

Mike Beam, Secretary

Laura Kelly, Governor

September 20, 2019

Matt Teagarden, CEO  
Kansas Livestock Association  
6031 SW 37<sup>th</sup> Street  
Topeka, Ks 66614-5115

RE: Your August 27, 2019 letter on the Proposed Remedy for the  
Impairment of Quivira Water Right

Dear Mr. Teagarden,

Thank you for your August 27, 2019, letter, bringing these important issues to the public forum. In this response, I will explain why we must move forward with administrative orders, outline the steps we are taking to provide water users with significant flexibility to use the allocations provided in the administrative orders, announce our decision to phase in orders over three years, and provide information on several other matters raised in your letter.

### **Why action is required at this time**

Your letter includes a request for “additional time to fully develop ... market-based, community-driven solutions” to the impairment. It is important to note that the issue of water shortages at the Quivira National Wildlife Refuge (Refuge) caused by junior pumping has been acknowledged by Big Bend Groundwater Management District 5 (GMD 5), WaterPACK, and the Kansas Department of Agriculture, Division of Water Resources (KDA-DWR) for decades. It was the reason that the Rattlesnake Creek Partnership was formed in 1993, the reason that the Rattlesnake Creek Management Plan, including its community-driven solutions, was signed by those parties in 2000, and the reason that after the Management Plan ended, far short of its goals, the U.S. Fish and Wildlife (Service) lodged its impairment claim with KDA-DWR in 2013.

As is explained more fully in the attached “Resolving the Quivira Impairment” and supporting documents on our web site, further delay in action to address the impairment is inconsistent with my responsibilities under state law and exposes the basin to much more significant and inflexible reductions being ordered by a court. The general reductions required by the coming water administration orders are an essential component of the remedy, stabilizing the declining quantity and quality of Rattlesnake Creek streamflow.

We share the community’s preference for a local solution. For two years we worked hard with GMD 5 to support its development of a Local Enhanced Management Area (LEMA) to remedy the impairment<sup>1</sup>. And while we agree with your assessment of the legislative intent of K.S.A. 82a-1041,

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<sup>1</sup> See the attached “KDA Assistance to GMD 5 on LEMA Plan Development.” The referenced documents and work in support of GMD 5’s LEMA development are available at [agriculture.ks.gov/quivira](http://agriculture.ks.gov/quivira).

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Big Bend GMD #5

it was GMD 5 that chose to use the LEMA tool as a way of developing a local solution, and we supported their decision. In the end, GMD 5 proposed a LEMA with a goal to “provide a satisfactory remedy to the impairment complaint at the Refuge” but failed in the LEMA plan to commit to actions that would accomplish that goal. For a detailed explanation of the inadequacies of the LEMA plan, see our May 30, 2019, review comments<sup>2</sup>.

### **What KDA-DWR is doing**

The Kansas Water Appropriation Act provides the Chief Engineer with broad discretion in water administration. While administration of surface water is relatively straightforward, it is our view that the statute does not preclude more complex administration when hydrologic conditions warrant.

Our plan for water right administration reflects the complexity of the groundwater-surface water interaction at play here and is an alternative to ordering 500 of the most-junior water rights to cease irrigation completely to accomplish the same result.

The three-part solution to the impairment we are pursuing was developed based on our work with GMD 5 and consists of: 1) limiting withdrawals across the basin to slow the ongoing growth of stream depletions, 2) the retirement or relocation of 4,400 acre-feet of use from the highest impact area near the stream to slow the growth of depletions in the shorter term, and 3) an augmentation project proposed by GMD 5. As we will discuss below, the first step can be ordered; steps 2 and 3 cannot.

Because we are assuming that the augmentation will be available in the next three years and the focused reduction will also take place within that schedule, the plan therefore includes time, as you have requested, for locally developed solutions. If augmentation is not developed or if the focused reductions are not accomplished, more severe water use restrictions will have to be ordered. Thus our approach phases in a comprehensive solution to the impairment starting with limiting the amount of water that can be withdrawn to slow the growth rate of stream depletions<sup>3</sup>.

Furthermore, based on feedback from the basin received in recent weeks, we will issue administrative orders over three years beginning in 2020 with junior water rights in Zone C (the area with a greater than 30% impact to the stream), then Zone B (greater than 20% impact) in 2021, and finally Zone A (greater than 10% impact) in 2022. See enclosed map. Again, this phasing in of regulation allows time for creative local solutions while beginning meaningful action that can be ordered by KDA-DWR.

We are also working with local stakeholders to develop a Water Conservation Area (WCA) to allow for annual allocations to be pooled into multi-year allocations, moved between water rights, and with limited restrictions, transferred between water right owners enrolled in the WCA. This will provide the flexibility to prepare for drier times and will facilitate a market for trading, buying and selling water.

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<sup>2</sup> <https://bit.ly/2IXAfVK>

<sup>3</sup> The amount of water authorized by the orders will still result in ongoing and growing depletions to streamflow in Rattlesnake Creek.

### **Augmentation is available to the basin, but can't be ordered**

KDA-DWR fully supports augmentation as a critical part of remedying the impairment and is committed to assisting the local community's efforts to develop augmentation capacity. Our actions to support augmentation development so far include providing informal feedback on GMD 5's conceptual development; coordinating with the Kansas Department of Health and Environment on water quality constraints and requirements; coordinating with GMD 5 to develop and enter into a Memorandum of Understanding on augmentation which guarantees that any augmentation provided will be considered in actions taken toward resolving the impairment; working with GMD 5 to update administrative regulations to ensure that the augmentation wellfield applications can be approved expeditiously; and more. Ultimately, it is the affected water users' responsibility to secure the financing, engineering, construction, operations and maintenance resources needed to build and operate any augmentation project. This is set forth in K.S.A. 82a-706b(a)(2), which states that the Chief Engineer shall: "*within the rattlesnake creek subbasin located in hydrologic unit code 11030009, allow augmentation for the replacement in time, location and quantity of the unlawful diversion, if such replacement is available and offered voluntarily.*"

It is important to understand that as Chief Engineer, I do not have the authority to order the development of an augmentation system or to order any person or entity to buy out, retire, or move water rights.

### **KDA-DWR is more concerned about litigation from or on behalf of the senior water right than we are about impairing water right owners contesting these orders**

We believe that these orders and a firm commitment to the rest of this path forward (augmentation and targeted reductions) significantly reduces the risk of litigation being initiated by the senior water right holder or other groups which may intervene on its behalf. Solving the impairment in court could result in much more significant reductions being ordered and could compromise our ability to provide flexibilities in water use through a WCA or with other tools.

### **The IGUCA is not useful at this point**

While the Intensive Groundwater Use Control Area (IGUCA) tool is an option for accomplishing the needed reductions, much of the IGUCA process focuses on building a record and making findings of fact concerning the water resource problem. That information is then used to develop corrective controls to remedy the problem. In this case, the problem has been thoroughly analyzed by all involved parties. Our work with GMD 5 to develop the corrective controls in the form of a LEMA, while unsuccessful, yielded valuable analyses, ideas and principles that are being applied through the coming administrative orders and the WCA under development, and hopefully by the leaders in the community who will facilitate the augmentation and focused reductions. In short, the IGUCA process is unnecessary at this late point.

### **Closing**

We do not believe the forthcoming orders need delay a solution or prevent the affected water users from working together. On the contrary, we believe our action will reduce the risk of litigation and provide focus for joint action on other required elements including augmentation and targeted reductions.

In my letter of July 30, 2019, to GMD 5, I indicated that KDA-DWR planned to issue orders in early September, to be effective January 1, 2020, allocating water use to begin to address the impairment of Water Right, File No. 7,571. The work to develop the orders, including the considerations noted above, developing allocations consistent with state law, and developing a framework for a companion WCA to provide flexibility, is taking longer than expected. We will issue the orders as soon possible and will host a meeting in the basin within a few weeks after the orders go out to discuss the orders and the path forward.

We will continue to provide information on the status of the impairment, the orders, and the tools being developed to help water users manage their allocations on our website at [agriculture.ks.gov/Quivira](http://agriculture.ks.gov/Quivira).

Thank you for your interest in this important matter. We remain committed to supporting the community in any way we can to help address the impairment while assisting all water users.

Sincerely,



David W. Barfield, P.E.  
Chief Engineer

**Attachments:**

Resolving the Quivira Impairment, August 2019  
KDA Assistance to GMD 5 on LEMA Plan Development  
Quivira NWR Impairment Administration Zones - Map

Cc: Mike Beam, Secretary, Kansas Department of Agriculture  
Groundwater Management District No. 5  
Water Protection Association of Central Kansas  
Robert Manes, Director, The Nature Conservancy of Kansas  
Justin Knopf, President, Kansas Association of Wheat Growers  
Douglas E. Wareham, President and CEO, Kansas Bankers Association  
Brandi Miller, President and CEO, Kansas Cooperative Council  
Steve Rome, President, Kansas Corn Growers Association  
Ronald C. Seeber, President and CEO, Kansas Grain and Feed Association  
Kansas Agribusiness Retailers Association  
Ken Winter, President, Kansas Grain Sorghum Producers Association  
Tim Stroda, President-CEO, Kansas Pork Association  
Dwight C. Meyer, President, Kansas Soybean Association

## Current Status of Quivira Impairment

- On July 30, 2019, Chief Engineer David Barfield provided a formal response to the GMD No. 5 Local Enhanced Management Area (LEMA) plan aimed to resolve the Quivira impairment, stating he was unable to move forward with their request to initiate proceedings to consider the plan as it failed to meet statutory requirements.
- Per their request, he also summarized a listing of necessary elements for a LEMA to resolve the impairment, should they desire to try again.
- Finally, and most significantly, Chief Engineer Barfield announced his intention to develop administrative orders by approx. September 1, 2019, to be effective January 1, 2020, to implement water use reductions in the basin to begin addressing the Quivira impairment, and in particular, the ongoing declines in streamflows into the Refuge with its reductions in water quantity and water quality.
  - These orders are the initial step of a three-pronged solution to the impairment. The other two components are:
    - A proposed augmentation project.
    - The retirement of 4400 acre-feet of use near the stream (Zone D).
  - To maximize flexibility in use, DWR will work with local water users to develop a Water Conservation Area (WCA) to create multi-year allocations and allow movement of allocations between water rights.
  - While required water use reductions will be from the authorized quantity, they will vary among water users based on the seniority of their water rights (with older rights getting larger allocations) and their historic use. The reductions will average under 15% from long-term use.
  - Attached is a map showing the affected area.
- A public meeting is anticipated during mid-September.
- More information related to this matter can be found at the following web pages:
  - Quivira impairment page: [agriculture.ks.gov/Quivira](http://agriculture.ks.gov/Quivira)

## Administrative orders can help avoid going to court

- With a nearly three-year-old final report from KDA–DWR finding impairment and a clear system of water right priority — “first in time is first in right” — the court system will likely have very little trouble deciding that a significant number of junior water rights should be shut off to ensure that the senior water right is satisfied. A court is not required to use the most flexible solution or the solution that is best for junior water rights.

- The courts do not have access to the LEMA, IGUCA, or WCA tools to help soften the effects of priority administration, and may not be inclined to trust that a future augmentation project would relieve some of the impairment until it is in place. KDA–DWR believes that all parties should work very hard to avoid the court system.
- The Chief Engineer’s action is needed to halt the ongoing declines in streamflow which diminish the amount of water available to the Refuge and its quality.
- See attached figures which show: a) the groundwater model’s estimates of historic and future reliable Rattlesnake streamflows (baseflows) at the current level of groundwater pumping, which will be 0 or near-0 in the future in most years, and b) a graph showing the degrading water quality at Zenith as the quantity of streamflow diminishes.

## **History of the Quivira Impairment**

- For decades, the U.S. Fish and Wildlife Service expressed concern that its senior water right on Rattlesnake Creek in the Quivira National Wildlife Refuge, a wetland of international significance and part of the central U.S. flyway, was being impaired by junior groundwater pumping.
- The Service’s water right for Quivira has a priority that dates back to 1957 and allows it to divert up to 14,632 acre-feet per year at a maximum rate of 300 cubic feet per second (cfs).
- After decades of voluntary efforts to resolve its concerns were unsatisfactory, the Service filed an impairment complaint with KDA-DWR in April of 2013. KDA-DWR then began its investigation of the alleged impairment.
- In 2016, KDA–DWR found that junior groundwater pumping has impaired the Service from exercising its senior water right for Quivira .
- Since then, KDA has worked with GMD5 to find a solution to the Quivira impairment that minimizes the adverse effect to the region’s economy. During that time, no water administration occurred.

## **What remedy has been determined to be sufficient?**

Modest reductions in groundwater use, averaging approximately 15 percent, along with an augmentation project and 4,400 acre-feet of targeted reductions will resolve the impairment and protect the region’s economy for at least a generation.

- Reductions in groundwater use will be achieved via the administrative orders which will be issued in September 2019. While required water use reductions will vary among water users based on the seniority of their water rights (with older rights getting smaller reductions) and their historic use, the reductions will average approx. 15% from long-term use.
- Augmentation: The statute dealing with the administering of water rights was amended in 2015 to allow augmentation specifically, and only in Rattlesnake Creek, to be considered in addressing impairment. At GMD5’s request, and to provide additional assurance to the basin, the chief engineer has signed a memorandum of understanding (MOU) with GMD5 reaffirming KDA’s commitment to give full credit for augmentation that addresses the impairment.
- The retirement of 4400 acre-feet of use in the high-impact area (Zone D).

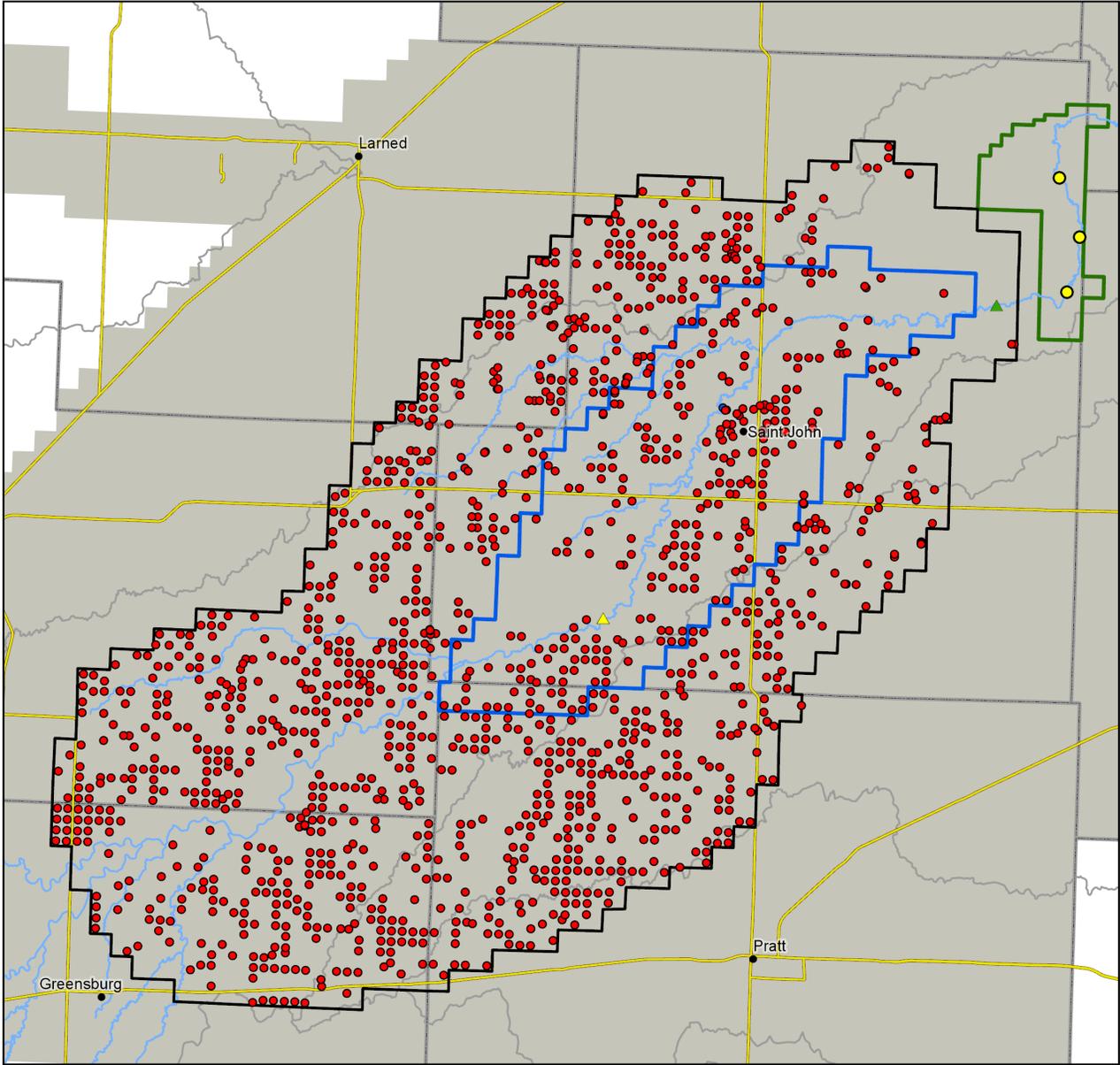
## **LEMA solution has not been successful**

- In August 2017, GMD5 expressed its desire to use a LEMA plan to remedy the Quivira impairment including the following: augmentation at a minimum of 15 cfs; pumping reductions via removal of end guns as well as additional voluntary measures; and 4,400 acre-feet of focused reductions in the high-impact area where 40% or more of the water pumped comes from Rattlesnake Creek streamflow.
- In September 2017, KDA–DWR informed GMD5 that its plan to address the impairment with a LEMA would require GMD5 to commit to an allowable level of pumping in the first five years of the LEMA, and then implement reduced water allocations in the second five years if the allowable pumping was exceeded.
- After nearly two years of work on the LEMA concept, KDA and GMD5 have been unable to agree on a LEMA plan that resolves the impairment.

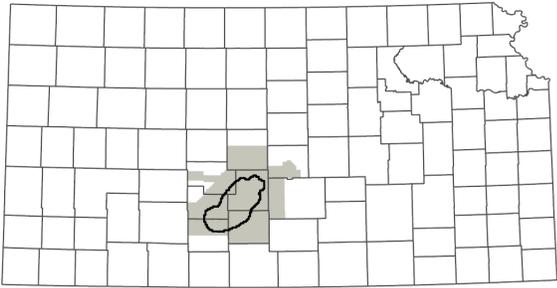
## **Basic Water Rights in Kansas**

- A founding principle of Kansas water law is “first in time, first in right.”
- Water rights are assigned a priority date to establish who has first right to water, which allows the Division of Water Resources to protect a water resource for those who established their rights first from those who came along later. In times of plenty, there may be enough water to satisfy all water rights.
- However, in times of water scarcity, those who have earlier, or more senior, water rights are entitled to satisfy those rights before those who have rights junior to them.
- The procedures for distributing water between users when a more senior right is being impaired are outlined in Kansas law (K.S.A. 82a-706b) and regulations (K.A.R. 5-4-1).

# Points of Diversion under Junior Water Rights Found to be Interfering with Quivira's Water Right



0 5 10 15 Miles



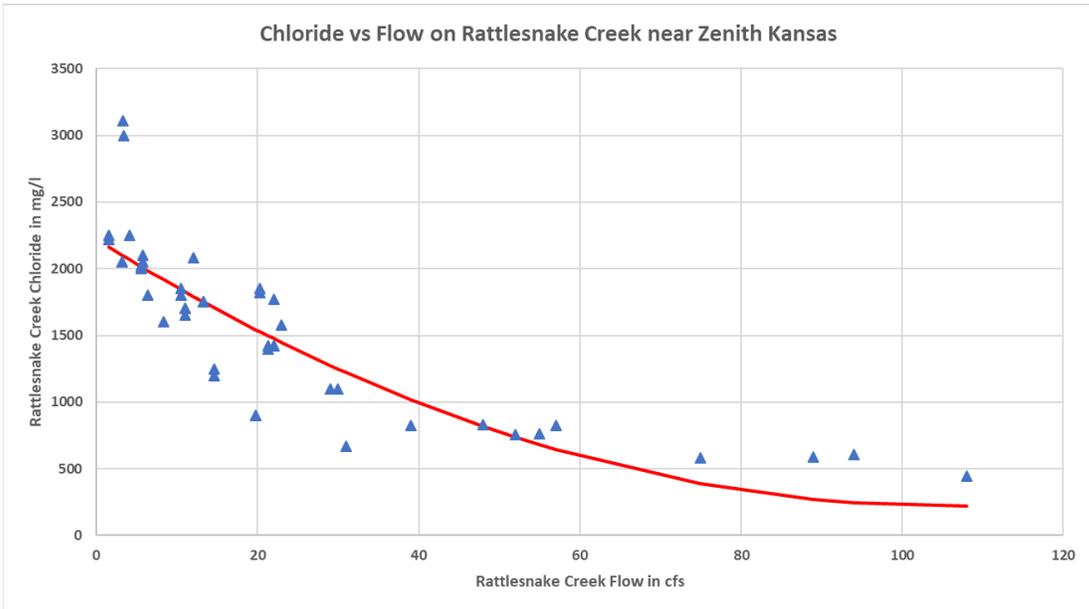
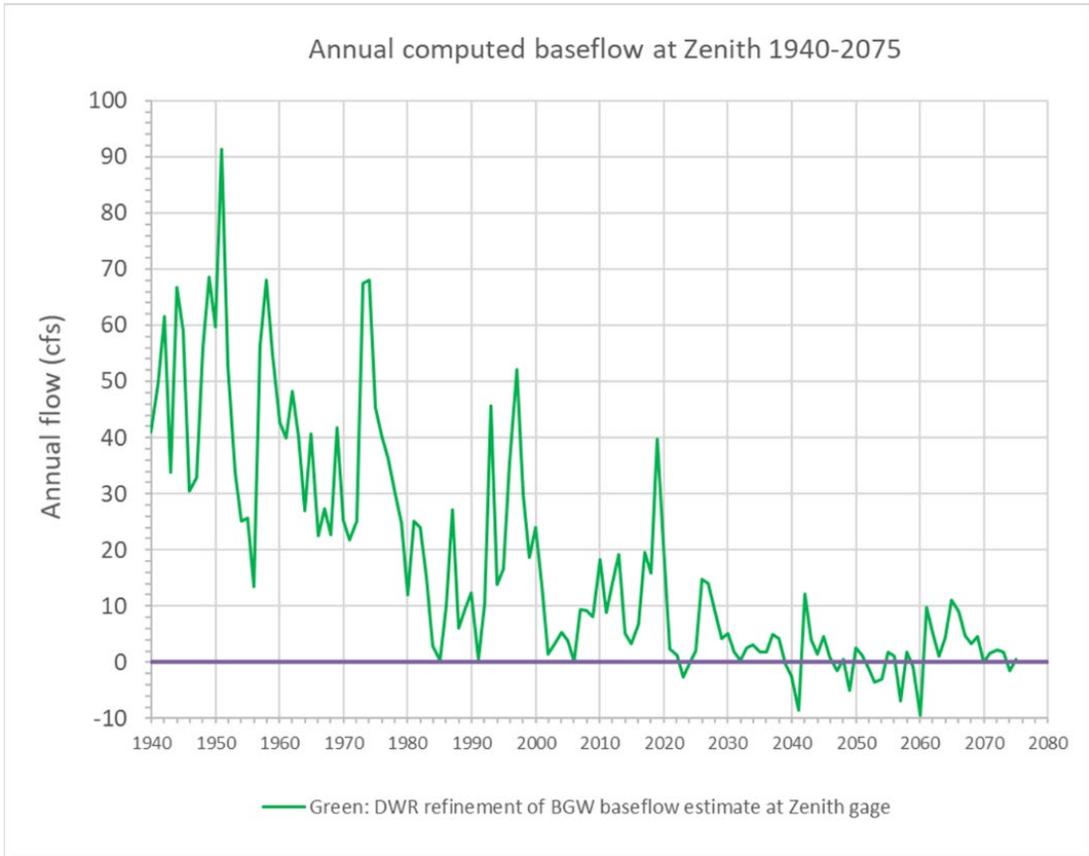
- WR 7,571
- Groundwater
- Surface water
- ▲ Zenith station
- ▲ Macksville station
- Zone A
- Zone D
- Quivira NWR
- ~ Rattlesnake Creek and tributaries
- Surface water basin
- Highway
- County
- GMD No. 5



Quivira NWR File No. 7,571  
Priority Date: August 15, 1957



Kansas Department of Agriculture  
Division of Water Resources  
August 7, 2019



## **KDA Assistance to GMD 5 on LEMA Plan Development**

### **Selected KDA written input and feedback on draft and proposed LEMA plans**

1. 9/8/2017 – Chief Engineer Barfield attends GMD 5 board meeting, providing and discussing the document “Outline of LEMA plan elements needed to address impairment (posted)”
2. 10/20/2017 – DWR provides initial ideas on “backstop control provisions” options.
3. 12/13/2017 – Memo from Sec. McClaskey and CE Barfield to GMD 5 advising there will not be water right administration in 2018 and listing essential elements of a LEMA plan.
4. 12/22/2017 - Kenny Titus email to Lynn Preheim with attached: a) letter and b) comments on their draft plan (comments at the end of the document).
5. 2/15/2018 PowerPoint presentation by David Barfield at GMD 5 annual meeting
6. 3/3/2018 Chris Beightel email to Orrin Feril with attached re-write of the draft plan dated 3/3/2018.
7. 3/7/2018 - Kenny email Preheim with attached additional markup of 3/6/2018.
8. 4/26/2018 Letter by Sec. McClaskey to GMD 5 Board with our understanding of our agreement with GMD 5 on the fundamental framework of the plan.
9. 5/17/2018 – Letter by Sec. McClaskey to GMD 5 Board with more specifics on flexibility and “teeth” in the LEMA plan.
10. 8/6/2018 – Letter by David Barfield with attached “score card” regarding GMD’s July 7, 2018 draft plan.
11. 8/23/2018 email by Chris Beightel with attached “score card” regarding GMD’s August 9, 2018 plan.
12. 10/17/2018 Email from Sec. McClaskey to GMD 5 Board and attached correspondence.
13. 12/20/2018 – Letter from David Barfield to GMD 5 Board on reasons their LEMA plan of 12/13/2018 cannot be set for hearing and requirements for the plan to be considered.
14. 1/4/2019, KDA-DWR Memo on Sufficiency of GMD 5's Augmentation-Only Plan to Resolve Quivira Impairment
15. 1/4/2019, KDA-DWR Evaluation of the impact of end gun removal on wateruse within GMD 5 under its 2010 AWEP
16. 1/7/2019 – Email from David Barfield to GMD 5 transmitting a copy of KDHE’s initial water quality assessment related to their augmentation proposal.
17. 4/4/2019 – KDA informal review comments on GMD 5's February 22 LEMA Proposal (included as attachment to 5/30/2019 review
18. 5/30/2019 - DWR Review of GMD 5's February 22 LEMA Proposal
19. 7/30/2019 - KDA-DWR Formal Response to February 22, 2019 LEMA Proposal

### **KDA support to GMD5 LEMA development:**

- Performing detailed modeling to determine whose groundwater pumping is impacting flows at Zenith and by how much. Zones defined with “Zone A” being where 10% or more of pumping comes from streamflow, “Zone B” 20% or more, and so on including “Zone D” 40% or more which becomes prominent in later discussions and plans. Used the model to evaluate several different reduction plans with different borders and targeted reductions.

- Developing a climate-based water use estimator to allow for climate to be factored into whether the basin achieved the required savings.
- Providing multiple water allocation calculation tools to allow GMD5 to explore various ways to create allocations considering priority and proximity to the stream as well as other factors.
- Proposing a rule to allow movement of water rights out of the high-impact area.
- Proposing a LEMA-wide Water Conservation Area (WCA) concept to allow flexibility in use of LEMA allocations.
- Providing detailed feedback on GMD5's various draft LEMA plans and offering draft language on certain portions of their plans.
- Coordinating with KDHE on preliminary water quality analysis of GMD5's augmentation plan
- Entering into an MOU to further assure GMD5 that augmentation that relieves the impairment will be fully credited.
- Reaching out to and meeting with other basin stakeholders to increase awareness of the issues including the consequences of inaction.
- Evaluating GMD5's assertion that its proposed augmentation project alone is sufficient to remedy the impairment, memo published 1/4/2019 (on website).
- Reviewed data related to potential end guns savings, published 1/4/2019 (on website).

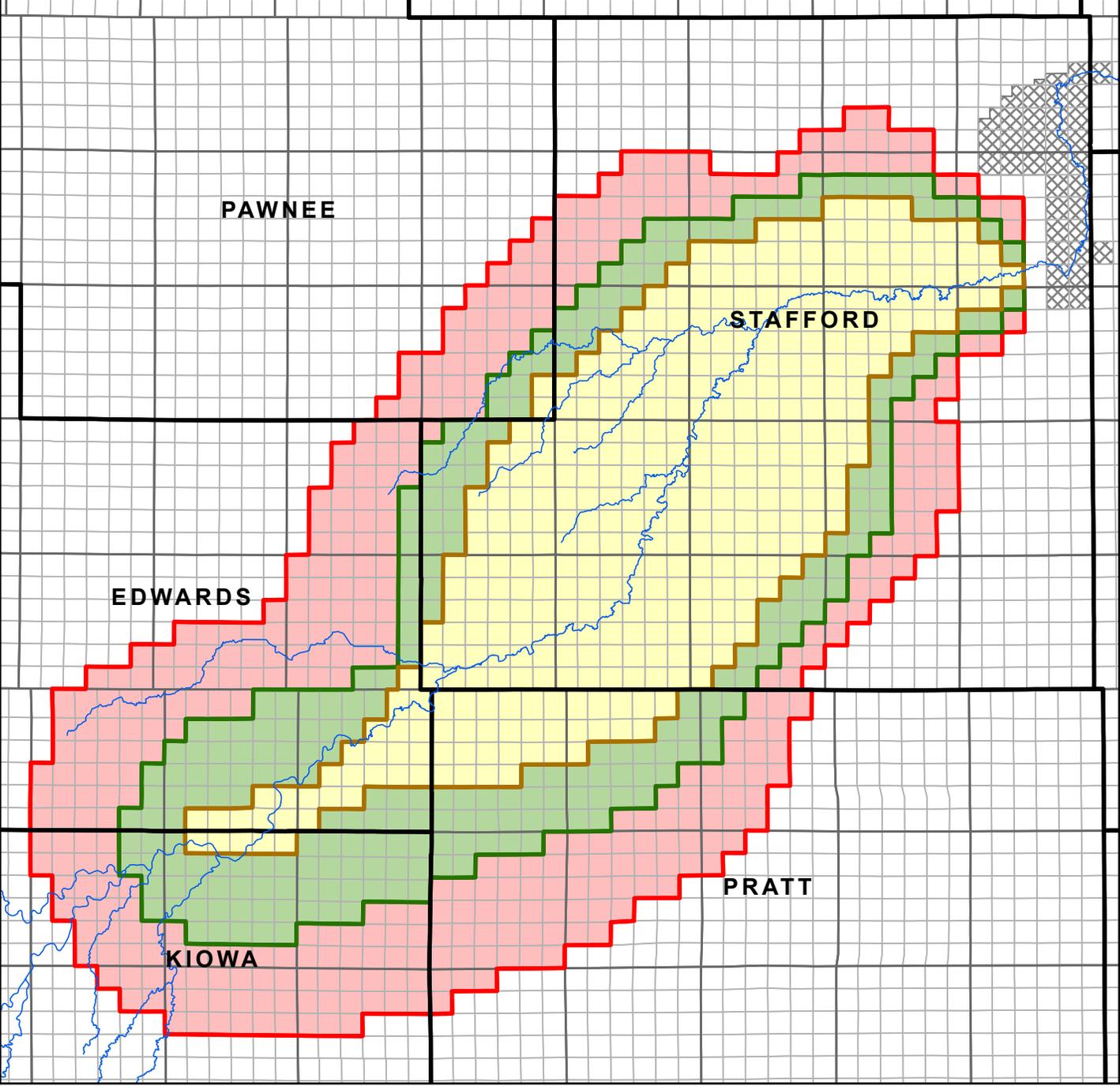
### **Key events:**

- 1980s: U.S. Fish and Wildlife Service (FWS) begins complaining that junior appropriators are impairing the refuge
- 1994-2013: Rattlesnake Creek Partnership (GMD5, WaterPACK, KDA-DWR, FWS) seeks voluntary solutions. Rattlesnake Creek Management Plan 2000-2012 accomplishes roughly 10% of its water use reduction goal.
- April 2013: FWS requests impairment investigation
- December 2015: KDA-DWR publishes its initial impairment investigation report
- December 2015: KDA-DWR hosts a public meeting in St. John to review the initial report
- July 2016: KDA-DWR publishes its final impairment report
- Fall 2016: Spring 2017 — GMD5 offers FWS augmentation-based solutions. FWS finds GMD5's proposals inadequate. GMD5 requests KDA-DWR specify what is needed to remedy impairment.
- July 2017: KDA-DWR presents remedy requirements in addition to GMD5's planned 15 cfs augmentation project to the GMD5 board
- August 2017: GMD5 outlines a proposed LEMA to remedy the impairment with augmentation, end gun removal, and other voluntary measures. KDA outlines the specific commitments to water use reductions and timelines that GMD5 needs to accomplish their plan as a LEMA.
- Fall 2017–November 2018: KDA works with GMD5 on LEMA development
- November 2018: GMD5 withdraws LEMA proposal
- December 2018: GMD5 formally proposes a LEMA plan with the sole corrective control being removal of end guns and without a commitment to a quantified level of water use reductions.
- December 20, 2018, KDA response to December 2018 plan.
- Feb. 22, 2019 – GMD 5 formally proposed a second LEMA plan
- July 30, 2019 - KDA-DWR Formal Response to February 22, 2019 LEMA Proposal including announcement of intent to issue water administration orders.

# Quivira National Wildlife Refuge (NWR) Impairment Administration Zones

18W 17W 16W 15W 14W 13W 12W 11W

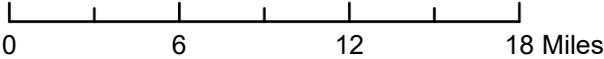
21S  
22S  
23S  
24S  
25S  
26S  
27S  
28S



-  Zone C (2020)
-  Zone B (2021)
-  Zone A (2022)
-  Quivira NWR
-  Rattlesnake Creek and Tributaries

Section Number Key

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36



Kansas Department of Agriculture  
Division of Water Resources  
Map Date: September 23, 2019