Kansas Water Authority Meeting
Memorial Hall, Lower Level
Pittsburg, Kansas
8:30 a.m. – August 17, 2017

Time	***Agenda Item***	***Location***			
7:30 am	**RAC Chair Meeting**	Memorial Hall, Room B-1			

Time	***Agenda Item***	***Presenter***	***KWA Advice***	***KWA Decision***	***Page No.***
8:30 am	**Call to Order/Introductions/Minutes**	Gary Harshberger		X	--
8:35 am	**Meeting Overview**	Ginger Harper			
8:40 am	**Lower Republican Background**	Earl Lewis			--
8:50 am	**Lower Republican River Basin Feasibility Study for Reservoirs Update**	Katie Miller, Burns & McDonnell	X		--
9:10 am	**Lower Republican River Basin Oasis Model, Final Report**	Andrea Brookfield, Kansas Geological Survey	X		--
9:30 am	**Research Coordination Work Group**	Ed Martinko & Dan Devlin	X		--
9:45 am	**KWA PWS Committee**	Dennis Schwartz			
	Negotiation Requests	Earl Lewis		X	--
10:00 am	**BREAK**				
10:15 am	**KWA Budget Committee**	Karma Mason			--
	FY17-18 SWPF Update			X	
	FY19 SWPF Budget Discussion			X	
11:15 am	**Water Planning Update**	Matt Unruh			
	Lower Water Quality Summit Update		X		
11:30 am	**LUNCH**				
12:15 pm	**KWA RAC Operations Committee**	Greg Graff			--
	RAC Member Appointments	Matt Unruh		X	
12:45 pm	**Regional Advisory Committee Updates**				--
	Equus-Walnut	Steve Hieger	X		
	Kansas	Sarah Hill-Nelson	X		
	Marais des Cygnes	Lori Kuykendal	X		
	Missouri	Carl Johnson	X		
	Neosho	Angela Anderson	X		
	Smoky Hill-Saline	Martha Tasker	X		
	Verdigris	John Black	X		
3:00 pm	**GMD Assessment Fee Proposed Legislation**	Calvin Kissick & Tim Boese			
3:20 pm	**Director's Report**	Tracy Streeter			--
3:40 pm	**New Business**				
4:00 pm	**Adjourn**				

Upcoming KWA Meetings: October, 2017, TBD; December, 2017, TBD, January 23-24, 2018, Topeka, KS

Minutes

KANSAS WATER AUTHORITY

May 17, 2017 **Garden City, Kansas** **Regular Meeting**

CALL TO ORDER: Chairman Gary Harshberger called the **May 17, 2017** Kansas Water Authority meeting to order at **4:05** p.m. at the Clarion Inn, Garden City, KS

MEMBERS PRESENT: Gary Harshberger, Chairman; Mike Armstrong; John Bailey; Greg Graff; Randy Hayzlett; Calvin Kissick; Brad Loveless; Karma Mason; Dennis Schwartz; Ted Nighswonger; Robin Jennison; Dan Devlin; Steve Adams; Dan Wells; Sue Schlapp; Don Whittemore; Tracy Streeter

MEMBERS ABSENT: Lynn Wobker; Alan King; Pat Apple; David Barfield; Ed Martinko; Jackie McClaskey; Rob Reschke

APPROVAL OF MINUTES:

Motion No. 05-17-01 It was moved by **Brad Loveless** and seconded by **Randy Hayzlett** the **January 25, 2017** Minutes for the Regular Meeting of the Kansas Water Authority be approved as presented. **Motion carried with no dissenting votes.**

It was moved by **Brad Loveless** and seconded by Ted Nighswonger the February 27, 2017 conference call minutes of the Kansas Water Authority be approved as presented. **Motion carried with no dissenting votes.**

KWA/KWO OPERATIONS:

KWA RAC Committee-Membership

Greg Graff presented the Membership Report for approval

Motion No. 05-17-02 It was moved by **Greg Graff** and seconded by **Karma Mason** to approve RAC membership items as presented, including appointment of Gary Armentrout to the Marais des Cygnes RAC, Kent Bacon, Kate Grover and Lisa Suderman to the Neosho RAC, Gene Albers to the Red Hills RAC, and removal of Paul Froelich and John Peckham from the Smoky Hill-Saline RAC.
Motion carried with no dissenting votes.

KWA RAC Committee-IPM Supension

Motion No. 05-17-03 It was moved by **Randy Hayzlett** and seconded by **Brad Loveless** to approve a one-time suspension of the IPM regarding RAC Chair terms, allowing RAC Chairs to conserve a consecutive term from their original term which would expire August 31, 2019.

KANSAS RAC COMMITTEE:

Upper Arkansas **Titus Jaeger** presented an update on their RAC goal implementation.

Cimarron **Nick Hatcher** presented an update on their RAC goal implementation.

Red Hills **Mark Watts** presented an update on their RAC goal implementation.

Adjournment The KWA adjourned at **5:35.**

KANSAS WATER AUTHORITY

May 18, 2017 ***Garden City, Kansas*** ***Regular Meeting***

CALL TO ORDER: Chairman Gary Harshberger called the **May 18, 2017** Kansas Water Authority meeting to order at **8:05** a.m. at the Clarion Inn, Garden City, KS.

MEMBERS PRESENT: Gary Harshberger; Mike Armstrong; Mark Fischer; Greg Graff; Randy Hayzlett; Alan King; Calvin Kissick; Brad Loveless; Karma Mason; Dennis Schwartz; Ted Nighswonger; Lane Letourneau; Don Whittemore; Dan Devlin; Robin Jennison; Paul Lieteig; Amanda Reed; Rob Reschke; sue Schlapp; Tracy Streeter

MEMBERS ABSENT: Lynn Wobker; Pat Apple

KWA/KWO OPERATIONS:

USGS Streamgaging Agreement

Motion No. 05-18-01 It was moved by **Brad Loveless** and seconded by **Ted Nighswonger** to give approval to the Director to enter into agreements with U.S. Geological Survey for the Streamgaging Network, Kansas River Water Quality Monitoring, and Neosho River Sediment Monitoring.

USGS KS River Taste & Odor Monitoring Agreement

Motion No. 05-18-02 It was moved by **Karma Mason** and seconded by **Greg Graff** to give approval to the Director to enter into agreements with U.S. Geological Survey for the Streamgaging Network, Kansas River Water Quality Monitoring, and Neosho River Sediment Monitoring.

USGS Neosho River Sediment Monitoring Agreement

Motion No. 05-18-03 It was moved by **Dennis Schwartz** and seconded by **Mike Armstrong** to give approval to the Director to enter into agreements with U.S. Geological Survey for the Streamgaging Network, Kansas River Water Quality Monitoring, and Neosho River Sediment Monitoring.

Tuttle Creek Reservoir US Army Corps of Engineers Planning Assistance to States

Motion No. 05-18-04 It was moved by **Mike Armstrong** and seconded by **Brad Loveless** to approve the Director to enter into a Planning Assistance to States (PAS) agreement with the U.S. Army Corps of Engineers for the development of a comprehensive plan for the Kansas River Sediment Analysis and Transport Model.

Regional Conservation Partnership Program (RCPP)-Milford Lake

Matt Unruh provided an update on Milford Lake.

KWA PWS COMMITTEE:
2017 PWS Comprehensive Capital Development Plan

Motion No. 05-18-05 It was moved by **Dennis Schwartz** and seconded by **Mike Armstrong** to approve the 2017 Public Water Supply Program Capital Development Plan (CCDP) as attached. This plan replaces the 2014 Water Marketing Program Capital Development and Storage Maintenance Plan.

CY 2018 Water Marketing Rate

Motion No. 05-18-06 It was moved by **Dennis Schwartz** and seconded by **Brad Loveless** to set the CY 2018 Water Marketing variable rate at $0.392/1000 gallons.

Public Water Supply IPM-11 Revision

Motion No. 05-18-07 It was moved by **Dennis Schwartz** and seconded by **Greg Graff** to approve the revised Internal Policy Memorandum #11, with a revision date of May 17, 2017. The revised IPM adds a fourth advisory member to the Committee representing an Assurance or Access District.

LEGISLATURE/BUDGET UPDATE:
Legislative Update

Ginger Harper provided this update.

SWPF Budget Discussion

Ginger Harper & Earl Lewis provided this update.

RESEARCH COORDINATION:
Research Coordination

Earl Lewis provided this update.

KWA RAC COMMITTEE:
Upper Republican

Richard Rockel presented an update.

Upper Smoky Hill

Richard Rockel presented an update.

Solomon-Republican

Donald Hellwig presented an update.

Great Bend Prairie

Berry Bortz presented an update.

DIRECTOR'S REPORT: **Tracy Streeter** provided the Director's Report.

NEW BUSINESS:

UPCOMING MEETINGS: August 16-17, 2017 Pittsburg, KS

Adjournment The KWA adjourned at **12:00** p.m.

MEMO

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

DATE: May 8, 2017
TO: Kansas Water Authority
FROM: Katie Goff
RE: Kansas Bostwick Irrigation District

The Kansas Bostwick Irrigation District (KBID) is under contract to convert open canals to a buried pipe system. This conversion will limit system losses to evaporation, seepage, and operational spills. KBID submitted their first annual report to the KWO on June 30, 2017 for the Open Canal Conversion to Buried Pipe Project - 33.0 Lateral Canal and Sub-laterals.

This open canal conversion to a buried pipeline project took place just off of the Courtland Canal on the 33.0 Lateral and Sub-laterals. The project eliminated a total of 4.18 miles of open canal including the 3 waste-ways and replaced it with 3.52 miles of buried PVC pipe. Construction began in early November, 2016, progressed at a swift rate due to good weather, and was completed in the last week of March, 2017.

The purpose of the project was to conserve water and to continue contract obligations with the United States Bureau of Reclamation for improved efficiencies. The goals were to design and install the pipeline in such a manner to reduce seepage losses and eliminate waste-ways while improving service to the irrigator allowing for on farm efficiency improvements as well. This project is estimated to save 894.6 acre-feet of water annually and encompasses 18 turnouts servicing 976.5 irrigated acres owned by 7 different landowners.

The next project that will take place utilizing the damage award funds held by the KWO will be the conversion of the 32.1 Laterals and Sub-laterals to a buried pipe system. The project will start following the end of the 2017 irrigation season and be completed prior to June 2018. This project will eliminate 2.99 miles of open canal and replace it with 2.71 miles of buried PVC pipe.

This item is information only. No action required.

MEMO

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

DATE: August 8, 2017
TO: Kansas Water Authority
FROM: Katie Goff
RE: Lower Republican River Basin Feasibility Study for Reservoirs Update

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Burns and McDonnell have finished evaluating the feasibility of four small reservoir sites in the Lower Republican as an option to store additional water for low flow times. The Kansas Water Authority will hear a presentation from Katie Miller, Burns and McDonnell, on the final report of the Reservoir Feasibility Study.

The final report includes the siting of four reservoirs based on Kansas Water Office input and based upon the results of the Value Study Report by the Bureau of Reclamation. The topography near each site was evaluated to determine location based on topographic features. Reservoir yield analyses were performed for each site to determine potential storage volumes and impoundment depths and coverage. Desktop studies were performed to determine soil conditions at each site, potential for wetlands, cultural resources, and threatened and endangered species. Opinions of probable cost were determined for each site based on height and length of embankment, outlet structures, and access. The collection of this data provides the basis for decisions relative to which site or sites are selected for reservoir design and construction.

This item is information only. No action required.

MEMO

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

DATE: August 8, 2017
TO: Kansas Water Authority
FROM: Katie Goff
RE: Lower Republican River Basin Oasis Model, Final Report

The Kansas Geological Survey has completed the contract to evaluate alternatives to increase the water available to water rights in the Lower Republican River Basin. The purpose of this contract was to simulate the distribution of water resources in the Lower Republican River Basin (LRRB) under different management alternatives to optimize beneficial use by water rights in the basin using the existing HGS-OASIS model of the LRRB, developed as part of the USBR WaterSMART basin study of the Republican River Basin in 2015. The Kansas Water Authority will hear a presentation from Andrea Brookfield, Kansas Geological Survey, on the final report of the LRRB Oasis Model.

The objective of this work was to assess the use of a supplemental account, Kansas account, and potential new reservoirs to optimize Kansas' beneficial use of water in the Lower Republican River Basin. Specifically, this work aimed to assess how to reduce water shortages of the access district (the junior water rights between HCL and Milford reservoir in Kansas) under MDS administration, in addition to reducing KBID's water shortages.

This item is information only. No action required.

MEMO

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

DATE: August 7, 2017
TO: Kansas Water Authority
FROM: Dennis Schwartz, Chair, Public Water Supply Committee
Cara Hendricks, P.E.
RE: Public Water Supply Committee Update

The purpose of this memorandum is to provide an update to the Authority regarding the following items related to the KWA Public Water Supply (PWS) Committee and associated PWS programs:

Action Items:

- Request for approval to enter into negotiations for Wolf Creek Marketing Contract

Informational Items:

- Status of 2017 PWS Comprehensive Capital Development Plan
- Notification of CY 2018 variable rate
- Letters of Interest solicitation for two PWS Committee advisory member positions

Request for Approval to Enter Into Negotiations for Wolf Creek Marketing Contract

On June 23, 2017, the Kansas Gas and Electric Company (KGE) as the contract's operating agent and on behalf of the owners in Wolf Creek Nuclear Operating Corporation submitted a letter to the Director of the Kansas Water Office notifying KWO of the intent to renew Wolf Creek's water marketing contract to purchase water from John Redmond Reservoir. The existing marketing contract (No. 76-2) is a fixed-rate contract with an end date of Dec. 31, 2017.

In accordance with K.S.A. 82a-1310a, on August 2, 2017, KGE followed up the June 23rd letter with the submittal of an application to the Kansas Water Office for a new water marketing contract. A copy of the letter and application is attached to this memorandum. The anticipated start date for the new contract is January 1, 2018.

In accordance with the State Water Plan Storage Act, K.S.A. 82a-1301 et seq., the Director of the Kansas Water Office requests approval from the Kansas Water Authority to enter into negotiations with KGE for a contract to withdraw and use water from John Redmond Reservoir for the purposes of serving Wolf Creek Nuclear Generating Station in Burlington, Kansas.

2017 Public Water Supply Program Comprehensive Capital Development Plan (CCDP)

On May 18, 2017, the Kansas Water Authority approved the 2017 Public Water Supply Program Comprehensive Capital Development Plan (CCDP). The purpose of the plan was to expand the 2014 *Water Marketing Program Capital Development and Storage Maintenance Plan* to account for all revenue and expenses related to the State's public water supply storage. The CCDP interconnects funding sources related to state-owned public water supply storage, including the Water Assurance Program and State Water Plan funds specifically tied to public water supply storage.

A link to the approved 2017 CCDP in its entirety has been added to the Kansas Water Office website under the "Reports & Publications" section.

This report is for information only. No action is needed at this time.

Notification of Water Marketing Program Variable Rate for Calendar Year 2018

On May 18, 2017, the KWA set the Calendar Year (CY) 2018 water marketing variable rate at $0.392 per 1,000 gallons, which is a 3.2% increase from the CY 2017 rate. On July 6, 2017, in accordance with the associated water marketing contracts, letters were sent to all current water marketing customers with variable rate contracts to notify them of the new CY 2018 variable rate.

This report is for information only. No action is needed at this time.

Request for Letters of Interest for Two Advisory Member Positions to the KWA Public Water Supply Committee

At the May KWA meeting, as recommended by the PWS Committee, the Authority approved revisions to Internal Policy Memorandum (IPM) #11 which establishes the standing committee on Public Water Supply program operations. As part of the updated IPM, there was the addition of a fourth advisory member representing an Assurance or Access District.

In July, the Kansas Water Office sent a request to the industrial customers of the Water Marketing Program, as well as the Water Assurance Districts and Lower Smoky Access District for letters of interest from those interested in serving a three-year term as an advisor to the Public Water Supply Committee in the following categories:

- Industrial Customer
- Assurance or Access District Member

KWO has requested that the letters of interest be submitted by August 18, 2017, at which time they will be shared with the KWA Chair for review and member appointment.

This report is for information only. No action is needed at this time.

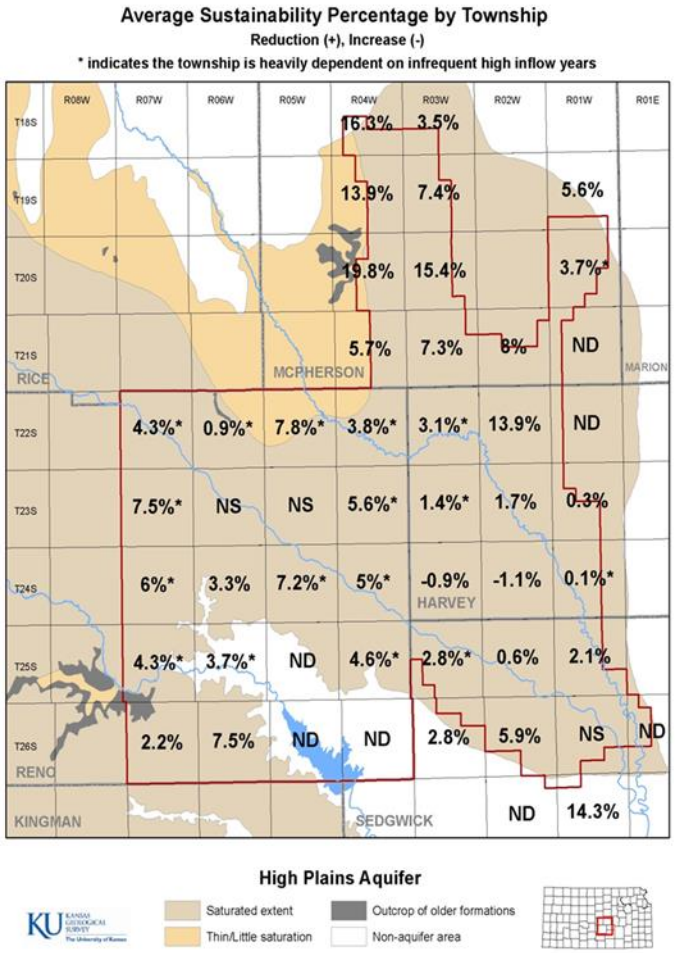
Equus-Walnut RAC Update

Steve Hieger, Chair

August 17, 2017

Priority Goal #1: Achieve and maintain sustainable balance of groundwater withdrawals with annual recharge in the Equus Beds Aquifer by 2020. Ensure safe yield and recharge rate calculations in the Equus Beds Aquifer are accurate through a district wide integrated groundwater and surface water model by 2018.

- Implementation Progress: KGS Completion of Equus Beds Groundwater Sustainability Assessment to determine groundwater withdrawals which support stable groundwater levels within region.
- Next Step(s):
  - Utilize data from Sustainability Assessment to evaluate new safe yield calculations for region.
  - Utilize data from Sustainability Assessment to update and expand model to cover all of GMD 2



Priority Goal #2: Each public water supplier in the region will develop a long term water supply plan and review every five years to meet their individual forecasted needs. Water suppliers should consider alternative uses of non-potable water and existing water supplies before developing any new water supply projects.

- Implementation Progress: KDHE completion of Technical, Financial and Managerial (TFM) Survey of water suppliers
- Next Step(s):
  - KDHE reports outcome of TFM survey to Equus-Walnut RAC for water suppliers within region

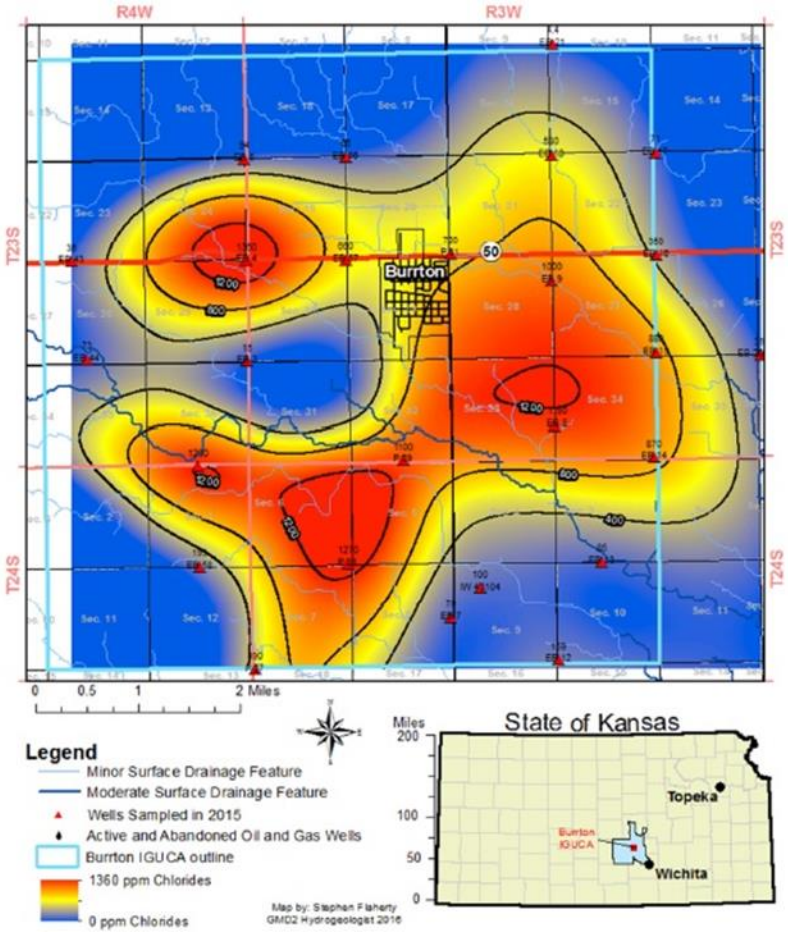
Priority Goal #3: Implement and maintain watershed protection activities to maintain regional reservoir storage capacity for an additional 100 years beyond the design life.

Priority Goal #4: Maintain or reduce the rate of sedimentation and nutrient loading through the encouragement of best management practices (BMPs) on 50% of the high priority acres in the watershed above water supply reservoirs. Ensure practices are sustained and maintained for the long-term and priorities are reassessed every five years.

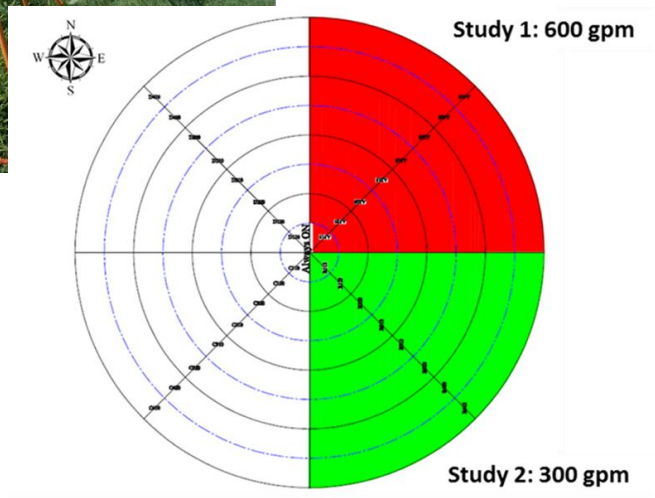
- Implementation Progress: Continued conservation practice implementation through existing programs in region.
- Next Step(s):
  - State of the Resource Update for region which includes conservation practice implementation progress
    - Dashboard development potential?
  - Water Technology Farm Establishment
    - Sediment and Nutrient Reduction Effectiveness

Priority Goal #5: Allocate necessary resources ($1-5 million) within five years to identify and prioritize current contamination issues impacting the Equus Beds Aquifer and develop a plan to manage and mitigate the contamination. Review existing studies and emerging technologies to develop a new conceptual plan with estimated costs. Begin implementation of the plan within 10 years of completing the study.

- Implementation Progress: Lower Quality Water Summit in Hutchinson to discuss lower quality water-related issues with 3 other RACs, including sources of contamination
- Next Step(s):
  - GMD2 lead effort to develop inventory of known contamination sites within Equus Beds
  - Continue to work to identify potential remediation projects



Priority Goal #6: While focused on the preservation of our water resources agricultural water users will double the value of irrigation-based production over the next 50 years. Coordinate with public/private research and development programs to develop and promote less water and nutrient intensive crops. Provide incentives for operators to implement irrigation efficiency improvements immediately. Increase efforts to implement water conserving agricultural production practices utilizing no-till methods, cover cropping systems and a rangeland cedar tree management program.



- Implementation Progress:
- Next Step(s):
  - Develop WTFs which evaluate less water intensive crops as well as management systems to improve water quality
  - Coordinate and support public/private research and development
    - *Invest in Center for Sorghum Improvement*
  - Workshops and field days in advance of annual burn season for improved rangeland management

Priority Goal #7: Encourage municipal, commercial, and industrial users of water to increase the efficiency of net water use by reducing the volume of water used per unit of measure by 5% per decade. Provide incentives for users to implement water efficiency improvements.

- Implementation Progress:

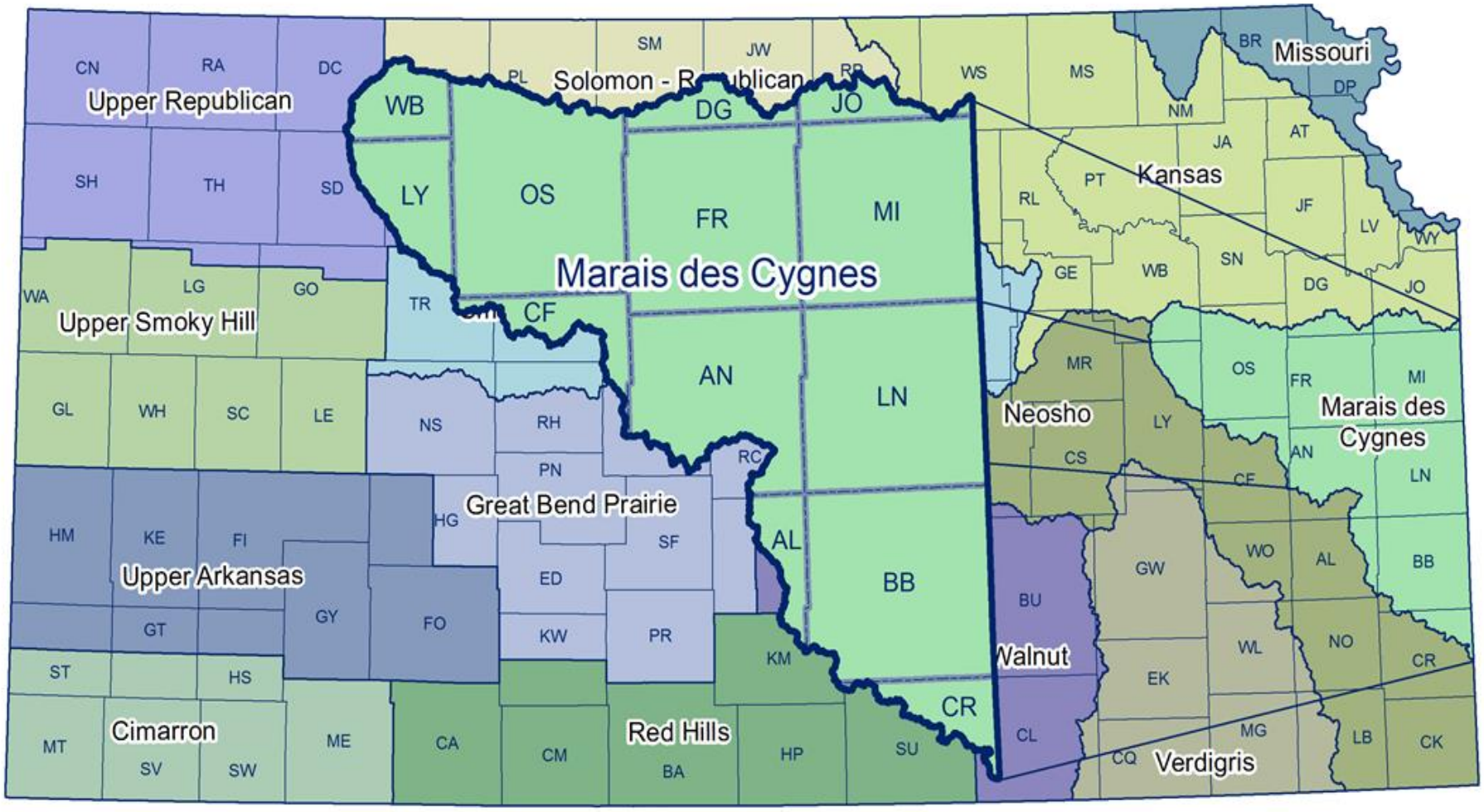
- Next Step(s):
  - Special Session at Governor's Conference for major water users within region (municipal, commercial, and industrial)
    - *Have entities that recently implemented water efficiency projects present their success to the attendees of session*

Marais des Cygnes RAC Progress

Chair: Lori Kuykendall

Vice-Chair: Keri Harris

Planner: Bobbi Luttjohann


Upper Republican
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Verdigris

Priority Goal #1

- Reduce cumulative sediment loads entering public water supply impoundments by 10 percent in the Marais des Cygnes River Basin every 10 years to extend the life of existing infrastructure.

Priority Goal #2

- Increase sources of supply, at a minimum of one multipurpose structure, to meet increased demand in specific growth areas by 2035. In addition, ensure water supply available from storage exceeds projected demand by at least 10% through the year 2050.

Action Steps

- A RAC representative will work with each WRAPS group within the Marais des Cygnes Region to assess their 9 Element Plan and their willingness to work with the RAC to meet the Marais des Cygnes Regional goal of sedimentation reduction. A RAC representative will also work with each conservation district within the Marais des Cygnes Region to assess their goals and their willingness to work with the RAC to meet the Marais des Cygnes Regional goal of sedimentation. If the goals of the conservation district and the 9 Element Plan of the WRAPS groups align with the RAC sedimentation goal then funding will be sought to leverage funds to meet Regional Goals. These two groups have a system in place to distribute cost share funds and to identify projects that need to be implemented to decrease sedimentation. They also provide educational opportunities for landowners.

Progress

- Currently working with KDHE as they update WRAPS Plans to include information on the RAC and how the WRAPS goals line up with the RAC goals

Action Steps

- In order to fund these efforts, the first plan of action is to not create a new funding source, but instead to ensure current funding sources are funded; we cannot continue to see funds being diverted away from water quality, water quantity and water conservation efforts within the state budget if we truly want to work to reach the goals of the RAC and the Vision. This would also include working to see that the State Water Plan Fund is funded to maximum levels and funds from the State Water Plan are allocated as they were originally intended; this should include pesticide and fertilizer fees being rerouted back into the water plan fund and therefore assisting with funding goal implementation. If these funds are not adequate, then new sources will need to be sought. These sources could include, but are not limited to applying a 1 cent/1000 fee on water used by all beneficial uses not already paying a usage fee and or a 1 to 3 cent per bottle water tax applied to bottled water sold in Kansas.

Progress

- $1.2 million from SGF
  - $1 million for streambank stabilization work
  - $100,000 Reservoir Bathymetric Surveys

Action Steps

- RAC members will also encourage local support of goal implementation through conservation districts, WRAPS groups, producers, municipalities, etc. This will be done through education and awareness of the RAC.

Progress

- RAC members speak to local groups, producers, municipalities about the RAC Goals and Plans
  - This is a continuous effort

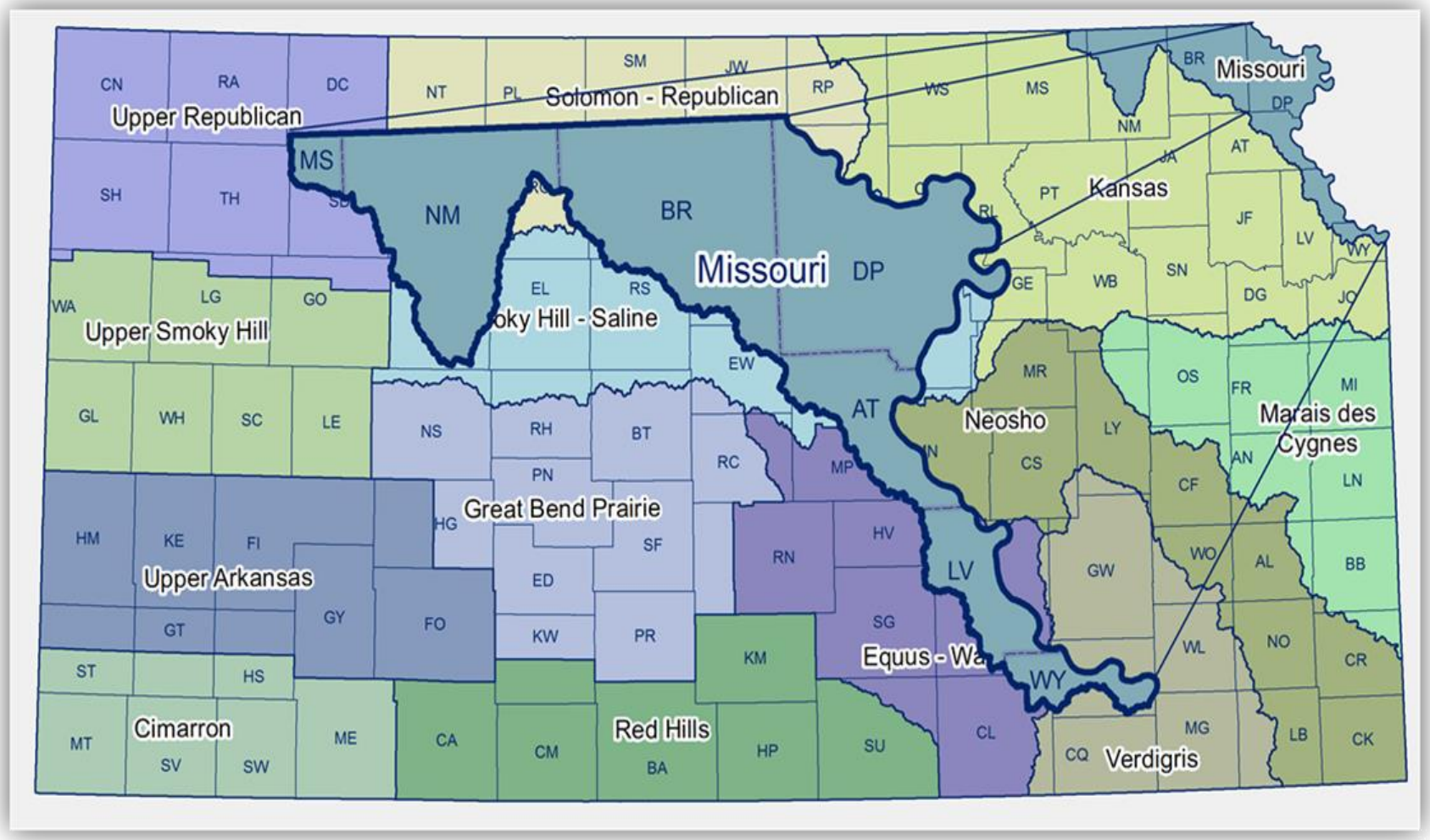
Action Steps

- The Kansas Water Office, along with the Marais des Cygnes RAC, will evaluate cost estimates of calling-in the unallocated storage in Melvern Reservoir, as well as the evaluation of a pool rises at Pomona and Hillsdale Reservoirs with the estimated cost of constructing a new reservoir for water supply. The entire Marais des Cygnes Region's population projections will be evaluated for their supply needs to ensure that the demand can be met and exceeded by 10% through the year 2050. Both mainstem and off-stream storage supply will be evaluated to ensure all counties within the Marais des Cygnes region have their water supply needs met. The reduction of sediment loads created by the work with the WRAPS groups and the Conservation Districts to implement BMPs such as, but not limited to, cover crops, No-Till, terraces, etc. will be evaluated for these practices' potential to meet projected water needs through 2050, and, as an alternative to constructing a new storage structure. The RAC is, in effect, going to consider whether Goal 2 can essentially be met by achieving Goal 1 in conjunction with purchasing the reserve supply in Melvern Reservoir and the already purchased, but largely underutilized, supply in Hillsdale Reservoir.

Progress

- KWO is currently conducting an evaluation of small PWS lakes in the Region
- KWO is refining demand projections
  - Regionally specific
  - Use specific
- Reallocation Study for the unallocated storage in Melvern
  - Preliminary assessment completed
- Multi-Agency Research Team forming to evaluate effectiveness of streambank stabilization efforts

Missouri Regional Planning Area



Missouri RAC

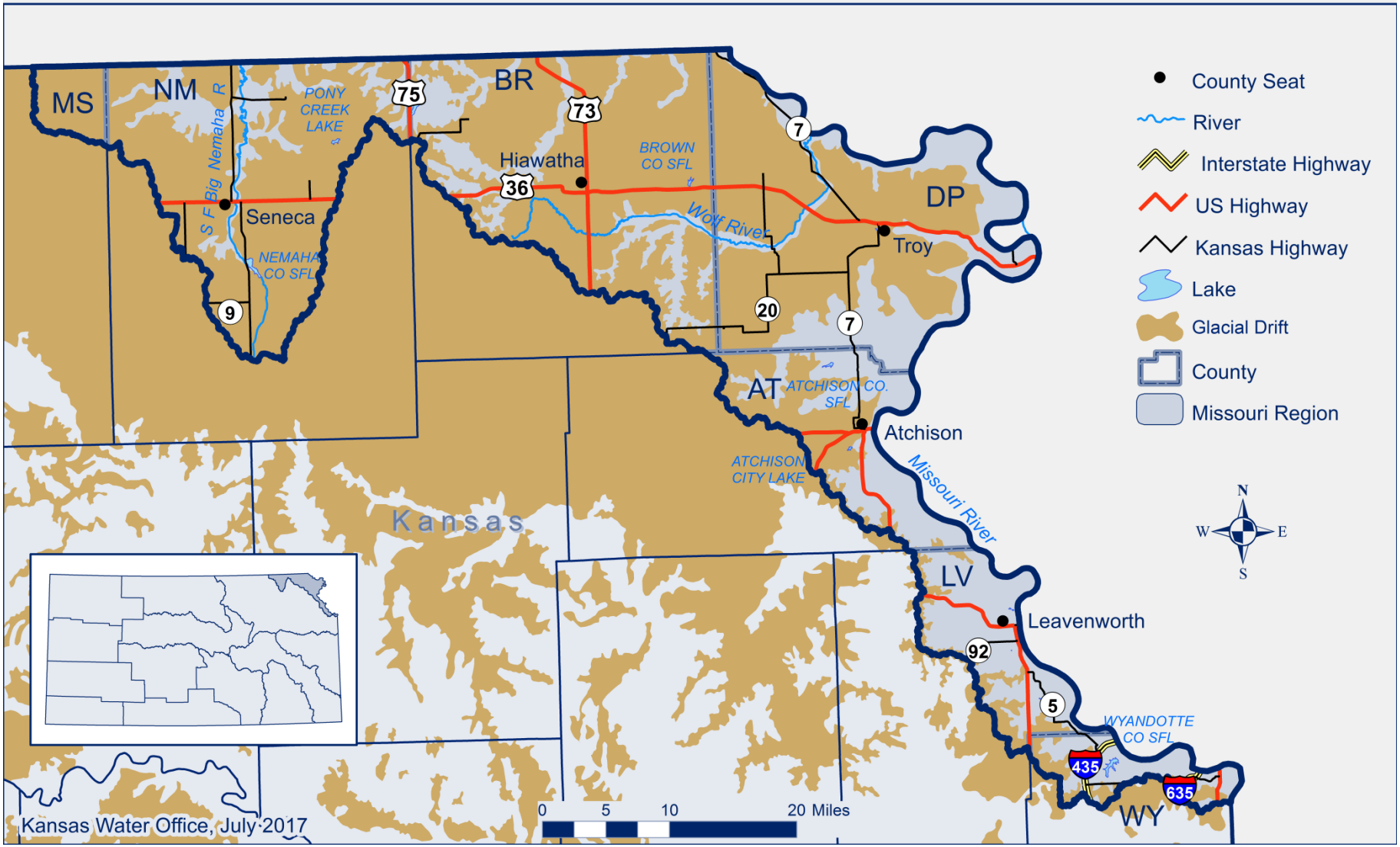
Goal #1

- Since groundwater quality is not well known, compile existing and collect additional data over the next 5 years to establish a baseline. Within 3 years after the baseline is established, a plan to implement best management practices will be developed to maintain and improve existing conditions. Monitoring and reevaluation of groundwater quality conditions and should continue at 5 year intervals.

Goal #3

- Collect additional information to improve safe yield estimate of groundwater and tributary streams within 3 years. Place a moratorium on additional permits until safe yield is identified. Once determined, only issue permits that do not exceed that yield. Safe yield should then be continuously monitored.

Missouri Regional Planning - Area Glacial Drift Aquifer



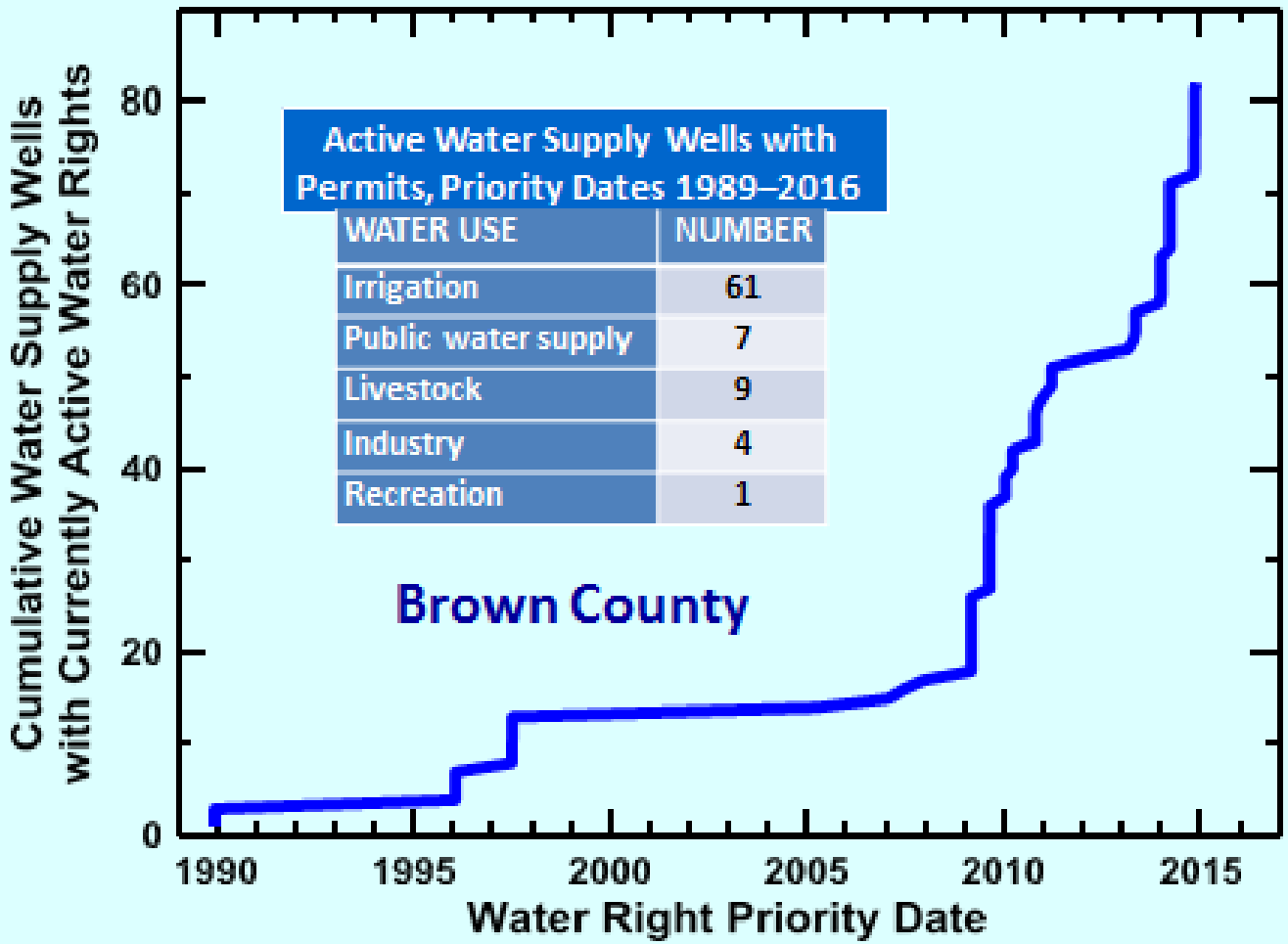
Progress/Accomplishments

- Multiple presentations by Brian Klager (Glacial Drift Aquifer) Brett Bunger, Chris Beightel and Katie Tietsort (Surface Water Permits & Safe Yield.
- Groundwater Quantity and Quality by Jordi Batlle-Aguilar, Don Whittemore and Jim Butler laid the foundation for Phase I.
- Phase I study completed by the KGS still lack some information(Saturated Thickness, depth to groundwater and changes in both over time)
- Phase II?

Progress/Accomplishments

- Working closely with KDA-DWR and local residents, no moratorium is necessary.
- Participation in upcoming Kansas Field Conference, September 11-13th

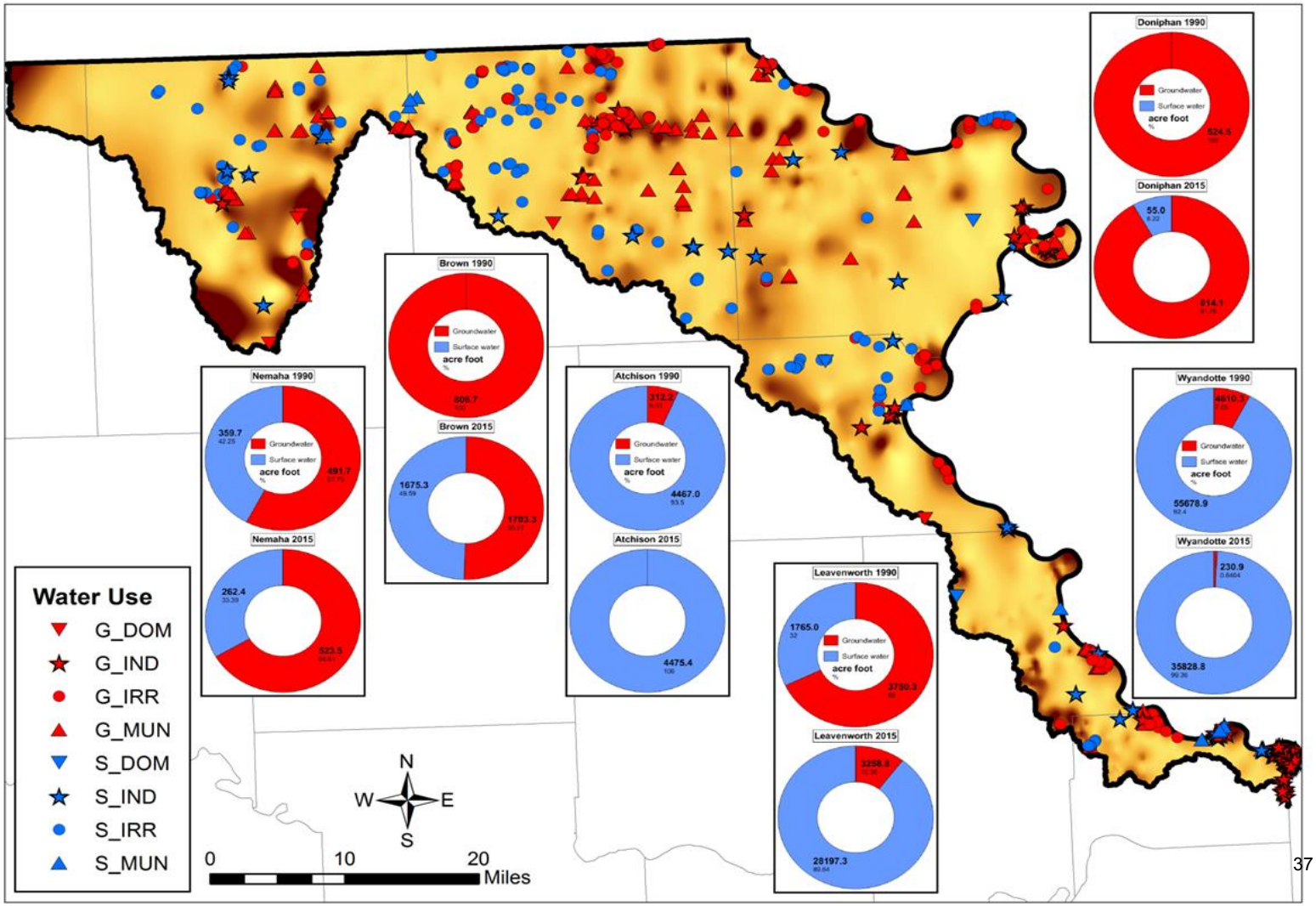
Increasing number of wells



Active Water Supply Wells with Permits, Priority Dates 1989–2016

WATER USE	NUMBER
Irrigation	61
Public water supply	7
Livestock	9
Industry	4
Recreation	1

Water Use by County



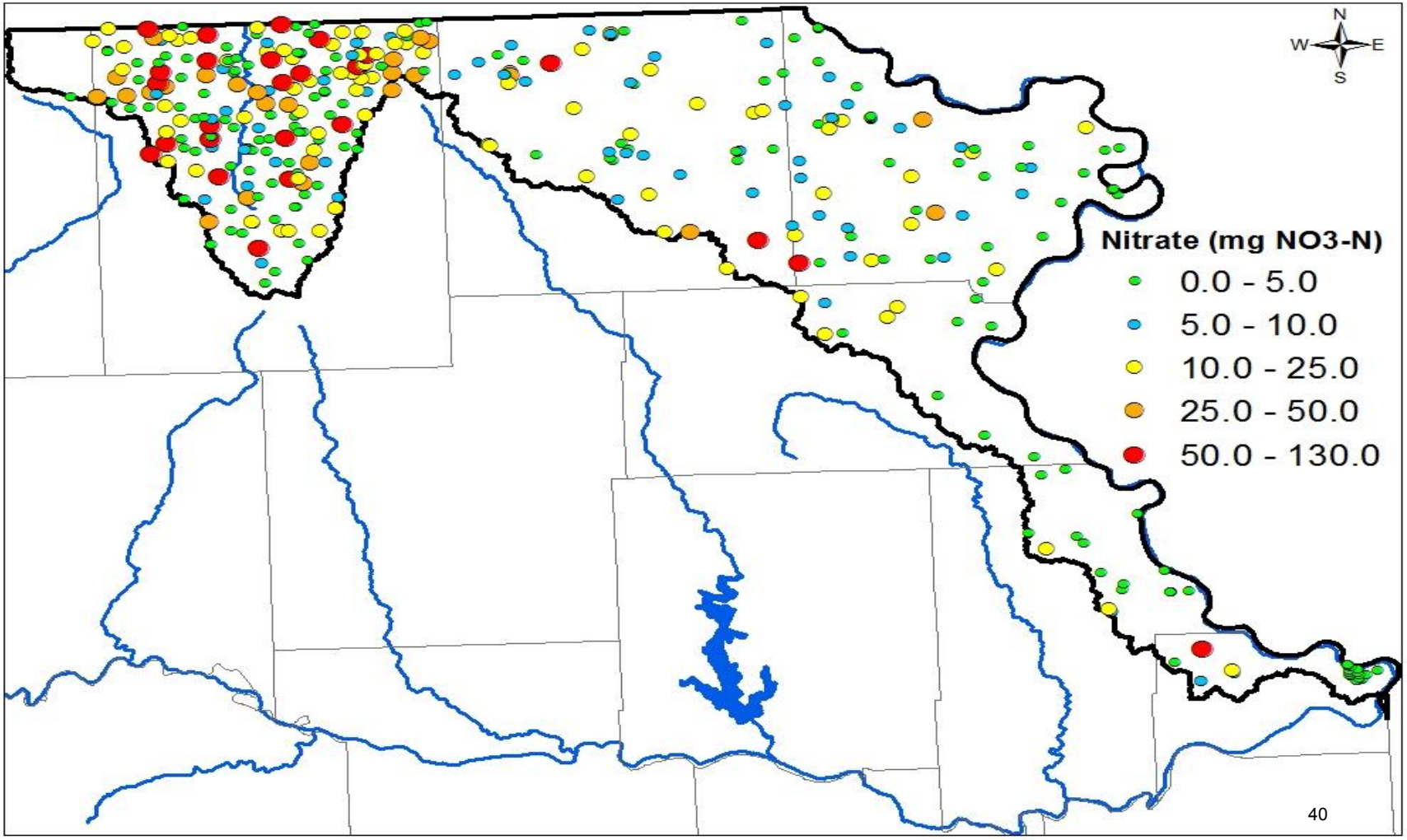
Goal #2

- To ensure a reliable surface water supply in the future, best management practices will be implemented so surface water quality in identified drainages is maintained or improved using goals and milestones as identified in the Missouri Watershed Restoration and Protection area 9 Element Plan.

Progress/Accomplishments

- Establishment of an Agriculture Sub-Committee
- DP Co. Regional Conservation Partnership Program.
- Involvement with Healthy Watershed Meetings.
- EPA Wetland Grant on Tile Outlet Terraces.

Nitrate Sampling



The Mighty MO

Engagement

- Missouri River Water Quality & Treatment Impacts presented to RAC by Michelle Wirth.
- Missouri Riverbed Degradation study presentation to the RAC by the Christy Ostrander, USACE.
- Mo River Sub-committee formed and Missouri Draft EIS comments submitted.

Pond Irrigation

Goal #4

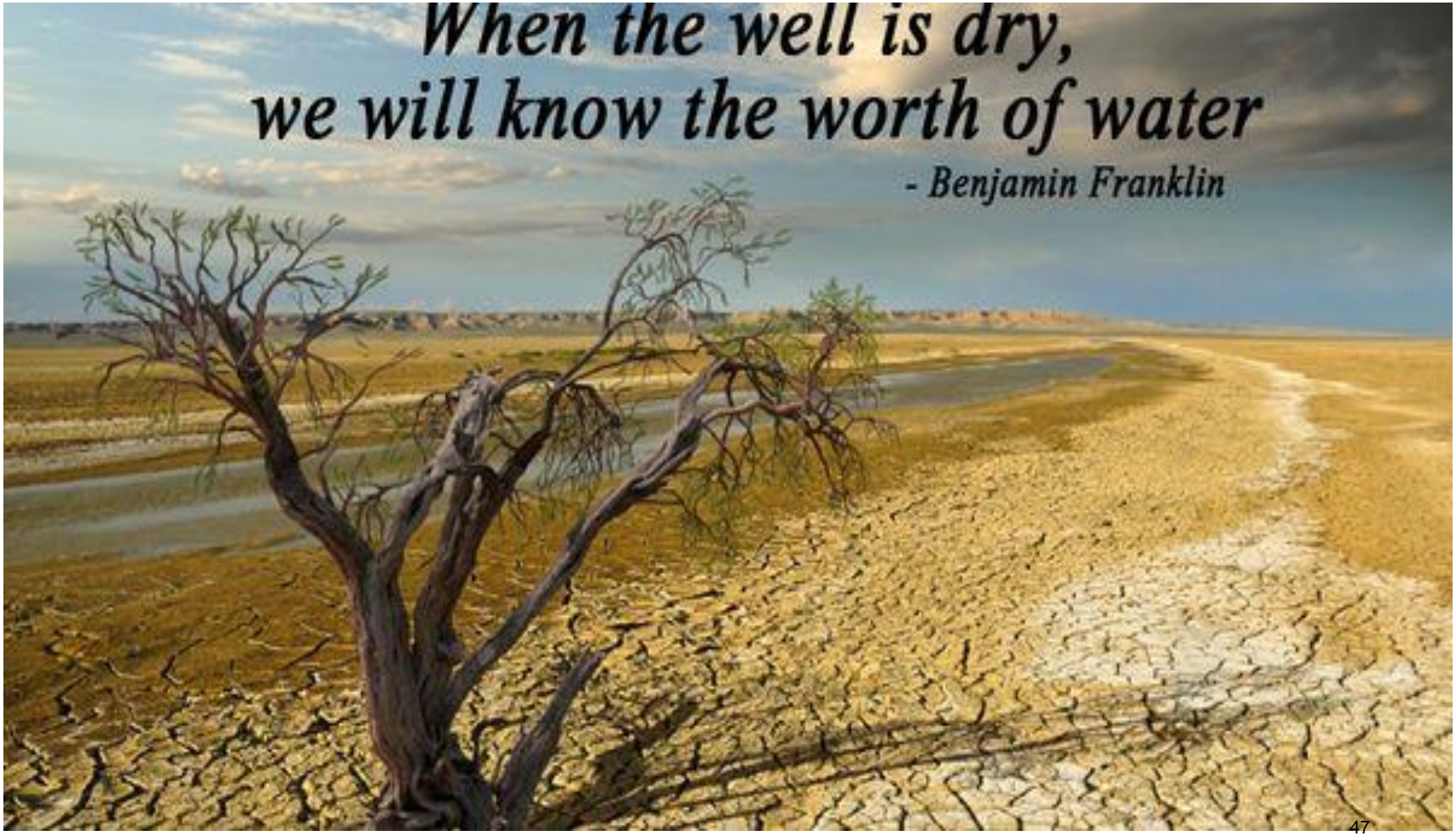
- Within 3-5 years the state should initiate a comprehensive education and outreach program. By the time of 8th grade education, kids should know where their water comes from, understand the basics of the water cycle, know basic water conservation principles and understand that their action impact water quality and water quantity. Schools, water providers and conservation districts should be the primary deliverers. A component of the comprehensive program should include enhancing information and outreach on research, technology and management practices using social media and public information outlets.

Progress/Accomplishments

- Participation in local Earth Day events in Doniphan, Brown and Wyandotte Counties
- Dana Ladner, KDA, presentation on to the RAC Vision Education piece.

Water Education

Questions?

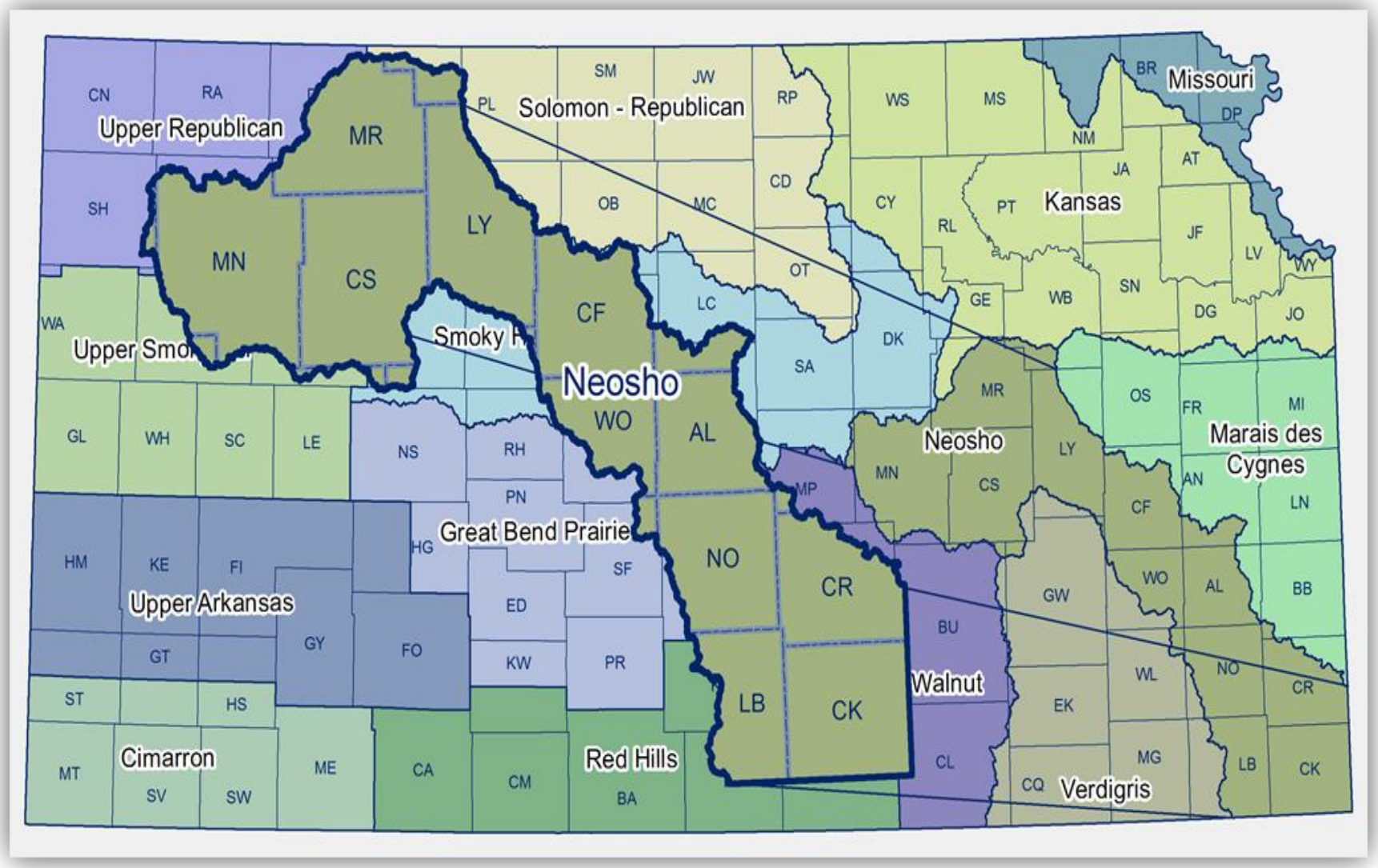

When the well is dry,
we will know the worth of water
- Benjamin Franklin

Neosho RAC Progress

Chair: Angela Anderson

Vice-Chair: Jay Byers

Planner: Bobbi Luttjohann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- **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 through watershed practices such as no-till, filter strips and streambank stabilization. By 2025, all streambank hotspots will be stabilized. By 2030, 80% of the priority cropland in need of conservation will be treated with no-till practices.

Action Steps

- The Kansas Water Office (KWO) is directed to work with the Streambank Team (KWO, KDHE, and KDA-DOC) to stabilize all streambank hotspots, as defined by the KWO, by 2025 in the Cottonwood-Neosho Region above John Redmond Reservoir. Funds will need to be created to fund the stabilization of the streambanks each year to complete reaches in order as they proceed from the reservoir.
- The Kansas Water Office, in cooperation with the Kansas Department of Health and Environment, the Kansas Department of Agriculture-Department of Conservation, and the local WRAPS groups, is directed to treat 80% of priority cropland, as defined by the WRAPS 9 element plans, with no-till practices, such as cover crops. In addition, treat with other sedimentation reduction farming practices, filter strips, terraces, and waterways by 2030 in the Cottonwood-Neosho Region above John Redmond Reservoir. Additional funds will need to be created to fund this action as well.
  - As a component of this plan a review of the sedimentation rate of John Redmond Reservoir will be evaluated. This evaluation will include scheduling and completing a bathymetric survey every 5 years and installing sedimentation monitoring stations to monitor the sedimentation rate and the progress and benefit of sedimentation reduction practices.
  - As an additional component, the effectiveness of best management practices for effects on hydrology and reduction of sediment and nutrients will be assessed and the information and education will be provided to those implementing practices. The education and information portion can be accomplished through the implementation of a Water Technology Farm (WTF) that incorporates no-till practices and other agriculture BMPs that address sedimentation, along with a possible streambank stabilization project.
- To ensure that there are funds available each year a steady funding source must be establish. The best funding source at this time appears to be the issuing of bonds to commence early implementation, and is recommend by the RAC, however, other funding sources are not excluded. Bonds should be sought at an amount no less than 8.5 million/year.

Progress

- Streambank Team has continued to evaluate and bid out streambank Projects
- Mapping of hotspots with 2015 aerial imagery has been updated and completed
- Working with WRAPS program to implement BMPs
- Bathymetric Survey Scheduled in the next 5 years
  - exact year not set, KBS changes
  - $100,000 from SGF
- Evaluating work done at KSU Ag Watersheds Field Lab to apply to a water quality-related WTF
- Partner with RCPP

Priority Goal #2: Reduce vulnerability to drought by the increasing reservoir storage at Marion and Council Grove Reservoirs through a permanent raise in conservation pool elevation. By 2025, evaluate the feasibility of permanent conservation pool rise at Marion and Council Grove reservoirs. Based on the outcome and findings of the feasibility study, stage increases in permanent pool elevation based on supply needs. Ensure water supply available from storage exceeds projected demand by at least 10% through the year 2050.

Action Steps

- The Kansas Water Office will continually work with the U.S. Army Corps of Engineers on refining reservoir operations and developing Drought Contingency Plans.
- A working group will be created that provides input on the pool rises at Marion, Council Grove, and
- John Redmond Reservoirs. This group will include the KWO, KDWP&T, KDHE, NRCS, USACE, and USFW.
  - The working group will look at costs associated with the pool rises and the benefits of increased supply.
- Based on the input from the working group and the cost benefit ratio analysis, the feasibility of the pool rises at Marion, Council Grove, and John Redmond Reservoirs will be determined by 2025. Based on that determination, a reallocation study may be implemented.

Progress

- Drought Modeling
- KWO continuous coordination with the USACE
- KWO continuous feedback request from other entities including KDWP&T, KDHE, NRCS, USACE, and USFW

Priority Goal #3: Reduce frequency of algal blooms in Marion Reservoir to no more than every 3 years through 2035. Evaluate the role of water level fluctuations in remediating and reducing algal bloom frequency.

Action Steps

- A working group will be created that provides input on the evaluation of the algal blooms at Marion.
  - This group will include the KWO, KDWP&T, KDHE, NRCS, USACE, and USFW.
- The working group will look at costs associated with algal blooms at Marion and determine the methods that would lead to a reduction in blooms.
- Based on the input from the working group and the cost-benefit ratio analysis, the feasibility of algal bloom reduction will be determined.

Progress

- Currently KWO is evaluating Milford water levels changes and the effect on HABs.
- Information gained may be useful for Marion
- Water Level Management with USACE is a continues effort
- USACE is evaluating installing floating wetlands above Marion (Lake Meade example)

Priority Goal #4: Increase storage in basin below John Redmond through development of additional storage sites. By 2020, complete an assessment of potential reservoir sites in lower portion of the Neosho planning region; including potential off-stream storage sites.

Action Steps

- The Kansas Water Office is directed to create a report by 2020 to determine the feasibility of developing additional water storage in the Cottonwood-Neosho Region below John Redmond Reservoir. The report will include possible locations of off-stream storage sites, and other possible sources of supply, including groundwater sources and water from other Regions. The report will also include a cost-benefit analysis of creating additional storage. As part of the report the Grand River Dam Authority will be encompassed into the conversation to discuss supply and funding options.

Progress

- Drought Tournament
- Drought Workshop
- Modeling
  - Will evaluate feasibility of developing additional water storage in the Cottonwood-Neosho Region below John Redmond Reservoir, including possible locations of off-stream storage sites. The modeling tool will include a cost-benefit analysis of creating additional storage.

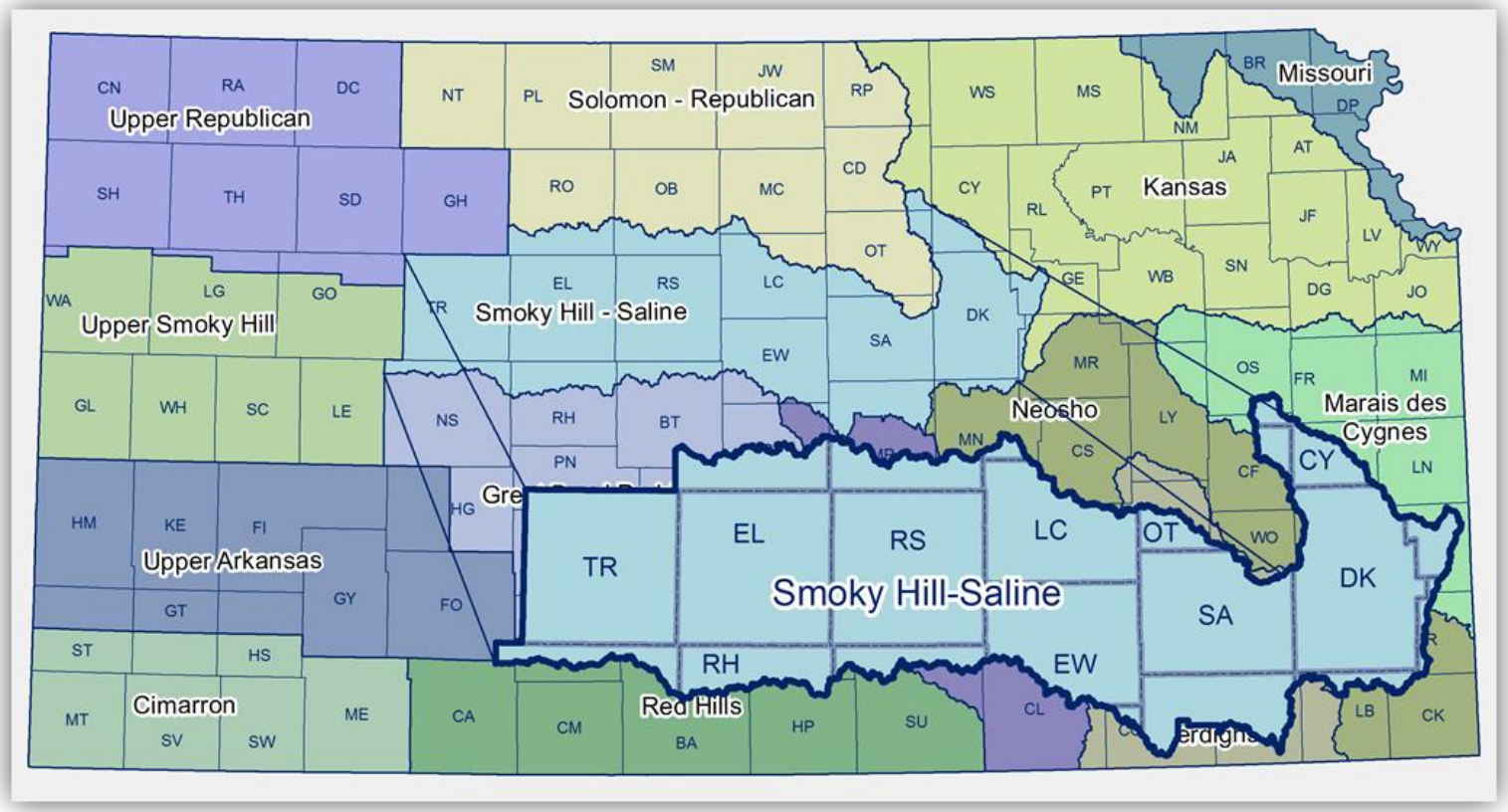
Smoky Hill-Saline Progress

Chair: Martha Tasker

Vice-Chair: Tim Scheck

Planner: Diane Knowles

Smoky Hill-Saline Regional Planning Area



GOAL #1: Increase available water supply, water supply storage, and interconnectivity among public water supplies within the Smoky Hill – Saline Planning Region. Methods of attaining goal can include: temporary or permanent conservation pool rise at Cedar Bluff Reservoir; utilize Wilson Reservoir as a water supply source for the region; permanent conservation pool rise at Kanopolis Reservoir; evaluate Kanopolis Reservoir to determine the feasibility of dredging and initiate project if deemed viable; construction of new water supply reservoirs within region; and phreatophyte control within riparian areas. Timeframe of implementation: Complete by 2060. Result of efforts: **Ensure water supply available from reservoir storage exceeds demand by at least 10% through the year 2060.**

Action Steps Goal #1

- **Evaluate recommendations included within the Smoky Hill-Saline section of the KWO Reservoir Roadmap when completed.**
- **Continue to pursue conservation pool rise efforts at Kanopolis Reservoir.**
- **Pursue alternative options to V-notch at Kanopolis Reservoir to allow for better control of operations and releases.**
- Develop a lake level management plan at Cedar Bluff Reservoir to facilitate temporary pool rises on as needed basis when inflow conditions warrant.
- Evaluate the feasibility of and develop where determined to be most effective low-head dams along the Smoky Hill River above Kanopolis Reservoir to help increase recharge of alluvial aquifer.
- Evaluate the potential to dredge pools within river channel to create pools or basins which help promote recharge of alluvial aquifer.
- Evaluate the potential for utilization of the NRCS PL-566 watershed structure program for structure rehab for water supply purposes.
- Utilize watershed districts within the Smoky Hill-Saline Regional Planning Area and the Kansas Watershed District Act for new construction, operation and maintenance of watershed structures needed to improve for watershed management and water supply purposes.
- Determine the viability of treatment of produced and lower quality water for water supply purposes.
- Utilize additional aquifers (i.e. Dakota, Arbuckle, Cedar Hills) for water supply purposes
- Finish reallocation study of Wilson Reservoir before proceeding forward with any exploration of Wilson as a water supply reservoir.
- Conduct a needs assessment and/or feasibility study for water suppliers within the Smoky Hill-Saline Regional Planning Area to evaluate potential for interconnectivity among systems. This could include an evaluation of systems which have already conducted studies on their own evaluating their individual system's needs and potential for interconnectivity.
- Utilize the Kansas Electronic Watershed Library (KEWL) or a similar program as a data clearinghouse for water supply-related studies completed within the Smoky Hill-Saline Regional Planning Area. This data clearinghouse could be developed for statewide purposes as well.
- Identify GIS, remote sensing, and/or on the ground assessments areas of phreatophyte growth in riparian corridors. Once identified, develop strategy for removal of phreatophytes in riparian areas to help maintain or restore streamflow in targeted regions.

Progress Goal #1

GOAL 1 Activities/Status:

- Kanopolis pool rise request to U.S. Army Corp of Engineers
- Management of releases now operated to maximize water in storage at Kanopolis. KWO continues to work with U.S. Army Corps of Engineers to refine reservoir operations
- Joint RAC low quality water summit held July 18, 2017
- LiDAR (aerial photos)for Trego Co. acquired, Dickinson Co. in priority 6, other counties in future areas
- Smoky Hill Reservoir Roadmap development in initial stage

GOAL #2: Develop a **statewide conservation education program/model which is applicable to all public water supplies** which quantifies water conservation efforts on customer usage. Develop a **youth-based water conservation education program** which is tied to school curriculum. Provide producers with tools and resources needed to make informed management decisions which improve water use efficiency. Educate all Planning Region stakeholders on the benefits of water conservation, thus working towards sustainable use of the region's water surface and groundwater resources.

Action Steps Goal #2

- Work with the Statewide Vision Education and Public Outreach Working Group to ensure Smoky Hill-Saline Planning Region stakeholders are educated on the benefits of water conservation, thus working towards sustainable use of the region's water surface and groundwater resources.

Progress Goal #2

GOAL 2 Activities/Status:

- To be meet with the Vision education and outreach – critical aspects to creating a long- term commitment to the future of our state's water resource needs

- Vison also includes a state wide K-12 curriculum on water conservation programs, community programs with partners such as KSU, conservation districts, youth programs and agencies within the Water Resources Subcabinet

GOAL #3: Reduce sediment and total suspended solids (TSS) concentrations within the lakes and streams within the Smoky Hill – Saline Planning Region. Method of attaining goal can include the continued support of best management practice (BMP) implementation for practices which reduce sediment runoff. Focus BMP implementation within priority areas identified in Big Creek Middle Smoky Hill River Watersheds 9 Element Watershed Protection Plan. Timeframe of implementation: Complete by 2040 - Final year of 9 Element Watershed Protection Plan is 2034. Result of efforts: 26% reduction of TSS concentrations on the Smoky Hill River at Ellsworth as noted within the 9 Element Watershed Protection Plan. **Remove sediment-impaired waters from the KDHE TMDL list.**

Action Steps Goal #3

- **Continued support of locally led and driven efforts, such as the WRAPS program and projects within the region, within watersheds and the BMPs noted for implementation within the 9 Element Watershed Plans.**
- Continue to support NRCS programs/initiatives such as RCPP, EQIP, easement programs, WRP, CSTP, etc., which can be utilized to implement sediment-reducing BMPs as well as improve soil health. Identify sources of sediment contributing to TSS/sediment in water bodies (i.e. streambank assessments, etc.).
- Continue to support KDA-DOC programs/initiatives such as the nonpoint source program, watershed program, water resource conservation program and the funding provided to DOC through the State Water Plan fund.
- BMP implementation above water supply waters to help facilitate settling out of solids before entry into water supply water (i.e. forebays, settling basins).
- BMP implementation should continue to reduce sedimentation rate of Kanopolis Reservoir as well as other water supply sources.
- Enhance and continue to support information/educational (I&E) efforts focused towards landowners to help reduce sediment runoff on their respective property.
- Include consideration of Wilson Reservoir and the upstream watershed of sediment sources which could impact capacity including bathymetric survey analysis to help quantify current capacity of lake.
- Evaluate sediment and nutrient loading originating from watershed above Herington Reservoir which could impact its viability as a public water supply source. Utilize the June 2008 bathymetric surveys on Herington Reservoir and Herington City Lake as baseline characterization of current capacity lost in lakes due to sedimentation.

Progress Goal #3

GOAL 3 Activities/Status

- WRAPS 9 Element Plans in place for all of the Smoky Hill River
- WRAPs activities on Smoky Hill River ongoing above Kanopolis
  - NRCS and KDA-DOC programs being utilized to stabilize streambanks reducing sediment movement
  - Information/educational (I&E) efforts focused towards landowners to help reduce sediment runoff on their respective property though WRAPs.

GOAL #4: Increase public water supply water use efficiency for suppliers within the region. Method of attaining goal can include the promotion of development of new or updated water conservation program plans for public water supplies within the Smoky Hill – Saline Planning Region. Implementation of conservation measures which lead to all public water supplies in the Smoky Hill – Saline Planning Region operating in the bottom 1/3rd of Gallons per Capita Per Day (GPCD) when compared to other public water supplies within respective Regions used for GPCD comparison. Timeframe of implementation: Complete by 2040. The results of the efforts will be obtaining the **same or increased outputs within participating municipalities while utilizing the same or less amounts of water.**

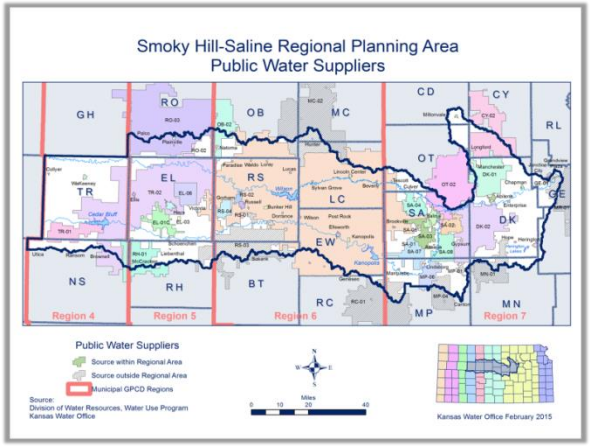
Action Steps Goal #4

- All public water supplies follow the 2007 Kansas Municipal Water Guidelines and have a recently updated conservation plan.
- Public water supplies evaluate the feasibility of water conservation rates.
- Public water supplies develop and promote rebate programs geared towards water conservation efforts.
- **Develop a "tool box" of educational information PWSs could utilize to pass information along to customers.**
- Work through the framework of existing statewide education efforts to:
  - Develop region-wide outreach campaign promoting water conservation efforts.
- Report GPCD values on an annual basis at RAC meetings
- Develop an independent technical task force to help large water users within public water supply systems to improve water use efficiency.
- Hold annual public water supply "field days" to share current water conservation efforts.
  - Make sure media is involved with promotion of these events.

Progress Goal #4

GOAL 4 Activities/Status:

- RAC received reported annual GPCD
- Average GPCD for public water suppliers evaluated to identify bottom 1/3rd
- Water Conservation Plan status compiled
- Begin planning of first field day – Hays
- State Vision Education efforts to include water conservation- need regional outreach plan

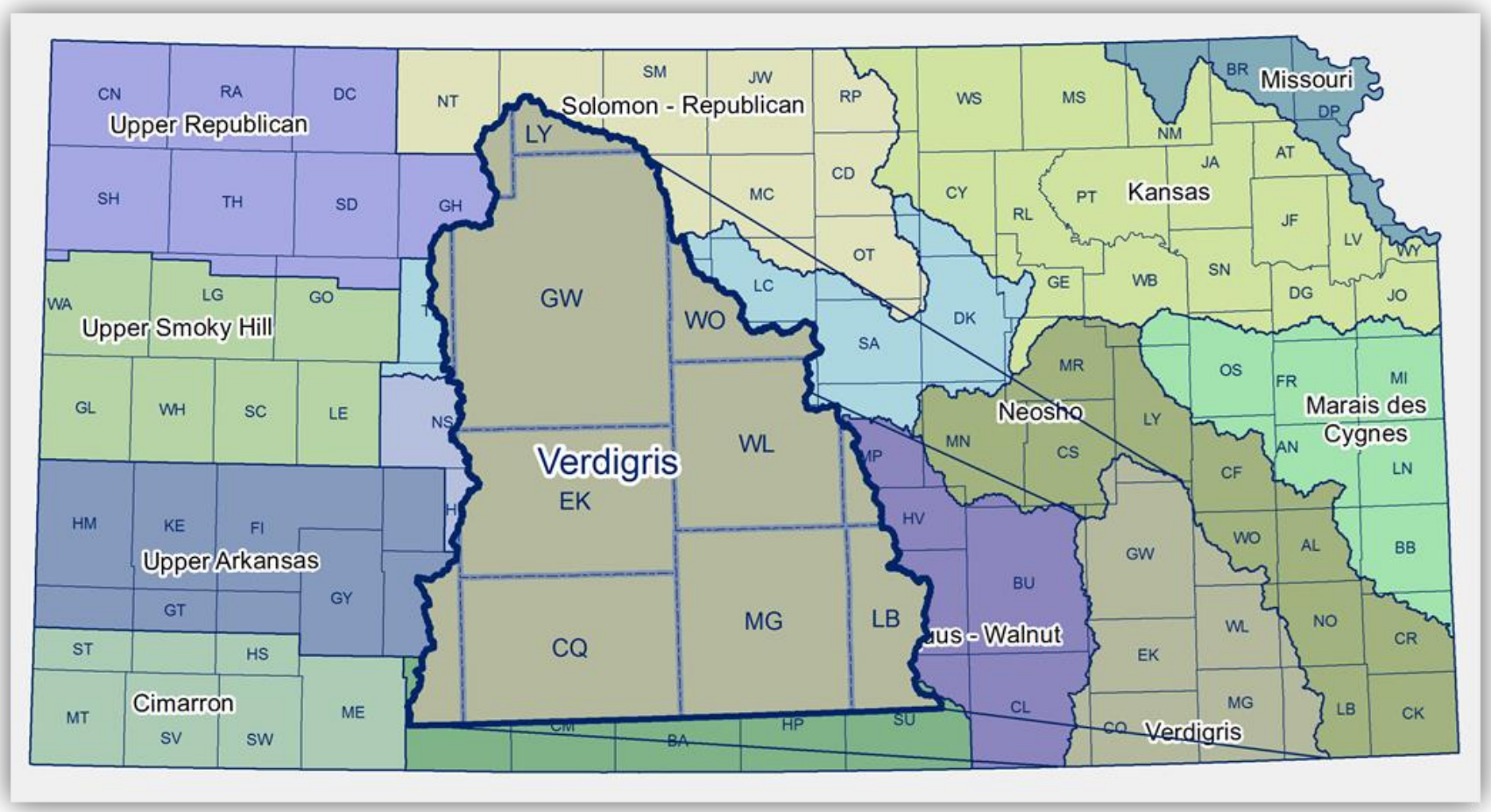


Verdigris RAC Progress

Chair: John Black

Vice-Chair: Ken McNickle

Planner: Bobbi Luttjohann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Verdigris

Priority Goal #1

- In order to manage the water storage capacity in our region, evaluate different processes of managing our reservoirs by 2020. Then using best management practices, including consideration of cost/benefit of the practices: increase water storage capacity by 10% every 10 years with priority given to existing structures, and ensure water supply available from storage exceeds projected demand by at least 10% through the year 2050.

Action Plan

- The Kansas Water Office will evaluate the feasibility of reservoir operation changes and water storage increases and estimate costs of these. A feasibility report will be drafted no later than 2020, which will include input from all affected entities (and will focus on Fall River Reservoir as a priority for reallocation and ensuring the supply exceeds demand beyond 2036). Based on the outcome of the feasibility report, changes to operations will be implemented and the process of reallocation studies may be initiated.

Progress

- KWO is refining demands
  - Area specific within the Region
- Drought Tournament
- Drought Workshop
- Modeling
  - Will evaluate feasibility of developing additional water storage in the in the Verdigris Region, focusing first on Fall River Reservoir. Local, State, and Federal entities are and will continue to be involved.

Priority Goal #3

- By 2020 evaluate potential sites and the costs and benefits of building new reservoirs within the Verdigris Region to meet future demands. Permitting agencies should streamline processes to speed approval of small ponds and reservoirs.

Action Plan

- In order to evaluate potential sites, a review the Reservoir Roadmap for the Verdigris Region will be conducted by the Kansas Water Office. After review of the Reservoir Roadmap additional work will be conducted by the Kansas Water Office to highlight areas of demand in the region and provide additional information on reservoir siting not covered in the Roadmap. A report will be created with this information, as well as cost benefit analysis of building new reservoirs. This report will be completed no later than 2020. In addition to this report the Kansas Water Office will review the PL-566 program in reference to dam rehabilitation and water supply addition. A committee will also need to be created involving those working with the permitting of reservoirs, including, but not limited, to SAKW, USACE, DOC, DWR, WRAPS, NRCS, and KWO. This committee will review mitigation guidelines and rehabilitation possibilities.

Progress

- KWO is refining demands
  - Area specific within the Region
- Drought Tournament, Workshop, & Modeling
- PL-566: Federal budget dependent (NRCS)
  - FY-17 approved funding for *current* rehab projects:
    - In stage of rehab already
      - Planning
      - Design
      - Construction
    - Adding water supply is legible but no funding to begin the planning
  - FY-18: Unknown
  - Take home: adding water supply is eligible but funding in FY-18 is needed

MEMO

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

DATE: August 10, 2017
TO: Kansas Water Authority
FROM: Ginger Harper
RE: H.R. 3383, to rename the Wichita-Valley Center Flood Control Project as the M.S. "Mitch" Mitchell Floodway

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On July 25, 2017, Congressman Ron Estes (KS-4) introduced H.R. 3383, which would designate the Wichita-Valley Center Flood Control Project as the M.S. "Mitch" Mitchell Floodway. The bill has been referred to the House Committee Transportation and Infrastructure, and no further action has been taken at this time.

As most of you know, Mr. Mitchell held numerous positions in Wichita and Sedgwick County, serving as the Flood Control and Maintenance supervisor for the City-County Flood Control office, assistant superintendent of public works maintenance, and flood control superintendent, Metropolitan Area Planning Commission chairman – and the list goes on. As the flood-control superintendent, he was a key figure in the success of the "Big Ditch."

The Wichita-Valley Center Flood Control channel is a series of floodways and diversion canals designed to protect against flooding of the Arkansas River, the Little Arkansas River, Cowskin Creek, Chisholm Creek and the Big Slough. It was completed in 1959.

Mr. Mitchell also served three terms as a member of the Kansas Water Authority.

The KWA could take action to support this legislation, and a notice of support would be sent to members of the Kansas Congressional Delegation.