

Looking Ahead to a Kentucky Water Resources Plan

Water Resources Board

October 31, 2016

Department for Environmental Protection
Energy and Environment Cabinet



To Protect and Enhance Kentucky's Environment

Kentucky
UNBRIDLED SPIRIT™

KENTUCKY FARM BUREAU



WATERMANAGEMENT
WORKING GROUP

<https://www.kyfb.com/federation/water/resources/>



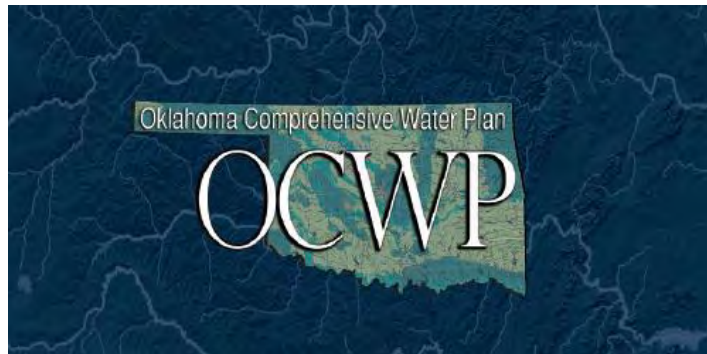
“A GOAL WITHOUT A PLAN IS A WISH”

Anonymous Radio Personality





The AWP brings data, science, and public input together to define water demands, water supplies, issues and potential solutions to meet our future needs.



States' plans are unique but share common features that are the foundation for water planning.



The Georgia Comprehensive State-wide Water Management Plan (State Water Plan) was adopted by the General Assembly in 2008. The State Water Plan provides for [Resource Assessments](#), [Forecasting](#), and [Regional Water Planning](#).



CORE ELEMENTS OF A WATER PLAN PROCESS

WATER AVAILABILITY

Water Supply and Infrastructure

DEMAND FORECASTING

Water Quality

GAP ANALYSIS

Watershed Management

TECHNICAL RESULTS AND FINDINGS

Wastewater Infrastructure

ISSUES AND POLICY RECOMMENDATIONS

Drinking Water Action Plans
AG Water Quality Plans
Source Water Protection Plans
Drought Response Plan

PLAN IMPLEMENTATION

****STAKEHOLDER-DRIVEN**

****REGIONAL PERSPECTIVES AND PRIORITIES**

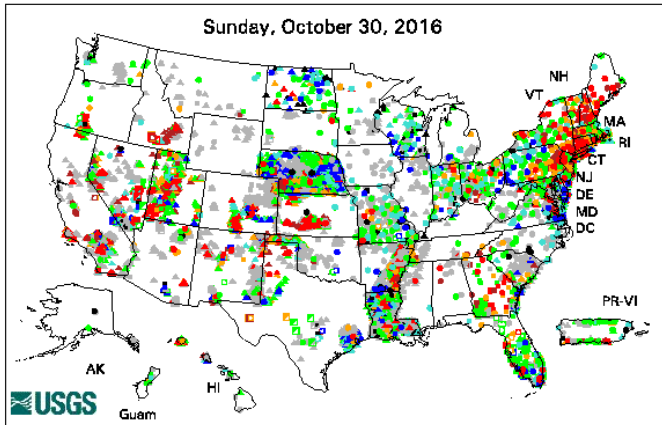
****INCREMENTAL DEVELOPMENT**



TECHNICAL DATA AND STUDIES

Active Groundwater Level Network

Sunday, October 30, 2016



Explanation - Percentile classes (symbol color based on most recent measurement)						Wells	Springs
●	●	●	●	●	●	○	○
Low	<10	10-24	25-75	76-90	>90	□	□
	Much Below Normal	Below Normal	Normal	Above Normal	Much Above Normal	△	△

Active Well Count

Real-Time: 1,628

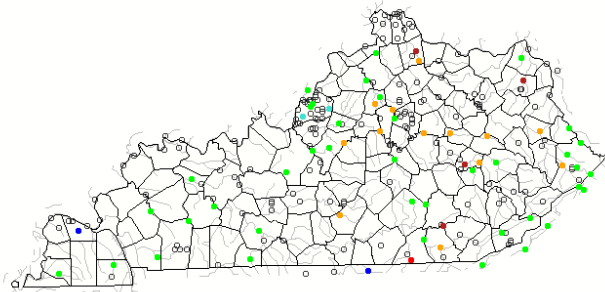
Daily: 1,230

Periodic: 13,460

Map of real-time streamflow compared to historical streamflow for the day of the year (Kentucky)

Kentucky or Water-Resources Regions

Monday, October 31, 2016 08:30ET



USGS

I. WATER AVAILABILITY

Regional Water Inventories

Annual and Seasonal "Surplus/Deficit"

- Existing withdrawal demand
- Instream Flow demands



Kentucky
UNBRIDLED SPIRIT

TECHNICAL DATA AND STUDIES



II. DEMAND FORECASTING

Population-driven Demands

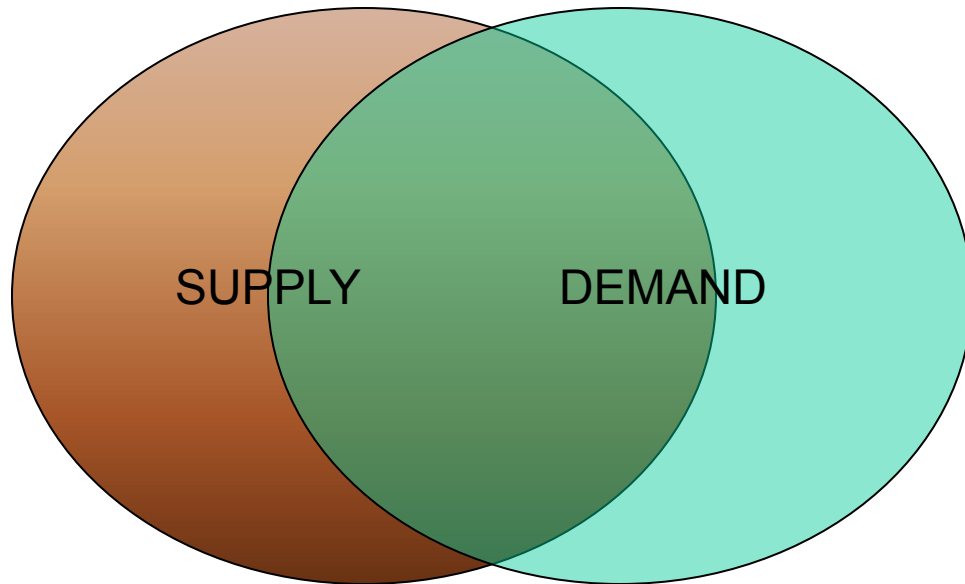
Agricultural Demands

Energy Sector Demands

Industrial Demands



TECHNICAL DATA AND STUDIES



GAP ANALYSIS

Where does available supply not meet current demand?

Where will available supply not meet future demand?

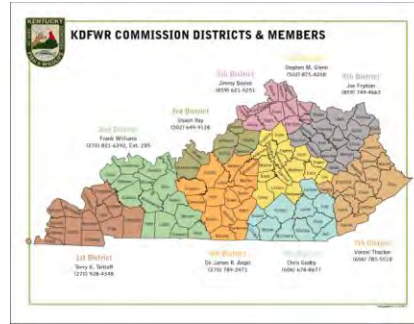
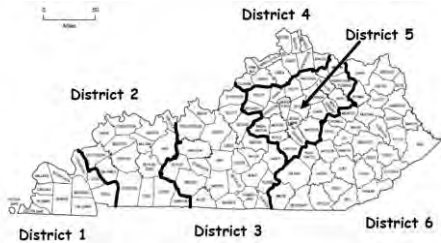
Why does the GAP exist?

What are potential solutions?

“HOT SPOT” ANALYSIS

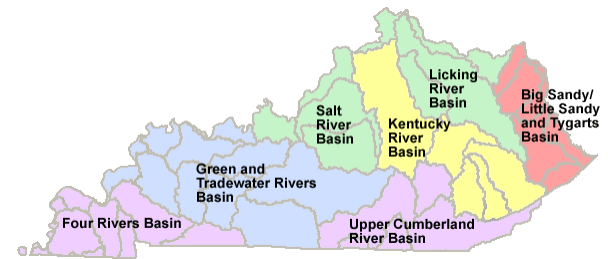
Which GAPS are most critical?

PLAN DEVELOPMENT



REGIONAL FOCUS

STAKEHOLDER DRIVEN



What issues are seen as priorities at the local/regional level?

What needs to be in the plan?

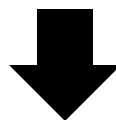
**** Inform the development of a statewide water resources plan.**



PLAN DEVELOPMENT AND IMPLEMENTATION

**TECHNICAL RESULTS
AND FINDINGS**

**REGIONAL ISSUES AND
PRIORITIES**



**STATEWIDE
PRIORITIZATION OF
ISSUES**

**POLICY/PROJECT
RECOMMENDATIONS**

**PLAN DEVELOPMENT
AND FEEDBACK**

PLAN IMPLEMENTATION

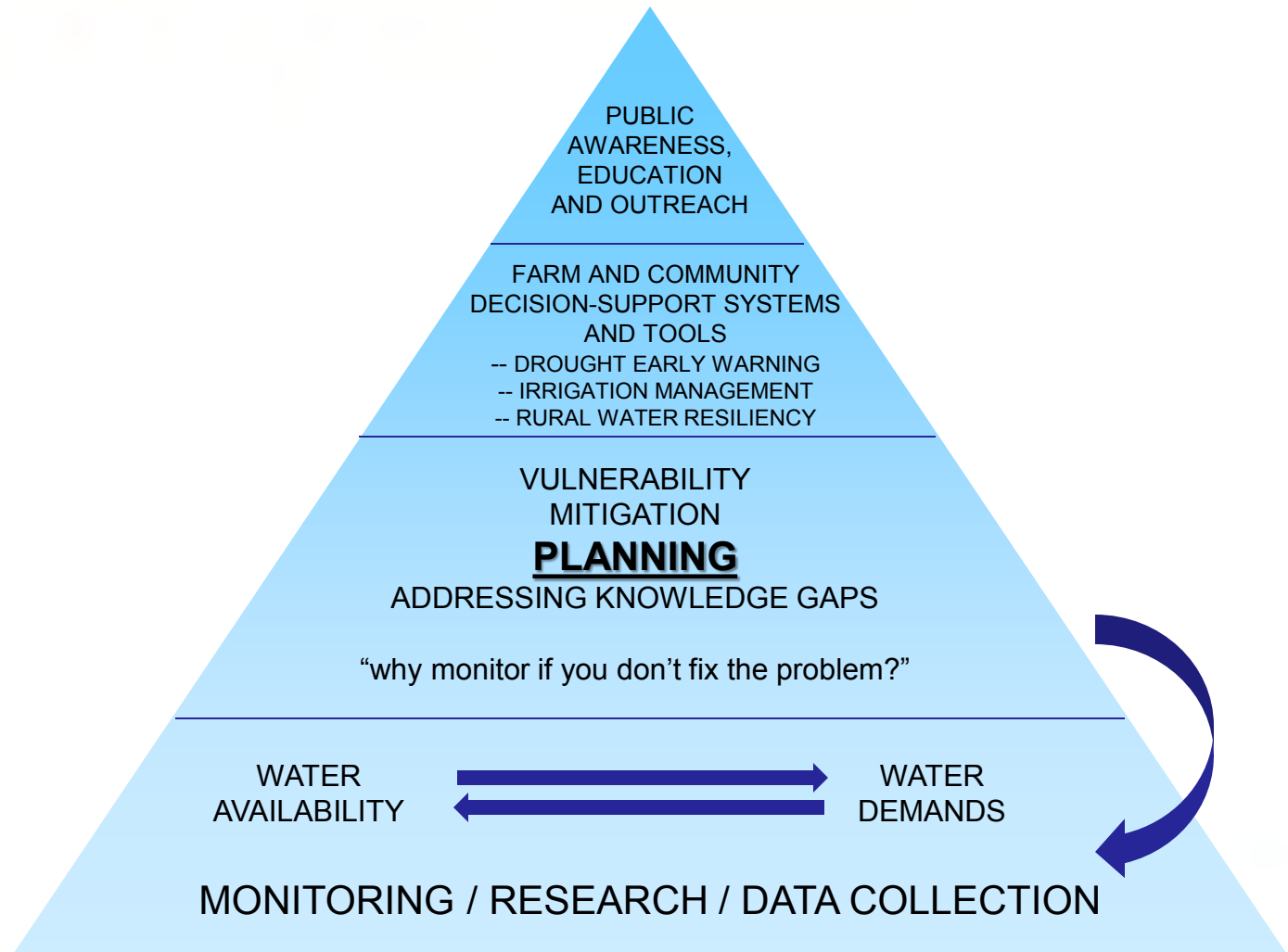


Appoint two working committees

- **Technical Data Committee**
- **Plan Development Roadmap Committee**

Water Resources Development

What do we need to know?



Applicant: Kentucky Climate Center, WKU

WKU-1: The Kentucky Mesonet Station Acquisition and Installation

WKU-2: Kentucky Mesonet Soil Monitoring

WKU-3: Kentucky Mesonet Precipitation Monitoring

WKU-4: Summaries, Forecasts and Outlooks



Applicant: US Geological Survey

USGS-1: Agricultural and Drought Data Management and Integration Application

USGS-2: Streamflow Gaging Stations in Critical Areas with Existing Data Gaps

USGS-3: Water Quality Monitoring Stations to Better Quantify Nutrient Loading



Applicant: Kentucky Geological Survey

KGS-1: Kentucky Groundwater Observation Network

KGS-2: A Groundwater Withdrawal Assessment Tool for the Jackson Purchase Region



Applicant: Dr. Steve Higgins/University of Kentucky

UK-1: Stormwater Management, Water Harvesting and the LEAF Program

