Kansas Water Authority Meeting
Conference Call / GoToMeeting
9:00 a.m. – July 30, 2020
Agenda

Time	*Agenda Item*	*Presenter*	*KWA Advice*	*KWA Decision*	*Page No.*
9:00 am	**Call to Order/Roll Call**	Connie Owen	--	--	--
9:05 am	**Approval of Meeting Minutes**	Connie Owen			
	June 17, 2020 Meeting (Conference Call/GoToMeeting)			X	2
9:10 am	**KWA RAC Operations Committee**	Jeremiah Hobbs			
	RAC Membership	Jeremiah Hobbs		X	4
9:20 am	**Vision/Kansas Water Plan Update**	Bobbi Luttjohann	X		5
	Harmful Algal Blooms KWP Section Update *DRAFT*	Kirk Tjelmeland	X		6
	Neosho RAC Goals/Action Plan revisions *DRAFT*	Jay Byers Angela Anderson	X		9
	Solomon-Republican RAC Goals/Action Plan revisions *DRAFT*	Tim Driggs Josh Olson	X		11
	Upper Smoky RAC Goals/Action Plan revisions *DRAFT*	Frank Mercurio Keadron Pearson	X		12
9:55 am	**Legislative & Budget Update**	Earl Lewis	X		
	SWPF FY 2021 Appropriations & FY 2022 Budget Update	Cara Hendricks	X		13
10:05 am	**GMD #1 LEMA Update**	Chris Beightel KDA-DWR	X		
10:20 am	**Certified Irrigator Program**	Shannon Kenyon GMD #4	X		
10:35 am	**Kansas River Reservoirs Flood & Sediment Study Update**	Laura Totten USACE	X		15
10:45 am	**Director's Report**	Earl Lewis	X		
11:00 am	**New Business**				
11:05 am	**Adjourn**				

Upcoming Kansas Water Authority Meetings: August TBD

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Minutes

KANSAS WATER AUTHORITY

June 15, 2020 **Topeka, Kansas** **Conference Call**

CALL TO ORDER: Chair Connie Owen called the **June 15, 2020,** Kansas Water Authority conference call to order at **2:05** p.m.

MEMBERS PRESENT: Connie Owen - Chair; Mike Armstrong, John Bailey, Lynn Goossen, Randy Hayzlett, Jeremiah Hobbs, Alan King, Carolyn McGinn, Allen Roth, Allan Soetaert, Jean Steiner, David Stroberg,

MEMBERS ABSENT: Chris Ladwig

EX-OFFICIO MEMBERS PRESENT: Dan Devlin, Sara Baer, Tom Stiles, Mike Beam, Scott Carlson, Kayla Savage, Earl Lewis

EX-OFFICIO MEMBERS ABSENT: Susan Duffy, Chris Beightel, Rolfe Mandel, Brad Loveless

APPROVAL OF MINUTES:

Motion No. 06-15-01 It was moved by **Allan Soetaert** and seconded by **David Stroberg** to approve the May 20, 2020 Minutes for the Regular Meeting of the Kansas Water Authority as presented. **Motion carried with no dissenting votes.** Information found in meeting materials.

KWA PWS Committee:

CY2021 Water Marketing Rate

Motion No. 06-15-02 It was moved by **John Bailey** and seconded by **Randy Hayzlett** to approve the KWA to set the CY2021 Water Marketing variable rate at $0.436/1000 gallons. **Motion carried with no dissenting votes.** Information found in meeting materials.

KWA RAC Operations Committee:

New RAC Membership

Motion No. 06-15-03 It was moved by **Jeremiah Hobbs** and seconded by **Allen Roth** to approve the application for membership on the Upper Smoky Hill RAC for Louis Bo Parkinson – Public Water Supply

Vision/Kansas Water Plan Update:

Schedule for KWP Update & Outline of Sections

Bobbi Luttjohann presented.

Vision/Kansas Water Plan Update:

Neosho Regional KWP Template DRAFT

Bobbi Luttjohann presented.

Vision/Kansas Water Plan Update:
Aquatic Nuisance Species (ANS) Section DRAFT

Kirk Tjelmeland presented.

Vision/Kansas Water Plan Update:
MDC RAC Goals/Action Plans

Keri Harris presented.

Vision/Kansas Water Plan Update:
Missouri RAC Goals/Action Plans

Chris Griffin presented.

Vision/Kansas Water Plan Update:
Upper Republican RAC Goals/Action Plans

Shannon Kenyan presented.

KWA Budget Committee:
SWPF Budget Discussion/Update

Cara Hendricks presented.

Federal Update:
Missouri River 2019 Survey Results

Matt Unruh gave an update.

Federal Update:
WRDA Update

Matt Unruh gave an update.

Federal Cooperative Agreements (USGS):

Motion No. 06-15-04 It was moved by **Mike Armstrong** and seconded by **Allen Roth** to approve the Director to enter into agreements with the U.S. Geological Survey for the Streamgaging Network, Kansas River Water Quality Monitoring, Neosho River Sediment Monitoring, Monitoring on Big Blue River Below Tuttle Creek Lake, and Monitoring on Republican River at Clay Center above Milford Lake, provided that efforts are made to negotiate a KWO contribution of up to $40,000 to the Kansas River Water Quality Monitoring agreement.

Director's Report:

Earl Lewis gave an update.

New Business:

Earl Lewis gave an update.

ADJOURNMENT The KWA adjourned at 3:54 pm

MEMO

Kansas Water Office
900 SW Jackson Street, Suite 404
Topeka, KS 66612
Phone: (785) 296-3185
Fax: (785) 296-0878
www.kwo.ks.gov

DATE: July 21, 2020
TO: Kansas Water Authority
FROM: Jeremiah Hobbs
RE: RAC Membership

The Kansas Water Authority (KWA) Regional Advisory Committee (RAC) Operations Committee met on July 21, 2020, via conference call. Discussion from the meeting included RAC membership concerning the Upper Smoky Hill RAC and the Upper Arkansas RAC. The KWA RAC Operations Committee reviewed and discussed the following applications and offer the following recommendations to the KWA.

Upper Smoky Hill RAC: One application has been received to fill the Agriculture Industry category position on the Upper Smoky Hill RAC:

- The applicant, Stephen Mangan has applied for the Agriculture Industry category.

Currently the Upper Smoky Hill RAC has three vacancies:

- At Large Public (cc) (expiration date – 2021)
- Financial (expiration date – 2021)
- Agriculture Industry (expiration date – 2023)

Recommendation: The applicant Stephen Mangan is qualified to fill the Agriculture Industry category as he is a dryland farmer and owns and operates cattle feeding operations and a cow/calf program. Mr. Mangan also sits on, and serves in a leadership role, for several agriculture, development, or industry boards/committees. It is recommended that Stephen Mangan fill the category of Agriculture Industry (expiring 2023).

Upper Arkansas RAC: One application has been received to fill the At Large Public category position on the Upper Arkansas RAC:

- The applicant, Jason Shamburg has applied for the At Large Public category, after discussion via email, to switch his application selection from the Agriculture category to the open At Large Public category.

Currently the Upper Arkansas RAC has one vacancy:

- At Large Public 2 (expiration date – 2023)

Recommendation: The applicant Jason Shamburg is qualified to fill the At Large Public 2 category as he currently works in the Region and has an understanding of the areas water resource issues. Mr. Shamburg does live in Manhattan, KS, however he spends 4 days/week in the Region and his business is located in the Region. It is recommended that Jason Shamburg fill the category of At Large Public 2 (expiring 2023).

The KWA RAC Operations Committee recommends KWA approval of the applications for membership as follows:

Upper Smoky Hill RAC
Stephen Mangan – Agriculture Industry (expiration date – 2023)

Upper Arkansas RAC
Jason Shamburg – At Large Public 2 (expiration date – 2023)

MEMO

Kansas Water Office
900 SW Jackson Suite 404
Topeka, KS 66612
Phone: (785) 296-3185
Fax: (785) 296-0878
www.kwo.org

DATE: July 24, 2020
TO: Kansas Water Authority
FROM: Bobbi Luttjohann
RE: Kansas Water Plan Update

At the June 17th Kansas Water Authority (KWA) meeting the KWA was provided an update concerning the Kansas Water Plan (KWP). This update included an approximate timeline, along with a review of the updated goals and action plans for three of the 14 Regional Advisory Committees (RACs), and drafts of the updated Neosho Regional section and the Aquatic Nuisance Species (ANS) section.

In the months of June and July, work has continued with the remaining 11 RACs to complete the update for their goals and action plans. Currently, six additional RACs have completed their update, with three presenting at the July 30th KWA meeting. Along with these goals and action plans, the Harmful Algal Bloom (HAB) section has been drafted and will be reviewed at the KWA meeting.

As we progress into August, the remaining RACs will complete the update of their goals and actions, providing an overview of them at future KWA meetings. Along with the RACs' updates there will also be updates of regional sections, statewide issues, and timeline.

Additional information on this process will be shared with the full KWA at future meetings.

This is for informational purposes only. No Kansas Water Authority action is necessary at this time.

Harmful Algal Blooms (HABs)

Background:

There are many different photosynthetic aquatic organisms that have historically been called "algae." Though there are some functional similarities among the different forms of "algae," these organisms have a wide range of physical attributes and origins. "Blue-green algae" are actually bacteria and are thus even more distinct from other types of algae. Blue-green algae are simple aquatic organisms that exist naturally in marine and freshwater waters, rivers, lakes, wetlands, and ponds. When they are present in low numbers, they are a normal part of a healthy ecosystem. Blue-green algae are also known as cyanobacteria.

At times, blue-green algae can reproduce very rapidly, creating a dense growth known as a bloom. A "harmful algal bloom," or HAB, refers to a dense growth of algae that has the potential for creating toxins or other nuisance compounds. Some species or strains of blue-green algae produce a variety of toxins, which in some cases are released from healthy cells, but in other cases are released only when they become stressed and/or die. It is still not fully understood why these compounds are produced – whether they are adaptations that benefit the organism, or whether they are merely by-products of some other important process. Cyanotoxins can have acute effects on liver, kidney, lungs, and nervous system, and there are no known antidotes. The cyanotoxin most commonly found in Kansas lakes is a family of compounds called microcystins, which primarily affects the liver.

Not all strains of a given species produce toxins, but a majority of the potentially harmful blue-green algae that have been seen in Kansas belong to one of three genus groups: *Microcystis*, *Aphanizomenon*, and *Dolichospermum* (formerly called *Anabaena*). These species become a problem when nutrients (phosphorus and nitrogen) are present in concentrations above what would occur naturally. Under these conditions, algae can "bloom," or grow very quickly to extreme numbers. Summer heat and calm, clear water can increase the likelihood of a bloom occurring, because blue-green algae are especially adapted to take advantage of such conditions. The water could be colored pea-green, blue, or blue-green, and a cyanobacterial bloom can look like a vivid paint spill or floating grass clippings.

The Kansas Department of Health and Environment (KDHE) HAB Response Program was established in 2010 as a complaint-based response program to address blooms on public waters only. Managers of private waters are encouraged to perform a jar test and use private labs if they believe they are experiencing a bloom. Under the KDHE program, there are three levels of Advisories. A **Watch** is triggered by microcystin over 4ug/l or cyanobacterial density over 80,000 cells/ml, a **Warning** for microcystin over 8 ug/l or cyano density over 250,000 cells/ml, and **Hazard** for microcystins over 2,000 ug/l or cyano density over 10,000,000 cells/ml.

Current Problem:

Over the past three years, there has been a steady increase in Kansas lakes that have developed a HAB and had an advisory of some level: 2017-26 lakes, 2018-32 lakes and 2019-37 lakes, see Figure 1. Information provided by KDHE is likely leading to more vigilance and informed reporting, however the

nutrients continue to accumulate in water bodies, providing the fuel for the possibility of increasing the number, severity, and duration of HABs.

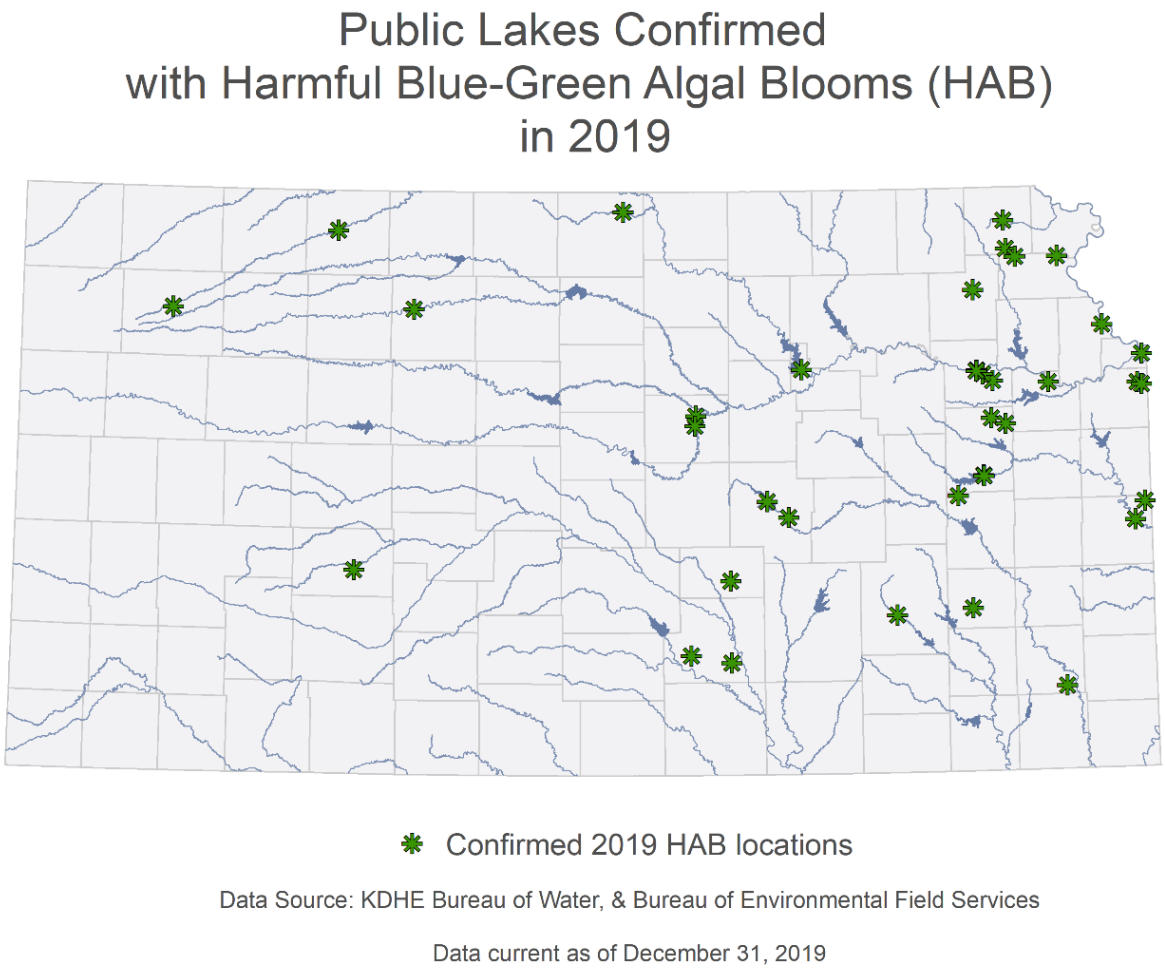

Figure 1.

Budget Needs:

The current budget needs include maintaining the KDHE HAB response program, improving outreach and education, improving prediction and detection methods using satellite imagery, and improving monitoring and laboratory analysis technologies. Other funding needs include reducing watershed nutrient inputs through land management practices to remove or divert nutrients from vulnerable waterbodies. Several of these items are partially funded under the State Water Plan Fund, ex.: Milford RCPP, Kansas Reservoir Protection Initiative, KDA programs, and KDHE programs. There are other HAB related research projects taking place within the state as well.

Regional Advisory Committee (RAC) Goals and Action Plans:

The Kansas RAC has Goal #5 -*After 2020, reduce duration and frequency of Harmful algal bloom disrupting recreation in lakes such that blooms last under a week and do not occur until after Labor Day.* While the specific nature of this goal may be infeasible to accomplish, the concepts of reducing the

magnitude, duration and frequency of HABs and their effects on recreation and drinking water are still valid aspirations. The Action Plans to accomplish this were to provide more money for Best Management Practices (BMP's) in watersheds, limit nutrients through multiple programs, use of in-lake technologies to treat HABs, and coordinated water releases to reduce HABs. There are six other RACs that have sediment reduction or the use of BMP's to reduce sediment that would also help limit nutrient loading into streams and reservoirs.

Updated Regional Advisory Committee (RAC) Goals and Action Plans:

Neosho Goals and Action Plans:

Priority Goal #1: Prolong the water supply storage in John Redmond Reservoir to the year 2065 by reducing the sedimentation rate by an average of 300 acre-feet per year.

Action Steps

- Stabilize all streambank hotspots, as defined by the Kansas Water Office (KWO), by 2030 in the Cottonwood-Neosho Region above John Redmond Reservoir. The Streambank Team (KDHE, KDA-DOC, and KWO) will secure funding for the stabilization of the streambanks each year to complete reaches in order as they proceed from the reservoir.
- The Streambank Team will evaluate streambank sites after the years with major flooding in the Region.
- A collaboration between the Regional Advisory Committee (RAC), local producers, local WRAPS groups, local conservation districts, regional public water suppliers (PWS), the KWO, the Kansas Department of Health and Environment (KDHE), and the Kansas Department of Agriculture-Division of Conservation (KDA-DOC) will secure funding and work to treat 80% of priority cropland with no-till practices, cover crops, buffer strips, soil health management principles, and other sedimentation and nutrient reduction farming practices by 2030 in the Cottonwood-Neosho Region above John Redmond Reservoir, Marion Reservoir, and Council Grove Reservoir. To provide education and share information concerning water and soil conservation and nutrient and sedimentation reduction, demonstration farms will be established in the region above these three reservoirs using this collaboration.
- The KWO will review the sedimentation rate of these three reservoirs by conducting bathymetric surveys every five years to monitor the sedimentation rate and the progress and benefit of sedimentation reduction practices. The KWO will secure funding for this program.
- The KWO will evaluate the feasibility of possible technologies to remove sediment from the reservoirs in order to maintain and protect water supply.

Priority Goal #2: Reduce vulnerability to drought to ensure water supply available from storage and other sources exceeds projected demand by at least 10% through the year 2050 for the entire Region.

Action Steps:

- The KWO will evaluate operational efficiencies and potential additional storage and sources, including upstream and downstream options, by 2025.
- The KWO will continually work with the U.S. Army Corps of Engineers (USACE) on refining reservoir operations and developing Drought Contingency Plans.
- The KWO will evaluate costs associated with conservation pool rises and the benefits of increased supply, soliciting the USACE's advice when needed. Based on the evaluation, a reallocation study may be implemented.
- The KWO will use Forecast Informed Reservoir Operations (FIRO) forecasting to control storage to increase water supply and reduce flooding by looking at climate variability and creating long-term forecasting

Priority Goal #3: Reduce overall nutrient loading, frequency of Harmful Algal Blooms (HAB), and potential for Aquatic Nuisance Species (ANS) to improve water quality within the Region by 2035.

Action Steps

- The RAC will work with the KDHE to identify the highest loading areas and investigate what practices would be best implemented to reduce nutrient loading.
- The KWO will work with KDHE to investigate and demonstrate in-lake treatment options to reduce the frequency and duration of HAB and assess the effectiveness of in-lake treatment options at minimizing the impact of HAB.
- Implement best management practices (BMP) above Marion Reservoir to reduce nutrients before they enter the Reservoir as mentioned in Goal 1 Action Steps, thereby reducing HAB frequency to no more than every three years.
- The RAC will work with the regional PWS and the Grand River Dam Authority to investigate nutrient crediting options for the entire Neosho Region (including areas in Oklahoma) to reduce nutrient loading from nonpoint sources.
- The RAC will encourage funding for the ANS Program through the State Water Plan Fund (SWPF). As well, the RAC will encourage the consideration of ANS for interbasin water transfer.

Priority Goal #4: Reduce vulnerability to floods within the Region by 2050 to reduce impacts to water quality and infrastructure.

Actions Steps:

- The RAC will work with the KWO, The Nature Conservancy (TNC), and USACE to evaluate and research the flooding within the Region to determine possible off-stream storage to utilize during flood events.
- The KWO will determine the storage capacity within the floodplain.
- The KWO will use Forecast Informed Reservoir Operations (FIRO) forecasting to control storage, to increase water supply, and to reduce flooding by looking at climate variability and long-term forecasting.

Solomon-Republican Regional Goals and Action Plans:

Priority Goal #1: Maintain and continue to develop a clearinghouse of technical tools, agreements and agency personnel for use alternatives for Solomon-Republican region waters. An example could be the marketing contract for Keith Sebelius Reservoir/Almena Irrigation District that reached agreement to convert irrigation to recreation use.

Action Steps

- Support KDWPT in their effort to renegotiate the Keith Sebelius Reservoir Minimum Pool Agreement with the Almena Irrigation District.
- Use the Keith Sebelius contract as a model for negotiations on other BOR Reservoirs (Kirwin, Webster).
- Use KBID's knowledge on capturing BOR grants to help improve Webster and Kirwin irrigation efficiency.
- Exhaust all possible funding sources necessary to improve water efficiency.
- Work with KDWPT on an economic study to determine the value of keeping as much water in the Western Reservoirs as possible.
- Investigate the benefits of raising the Conservation Pool at both Kirwin and Webster.

Priority Goal #2: Reduce inbound sediment loads, through conservation measures, with a focus on White Rock Creek to Lovewell Reservoir, by 25% every 10 years.

Action Steps:

- Use KDHE to evaluate sources of sediment entering Lovewell Reservoir.
- Use Kansas and Nebraska data to evaluate suspended solids and nutrients.
- Use data to evaluate the effects of the Courtland Canal on Reservoir loading.

Priority Goal #3: Complete a bathymetric assessment every 10 years on all reservoirs in the Solomon-Republican Region. This goal will be a tool to periodically monitor sediment accumulation and rates. If sediment loads exceed 10%, actions should be initiated to determine the source watersheds and remedies within a twelve-month period from assessment report.

Action Steps:

- Work with KWO to complete bathymetric survey of Waconda Reservoir.

Priority Goal #4: Continue initiative that will maintain and annually fund a Kansas Administrative Team to facilitate Republican River Compact (RRC) compliance. An annual report of progress and activities should be prepared and presented to the Solomon-Republican Regional Advisory Committee.

Action Steps:

- Quarterly presentation by KWO staff on RRC outcomes.

Priority Goal #5: Complete an annual assessment of streambank and ditch erosion within the Solomon-Republican region.

Action Steps:

- Research extent that data is already available.
- Identify areas of major streambank and ditch erosion.
- Coordinate efforts with local county engineers and public works departments, conservation districts, WRAPS, NRCS, and the KWO.

Upper Smoky Hill Regional Goals and Action Plans:

Priority Goal #1: Work with agencies to identify areas within the region that have similar aquifer characteristics and establish long-term use levels that will extend the useful life of the aquifer in those areas until 2070.

Action Steps:

- Support implementation of the Wichita County LEMA submitted by Groundwater Management District No. 1 (GMD 1).
- Support implementation of the Groundwater Recharge and Sustainability Project (GRASP) RCPP that was recently approved.
- Continue to support enrollment in the Wichita County WCA.
- Provide recommendations to GMD 1 for additional LEMAs based upon the information developed by KGS for the proposed revision of Goal #1.
- Support KDA and other agencies in exploring options on ways to help citizen groups submit conservation proposals for LEMAs and other tools to the Chief Engineer.
- Establish methods for local producers that will identify provisions within USDA farm programs that conflict with Goal #1. This would include crop insurance and loan programs.

Education:

a. Provide education and outreach to crop consultants concerning specific information on water use reductions and technologies available to achieve water conservation related to irrigated crop production.
b. Conduct seminars with local agricultural lenders to explain the purpose and implementation of Goal #1.
c. Publish an annual report for the region showing annual water use and trends in irrigation use and aquifer levels.

Priority Goal #2: Encourage public water supplies within the planning region to complete studies of municipal water consumption and develop goals and plans for conservation by 2025.

Action Steps:

- Assemble information about programs and grants that are available from state agencies and related entities (KWO, KDHE, Kansas Rural Water Association, KWRA) to evaluate water consumption and quality; identify sources of waste; plan and fund infrastructure improvements; and provide incentives to establish landscaping with lower water requirements.
- Provide information and education on how rate structures can provide incentives for water conservation.
- Education may include presentations to city governing bodies on remaining aquifer life and the process for acquiring water rights and changing beneficial use to municipal use.

Priority Goal #3: Encourage the implementation of water conservation measures at confined animal feeding operations (CAFOs) in the region.

Action Steps:

- Investigate and determine the most effective format for sharing information about water treatment and recycling systems with CAFO owners and managers. Note that this may include field days, online posts and videos, and presentations to companies and producer organizations.
- Provide information on existing technology and vendors for water conservation systems: a. Water tank overflow treatment and recycling systems b. Water tanks and fountains that do not require continuous overflow c. Devices that regulate overflows based on water temperature.
- Determine the availability of programs and funding for research of technology for wastewater treatment and reuse for livestock consumption. This includes evaluation of livestock health impacts associated with such systems.

MEMO

Kansas Water Office
900 SW Jackson Suite 404
Topeka, KS 66612
Phone: (785) 296-3185
Fax: (785) 296-0878
www.kwo.org

DATE: July 24, 2020
TO: Kansas Water Authority
FROM: Cara Hendricks
RE: SWPF FY 2022 Budget Update

In June, the KWA Budget Committee held two meetings (6/12 and 6/16). The purpose of these meetings was to update the Committee members on the FY 2022 SWPF budget process and timeline, review the Kansas Water Plan Budget Guidelines that were approved by the KWA earlier this year, and provide an overview of the current programs and projects that are funded by the SWPF. Agency representatives were present at the meetings to provide information regarding the specific programs and projects.

KWO staff have been working with the RACs to provide a follow-up to the SWPF budget information previously shared as part of the RAC Informational Budget Webinar provided in April, including region-specific information regarding SWPF expenditures by program/project. This information has been presented to the RACs during their July meetings in order to facilitate RAC feedback and input back to the KWA Budget Committee as part of the FY 2022 SWPF budgeting process. The KWA Budget Committee plans to meet in early August to review agency recommendations and RAC input as they work to develop the FY 2022 SWPF budget recommendations for the full KWA's consideration at the August KWA meeting.

No action is needed at this time. Information is provided for discussion purposes only.

State Water Plan Fund: FY 2020 & FY 2021 Appropriations

EXPENDITURES	FY 2020 Appropriated	FY 2021 KWA Budget Recs	FY 2021 Gov Budget Recs	FY 2021 Conf Adjustments	FY 2021 Appropriation
Department of Health and Environment					
Contamination Remediation	$ 1,093,131	$ 1,088,301	$ 1,088,301		$ 1,088,301
Nonpoint Source Program	$ 307,059	$ 303,208	$ 303,208		$ 303,208
TMDL Initiatives	$ 280,738	$ 280,738	$ 280,738		$ 280,738
Harmful Algae Bloom Pilot	$ 450,000	$ 450,000	$ 450,000		$ 450,000
Watershed Restoration/Protection (WRAPS)	$ 730,884	$ 730,884	$ 730,884		$ 730,884
Drinking Water Protection Program	$ 350,000	$ 500,000	$ 350,000		$ 350,000
SUBTOTAL--KDHE	**$ 3,211,812**	**$ 3,353,131**	**$ 3,203,131**	**$ -**	**$ 3,203,131**
Department of Agriculture					
Interstate Water Issues	$ 499,281	$ 490,007	$ 490,007		$ 490,007
Subbasin Water Resources Management	$ 621,651	$ 608,949	$ 608,949		$ 608,949
Water Use	$ 72,600	$ 72,600	$ 72,600		$ 72,600
Water Resources Cost Share	$ 2,448,289	$ 2,448,289	$ 2,448,289	$ 250,000	$ 2,698,289
Nonpoint Source Pollution Asst.	$ 1,860,104	$ 1,857,836	$ 1,857,836		$ 1,857,836
Aid to Conservation Districts	$ 2,192,637	$ 2,192,637	$ 2,192,637	$ 150,000	$ 2,342,637
Watershed Dam Construction	$ 550,000	$ 950,000	$ 550,000	$ 200,000	$ 750,000
Water Quality Buffer Initiative	$ 200,000	$ 200,000	$ 200,000		$ 200,000
Riparian and Wetland Program	$ 154,024	$ 154,024	$ 154,024		$ 154,024
Water Transition Assistance Program/CREP	$ 302,046	$ 599,745	$ 302,046	$ 397,699	$ 699,745
Irrigation Technology	$ 100,000	$ 200,000	$ 100,000		$ 100,000
Crop and Livestock Research	$ 350,000	$ 350,000	$ 350,000		$ 350,000
Streambank Stabilization	$ 500,000	$ 1,000,000	$ 500,000	$ 250,000	$ 750,000
Real-Time Water Mgmt - Telemetry - *SWRM*	$ -	$ 25,000	$ -		
Water Supply Restoration Program	$ -	$ 465,000	$ -		
SUBTOTAL--KDA	**$ 9,850,632**	**$ 11,614,087**	**$ 9,826,388**	**$ 1,247,699**	**$ 11,074,087**
Kansas Water Office					
Assessment and Evaluation	$ 600,000	$ 700,000	$ 629,900	$ 200,000	$ 829,900
Flood Response Study	$ 100,000	$ -	$ -		$ -
MOU - Storage Operations & Maintenance	$ 410,000	$ 480,100	$ 480,100		$ 480,100
Stream Gaging	$ 423,130	$ 423,130	$ 423,130		$ 423,130
Technical Assistance to Water Users	$ 325,000	$ 425,000	$ 325,000		$ 325,000
Vision Education Strategy	$ 100,000	$ 100,000	$ 100,000		$ 100,000
Reservoir and Water Quality Research	$ 350,000	$ 350,000	$ 350,000		$ 350,000
Water Technology Farms	$ 75,000	$ 75,000	$ 75,000		$ 75,000
Watershed Conservation Practice Imp (KRPI)	$ 700,000	$ 1,000,000	$ 700,000	$ 300,000	$ 1,000,000
Equus Beds Chloride Plume Project	$ 50,000	$ 50,000	$ 50,000		$ 50,000
Milford Lake Watershed RCPP	$ 200,000	$ 200,000	$ 200,000		$ 200,000
Water Injection Dredging (WID)	$ -	$ 660,000		$ 660,000	$ 660,000
Arbuckle Study	$ 68,000	$ 100,000			$ -
SUBTOTAL--KWO	**$ 3,401,130**	**$ 4,563,230**	**$ 3,333,130**	**$ 1,160,000**	**$ 4,493,130**
University of Kansas--Geological Survey	**$ 26,841**	**$ 26,841**	**$ 26,841**	**$ 26,841**	**$ 26,841**
State Employee Pay			$ 33,965		
KPERS Reamortization			$ (40,226)		
Total State Water Plan Expenditures	**$ 16,490,415**	**$ 19,557,289**	**$ 16,383,229**	**$ 2,434,540**	**$ 18,797,189**
REVENUE					
Beginning Balance	$ 4,137,410	$ 418,362	$ 418,362	$ 418,361	$ 418,361
Transfers and Adjustments					
State General Fund Transfer	$ 4,005,632	$ 6,000,000	$ 4,005,632	$ 1,994,368	$ 6,000,000
Economic Development Fund Transfer	$ 500,000	$ 2,000,000	$ 500,000	$ 413,325	$ 913,325
Release of Prior Year Encumbrance					
Other Service Charges	$ 51,482	$ 51,482	$ 51,482		$ 51,482
Transfers to SGF - John Redmond Bond	$ (1,260,426)	$ (1,260,426)	$ (1,260,426)		$ (1,260,426)
SUBTOTAL--Adjustments	**$ 3,296,688**	**$ 6,791,056**	**$ 3,296,688**		**$ 5,704,381**
Receipts					
Municipal Water Fees	$ 3,208,301	$ 3,305,836	$ 3,305,836		$ 3,305,836
Clean Drinking Water Fee Fund	$ 2,710,279	$ 2,800,000	$ 2,800,000		$ 2,800,000
Industrial Water Fees	$ 950,983	$ 930,000	$ 930,000		$ 930,000
Stock Water Fees	$ 430,297	$ 350,000	$ 350,000		$ 350,000
Pesticide Registration Fees	$ 1,374,886	$ 1,390,000	$ 1,390,000		$ 1,390,000
Fertilizer Registration Fees	$ 3,584,360	$ 3,638,611	$ 3,638,611		$ 3,638,611
Pollution Fines and Penalties	$ 150,000	$ 230,000	$ 230,000		$ 230,000
Sand Royalties	$ 16,466	$ 30,000	$ 30,000		$ 30,000
SUBTOTAL--Receipts	**$ 12,425,572**	**$ 12,674,447**	**$ 12,674,447**		**$ 12,674,447**
Total Available	$ 19,859,670	$ 19,883,865	$ 16,389,497		$ 18,797,189
Less: Expenditures w/out carryover	$ 16,490,415	$ 19,557,289	$ 16,383,229		$ 18,797,189
Less: Expenditures w/ carryover	*$ 19,441,308*	$ -	$ -		
Ending Balance	**$ 418,362**	**$ 326,576**	**$ 6,268**		**$ 0**

MEMO

Kansas Water Office
900 SW Jackson Street, Suite 404
Topeka, KS 66612
Phone: (785) 296-3185
Fax: (785) 296-0878
www.kwo.ks.gov

DATE: July 23, 2020
TO: Kansas Water Authority
FROM: Josh Olson
RE: Federal Update – Kansas River Reservoirs Flood and Sediment Study

Kansas River Reservoirs Flood and Sediment Study

The Kansas River Reservoirs Flood and Sediment Study (KRRFSS) is a 3-5-year watershed study with total funding of $3 million and a required 25% non-federal sponsor cost share of $750,000. The Federal Cost Share Agreement for KRRFSS was executed on March 25, 2019. Since that time, the Kansas Water Office (KWO) and the Kansas Department of Wildlife, Parks and Tourism (KDWPT), the non-federal co-sponsors, have worked with the U.S. Army Corps of Engineers (USACE) to develop a Project Management Plan (PMP), form an Advisory Committee, create a Shared Vision Statement (SVS), and perform stakeholder and public outreach. The SVS and a study timeline are provided below for your reference.

Due to social distancing limitations caused by COVID-19, public outreach has been relatively inactive the last few months. However, the KWO, KDWPT, and USACE have continued working on the existing condition and future without project condition, which include a variety of topics such as water supply, biological resources, and economics. Recently, efforts have also included development of the project Goals and Objectives, as well as considerations for strategies and alternative measures to address issues within the basin. Laura Totten (USACE) will be providing an update with further details of current efforts on the KWA conference call.

Shared Vision Statement:

> "Identify actions within the Kansas River Basin necessary to extend the useful life of our reservoirs, to increase their resiliency and maintain capacity. Develop sustainable measures to reduce flood risk, improve sediment management, and mitigate drought, while seeking opportunities related to critical infrastructure investment, water supply availability, ecosystem restoration, water quality, and enhancing recreation."

Study Timeline

- May –September 2019: Project Management Plan Development
- September 2019 –January 2020: Initial Round of Stakeholder Coordination and Public Scoping
- July 2019 –January 2021: Initial Baseline and Existing Conditions, Future Conditions, Measures/Strategies/Alternatives Development
- June 2020 –April 2021: Preparation of Study Summary Document
- May 2021: Shared Vision Milestone Meeting
- May 2021 –May 2023: Watershed Study Recommendations Milestone
- Fall 2023 –Final Watershed Study Report

No action is needed at this time. Information is provided for discussion purposes only.

Kansas River Reservoirs Flood and Sediment Study (Watershed Study)

Kansas Water Authority Meeting

July 30, 2020

Kansas Water Office

US Army Corps of Engineers.

Kansas Department of Wildlife, Parks and Tourism

Goals and Objectives

Draft Goals

The specific goal of this study is to assist in developing a comprehensive basin-wide management plan that will:

- Incorporate public input and involvement
- Assess existing watershed characteristics and conditions
- Identify watershed issues and concerns
- Develop, evaluate, and prioritize conceptual plans including both structural and non-structural measures, in support of identified goals and objectives
- Identify potential “spin-off” and “off-shoot” projects that may fall under appropriate Federal, State, and/or local authorities, and
- Identify potential regional or locally funded projects.

Goals and Objectives

Draft Objectives

The primary objective of the Watershed Study is to develop a comprehensive plan to support the Shared Vision to identify actions within the Kansas River Basin necessary to extend the useful life of our reservoirs, to increase their resiliency and maintain capacity. Develop sustainable measures to reduce flood risk, improve sediment management, and mitigate drought, while seeking opportunities related to critical infrastructure investment, water supply availability, ecosystem restoration, water quality, and enhancing recreation. Specific study objectives include recommended solutions to:

- Manage sedimentation in reservoirs to reduce loss of volume and decrease the sedimentation rates for sustainment of authorized purposes and benefits
- Reduce risks to life safety in the Kansas River Basin with a focus on improved flood risk system flexibility under a variety of climate change and land use development patterns
- Reduce both societal consequences and economic damages associated with flood risk in the study area, with an emphasis on improving system resiliency and increasing the long-term integrity of the flood system
- Increase the reliability and availability of water supply

Goals and Objectives

Draft Objectives (continued)

- Reduce both societal consequences and economic impacts associated with drought risk in the study area, with an emphasis on improving system resiliency and increasing the long-term integrity of the water supply system
- Increase adoption of watershed practices that reduce future loss of reservoir storage
- Increase the identification of future water related infrastructure investment costs (e.g., reservoirs, lakes, levees, public water supply infrastructure)
- Protect and improve biological resources including vegetation and wetlands, wildlife and wildlife habitat, and fisheries and aquatic species
- Protect and improve the availability of high-quality water for residential, commercial, industrial, and recreational uses, and for biological communities
- Protect, promote, and expand recreational opportunities, including boating, fishing, hunting, camping, wildlife viewing, swimming, picnicking
- Maintain/improve sportfish populations, habitats, and angler access
- Increase the adaptability and resiliency of the water supply, flood risk management, and ecological systems of the Kansas River Basin in relation to climate change, including planning for extreme events (i.e. flooding and drought)

Existing Conditions and Future Projections

Resources/Topics Considered

- Climate and Precipitation
- Hydraulics, Flood Risk, and Drought
- Water Supply for Municipal and Industrial Use
- Recreation
- Socioeconomics
- Land Use
- Water Quality
- Reservoirs and River Infrastructure, Operations, and Hydrologic Processes
- Reservoir Sedimentation
- Geology, Soils, Upstream Sediment, and Geomorphology
- Biological Resources (Vegetation and Wetlands, Wildlife and Fisheries, Threatened and Endangered Species, Invasive Species)
- Cultural / Tribal Resources

Strategies/Alternatives

- Goal: To reduce vulnerability and create resiliency of the existing system to ensure safety and to meet the needs of Kansas
- Potential measures considered:
  - Structural restoration
  - Sediment removal
  - Reservoir operational changes
  - Demand management
  - Reallocation
  - Extreme event (i.e. flood and drought) planning
  - Watershed management
  - Others

Study Schedule

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