Testimony of the Northwest Kansas Groundwater Management District No. 4 (GMD 4) to Hearing Officer David Barfield, Chief Engineer, Division of Water Resources, Kansas Department of Agriculture.

RE: Written Testimony for Proposed District-Wide Local Enhanced Management Area (LEMA) of November 14, 2017

Presented by: Raymond Luhman

This testimony is from Northwest Kansas Groundwater Management District No. 4 (GMD 4). It was approved by the GMD 4 Board of Directors.

GMD 4 submits this testimony in support of the Chief Engineer finding that the proposed Local Enhanced Management Area (LEMA), with a minor modification, will conserve water and educate water users on further conservation methods to extend the life of the Ogallala aquifer in Northwest Kansas. The GMD 4 provides a short history of the Kansas Water Appropriation Act (KWAA), the Groundwater Management District Act (GMDA), the Local Enhanced Management Area (LEMA) statute, and the previous actions taken in this proceeding. Then, GMD 4 re-states its goal. Last, GMD 4 shows how the corrective control measures should reach the goal in this case.

1. History of the Kansas Water Appropriations Act

In 1944, the Kansas Legislature passed the Kansas Water Appropriation Act (KWAA). K.S.A. 82a-701 et seq. In passing the KWAA, the Kansas Legislature dedicated "All water within the state of Kansas . . . to the use of the people of the state, subject to the control and regulation of the state . . . "K.S.A. 82a-702.

Then, in 1972, the Kansas Legislature supplemented the KWAA with the Groundwater Management District Act (GMDA). K.S.A. 82a-1020 through 82a-1041. In doing so, the Legislature:

"recognized that a need exists for the creation of special districts for the proper management of groundwater recourses of the state; for the conservation of groundwater resources; for the prevention of economic deterioration; for associated endeavors within the state of Kansas through the stabilization of agriculture; and to secure of Kansas the benefit of its fertile soils and favorable location." K.S.A. 82a-1020.

On December 19, 1974, after a series of informal meetings were held in the GMD 4 area to sense the will of the people relative to forming a GMD, a steering committee filed a declaration of intent and a map of the proposed district boundaries with Kansas' Chief Engineer. After further discussions between the steering committee, the Kansas Department of Agriculture Division of Water Resources (DWR), and the Chief Engineer, the Chief Engineer certified a final description of the district boundaries.

In 1975, the water users voted in favor of creating GMD 4. On May 24, 1976, the initial meeting was held in Colby, Kansas. Eleven board member positions were opened for election and all the positions were filled. GMD 4 was established. Since that time, GMD 4 has undertaken many conservation efforts, including purchasing water rights; monitoring annual usage; sending advisory letters to those who appeared to pump more water than necessary; ending new development; and creating the first LEMA in the Sheridan 6 High Priority Area (SD-6 LEMA). GMD 4 now embarks on a new conservation effort, LEMA using those same boundaries contemplated in 1974 and adopted in 1976 for GMD 4.

In 2012, at GMD 4's request, the Kansas Legislature passed the Local Enhanced Management Area (LEMA) statute. *See* K.S.A. 82a-1041. Any LEMA is a creature of statute. As part of the GMDA, K.S.A. 82a-1041 allows GMDs to address groundwater declines and other conditions of concern through management plans that include specific goals and corrective control procedures while still being consistent with state law. This local autonomy over the management plan distinguishes LEMAs from IGUCAs. The LEMA statute refers to the IGUCA statute to establish the groundwater conditions that may give rise to creating a LEMA. A LEMA must comport with the public interest, a term that figures prominently in both the KWAA and the GMDA, because the Chief Engineer has the statutory duty to regulate the distribution of the state's water resources for the benefit of all of its inhabitants according to the law. K.S.A. 82a-1041(b)(2); K.S.A. 82a-706; K.S.A. 82a-702; K.S.A. 82a-1020. GMD 4 proposed and administered the first LEMA—the SD-6 LEMA. Now, GMD 4 proposes this LEMA.

2. History of these Proceedings

On June 8, 2017, GMD 4 submitted a revised LEMA Proposal (the Proposal) to the Chief Engineer. Before submitting the proposed LEMA, GMD 4 held four public meetings in Colby, Goodland, Hoxie, and St. Francis, Kansas; and, had multiple board meetings, with many interested people attending, over a two and half year period between January 2015 and June 2017 to discuss the Proposal. This represented a significant public involvement in the process that resulted in the locally developed and locally requested plan. Additionally, GMD 4 had previously presented a more restrictive program at an additional 4 meetings. The public acceptance of that program was less positive, and therefore the board rejected that program.

On June 27, 2017, the DWR and Chief Engineer found that "on its face," the Proposal met the threshold requirements of K.S.A. 82a-1041(a) and initiated these proceedings. This determination on whether the Proposal met the K.S.A. 82a-1041 thresholds was not a final determination but an initial determination that the Proposal warranted further review, input, investigation, testimony, and consideration. To begin that review, the Chief Engineer delegated his authority to an independent hearing officer, Constance C. Owen, to conduct the initial public hearing in this matter. Notice was given of that first hearing as required by K.S.A. 82a-1041(b).

On August 23, 2017, Constance C. Owen, Hearing Officer, conducted the initial hearing on whether the Proposal met the statutory requirements of K.S.A. 82a-1041(b) and whether this matter should proceed to a second hearing. Written testimony was allowed to be submitted on this issue until September 13, 2017. *See* Order on Initial Requirements of the Groundwater Management District No. 4 District-Wide Local Enhanced Management Area, 21 (Aug. 23, 2017) (Initial Order).

The testimony GMD 4 presented, both oral and written, for the August 23, 2017 hearing is incorporated and made a part of this testimony. Therefore, this testimony will focus on the goal, the proposed corrective control measures, and the implementation of the proposed corrective control measures.

On September 23, 2017, Ms. Owen issued her Initial Order concluding that the Proposal "satisfied the three initial requirements for approval as set forth in K.S.A. 82a-1041(b)(1)-(3)."

These are excerpts from the GMD #4 Management Program of 9/19/2016, Section IV. Subsection 6 and Subsection 1 b and go further in explaining that the proposed restrictions are in the public interest:

3. The Proposal, as found by Hearing Officer Owen's, is in the public's interest.

K.S.A. 82a-1020 is the Legislative declaration relative to establishing groundwater management districts in Kansas. It declares that in the public interest it is necessary and advisable to permit the establishment of GMDs which allow local water users to determine their own destiny with respect to the use of groundwater—insofar as that destiny does not conflict with the basic laws and policies of the state.

As described by GMD 4's management plan, "Public interest" is a fundamental term used throughout the KWAA and GMDA, and within regulations developed under both statutes. Yet the term is only narrowly defined within state statute and regulation. It has been generally accepted that the complete definition of this term is actually embodied in the full suite of statutes and associated regulations, and therefore must be considered in this total, overarching context. This full context also includes the administrative, executive and judicial systems whose policies and actions also become part of the complete definition. In contrast, it has also been generally accepted that a specific statutory definition of "public interest" would be restrictive and confining, thus having more disadvantages than advantages.

The GMDA made it state policy that the local land owners and water users were to determine their own destiny in regard to groundwater management issues—so long as local decisions were consistent with state law. Since a groundwater management district cannot determine its own destiny without also expressing its own public interest, it seems logical that such authority is inherent in the GMDA.

In this spirit, this LEMA is being proposed by the GMD 4 BOD, because it believes is best for the landowners and water users of GMD 4 and hence best for the state of Kansas. The board also believes it is more clearly within the spirit of the LEMA statute. If in fact the entire suite of statutes and regulations define public interest in concert with the administrative, executive and judicial systems, then the GMDs and LEMAs are clearly a part of these systems and they deserve sufficient consideration. A single expression of public interest exclusively from the state perspective may not serve Kansas as well as a more flexible definition recognizing regional diversity.

When the LEMA process comes from the local board of directors and the corrective control provisions being requested from that process are consistent with state law, then the public interest of K.S.A. 82a-1020 has been satisfied.

In any event, the GMD 4 provided GMD 4 water users information very early in the discussions of the District Wide LEMA. The evidence provided the water users showed that adopting and implementing any corrective control provisions that would reduce water use, would also extend the life of the regional aquifer.

A web page was created to keep the process available to the public and was updated regularly by GMD 4 staff. Beginning in January of 2015, the process was covered by at least 28 board meetings.

- 4. The corrective controls measures should reach the LEMA goal.
 - 4.1. The Goal for the LEMA is to promote improved management of water and not exceed irrigating 1.7 million acre-feet over a five year period.

The request for a LEMA contained the following goal statement and detail:

To promote improved management of water used district-wide with a goal not to exceed 1.7 million acre-feet (AF) for irrigation over five years within townships displaying an annual decline rate for the period 2004 - 2015 of 0.5% or greater annual decline and promote more efficient use by non-irrigation uses.

This LEMA shall exist only for the five- year period beginning January 1, 2018 and ending December 31, 2022. The proposed LEMA shall include all points of diversion located within the boundaries of GMD 4 excluding vested rights and points of diversion whose source of supply is 100% alluvial.

The total program diversion amount of 1.7 million AF for irrigation use for townships with annual decline rates of 0.5% or greater shall represent five (5) times the sum of designated legally eligible acres times the amount designated for irrigation water rights;

The Northwest Kansas Groundwater Management District No. 4 shall use the procedures herein to determine the 5-year allocation for each water right, and specify said values in Section 3). All allocation values shall be expressed in terms of total acre-feet for the five-year LEMA period. *See* Attachment 1, Request for a District-

Wide LEMA Submitted to the Chief Engineer, Kansas Department of Agriculture, Division of Water Resources (June 8, 2017) (Proposal).

GMD 4 established that goal because many parts of the Ogallala Aquifer within GMD 4 are declining at a rate greater than .05% per year. At the initial hearing, Hearing Officer Owens specifically found that:

The credible and relevant data provided by the [Kansas Geological Survey] KGS and used to develop this LEMA proposal corroborates GMD 4's conclusion that water levels are declining or have declined excessively and that withdrawals equal or exceed the rate of recharge in the area of the proposed GMD 4 LEMA. Initial Order at 12.

The Hearing Officer based her finding on KGS's measurements of depth-to-water in about 1,400 wells taken from the same year. After taking those depth-to-water measurements, KGS calculated three-year averages (2004, 2009, and 2015) and isolated the data relative to wells within GMD 4. KGS determined that the average saturated thickness for GMD 4 was 76 feet in 2004 and 70 feet in 2015. Parts of Sherman County had an average rate of decline of over 20 feet and much of Sherman County and portions of Thomas and Sheridan County averaged declines of 12 feet over the six year period from 2009-2015. KGS concluded that "The major driver for these water level declines is groundwater pumping as illustrated by published reports (citation omitted), which show statistically significant correlations exist between annual water-level change and annual groundwater use across GMD 4."

4.1.1. The corrective controls measures should reach the LEMA goal as applied to irrigation water use.

The corrective control measures will reach the goal by reducing pumpage. GMD 4 determined the LEMA allocation for each water right using the procedures described below.

To determine a water user's LEMA allocation, GMD 4 first determined what acreage a water users recently irrigated (irrigated acres). To determine irrigated acres, GMD 4 examined annual water use reports from 2009–2015. GMD 4 used the 2009-2015 range because 2009 was the first year that all wells in GMD 4 were metered and 2015 was the last year that water use data was available when the LEMA process through the public meetings was initiated. The maximum reported irrigated acreage during that period was used to set the irrigated acre amount (or eligible acre amount) for

each right. GMD 4 checked any discrepancies or inconsistencies against the United States Department of Agriculture aerial photos, the actual water rights, and the water use reports to finally determine irrigated acres (or eligible acres).

GMD 4 derived the LEMA township annual decline percent for the period of 2004-2015 from KGS section level data. A section is an area about one square mile containing 640 acres with 36 sections making up one survey township on a rectangular grid. The KGS compiled data on a section-by-section basis to determine the section-by-section declines. The KGS section level data was averaged for each legal township in the district. KGS section level data was used because it assigns a value for bedrock and water level elevations for each specific section. Then, GMD 4 removed all wells with any alluvial connection from the data set. Additionally, GMD 4 removed any sections that exhibited less than 15 feet of saturated thickness from the analysis; because, removing those sections minimized the depletion status of areas on the fringe of GMD 4. Very small declines in areas of little saturated thickness result in unacceptably high percentage figures, which is why they were removed from the analysis. This section level data GMD 4 relied on to determine the township declines and the LEMA allocations.

Last, GMD 4 examined the Net Irrigation Requirements (NIR) set by the United State Natural Resource Conservation Services. (NCRS). See U.S. Dept. of Agric., Nat. Res. Cons. Serv., Nat'l Eng'r Handbook, Irrigation Guide, KS210-652-H., Amend. KS31, KS652-4.1 thru 4.25 (2014), https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_030990.pdf.

The State of Kansas has used the NIR amounts since at least 1994 and referenced the NIR amounts in K.A.R. 5-5-9, K.A.R. 5-5-10, K.A.R. 5-5-11 and other regulations. The GMD 4 Board used the NRCS NIR 50% and 80% values for corn by county. 50% NIR represents the net irrigation requirement for corn that would be sufficient in 5 out of 10 years (considered to be normal) based on the precipitation requirement for corn that would be sufficient in 8 out of 10 years (considered to be dry) based on the precipitation that would be expected in 8 out of 10 years.

These figures were then interpolated to derive a value at the western edge of each zone. Each township was then assigned a color based on the zone in which it was located," red, yellow, purple, blue and green. Townships exhibiting greater than a 2% annual decline rate were assigned the 50% NIR for corn by zone (red). Townships exhibiting from 1% to 2% annual decline rate were assigned the 80% NIR for corn

by zone (yellow). Townships exhibiting 0.5% to 1% were assigned an 18 inch allocation district-wide (purple). Those townships that are below the 0.5% decline rate will not have restrictions on their diversions imposed (blue and green). The tiered system gives due consideration to water users who have already implemented reductions in water use resulting in voluntary conservation measures as evidenced by a slower rate of decline. No township has an allocation less than the 50% NIR for its respective zone.

Last, GMD 4 multiplied the irrigated acre values by the allocation amount on the map attached to the Proposal based on the decline percentage for the township where the point of diversion was located and the corresponding NIR. That NIR number was then divided by 12 (to convert to acre-feet) and then multiplied times the acres times five to determine the five year LEMA allocation. For example, in township 8-42W in Sherman County, the NIR for corn is 16.1 inches per acre. If a water right user irrigated 124 acres in that township, then the LEMA allocation would be 832 acrefeet over five years.

The LEMA allocation will also not reduce water users by greater than 25% except for those being reduced to an 18 inches per acre per year cap. No LEMA allocations within areas of decline greater than .05% will be receive an allocation in excess of 18 inches per acre per year. These amounts apply to those water rights in red, yellow, and purple townships.

The LEMA proposal also contains provisions addressing specific situations. Those provisions include:

Wells pumping to a common system or systems shall be provided a single allocation for the total system acres, subject to the review process in Sections 5 and 6. The total amount pumped by all of the wells involved must remain within the system allocation.

No water right shall receive more than the currently authorized quantity for that right, times five (5).

No water right within a K.A.R. 5-5-11, 5-year allocation status shall receive an allocation that exceeds its current 5-year allocation limit.

No water right shall be allowed to pump more than its authorized annual quantity in any single year.

In all cases the allocation shall be assigned to the point of diversion and shall apply to all water rights and acres involving that point of diversion. Moreover, in all cases the original water right shall be retained.

For water rights enrolled in EQIP and/or AWEP that will be coming out of either program on or before September 30, 2022, the allocation quantity shall be set at the annual allocation for only the remaining years of the 2018-2022 LEMA period.

If a water right is or has been suspended, or limited for any year of this LEMA, due to penalty issued by the Kansas Department of Agriculture, Division of Water Resources (DWR), then the GMD 4 and DWR will reduce the allocated quantity for such water right accordingly for the 2018-2022 LEMA period.

For water rights enrolled in a KAR 5-5-11 change, MYFA, WCA, or other flexible water plan, the most water restrictive plan will apply.

Each allocation for irrigation will be a total 5-year amount. The Proposal does not contain an acre-inch per acre limitation. The allocation may be used in any fashion and at any time during the LEMA chosen by the right holder, except that water user cannot exceed the annual authorized quantity unless authorized by a Muli-Year Flex Account (MYFA) or Water Conservation Act (WCA) term permit or plan.

After completing these calculations, about 65% of the wells or well-groups slated for a LEMA allocation will have a LEMA allocation that less than their combined diversions from 2009 – 2015.

The base water right will not be altered during the LEMA period. Any order issued under the LEMA will be subject to the additional LEMA terms and conditions for the five years during the LEMA. GMD 4 further requests that any future reiterations of

this LEMA that may come into existence or be proposed by the GMD 4 Board take into consideration allowing a maximum 10% carry-over of the LEMA allocated amount. See Proposal 1)d)-1). This gives future GMD 4 and LEMA boards an opportunity to continue rewarding those that conserve. It also incentivizes conservation into the future.

4.1.2. The corrective control measures, with modifications, should reach the LEMA goal.

For non-irrigation use type, the GMD 4 Board requests that the following language modify the stockwater portion of the proposed LEMA (Modifications) for two reasons. First, the total acre feet allocated to stockwater use in GMD 4 is less than 0.5 % of total appropriations. Second, animal feeding and dairies represent a significant market for local crops and the GMD 4 Board reasoned that animal feeding and dairies should not be unduly restricted.

The GMD 4 Board still encourages livestock and poultry operations to only use 90% of the amount they are allocated. The proposed Modifications read:

Part 2)a) Livestock and poultry use will be encouraged to maintain their use at 90% of the said amount provided by K.A.R. 5-3-22 based on the maximum amount supportable by the number of animals authorized by a current facility permit. At no time will a stockwater right be authorized to pump more than its authorized quantity. . . .

Part 2)d) When converting from irrigation to non-irrigation use, the base water right will be converted under the procedures in K.A.R. 5-5-9, 5-5-10, or Groundwater Management District #4 regulations, and the appropriate non-irrigation Local Enhanced Management Area allocation will apply as found in Section 2 for the remainder of the Local Enhanced Management Area period.

Parts 2)b), 2)c), and 2)e) of the Proposal would remain the same. With the acceptance of the above modifications and because of the small fraction of the groundwater used for stock water, dairies, and recreational use, this should not be an impediment to adopting the Proposal. Additionally, stock water and dairies provide a market for crops such that the GMD 4 BOD determined decreasing the stock water and dairy use could negatively impact the agricultural economy in the region and adversely impact implementation of the Proposal.

4.1.3. Appeal Process

If an irrigation user believes they have more irrigated acres or have applied water in a different fashion than reported, an appeal process will be instituted to allow individuals and GMD 4 to review their irrigated acres. Any appeal must begin by March 1, 2019. Only irrigated acres and LEMA allocations may be appealed. The process also allows additional data from 2016 and 2017 to be considered. Again, the information the GMD 4 had when it submitted the proposal was from 2009-2015.

Water users and GMD 4 staff will conference regarding discrepancies in irrigated acres. Any decision made by GMD 4 staff may be brought before the GMD 4 board for a final decision.

This appeal process is an effort by GMD 4 to make sure that the allocations are correctly set.

4.1.4. Violations

Violations under the Proposal will be consistent with the violations in the SD-6 LEMA. These are added fines and/or suspensions to be applied in the case of over-pumping the LEMA quantity. While this does provide penalties for over-pumping the LEMA quantity; it is equally important that accurate data is available regarding water use and these provisions provide additional methods to test the accuracy of the data. In the first five years of the SD-6 LEMA, no violations occurred. There is an additional incentive for those townships not currently being issued a LEMA allocation. That incentive is to maintain or improve on current pumping levels to ensure that their respective townships do not reach decline levels that would require restrictions if a future LEMA were proposed.

An added violation concerns meter tampering. If a preponderance of evidence suggests that actions have been taken to remove or alter the meter's ability to accurately measure flow the offending water right will be suspended for a period of five years and any remaining LEMA allocation will be lost.

There are some added requirements that apply to wells that have a LEMA allocation. These require that the meters be read at least every two weeks and that malfunctioning meters be repaired/replaced as soon as possible. It also requires a back-up system by which the amount of water pumped can be readily determined. If such back-up data

is unavailable it will be assumed that the entire appropriated right has been pumped for the purpose of LEMA record keeping.

4.1.5. Economic Viability

Preliminary economic studies done by Dr. Bill Golden on the SD-6 LEMA indicate that cash flow values inside that LEMA very closely resemble those of the immediate surrounding area. Dr. Bill Golden, Monitoring Impacts of Sheridan County 6 Local Enhanced Management Area, Interim Report 2013 – 2015, Nov. 8, 2016 (SD-6 Interim Report). It should be noted that the SD-6 LEMA has a much higher level of restrictions than the ones proposed by this LEMA.

A previous study was done by Golden, Peterson, & O'Brien, Potential Economic Impact of Water Use Changes in Northwest Kansas (2008) (The Golden Report). There, Golden et.al stated that, the least desirable option to institute cutbacks in diversions was to use a system that completely dries up acres—either by a first in time, first in right system, or other programs that take land out of irrigated production. They concluded that less water use on more acres had far less of a negative impact. Instituting reductions by using order of priority would have the effect of drying up many acres and for this reason, the GMD 4 board proposes giving an equal allocation to all non-vested rights based on their location and the decline rate of the Ogallala aquifer.

The Golden Report initially evaluated the potential economic consequences of reduced groundwater us in northwest Kansas. Specifically, the Golden Report evaluated the potential economic impacts of three possible reduction levels: (1) a zero reduction in groundwater pumping; (2) completely eliminating all groundwater pumping; and (3) reducing groundwater pumping by 30%. Regarding the third option, the Golden Report then assessed the respective economic impacts of achieving such a reduction by three scenarios: (a) by limited irrigation; (b) by a buyout of irrigation rights, while allowing dryland farming on dried-up lands; and (c) by a conservation program such as the Conservation Reserve and Enhancement Program (CREP), which requires a 15-year following period, after which dryland farming can resume. The Golden Report employed data that is consistent with the KGS model described above.

In assessing the respective economic impacts of the three possible reduction levels and the three scenarios described above, the Golden Report employed a variety of tools, including input-output impact analysis, and specifically, Impact Analysis for Planning (IMPLAN). IMPLAN is a commonly accepted method of economic analysis that has been used by agricultural economists in Colorado, Kansas, and Nebraska. IMPLAN has been accepted as a reliable and persuasive method of assessing water-use impacts on agriculture by the Supreme Court of the United State. *See Kansas v. Colorado*, No. 105, Orig., Fifth and Final Report of the Special Master, at 20 (Feb. 4, 2008). *See also Kansas v. Colorado*, No. 105 Orig., 543 U.S. 86, 91 (2004) (accepting the use of IMPLAN to award economic damages).

According to the Golden Report, under the first option, over a 60 year period,—no reduction in groundwater pumping—the irrigated acres of the SD-6 area declined from 16,062 in year one to 8,245 in year 60. Future gross profits tracked this unregulated decline in groundwater levels beginning at about \$5,279,829 in Year 1 and dropping to \$3,997,627 in Year 60.

Under the other Golden Report extreme—a 30% reducing in groundwater pumping—the decline in water use and profitability is far less precipitous. The irrigated acres of the SD-6 area were projected to decline from 16,062 in year one to 13,327 acres in year 60. Future gross profits track this less aggressive decline in groundwater levels, starting at \$4,717,461 in year one and dropping to \$4,285,202 in year 60.

The SD-6 LEMA ultimately adopted a 20% reduction. A middle ground between continuing the groundwater mining then occurring and a 30% immediate reduction for all irrigated rights.

In 2016, Golden issued his Interim Report for the SD-6 LEMA. There, Golden found that past efforts (pre-LEMA efforts) to slow decline and ensure the future economic viability of the region have been largely unsuccessful. Golden noted that "LEMAs are proactive, locally designed, and initiated water management strategies for a specific geographic area that are promoted through a GMD and then reviewed and approved by the Chief Engineer." *Id.* at 1. He further notes that the LEMA blueprint may be the future of groundwater management; that it overcomes the problems associated with the 'top-down' Intensive Groundwater Use Control Areal (IGUCA) process; and it "minimizes the common property externality associated with groundwater extraction." *Id.* at 2.

Golden, in his SD-6 Interim Report, then compared those producers inside the SD-6 LEMA with those producers outside the SD-6 LEMA to determine the SD-6 LEMA's economic impact using methods that are consistent with methods used by the Kansas Department of Agriculture. *Id.* at 2-3. On comparing the control and the target group,

Golden concluded that producers were able to reduce groundwater use in the SD-6 LEMA area with minimal impacts on cash flow (gross profits less expense equating to net profits). *Id.* at 2-3.

Furthermore, the Proposal does not contain any restrictions below the average water needs for corn; and, most of the wells or groups have allocations at or above the drier 80% chance NIR for corn (see explanation of NIR above). Last, the greatest restriction, 25%, is well within the 0% reduction to 30% reduction ranges contemplated by the Golden Reports (Golden Report and SD-6 Interim Report) to maintain the economic viability of the GMD 4 region.

Conclusion

This concludes the written testimony for GMD 4. In sum, GMD 4 contends that:

- 1. The Chief Engineer should adopt Hearing Officer Owens' Order on Initial Requirements of the Groundwater Management District No. 4 District-Wide Local Enhanced Management (LEMA) and incorporate it into the Chief Engineer's order.
- 2. The Chief Engineer should issue an Order of Decision accepting the Proposal with the Modifications and return the Proposal with the Modifications to GMD 4 for approval.
- 3. On approval by GMD 4, the Chief Engineer should issue an Order of Designation designating all of GMD 4 as a LEMA and implementing the modified corrective controls within the Proposal and described above.

ATTACHMENTS

Attachment 1

Request for a District-Wide LEMA Submitted To the Chief Engineer, Kansas Department of Agriculture, Division of Water Resources

June 9, 2017

In order to reduce decline rates and extend the life of the aquifer in Northwest Kansas Groundwater Management District No. 4 (GMD 4) the Board of Directors of GMD 4 proposes the following five year plan be submitted via the Local Enhanced Management Area (LEMA) process contained in KSA 82a-1041 for the entire area within the boundary of the Northwest Kansas Groundwater Management District No. 4.

Overview and Goal Expression

To promote improved management of water used district-wide with a goal not to exceed 1.7 million acre-feet (AF) for irrigation over five years within townships displaying an annual decline rate for the period 2004 - 2015 of 0.5% or greater annual decline and promote more efficient use by non-irrigation uses.

This LEMA shall exist only for the five- year period beginning January 1, 2018 and ending December 31, 2022. The proposed LEMA shall include all points of diversion located within the boundaries of GMD 4 excluding vested rights and points of diversion whose source of supply is 100% alluvial.

The total program diversion amount of 1.7 million AF for irrigation use for townships with annual decline rates of 0.5% or greater shall represent five (5) times the sum of designated legally eligible acres times the amount designated for irrigation water rights;

The Northwest Kansas Groundwater Management District No. 4 shall use the procedures herein to determine the 5-year allocation for each water right, and specify said values in Section 3). All allocation values shall be expressed in terms of total acrefect for the five-year LEMA period.

1) Allocations – Irrigation

- a) Proposed allocations provided in Sections 3 and 4 were determined based on the maximum reported and/or verified acres for years 2009-2015. Proposed allocations are subject to change in the case where incorrect water use data is verified via the process in Sections 5 and 6.
- b) All irrigation water rights, excluding vested rights, shall be limited to the allocation for the water right location on the accompanying map over the 5-year period beginning January 1, 2018 and ending December 31, 2022. If a vested right and an appropriation right have the same place of use or same point of diversion, the vested right will be the vested water right's authorized quantity and the appropriation right will be limited to the total system allocation minus the vested water right's authorized allocation.

- c) The base water rights will not be altered by any Order issued under this request, but will be subject to the additional terms and conditions described herein for the duration of the LEMA.
- d) Wells pumping to a common system or systems shall be provided a single allocation for the total system acres, subject to the review process in Sections 5 and 6. The total amount pumped by all of the wells involved must remain within the system allocation.
- d) No water right shall receive more than the currently authorized quantity for that right, times five (5).
- e) No water right within a K.A.R. 5-5-11, 5-year allocation status shall receive an allocation that exceeds its current 5-year allocation limit.
- f) No water right shall be allowed to pump more than its authorized annual quantity in any single year.
- g) In all cases the allocation shall be assigned to the point of diversion and shall apply to all water rights and acres involving that point of diversion. Moreover, in all cases the original water right shall be retained.
- h) For water rights enrolled in EQIP and/or AWEP that will be coming out of either program on or before September 30, 2022, the allocation quantity shall be set at the annual allocation for only the remaining years of the 2018-2022 LEMA period.
- i) If a water right is or has been suspended, or limited for any year of this LEMA, due to penalty issued by the Kansas Department of Agriculture, Division of Water Resources (DWR), then the GMD 4 and DWR will reduce the allocated quantity for such water right accordingly for the 2018-2022 LEMA period.
- j) For water rights enrolled in a KAR 5-5-11 change, MYFA, WCA, or other flexible water plan, the most water restrictive plan will apply.
- k) No water right shall be reduced by more than 25% of their average historical pumping based on years pumped 2009-2015 unless it would allow a quantity over 18 inches per acre to be pumped.
- 1) Should GMD 4 request a new LEMA beyond the first five-year period, the GMD 4 Board will consider a maximum 10% carry-over of the LEMA allocation for the regions depicted in the purple, yellow, and red on Attachment 1 if a new district-wide LEMA is considered or pursued as a result of the LEMA Order Review discussed in Section 11.

2) Allocations – Non-irrigation

a) Livestock and poultry use will be restricted to 76% of the quantity of water deemed to be reasonable for livestock and poultry provided in K.A.R. 5-3-22 in townships with greater than 2% average annual decline and 85% of said amount in townships with average annual declines

between 1% and 2%, based on the maximum head supportable by the feedlot permit in effect on December 31, 2015. At no time will a stockwater right be authorized to pump more than its authorized quantity.

- b) Municipal will be encouraged to reduce the amount of unaccounted for water reported annually on the water use report and reduce the gallons per capita per day.
- c) All other non-irrigation users will utilize best management practices.
- d) When converting irrigation to non-irrigation, then the most restrictive of the LEMA allocation, GMD 4 regulations, or conversion outlined in K.A.R. 5-5-9 will be used to determine the converted allocation amount.
- e) The base water rights will not be altered by any Order issued under this request, but will be subject to the additional terms and conditions described herein for the duration of the LEMA.

3) Individual Allocation Amounts

The five-year allocations for every water right per Sections 1.a and 2 above shall be converted to a five-year acre-feet total, with Attachment 1 containing the assigned eligible irrigation restriction for each township. Each water right will be restricted to its total acre-feet allocation within the LEMA order issued through this process, subject to the review processes outlined in Sections 5 and 6.

4) Data Set

The relevant data for this LEMA proposal came from the Water Rights Information System (WRIS) maintained by the Kansas Department of Agriculture, Division of Water Resources (DWR).

If any data errors are discovered, then the GMD 4 Board requests that the person or entity discovering the errors contact GMD 4 to update or correct any alleged errors via the processes outlined in Sections 5 and 6.

Attachment 2 contains pdf files of irrigation and stockwater water right numbers and allocations. Associated spreadsheets will be kept by GMD 4 and DWR; will be available on the GMD 4 and DWR websites; and may be changed with the Chief Engineer's approval or through the processes outline in Section 5 and 6. The GMD 4 and the DWR will document or track any changes made to the irrigation water and stock water right allocations attached hereto.

5) Eligible Acres Process

Based on input from stakeholders, it was agreed that the following procedure would be used to assign eligible acres to every irrigation water right in the District-Wide LEMA and to include in any future LEMA request.

The GMD 4 and DWR determined eligible acres as follows:

- a) The GMD 4 and DWR used the maximum reported authorized irrigated acres from 2009-2015 that could be verified as being legally irrigated with the GMD 4 in-house aerial photography and water right file information.
- b) If the authorized place of use was not irrigated from January 1, 2009 to December 31, 2015, then earlier years that the water user irrigated the acres may be considered.
- c) The DWR will contact every water right owner within 60 days after the Order of Designation and others known to them as operators or interest holders in the water right to inform them of the eligible acres assigned to their water right(s) under the adopted process, allow them the opportunity to appeal the assigned acres under the process described below and allow them the opportunity to provide more information to the GMD 4 Board on the correct acres. The GMD 4 Board's decision is final and the eligible acres determined by the GMD 4 Board will be used to calculate and assign the final allocations.

6) Appeals Process

- a) Appeal Process. The following process will govern appeals regarding eligible acres and allocated water:
 - (1) Any appeal of the eligible acres and allocated water must be filed before March 1, 2019. Failure to file an appeal of the eligible acres and allocated water by March 1, 2019 will cause the assigned eligible acres and allocated water to become final during the LEMA period.
 - (2) Only eligible acres and allocated water may be appealed through this appeal process. No other issues including, but not limited to, the LEMA boundaries, violations, meter issues, etc., may be appealed through this process.
 - (3) Any appeal will first be heard by the GMD 4 staff who will determine eligible acres based on the factors above in Section 5) Eligible Acre Process.
 - (4) Any determination made by the GMD 4 staff may be appealed to the GMD 4 Board.
 - (5) The GMD 4 and DWR will use the acres and allocated water determined through the processes contained in Sections 5 and 6, as detailed above, to calculate and assign allocations.
- b) Factors to be considered by the GMD 4 Board on appeal. The following factors, in order of importance, will be used when reviewing a determination of eligible acres and allocated water on appeal.
 - (1) First, the reviewer will first consider the location of the well(s) and their township allocations.
 - (2) Second, the reviewer may consider the authorized place of use.
 - (3) Third, the reviewer may consider any and all aspects of the water right, use, place of use, point of diversion, or any other factors the reviewer determines appropriate to determine eligible acres and allocated water.

7) Violations

- a) The LEMA order of designation shall serve as initial notice of the creation of the LEMA and its terms and conditions to all water right owners within the GMD 4 on its effective date.
- b) Upon GMD 4 learning of an alleged violation, GMD 4 will provide DWR with the information GMD 4 believes shows the alleged violation. DWR, under its discretion, may investigate and impose restrictions and fines as described below or allowed by law.
- c) DWR will address violations of the authorized quantities as follows:
 - (1) Exceeding any total allocation quantity of less than 4 AF within the allocation period will result in a \$1,000.00 fine for every day the allocation was exceeded.
 - (2) Exceeding any total allocation quantity of 4 AF or more within the allocation period will result in an automatic two-year suspension of the water right and a \$1,000 fine for every day the allocation was exceeded up to a maximum of \$10,000.
- d) In addition to other authorized enforcement procedures, if the GMD 4 Board finds by a preponderance of evidence that meter tampering, removing the meter while pumping, or any other overt act designed to alter the metered quantity as described in K.A.R. 5-14-10 occurred, then the GMD 4 Board will make a recommendation to the Chief Engineer that a written order be issued which states:
 - (1) The nature of the violation;
 - (2) The factual basis for the violation:
 - (3) That the water right is suspended for 5 years; and
 - (4) That the water right loses all remaining assigned quantities under the District-Wide Local Enhanced Management Area.

8) Metering

- a) All water right owners shall be responsible for ensuring their meters are in compliance with state and local law(s). In addition to being in compliance and reporting annually the quantity of water diverted from each point of diversion, all water right owners shall implement at least one of the following additional well/meter monitoring procedures:
 - (1) Inspect, read and record the flow meter at least every two weeks the well is operating. The records of this inspection procedure shall be maintained by the well owner and provided to the district upon request. Should the flow meter reported readings be in question and the bi-weekly records not be available and provided upon request of the district, the well shall be assumed to have pumped its full annual authorized quantity for the year in question. Following each year's irrigation season, the person or persons responsible for this data may at their discretion transfer the recorded data to the district for inclusion in the appropriate water right file for future maintenance.
 - (2) Install and maintain an alternative method of determining the time that the well is operating. This information must be sufficient to be used to determine operating time in the event of a meter failure. Should the alternative method fail or be determined inaccurate the well shall be assumed to have pumped its full annual authorized quantity

for the year in question. Well owners/operators are encouraged to give the details of the alternative method in advance to GMD 4 in order to insure that the data is sufficient.

- b) Any water right owner or authorized designee who finds a flow meter that is inoperable or inaccurate shall within 48 hours contact the district office concerning the matter and provide the following information:
 - (1) water right file number;
 - (2) legal description of the well;
 - (3) date the problem was discovered;
 - (4) flow meter model, make, registering units and serial number;
 - (5) the meter reading on the date discovered;
 - (6) description of the problem;
 - (7) what alternative method is going to be used to track the quantity of water diverted while the inoperable or inaccurate meter is being repaired/replaced; and
 - (8) the projected date that the meter will be repaired or replaced.
 - (9) Any other information requested by the GMD 4 staff or Board regarding the inoperable or inaccurate flow meter.
- c) Whenever an inoperable or inaccurate meter is repaired or replaced, the owner or authorized designee shall submit form DWR 1-560 Water Flowmeter Repair/Replacement Report to the district within seven days.
- d) This metering protocol shall be a specific annual review issue and if discovered to be ineffective, specific adjustments shall be recommended to the chief engineer by the advisory committee.

9) Accounting

a) DWR, in cooperation with GMD 4, shall keep records of the annual diversion amounts for each Water Right within the LEMA area, and the total 5-year quantity balances will make this information available to the Water Right Holder and the GMD 4 on their request.

10) Advisory Committee

a) A District-Wide LEMA Advisory Committee shall be appointed and maintained by the GMD 4 Board consisting of fourteen (14) members as follows: one (1) GMD 4 staff; one (1) GMD 4 Board Member; one (1) representative of the Division of Water Resources, Kansas Department

of Agriculture as designated by the chief engineer; and the balance being irrigators with regional distribution identical to GMD 4 board member distribution. One of the District-Wide LEMA members shall chair the committee whose direction shall be set to further organize and meet annually to consider:

- (1) water use data;
- (2) water table information;
- (3) economic data as is available;
- (4) violations issues specifically metered data;
- (5) any new and preferable enhanced management authorities become available;
- (6) other items deemed pertinent to the advisory committee.
- b) The advisory committee in conjunction with DWR shall produce an annual report which shall provide a status for considerations (1) through (6) and any recommended modifications to the current LEMA Order relative to these six items. Said report shall be forwarded to the GMD 4 board and the chief engineer.

11) LEMA Order Reviews

- a) In addition to the annual LEMA Order reviews per Section 10 the District-Wide LEMA Advisory Committee shall also conduct a more formal LEMA Order review 1.5 years before the ending date of the LEMA Order. Review items will focus on economic impacts to the LEMA area and the local public interest. Water level data may be reviewed.
- b) The committee, in conjunction with DWR and GMD 4, shall also produce a report following this review to the chief engineer and the GMD 4 board which contains specific recommendations regarding future LEMA actions. All recommendations shall be supported by reports, data, testimonials, affidavits or other information of record.

12) Impairment Complaints

While this program is being undertaken, the GMD 4 stakeholders request that any impairment complaint filed in the district while this management plan is in effect, which is based upon either water supply issues or a regional decline impairment cause, be received by the Chief Engineer, and be investigated by the Chief Engineer with consideration to the on-going Local Enhanced Management Area activities.

13) Water Level Monitoring

The data used to determine regional aquifer declines in Attachment 1 are based on the annual water level monitoring taken by KGS and DWR. Those measurements will continue as the data

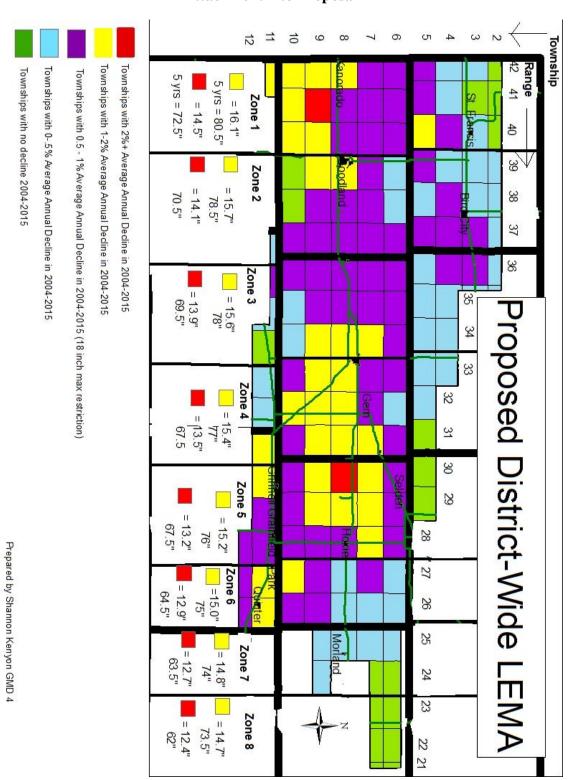
set used in determining water level declines. In the future, GMD 4 could, but is under no obligation, install additional monitoring wells.

14) Coordination

The GMD 4 stakeholders and the GMD 4 board expect reasonable coordination between the chief engineer's office and the GMD 4 board on at least the following efforts:

- a) Development of the LEMA Order resulting from the LEMA process;
- b) Accounting for annual pumpage amounts by LEMA water right owners/operators.
- c) Compliance and enforcement of the District-Wide LEMA Order.

Attachment 1 to Proposal



GMD 4 Testimony – District Wide LEMA Proposal – November 2, 2017 Page 24 of 45

Attachment 2 to Proposal

Irrigation and Stockwater Allocation PDF Files





Attachment 3 to Testimony

Public Meeting Notes and Sign-in Sheets

PUBLIC LEMA BOARD MEETINGS QUESTIONS AND COMMENTS

COLBY (97 signed in)

Questions:

Is this a 5 yr. program?

What about restricting dairies?

We used to flood and haven't for a while, how will that affect me?

At the end of 5 years are you going to increase or decrease our allocation?

Why would we do this if we're the only district doing it?

Will we get a letter on what we will get under the plan?

Will we be able to bank the water?

Will there be a vote?

How much water is this going to save?

How is this a LEMA? It looks like an IGUCA

Why cut people that don't have a problem?

What happens in 5 years?

Can we just "knock off" the new wells?

What happens if we do nothing?

Why the whole district?

Public Comments:

0.5 - 1% should also have a reduction.

This plan is a personal agenda.

You need more measureable goals.

Data other than KGS should be used.

I've lost nine windmills, how here isn't afraid of the water going away.

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GOODLAND: (88 signed in)

Questions:

Is the purple 18" per circle?

What about EQIP acres?

Does this apply to vested rights?

How do you figure out where you are located?

How did you come up with the zones?

Who on the board represents Wallace County?

Is the maximum 25% reduction based on your historical pumping?

Will there be a vote?

Can we do a district-wide WCA instead?

Why was 2009-2015 used?

What is your depletion goal?

Are you going to install more observation wells?

What's the reversal process if there is public outcry?

Is SD6 going to re-up?

Is this going to permanently reduce my water right?

Was there an economic study?

Has the board been advised to wait until the economic study is over?

Is the economic study available?

Can we vote?

What is the time frame for implementation?

Have you contacted the county assessor?

Is there economic impact in SD 6?

How many of the wells in SD 6 get measured?

How did you get the different colors?

When are the observation wells measured?

Comments:

You should do a 20% reduction of all wells and for one year in five you can't pump water.

South of Ruleton I don't have a decline problem, but four miles away they do.

A provision needs to be included to discontinue the plan and make it a reversible process.

This will create a 10% net decrease in economics.

I want to see the scatter plots to determine the % reduction needed in the decline areas.

The longer we extend the aquifer, the longer we benefit.

You need to include a possible drought contingency plan.

Bigger government is not good.

Blue areas should have restrictions if truly a groundwater management district.

Thank you for your efforts.

There should be a 10% reduction in five years for areas that still have a decline. That 10% reduction should continue every five years until no decline.

Thank you to the board for listening to our comments at the last public meetings. The map is proof that you listened to us.

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ST FRANCIS (49 signed in)

Questions:

How are acres determined?

What happens to water rights still in their perfection period?

What does "encourage" mean in relation to municipalities?

What is depth to water in these areas?

Will it be a reduction in the water right or only what is allowed to be pumped?

If you change tenants in the middle of the five year period, what happens to your remaining allocation?

How much water does this save?

What are the ramifications for going over?

How much is allowed in SD 6?

Can you bank the water if you don't use it?

What are the economic ramifications?

How have the other meetings gone?

Is there any provisions on contiguous acres?

Why is there no flexibility in this plan?

Comments:

I pump 21" per year but was hailed out one year so my average is skewed. That may not trigger the no more than 25% reduction.

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HOXIE (60 signed in)

Questions:

If SD 6 re-ups will they keep their flexibility?

What about restricting the well at the Sheridan Lake?

How many AF do they have?

Who came up with the 12 g/h/d?

Why did you go on a township level instead of individual wells?

How many acres does each observation well cover?

How and when will you know it's working?

How many wells in SD 6?

How do the declines compare to outside of SD 6?

What happens when SD 6 re-ups?

How many townships in SD 6?

Does 5 years give you enough time to readjust if it's not working?

Are you going to get tougher if there is still a decline?

There's not much irrigation in my red township, but there is a huge feedlot and ethanol plant. Have you taken this into account?

How many other hot spots (HPA) are there in the district?

Can you buy water rights like you can in SD 6?

After 5 years what's the plan?

Does the amount I've historically pumped affect me?

If we don't do something now, will the state come in later?

Comments:

The data is inaccurate.

If SD 6 can do it then it should be district-wide.

I want out of the district.

I have issues with tax payers paying for the building and supplying money to the Foundation.

We need to educate the people in town on the water problem.

You can't wait another 20 years to solve this problem.

I testify the LEMA is working. The farm management improves.

The probes, and other technology work.

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