Red Hills Regional Advisory Committee Meeting
9:00 am March 16, 2016
Medicine Lodge Kansas

Members in Attendance:

Name	City	Category	Present
Suzanne Drouhard (Chair)	Danville, KS	Agriculture (cc)	Yes
Clark Bibb	Coldwater, KS	At Large Public West	Yes
Ken Brunson	Pratt, KS	Fish and Wildlife	Yes
Jim Harden	Clark County, KS	At Large Public (cc)	No
Amber Horbelt	Anthony, KS	Local Government	Yes
Hi Lewis	Wichita, KS	Industry/Commerce (cc)	Yes
Larry Mangan	Wellington, KS	Public Water Supply (cc)	Yes
Gregory Shelor	Minneola, KS	Agriculture (cc)	No
Mark Watts	Medicine Lodge, KS	Industry/Commerce	Yes
Phil White	Wellington, KS	At large Public East	Yes
Jay Zimmerman	South Haven, KS	At Large Public	No

Others in attendance:
Bill Hunter (Sunflower RC&D area), Steve Garten Barber Co. Comm), Robert Wimer (NRCS), Wyatt Sperry (NRCS), Jeff Lanterman (KDA-DWR), Scott Alberg (KCC), Richard Basore (KDHE), Allison Herring (KDHE), Lee Adams (Harper Co.), Jeff Porter (City of Medicine Lodge), Jerry McNamer (Barber Co), Kevin Nolan (Lake Arrowhead), Katie Goff (KWO), Kelsee Wheeler (KWO), Diane Knowles (KWO), Brian Dunnigan (Olsson Assoc.), Aaron Ball Olsson Assoc.), Darren Hennen (Olsson Assoc.) and Chad Johnson (Olsson Assoc.)

Welcome and Introductions: Steve Garten, Barber County Commissioner welcomed everyone to Barber County and the new county building. Suzanne Drouhard welcomed everyone to the RAC meeting self introductions were made by everyone.

Approval of Agenda: Agenda: Agenda was accepted with one addition for a report on KWA/Legislative visits from Mark Watts.

KWA/Legislative Day in Topeka: Mark Watts, who represented the RAC at the January activities in Topeka, reported on the successful interaction with state legislators in January. He encouraged others to participate in the future, as he found the activities very beneficial.

Review of October Meeting Notes: Meeting notes were approved. (Motion from Mark Watts, second by Phil White, carried.)

Regional Updates

KDA-DWR: Jeff Lanterman reported that rules and regulations to extend the time frames for term permits are one of the changes in the works. One benefit is that a Water Conservation Area (WCA) of more than 5 years can be developed.

NRCS-Hutchison Office: Robert Wimer reported programs available include conservation stewardship, EQIP and conservation easements. A program new to the area, Regional Conservation Partnership Program (RCPP) is also available. Examples of areas the program can address included irrigation efficiencies, riparian areas, upland game birds, and multi state interests such as Grand Lake. A couple of approved RCPPs now include parts of Kansas to address irrigation efficiencies in the Kansas GMDs and Grand Lake (Oklahoma & Kansas).

Ken Brunson added that there is a newly approved healthy grassland initiative in the process of developing the rules that include the red hills along with the flint hills. Measures to control and manage eastern red cedar are part of that project.

KCC: Scott Alberg reviewed his report on the estimated oil and gas production water use in the region in 2013. This was prepared since not all of this water use is reported to DWR. Scott also noted he has provided data to Diane on chloride concentrations in various formation water by county for future reference.

KDHE: Richard Basore announced the availability of low interest loans for watershed restoration and protection projects. Allison Herring noted Mike Tate has retired as Bureau of Water director, Jaime Gaggero will be filling the position beginning later this month.

Action Plan Discussion
Industry related Goals (3 & 4)
Hi Lewis provided an overview of issues related to treating and reuse of produced water from the industry perspective. He then outlined ideas and needs for a pilot project to recycle produced oilfield water somewhere in the Red Hills. The pilot project would be similar to one in Oklahoma which treated the water to levels acceptable for surface discharge. The Oklahoma project was treatment by reverse osmosis (RO) on steroids, with electricity being the major cost at about 2 cents per gallon. The electrical cost can be prohibitive to the industry treating and reusing produced water. Hi suggests the state work with electric providers to subsidize that cost.

A skid-mounted plant would be placed near a produced water source, possible a disposal well (transportation of produced oilfield water is a MAJOR component of the cost and risk of treatment). Ideally this would also be near storage and usage locations for use by local farmers/ranchers. Coordination with various state agencies will be needed to know where the treated water can be released and who can use it for what purpose.

Hi also explained that fresh water is preferred for drilling but produced water could be used for fracing. One major issue is in the handling (storage and transportation) of the saline water. Any leakage of the saline water from storage or pipelines is a liability to avoid. Use of county bar ditches for temporary pipelines could address the transportation issue to some degree.

Goal of a pilot project would be to prove the produced water can be treated for reuse. The pilot would look at treating 250-500 barrels per day probably something around 300 b.

It was noted that the Red Hills region is the only area looking at this issue although there are other regions of the state interested in the results and potential water supply.

Also noted it could prove to be a win/win for Barber County.

Hi outlined the steps needed are the identification of a source of produced water, near a disposal well, with an area receptive to surface disposal (discharge) of sufficient size with power accessable.

Discussion followed making the following points:

- A wetland might be acceptable for the discharge;
- Post treatment water analysis would be needed;
- Nice to get a cost /benefit;
- Based on 20% waste, estimated 10 acres needed; and
- At 2 cents per gallon to treat that is about $65/acre foot.

Multipurpose Small Lake Goal process was presented by Olsson Associates. This overview provided six major activities to lake development along with time frames. Major areas presented were environmental permitting, land acquisition, mitigation of impacts, water treatment and distribution; funding and construction. The first steps forward would be dam and reservoir planning and design based on defined project purpose and public input. Examples were provided of possible permits needed, potential funding sources, and similar projects the firm has work on.

It was estimated 8-12 years to fully develop the project and get to the construction phase.

Next steps would be to complete a detailed engineering study, after defining fully the project purpose.

Discussion touched on eminent domain, reservoir size, engineering study cost, who pays of the study, how to pay for the project, total cost of the project, earthquake potential/effects, a hydro-electric component, sale of water to the City of Wichita, the possible uses of the reservoir and that watershed conservation should be considered in any plan to reduce siltation.

The RAC consensus was that public input will be needed to help define the needs the reservoir will meet. Despite the 2013 study indicating supply may not be needed based on projections, it was suggested that there is still a need in the region for reliable fresh water and this could aid in maintaining and growing population. (Population decline occurs due to lack of or poor water.) The engineering study would follow fulling defining the project.

Diane will contact the RAC to determine a date for the next meeting, possibly mid- late June.