

**JOINT MEETING OF THE KENTUCKY FARM BUREAU WATER MANAGEMENT
WORKING GROUP AND KENTUCKY WATER RESOURCES BOARD**

AGENDA
APRIL 26, 2017
EDEN SHALE FARM
OWENTON

Times are
Approximate

- | | |
|----------------|--|
| 10:00 a.m. EST | Call to Order and Announcements:
Mr. Steve Coleman, Chair |
| 10:05 a.m. | Introductions |
| 10:10 a.m. | Consideration of Minutes |
| 10:15 a.m. | Eden Shale Farm Tour and BMP Overview |
| Noon | Lunch |
| 1:00 p.m. | Source Water Protection:
Mr. Rob Blair, KDOW Watershed Management Branch |
| 1:30 p.m. | Kentucky Water Resources Board - Discussion on Content of
Commonwealth Strategic Water Plan and Project Rankings:
Mr. Peter Goodmann, KDOW |
| 2:00 p.m. | Review of WMWG General Recommendations and BMP Guide:
Mr. Steve Coleman |
| 2:30 p.m. | General Discussion |
| 3:00 p.m. | Adjourn |

**Water Resources Board
Draft Meeting Minutes
February 2, 2017**

Board Members in Attendance: Earl Bush (County Judge Executives); Brent Burchett (Proxy, KDA); Steve Coleman (KY Farm Bureau); Lloyd Cress, Jr. (KY League of Cities); Dr. Nancy Cox (UK); John Dix (KRWA); Kate Shanks (Proxy, KY Chamber of Commerce); Charles Snavely (EEC Secretary); Shane Wells (Proxy, KACD);

Board Members Absent: Jared Carpenter (LRC); Kevin Jeffries (Soil and Water Conservation Districts); Kevin Rogers (KY Chamber of Commerce); Ryan Quarles (Commissioner Dept. of Agriculture);

Others in Attendance: Paulette Akers (Director DCA); Adam Andrews (KYCGA); Amy Babey (USACE); Biff Baker (GOAP); Angela Billings (DPH-EMB); Steve Blanford (NRCS); Chloe Brantley (DOW); Brandon Brummet (USACE); Lane Boldman (KY Conservation Committee); Joe Cain (KYFB); Bill Caldwell (DOW); David Chinn (Monty's Plant Food Co.); Pete Cinotto (USGS); Allison Crawford (KYSEC); Lee Anne Daveine (USACE); Nicole Erwin (OVR); Peter Goodmann (Director DOW); Mike Griffin (USACE); Amanda Gumber (UK-CES); Richard Harrison (ORSANCO); Steve Higgins (UKCAFE); Wayne Hunt (Hunt Farms); Carey Johnson (DOW); Samantha Kaiser (DOW); Aaron Keatley (Commissioner DEP); Jim Kipp (KWRRR); Allen Kyle (Kyle Farms); Gary Larimore (KRWA); David London (USACE); Hailey McCoy (EEC); Kim Richardson (DOC); Bijaya Shrestha (KWA); Joscoh Sisk (Sisk Farms); Larry Thomas (Farmer); Michael West (EEC-OGC); Karen Woodrich (USDA-NRCS);

The meeting began at 1:05 p.m.

Call Meeting to Order and Roll Call of Board Members

Secretary Snavely called the meeting to order. Peter Goodmann led the roll call of Board members. The Board will need to decide on a member to take the place of Senator McKee.

Introduction of Guests

Secretary Snavely introduced Colonel Chris Beck from the US Army Corps of Engineers (USACE). He is the Commander of the Louisville District. Colonel Beck introduced his team from the Louisville District.

Guests introduced themselves.

Minutes of November, 2016

The meeting minutes from November were approved by consensus.

Water Resources Discussion with Colonel Chris Beck, USACE

Colonel Beck gave a presentation about the USACE authorities. He discussed the civil works watershed-based boundary lines which cover five states and are centered in Kentucky. The Louisville District regulates Indiana, Illinois, and Kentucky. The USACE strives to provide consistency in all areas. Budgets vary for different projects and programs. USACE provide funding for individual projects in navigation, flood and storm risk management, aquatic ecosystem restoration, and watershed planning, as well as,

programs in emergency management and regulatory programs. A smaller portion of the budget funds hydropower, recreation, and water supply. Colonel Beck stressed to the Board that though a policy may be authorized does not mean that funds have been appropriated to implement it. The 2016 Water Infrastructure Improvements for the Nation (WWIN) Act is the newest legislation which incorporated the Water Resources Development Act (WRDA). Several authorities were mentioned and the USACE asked the public to discuss how these authorities can benefit their projects. The Kentucky Silver Jackets is a group of organizations that meet every six weeks to share and leverage information and resources to improve flood risk management across the Commonwealth.

Lee Anne Devine gave a presentation on regulatory updates to the Board. She encourages the public to ask questions and reach out to the USACE. The USACE goal is to work with applicants to get approval and applicants are encouraged to have a pre-project meeting to discuss future projects and applications with the USACE. Most applications are revised before approval. Options with lesser environmental impact receive approval. The key for the applicant is having an open dialogue with USACE. If an approved option cannot be completed, the applicant can discuss other options with the USACE. The main two statutes that are regulated are Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act.

The Board asked Ms. Devine to further explain what qualifies as a permit exemption and how land owners should be advised on the application process. Ms. Devine reiterated that the USACE encourages anyone with questions to call before beginning a project for which a permit could be required, which is preferable to having the USACE perform a site visit after the project is completed. A written exemption request can be submitted to the USACE and could be issued within 60 days of receipt. If the exemption request is denied it could take up to four months to develop an application and receive an approved permit.

The USACE proposed rule for use of USACE reservoir projects for domestic, municipal and industrial water supplies is currently in the Federal Register and is open for comments until February 14, 2017.

Colonel Beck discussed the Ohio River Basin Comprehensive (ORBC) Plan initiative which is a collaboration of various agencies and stakeholders across 14 states to provide a strategic plan for prioritizing investments in order to efficiently and effectively address water resource related issues using a watershed approach. The Great Lakes Restoration Initiative has received consistent funding while Ohio River Division funds have decreased. The ORBC initiative could help with funding in the Ohio River Basin. The Ohio River Basin Alliance (ORBA) is leading the ORBC initiative and needs to maintain the momentum.

The Board would like a subgroup to continue discussions with Colonel Beck and the USACE. Colonel Beck discussed the challenges with creating a flow chart for possible exemptions and projects that could require permits because each individual project is unique, and cautioned that such a chart could be misleading.

Final Projects Profiles Report

Bill Caldwell (DOW) discussed the final project profile ranking results. The State Water Plan ranked number one. He reminded the Board of the two working committees (technical data committee and roadmap), members of the committees, and the areas of focus.

Motion: (John Dix) To recommend that the Cabinet pursue funding for projects that further the goals of the Water Resources Board to:

1. Develop technical data and studies that are necessary for the development of a State Water Plan, or
2. Implement additional surface, groundwater or soil moisture monitoring where it is determined to be necessary to quantify and manage water resources for planning purposes including drought monitoring and response; and
3. That the Cabinet will notify the Board as to when the Cabinet pursues funding opportunities and discuss the proposed project with the Water Resources Board at the next Board meeting.

Second: (Steve Coleman)

The Board further discussed the motion until all members understood the motion.

Vote: Unanimous

The two working committees will meet before the next Board meeting.

Open Discussion for Board Members

Mr. Coleman reminded the Board of the Kentucky Farm Bureau Water Management Work Group recommendations.

Public Comment Period

No public comments were made.

Next Meeting

Mr. Goodmann recommended that a future meeting be at Eden Shale. The Kentucky Farm Bureau Water Management Work Group meeting at Eden Shale is April 26, 2017. The Board will communicate through email to confirm meeting.

The meeting adjourned at 3:22 p.m.

Water Resources Board Meeting
 Eden Shale Farm
 Owenton, Kentucky 40359
 April 26, 2017

PUBLIC SIGN-IN SHEET

<u>Name</u>	<u>Agency/Organization</u>	<u>Email Address</u>	<u>Phone number</u>
<u>Billy Matthews</u>	<u>Senator Rand Paul</u>	<u>Billy-Matthews@Paul.Senate.Gov.</u>	<u>859-322-3494</u>
<u>Kyle Kelly</u>	<u>Agr. Business Association</u>	<u>kkelly@kyretail.com</u>	<u>502-750-3766</u>
<u>Brad Burke</u>	<u>Farm Credit Mid America</u>	<u>Brad.Burke@E-Farmcredit.com</u>	<u>606-782-1367</u>
<u>Bryan Ellis</u>	<u>Speaker Hoover</u>	<u>bryan.ellis@lrc.ky.gov</u>	<u>270-766-2342</u>
<u>Jim KIPP</u>	<u>KWRMI</u>	<u>KIPP@UKY.EDU</u>	<u>859-257-1832</u>
<u>Corey Elder</u>	<u>Speaker Hoover</u>	<u>Corey.Elder@Lrc.ky.gov</u>	<u>270 804-5718</u>
<u>Cliff Quales</u>	<u>KPA</u>	<u>cliff.quales@KY.Gov</u>	<u>859 532 9540</u>
<u>Ben Conner</u>	<u>KDA</u>	<u>ben.conner@ky.gov</u>	<u>502-229-1714</u>
<u>Kim Richardson</u>	<u>DOC</u>	<u>kimberly.richardson@ky.gov</u>	<u>502-782-6751</u>
<u>Lowell Atchley</u>	<u>LRE</u>	<u>lowell.atchley@lrc.ky.gov</u>	<u>502-524-8100</u>
<u>Brent Burchett</u>	<u>KDA</u>	<u>brent.burchett@ky.gov</u>	
<u>Steve Workman</u>	<u>UKA</u>	<u>Steve.workman@uky.edu</u>	
<u>David Chinn</u>	<u>Monty's Plant Food</u>		
<u>Sarah Gaddis</u>	<u>Dow</u>	<u>sarah.gaddis@ky.gov</u>	<u>502-561-3410</u>
<u>Keri Johnson</u>	<u>"</u>	<u>Keri.Johnson@ky.gov</u>	<u>"</u>

Type 1	"Good Management Practice"	Type 2	Type 3	Practice	Definition
Crops	GMP 1			Conservation Cover (327)	Establishing and maintaining permanent vegetative cover.
Crops	GMP 2			Conservation Crop Rotation (328)	Growing crops in a planned sequence on the same field.
Crops	GMP 3			Contour Buffer Strips (332)	Narrow strips of permanent, herbaceous vegetative cover established around the hill slope, and alternated down the slope with wider cropped strips that are farmed on the contour.
Crops	GMP 4			Contour Farming (330)	Using ridges and furrows formed by tillage, planting and other farming operations to change the direction of runoff from directly downslope to around the hillslope.
Crops	GMP 5			Cover Crop (340)	Crops including grasses, legumes, and forbs for seasonal cover and other conservation purposes.
Crops	GMP 6	Livestock		Filter Strip (393)	A strip or area of herbaceous vegetation that removes contaminants from overland flow.
Crops	GMP 7	Streams and Other Waters		Drainage Water Management (554)	The process of managing the drainage volume and water table elevation by regulating the flow from a surface or subsurface agricultural drainage system.
Crops	GMP 8	Farmstead		Irrigation Land Leveling (464)	Reshaping the surface of land to be irrigated, to planned lines and grades.
Crops	GMP 9			Irrigation Pipeline (430)	A pipeline and appurtenances installed to convey water for storage or application, as part of an irrigation water system.
Crops	GMP 10			Irrigation Reservoir (436)	An irrigation water storage structure made by constructing a dam, embankment, pit, or tank.
Crops	GMP 11			Irrigation System, Microirrigation (441)	An irrigation system for frequent application of small quantities of water on or below the soil surface: as drops, tiny streams, or miniature spray through emitters or applicators placed along a water delivery line.
Crops	GMP 12			Irrigation System, Surface and Subsurface (443)	A system in which all necessary earthwork, multioutlet pipelines, and water-control structures are installed for distribution of water by surface means, such as furrows, borders, and contour levees, or by subsurface means through water table control.
Crops	GMP 13			Irrigation Water Management (449)	The process of determining and controlling the volume, frequency, and application rate of irrigation water.
Crops	GMP 14			Mulching (484)	Applying plant residues or other suitable materials produced off site, to the land surface.

Type 1	"Good Management Practice"	Type 2	Type 3	Practice	Definition
Crops	GMP 15	Livestock		Nutrient Management (590)	Managing the amount (rate), source, placement (method of application), and timing of plant nutrients and soil amendments.
Crops	GMP 16			Stripcropping (585)	Growing planned rotations of row crops, forages, small grains, or fallow in a systematic arrangement of equal width strips across a field.
Crops	GMP 17	Streams and Other Waters		Structure for Water Control (587)	A structure in a water management system that conveys water, controls the direction or rate of flow, maintains a desired water surface elevation or measures water.
Crops	GMP 18	Streams and Other Waters		Tailwater Recovery	
Crops	GMP 19			Terrace (600)	An earth embankment, or a combination ridge and channel, constructed across the field slope.
Farmstead	GMP 1	Livestock		Access Control (472)	The temporary or permanent exclusion of animals, people, vehicles, and/or equipment from an area.
Farmstead	GMP 2	Livestock		Access Road (560)	An access road is an established route for equipment and vehicles.
Farmstead	GMP 3	Livestock		Animal Trails and Walkways (575)	Established lanes or travel ways that facilitate animal movement.
Farmstead	GMP 4	Livestock	Crops	Composting Facility (317)	A structure or device to contain and facilitate an aerobic microbial ecosystem for the decomposition of manure and/or other organic material into a final product sufficiently stable for storage, on farm use and application to land as a soil amendment.
Farmstead	GMP 5			Critical Area Planting (342)	Establishing permanent vegetation on sites that have, or are expected to have, high erosion rates, and on sites that have physical, chemical, or biological conditions that prevent the establishment of vegetation with normal seeding/planting methods.
Farmstead	GMP 6			Deep Tillage (324)	performing tillage operations below the normal tillage depth to modify the physical or chemical properties of a soil. It includes tillage operations commonly referred to as deep plowing, subsoiling, ripping, or row-till, performed from time to time below the normal tillage depth.
Farmstead	GMP 7	Livestock		Dry Hydrant (432)	A non-pressurized permanent pipe assembly system installed into water source that permits the withdrawal of water by suction.
Farmstead	GMP 8			Farmstead Energy Improvement (374)	Development and implementation of improvements to reduce, or improve the energy efficiency of on-farm energy use

Type 1	"Good Management Practice"	Type 2	Type 3	Practice	Definition
Farmstead	GMP 9	Livestock		Heavy Use Area Protection (561)	The stabilization of areas frequently and intensively used by people, animals or vehicles by establishing vegetative cover, surfacing with suitable materials, and/or installing needed structures.
Farmstead	GMP 10			Lighting System Improvement (670)	Complete replacement or retrofitting of one or more components of an existing agricultural lighting system.
Farmstead	GMP 11			Roof Runoff Structure (558)	A structure that will collect, control and convey precipitation runoff from a roof.
Farmstead	GMP 12			Roofs and Covers (367)	A rigid, semirigid, or flexible manufactured membrane, composite material, or roof structure placed over a waste management facility, agrichemical handling facility, or an on-farm secondary containment facility.
Farmstead	GMP 13	Livestock		Trails and Walkways (575)	A trail is a constructed path with a vegetated or earthen surface. A walkway is a constructed path with an artificial surface. A trail/walkway is used to facilitate the movement of animals, people, or off-road vehicles.
Farmstead	GMP 14	Silviculture		Tree/Shrub Establishment (612)	Establishing woody plants by planting seedlings or cuttings, by direct seeding, and/or through natural regeneration.
Farmstead	GMP 15	Livestock		Water Harvesting Catchment (636)	A method to detain stormwater for beneficial reuse with basin structures or tanks.
Farmstead	GMP 16	Crops		Water Well (642)	A hole drilled, dug, driven, bored, jetted or otherwise constructed into an aquifer for water supply.
Livestock	GMP 1	Streams and Other Waters		Aquaculture Pond (397)	A water impoundment constructed and managed for farming of freshwater and saltwater organisms including fish, mollusks, crustaceans and aquatic plants.
Livestock	GMP 2			Genetic Improvements	Lowering the weight of animals to reduce compaction of pastures
Livestock	GMP 3			Livestock Shelter Structure (576)	A permanent or portable structure with less than four walls and/or a roof to provide for improved utilization of pastureland and rangeland and to shelter livestock from negative environmental factors. This structure is not to be construed to be a building.
Livestock	GMP 4	Crops	Farmstead	Vegetated Treatment Area (635)	An area of permanent vegetation used for agricultural wastewater treatment.

Type 1	"Good Management Practice"	Type 2	Type 3	Practice	Definition
Streams and Other Waters	GMP 1			Constructed Wetland (656)	An artificial wetland ecosystem with hydrophytic vegetation for biological treatment of water.
Streams and Other Waters	GMP 2			Dike (356)	A dike is an embankment constructed of earth or other suitable material to protect land against overflow or to regulate water.
Streams and Other Waters	GMP 3			Diversion (362)	A channel generally constructed across the slope with a supporting ridge on the lower side.
Streams and Other Waters	GMP 4			Grade Stabilization Structure (410)	A structure used to control the grade and head cutting in natural or artificial channels.
Streams and Other Waters	GMP 5	Crops		Grassed Waterway (412)	A shaped or graded channel that is established with suitable vegetation to convey surface water at a non-erosive velocity using a broad and shallow cross section to a stable outlet.
Streams and Other Waters	GMP 6			Pond (378)	A pond is a water impoundment made by constructing an embankment, by excavating a dugout, or by a combination of both.
Streams and Other Waters	GMP 7	Silviculture		Riparian Forest Buffer (391)	An area predominantly trees and/or shrubs located adjacent to and up-gradient from watercourses or water bodies.

ANTICIPATING FUTURE NEEDS AND REACTING TO PROBLEMS

Water Resources Board

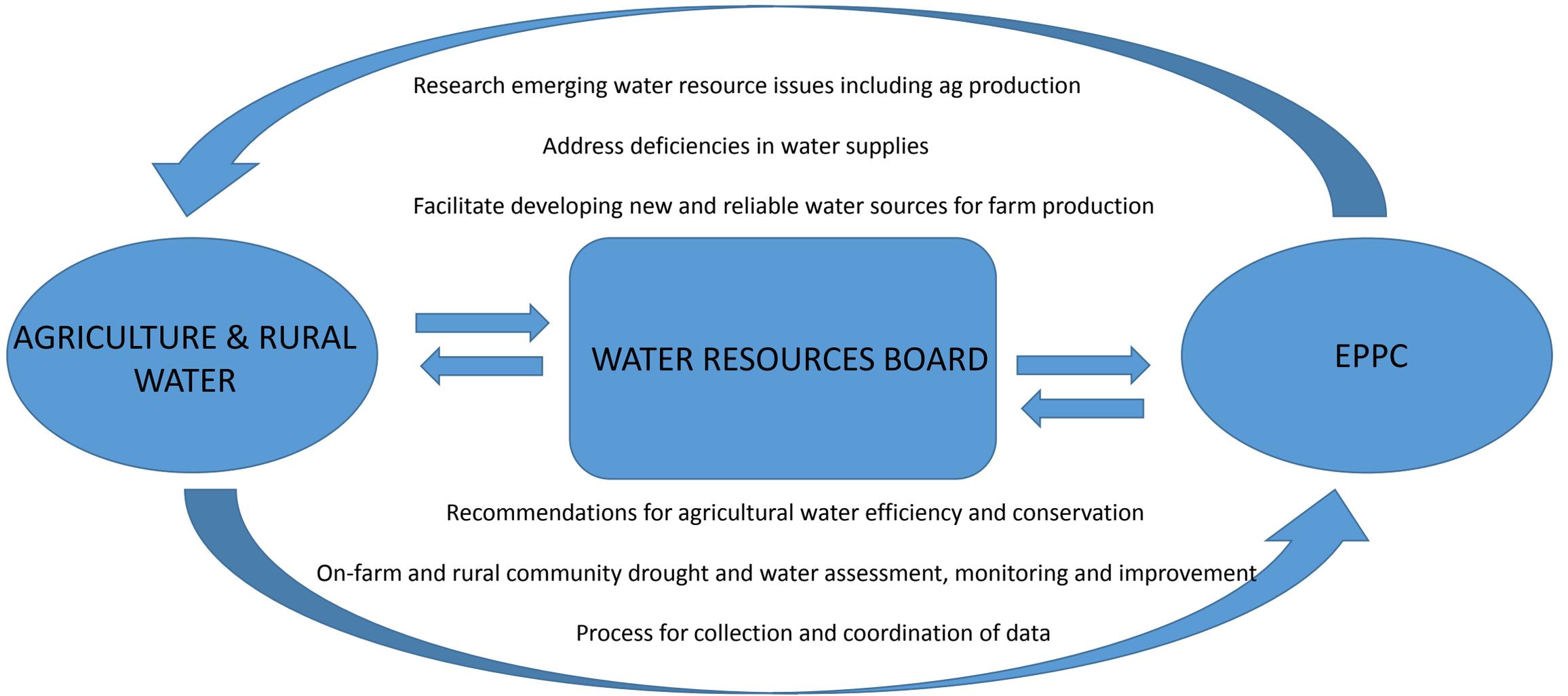
April 26, 2017

**Department for Environmental Protection
Energy and Environment Cabinet**



To Protect and Enhance Kentucky's Environment

Kentucky
UNBRIDLED SPIRIT™



“Be anticipatory of future needs and reactive to problems” KRS 151.112(c)

Draft Goals: Project Development Plan / a.k.a. Water Plan

- Create and maintain an Inventory the state's available water resources
- Quantify water demands and project future needs
- Develop mitigation strategies and funding to insure the adequacy and sustainability of agricultural and rural water supplies
- Develop amendments to the state drought plan that strengthen drought assessment, response and mitigation for agriculture
- Develop or expand monitoring networks for climate, hydrologic, water use and other data needed for water resources management
- Create mechanisms for outreach and dialog with individuals and communities to initiate activities related to water efficiency, drought preparedness, and future water needs.

PROJECT DEVELOPMENT PLAN AND TIMELINE

Data and GAP Analysis – Ag and Rural Water

- Water Availability – source and infrastructure
- Water Use and Demand – Ag focused

- GAP identification – Data Gaps / Water Gaps



Technical Committee Progress Reviews

May 11, May 31, June 15

June 15 – June 30

Needs Assessment / Solutions / Alternatives

June 15

Project Development Committee

Project Development

- From GAP analysis results

June 15

Project Development Committee

Preliminary Results Report out to Full Board

July 15

PROJECTS CURRENTLY UNDERWAY OR BEING DEVELOPED

RELATES TO

STATUS

I. Data and GAP Analysis – Ag and Rural Water

DOW-1

Underway

II. Aquifer Designation/Characterization (USGS WUDR)

KGS-1

Submitted

III. Groundwater Monitoring Network

KGS-1

Development

IV. Drought Risk Assessment (FEMA)

DOW-1

Funded

V. Project Development Committee Additions

KRS 151.113

Forthcoming

END

STATE WATER PLAN INITIAL PROJECT PROFILE

A state water plan will be built upon a series of technical studies or tools. These will be designed to provide decision makers with the necessary data to conceive, develop, prioritize and implement measures that will address existing water supply issues and create a vision for future water resources development for the Commonwealth. Two fundamental areas of technical study are proposed that will be complemented by several lesser projects that together will provide a basis for developing a state water plan (see attached presentation from the October Board meeting for process overview).

Water Availability

A statewide water availability assessment will be performed at a planning unit level to inventory the regional water sources and assess annual and seasonal surplus and deficit based on hydrological records, models or other methods and known withdrawal and instream flow demands.

Demand Forecasting

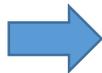
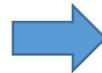
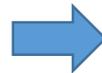
Projecting future water demands for water supply, agriculture, industry, mining, energy production and other needs is a key part of developing a long-term vision for the state's water resources. Reliable projections for water demands combined with a water availability assessment will be used to identify gap areas where water demands may exceed supply, serving as the basis for water plan development.

Other related projects and studies

Drought Risk Assessment: a drought risk assessment will be developed by the Division of Water in 2017. One of the principal water use sectors included in the assessment will be agricultural drought risk based on regional vulnerability to drought in crop and animal production operations. Data from this assessment may inform both the Water Availability and Demand Forecasting technical studies. This project is funded by a grant from FEMA.

Aquifer Designation: developed for all regulated groundwater withdrawals in Kentucky , or for a region in a pilot study. Data and methods developed for this study are expected to contribute to more detailed characterization studies of aquifers that are or may become high-use aquifers, most notably in the Jackson Purchase area. This study will be proposed as part of a USGS Water Use Data and Reporting grant (WUDR) in cooperation with KGS.

Water Tracking: Tracking the various uses of water that produced by the state's 397 Public water systems (PWS). Treated water is used for domestic, commercial, industrial, mining, agricultural and other purposes. This study will include an assessment of the demands that may be placed on PWS by livestock water demand, especially under seasonal high demand or drought conditions. It is anticipated that this study can be funded by leveraging funds from a WUDR grant with other funding sources.



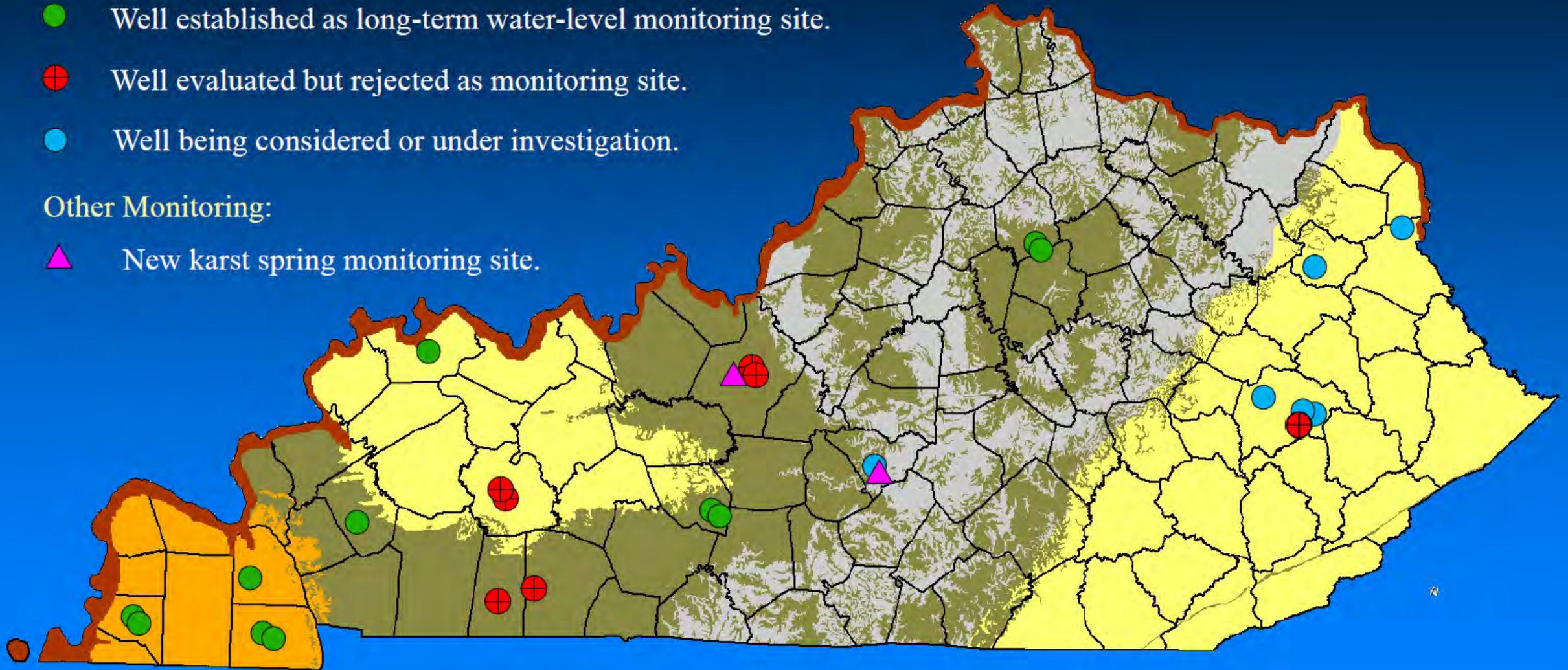
Status of KGS KY Groundwater Observation Network Sites (April 2017)

KGON wells:

- Well established as long-term water-level monitoring site.
- ⊕ Well evaluated but rejected as monitoring site.
- Well being considered or under investigation.

Other Monitoring:

- ▲ New karst spring monitoring site.



Kentucky's Source Water Protection Program

Robert J. Blair, P.G.

Kentucky Division of Water
Watershed Management Branch

KFB Water Management Working Group/KY Water Resources Board

April 26, 2017



Source Water Protection Planning

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

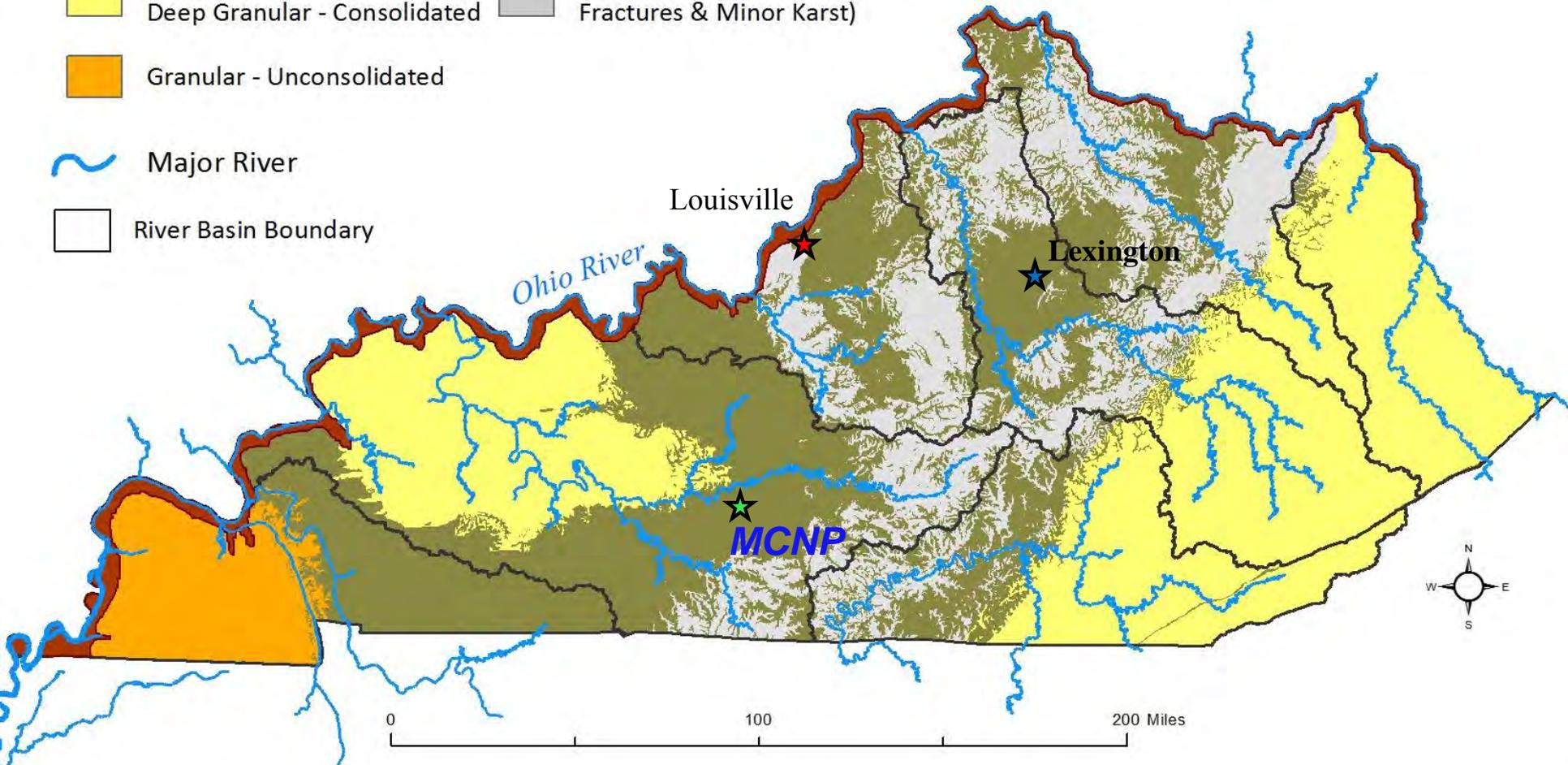
Generalized Hydrography of Kentucky

Predominant Aquifer Type

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

 Major River

 River Basin Boundary



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

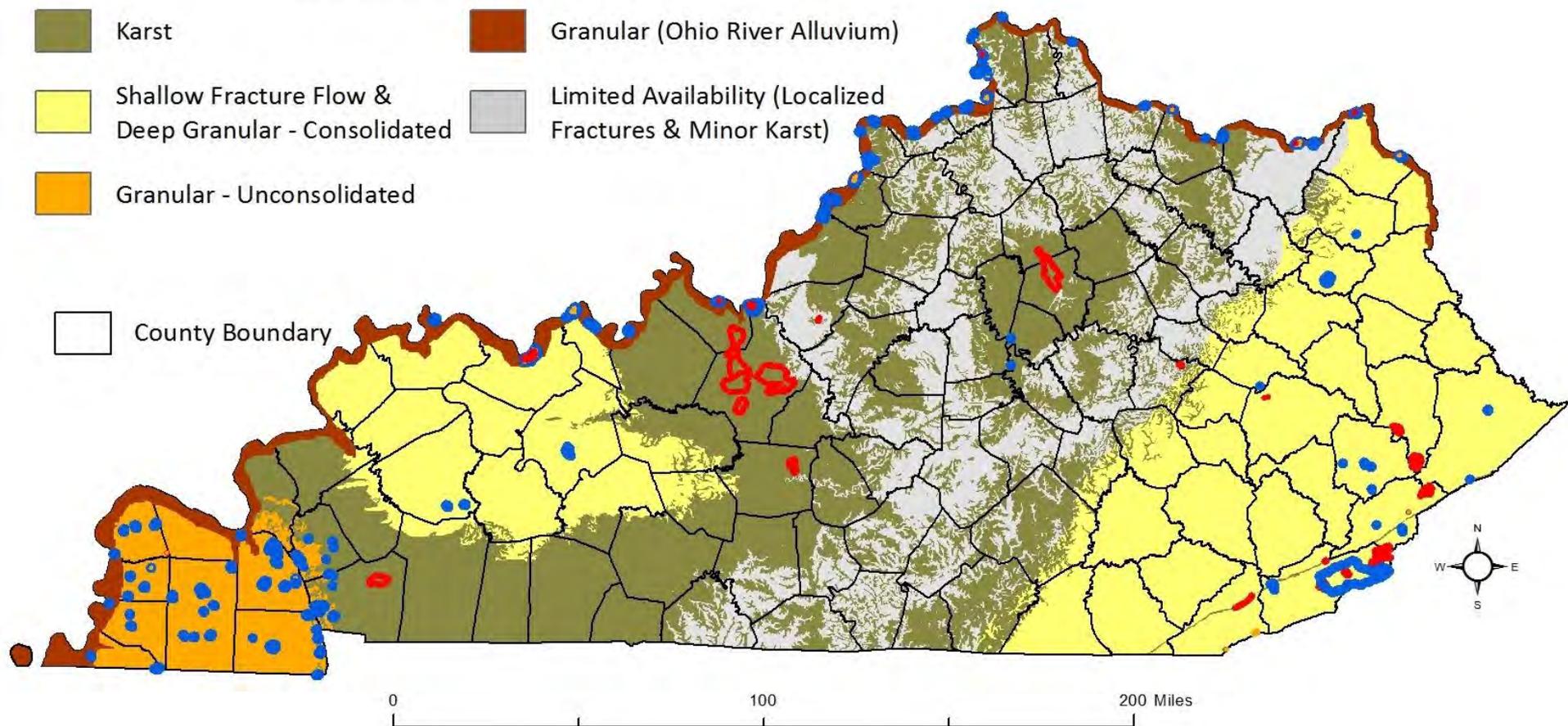
Nearly 100 Water Systems

Population Served ~ 400,000

Predominant Aquifer Type

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

 County Boundary



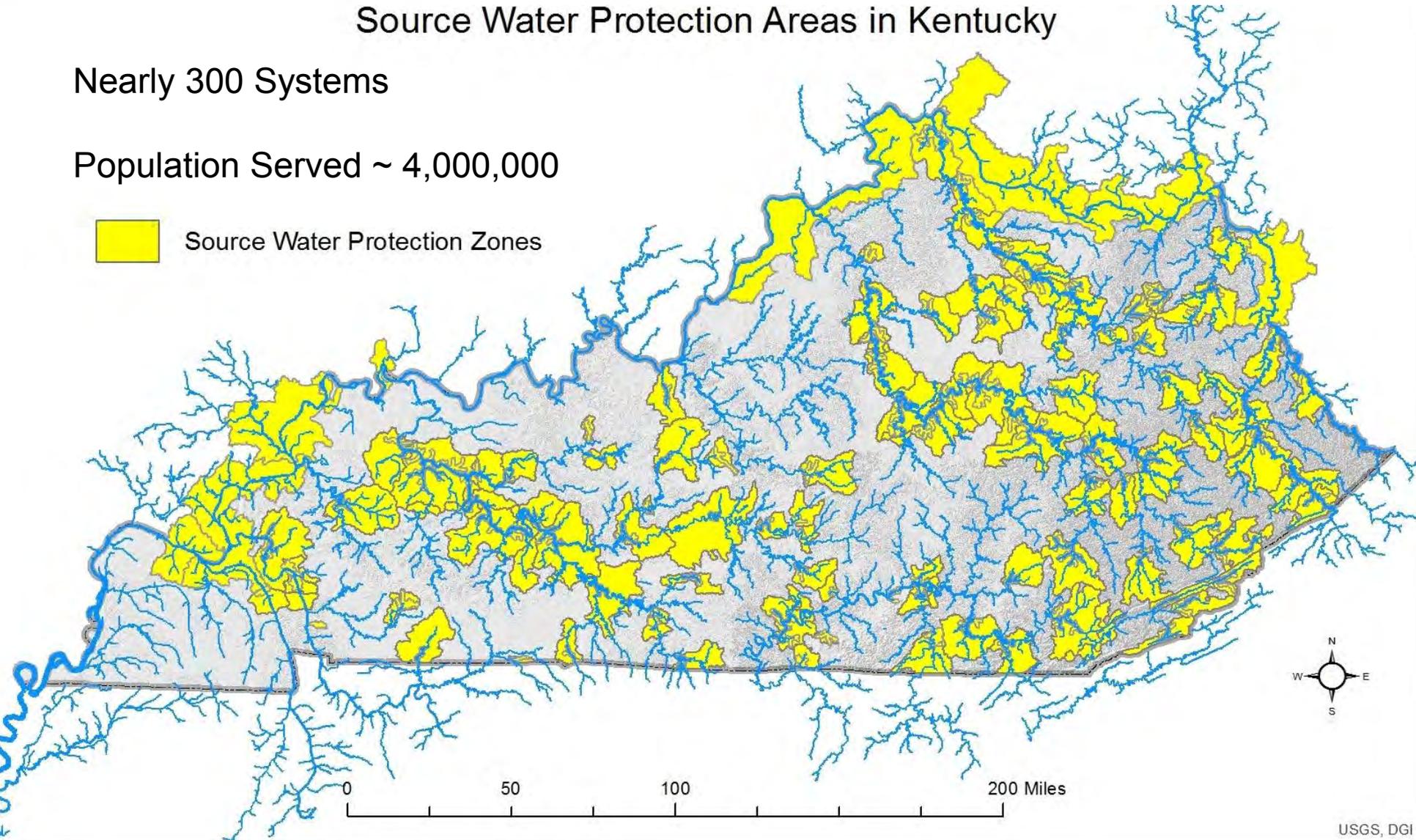
KY Public Water Supplies – Surface Water

Source Water Protection Areas in Kentucky

Nearly 300 Systems

Population Served ~ 4,000,000

 Source Water Protection Zones



Moving Forward with SWP in KY

- Source Water Protection Assistance Program
- Collaboration and Partnerships
 - CWA 319(h) funding and Watershed Plans
 - Area Development Districts – Water Management Councils
 - Individual Water Systems
 - Other agencies
- Evaluate/Update SWP for Surface Water Systems
 - Focus on Management and Implementation
- Promote programs and assistance at workshops and meetings throughout Kentucky

Source Water Protection Assistance Program Projects

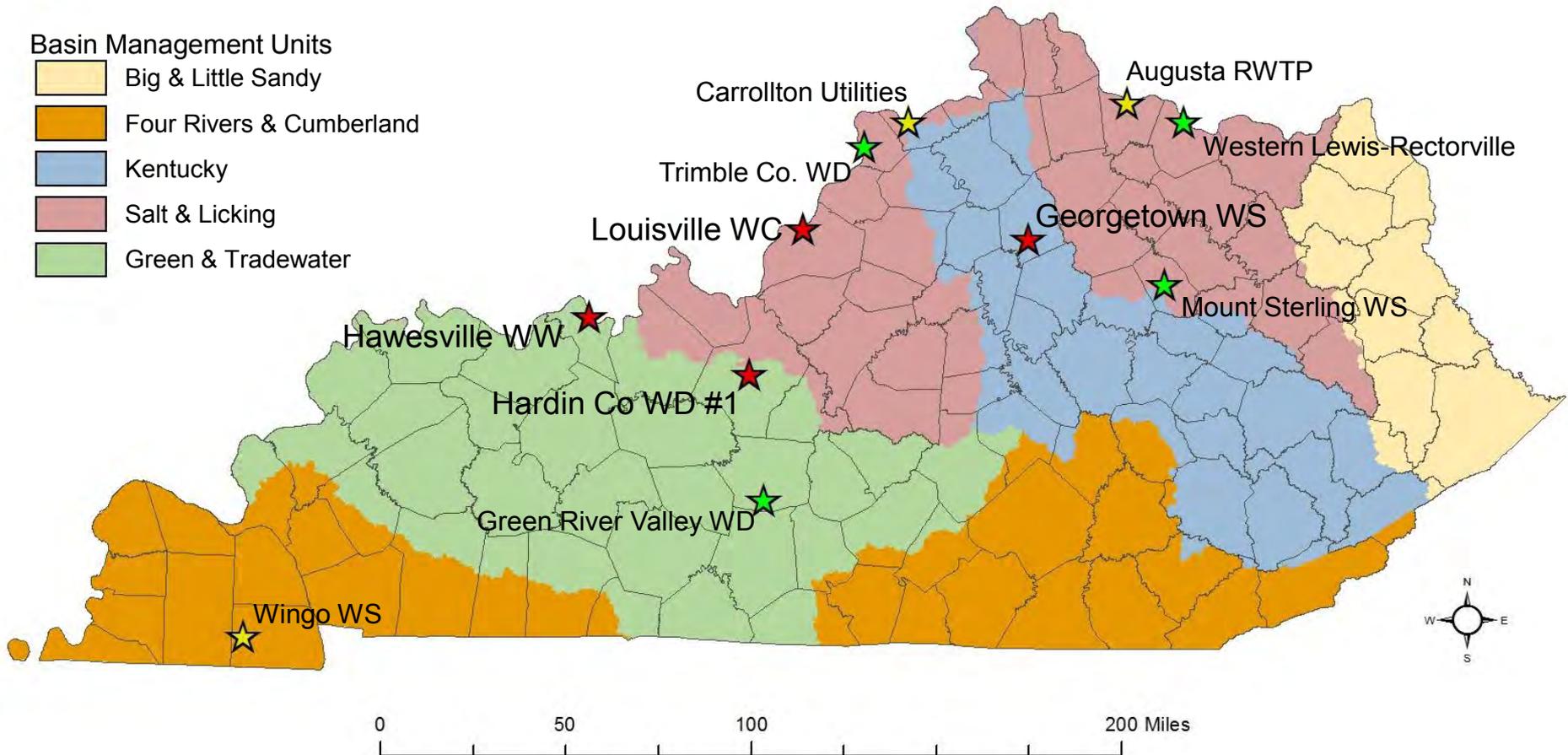
★ 2016: 4 projects @ \$150k

★ 2015: 5 projects @ \$145k

★ 2014: 4 projects @ \$85k

Basin Management Units

- Big & Little Sandy
- Four Rivers & Cumberland
- Kentucky
- Salt & Licking
- Green & Tradewater



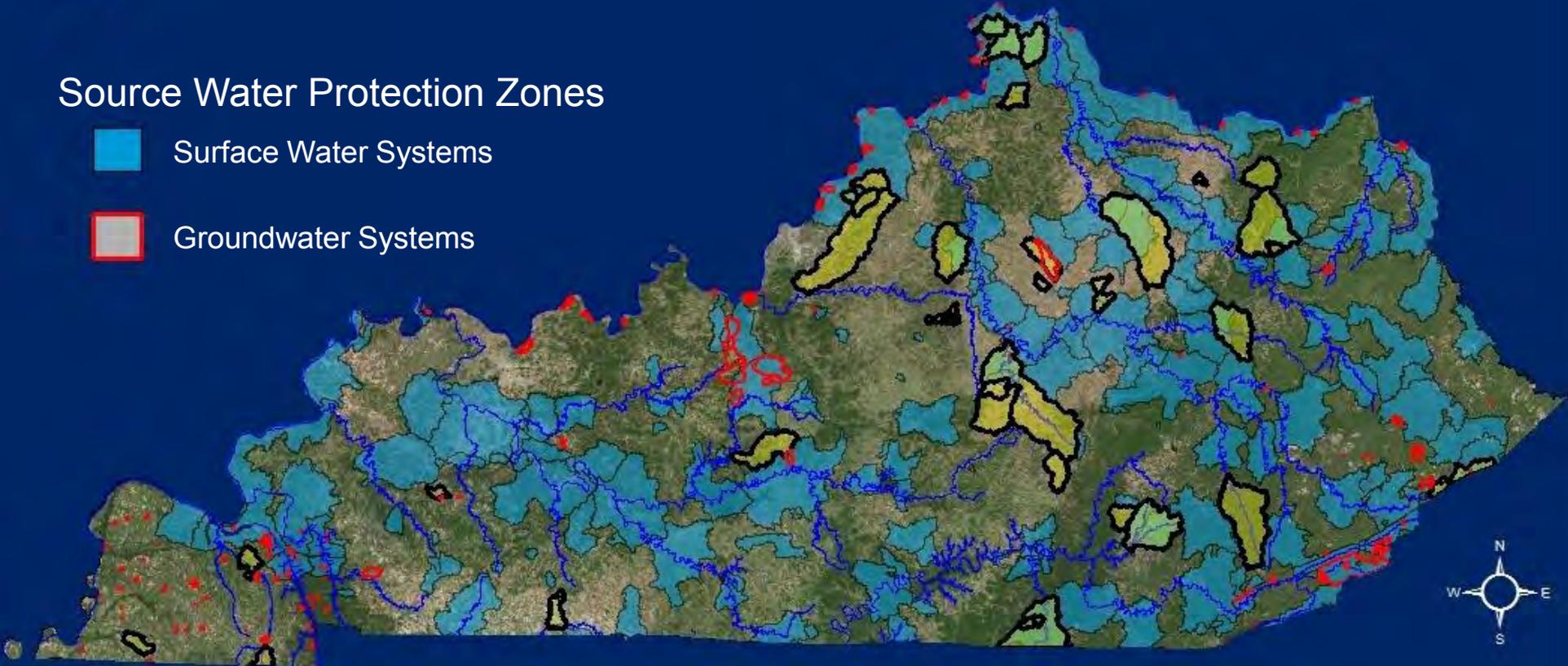
Collaboration and Partnerships

 Watershed Planning Areas (CWA 319)

Source Water Protection Zones

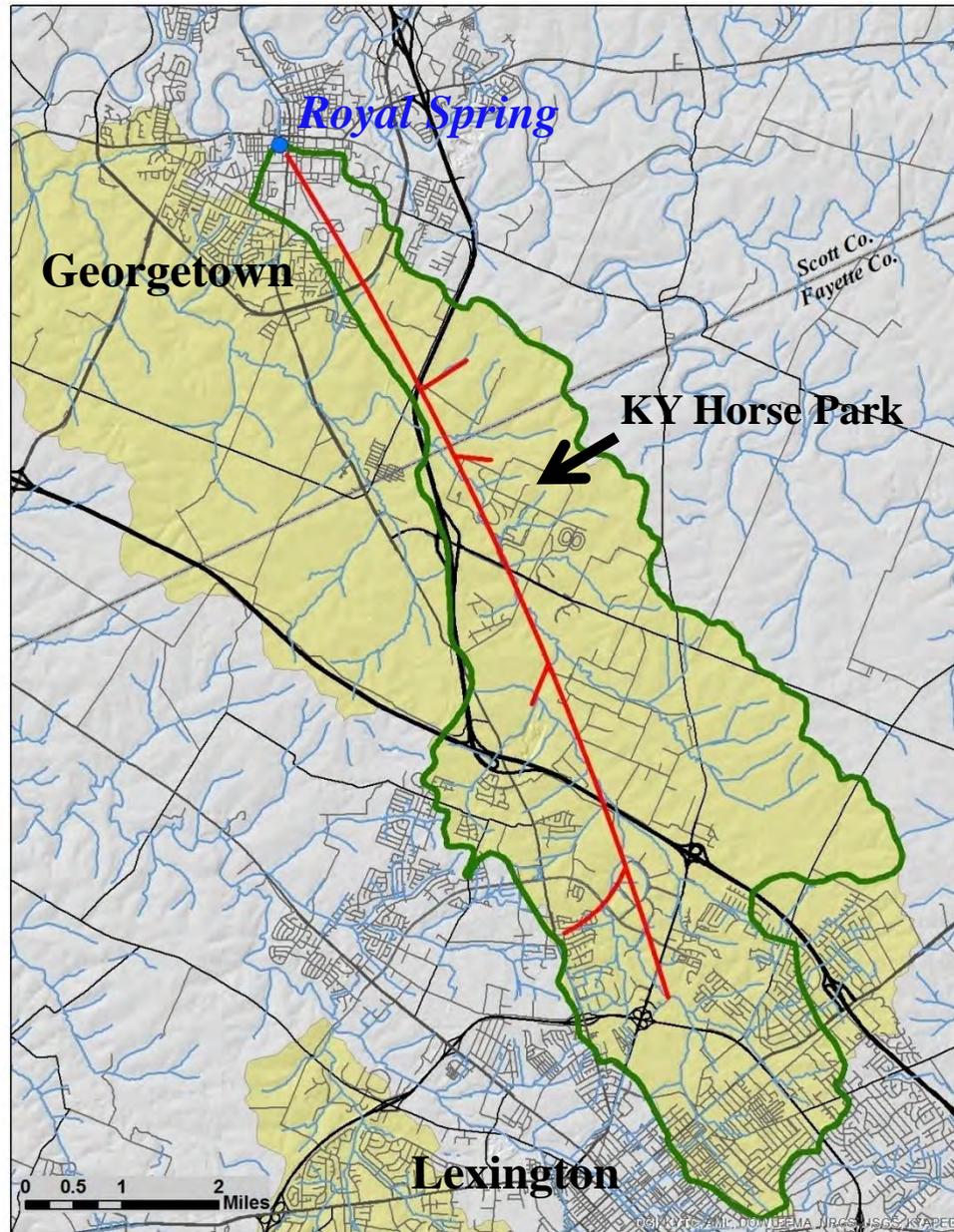
 Surface Water Systems

 Groundwater Systems



0 50 100 200 Miles

CWA-SWP Collaboration

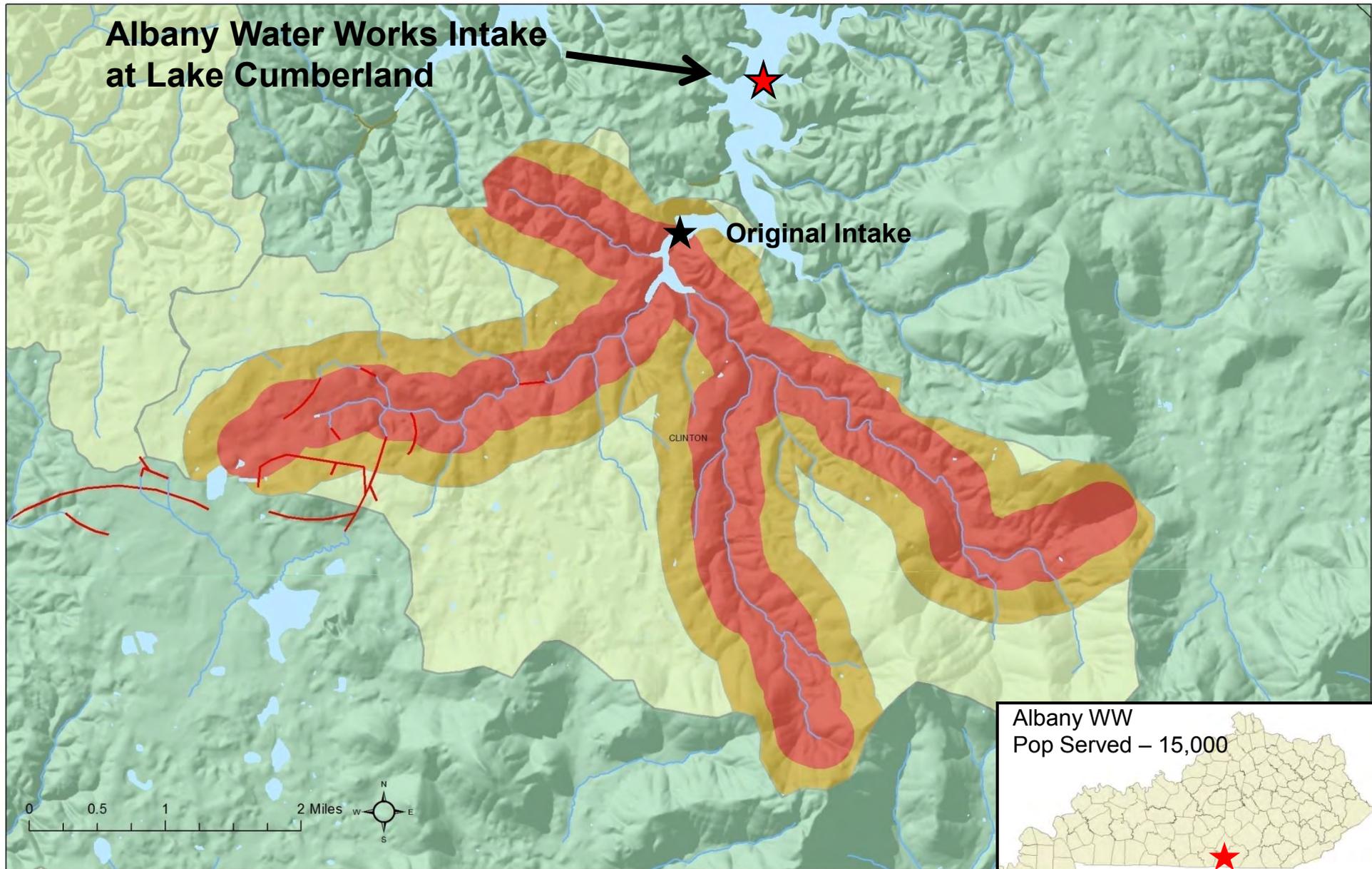


Collaboration and Partnerships

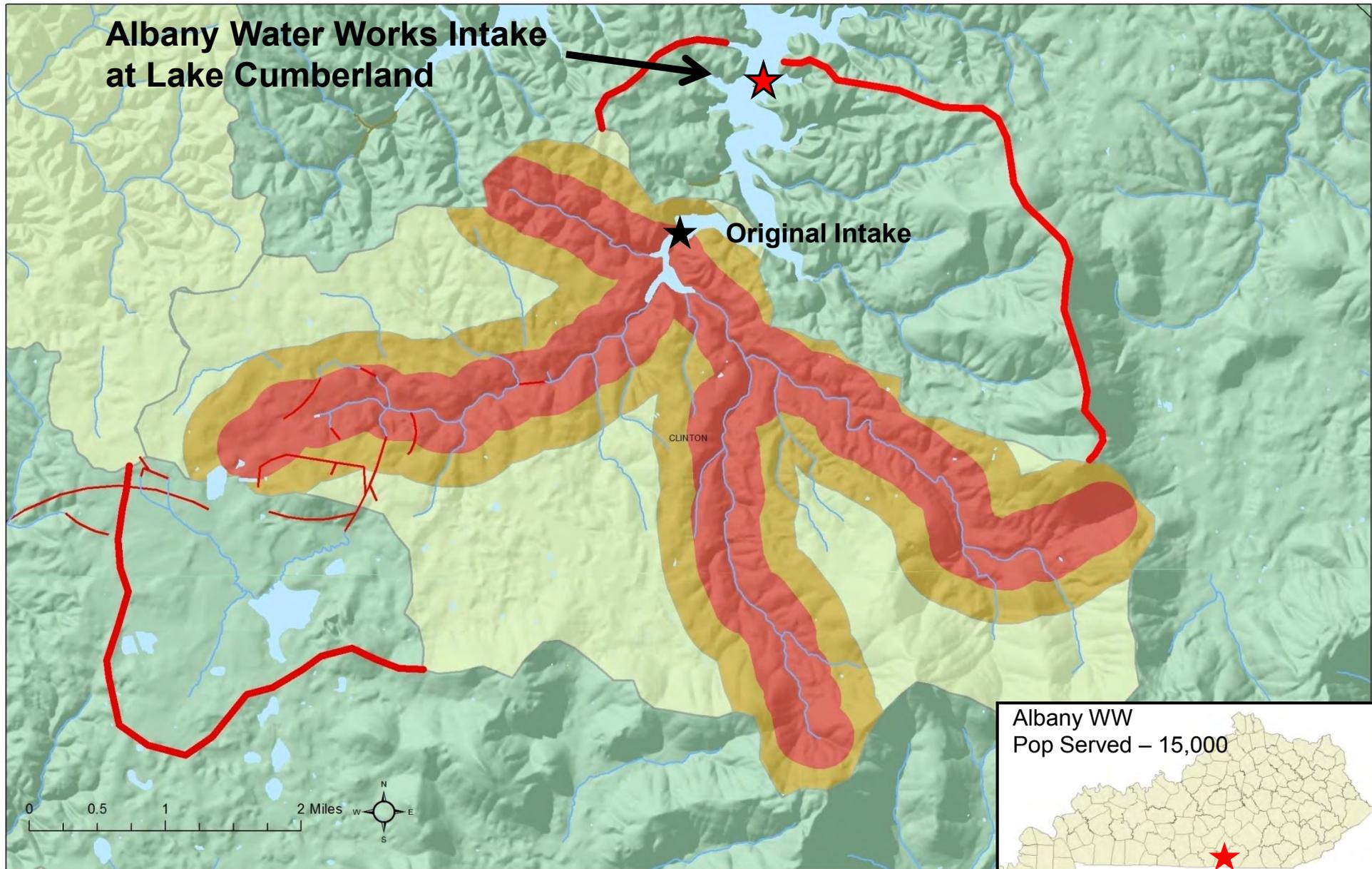
Other government and non-government agencies

- EPA and Region 4 states
 - SWP meeting to share ideas and discuss programs
- Association of State Drinking Water Administrators
 - Information exchange
- Drinking Water Advisory Council
 - Direct interaction with regulated community
- Kentucky Rural Water Association
 - SWP plan development and water system assistance
 - Meetings, trainings and workshops

SWP Evaluation and Updates



SWP Evaluation and Updates



SWP and Agricultural Connections

Monitoring

- Drinking water supply assessments
 - Adequacy and reliability
- Water withdrawal permitting relies on similar info
 - Monthly withdrawal reporting to DOW
- Limited collaboration with KGS Groundwater Level Observation Network

SWP and Agricultural Connections

Analysis of Water Use and Information Needs

- Water system production and demand info
- Technical assistance to rural water systems
 - Often in tandem with KRWA
- Planning for expansion and future demand
- Public awareness and involvement are keys to SWP success

SWP and Agricultural Connections

Water Resource Development and Tech Assistance

- Efficiency programs for new facilities/infrastructure may have some utility
- Technical assistance for SWP may not directly apply, but we are an available resource

SWP and Agricultural Connections

Drought Mitigation and Response

- Part of coordination between water users
- Part of coordination and information exchange within and between agencies
- Technical assistance for SWP may not directly apply, but we are an available resource

SWP and Agricultural Connections

Communications & Outreach

- Major part of our efforts – water suppliers, communities, local/regional governments
- Collaboration and partnerships
- SWP is an element of comprehensive water management planning

SWP and Agricultural Connections

Water Resource Development Act

- Section 7104 – SWP implementation is an eligible use of SRF

Closing Thoughts

- Recent national and local events highlight need for SWP
 - Elk River, WV spill (MCHM)
 - HABs on Ohio River (other DW sources)
 - State/Local land use proposals
 - Increased treatment costs
- Successful SWP through partnerships:
 - Government (federal, state and local)
 - Water Systems
 - Communities
- Unique drinking water supplies require individualized assessment, planning and implementation

Questions?

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