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
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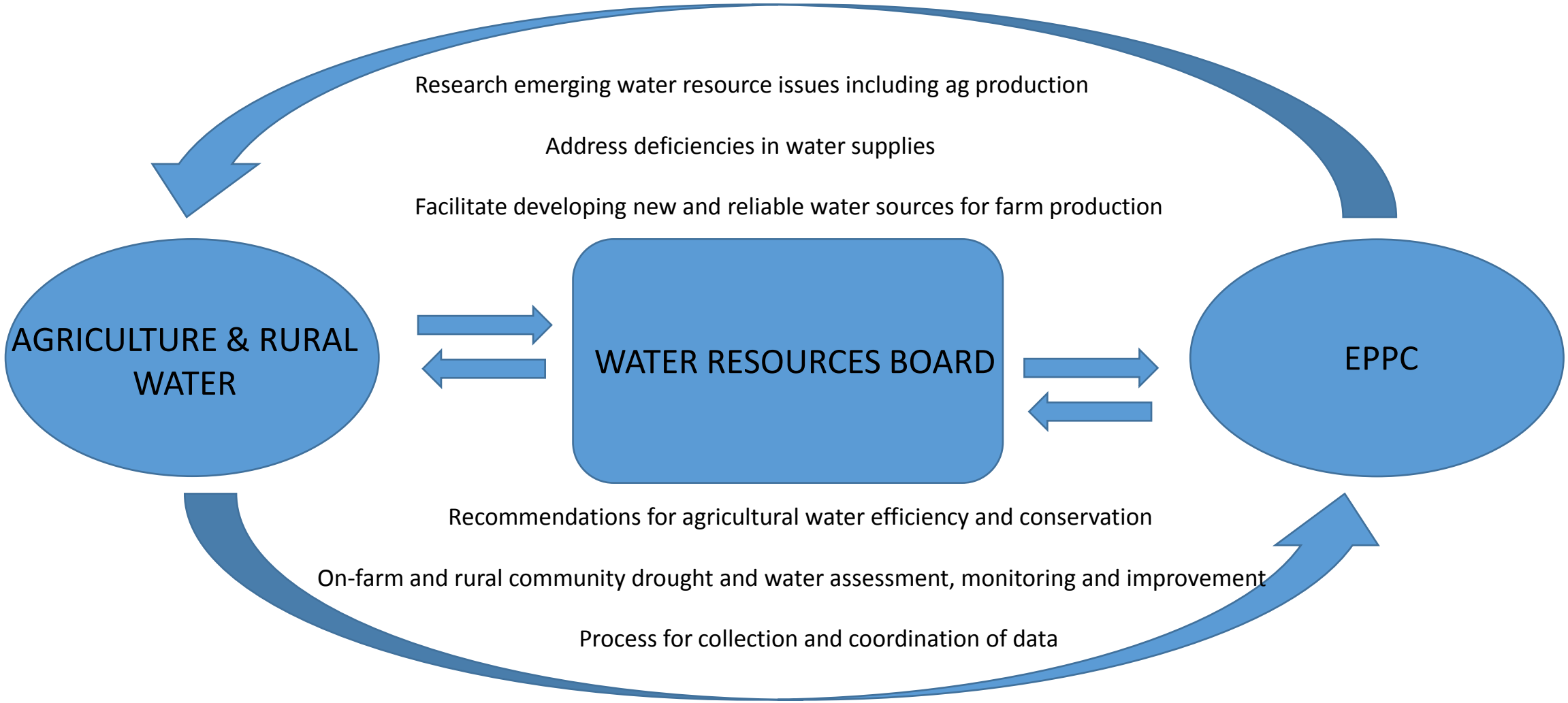


"Be anticipatory of future needs and reactive to problems" KRS 151.112(c)

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

Technical Committee Progress Reviews

May 11, May 31, June 15

- GAP identification – Data Gaps / Water Gaps

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).

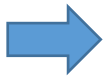
Water Availability

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

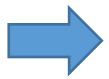
Projecting future water demands for water supply, agriculture, industry, mining, energy production and other needs is a key part of developing a long-term vision for the state's water resources. Reliable projections for water demands combined with a water availability assessment will be used to identify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