



Smoky Hill-Saline Regional Advisory Committee Priority Goal #1 Action Plan

Priority 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

- ❖ 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.

Responsible and Other Assisting Agencies/Organizations

- ❖ Kansas Water Office, Kansas Department of Agriculture – Division of Water Resources, Kansas Department of Health and Environment, U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, NRCS, SAKW, local watershed districts, regional public water suppliers (including municipal and rural water districts), Kansas Forest Service, county noxious weed programs.



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Resources Needed:

- ❖ Funding for needs assessments, feasibility studies, or other assessments associated with action steps noted above. Total funding needed TBD.

Timeframe of Completion:

- ❖ During 2017, the Smoky Hill-Saline RAC will evaluate the action steps and develop a prioritized timeline to meet the end goal of ensuring water supply available from reservoir storage exceeds demand by at least 10% through the year 2060.

Geographic Scope:

- ❖ The entire Smoky Hill-Saline Planning Region.

Regulation/Policy Changes:

- ❖ TBD



Smoky Hill-Saline Regional Advisory Committee Priority Goal #2 Action Plan

Priority 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

- ❖ 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.

Responsible and Other Assisting Agencies/Organizations:

- ❖ Statewide Vision Education and Public Outreach Working Group implementing agencies and organizations.

Resources Needed:

- ❖ Identified by the Education and Public Outreach Working Group to the Blue Ribbon Funding Task Force.

Timeframe of Completion:

- ❖ Throughout Vision implementation period.

Geographic Scope:

- ❖ Statewide with RAC efforts focused within the Smoky Hill-Saline Planning Region.

Regulation/Policy Changes:

- ❖ None.



Smoky Hill-Saline Regional Advisory Committee Priority Goal #3 Action Plan

Priority 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

- ❖ 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.

Responsible Agencies/Organizations:

- ❖ Kansas Water Office, Kansas Department of Health and Environment (including WRAPS Program), Kansas Department of Agriculture – Division of Conservation, Kansas Department of Wildlife, Parks & Tourism, Kansas Corporation Commission, Kansas Biological Survey (KBS), Kansas State University.

Other Assisting Agencies/Organizations:

- ❖ Local conservation districts, county governments, municipalities, U.S. Army Corps of Engineers, K-State Research & Extension, Kansas Forest Service, Kansas Association for Conservation & Environmental Education (KACEE), Federal Emergency Management Agency (FEMA), Natural Resource Conservation Service (NRCS), Environmental Protection Agency (EPA), Kansas Rural Center (KRC), U.S. Fish & Wildlife Service (USFWS), U.S. Bureau of Reclamation, local industry/commerce, Kansas Rural Water Association (KRWA), local watershed districts, colleges/universities, Quail Forever, Pheasants Forever, Kansas Alliance for Wetlands & Streams (KAWS), other local groups.

Resources Needed:

- ❖ WRAPS program to provide coordination of efforts among other agency/organizations needed.
- ❖ Planners/designers and implementers for BMPs to be implemented for specific projects (i.e. streambank stabilization projects.).
- ❖ Cost estimates to fully implement WRAPS 9 Element watershed plans within Smoky Hill-Saline Planning Region is approximately **\$1.56 million annually**.



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- ◇ Additional costs outside of this annual cost would be expected as well.

Timeframe of Completion:

- ❖ Actions to be completed by 2040

Geographic Scope:

- ❖ WRAPS project areas within Smoky Hill-Saline Planning Region
- ❖ Saline drainage above Wilson Reservoir
 - ◇ More assessment information needed in this area to characterize BMP needs.

Regulation/Policy Changes:

- ❖ Continue to oppose current Waters of the United States (WOTUS) efforts.
- ❖ Streamline process and provide latitude to acquire necessary permits for streambank stabilization or other BMPs to reduce/remove additional requirements and costs.



Smoky Hill-Saline Regional Advisory Committee Priority Goal #4 Action Plan

Priority 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

- ❖ 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.

Responsible and Other Assisting Agencies/Organizations:

- ❖ Public water suppliers within Region, Kansas Water Office, Kansas Department of Agriculture – Division of Water Resources, Kansas Rural Water Association, Kansas Municipal Utilities

Resources Needed:

- ❖ Technical and financial resources for region-wide outreach campaign and independent technical task force.

Timeframe of Completion:

- ❖ Complete by 2040

Geographic Scope:

- ❖ Entire Smoky Hill-Saline Planning Region

Regulation/Policy Changes:

- ❖ None noted.