SIERRA CLUB
KANSAS CHAPTER

**Comments on Draft Revision of the Kansas Water Plan**

**October 2021**

## The High Plains Aquifer (HPA):

There are five guiding principles in the draft 2021 Kansas Water Plan (KWP) and the first is “Conserve and Extend the High Plains Aquifer.” This appears fitting, as the plan provides alarming data on the decline of western Kansas groundwater. “The future of habitability in much of western Kansas is at stake,” the plan observes. “Water users of all kinds will need to adopt practices amenable to less groundwater use if these populations and economies are to remain viable.” (p. 2)

Yet the plan avoids recommending the obvious – usage must be limited to safe yield if western Kansas populations and economies are to remain viable. Simply calling for using less is inadequate. Significantly, the plan’s first guiding principle is not to “preserve the High Plains Aquifer;” its goal is merely to “extend” it.

The plan acknowledges this in the background information (p.18). "The Ogallala Aquifer supports an extensive agricultural complex, including irrigated crops, a large cattle and dairy industry and biofuel plants … The continued existence of these economic activities, and the communities they support, relies on protecting ***and preserving*** the Ogallala Aquifer." (emphasis added)

The plan deserves credit for providing data on the ongoing decline of groundwater due to withdrawals in excess of recharge. The report calls for improved efficiency and more effective use of water. Historically such gains do not reduce usage; they simply raise productivity and harden the demand for water. Efficiency gains must result in corresponding reductions in usage if they are to address the fundamental imbalance.

**Recommendation:** The first principle must be “Conserve and ***Protect*** the High Plains Aquifer.” The actions required must be based on safe/sustainable yield, not merely usage reductions.

Assumptions upon which this issue has been given highest priority in the five guiding principles include:

1. The HPA supports an extensive agricultural complex including irrigated crops, a large cattle and dairy industry, meat packing plants, and biofuel plants in Kansas.

2. Research has shown that the value of water, as measured in revenue generated, continues to increase for irrigated crops with more efficient crop water management, higher yielding crops, and higher prices.

3. A separate economic study completed in 2013 by the Kansas Department of Agriculture showed that statewide revenue for irrigated and dryland corn was 513 million and 43 million dollars, respectively.

Conclusions reached:

4. Clearly, water resources are an important linchpin of the local and statewide economy.

5. Thus, we should all strive to ensure that groundwater and surface water will be available for future generations of Kansans.

The conclusions reference all Kansans and all waters in the state. But the premises *relate only to waters used in agricultural applications*. Should all Kansans support water conservation because Kansas agriculture, especially irrigated agriculture, needs water and Kansas agriculture generates state revenue? The water needs of irrigation-agriculture and CAFOs in the HPA area of Kansas are not sufficiently established to warrant the water conservation and preservation efforts of all Kansans. In addition, the use of the great majority of water in Kansas by agricultural interests has contributed to: (1) 96% rate of impairment for assessed lakes; (2) 84% impairment for assessed stream miles; (3) 99% impairment of assessed wetlands for recreational use and aquatic life; and (4) a chronically diminishing high plains aquifer. Why should all Kansans have to pay for the downstream impacts of agricultural pollution?

**Recommendation:** KWO should enforce water use policies which support production of crops and livestock consonant with annual precipitation patterns in HPA areas and which do not require large state subsidies (WTAB, CREP, EQIP, ITI, TMDL mitigation, 303(d) mitigation) paid for by all Kansans.

## Reservoir capacity:

All lakes fill up with sediment over time, but common “big ag” practices result in rapid loss of capacity due to increased erosion and transportation of soils from lands in crop production. Dredging operations are very expensive, temporary solutions which can harm habitat within the reservoir and downstream when sediment laden waters, often contaminated, are released. Upland disposal adds to the expense. Use of watershed

dams and hydro-injection removal of accumulated sediments must address associated impacts on wildlife habitat. *Kansas taxpayers should not be paying to solve problems created upstream by poor agricultural practices.*

**Recommendation:** Best management practices at the farm level are recommended in the Plan, but enforceable measures are needed which can reduce significantly the input of sediments from disturbed lands and thereby prolong the useful life of our reservoirs.

## KDHE and Water Quality Protection:

Paragraph 1 of "Background": "Kansas has developed a robust monitoring and assessment program to track trends and conditions in water to achieve the objectives of the State Water Plan (SWP) and to maintain state primacy for administration of federal water quality programs." While the State may have developed a rigorous assessment program, it has not developed a "rigorous and robust" plan to achieve the objectives of the SWP, as evidenced by the following from data found in KDHE reports to the EPA:

Kansas 303(d) list of impaired water body segments/water body pollutants:

2020: 1,235 water body segments; 2,385 water body impairments

2018: 1,264 water body segments; 2,577 water body impairments

2016: 1,264 water body segments; 2,577 water body impairments

2012: 1,330 water body segments; 2,780 water body impairments

2010: 1,283 water body segments; 3,045 water body impairments

The data indicate a 3.7% drop in impaired water body segments over the reported 10-year period and a 21.7% drop in impairments over the same period. "Rigorous and robust" seem inappropriate for progress of this kind.

EPA, Region 7 "Impaired Waters and TMDS "Summary of State Information":

Iowa - 571

Kansas - 1,264

Missouri - 307

Nebraska - 411

1,264 is the 2018 number of impaired water body segments reported by KDHE to EPA. Again, these data do not support the comment that Kansas has a "rigorous and robust" plan to achieve the objectives of the KWP. Kansas has more than twice the number of impaired water body segments as Iowa, the state with the second largest number of such segments.

Background (cont.): “Water quality data … guide implementation of pollutant and pollution reduction activities.” Yet, Kansas ranks first among the states in EPA Region 7 with impaired waters. It appears that, despite this statement, KDHE and KWO water data are just one among many factors which “guide” pollution reduction activities in Kansas, as evidenced by the following:

The main sources of impairments in Kansas waters, in order of miles of water bodies affected, include pathogens, metals, nutrients, and salinity. Pathogens are at the top of the list in Region 7, EPA. First among pathogens is E. coli. E. coli impairment in Kansas results from CAFOs, livestock, human septic systems, wildlife and pet waste, depending upon the region tested. Among the common causes of impairment of rivers and streams is “nutrients,” and the top nutrient cited is phosphorus. Phosphorus is implicated in eutrophication and lack of dissolved oxygen, two major causes for impairment in Kansas waters. Phosphorus and nitrogen loading are associated with industrial agriculture in Kansas. Representing CAFOs and livestock are the Kansas Farm Bureau, the Kansas Livestock Association, and the Kansas Corn Growers Association, all of whom have lobbyists in Topeka. The Kansas Farm Bureau spent $59,163 on lobbying efforts in Topeka in 2020; the Kansas Livestock Marketing Association, $125,000. There is no mention in the plan of the economic and political powerhouses at work in the State which support more lax regulatory regimes, which oppose the EPA, and which vigorously oppose tax structures necessary to develop, monitor and enforce clean water standards.

**Recommendation:** KWO should be more honest in reporting the state of water quality and should focus efforts to address critical problems, based on science, not politics.

There are additional reasons for the continuing decline in water quality which are not adequately addressed. The Draft Water Plan states that KDHE is the primary agency “assessing and managing” water quality in Kansas, including both surface and groundwater. The Plan describes the condition of state waters as follows:

1. 86% of our streams and 96% of our lakes are impaired.
2. There is an upward trend in the number of public water bodies affected by Harmful Algae Blooms (HABs).
3. Previous studies found that 30% of domestic wells in Kansas have nitrate levels greater than the MCL for public drinking water.

The Plan then notes in Figure 3 that agricultural sources, including nitrogen-based fertilizers and animal manure, are substantially responsible. But the Plan does not suggest that KDHE is not doing its job adequately. KDHE claims it is limited by the available statutes and regulations. If so, it is also their responsibility to propose to the legislature policies for new statutes to protect waters of the state. KDHE is also the agency that drafts regulations to carry out the intent of any statutes.

KDHE may be doing studies and forming work groups, but they often do not include all stakeholders. KDHE is not turning these studies into new policies, particularly when

they may offend the state's vested economic interests. KDHE should be maintaining an arms-length relationship with some of the state's major polluters, in this case, industrial scale livestock operations or CAFOs. A good example is described in a recent article in the Kansas Reflector: https://kansasreflector.com/2021/05/25/sierra-club-blows-whistle-on-kdhe-plan-to-reform-hog-cafo-regulations/

Another example is the buildup of massive nitrogen plumes under large hog CAFO waste impoundments or lagoons. The number and size of hog CAFOs have grown dramatically since 1995. While some of these have waste lagoons with plastic liners, many have only soil liners. Based on an intensive study by Kansas State University from about 1998 to 2001, one of our members published in 2003 a peer-reviewed analysis of the need to prepare for a cleanup when these facilities are closed. These plumes of nitrogen-saturated soils will range from 12 to 24 feet thick after 25 years and thus constitute a serious threat to groundwater. See the attached journal article: COST OF REMEDIATION OF NITROGEN-CONTAMINATED SOILS UNDER CAFO IMPOUNDMENTS (k-state.edu)

KDHE has never drafted detailed standards for the cleanup of these plumes, instead relying on internal policies with considerable latitude of application. The governing statute (K.S.A. 65-1,190) also includes several loopholes, such as continuing use of the impoundments as freshwater ponds and does not clearly require the removal of contaminated subsoils to substantial depths.

**Recommendation:** It's time for an independent review of KDHE's policies and performance regarding the protection of waters of the state. Such a review should be included in the Water Plan.

## Climate Change/Extreme Events:

Given the anticipated severity of the climate crisis, planning for droughts, extreme weather and floods *cannot be considered optional or recommended*. Addressing the root causes of climate change may not be the responsibility of the KWO, but there is a clear need for KWO to *require* emergency planning by communities in preparation for future droughts and floods.

**Recommendation:** Make governmental entities and water-related utilities responsible for adopting and regularly updating emergency plans for dealing with drought and floods; provide a template.

## Education:

Multiple non-profits and universities have been engaged in education on water resource issues in Kansas for many years. Not all are listed. Raising awareness rarely makes significant changes in human behavior, especially when profits are at stake. If education

of the general public were working, we would not have the water resource issues we are facing. Calling for more public awareness may be seen as the “easiest” solution, but it shifts the burden of responsibility onto educators and non-profits and away from the real sources of the problem.

**Recommendation:** Continue educating the public but focus more effort on addressing the real problems with water issue in Kansas. Combine education with incentives but also develop appropriate and enforceable measures to solve the root causes of our water problems.

## Failure to Address Wildlife Habitat Issues:

It could be argued that our natural landscapes and associated ecosystems hold the most senior water rights. Yet these needs are barely addressed in the draft Kansas Water Plan. It is not until p.15 of the document that there is any reference to providing water for “Wild Kansas” and that only mentions “minimal desirable stream inflows.”

Given the expected impacts of climate change, current estimates of minimal inflow do not equate to *ecological* inflows. The establishment of minimal flow rates does not allow for seasonal patterns in flow, often critical for successful reproduction. Furthermore, “minimal” flows become the target rate for regulators at the peril of both aquatic and terrestrial ecosystems.

Currently less than 5% of the state’s assessed wetlands support aquatic life and recreational uses. For decades, the brackish wetlands at Quivira National Wildlife Refuge have been starved of water by local irrigators, despite holding senior water rights in the Rattlesnake Creek watershed. As groundwater in the basin is removed for row crop irrigation, the water table has continued to drop; the base flow of the creek is threatened to this internationally recognized inland wetland. The local groundwater management district claims that this is a “timing issue,” but that timing is critical for the wildlife for which the refuge was created. To date, resolution of this situation by USFWS and KDA has not been reached.

While all wildlife require access to clean water as a key component of their habitat, the great majority of our State and Federally “listed” species in Kansas are directly tied to water in some way, including many species of fish and mussels. Threatened and Endangered Wildlife / Services / KDWP - KDWP (ksoutdoors.com) Minimal inflows put these aquatic species even more at risk from drought.

Furthermore, discussion of the urgency to dredge our reservoirs, potentially using hydro-injection techniques that blow accumulated sediments downstream, does not include impacts on aquatic habitats (p. 69). Suspended sediments can be deadly to mussel beds and to fish larvae and the benthic fauna that sustain them. https://www.sierraclub.org/sierra/why-were-so-many-species-mussels-just-declared-extinct?

Harmful algal blooms (HABs) threaten wildlife, too. The Plan must do more to protect streams, rivers, lakes, and wetlands by reducing nutrient loading. KDHE must develop and enforce measures to address the sources. HABs do not need expensive treatment if they are prevented at the source of the problem. Release of water from reservoirs to "dilute" pollution is not the solution.

The KDWP manages a Stream Survey and Monitoring Program (p.23) with multiple crews collecting valuable data. This program has no regulatory or enforcement authority. Its goal is to assess biological communities present within Kansas streams. KDWP needs to be given more authority to enforce protection of water resources on behalf of Kanas wildlife. Ongoing assessment does not solve the problem.

**Recommendation:**
**Make restoring and maintaining habitat for Kansas wildlife a 6th Guiding Principle in the KWP to provide grounds for balancing the requirements of "natural flows" with the needs of agriculture. Give KDWP a stronger role in developing and implementing a Kansas Water Plan.**

## Other issues of note:

- **Protection of private wells**: About 150,000 people in Kansas get their drinking water from private wells, which can fail due to falling water tables. Declining water quality and pollutants can directly impact human health. While more testing is recommended in the Plan, KWO needs to develop a solid plan with various agencies for addressing issues in private domestic wells, which are potentially contaminated with nitrates, PFAS, and minerals. Protection of private wells from agriculture-related pollution, from drawdown from irrigators and from declining water quality is essential. Recommendations have been offered from public health officials: West Wichita Focus Group Results (ks.gov)

- **Water reuse:** The Water Vision calls for an evaluation of the sources and potential uses of lower-quality water as a strategy for additional sources of water supply. The Kansas Health Institute has done a study on water reuse issues. waterreusehiawebs.pdf (khi.org) KHI's study assessed how the implementation of municipal water reuse projects in Kansas could affect water availability and community sustainability, water quality, community perception of water quality, consumption of beverages other than municipal tap water, cost and utility rates, guidance and regulation of water reuse and associated health outcomes. See Findings/Recommendations pp. 20-21. While reusing water for potable sources is still controversial, this is an issue that has good potential for providing clean water for other uses and needs to be examined more fully.

- **Interbasin transfers:** Sustainable water use implies that local usage/safe yield is limited to what is available through groundwater recharge and/or precipitation

*within a specific watershed*. There appears to be ongoing support for large interbasin water transfers, including moving Missouri River "excess" waters across the State to replace depleted groundwater. Ecologically, there is risk of introducing non-endemic aquatic species, some of which may be invasive. In addition, at least two reviews of this project have demonstrated that it is cost-prohibitive. *Taxpayers should not be burdened with the bill when the major users have failed to adopt measures to assure sustainable water use for the future.*

- **Water affordability:** Access to sufficient, safe and affordable water is a human right. Water crises across the nation reflect failures of municipalities and other water providers to plan for protection of drinking water quality and safe delivery systems. Contamination of groundwater and impairment of the streams that are connected to drinking water sources threaten the health of Kansans across the State. Failure to address water quality problems at the source leads to increased costs "downstream" to make water safe. In Kansas, the story of unsafe nitrate levels in the water of Pretty Prairie is a home-grown example: a small community lacking the funds to solve a problem it did not cause. Kansas Town Faces Big Bill to Clean Drinking Water - Circle of Blue In other overburdened communities, water shut-offs from failure to pay bills can leave low-income households without access to any domestic water. The Kansas Water Plan must identify water-related environmental justice cases and take steps to address them.

- **Funding of KWO/KWP:** It is unacceptable that our leaders have repeatedly failed to commit financially to planning for the sustainable use and protection of our limited Kansas water resources, in the interest of all Kansans. Statute requires specific funding for the KWO and the Water Plan and should be enforced so that there are dependable and dedicated sources of funds which can be increased when necessary.

- **Addressing the Energy-Water Nexus:** Fossil fuel and nuclear energy generating facilities use a lot of water, mostly for cooling. There are associated issues of wastewater contamination, pollution from ash waste ponds, discharge of heated effluent and measurable water losses. Extraction of fossil fuels, particularly the widespread practice of hydrofracturing, requires large amounts of water, some of which is returned to the surface, via flowback augmented by "produced water" from the fracked formation, in such a contaminated state that it can seldom be reused. Generally, the wastewater is injected into deep wells around the State, where it is essentially removed from future use and, in addition, can trigger "frackquakes." While the amount of water used for fracking is small compared to that consumed by agriculture, it is an issue that should be included in the Plan. *Encouraging the development of renewable energy sources that use little or no water, aids water conservation and addresses climate change.*

- **Role of KCC:** The Kansas Corporation Commission regulates oils and gas extraction activities, which intersect the Clean Water Act and the Safe Drinking Water Act. These "intersections" are harmful when KCC fails to list "abandoned"

wells after extended periods of non-production as required by regulation, fails to enforce regulations that apply to closing abandoned wells properly, and makes extensive efforts to deny "protestors" mandated hearings. The KCC's authority regarding water quality protection, also includes regulating "enhanced" oil production, where the remaining oil is forced out of old reserve pockets containing large volumes of salt water. The flowback referenced in the above section contains not only water, sand and proprietary and potentially toxic fracking fluids, but also highly saline produced "formation" waters. Runoff from and/or flooding of old oil production sites risks salts (TSS) getting into surface and groundwater. Salinity is listed as the 4$^{th}$ leading cause of water body impairment in Kansas. Unfortunately, environmental protection by KCC is lax. Members of the KCC and its Oil and Gas Advisory Committee have financial interests in the fossil fuel industries. The legal staff of the KCC Oil and Gas Division have argued before district courts in the State that protestants, who have alleged spills, leaks, violations of regulations and insufficient bonding requirements, do not have standing to make such arguments. Again, water quality data do not "guide" pollution reduction activities in Kansas. They are only part of a larger narrative in which oil and gas lobbies, farm lobbies and antiregulatory interests compete for control of our water resources at the expense of the public welfare.

## Summary:

To its credit, this draft of the KWP includes a thorough description of history, background, monitoring and assessment by various agencies, as well as a comprehensive picture of the work of the RACs. But there is not enough solid planning for addressing our "water crisis," particularly with all the different agencies charged with the various aspects of water management in Kansas. It may well be time to consider consolidating the water resource management entities to enhance coordination, to reduce redundancies/expenditures, to limit political influence and to provide more balance among diverse water users.

The "Measuring Success" sections are too vague. A workable plan requires designating responsible entities, establishing numerical goals, and determining appropriate timelines to reach them. If KWO doesn't know what the specific goals are and when they need to be reached, there is no way to measure success. Without assessing progress, there's little incentive to make policy revisions. It's just the same old/same old that got us into this situation in the first place.

Discussing qualitative trends based on ongoing assessments and monitoring is not solving the problems. Voluntary measures, recommended BMPs, education and incentives have not proven to be effective. Our water situation is dire. The HPA continues to drop in most areas of western Kansas, headwater streams and wetlands

are drying up, HABs are on the increase and water quality is not improving significantly across the State. In addition, climate change is making things worse.

In the face of the growing climate crisis, Kansas needs to be addressing the future of water with the urgency and political will required to keep the State hospitable for all its citizens, habitable for Wild Kansas and economically viable. How long will the KWO delay developing an effective Water Plan that is sustainable -- ecologically, economically, and socially -- and enforceable?

Respectfully submitted October 15, 2021,

C. Elaine Giessel, Chair
Sierra Club – Kansas Chapter
Elaine.Giessel@Kansas.SierraClub.org
P.O. Box 11415
Overland Park, KS 66207 – 1415

CC: Yvonne Cather, Co-chair Conservation Committee
Craig Lubow, Co-chair Conservation Committee
Duane Schrag
Craig Volland
Scott Yeargain
Zack Pistora