

MEMO



DATE: June 30, 2016
TO: Kansas Regional Advisory Committee Members
FROM: Margaret Fast
RE: July 7, 2016 Meeting

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The Kansas Regional Advisory Committee will meet on **Thursday, July 7th, 2016 at 9:30 a.m. in the Kansas Water Office Conference Room, 900 SW Jackson, Suite 404, Topeka.** Free two-hour (and they are strict about the time), on-street parking is available on 9th and on Kansas Avenue. There is also a parking garage on the NW corner of 9th and Kansas with parking for \$1.00/hour.

The meeting will focus on crafting an action plan for Goals 1 and 2:

Increase water storage capacity and availability in federal reservoirs. By 2020, purchase all available storage in federal reservoirs to secure an adequate water supply for the region. By 2025, evaluate the ability to raise the conservation pool in each federal reservoir.

By 2050, explore additional storage possibilities such as construction of multipurpose lakes so that new water sources can be brought online.

Enclosed please find the following meeting materials:

- Agenda
- Meeting notes from June 17
- Huntzinger Proposal
- Kansas Regional Goals

If you have any questions or need additional information prior to the meeting, feel free to contact me at Margaret.fast@kwo.ks.gov or give me a call at 785/296-0865. I look forward to meeting with you!

Meeting Agenda
Kansas Regional Advisory Committee
July 7, 2016, 9:30 a.m.
Kansas Water Office, 900 SW Jackson, Suite 404, Topeka

1. Welcome/Introductions
2. Review June 17 Meeting Notes
3. Report from KTC committee meeting - Katie Miller
4. Focus on Goals 1 and 2
 - a. Follow-up on Webinar
 - i. Additional Information needs?
 - ii. Actions Needed
 - b. Craft Draft Action Plan
5. Review of KDHE information on funding needs for nutrient and HAB control.
 - a. Possible modification of approved HAB Action Plan to incorporate funding needs.
6. Overview of Huntzinger Proposal: an example of an implementation project for Kansas Basin Watershed Management System
7. Public Comments *
8. Agency Comments
9. Next Meeting:
 - a. KS RAC
 - i. August 8, 1-4 - KWO
 - ii. September 8, 9:30 – KWO
 - iii. October 6, 9:30 – Westar Professional Development Center
 - b. KWA
 - i. August 30-September 1
 - ii. October - TBD

*Public Comments are limited to 3-5 minutes and limited to issues related to regional goals, action plans, or other water resources issues and concerns.

Underlined Items require action.



Kansas Regional Advisory Committee Meeting Notes

Kansas Regional Advisory Committee Meeting

June 17, 2016

Westar Professional Development Center, Topeka, Ks

Members Attendance:

<i>Name</i>	<i>City</i>	<i>Category</i>	<i>Term</i>	<i>Present</i>
Marlene Bosworth	Sabetha, KS	Conservation/Environment (cc)	2019	Yes
Brad (William) Bradley	Overland Park, KS	Fish and Wildlife	2017	No
Glenn Brunkow	Westmoreland, KS	Agriculture (cc)	2017	Yes
Dawn Buehler	Eudora, KS	Recreation	2019	Yes
Blake Follis	Topeka, KS	At Large Public (cc)	2019	Yes
Sarah Hill-Nelson, Chair	Lawrence, KS	Industry/Commerce	2019	Yes
Heath Horyna	Topeka, KS	Industry/Commerce (cc)	2017	Yes
Daniel Howell	Frankfort, KS	Agriculture	2017	Yes
Darci Meese	Lenexa, KS	Public Water Supply (cc)	2019	Yes
Katie Miller	Junction City, KS	Conservation/Environment	2019	Yes
William Ramsey	Leawood, KS	Planning, Restoration and Protection	2017	No
Sharon Schwartz	Washington, KS	WRAPs	2019	No
Greg Wilson	Olathe, KS	Water Assurance District	2017	Yes

Others in attendance:

<i>Name</i>	<i>Town</i>	<i>Representing</i>
Allyn Lockner	Topeka	Himself
Katie Tietsort	Topeka	Ks Dept. of Ag
Tom Stiles	Topeka	Ks Dept. of Health and Environment
Amanda Reed	Topeka	Ks Dept. of Health and Environment
Galen E Biery	Topeka	Ks River Water Assurance District #1
Jacob Gray	Topeka	Ks Division of Emergency Management
Jarran Tindle	Manhattan	Kansas Forestry Service
Rob Reschke	Manhattan	KS Dept. of Ag, Division of Conservation
Wayne Luckert	Topeka	Shawnee Co. Conservation District
Judy Boltman	Topeka	Shawnee Co Conservation District
Roberta Spencer	Holton	Jackson Co Conservation District
Nina Meyer	Washington	Washington Co Conservation District
John Wunder	Valley Falls	State Conservation Commission
Margaret Fast	Topeka	Kansas Water Office
Tracy Streeter	Topeka	Kansas Water Office
Ginger Harper	Topeka	Kansas Water Office
Amanda Sales	Topeka	Kansas Water Office
Martin Koch	Topeka	Kansas Water Office
Thomas Topi	Kansas City	US Army Corps of Engineers

Membership: Sarah Hill-Nelson, Lawrence, KS; Marlene Bosworth, Sabetha, KS; Brad Bradley, Overland Park, KS; Glenn Brunkow; Dawn Buehler, Eudora, KS; Blake Follis, Topeka, KS; Heath Horyna, Topeka, KS; Daniel Howell, Frankfort, KS; Darci Meese, Lenexa, KS; Katie Miller, Wichita, KS; William Ramsey, Leawood, KS; Sharon Schwartz, Washington, KS; Greg Wilson, Olathe, KS
KWO Planner: Margaret Fast, 785-296-3185; margaret.fast@kwo.ks.gov

Welcome and Introductions:

Self introductions were made.

April 29 Meeting Note Review:

Sarah reviewed the last the work of the committee since they first met in October 2015. A system for coordination of targeting of funding and technical assistance has been the focus of each meeting. The April 29 meeting notes described the discussion and transition. They were accepted as written.

Action Plan Review:

Kansas Basin Watershed Management System Action Plan

With the purpose of clearly describing the Kansas Basin Watershed Management System (KBWM System), the committee removed any description of the KBWM System from the Sedimentation and Harmful Algal Bloom (HAB) Action Plans and put it into a separate document (action plan) that would apply to both the Sedimentation and HAB Action Plans. A variety of changes were made to the draft included in the mailing, including:

- Moving “Action is Grassroots” to the top of the list of the four key principles;
- Adding Kansas Forest Service to the Kansas Interagency Watershed Leadership Team;
- Adding the encouragement of cross-jurisdictional coordination with the state of Nebraska and federally-recognized Tribes;
- Placing the 4 key principle bullet point on the charts, as well as flipping the chart to show the WRAPS stakeholder leadership teams, conservation district boards and landowners at the top of the chart to emphasize the importance of the grassroots action. In the revised version of the chart the KBWM Interagency Watershed Leadership Team shows that it is serving in a supportive role to the landowners who must work together to make the final determination of which projects are executed within the prioritized region.

Each of these changes were discussed and passed by unanimous votes of the committee. Other editorial changes were also made.

Glen moved and Katie seconded that the Kansas Basin Watershed Management System Action Plan be approved as modified. Motion carried unanimously.

Sedimentation Goal Action Plan

This Plan was then reviewed bullet by bullet. The KBWM System is incorporated by reference. A variety of editorial changes were made. A motion was made to modify the statement as shown: “Within ~~ten~~ five years all state and federal lands surrounding each reservoir ~~and~~ in the watershed must have implemented best management practices as identified through the KBWM system.” Those changes carried by majority vote. Blake moved and Darci seconded that the Sedimentation Goal Action Plan be approved as modified. Motion carried unanimously.

Harmful Algal Bloom Goal Action Plan

Sarah began the discussion clarifying that even if the goal is not attainable as currently worded, the KWA has advised the RACs to develop action plans to get started addressing the goal, with modification later if needed. A variety of clarifying and editorial changes were made, including a determination to consistently refer to “harmful algal blooms,” incorporating the KWBM system by reference and ordering points in a manner consistent with the Sedimentation Goal Action Plan. Dan moved and Glen seconded to approve the Harmful Algal Bloom Goal Action Plan as modified. Motion carried unanimously.



Kansas Regional Advisory Committee Meeting Notes

Public Comments:

Allyn Lockner made comments on the Plans that went to the need for technical training, accountability and record keeping, working with Nebraska and the Tribal nations in Kansas. Each of those points was discussed and the committee either determined the plans already addressed the comment (i.e. the need for technical assistance) or added a comment (coordination with Nebraska and federally recognized tribes).

Next Meetings:

June 30, 8:00 am - Webinar. Earl Lewis will provide a webinar on background on reservoir storage as the committee moves into discussion of the next goals.

July 7, 9:30 – RAC Meeting, KWO Conference room. Agenda will include discussion of goals 1 and 2, information from KDHE about funding needed for nutrient and harmful algal bloom control, and an overview and possible endorsement of Tom Huntzinger proposal as presented before the Blue Ribbon Funding Task Force for Water Resources Management.

August 8, 1:00 – RAC meeting, KWO conference Room. Finalize Action Plans for goals 1 and 2.

August 31-September 1 – KWA meeting, Emporia

September 8, 9:30 am – RAC meeting, KWO conference room. Discussion on goal 4.

October 6, 9:30 am – RAC meeting, Westar Professional Development Center. All Goal Action Plans finalized.

Membership: Sarah Hill-Nelson, Lawrence, KS; Marlene Bosworth, Sabetha, KS; Brad Bradley, Overland Park, KS; Glenn Brunkow; Dawn Buehler, Eudora, KS; Blake Follis, Topeka, KS; Heath Horyna, Topeka, KS; Daniel Howell, Frankfort, KS; Darci Meese, Lenexa, KS; Katie Miller, Wichita, KS; William Ramsey, Leawood, KS; Sharon Schwartz, Washington, KS; Greg Wilson, Olathe, KS
KWO Planner: Margaret Fast, 785-296-3185; margaret.fast@kwo.ks.gov

→ Agenda for next RAC mtg.

Testimony before the Blue Ribbon Funding Task Force for Water Resources Management, April 19, 2016

Funding a Strategy for Managing Corps Land to Protect Clinton Reservoir as a Public Water Supply and Contact Recreation Resource

Prepared by Tom Huntzinger, Kansas Alliance for Wetlands and Streams

Description of Need

Runoff from the Upper Wakarusa watershed replenishes Clinton Lake following the hydrologic cycle of precipitation. Clinton Lake water provides a public water supply for about 100,000 people and the most visited recreational destination in the state. Water quality monitoring and analysis has shown that nutrients and sediment washed off cropland and stream banks has resulted in concentrations in the lower reaches of the Wakarusa River and Clinton Lake that have exceeded water quality standards during storm events. Excess nutrient loads in the Lake have resulted in taste and odor problems and hypoxic ecological conditions hazardous to aquatic life and contact recreation. Sediment transport into the Lake has exceeded the projected rates decreasing its expected capacity. Pesticide transport from croplands during spring runoff events is also of concern but has not exceeded standards in recent years.

Cropland and grassland that is in close proximity to Clinton Lake provide the best opportunity to improve water quality by controlling transport of nutrients and sediment in storm water runoff directly into the Lake or lower reaches of the Wakarusa River. Excess runoff that occurs more frequently than would occur from native prairie has destabilized stream banks which also contributes sediment to Clinton Lake. Cropland and grassland on Corps property and managed by Kansas Department of Wildlife, Parks and Tourism (KDWP&T) are located in close proximity to the Lake.

The land management strategy involves five elements. Construct wetland forebays to trap and filter sediment and nutrient before they reach the main reservoir. A comprehensive implementation of conservation practices that reduce sediment loads from croplands. Provide a transition of current cropland to native landscape that results in a sustainable and productive habitat. Develop a rigorous and timely channel maintenance program to address the accumulation of debris. And finally a dedicated revenue source to cover costs of managing and maintaining a sustainable and healthy native habitat that promotes wildlife, protects Clinton Reservoir for public water supply and contact recreation.

Wetland Forebays

Construct a wetland forebay near the mouth of each tributary and main river channel coming into the Reservoir that would settle out suspended material before it reaches the main lake. Kansas Department of Health and Environment preliminary projections indicate the structures could meet the sediment reduction requirements for Clinton Lake and about 45% of the reduction in phosphorous needed to meet the water quality standard in the Lake. Wetland structures would be built so water from the River can also be gravity diverted into the tributary wetlands during high flow periods but probably not the massive infrequent flood events. The intent of the diversion system would be to sustain the wetland environment when tributary inflows are not sufficient to maintain an optimum habitat for filtering and degradation of contaminants in the storm water. Current efforts to enhance wetland habitat for wildlife has been a focus and this concept is consistent with that effort. KDWP&T would provide guidance in the design of the forebays to address the need to sustain current fisheries and other aquatic life that will not substantially disrupt migration, spawning, nesting and other biological functions. Adequate water control structures would be part of the forebay structure to optimally manage aquatic habitat and trap sediment and nutrients. It must be expected that these forebays would be cleaned out every 15 or 20 years with a plan for the destination of the dredge materials at the outset. Forebays in addition to the main river channel would be on tributaries that drain directly into Clinton Lake or into the Wakarusa River within the flood pool and would include Coon Creek, Deer Creek, Rock Creek, Elk Creek, Camp Creek and Lynn Creek.

Funding requirements

The primary funding source would be the Corps of Engineers Continuing Authorities Program (CAP) under Section 1135 Ecosystem Restoration. The program is initiated with a request for a feasibility study. The planning effort in the feasibility study involves planning, design and construction oversight and requires a 50% local match for costs over \$100,000. Construction and implementation costs require a 25% local match. There is a precedent in Kansas for CAP funding as similar work was done at Milford Reservoir sometime ago under Section 1135. The program at Milford cost about \$5.3 M for 12 forebays installed in the mid 1990's. The proposed program for Clinton Reservoir will include 6 forebays; the main channel and five tributaries. The local commitment for this program at Clinton Reservoir is considered to be similar Milford but a few less structures and an increased cost over 20 years. The local match would be in the \$1.0M range. Operation and maintenance of these structures as effective stormwater retention and wildlife habitat once in place would require about \$50,000/ year.

Conservation Master Plan

The Upper Wakarusa Watershed Restoration and Protection Strategy (WRAPS) is working with the KDWPT and contract farm operators to develop and implement a conservation master plan for Corps land. The plan proposes to implement specific best management practices on croplands and stream reaches that field surveys have identified as significant sources of nutrient and sediment. Current cropland farming agreements allow farm operators flexibility to produce crops with some constraints for wildlife habitat management. In recent years some effort has been directed toward water quality concerns in response to the need to protect Clinton Lake from contaminants particularly during storm events. Contractual agreements on the cropland currently do not require no till practices. No till methods have been encouraged with moderate success. No till methods are being considered as a requirement for this cropland when new agreements are written. Cover crops and nutrient management methods should also be a part of the land management approach. A conservation practice list for structural improvements has been developed that shows specific needs for each individual field. Implementation of these practices is necessary to reduce sediment and nutrients transport directly into the Reservoir or the lower reaches of the Wakarusa River. A request for assistance will be made in the coming month or so to the NRCS to prepare final conservation plans and final construction cost estimates for each field that requires them.

Funding requirements

Preliminary site plans and most probable cost estimates indicate a cost of about \$150,000 to implement needed conservation plans on 42 fields.

Transition Cropland to Native Habitat

It is commonly understood that the ultimate land management solution to reduce contaminant transport from the cropland would be to plant it to permanent native vegetation. There is significant merit to considering this option overall. However it is acknowledged that some common feed grain species provide effective food plots for wildlife. KDWP&T would retain this management option when it enhances wildlife and maintains protection from sediment transport to the Reservoir. This protection would include seasonal cover crops, strip plots, rotations etc. The current agricultural use of these fields is to lease the land for crops and use the revenue to manage the remainder of the land for wildlife habitat. A reasonable transition from this tradition may take 5-15 years to allow leases to expire and to retain some crop acres for a longer period of time to reasonably accommodate farm operators that need more time to adjust their farm operations. KDWP&T wildlife and land managers would be expected to work with farm operators to achieve this transition. There is currently about 1000 acres of cropland. A sequence of field activities will guide the transition to eventually establish perennial vegetation for optimum wildlife habitat.

Transition to alternative land uses must identify alternative revenue sources concurrently with any transition away from cropland. One viable opportunity would be to develop a source for native plants that reflects the local wild species ecotypes that have been planted in various habitats in the area that can be nurtured for harvest and sold on the market as seeds, plants, and fruit. This function could be contracted to a private firm that has the capability to sustain this as a business enterprise similar to the current feed grain cropland. Another example would be harvesting native hay crops as is currently done in several locations but not at a substantial scale. Some vendors have expressed interest in these concepts. In these examples some startup funding is expected to cover some of the risks associated with the startup enterprise.

Funding requirements

Revenue currently generated from the land as cropland is currently about \$80,000/year. Alternative funding sources must be found to replace cropland leases that provide the fundamental foundation for most of the resources for current maintenance of Corps land that would transition to native habitat. To fully implement this option would require planting permanent vegetation on about 1000 acres currently in forage crops. The transition would take place over a 10-year period. It would require about \$15,000/year over the ten years to plant it to permanent native cover. Maintenance of the native habitat would require \$50,000/year. Opportunity for revenue from the native vegetation seed or plants is possible after the cover is established. Some native plants have market value as alternative crops that may equal or exceed current row crops. If there is a loss in revenue with permanent cover this amount would need to be funded. Startup funds for a native plant alternative crop enterprise is expected to be \$15,000/year for three years.

Channel Stability and Management of Debris Flows

Establish a regular channel maintenance program to manage debris flows after floods that enhances channel stability. Large quantities of woody vegetation and trees are transported downstream during flood events. It is deposited where channel geometry slows down the velocity or snags on the bank that prevent debris from moving on downstream. The stationary debris accumulates more debris resulting in large piles in the channel. Flow currents cut around the piles taking out part of the bank leaving the piles mid channel to erode the banks each time runoff occurs. A maintenance effort should be sustained that moves these mid channel piles to the bank preferably to the bank that is eroding. The debris can be anchored to the bank to trap sediment from future storm runoff that eventually forms a flood plain bench and stabilizes the bank but still sustains meanders that control streambed gradients. The cleared channel is then capable of conveying the full storm discharge without undermining the banks. Larger machine methods such as track hoes or drag lines may be required to move large logs and debris piles.

Several reaches of the lower Wakarusa River and tributaries have been identified as unstable and sources of sediment to the Reservoir. Unstable bed and banks in these reaches should be stabilized to prevent further bank erosion and destruction of flood plain benches and riparian zones. Streambank stabilization projects on larger streams are typically done in a coherent series along a defined reach of channel. They are expensive and technically challenging. The need for channel stabilization is acknowledged here but is considered beyond the scope of this presentation.

Funding requirements

The need for this effort is flood dependent so would be an intermittent task vigorous at times and modest at others. It is expected that \$20,000/year would insure that resources and machines were available when needed. If this maintenance were to be neglected the channel may not be capable of conveying floods and would fill the channel with sediment and added debris over time and cleanup may not be achievable or affordable.

Maintenance and Enhancement Resources

Cropland leases provide the fundamental foundation for most of the resources for current maintenance of Corps land. For example, current funding from cropland leases is about \$80,000 per annum at Clinton Reservoir. The funds are also used to leverage grant opportunities for additional resources. Alternative funding sources must be found to replace the cropland leases as native vegetation and forebays are completed. Additional funding is required to manage wetlands, implement needed conservation practices and maintain channel conveyance free of debris.

Summary of Funding Requirements

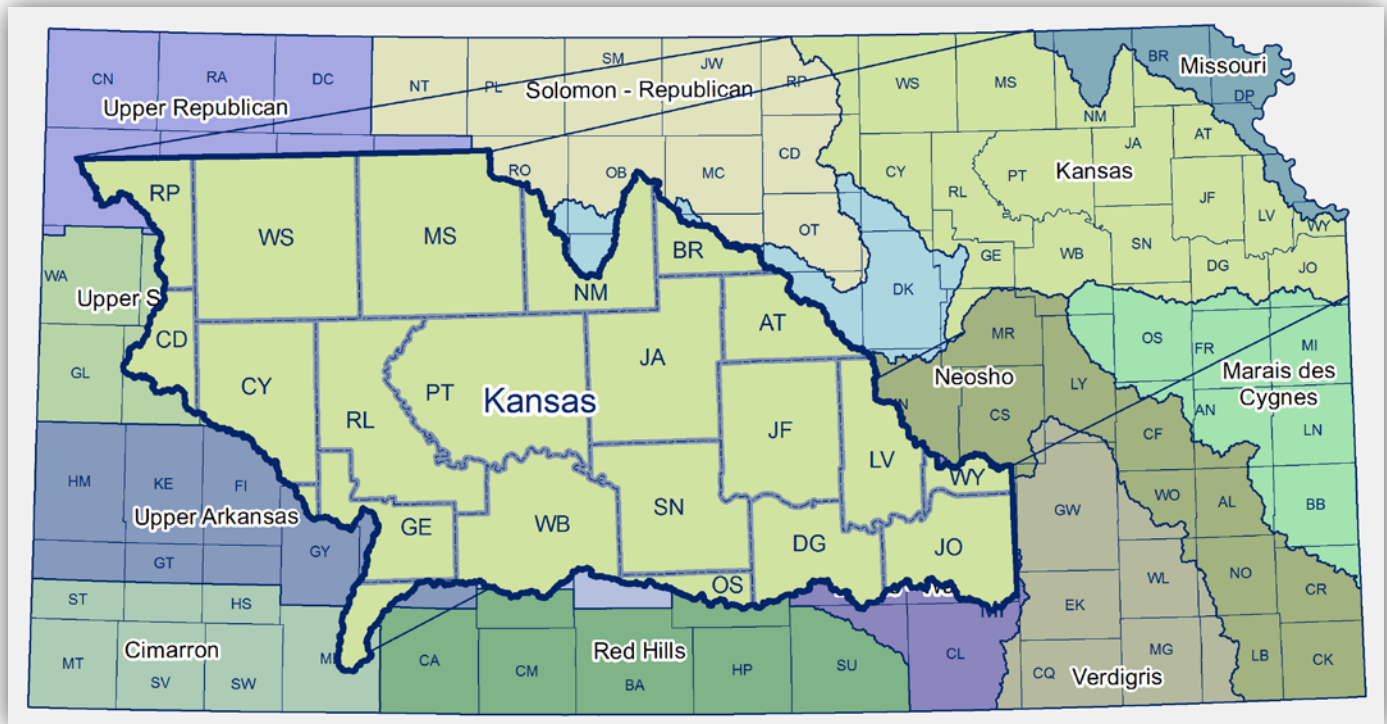
Wetland Forebays	\$1.0M installation	\$50,000 annual maintenance
Conservation Masterplan	\$150,000 implementation	
Transition cropland to native veg		
Native habitat maintenance		\$50,000 annual maintenance
Native plant seeding		\$15,000/year for 10 years
Alternative native crop startup	\$ 15,000/yr for 3 yrs	
Management of channel debris		\$20,000 annual maintenance

Kansas Regional Planning Area

Guiding Principle

The following are vital guiding principles to implementing the goals in the Kansas region:

- Increasing research to utilize the most effective technology and best management practices available
- Developing and implementing a comprehensive water education program for all ages



- 1. Increase water storage capacity and availability in federal reservoirs. By 2020, purchase all available storage in federal reservoirs to secure an adequate water supply for the region. By 2025, evaluate the ability to raise the conservation pool in each federal reservoir.**
2. By 2050, explore additional storage possibilities such as construction of multipurpose lakes so that new water sources can be brought online.
3. Reduce the cumulative sediment rate of federal reservoirs and other water supply lakes by 10 percent in the Kansas region every 10 years through implementation of watershed best management practices.
4. By 2035, reduce per capita water consumption by 10 percent by 2035 through conservation, education and pricing mechanisms.
5. After 2020, reduce duration and frequency of harmful algae blooms disrupting recreation in lakes such that blooms last under a week and do not occur until after Labor Day.