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In accordance with K.S.A. 82a-1041, Big Bend Groundwater Management District #5 ("District") is pursuing a Local Enhanced Management Area ("LEMA"). On February 15, 2018, the District board presented the key components of the draft LEMA plan at the annual meeting. These components are: 1) end gun removal within entire LEMA area, 2) implement streamflow augmentation at a rate of 15 cubic feet per second ("cfs"); and 3) promote movement or retirement of water rights out of sensitive areas of the LEMA. The draft LEMA document is available for public review and comment. Please use this form to submit comments and concerns to the District. Feel free to attach pages as needed.

Name (optional): Brian Caruso

Contact Info (optional): Brian_Caruso@fws.gov

Please see the attached letter containing comments from the U.S. Fish and Wildlife Service regarding the draft LEMA proposal.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Mountain-Prairie Region

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Groundwater Management District #5
125 S Main St.
Stafford, KS 67578

March 15, 2018

Submitted via email to LEMA@gmd5.org

Dear GMD 5 Board Members,

The U.S. Fish and Wildlife Service (Service) appreciates the efforts of the Groundwater Management District #5 (GMD 5) Board and all parties involved in drafting the Local Enhanced Management Area (LEMA) plan. The Service owns and manages the Quivira National Wildlife Refuge (Refuge).

(For historical reference, the State of Kansas approved the Refuge's water right, Water Right No. 7571, with a priority date August 15, 1957, at a combined diversion rate not to exceed 300 cubic feet per second and a quantity not to exceed 14,632 acre-feet per calendar year. According to the State Engineer, this right "is senior in priority to about 95% of the water rights in the basin," and which entitles the Refuge to divert up to 14,632 acre-feet of surface water each year from Rattlesnake Creek, when water is available. The Chief Engineer's impairment finding in the July 15, 2016 Final Report of the Chief Engineer (Section 6- Determination of Junior Groundwater Pumping Impacts at the Refuge) concluded that "upstream, junior groundwater pumping regularly and significantly impairs the Service's ability to use its Water Right File No. 7,571." Id. at 4. The Chief Engineer further found that the "impairment is not substantially due to regional overall lowering of the water table, but is principally due to ongoing impacts of junior groundwater pumping... Id.)

The Service is committed to working through this state water rights process and generally supports the LEMA process as a potential means to remedy impairment. While we understand that this is a draft, and that further revisions are likely, we do have concerns about whether the LEMA as currently drafted will be sufficient to remedy impairment as described below.

The Service has always advocated for a sustainable solution that addresses impairment over the long-term. The current LEMA plan fails to eliminate growing depletions to streamflow and does not eliminate impairment of the Service's surface water right in the future. The Chief Engineer concluded that halving the rate of streamflow depletions (i.e. a 15% reduction in groundwater pumping) still produces a downward trend in stream discharge. How will increasing streamflow depletions be accounted for in the future?

The current LEMA proposal heavily relies on augmentation to remedy impairment. An augmentation well-field has been offered within the plan to provide water to the Refuge at a maximum rate of 15 cfs. The Refuge's diversion schedule used by the Chief Engineer in the impairment report shows there are several months when the Refuge needs approximately 30 cfs. With the current proposal still allowing natural streamflow to decline, and augmentation unable to meet the Refuge's needs, how is impairment to the Service's water right going to be remedied?

The Service is concerned that the proposed location of augmentation wells will cause secondary impairment to Rattlesnake Creek below the Zenith Gage and wetlands managed by the Service. Impacts to Rattlesnake Creek downstream of the Zenith Gage cannot be determined with the current streamflow response map. The Little Salt Marsh on the Refuge is about 3.5 miles east of the Zenith Gage, and closer in proximity to the proposed augmentation well-field than the Zenith Gage. The Service also manages a tract on Peace Creek near the west edge of the proposed well field. We recommend that streamflow depletions be calculated for the proposed augmentation well-field on Rattlesnake Creek from the Zenith Gage to the Little Salt Marsh. Additionally, we recommend an analysis on how the augmentation wells would affect Peace Creek discharge, nearby regulated wetlands, and groundwater quality near the wells.

Several studies conducted in the mineral intrusion area by the Kansas Geological Survey show that pumping-induced salinization of the aquifer is a concern even with a continuous clay layer present. The reports indicate that 30 - 50% of the saturated thickness of the proposed augmentation well-field is occupied with salt water. What happens if the water quality from the augmentation wells fail to meet the specified water quality criteria? We recommend that additional language be added to the LEMA to address implementation of water quality monitoring procedures and what actions will be taken if concentrations approach and exceed critical water quality thresholds established by the Kansas Department of Health and Environment.

Augmentation is authorized via K.S.A. 82a-706b that specifically states that "*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.*" The augmentation wells that are proposed in the current LEMA are not located within HUC 11030009 (Rattlesnake Creek). Does this violate K.S.A. 82a-706b and spread the impacts of augmentation to another basin (Peace Creek) by locating the wells outside of HUC11030009?

The Service appreciates the efforts GMD 5 leadership has invested in determining the water conservation estimates that would occur from end-gun removals. Can you provide the methods used to calculate these savings so that all water users within the boundary have a better understanding?

The Service advocates development of a LEMA proposal that assures the viability and protection of the Service's water right into the future. The Service supports voluntary and incentivized water use saving programs and use of a realistic participation rate in estimating savings.

The Service asks that *Section 3) vi. Drought* of the proposed LEMA plan be removed entirely. The Service is in the process of updating the Water Conservation Plan and Drought Contingency Plan with the Kansas Division of Water Resources (DWR), partly due to the impacts from impairment on streamflow.

Finally, the presentation given at the Annual District Meeting mentioned that the Service did not provide any reason for rejecting the first and second proposal. The record reflects otherwise; written responses were provided and are currently posted to the DWR website. The Service explained in its comments that it could not accept the proposals largely because they were inconsistent with Kansas water law, which requires the impaired amount of water to be provided *in place* where it can be used for beneficial use by the Refuge. We also believe that the potential for secondary impairment caused to Rattlesnake Creek and/or Refuge wetlands by the augmentation wells, as well as water quality concerns, raise questions with regard to consistency with State law. We request that your record be corrected by adding the Service's written comments to GMD 5's record and updated on its website.

We are willing to continue to work with you to explore options for resolving impairment, but any resolution of this matter must be fully protective of the United States' senior water right and consistent with the State Engineer's Final Impairment Report. We would be happy to further discuss potential solutions with GMD 5 at any time.

Sincerely,

Brian S. Caruso, Ph.D., P.E.
Chief, Division of Water Resources

cc: David Barfield, P.E., Chief Engineer
Via email: David.Barfield@ks.gov
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Division of Water Resources
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