



United States Department of Agriculture

Source Water Protection

in the 2018 Farm Bill

Kentucky

Natural
Resources
Conservation
Service



*Kentucky USDA State Technical Committee
August 21, 2019*

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Natural
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nrcs.usda.gov/

SEC. 1244. [16 U.S.C. 3844] ADMINISTRATIVE REQUIREMENTS FOR CONSERVATION PROGRAMS.

(n) SOURCE WATER PROTECTION THROUGH TARGETING OF AGRICULTURAL PRACTICES.—

(1) IN GENERAL.—In carrying out any conservation program administered by the Secretary, the Secretary shall encourage practices that relate to water quality and water quantity that protect source waters for drinking water (including protecting against public health threats) while also benefitting agricultural producers.

(2) COLLABORATION WITH WATER SYSTEMS AND INCREASED INCENTIVES.—

(A) IN GENERAL.—In encouraging practices under paragraph (1), the Secretary shall—

(i) work collaboratively with community water systems and State technical committees established under section 1261(a) to identify, in each State, local priority areas for the protection of source waters for drinking water; and

(ii) subject to subparagraph (B), for practices described in paragraph (1), offer to producers increased incentives and higher payment rates than are otherwise statutorily authorized by the applicable conservation programs administered by the Secretary.

(B) LIMITATION.—An increased payment under subparagraph (A)(ii) shall not exceed 90 percent of practice costs associated with planning, design, materials, equipment, installation, labor, management, maintenance, or training.

(3) RESERVATION OF FUNDS.—

(A) IN GENERAL.—In each of fiscal years 2019 through 2023, the Secretary shall use to carry out this subsection not less than 10 percent of any funds available for conservation program administered by the Secretary under this title (other than the conservation reserve program established under subchapter B of chapter 1 of subtitle D).

(B) LIMITATION.—Funds available for a specific conservation program shall not be transferred to fund a different conservation program under this title.





This effort will not result in a separate project or separate funding, but....

- **Conservation program applications received from landusers (farmers, woodland owners) in the selected priority areas may receive higher consideration for funding to treat natural resource concerns, and**
- **If funded, may receive a higher level of financial assistance for some conservation practices and activities**



By September 30, 2019 NRCS in each state is required to:

- **Identify priority areas**
 - Entire or portions of already identified source water protection areas (SWPA)
 - Have a protection plan, in addition to an assessment that:
 - characterizes the source water,
 - identifies areas of concern,
 - potential threats, and
 - describes source water protection goals and an action plan for implementation
- **More guidance to come on:**
 - Identifying priority practices for the increased payment rates



Input Requested from Interested Parties to Help Identify Potential Priority Areas for NRCS Program Priority and Increased Incentives to Agricultural Producers

- Name, contact information, and who you represent:
[Redacted]
- What is the water source? (river, lake, groundwater, etc.) [Redacted]
- Where is the source located? [Redacted]
- Who does it serve? (towns/communities/etc.) [Redacted]
- How many customers? Rural, urban, both? [Redacted]
- What/where is the protection area? Please provide pertinent maps if available.
[Redacted]
- What are the identified areas of concerns? (failing septic systems, ag fertilizer use, cattle in streams)
[Redacted]
- Are there other potential threats?
[Redacted]
- How does agriculture impact the source?
[Redacted]
- Current protection activities, if any?
[Redacted]
- Is there a SWP assessment that characterized the water source, identifies areas of concern and potential threats, and describes SWP goals and an action plan for implementation? [Redacted]
- Is there a SWP plan? [Redacted]
- What else do you want us to know?
[Redacted]



Tell us why your drinking water source needs NRCS to provide natural resource assistance to landusers in the protection area.

Remember, NRCS can only assist on agriculture related resource concerns.





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Kentucky Source Water Protection and Priority Areas

Robert J. Blair, P.G.
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Kentucky Division of Water
Watershed Management Branch

NRCS State Technical Committee
August 21, 2019



Source Water Protection Planning

- Select Planning Committee – community representation
- Delineate Protection Zones – contributing areas of Water Supply Source(s)
- Contaminant Source Inventory – identify potential contaminants
- Develop Management Strategies – regulatory, BMP, E & O
- Contingency Planning – drought, contamination, alternatives
- Implementation – management strategies, review & update

Reasons for Source Water Protection

- Health-based impacts to drinking water
 - Elevated nutrients
 - Increased turbidity
 - Pathogens
- Leads to immediate and significant impacts
 - Harmful Algal Blooms (HABs)
 - Disinfection By-Products (DBPs)
 - Increased drinking water treatment costs

HABs



Ohio River at NKWD intake, Sept 9



Nutrient Reduction Strategy

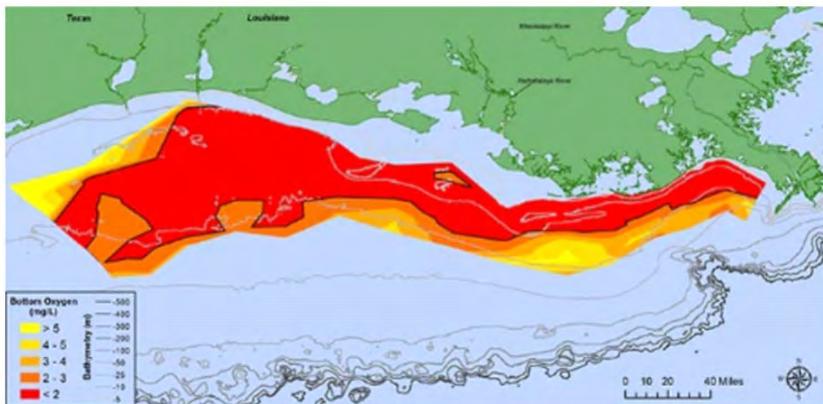
Gulf Hypoxia Task Force - Zone Reduction Goal

Coastal Goal:

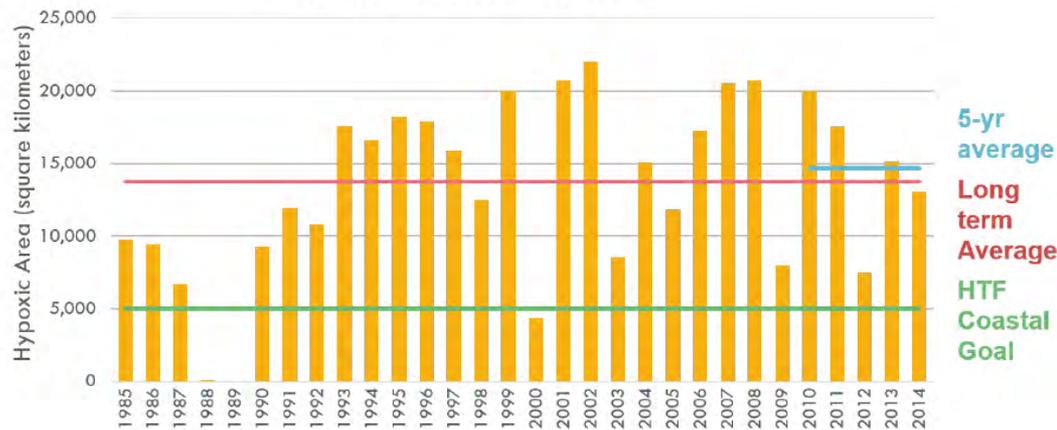
By 2035, reduce 5-year running average size of the Gulf hypoxic zone to 5,000 km²

Interim Target:

20% reduction of nitrogen and phosphorus loading by 2025



Annual Hypoxic Zone Size



Source: N. Rabalais

KY Public Water Supplies - Groundwater

Wellhead Protection Area

-  Zone 1: 180 day Time of Travel
-  Zone 2: 10 year Time of Travel
-  Zone 3: Hydrologic Boundary

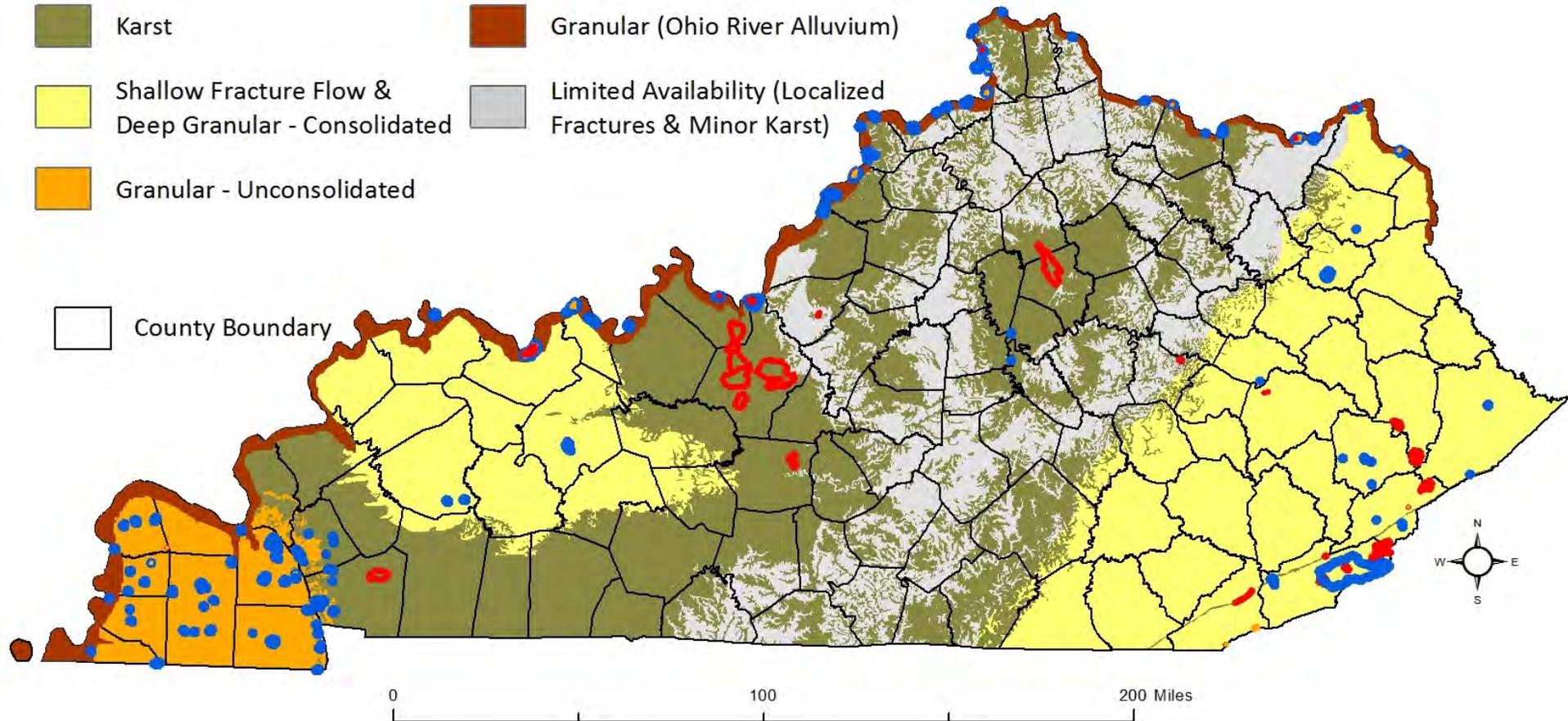
Nearly 100 Water Systems

Population Served ~ 400,000

Predominant Aquifer Type

-  Karst
-  Shallow Fracture Flow & Deep Granular - Consolidated
-  Granular - Unconsolidated
-  Granular (Ohio River Alluvium)
-  Limited Availability (Localized Fractures & Minor Karst)

 County Boundary



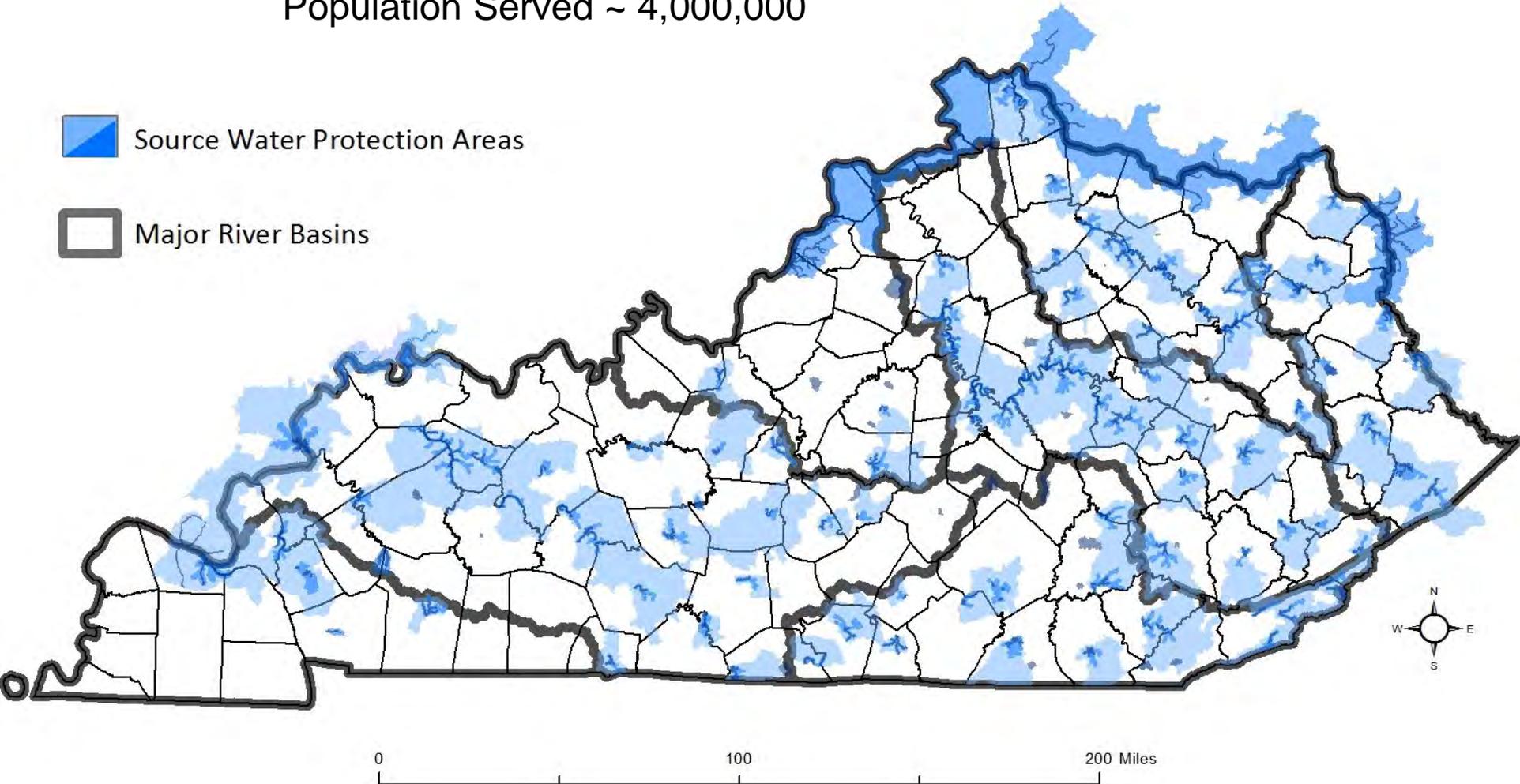
KY Public Water Supplies – Surface Water

Nearly 200 Water Producers

Population Served ~ 4,000,000

 Source Water Protection Areas

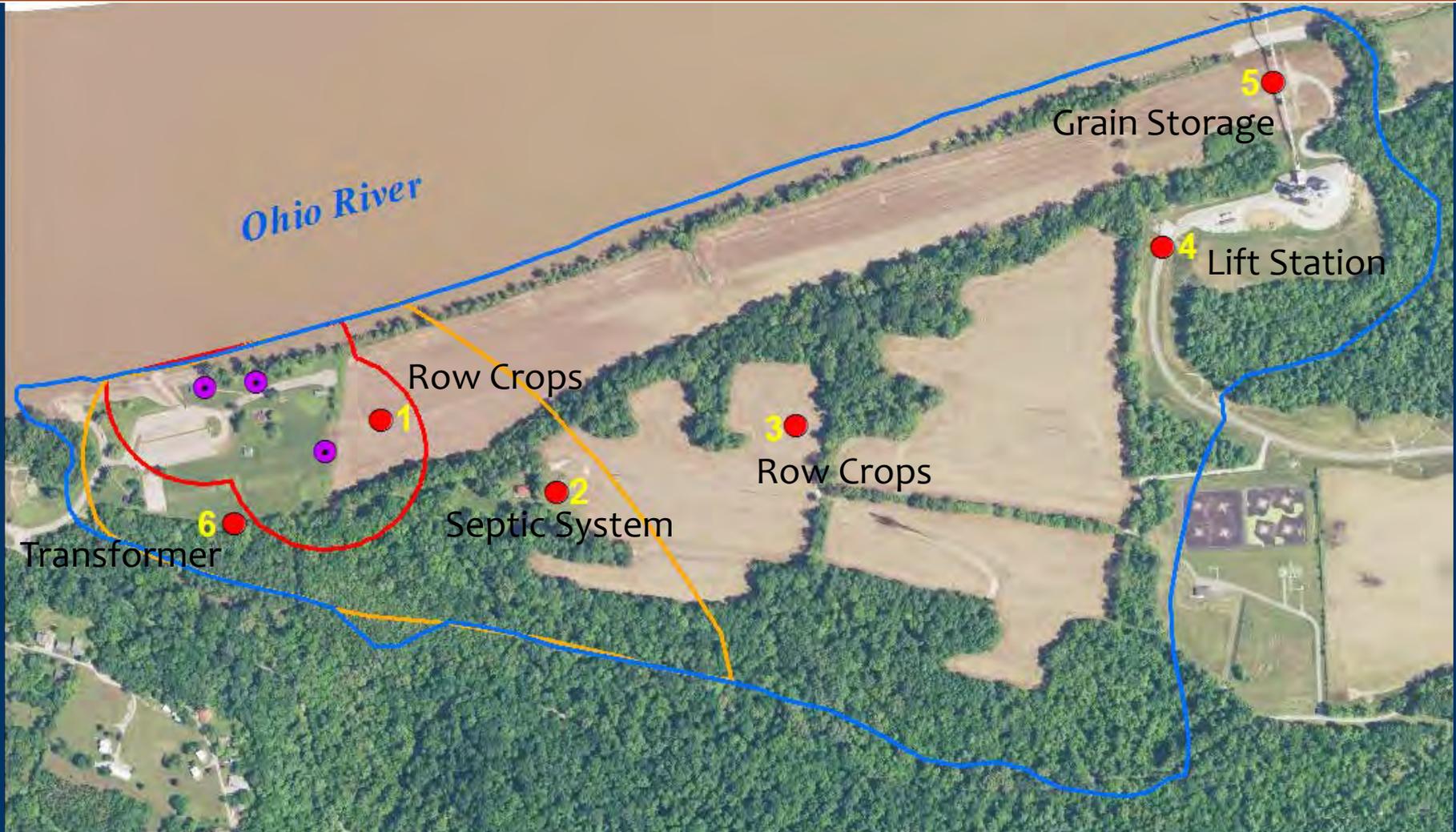
 Major River Basins



SWP and Agricultural Connections

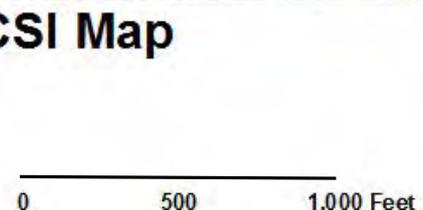
- **Monitoring**
- **Analysis of Water Use and Information Needs**
- **Water Resource Development and Technical Assistance**
- **Drought Mitigation and Response**
- **Communications & Outreach**
- **AWQA and nutrient reduction strategy**

SWP and NRCS Activities

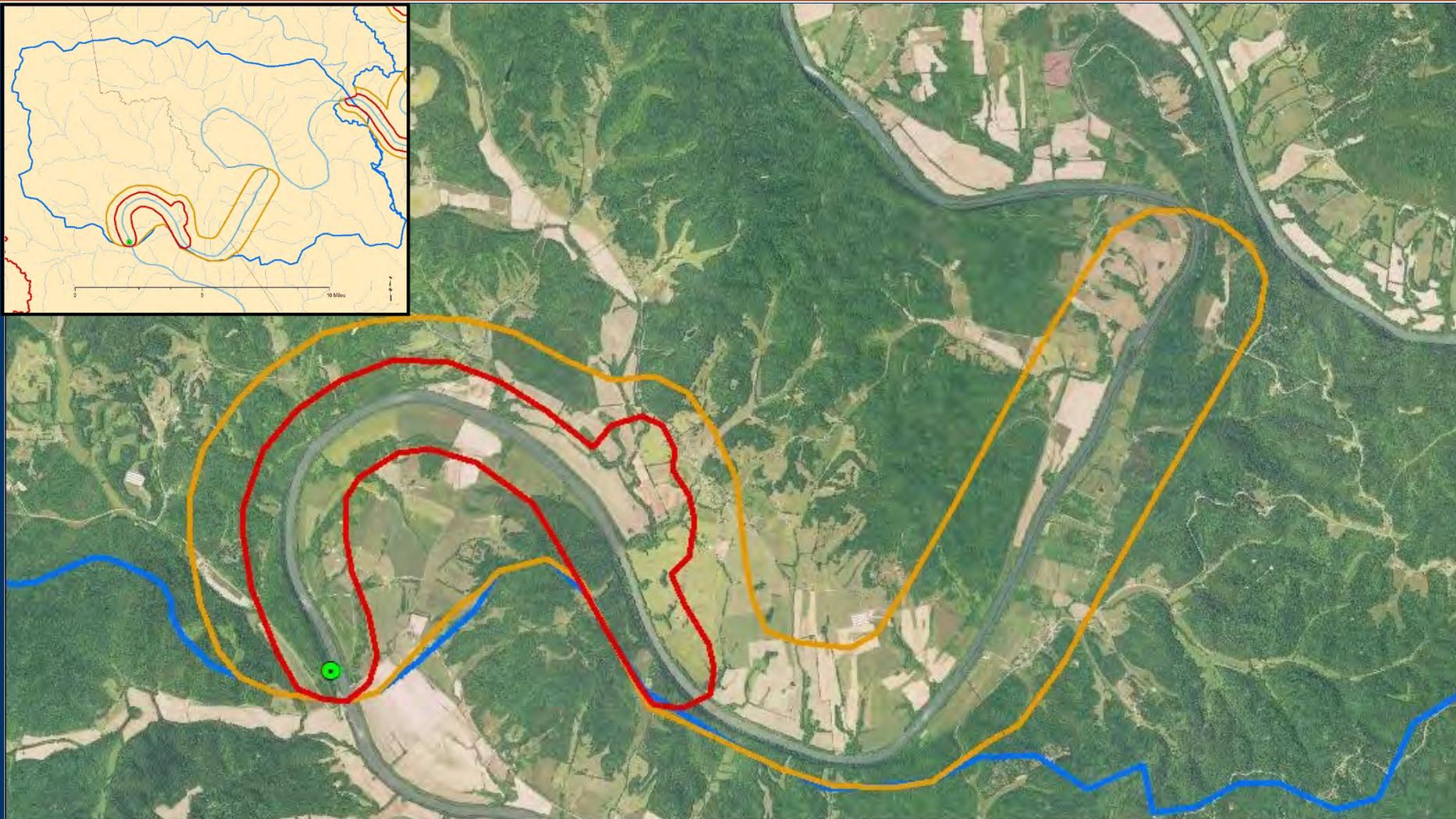
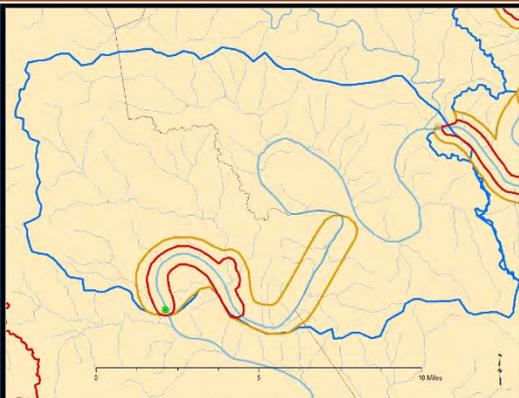


Brandenburg Water Works CSI Map

-  Zone 1: 180 day time of travel
-  Zone 2: 10 year time of travel
-  Zone 3: Hydrologic boundary
-  Potential contaminant source
-  PWS well



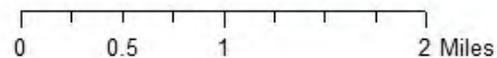
SWP and NRCS Activities



-  SWPA Zone 1: 5 miles upstream
-  SWPA Zone 2: 10 miles upstream
-  SWPA Zone 3: 25 miles upstream

Monroe County Water District SWP Map

 Drinking Water Intake



Questions?

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