1: First indication of bloom in Meldahl and Markland Pools (Cincinnati area) (ORM 460)
- Week of 9/7: Bloom extends to almost to Louisville, KY (ORM 606)



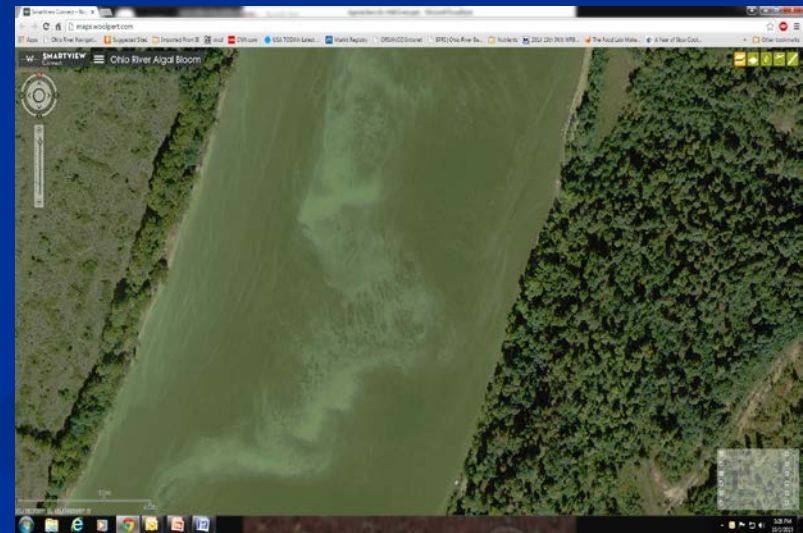
# 2015 HAB Timeline (Cont.)

- Week of 9/28: Report of localized algae near Evansville (ORM 791).
- Week of 10/5: Algae visible at Newburgh L&D (ORM776)



# ORSANCO's Role

- ORSANCO served as a Coordinating Partner
- Worked closely with State, Federal and Local Partners
- Communicated with Drinking Water Utilities
- Convened Planning Conference Calls
- Facilitated Public Information coordination
- Provided a coordinated informational resource via its website [WWW.ORSANCO.ORG](http://WWW.ORSANCO.ORG)
- Coordinated Sampling Surveys
- Facilitated Communication for Recreation Advisory issuance and removal

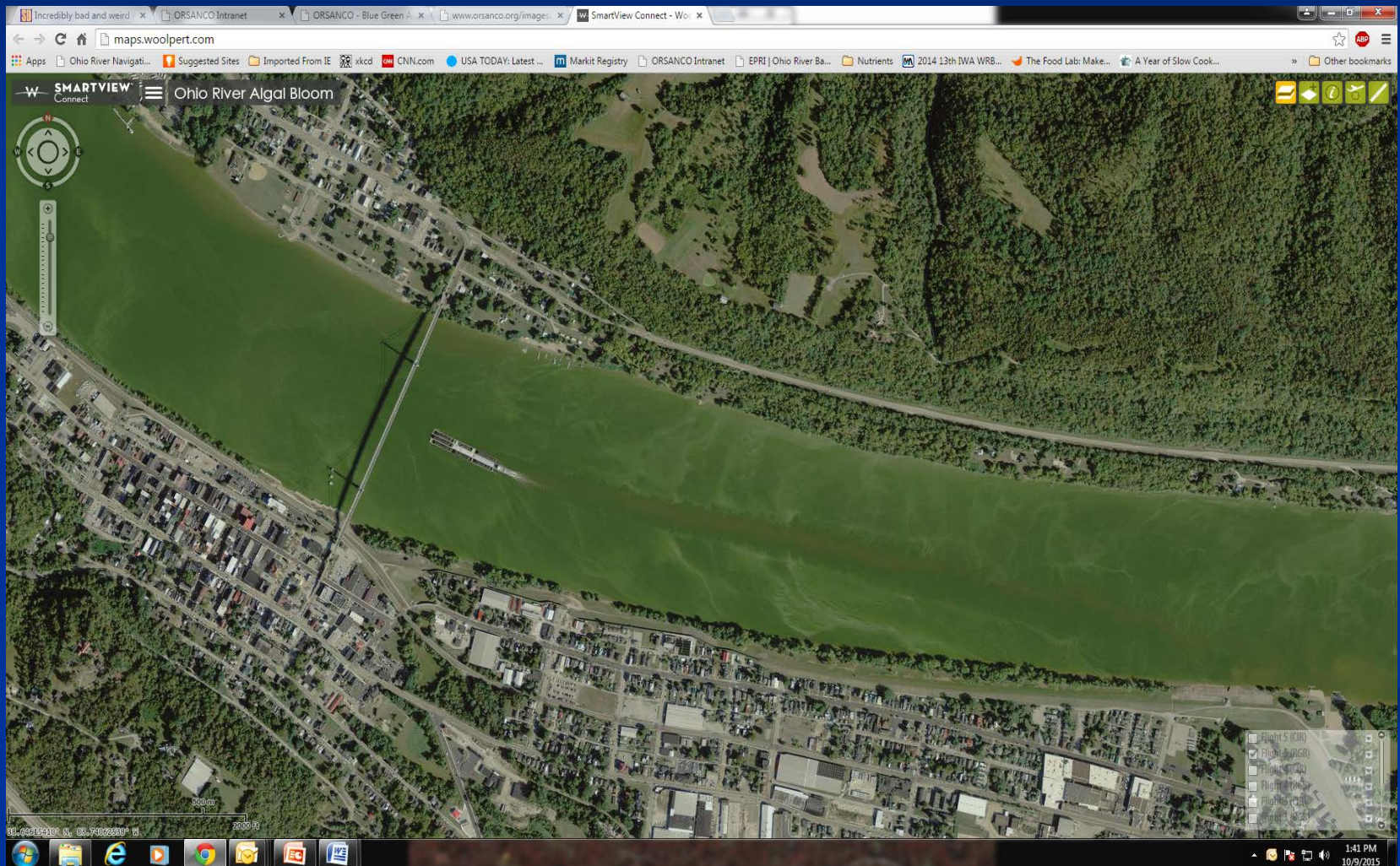


# Sampling Efforts

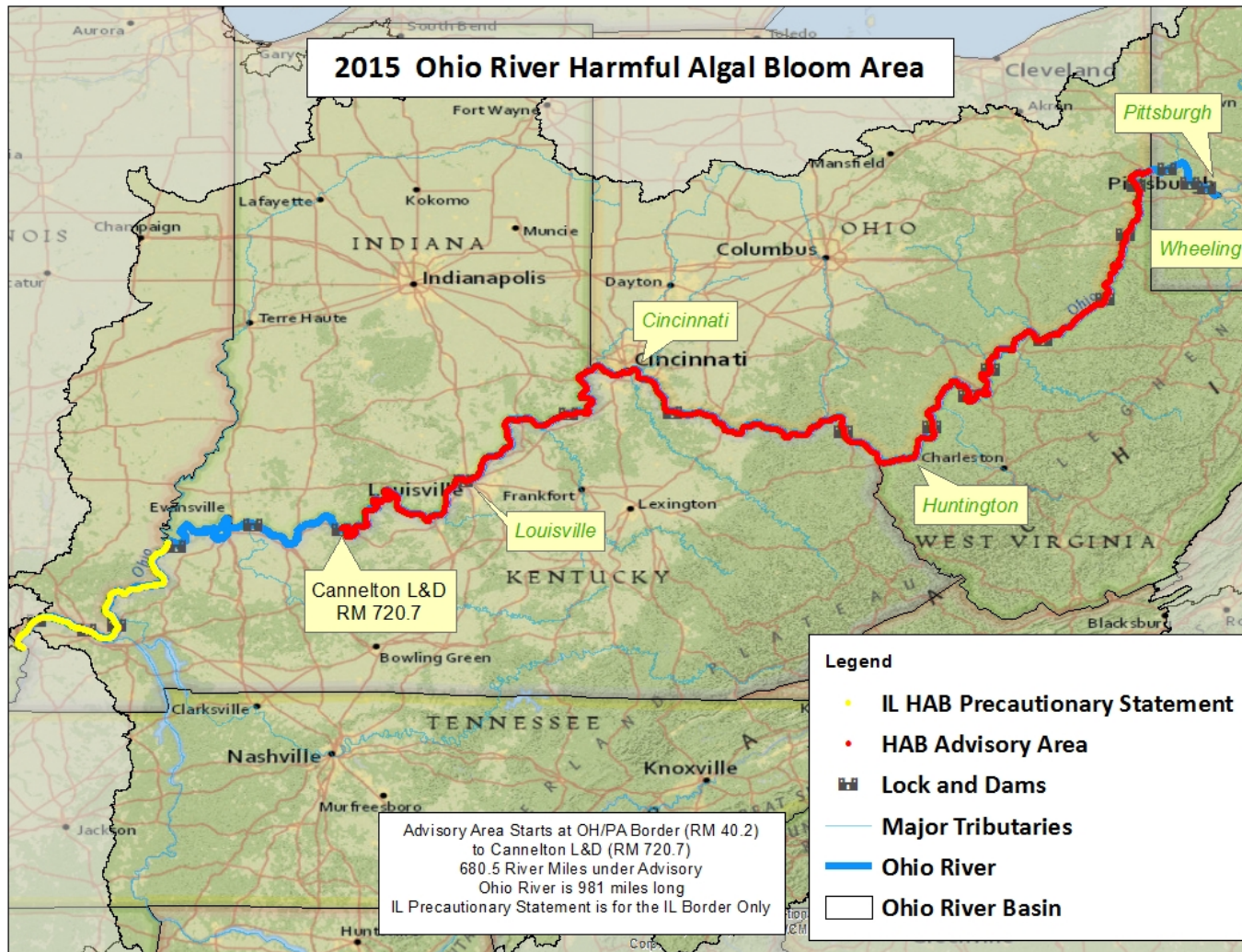
- ORSANCO sampling crews conducted 14 surveys. Focus was on extent.
- PA, WV, OH, KY, IL all had crews sampling sections of the river and their tributaries
- US EPA and Corps of Engineers provided sampling crews
- Aerial Surveys:
  - WV DEP – 2 from Huntington to Sistersville
  - OEPA – 1 survey from Cincinnati to Marietta
  - Corps of Engineers- 1 survey from Hannibal to JT Myers
  - NASA – 2 surveys with hyperspectral imaging



# Maysville KY September 22



# Advisory Map



# Next Steps

- Analyze data gathered
- Secure Partner feedback
- Update Response Plans
- Develop Summary Report





# Questions?



Contact Information

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