

Kansas Water Authority

In-Person/Virtual Meeting

August 17, 2021

Garden City, KS

Options For Audio:

- **Use Computer Audio via Zoom**
or
- **Use your phone:**

Dial: (346) 248-7799

Meeting ID: 875 0915 5720

Passcode: 394863



MEETING AGENDA

<i>Time</i>	<i>Agenda Item</i>	<i>Presenter</i>	<i>KWA Advice</i>	<i>KWA Decision</i>	<i>Page No.</i>
8:00 am	Call to Order/Roll Call	Dawn Buehler	--	--	--
8:05 am	Approval of Meeting Minutes	Dawn Buehler			
	June 23, 2021 Meeting (Virtual)	Dawn Buehler		X	2
8:10 am	Overview of Meeting Agenda & Logistics	Connie Owen	X		
8:15 am	Kansas Water Plan Update	Connie Owen			
	2021 Kansas Water Plan Draft (for Public Comment)	Connie Owen		X	4
9:30 am	Public Water Supply Committee Update	John Bailey			
	RWD Douglas No. 6 Request to Negotiate	Nathan Westrup		X	5
9:45 am	Garden City Water Conservation Efforts	Fred Jones Jake White	X		
10:15 am	BREAK				
10:30 am	KWA Budget Committee	Mike Armstrong			
	FY 2023 SWPF Budget Discussion	Cara Hendricks Debra Jones		X	12
11:45 am	Legislative & Federal Update	Matt Unruh	X		14
	KWA Message to Gov. & Legislature Re: Federal Funding	Connie Owen		X	15
12:00 pm	Lunch Break				
1:00 pm	RAC Operations Committee	Jeremiah Hobbs			
	RAC Messages to the KWA	Jeremiah Hobbs		X	16
	New RAC Membership Appointments	Jeremiah Hobbs		X	19
1:50 pm	GMD1 LEMA Update	Earl Lewis	X		
2:10 pm	Western Kansas Playa Lake Efforts	Matt Smith	X		
2:40 pm	Director's Report	Connie Owen	X		
2:50 pm	New Business				
3:00 pm	Adjourn				

Call to Order/Roll Call

Call to Order/Roll Call; *Dawn Buehler*

Minutes

Presented by: Dawn Buehler



Action Needed

Approval of minutes from:

June 23, 2021*

**Virtual Meeting via Zoom*

Kansas Water Plan Update

The 2021
KANSAS WATER PLAN



Presented by:
Connie Owen



Action Needed

*Approval for KWO to
transition to formal public
comment phase of
Kansas Water Plan Update*

Document Overview:

The 2021 KANSAS WATER PLAN



KANSAS WATER PLAN

Prepared by
The Kansas Water Office

900 SW Jackson, Ste 404
Topeka, KS 66612

(785) 296-3185
www.kwo.ks.gov

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Conserve & Extend the High Plains Aquifer

Background

The High Plains Aquifer (HPA) is the largest, most economically important groundwater source in Kansas. It underlies western and south central Kansas and is composed of several hydraulically connected aquifers¹⁾. The Ogallala, which is the largest of these, occurs in the western third of Kansas, an area that is semi-arid with limited surface water. The eastern extension of the HPA is composed of younger sediments that make up the Great Bend Prairie and Equus Beds aquifers. Lying above the Ogallala Formation are Pleistocene and younger stream valley deposits that bear water; where these are connected to the underlying aquifer,

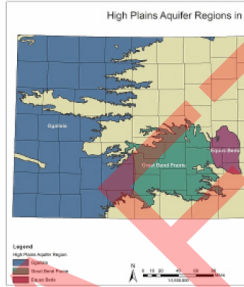


Figure 1. Map of the High Plains Aquifer

In western and south central Kansas, groundwater has historically been the source of large volumes of water for irrigation, stock watering, municipal, and industrial use; there have been over 50,000 water rights approved in all of Kansas with a majority approved for groundwater use in the HPA (figure 2)⁽¹⁾.

The total average reported irrigated acres for 2010 to 2020 in the HPA is estimated around 2.7 million acres⁽²²⁾. Corn has been the most commonly grown crop in recent years. Given that corn may need up to two feet of water per acre per year, it may require acre-feet of water for corn and other crops. This total in the HPA is from precipitation on the surface water. The HPA has a very limited supply of groundwater throughout the region.

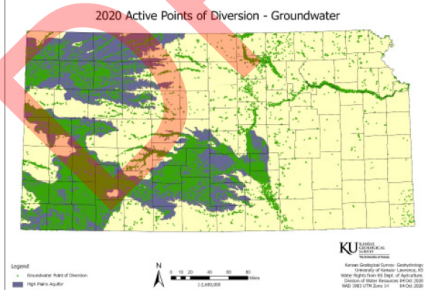


Figure 2. 2020 active groundwater points of diversion in Kansas¹

Conserve & Extend the High Plains Aquifer

Management Approach

The HPA is essential to the economy and environment, as well as to the well-being of our citizenry. A variety of local, state and federal entities are charged with the duty to help implement water conservation efforts within the region. These entities assist producers through cost-share and incentives programs, conservation and environmental programs, and education and outreach efforts. The entities responsible for providing these services include local groundwater management districts, KDA-DWR, Kansas Water Office (KWO), Kansas Department of Agriculture's Division of Conservation (KDA-DOC), Kansas Department of Health and Environment (KDHE), Kansas Geological Survey (KGS), K-State Research and Extension, United States Department of Agriculture's Natural Resources Conservation Service (USDA-NRCS), United States Department of Agriculture's Farm Services Agency (USDA-FSA) and local conservation districts.

In addition to these voluntary financial assistance programs, regulatory mechanisms exist to ensure the lawful use of water and to secure reductions in use when necessary to preserve the availability (and sometimes the quality) of a given water supply. The KDA-DWR administers the Kansas Water Appropriation Act, K.S.A. 82a-701, et seq., which, among its provisions establishes a “first in time, first in right” doctrine for priority among water rights during times of shortage, regardless of type of use. The KDA-DWR is also mandated by law to administer this rule between water right owners when an impairment complaint is lodged. The KDA-DWR has also required the installation of water flow meters on diversion works for water rights across the state, which has allowed data-driven management decisions and supported research empowering effective conservation strategies.

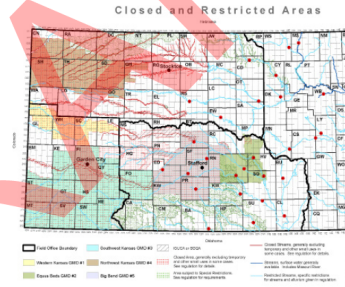


Figure 7. Closed and restricted areas in Kansas to new water appropriation and the Groundwater Management

Kansas water law also allows the KDA-DWR to establish Intensive Groundwater Use Control Areas (IGUCAs) in specifically-identified areas where a declining groundwater supply meets certain critical criteria. There are currently eight IGUCAs, the most recent having been established in 1992 (Walnut Creek IGUCA).

Conserve & Extend the High Plains Aquifer

Regional Conservation Efforts

Cost-Share & Incentives

- **Water Transition Assistance Program (WTAP):** A program offered by KDA-DOC that pays water right owners in targeted areas that are closed to new water rights appropriations, to permanently dismiss all or a portion of their active water right(s)⁽³⁾.
- **Conservation Reserve Enhancement Program (CREP) – Kansas Upper Arkansas River:** USDA-FSA offers a program to producers in the Upper Arkansas River counties in Kansas that pays irrigators to permanently transition acreage out of irrigated production and into grasslands or other conservation practices⁽⁴⁾.
- **Irrigation Technology Initiative:** KDA-DOC offers cost-share funds to assist landowners with irrigation efficiency technology. This initiative is designed to promote irrigation efficiency and water conservation by providing cost-share assistance to landowners for automated soil moisture probes⁽⁵⁾.
- **Environmental Quality Incentives Program (EQIP):** USDA-NRCS program that provides financial and technical assistance to producers to implement water conservation practices⁽⁷⁾.

Conservation & Environment

- Regional Advisory Committee (RAC): Regional planning committees were established by the Kansas Water Authority (KWA) to focus on priority goals for the region and develop an action plan to help address water concerns and other issues within their region⁶.
- Local Enhanced Management Area (LEMA): A program that allows a GMD to take action to conserve water usage in portions or all of their district. If recommended by the GMD and ordered by the Chief Engineer, the conservation measures temporarily override the appropriated water rights in the region. A LEMA has the potential to be highly effective due to local commitments and changes in farming practices⁷.
- Water Conservation Areas (WCA): A program offered by KDA-DWR that allows individual farms the flexibility of their water right(s) on their land for a limited time period, as long as they officially agree to reduce water use during that period¹⁰.

Education & Outreach

- **K-State Research and Extension (KSRE)**: Offers information and guidance through their Mobile Irrigation Lab, KanSched, and Crop Water Allocator that help producers make the most efficient, economic use of their crop water. KSRE is looking into more water-tolerant crops and experimenting with multiple crop varieties in order to learn what works best in different climates and if any new crop variety can be obtained for further water conservation⁽¹⁾.
- **Water Technology Farms (Water Tech Farms)**: KWO collaborates with producers and other partners to help demonstrate and educate other producers on the benefits of utilizing new irrigation technologies, practices, and services⁽²⁾.
- **HPA Index Well Network**: A KGS program that is focused on developing an improved understanding of aquifer dynamics at scales appropriate for management. The program has a monitoring network of 25+ wells with much of the data being presented in real-time on the KGS website to allow Kansans to understand conditions in the HPA in their area. An additional goal is to directly examine water resource issues and areas of particular interest to the GMDs and KDA-DWR⁽³⁾.

Document Overview:

Conserve & Extend the High Plains Aquifer

Measuring Success

Much of the Ogallala portion of the HPA has been heavily depleted since groundwater was first pumped. Projections in some areas show no more than 20 years of water remaining at current rates. Other areas in west central Kansas have already returned where many acres of once irrigated land have now been converted to cattle grazing. Some small areas in southwestern Kansas show more remaining, but this is far from the rule in most of the HPA in western Kansas.

Although the continued life of the Ogallala Aquifer and the livelihoods of those who rely on it absolutely depends on the significant reductions in pumping, too many producers still use the full authorized quantities under their water rights. And because the vast majority of Ogallala water use is irrigation, it is imperative that irrigation use be reduced. This need not mean economic disaster, however. Recent studies have shown that the same amount of yield or more can be accomplished with less water if new farming practices are introduced.

The KGS currently has over 25 "index wells" that have been installed in the HPA region and are recording water levels every hour (Figure 8)⁽¹⁹⁾. The first three sites, located in Haskell (GMD3), Scott (GMD1), and southern Thomas (GMD4) counties were drilled in 2007⁽¹⁹⁾. Figures 9, 10, and 11 show the seasonal changes and trends in the water table for these three wells since they were installed.

As can be seen in the graphs on this page and the next, water levels can vary substantially in a single year in response to irrigation-based pumping during the growing season and climatic conditions. In recent years, the overall rate of decline has improved as much of the HPA region has seen above average precipitation rates resulting in lesser pumping demands. When favorable and timely rains do not occur, groundwater withdrawals increase and water levels typically fall.

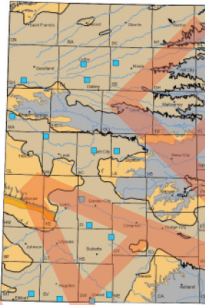


Figure 8. KGS Index Wells in the High Plains Aquifer

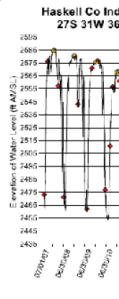


Figure 9. Haske reduction in the rate of to a temporary curtail of the

Conserve & Extend the High Plains Aquifer

higher water use can boost property values, which, in turn, provide more highly-valued collateral for more favorable bank loans.

Federal crop insurance programs may create an incentive to use water unnecessarily simply to get crop started without the expectation of harvest, because the anticipated crop failure will result in a financially rewarding insurance payment. Such unintended consequences seem the result of policies that began in pre-development times, but continue to exist now that a depletion is reaching crisis levels. A successful approach to reducing agricultural groundwater use, while retaining profitability, must involve updating these and other financial forces so that they encourage and reward preservation of aquifer waters.

Potential promise involves the impact on playa lakes on aquifer recharge. Playa lakes are shallow depressions that hold water from rainfall and runoff. According to the KGS, when playa lakes are full, they can provide recharge for underlying aquifers, as well as providing habitat for plants and animals. Western Kansas is home to more than 22,000 playas, but 80 percent of these have been plowed and planted over⁽²⁰⁾. The KGS, in collaboration with the University of Waterloo, Kansas Biological Survey and the University of Minnesota-Mankato, are undergoing a study of the effect farming has on the ability of playas to recharge the aquifer.

Recommended Actions and Strategies - Conserve & Extend the HPA

Throughout the course of a calendar year, the KWA and RACs meet regularly to address resource concerns and future agendas. Starting in the fall of 2019, the KWA held regional meetings with local stakeholders to discuss their concerns, as well as recommendations on steps to resolve such issues. Based on applicable science, research and experience, the following actions and strategies are recommended to help conserve and extend the HPA in Kansas.

Policy or Program Recommendations

- Support soil health/carbon sequestration practices and partnerships.
- Increase incentives for water conservation programs.
- Continue support of the KGS Index Well Program.
- Provide more support to KDA-DWR for Compliance and Enforcement.
- Provide greater support for promotion, development, and management of LEMAs and W.
- Ensure appropriate irrigation efficiency technology and irrigation management practices eligible under existing or new state and federal financial assistance programs.
- Ensure crop insurance, banking and property valuation policies do not discourage water conservation and/or use of alternative, specialty and cover crops.



Conserve & Extend the High Plains Aquifer

Implementation Actions

- Continue to share pertinent HPA information.
- Develop a curriculum to be taught in schools explaining the past, present, and future of the HPA and related issues.
- Continue to bring the eight Ogallala states together to work on collaborative projects.
- Pursue opportunities to facilitate recycling and reuse of stockwater and other sources.
- Collaborate with crop consultants and other agricultural advisors to support farmers interested in water conservation and less water-intensive crop production.

Data, Research, and Studies

- Continue evaluation of emerging innovations on Water Tech Farms in collaboration with KSU and other partners.
- Expand research on drought tolerant and low-water crops to determine suitability for area.
- Expand research on optimum plant development stages to determine most efficient irrigation water application.
- Provide the public with reports that include studies demonstrating the benefits of pumping less water.
- Evaluate and identify most efficient system technologies for use by Kansas irrigators.
- Evaluate and identify ways to create new and strengthen existing markets for less water-intensive crops.

Funding and Resource Needs

- Fully fund the KWP.
- Coordinate with the Kansas Department of Commerce and the Marketing Division of the KDA to consider incentives to recruit businesses and focus economic development on businesses that value water conservation, use water-efficient technologies, and reduce the removal of water from the state.
- Encourage value-added processing within Kansas by providing financial or water right credit incentives to dairies and feedlots.



Document Overview:

PAGE 76 KANSAS WATER PLAN 2021

Cimarron Region

Regional Description

The Cimarron Regional Planning Area is located in the southwest corner of Kansas covering 3,995 square miles, including all of Meade, Morton, Seward, and Stevens counties and the southern portions of Grant, Haskell, and Stanton counties (Figure 1).

The Cimarron Region is bordered by Oklahoma on the south and Colorado on the west.

Cimarron Regional Planning Area

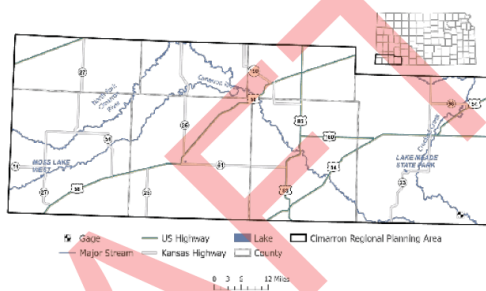


Figure 1. Cimarron Regional Planning Area

CLIMATE & LAND USE

The climate of the region is characterized by moderate to low precipitation, relatively high wind velocities, a wide range of temperatures, and abrupt weather changes. Average annual precipitation varies from 16 inches in the west to 22 inches in the east (Figure 2). The high winds and low humidity of the region contribute to a high evaporation rate.

Cimarron Regional Planning Area

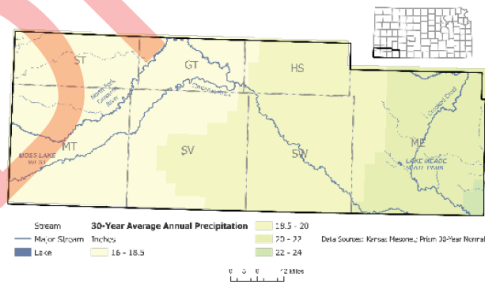


Figure 2. 30-year average annual precipitation in the Cimarron Region

- Regional Description includes:
 - Climate & Land Use
 - Population & Economy
 - Overview of Surface & Groundwater Resources
 - Regional Water Use

Document Overview:

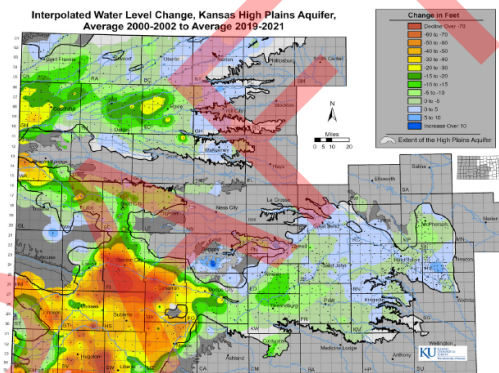
Cimarron Region

Regional Issues & Priorities

OGALLALA AQUIFER LEVEL DECLINES

Since the 1970s, the Ogallala Aquifer, as detailed in the *Conserve & Extend the High Plains Aquifer* section, has been developed so extensively that the amount of water withdrawn annually is significantly more than the recharge, resulting in groundwater declines. Some areas are already experiencing shortages in meeting demand.

As groundwater level declines (Figure 9), the aquifer loses hydraulic connection with the overlying alluvial aquifers and rivers and no longer contributes much, if any, base streamflow. This loss of hydraulic connection between surface and groundwater within the region has caused streams to dry up between rain events. Kansas Geological Survey (KGS), in an effort to help develop a better understanding of the aquifer dynamics at a scale that would be appropriate for management, created the [Index Well Program](#): a network of well-monitoring systems that aids in tracking water level changes while providing real-time data.



Future KWA Review/Action:

- August:
 - KWA Approval for KWO to post full draft Kansas Water Plan for public review and public hearings during formal public comment phase.
- Following KWA Action on transition to formal public comment phase:
 - Open public comment period of at least 30 days
 - Satisfy statutory public hearing requirements
- Following Formal Public Comment Phase:
 - Review of comments from before and during formal public comment phase and consideration of comments for incorporation in draft Kansas Water Plan
 - KWA review and approval of Kansas Water Plan

TODAY'S REQUESTED ACTION: Approval for KWO to transition to formal public comment phase of Kansas Water Plan Update

PWS Committee Update

Presented by: John Bailey & Nathan Westrup

- RWD Douglas No. 6 Request to Negotiate

Douglas Co. Rural Water District No. 6, Application & Request to Negotiate

- DG RWD No. 6 – Current contracts
 - Water Purchase Contract No. 79-2 (Capped rate)
 - Expires 12/13/21
 - Quantity, 23.76 MGY
 - Application for renewal – received 06/16/21
 - Water Purchase Contract No. 90-2 (variable rate)
 - Expires 12/31/30
 - Quantity, 9.5 MGY
- DG RWD No. 6 – Application
 - Application No. 260
 - Proposed term – 40 years
 - Proposed quantity – 33.2 MGY
 - Proposed consolidation
 - *The District has requested termination of WPC No. 90-2, incorporating the quantity into a single contract*

Request to negotiate (98-5-3)

- Applicant has submitted a written notice to begin negotiations
- *If the KWA finds that the proposed sale is in the **public interest** and that it will **advance the purposes of the State Water Planning Act and the State Water Plan** –*
“...the authority shall authorize the director to negotiate with the applicant for the purposes of entering into a written contract for sale of water supply.”

PWS Committee Action

- PWS Committee recommends* authorizing the Director to begin negotiations with RWD Douglas No. 6

*The consensus of present voting members, 2 of 4. 3 advisory members were also in attendance.

PWS Committee Workplan

Task	Committee Action Required	Status	Calendar Year 2021												Calendar Year 2022												Calendar Year 2023												Calendar Year 2024																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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PWS Committee Workplan

		Committee Action Required	Status	Calendar Year 2021												Calendar Year 2022												Calendar Year 2023												Calendar Year 2024											
Task				1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
City of Emporia																																																			
WPC 81-2			Active	Expires on 10/21/2023																																															
Two potential options (Emporia's decision)				Emporia is evaluating the renewal of their Water Purchase Contract vs the purchase of additional Water Assurance District storage.																																															
Potential evaluation period																																																			
Option 1: Renewal Application				(If Emporia choses to remain a Water Marketing customer)																																															
Request to negotiate		X																																																	
Negotiations																																																			
Contract Approval		X																																																	
Option 2: Additional WAD storage				(If Emporia choses to leave the Marketing Program, additional Assurance storage will need to be purchased from the Marketing Program)																																															
Permission to negotiate sale of storage		X																																																	
Negotiations																																																			
WAD storage contract																																																			
Evergy - Wolf Creek																																																			
WPC 17-2			Active	Expires on 12/31/2022																																															
Two potential options (Evergy's decision)				Evergy (Wolf Creek) is evaluating the renewal of their Water Purchase Contract vs Water Assurance District membership - requiring storage purchase.																																															
Potential evaluation period																																																			
Option 1: Renewal Application & New App*				(If Evergy choses to remain a WM customer)																																															
Request to negotiate		X																																																	
Negotiations																																																			
Contract Approval		X																																																	
Option 2: Additional WAD storage				(If Evergy choses to leave the Marketing Program, additional Assurance storage will need to be purchased from the Marketing Program)																																															
Evergy - Application for water right*				Assurance membership requires an eligible water right, as determined by the Chief Engineer																																															
Permission to negotiate sale of storage		X																																																	
Negotiations																																																			
WAD storage contract																																																			
Water Marketing Program - Finance																																																			
Evaluating Financial Consultant			Complete																																																
Contract Consultant			Complete																																																
Financial analysis & Concept Design			In Progress																																																
Financial model build			TBD																																																
Evaluate Bonding Program Debt			TBD	Timing is largely dependent on decisions of Emporia, Evergy, and financial consultant recommendation																																															
Set Water Marketing Rate		X	Annual																																																
Update Capital Development Plan		X	TBD	Also very dependent on Emporia, Evergy, and financial consultant																																															
Surplus Water Report		X	Annual																																																

Garden City Water Conservation Efforts

Presented by: Fred Jones & Jake White

KWA Budget Committee

Presented by: Mike Armstrong, Cara Hendricks
and Debra Jones



Action Needed

Approval of FY 2023 SWPF
Budget Recommendations

Legislative & Federal Update

Presented by: Connie Owen & Matt Unruh



Action Needed

Approval of KWA Message to Governor &
Legislature Re: Federal Funding

LUNCH BREAK

Thank you to today's lunch sponsors:



KWA RAC Operations Committee

Presented by: Jeremiah Hobbs



Action Needed

- RAC Messages to the KWA
- RAC Membership Appointments

RAC Messages to the KWA

Great Bend Prairie RAC

Message: The Great Bend Prairie Regional Advisory Committee (RAC) would like to receive direct communication back from the Kansas Water Authority (KWA) on why they have accepted or rejected our FY 2023 budget recommendations.

Background: Several years ago, a higher level of RAC participation in the budget process began with presentations provided to individual RACs on how SWPFs are being spent in their Region. These presentations are modified annually to reflect changes in line item spending. The current process provides a budget webinar to the RACs in spring with individual RAC recommendations to the KWA suggested budget in July or August.

The recommendations from the RACs are primarily driven by the Goals and Action Plans that the RACs have developed. In previous years, the RACs have not received a direct response back from the KWA that included an explanation on their budget recommendations.

Staff Input: Kansas Water Office (KWO) staff have developed presentations for each individual region and solicit input from the RACs which is provided to the KWA Budget Committee for consideration in their final recommendations that are presented to the KWA.

Response: The KWA RAC Operations Committee recommends that the KWA Budget Committee address this message.

The KWA RAC Operations Committee recommends the KWA Budget Committee address this message.

RAC Messages to the KWA

Kansas RAC

Message: The Kansas Regional Advisory Committee (RAC) is pleased that the Kansas Water Authority (KWA) has supported the recommendation for an interim session for the House Water Committee in 2021.

However, the Kansas RAC would like to take this opportunity to reiterate its belief that the crucial nature of water to the well-being of the State of Kansas and its citizens necessitates that a permanent committee on water be established in each branch of the Kansas legislature. We believe that the establishment of a permanent committee will allow representatives the time to develop expertise in the area, and encourage sufficient attention to our most critical and potentially most complex resource – water.

Background: A new House Water Committee, led by Rep. Ron Highland, was created for the 2021 legislative session. The committee is focused on water issues and has met with various water-related agencies and interest groups to better understand how water resources are managed in the state of Kansas. At the Kansas RAC meeting on March, 19, 2021, the Kansas RAC approved a message to the RAC Operations Committee related to the House Water Committee which included recommendations that the KWA advocate for an interim summer session for the House Water Committee, as well as a permanent standing committee on water. Additionally, the Kansas RAC stated that it would like to offer its assistance, as appropriate, to the House Water Committee and recommended the KWA do the same.

The RAC Operations Committee discussed the original Kansas RAC message at its meeting on April 13, 2021, noting that the House Water Committee is authorized through the 2022 legislative session. The RAC Operations Committee advanced the recommendations to support an interim session and offer assistance to the House Water Committee. However, no comment on the recommendation for a permanent standing committee was included in the RAC Operations Committee response to the KWA. At the April 26, 2021, KWA meeting, the KWA voted and approved the KWA working with the KWO and House Water Committee to support an interim session.

In response, Dawn Buehler, KWA Chair, submitted a letter on May 12, 2021, to Representative Highland that provided some background about the RACs and KWA, expressed support from the Kansas RAC and KWA for an interim session, and offered assistance to the House Water Committee in support of further study of water resource management within Kansas. The House Water Committee ultimately received approval for an interim session which will be held in Garden City, Kansas, on August 17-18th. Several regional water issues will be addressed during the meeting, including: Water Quality/Quantity, Infrastructure Challenges, State Water Agency Organization and Funding.

RAC Messages to the KWA

Kansas RAC (continued)

Staff Input: Kansas Water Office (KWO) staff continue to work with the House Water Committee to present information, as requested related to water resources management in the state of Kansas. The August 17th KWA meeting date and location was scheduled to coincide with the House Water Committee interim session, in order to facilitate KWA and KWO participation and assistance.

Response: The KWA RAC Operations Committee suggests the KWA agree to generally recommend the concept of standing legislative committees in the Kansas House and Senate, respectively, to address water-related issues. This recommendation is not intended to convey an endorsement in support of, or in opposition to, any specific legislation the current House Water Committee may propose or consider.

The KWA RAC Operations Committee recommends KWA approval of the proposed response for the message to the KWA from the Kansas RAC.

RAC Membership

A membership drive for Regional Advisory Committee (RAC) membership positions with term expirations of June 30, 2021, as well as vacant positions, took place beginning this past spring. Eighty-two applications for RAC membership were received covering all 14 of the RACs.

On August 10, 2021, the RAC Operations Committee met to review the applications for RAC membership received and to develop recommendations for membership appointments to the various RACs. The table attached to this memo includes the complete list of recommendations for membership for various positions for all 14 RACs as discussed by the RAC Operations Committee and approved for recommendation to the full KWA. The recommendations are listed by RAC, and include the term expiration date, membership category (including the indication of core categories (cc) as designated by the Memorandum of Internal Policy-RAC), the applicants name and home location.

These membership recommendations will be reviewed with the full KWA at the August 17th meeting, at which time the KWA RAC Operations Committee will recommend that the KWA accept the recommendation made by the Committee and appoint the RAC applicants recommended.

Other information of note from the 2021 membership drive includes:

- 20 current RAC members with 2021 term expirations did not express interest in continuing on as members for an additional term
- 22 RAC positions are currently vacant (9 have 2023 terms expirations)

The KWA RAC Operations Committee recommends the KWA consider and accept the recommendations made by the Committee and appoint those RAC applicants recommended.

RAC Membership

RAC	Position Information						
	Membership Category	At Large Public (cc)	Groundwater Management	Irrigation	Public Water Supply		
Cimarron	Term Expiration Following KWA Action	2025	2025	2025	2025		
	RAC Ops Committee Recommendation	Alan Olson, Ulysses	Bret Rooney, Satanta	Luke Grubbs, Hugoton	Matt Higgins, Elkhart		
	Membership Category	Industry/Commerce 2	Conservation/Environment (cc)	At Large Public (cc)	Public Water Supply 2	Public Water Supply 3	Agriculture (cc)
Equus-Walnut	Term Expiration Following KWA Action	2025	2025	2025	2025	2025	2025
	RAC Ops Committee Recommendation	Brian Meier, Wichita	Byron Warts, Newton	Chad Milligan, Wichita	Brett Perry, Andover	Josh Bedel, McPherson	Richard Basore, Sedgwick
	Membership Category	Industry/Commerce 2	Agriculture 2	Industry/Commerce (cc)	At Large Public (cc)	Public Water Supply 2	Conservation/Environment (cc)
Great Bend Prairie	Term Expiration Following KWA Action	2025	2025	2025	2025	2025	2025
	RAC Ops Committee Recommendation	Cammie Vaupel, St. John	Daniel Filbert, Macksville	Jeff Holste, Burdett	Orrin Feril, Stafford	James Oberle, Pawnee Rock	Veronica Coons, Great Bend
	Membership Category	Fish & Wildlife	Agriculture 2	Agriculture (cc)	Public Utility (From Recreation)	Industry/Commerce (cc)	Water Assurance District
Kansas	Term Expiration Following KWA Action	2025	2025	2025	2023	2025	2025
	RAC Ops Committee Recommendation	Brad Bradley, Overland Park	Daniel Howell, Frankfort	Glenn Brunkow, Westmoreland	Bill Heatherman, Manhattan	Melissa Michels, Maple Hill	Sylvia Davis, Topeka
	Membership Category	Public Water Supply 3	Agriculture (cc)	At Large Public (cc)	Conservation/Environment (cc)	Conservation/Environment 2	Public Water Supply 2
Marais des Cygnes	Term Expiration Following KWA Action	2025	2025	2025	2025	2025	2023
	RAC Ops Committee Recommendation	Gary Armentrout, Centerville	Gayla Speer, Wellsville	Keri Harris, Ottawa	Ron Brown, Fort Scott	Scott Yeargain, Ottawa	James Depriest, Iola/Garnett
	Membership Category	WRAPS	Public Water Supply (cc)	Public Water Supply 3	Public Water Supply 2	At Large Public (cc)	
Missouri	Term Expiration Following KWA Action	2025	2025	2025	2025	2025	
	RAC Ops Committee Recommendation	Chris Griffen, Troy	Joel Mahnken, Leavenworth	Michelle Wirth, Kansas City	Mike Stec, Atchison	Martin Simon, Atchison	
	Membership Category	Conservation/Environment (cc)	At Large Public (cc)	Public Water Supply (cc)	Industry/Commerce 2	Agriculture (cc)	Agriculture 2
Neosho	Term Expiration Following KWA Action	2025	2025	2025	2025	2025	2023
	RAC Ops Committee Recommendation	James Triplett, Pittsburg	Jay Byers, Pittsburg	Joe Buchanan, Council Grove	Kate Grover, Iola	Susan Hague, Cedar Point	Dale Strickler, Iola
	Membership Category	Local Government	At Large Public (cc)	Industry/Commerce (cc)			Tisha Conard Richardson, Wilsey
Red Hills	Term Expiration Following KWA Action	2025	2025	2025			
	RAC Ops Committee Recommendation	Jeffery Porter, Medicine Lodge	Brandon Grigsby, Ashland	Mark Watts, Medicine Lodge			
	Membership Category	Small Public Water Supply	Agriculture 2	Conservation	Conservation/Environment (cc)	Irrigation	
Smoky Hill-Saline	Term Expiration Following KWA Action	2023	2025	2025	2025	2025	
	RAC Ops Committee Recommendation	Rich Krause, Russell	Tom Breit, Utica	Bevin Law, Longford	Dan Baffa, Salina	Brad Shogren, Lindsborg	
	Membership Category	Industry/Commerce (cc)	Agriculture 2	At Large Public 2	At Large Public (cc)	Conservation/Environment (cc)	
Solomon-Republican	Term Expiration Following KWA Action	2025	2025	2025	2025	2025	
	RAC Ops Committee Recommendation	David Pfizenmaier, Clay Center	Don Hellwig, Solomon	Mike Brzon, Courtland	Sharon Sahfeld, Beloit	Robbin Dibble, Alton	
	Membership Category	Conservation/Environment (cc)	Public Water Supply (cc)	Surface Water Irrigation	At Large Public (cc)	Dairy	Agriculture Industry
Upper Arkansas	Term Expiration Following KWA Action	2025	2025	2025	2025	2025	2025
	RAC Ops Committee Recommendation	Bill Simshauser, Lakin	Fred Jones, Garden City	Monte Morgan, Deerfield	Hugh Brownlee, Syracuse	Kyle Averhoff, Garden City	Roy Dixon, Garden City
	Membership Category	At Large Public 2	Public Water Supply 2	Industry/Commerce (cc)	Conservation/Environment (cc)	At Large Public (cc)	
Upper Republican	Term Expiration Following KWA Action	2023	2025	2025	2025	2025	
	RAC Ops Committee Recommendation	David Shaul, Atwood	Omar Weber, Colby	Brian Baalman, Menlo	Scott Ross, Atwood	Sue Evans, Colby	
	Membership Category	Agriculture (cc)	Groundwater Management	Financial			
Upper Smoky Hill	Term Expiration Following KWA Action	2025	2025	2025			
	RAC Ops Committee Recommendation	Farrin Watt, Leoti	Kyle Spencer, Scott City	Landon Frank, Scott City			
	Membership Category	At Large Public (cc)	Conservation/Environment (cc)	Public Water Supply 2	At Large Public 2 (New Position)	Industry/Commerce 2	
Verdigris	Term Expiration Following KWA Action	2025	2025	2025	2025	2025	
	RAC Ops Committee Recommendation	Pamela Walker, Altoona	Gary Kelley, Sedan	Ken McNickle, Mound Valley	Brian Graff, Neodesha	Ronald Smith, Fredonia	
	Membership Category						

GMD1 LEMA Update

Presented by: Earl Lewis

Western Kansas Playa Lake Efforts

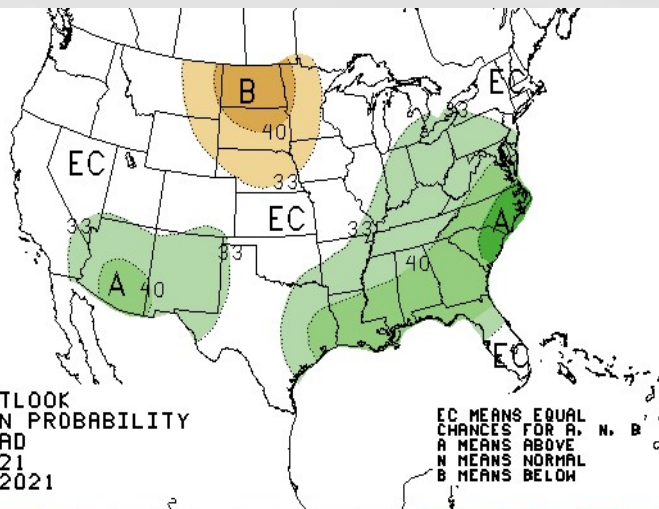
Presented by: Matt Smith

Director's Report

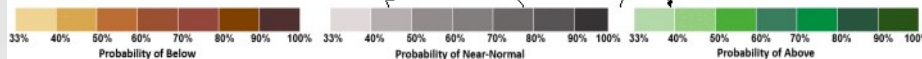
Presented by: Connie Owen



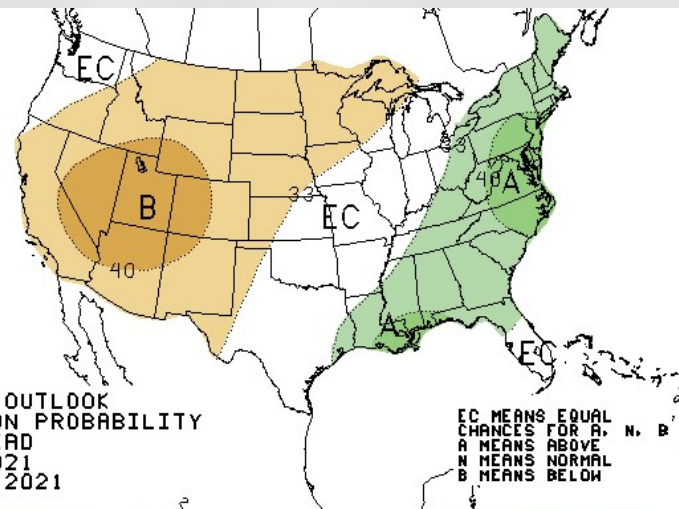
ONE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.0 MONTH LEAD
VALID AUG 2021
MADE 31 JUL 2021



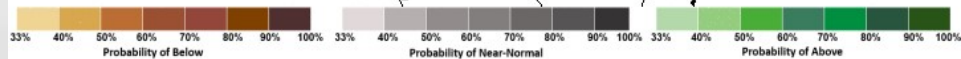
EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW



THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID ASO 2021
MADE 15 JUL 2021

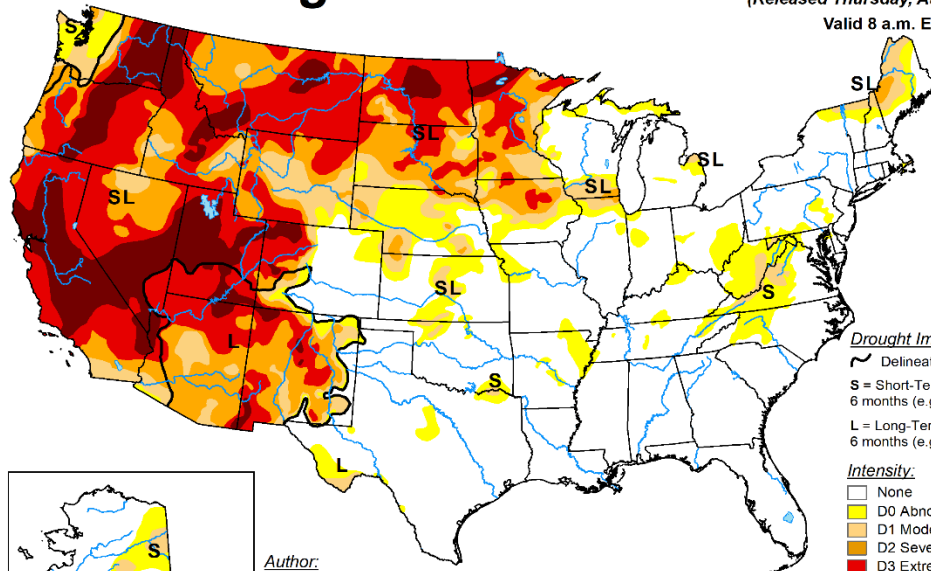


EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW



U.S. Drought Monitor

August 10, 2021
(Released Thursday, Aug. 12, 2021)
Valid 8 a.m. EDT



Drought Impact Types:

- ~ Delineates dominant impacts
- S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

Author:
Richard Tinker
CPC/NOAA/NWS/NCEP

The Drought Monitor focuses on broad-scale conditions.
Local conditions may vary. For more information on the
Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>



droughtmonitor.unl.edu



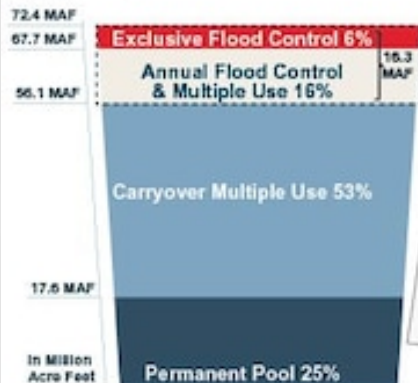
US Army Corps
of Engineers
Northwestern Division

Missouri River Basin

LEGEND

- Missouri River Basin
- Missouri River Dams
- Capitol City

The reservoirs are to scale and represent the relative size of the **total flood control storage (annual + exclusive)** at the six Missouri River Mainstem projects.



FORT PECK
Total Storage 18,463 MAF
Total Flood Control Storage 3,875 MAF
Top of Exclusive Flood Control - 2250.0 FT
22.5% of System Flood Control Storage

GARRISON
Total Storage 23,451 MAF
Total Flood Control Storage 5,708 MAF
Top of Exclusive Flood Control - 1854.0 FT
35.0% of System Flood Control Storage

OAHE
Total Storage 22,983 MAF
Total Flood Control Storage 4,315 MAF
Top of Exclusive Flood Control - 1820.0 FT
26.5% of System Flood Control Storage

BIG BEND
Total Storage 1,810 MAF
Total Flood Control Storage 0.179 MAF
Top of Exclusive Flood Control - 1423.0 FT
1.1% of System Flood Control Storage

FORT RANDALL
Total Storage 5,293 MAF
Total Flood Control Storage 2,292 MAF
Top of Exclusive Flood Control - 1375.0 FT
14.3% of System Flood Control Storage

GAVINS POINT
Total Storage 0,428 MAF
Total Flood Control Storage 0.133 MAF
Top of Exclusive Flood Control - 1230.0 FT
0.8% of System Flood Control Storage

MT

Helena

ND

MN

Bismarck

SD

Pierre

St. Paul

WY

Cheyenne

NE

IA

Des Moines

CO

Denver

Lincoln

KS

Topeka

Jefferson City

MO

New Business

- USGS Agreement – Kansas River WQ Monitoring
- Other items as needed

Adjourn

Upcoming KWA Meeting:

October 6, 2021
Location/Format TBD