

**PREAMBLE:** We recommend that KWO foster a collaborative partnership approach to water resource issues across Kansas by utilizing the following key principles:

- ❖ Partnerships - Every federal, state and local agency will work together in partnership for the benefit of water resources. This will require these organizations to work cooperatively in order to coordinate programs, funding and technical resources to achieve shared water resource goals.
- ❖ Action is Grassroots – Actions to achieve water resource goals should initiate from and be carried out at the Grassroots level (i.e. locally). Property owners in targeted regions must play an integral part of the process and their input informs the prioritization of projects for watersheds. “Action is Grassroots” means that all projects are voluntary, and that local landowners continue to work through existing systems to coordinate, encourage, and commit to high priority projects. Mechanisms that allow for bottom-up decision-making will be central to action in the Kansas Region as local landowners utilize their knowledge of the region to determine what projects are best and workable for the area.
- ❖ Watershed Based – All projects and associated funding are prioritized based on the needs in the watershed rather than on political boundaries.
- ❖ Prioritization Based on Data – All projects and associated funding are prioritized through a science-based system within the watershed that emphasizes targeting for the greatest impact.
- ❖ Outreach – Critical projects within a watershed are identified, and outreach is conducted to encourage and support participation by key (high priority in the watershed based on science-based analysis) property owners in the watershed.

### **Priority Goal #1: Increase water storage capacity and availability in federal reservoirs to secure an adequate water supply and to maintain water quality in the region.**

#### **Action Steps**

- ❖ Increase water storage availability in federal reservoirs to supplement instream flow needs of the Kansas River.
  - ◇ Complete necessary background work to support a request to reallocate storage from water supply to water quality in Milford and Perry reservoirs. Move a sufficient amount of storage from water supply to water quality in support of Kansas River quality flow targets.
  - ◇ Determine amount of additional annual costs for calling into service the remaining water supply storage not needed to meet instream purposes and request full funding. When funding is secured, call into service storage not to be included within reallocation request.
- ❖ By 2025, evaluate the ability to raise the conservation pool in each federal reservoir.
- ❖ The Kansas RAC recommends the Kansas Water Office pursue Forecast Informed Reservoir Operation and, as articulated in the “Basin Restoration Approach: Kansas Lower Republican,” the Kansas RAC advises the KWO to improve coordination with the USACE on reservoir releases, management plans, and future actions to address resiliency to flood and drought conditions, water quality, and quantity issues.
- ❖ The Kansas Water Office shall gather data to determine steps to maintain consistent storage levels at specific reservoirs. As a long-term goal, KWO should incorporate existing studies and information to study the possibility of future dredging and other measures by the State of Kansas on a more consistent basis to maintain storage.

**Priority Goal #2: In order to ensure water supply needs are met throughout the entire region, review regional demands for water and evaluate water supply options for areas of need.**

### **Action Steps**

- ❖ The KWO will compile existing information and complete additional evaluation necessary to determine areas of water supply need.
- ❖ Explore additional storage possibilities for construction of multipurpose small lakes so that new water sources can be brought online to alleviate specific regional issues.
- ❖ Working with KDA-DOC, NRCS and local watershed districts, identify existing watershed structures that are in need of restoration and have potential to be made larger and provide supplemental water supply.
- ❖ Working with KDA-DOC, NRCS and local watershed districts, identify watershed dam and multipurpose small lake sites that were not constructed, but could be built to provide supplemental water supply.
- ❖ KWO shall develop criteria to determine whether these sites should be expanded or built based on a broad range of issues including demonstrated need, return on investment, suitability of site for long-term use, taking into account potential for HABs and sedimentation, and other legal and logistical issues.
- ❖ Seek partnership and funding opportunities for proposed projects that meet the established criteria.
- ❖ Support the KWO and DWR in their efforts to ensure all municipalities and rural water districts have updated water conservation plans that meet the 2007 Municipal Water Conservation Plan Guidelines.

**Priority Goal #3: Reduce the cumulative sediment rate of federal reservoirs and other water supply lakes in the Kansas region to ensure adequate water supply for the region for the next 40 years.**

**Achieve individual reduction goals set by the Kansas Water Office for each lake as set forth by the nine-element watershed plan for each within 40 years.**

All goals and action plans in the Kansas Regional Planning Area will follow the FIVE WATERSHED PRINCIPLES.

### Action Steps

- ❖ Establish a complete list of major reservoirs and water supply lakes in the Kansas RAC Region. This List is referred to as Appendix A and will be attached to Priority Goal #3.
- ❖ The Kansas Water Office shall set individual sediment reduction goals for each major reservoir and water supply lake. These goals will be included in Appendix A and updated as new information becomes available.
- ❖ The sediment reduction goals for reservoirs and lakes will be achieved using Best Management Practices (BMPs) implemented in the watersheds of these reservoirs and lakes in the Region. It is estimated that BMP implementation funding of a minimum of \$5M annually will be required to achieve the targeted watershed goals within 40 years.
- ❖ Reduce sediment load from out-of-state sources by working with neighboring states and supporting their efforts to implement BMPs.
- ❖ By 2024, all state and federal lands surrounding each federal reservoir and water supply lake in the Kansas RAC Region must implement BMPs such as no-till, soil health practices, or buffers at levels to support achievement of sediment reduction at each reservoir or lake.
- ❖ The Kansas Water Office, in coordination with other state agencies, shall ensure individual WRAPS plans and Conservation Districts' goals for the Kansas RAC Region include the concept of reservoir sustainability with the goal of maintaining storage capacity in Kansas Region reservoirs.
- ❖ Pursue innovative sediment management alternatives, such as water injection dredging technology.
- ❖ The Kansas RAC will have representation on the Natural Resources Conservation Services (NRCS) Kansas Technical Committee to help ensure that reservoir sustainability and Kansas water supply issues are addressed in NRCS goal setting and programs.
- ❖ Establish programs with local universities to leverage relevant expertise and student resources that will address the sedimentation reduction goal.
- ❖ Obtain technical assistance and advisors (TA) at a level sufficient to meet the BMP implementation goals in the Region. It is estimated that additional TA funding of at least \$350,000 annually would be necessary.
- ❖ NRCS and local conservation districts, in coordination with other state agencies, should prioritize the completion of voluntary Comprehensive Conservation Plans for all land in the Kansas RAC Region and encourage landowners to develop such plans. These Plans will be designed to address natural resource concerns on cropland, in riparian zones, on pastureland, livestock feeding area and others on a whole land or farm unit basis rather than on an individual crop field or a single resource concern basis. Information generated from these comprehensive plans will be used to aid in identifying BMP needs and prioritization of sub-watersheds in the basin, as well as assist with funding and implementation decisions. Eligibility for BMP cost share programs should be prioritized for lands that have Comprehensive Conservation Plans.



## Kansas Regional Advisory Committee Priority Goal #3 Action Plan

- ❖ The KWO shall take the lead to create a partnership list of all BMP implementation programs available to the public from Federal and State agencies, natural resource organizations and other groups. This list will be created and shared via a website hosted by KWO as well as in a 1-page flyer (or multiple page booklet as needed) that will be made available to the public. This information will be updated in real time on the KWO website and quarterly on the flyer by KWO staff and distributed widely to all agencies and partners for use and distribution. This document will be a key means to inform the public about all available cost share and technical assistance available for BMP implementation.

**Priority Goal #4: Improve water quality throughout the Kansas region through the utilization of natural solutions with a goal of sustainably meeting the needs of natural and human communities in the watershed.**

### Action Steps

- ❖ KWO will provide an annual report to the RAC regarding natural solutions that have been implemented, which will include an assessment of their effectiveness to date.
- ❖ Identify and request natural solutions be incorporated for all appropriate applications.
  - ◇ Examples of natural solutions include:
    - ◇ Prescribed burns (reduces atmospheric carbon output by preventing larger fires later with smaller fires now, and encourages climate-adapted native vegetation);
    - ◇ Hardwood reforestation in riparian areas (reduces erosion, reduces surface runoff; lowers water temperature);
    - ◇ Reduced impact logging (leave hollow trees standing, minimize clear cutting, maintain age diversity in forest stand, preserve highest quality trees);
    - ◇ Using soil health/regenerative agriculture practices on cropland (no soil disturbance, diversity of species, living root in the soil at all times, keeping soil covered, allow livestock impact) and rangeland (short periods of intense grazing, leaving more than 50% of plant biomass ungrazed, long periods of rest);
    - ◇ Wetlands and flood plains (pollution and erosion filtering, mitigation of pollutants, flood damage buffering);
    - ◇ For all of the above, see Proceedings of the Natural Academy of Sciences of the United States of America, “Natural Climate Solutions,” October 31, 2017, 114 (44) 11645-11650.
- ❖ Pursue pilot projects for identified natural solutions.
- ❖ Request that each funded project within the Kansas region have stated objectives to further this goal, such as maintaining and restoring stream flows and water quality for healthy aquatic and riparian communities, protecting receiving waters from pollution, protecting the quality of water supplies to meet human needs within the watershed, reducing flood risk to human communities and encouraging natural flood processes, and increasing resilience to climate change.

### **Priority Goal #5: Continue to reduce the duration and frequency of Harmful Algal Blooms (HABs) in the watershed.**

The reduction of HABs in the Milford Lake watershed is a top priority for the Kansas Regional Planning Area.

#### **Action Steps**

- ❖ The Kansas RAC shall recommend to the Kansas Water Authority that a minimum of \$3 million per year shall be allocated towards HAB mitigation in the Kansas Regional Planning Area with a minimum of \$1.5 million to be directed to BMP implementation in the Milford Lake Watershed.
- ❖ By 2024, all state and federal lands surrounding each federal reservoir and water supply lake in the Kansas RAC Region must implement BMPs such as no-till, soil health practices, or buffers at levels to support achievement of harmful algal bloom (HAB) reduction at each reservoir or lake.
- ❖ The Kansas Water Office, in coordination with other state agencies, shall ensure individual WRAPS plans and Conservation Districts' goals for the Kansas RAC Region include the concept of minimizing nutrient inflow to lakes to reduce the potential for HABs with a focus on best management practices such as no-till, soil health and nutrient management practices, or buffer.
- ❖ Encourage stakeholders to engage in collaborative efforts that result in the reduction of nutrient loading in federal reservoirs (example, Milford RCPP).
- ❖ The Kansas RAC recommends that the Kansas Water Office include management for HABs as part of the lake level management plan to mitigate HABs in reservoirs, as well as downstream impacts.
- ❖ Support ongoing research for identification and remediation of the causes, prevention and treatment of HABs, including potential in-lake technologies.
- ❖ Establish programs with local universities to leverage relevant expertise and student resources that will address the HAB reduction goal.
- ❖ NRCS and local conservation districts, in coordination with other state agencies, should prioritize the completion of voluntary Comprehensive Conservation Plans for all land in the Kansas RAC Region and encourage landowners to develop such plans. These Plans will be designed to address natural resource concerns on cropland, in riparian zones, on pastureland, livestock feeding area and others on a whole land or farm unit basis rather than on an individual crop field or a single resource concern basis. Information generated from these comprehensive plans will be used to aid in identifying BMP needs and prioritization of sub-watersheds in the basin, as well as assist with funding and implementation decisions. Eligibility for BMP cost share programs should be prioritized for lands that have Comprehensive Conservation Plans.
- ❖ Encourage KDHE to continue providing funding to support roughfish removal.
- ❖ Obtain technical assistance and advisors (TA) at a level sufficient to meet the HAB reduction goals in the Region.