Written Testimony
of the Division of Water Resources, Kansas Department of Agriculture ("DWR"),
to Hearing Officer David Barfield, Chief Engineer, DWR

Date: November 13, 2017
RE: Second Public Hearing for District-Wide Local Enhanced Management Area ("LEMA") Proposed by the Northwest Kansas Groundwater Management District No. 4 ("GMD4")

DWR fully supports the district-wide LEMA proposed by GMD4. Although the proceedings for this proposed LEMA originated solely with the GMD4 board and at no request or directive from DWR, DWR applauds the initiative taken by GMD4 to conserve water and extend the life of the Ogallala aquifer in Northwest Kansas.

Either Kelly Stewart, Water Commissioner for the DWR Stockton Field Office, or his staff have attended every GMD4 board meeting since the board began to consider this proposed LEMA, so that DWR would be kept abreast of the issues and could provide answers and support regarding questions and issues that might arise.

During GMD4's consideration and development of this proposed LEMA, DWR provided technical support on various elements of the proposed LEMA's management plan. For example:

- DWR staff analyzed the effectiveness of the proposed LEMA's corrective controls to meet the stated goal of limiting irrigation water use to 1.7 million acre feet during the 5-year period in townships with restrictions. DWR staff found that, under a certain set of basic valid assumptions (i.e., that those who have been pumping less than their proposed assigned LEMA allocations will continue to pump less, and that those with restrictions under the proposed LEMA will stay within those restrictions), that goal is attainable through the proposed LEMA's corrective controls.

- DWR staff, in conjunction with GMD4 staff, developed an online application that allows GMD4 water users to preview allocation amounts for individual or groups of water rights, so that GMD4 water users can see whether and to what extent a water right will be subject to an allocation under the proposed LEMA.

If this proposed LEMA is designated, then DWR, and specifically its Stockton Field Office, will provide support for the implementation, management, and success of this proposed LEMA. Such support will include communicating and coordinating with GMD4 in monitoring LEMA allocations, ensuring compliance and enforcement, and providing public assistance. To this end, a dedicated staff position has been added to the Stockton Field Office, which position has the primary responsibility of assisting all water users within that field office area, including GMD4 stakeholders, in developing and administering LEMAs and water conservation areas.

DWR has closely communicated and collaborated with GMD4 regarding implementing the designated Sheridan 6 LEMA, which is also within GMD4. DWR will follow this model of collaborative effort to ensure the success of this proposed district-wide LEMA, if and when it is designated. DWR is committed to assisting GMD4 water users in achieving responsible and effective water management. And DWR believes that this proposed LEMA will be successful and will meet its goals if it is designated by the Chief Engineer.

KANSAS DEPARTMENT OF AGRICULTURE,
DIVISION OF WATER RESOURCES

By: _____
Lane Letourneau, Program Manager
Water Appropriation Program

By: _____
Kelly Stewart, Water Commissioner
Water Appropriation Program

BEFORE THE KANSAS DEPARTMENT OF AGRICULTURE
DIVISION OF WATER RESOURCES

In The Matter of the Designation of the Groundwater Management District No. 4 District-Wide Local Enhanced Management Area in Cheyenne, Decatur, Rawlins, Gove, Graham, Logan, Sheridan, Sherman, Thomas, and Wallace Counties in Kansas.	)Case No. 002-DWR-LEMA-2017

Order on Initial Requirements
of the Groundwater Management District No. 4
District-Wide Local Enhanced Management Area (LEMA)

On the 23rd day of August 2017, the above-captioned matter came on for hearing before the undersigned Hearing Officer, who was delegated to hear this matter by the Chief Engineer of the Division of Water Resources, Kansas Department of Agriculture. The hearing, conducted in Frahm Theater at the Cultural Arts Center at Colby Community College, Colby, Kansas was called to order at 9:08 a.m.

Procedural Background

This proceeding was initiated by the Board of Directors of the Northwest Kansas Groundwater Management District No. 4, pursuant to K.S.A. 82a-1041. This statute governs the process for the creation of a Local Enhanced Management Area (LEMA). The Board of Directors requested the approval of a district-wide LEMA in that groundwater management district (GMD4).

The LEMA statute proscribes a multi-stage process for approval. In the first stage, a groundwater management district requests approval of a proposed LEMA from the Kansas Department of Agriculture's Division of Water Resources (DWR), specifically, the Chief Engineer of DWR. K.S.A. 82a-1041(a). The Chief Engineer then reviews the plan based on five criteria listed in the statute. *Id.* If the Chief finds all five elements present in the plan, he or she shall hold an initial public hearing to determine if three specific factual matters are satisfied. K.S.A. 82a-1041(b). If the initial public hearing is favorable to the LEMA plan on all three counts, the matter proceeds to a second public hearing, held by the Chief Engineer to evaluate the merits of the proposed plan, including the corrective controls. K.S.A. 82a-1041(b)(3), (c). In general, the Chief Engineer may approve or reject the plan as proposed, or return it to the GMD for revisions or modifications. K.S.A. 82-1041(d). The current order addresses the initial public hearing, as described in K.S.A. 82a-1041(b).

On June 8, 2017, GMD4 submitted to the Chief Engineer, David W. Barfield (Chief Engineer), a plan for a proposed district-wide LEMA. In a letter dated June 27, 2017, the Chief Engineer informed Ray Luhman, Manager of the GMD, that the proposal met the five requirements of K.S.A. 82a-1401(a). The letter further stated that the Chief Engineer had designated this hearing officer to conduct an initial public hearing, in accordance with K.S.A. 82a-1401(b).

Notice of Hearing

Notice of this hearing was provided to water right holders of record in the area by certified mail, and to associated water use correspondents by first class mail. A copy of the Notice of Hearing was published in the Colby Free Press, the Goodland Star News, and the Kansas Register, at least 30 days prior to the date of the hearing.

Applicable Law

When proceedings to designate a LEMA are initiated, K.S.A. 82a-1041(b) requires an initial public hearing on the question of designating such an area as a local enhanced management area according to the local enhanced management plan. K.S.A. 82a-1041(b) provides,

> "The initial public hearing shall resolve the following findings of fact:
> (1) Whether one or more of the circumstances specified in subsection (a) through (d) of K.S.A. 82a-1036, and amendments thereto, exist;
>
> (2) whether the public interest of K.S.A. 82a-1020, and amendments thereto, requires that one or more corrective control provisions be adopted; and
>
> (3) whether the geographic boundaries are reasonable." K.S.A. 82a-1041(b).
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> The "circumstances specified in subsections (a) through (d) K.S.A. 82a-1036" are:
> "(a) Groundwater levels in the area in question are declining or have declined excessively; or
> (b) the rate of withdrawal of groundwater within the area in question equals or exceeds the rate of recharge in such area; or
> (c) preventable waste of water is occurring or may occur within the area in question; or
> (d) unreasonable deterioration of the quality of water is occurring or may occur within the area in question."

If the proposed LEMA plan meets these three criteria, a second public hearing will be conducted by the Chief Engineer to determine if the plan should be adopted as proposed, rejected or returned to GMD4 for revision or modification. K.S.A. 82a-1041(d).

Comments Submitted at the Hearing

The comments offered at the initial public hearing, whether oral or written, have all been taken into account in the preparation of this order and the findings herein.

Ray Luhman, Manager of the Northwest Kansas Groundwater Management District No. 4 (GMD4), summarized the plan and submitted oral and written testimony in support of a finding that the plan meets the three initial criteria. Mr. Luhman, on behalf of GMD4, also subsequently submitted supplemental written testimony. This testimony is described later in this order.

Brownie Wilson, Geographic Information Systems and Support Services Manager for the Geohydrology Section at the Kansas Geological Survey, read his written testimony at the hearing. Mr. Wilson testified about the studies the KGS performed at the request of GMD4. He stated that, in May 2016, at the GMD's request, the KGS looked at the changes in the saturated thickness of the Ogallala/High Plains Aquifer (HPA) from 2004 to 2015 within the boundaries of GMD4. He defined the saturated thickness in the HPA as the difference in elevation between the underlying bedrock and the water table for a given year.

Mr. Wilson described in detail the Cooperative Water Level Program, in which KGS and DWR measure depth-to-water in approximately 1400 wells across the HPA, in which measurements are taken from the same wells each year. These measurements are field checked, digitally stored, analyzed to detect anomalies, and reviewed further if anomalies are found. Mr. Wilson further explained the procedures used, including downloading measurements and locations, mapping that data, removing unreliable well measurements from the data set and calculating three-year averages (2004, 2009 and 2015). KGS then isolated data relative to wells within GMD4, using computer modeling to estimate water table elevations across the GMD and to overlay the public land survey system (PLSS) sections grid across the elevation estimations. Also, each PLSS section was assigned the mean bedrock elevation from data used in KGS published reports, along with the land surface elevation from United States Geological Survey data. The GMD was then provided a resulting Microsoft Excel spreadsheet and GIS files of the PLSS sections within the GMD. According to Mr. Wilson's report, "the change in the water

table between those years and the saturated thickness can be readily computed at the PLSS-section level."

Two further reviews of the data led to further refining of the wells used; a particular well with significant decline unlike others in its area was removed from the dataset, and eleven wells within the GMD that were found to be alluvial were removed from the dataset. KGS conducted an additional application of the modeling and calculation process after each review.

Mr. Wilson's report states as follows:

> "The average saturated thickness for GMD4 was 76 feet in 2004 and 70 feet in 2015. The greatest areas of change in the water table occurred in southwest portions of Sherman County where the average rate of decline from 2004 to 2015 was over 20 feet. Much of Sherman County and portions of Thomas and Sheridan County averaged declines of 12 feet. 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 GMD4."

Lane Letourneau, Program Manager for DWR's Water Appropriations Program, presented an oral statement in support of the LEMA. Mr. Letourneau stated that DWR has reviewed the proposed LEMA plan and found that it meets the standards to begin the hearing process. He also stated that DWR views the proposed LEMA as meeting the statutory mandates "requiring the chief engineer to provide due consideration to water management or conservation measures previously implemented by the water-right holder." Mr. Letourneau explained that the plan would not require pumping reductions from water right holders who are already conserving and already meeting the stated pumping goals.

Individual members of the public were given the opportunity to speak at the hearing. Eight individuals offered oral comments at the initial hearing; some of them also submitted written comments at the hearing or at a later date. These comments, oral and written, have all been taken into account in the preparation of this order and the findings herein. The following individuals spoke at the hearing:

Scott Ross, of Stockton, Kansas, testified at the hearing and offered a written statement. In his oral testimony, Mr. Ross, principal of Water Rights Investigative Service, LLC, spoke on behalf of his family's interests in the area, both agricultural and business-related. He stated that he was involved in the Sheridan 6 LEMA process from the early 1990's through the passage of the LEMA statute in 2012. His concern is the

district-wide scope of this LEMA plan. According to Mr. Ross, "the intent [of the LEMA process] was always to have a smaller, more personalized local group develop processes" such as the Sheridan 6 LEMA, which has been a "great success."

In his written testimony, Mr. Ross stated that he is generally in favor of the LEMA process. He watched with great interest the process of how the Sheridan 6 LEMA came to be, including the passage of the new statute to enable LEMAs to be created. He described with great detail GMD4's development of aquifer sub-units and high priority areas within the GMD, the investigation of various management techniques and concepts, and the intensive efforts to involve the local water users in each stage of the process. Mr. Ross characterized the results of the first 5 years of the Sheridan 6 LEMA's existence as "a resounding success." He then argued against the proposed boundaries of the district-wide LEMA proposal, urging that "more data can and should be collected and more analysis done to target specific areas in need of corrective control measures." To illustrate his position, he cited a number of factors regarding the eastern half of Sheridan County, including the following:

> "The area encompasses 360 square miles of surface area east of Highway 23. It is underlain by 2 fresh water aquifers, the alluvial aquifers of the Saline and South Fork Solomon Rivers and their tributaries, as well as the High Plains Ogallala Aquifer.
>
> This area contains 285 permitted wells some are diverting water from both aquifers, some from only one. Among these 285 wells, 103 of them have or should have water Level Measurement Tubes installed for the purpose of measuring water levels.
>
> The water levels in High Plains Ogallala aquifer are measured at least annually by 16 wells as recorded within the Kansas Geological Survey's WIZARD database. At least two of these wells are most likely alluvial wells or at best include both alluvial and High Plains aquifers. Several townships within this area have no recorded water level measurements, and yet they are being included. Several other townships included in this area show increased water levels. . . .
>
> [GMD4] provides for their recharge calculation to use 1/2 inch of precipitation recharge per acre. Based on USGS 87-4230, currently accepted data, eastern Sheridan County would have a recharge value of between .875 and one inch per acre or conservatively 250 acre-feet per 2-mile circle more water to appropriate. The water users in eastern Sheridan County have little reason to be restricted. . .
>
> This area includes water users who utilize alluvial aquifers not necessarily connected to the High Plains Ogallala Aquifer. They would be forced to act to establish their right before they could be removed from this proposed LEMA."

Mr. Ross explained that the LEMA process was intended to be developed by water users themselves, and to only apply to those users' local area within a GMD rather than to a GMD as a whole. He asserted that the LEMA proposal should be returned to the GMD4 Board of Directors with a recommendation to focus on the already-designated high priority areas (other than Sheridan 6), with inclusion of local input.

Pat Haffner of Hoxie, Kansas, expressed concern about whether the proposed LEMA boundaries are reasonable. He stated that some areas within GMD4 meet the criteria for excess groundwater decline or withdrawals exceeding recharge, but many areas within the GMD do not meet these same criteria. He contends the data does not support including the entire GMD in this LEMA proposal. He suggested "we might be pushing this a little fast," and "if we're going to do it, we ought to have it right, we ought to have the boundaries right and we ought to know what we're really doing here."

Mike McKenna of Jennings, Kansas, spoke on behalf of a property owner in Sheridan County. He expressed doubt that GMD4 has demonstrated the need for a LEMA regarding townships that are marked as blue or green on the KGS map illustrating groundwater level declines. He objected to additional levels of regulation and bureaucracy in that area of Sheridan County.

Lori Wilson, who lives southeast of Colby, Kansas, spoke in favor of approving the proposed LEMA plan. She stated that, while restrictions are never fun, the fact that water levels have declined considerably is a fact where she lives. She stated, "where we live, we can't go any deeper." She stated that the water levels in wells serving her two windmills had dropped 21 feet this year. She urged approval of the LEMA plan to protect water availability for future generations.

Chastity Mader, who owns property north of Quinter, Kansas, in both Sheridan and Gove Counties, agreed "we all need to do our part to conserve water." She expressed concern as to whether the proposed plan would only impose restrictions on agricultural users and not on towns. She described her family's conservation methods, including only watering one circle, irrigating that circle only when needed and only at night to conserve water, not watering their lawn, and only watering the windbreaks in times of extreme heat. She also had questions about how proposed restrictions might affect her property; because these questions were outside the scope of the hearing, she was referred to GMD staff for answers.

Harold Murphy, who lives south of Selden, Kansas, stated that he had concerns about the proposed boundaries in that it was his understanding, "where we've already been in the LEMA, that's been factored in, and we'll still have our LEMA." This

statement would indicate that he lives within the Sheridan 6 LEMA. He expressed concern about an impact of a corrective control provision in the Sheridan 6 LEMA, which he assumed would apply under the proposed LEMA. He also expressed general concerns about the proposed LEMA's impact on livestock operations.

Bert Stramel, who farms south of Colby, spoke at the hearing and subsequently submitted comments in writing. Mr. Stramel stated that he was intensively involved with the creation of the LEMA rules prior to the Sheridan 6 LEMA, and has intensively followed the process of the proposed GMD4 LEMA. He stated the LEMA process was "meant for locals to submit a smaller area to the chief engineer through the GMD4, or through a GMD", whereas the GMD4 LEMA "has been more of a GMD designed plan that has been forced upon the irrigators -- or against the water users, I should say." He emphasized, however, that "I wholeheartedly believe we need restrictions in the entire District." Mr. Stramel also contends the LEMA would take, or at least deny access to, a private property right. He alleges the color-coded township map was changed over time to gain more votes to support it. He rejects the GMD's characterization that recent GMD board election results reflect support for the LEMA; he claims many other factors influenced the outcome of those elections.

In his written comments, Mr. Stramel opposed the LEMA for a variety of reasons. He wrote, "[t]his plan was submitted by the local GMD and will be forced upon water right holders who never requested such a plan." He alleged the plan would deprive him of the full value of his water right without his consent and that the restrictions would violate current water law by disregarding the principles of prior appropriation. Mr. Stramel stated that at every meeting he attended, the public wanted to vote on the LEMA, but GMD4 staff refused. He alleged that the GMD4 informational meetings did not adequately educate the public on the LEMA proposal. He alleged this LEMA does not require the additional monitoring wells or the collection of any new data. Mr. Stramel described inconsistencies between the exemption from restrictions for certain townships, despite apparent waste of water in those townships. Mr. Stramel urged that this plan be sent back to GMD4 so they can educate and represent their constituents.

Jon Friesen of Colby, Kansas, spoke at the hearing and subsequently submitted comments in writing. Mr. Friesen expressed his concern for the protection of water rights, which he stated he fought to protect during his 12 years as a GMD4 board member. He also cited a level of distrust regarding how the most recent GMD4 board election results were tallied. He stated, "Our GMD Board represents us. It is solely funded from us, the water users and the landowners." Mr. Friesen complained that there was never a public vote or show of hands at a GMD board meeting as to whether the

proposed LEMA should be adopted. He also challenged the exclusive use of KGS data, based on a water level measurement that was higher in 2016 than in 2014 and 2015.

In his written comments, Mr. Friesen stated that the LEMA plan was never a grassroots plan for which the process was designed. He stated that, if the use of water rights is to be altered, there should be a public vote. He contended that water users' voices were not heard in this process and that this LEMA plan was "pushed by the State" and that the GMD board followed suit. Mr. Friesen challenges some of the corrective control provisions of the proposed LEMA. He also objected to what he believes were personal opinions given in the DWR testimony. Mr. Friesen requests this plan be returned to the GMD4 board for improvement and that a public vote of the GMD4 voters be held.

Public Comments Submitted in Writing Only

Some individual members of the public submitted written comments addressing the issues at hand. These comments have all been taken into account in the preparation of this order and the findings herein.

Sharon Stramel of Colby, Kansas, wrote in support of proceeding with the LEMA plan. She stated that she has been involved with farming all her life, both irrigation and dry land farming. In the last 2 years she has had to lower the pipe in her pasture well 17 feet and 23 feet. She described the water situation as "critical", and stressed the need for conservation measures to provide water for her and her grandchildren.

Max E. Mann, D.V.M. of the Quinter area, wrote with concerns about the boundaries of the proposed LEMA. Dr. Mann is a landowner, producer and water right holder in GMD4; he is a retired veterinarian who practiced in the Quinter area for 50 years. Dr. Mann states that there is a variation of the depth and saturated thickness of the water table of the Ogallala Aquifer underlying GMD4, and that the high priority areas of greatest depletion have been defined by data from the Kansas Geological Survey, as well as data from water right holders. This data comes from various sources, including well drillers' logs, pumping records and static water-level measurements. Dr. Mann states that the proposed district-wide LEMA boundaries do not reflect the hydrological data. He would support a LEMA in GMD4 if the boundaries were "defined by wells exhibiting the greatest drop in static water level."

Leonard Kashka, Jr., of Goodland, Kansas, wrote about the need for conservation of water and the Governor's encouragement of conservation in 2012. Mr. Kashka contends that the proposed LEMA's water use restrictions do not take into account the

conservation efforts already undertaken by some water users, which he considers discriminatory. He argues that, under the proposed allocations, some users who have overpumped their water rights will be less restricted than those who have conserved.

Doyle E. Saddler of Colby, Kansas, M.S. in Physical Geography and B.S. in Geology, wrote to challenge a number of aspects of the proposed LEMA. Mr. Sadler contends a GMD board member, rather than a GMD employee, should have given testimony at the hearing; DWR should stay neutral and abstain from supporting the plan; the KGS comments are misleading because an observation well measurement is only relevant to that well; creating a district-wide LEMA is, in effect, creating a new GMD, which required a public vote, meaning a district-wide LEMA should be subject to a public vote; the proposed corrective controls violate the principle of prior appropriation ("first in time is first in right"); drought provisions are nonexistent; GMD board members who do not have wells in the most restricted areas should refrain from voting on the proposal to avoid a conflict of interest; if water use restrictions are imposed, they should apply equally to all water rights; this LEMA plan will impact investment in ways that cannot be predicted, so a small board should not make this decision. Mr. Saddler stated his concurrence with the comments of Scott Ross.

DISCUSSION AND FINDINGS OF FACT

The purpose of this hearing, in accordance with the LEMA statute, is to resolve three factual issues, as delineated by K.S.A. 82a-1041(b):

(1) Whether one or more of the circumstances specified in subsection (a) through (d) of K.S.A. 82a-1036, and amendments thereto, exist;

(2) whether the public interest of K.S.A. 82a-1020, and amendments thereto, requires that one or more corrective control provisions be adopted; and

(3) whether the geographic boundaries are reasonable.

1) Do one of more of the circumstances specified in subsection (a) through (d) of K.S.A. 82a-1036 exist here?

The LEMA statute borrows these four circumstances from K.S.A. 82a-1036, which relates to the creation of Intensive Groundwater Use Control Areas. The four circumstances are:

(a) Groundwater levels in the area in question are declining or have declined excessively; or

(b) the rate of withdrawal of groundwater within the area in question equals or exceeds the rate of recharge in such area; or

(c) preventable waste of water is occurring or may occur within the area in question; or

(d) unreasonable deterioration of the quality of water is occurring or may occur within the area in question. K.S.A. 82a-1036.

Ray Luhman, Manager of the Northwest Kansas Groundwater Management District No. 4 (GMD4), submitted oral and written testimony in support of a finding that the LEMA plan meets the first two of these four IGUCA criteria.

Mr. Luhman stated that groundwater levels are declining or have declined excessively within GMD4, the area covered by the proposed LEMA. In support, he cited to KGS section level data, as represented on a color-coded map attached to the GMD4 testimony. (GMD4 Exhibit 1.) He stated that the townships used in the KGS calculations have at least 15 feet of saturated thickness. In the GMD areas marked as red, yellow and purple on the map, "there is at least a 0.5% annual decline in the water table over an eleven-year period." According to the exhibit, the eleven-year period covers 2004 through 2015. Mr. Luhman further stated, "[t]ownships exhibiting less than 0.5% decline rate have no restrictions imposed, only additional monitoring enforcement criteria." These townships are marked on the map as blue and green.

Mr. Luhman also contended the rate of withdrawal equals or exceeds the rate of recharge in the area of the proposed LEMA. In Mr. Luhman's report, GMD4 compared the estimated rate of annual recharge with two different amounts, (1) the amount of water reported by the water users as actually pumped, and (2) the maximum amount of water that could lawfully be pumped under those water rights. The data is given in annual district-wide totals, for each year in the seven-year period covering 2009 through 2015. (GMD4 Exhibit 1.1.)

The GMD cited KGS data indicating the annual rate of recharge for the seven-year period as a range, between 126,910 acre-feet per year to 160,320 acre-feet per year. (GMD4 Exhibit 1.1.)

The GMD cited water use record totals, derived from annual reports submitted by the water right holders within GMD4, for each of the seven years. (GMD4 Exhibit 1.1) These annual amounts, representing total water usage by all water right holders within GMD4, range from 307,051 acre-feet per year to 539,567 acre-feet per year. When the seven totals are averaged, the average annual usage for that seven-year period is 419,850 acre-feet per year.

The GMD exhibit indicates the total amount of water allocated for annual use in GMD4 is 848,476.9 acre-feet. (GMD4 Exhibit 1.1.) This data point represents the maximum amount of water that can be lawfully pumped each year under all the water rights within GMD4. (Actual usage may not lawfully exceed this amount although, as the data shows, actual usage may be less.)

To establish that the rate of withdrawal of groundwater within the GMD equals or exceeds the rate of recharge, GMD4 demonstrated that, for the seven-year period noted, the yearly maximum amount of water that may be lawfully used by all water rights within the GMD (848,476.9 acre-feet) exceeds the yearly rate of recharge (from 126,910 acre-feet to 160,320 acre-feet). GMD4 also demonstrated that the actual water used each year during these seven years (an average of 419,850 acre-feet) exceeds the yearly rate of recharge (from 126,910 acre-feet to 160,320 acre-feet). Moreover, in the year of least water use, 2009, the 307,051 acre-feet of water used far exceeds even the largest point in the range of recharge (160,320 acre-feet).

Brownie Wilson's testimony and report detailed the methodologies used by the KGS to obtain and calculate water level data in the proposed LEMA area, as well as their multiple review protocols. Ray Luhman testified that this data was used to develop the current LEMA proposal.

A significant number of the public comments challenged this LEMA plan based on the fact that the proposed area included townships GMD4 has designated as not currently experiencing excessive groundwater level declines. Indeed, GMD4 explicitly concedes this fact. GMD4 stated that "groundwater levels are declining excessively" in townships where the KGS found to have at least 0.5% annual water table decline. Those areas were marked on the KGS color-coded map as red, yellow and purple. In contrast, GMD4 stated that the areas marked blue and green, areas where KGS found the annual decline to be less than 0.5%, would have no restrictions imposed and would be subject only to monitoring and enforcement. There was no testimony suggesting that water tables have not declined or are not declining excessively anywhere within GMD4. Whether or not to include the green and blue areas is an issue more directly pertaining to whether the proposed boundaries are reasonable; this issue will be addressed below, relative to K.S.A. 82a-1041(b)(3).

Some public comments supported adoption of this LEMA to address severe water level declines, including personal corroboration of significant water level declines in the area. Other comments encouraged conservation measures even if they took issue with the details of this LEMA proposal.

The credible and relevant data provided by the KGS and used to develop this LEMA proposal corroborates GMD4'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 GMD4 LEMA.

After careful consideration of all the evidence, the Hearing Officer finds that this LEMA proposal meets the first criteria of K.S.A. 82a-1041(b).

(2) Does the public interest of K.S.A. 82a-1020 require that one or more corrective control provisions be adopted?

The public interest standard referenced here is the statutory declaration of the policy and purpose of the Groundwater Management District Act, as follows:

> "It is hereby recognized that a need exists for the creation of special districts for the proper management of the groundwater resources 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 for Kansas the benefit of its fertile soils and favorable location with respect to national and world markets. It is the policy of this act to preserve basic water use doctrine and to establish the right of local water users to determine their destiny with respect to the use of the groundwater insofar as it does not conflict with the basic laws and policies of the state of Kansas. It is, therefore, declared that in the public interest it is necessary and advisable to permit the establishment of groundwater management districts." K.S.A. 82a-1020.

Thus, in order for a LEMA plan to be considered in the public interest it must seek to further conservation and protection of groundwater resources, establish the right of local water users to "determine their destiny" regarding groundwater management, and meet both goals while in compliance with state law and policy.

According to Mr. Luhman's testimony, GMD4 emphasized the language in K.S.A. 82a-1020 regarding the public interest in allowing local water users to determine their own destiny with respect to the use of groundwater insofar as there are no conflicts with basic laws and policies of the state. GMD4 contended that, as long as a proposed LEMA comes from local GMD Board of Directors, and that the requested corrective control

provisions are consistent with state law, then the public interest component of K.S.A. 82a-1041(b)(2) is satisfied.

The GMD also contended there was significant public involvement in the process of developing this LEMA plan. According to Mr. Luhman, GMD4 held two public meetings and multiple board meetings with "many interested people attending" between January 2015 and June 2017. GMD4 also stated that it provided its water users information about a potential district-wide LEMA very early in the discussions, and that GMD4 created a webpage on the topic and updated it regularly. Mr. Luhman's testimony stated, "Beginning in January of 2015, the process was covered by at least 28 board meetings." The GMD also cited the outcome of a February 2017 election of members of the GMD Board of Directors as reflecting public support for the LEMA, although the minutes of that meeting do not reflect any of the positions of the candidates. (Exhibit 2.1.) GMD4 concluded that this LEMA proposal was "locally developed and locally requested."

GMD4 also cited excerpts from its Management Program dated September 19, 2016, addressing the potential for conflict, or at least inconsistency, between what might be in the public interest as expressed at the state level as compared to interpretations of public interest applicable to the specific region in which GMD4 lies. As described above, the law enabling the creation of Groundwater Management Districts simultaneously empowers local involvement in groundwater management while prohibiting local action from conflicting with state laws and policies. K.S.A. 82a-1020. The GMD4 Management Program concludes, "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." The Management Program declares GMD4's goals as conveying a clear expression of public interest and working with the Legislature and all appropriate state agencies to insure that they recognize, support and promote the local public interest expressed in the Management Program.

Mr. Luhman further cited the GMD4 Management Program's provision that the problem of groundwater depletion "may necessitate policies encouraging or mandating higher efficiencies of water usage along with efforts that reduce consumptive water use". This provision lists a number of possible actions to address the depletion problem, including the establishment of a LEMA. Thus, Mr. Luhman contends the proposal for this LEMA is "in the public interests as per our management program."

At least one public comment suggested this LEMA process does not meet the public interest criteria because no public vote was held to determine support or resistance.

The LEMA statute resolves this complaint. The LEMA law does not require a public vote, so the lack of one does not invalidate the LEMA process here.

Another public comment objected to the GMD characterizing the recent board election as reflecting a general support for this LEMA. As noted above, the minutes of that board meeting do not reflect any of the positions of the candidates. (Exhibit 2.1.) The record does not establish the outcome of the election as reflecting public opinion about the proposed LEMA, whether positive, negative or indifferent. Therefore, this board election is not persuasive as either supporting the LEMA or opposing it.

A few of the public comments objected to the adoption of this LEMA based on allegations that the involvement of the public was insufficient and that GMD4 did not allow for adequate public involvement in the development of this proposal. The complaints included claims that the public was not adequately informed and that the proposal had originated with the GMD rather than local individual water users. The criteria at issue here, as found in the LEMA statute, asks "whether the public interest of K.S.A. 82a-1020, and amendments thereto, requires that one or more corrective control provisions be adopted." In the context of the GMD Act, "public interest" is comprised of two primary considerations: proper management of groundwater and local input in that management. As found above, the need for proper groundwater management in GMD4 is not in serious question. It was fundamental to the creation of the district in 1976 and, as the record shows, it is more pronounced now.

However, there is disagreement as to whether this proposed LEMA meets the second component of "public interest" in K.S.A. 82a-1020: that local water users determine their destiny with respect to the management of groundwater. The LEMA statute itself gives guidance on this issue. According to K.S.A. 82a-1041(a), the first official step for creating a LEMA is when the "groundwater management district" recommends the approval of such a plan to the Chief Engineer of the Division of Water Resources. Under the Groundwater Management District Act, "*All powers granted to a groundwater management district* under the provisions of this act shall be exercised by an elected board of directors". (Emphasis added.) K.S.A. 82a-1027(a). The GMD Act envisions that the Board of Directors, elected by its voters and acting as their representatives, is the mechanism through which the local water users determine their destiny, at least as to powers granted by that Act. In this case, the GMD4 Board of Directors submitted their LEMA proposal to the Chief Engineer, which appears to meet the second component of the statutory "public interest" criteria of K.S.A. 82a-1041(b)(2).

In comparison, the statute allowing for the creation of water conservation areas, K.S.A. 82a-745, specifically states, "Any water right owner or a group of water right

owners in a designated area may enter into a consent agreement and order with the chief engineer to establish a water conservation area. The water right owner or group of water right owners shall submit a management plan to the chief engineer." K.S.A. 82a-745(a). Had the legislature included similar language in the LEMA statute, the analysis here may well have reached a different conclusion.

Although this statutory analysis seems to resolve the "public interest" matter, it is important to address the objections. Regarding the opportunity for public involvement, the record shows that GMD4 held two public meetings and at least 28 public board meetings at which the district-wide LEMA was discussed between January 2015 and June 2017. Ray Luhman testified that many interested people attended. Exhibits attached to GMD4 testimony include copies of sign-in sheets at public meetings held in Colby (97 signatures), Goodland (88 signatures), St. Francis (49 signatures), and Hoxie (60 signatures), Kansas. This evidence supports a finding of sufficient opportunity for public involvement.

A number of the public comments described personal involvement in, or knowledge about, the development of the Sheridan 6 LEMA and the creation of the LEMA concept. [See *In the Matter of the Designation of the Sheridan 6 Local Enhanced Management Area (LEMA)*; Dept. of Agriculture, Case No. 12 WATER 8366 (2012).] These comments explain that the original vision was that LEMAs would be initiated by a group of local water users within a GMD, and those individuals would then work through their GMD board to present a plan to the Chief Engineer of DWR. Although there is no reason in the record to doubt these explanations, that vision was not ultimately expressed in the language of the LEMA statute. [The fundamental rule of statutory interpretation "is to give the statute the effect intended by the legislature. . . If a statutory provision is clear from its plain language, then that language is to be applied as expressed." *Hawley v. Kansas Dept. of Agriculture*, 281 Kan. 603, 608, 132 P.3d 870 (2006)] As a result, this order must respect the statutory language of K.S.A. 82a-1041(a).

It is also noteworthy that the LEMA law's "public interest" criteria states that the public interest as defined in the GMD Act "requires that *one or more corrective control provisions* be adopted." (Emphasis added) K.S.A. 82a-1041(b)(2). This provision does not ask if the public interest requires the entire proposed LEMA be adopted. Thus, it is sufficient if the public interest (the need for groundwater management and the exercise of local input) requires even one corrective control. This provision is consistent with the two-stage hearing process in which the LEMA's proposed corrective controls can be addressed at a subsequent hearing.

After careful consideration of all the evidence, the Hearing Officer finds that this LEMA proposal meets the second criteria of K.S.A. 82a-1041(b).

(3) Are the geographic boundaries reasonable?

Finally, GMD4 contended the geographic boundaries of the proposed LEMA are reasonable. In support, Mr. Luhman noted that the proposed LEMA boundaries are the boundaries of the GMD itself. He explained that this GMD was created in 1976, based on a vote of the local water users, pursuant to statute. Now those boundaries are being used to establish further water conservation measures, specifically, this LEMA. According to Mr. Luhman, each township within GMD4 was analyzed for its respective annual decline rate from 2004 to 2015 using KGS section level data. The LEMA plan recognizes these differing rates of decline and proposes water use restrictions accordingly. Those townships demonstrating an annual water level decline of less than 0.5% will not have pumping restrictions imposed because 75% of the saturated thickness will remain in 50 years, but they will be subject to increased compliance and enforcement provisions. GMD4 states that, in light of the 5-year scope of this plan, the Board of Directors "deems such decline rates acceptable for now."

Regarding the townships with at least 0.5% annual water level decline, the GMD discussed how "zoned values", based on net irrigation requirements, were used to differentiate irrigation restrictions in the townships where restrictions would be imposed. The GMD also explained the water use restrictions proposed for stockwatering. To the extent that these discussions address the merits of the LEMA's potential restrictions, they are beyond the parameters for consideration in this stage of the hearing process. These discussions are only appropriate insofar as they are alleged to justify the boundaries.

In supplemental testimony, GMD4 contended the district-wide scope of the LEMA will serve a number of purposes, all of which support a finding that the boundaries are reasonable. First, the LEMA will encourage conservation of water because it will reward users who conserve while reducing usage in areas of greater decline. To this end, approximately 82% of water rights within the GMD (basically those in areas of at least 0.5% annual decline) will have a reduced allocation of water under the LEMA. The remainder, the areas of lesser decline, will be subject to increased monitoring and enforcement, but not a reduction in usage. DWR testimony corroborated the notion that this LEMA would not require pumping reductions from water right holders who are already conserving and already meeting the stated pumping goals.

Second, the GMD asserted the LEMA will promote improved management. Increased monitoring by all irrigation users, as required under the LEMA will educate water users and encourage more judicious use of water. Third, the GMD contended the LEMA will create an incentive for water users located in the townships currently below 0.5% annual decline (marked as blue and green on the KGS map) to judiciously use water to prevent their townships from experiencing more decline and thereby becoming eligible for possible reductions in allocations in the future. Four, the inclusion of all townships within the GMD will allow for adjustments in corrective controls as areas experience greater or lesser decline, rather than a revision of boundaries along with new calculations. The GMD asserts the ability to adjust allocations up or down as the water table changes is a more effective and efficient method of management.

GMD4 responded to the complaint that the district-wide boundaries of this LEMA fail to implement corrective controls on a sub-aquifer basis. The GMD alleged the proposed LEMA identifies, and responds to, smaller aquifer sub-units because varying restrictions will be imposed based on the existing circumstances in different areas.

For all the reasons just described, GMD4 contends the district-wide boundaries of this proposed LEMA are reasonable.

Of the three factual findings that must be met at this stage for the LEMA plan to proceed, this third finding, whether the boundaries are reasonable, generated the most controversy. Even individuals who challenged the boundaries did so while stating support for the LEMA process in general. The main complaint about the boundaries fundamentally asserts that, although additional reductions in use are appropriate in some areas within GMD4, some areas do not currently need such reductions and therefore, applying the LEMA to the entire district is unreasonable. To put it another way, the argument asserts that the boundaries of a LEMA within GMD4 would be reasonable if they only covered the areas of greatest water table decline.

The key term here, "reasonable", is defined as being in accordance with a rational ground or motive. *Merriam-Webster Dictionary*, available at https://www.merriam-webster.com/dictionary/reasonable; https://www.merriam-webster.com/dictionary/reason. The question, then, is whether the LEMA's inclusion of areas, specifically townships, with lesser water table declines is without a rational basis. If substantial credible evidence in the record demonstrates a rational basis for the inclusion, it must be found to be reasonable.

The context of delineating areas for groundwater management efforts presents particular problems. There is an inherent problem when surface, or political, boundaries

are used to affect the varying and complicated hydrological realities of water sources existing under the ground. In the *Denver Water Law Review*, James H. Davenport shares water law expert Professor Joseph L. Sax's summary of the dilemma:

> "In 2001, Professor Sax urged the importance of reconciling 'hydrologic reality (or rationality)' with 'managerial practicability' when considering watershed management: 'One profoundly important question as one ponders watershed management is to what extent we may have to break problems down into artificial units simply to be able to cope with them at all. The watershed, or whatever the hydrologically-rational unit may be, usually bears little if any relationship whatever to governmental units at any level- from the county to the country. Nor is there any hydrological or ecological measure of managerial capacity.'" James H. Davenport, *Less is More: A Limited Approach to Multi-State Management of Interstate Groundwater Basins, 12 U. Denv. Water L. Rev. 139 (2008)*(citation omitted).

As Professor Sax explains, groundwater management decisions employing political boundaries can never be perfect. Nonetheless, management decisions must be made. Those decisions are valid if based, to the extent possible, on relevant credible scientific data.

In this case, GMD4 has clearly stated that there are differences in annual water level decline throughout the district. GMD4 relied on KGS data regarding groundwater declines. KGS gathered water level data from a network of well measurements and calculated township-level data, using mathematical interpolations and computer modeling. The resulting township-level data is represented in the record by a color-coded map. (GMD4 Testimony, Attachment 1.) GMD4 defined the areas of excessive decline as those with at least 0.5% annual decline, the townships shown in red, yellow and purple. The GMD stated, "88% of the townships within GMD 4 have declining water tables." These areas of excessive decline represent approximately 82% of the water rights within the GMD4 boundaries. These are the areas in which the LEMA would require reduced water use. There was little, if any, objection to the creation of a LEMA in the areas of excessive decline.

The question is whether it is reasonable to include the other townships in the LEMA. The GMD has clearly conceded that the LEMA boundaries will include townships experiencing less than 0.5% decline, the areas marked on the map as blue and green. The GMD emphasized that these areas will not see reductions in use, only increased monitoring and enforcement. As outlined above, GMD4 set forth several justifications for doing so (basically, improved conservation and more effective

management). In the most general sense, the objections allege that these townships should not be included because they do not have the more serious level of water table decline. In other words, could a LEMA boundary be found to be reasonable even if it includes areas within it that have no currently demonstrated need?

To address this complaint, one must first recognize the inherent imprecision described by Professor Sax above. As simplistic as is it to say that water levels do not respect township boundaries, this concept is unavoidable when determining the reasonableness of these proposed LEMA boundaries.

Against the backdrop of that managerial dilemma, we need to resolve whether it is reasonable to include areas not currently experiencing excessive decline within a LEMA, along with areas definitely experiencing excessive decline. The same dilemma exists as to recharge rates. The LEMA statute seems to anticipate the unpredictable set of circumstances that could arise with groundwater management because it simply requires the boundaries to be reasonable.

In this case, 88% of the 155 townships within the proposed district-wide LEMA are experiencing sufficient water level declines to meet the statutory benchmark for need. The other 12% of townships are scattered throughout the district, some nearly surrounded by townships designated as in excessive decline, others situated along the district's borders, adjacent to townships designated as in excessive decline. The townships not in excessive decline are, nonetheless, included within the GMD. It was determined, as long ago as 1976, that these townships (the 12%) were appropriate for inclusion in a groundwater management district. When the district was first created, part of the process required the Chief Engineer to approve the petition to organize a GMD if certain criteria were met. K.S.A. 82a-1024(b). One of those criteria states, "The lands proposed to be included in the district substantially comprise a hydrologic community of interest." K.S.A. 82a-1024(b)(1). The water level declines and recharge rates throughout the district must have varied widely from each other at that time, yet they were found to comprise a hydrologic community of interest. Although the inclusion of the "12%" townships in the GMD is not, by itself, conclusive that inclusion in the LEMA is reasonable, it supports such a finding.

A finding that this district-wide boundary is reasonable does not mean a smaller boundary would necessarily be unreasonable. However, the LEMA statute only allows evaluation of the boundaries as proposed.

Some of the objections to the proposed boundaries contend it was never the intention of the individuals crafting the LEMA process that a LEMA cover an entire

GMD. The same analysis used in the "public interest" section of this order applies here. This order is restricted by the language of the LEMA law. That law does not prohibit a LEMA boundary from coinciding with the boundary of an entire GMD, nor does it require that the boundaries of a LEMA be smaller than the boundaries of the requesting GMD.

It should also be noted that some comments supported the adoption of the proposed district-wide LEMA. These comments cited personal observations of severe decline in groundwater levels, urged preservation of the groundwater for future generations, and requested that all types of water use in the district (ex., irrigation, stockwatering, municipal) share some of burden of reduced pumping.

The record indicates the following: (1) 88% of the townships within the proposed LEMA are experiencing excessive groundwater level declines as evidenced by KGS data, (2) despite the fact that framing groundwater realities within political surface borders is inherently imprecise, the KGS data is relevant and credible and (3) including the "12%" townships, those not currently experiencing excessive decline, within the proposed LEMA boundaries will encourage conservation and promote more effective and efficient groundwater management in the future. These facts establish a rational basis for the proposed LEMA boundaries. After careful consideration of the record as a whole, the Hearing Officer finds this LEMA proposal meets the third criteria of K.S.A. 82a-1041.

A final note may be in order. The public comments received at the hearing and in writing have been seriously considered; indeed, they raised issues of significant concern. However, some of the questions and comments pertained to matters beyond this Hearing Officer's authority to address, such as what the impact of this LEMA may be on the existing Sheridan 6 LEMA (one individual apparently assumed the Sheridan 6 LEMA would remain intact and hoped it would, while another individual assumed the district-wide LEMA would replace it and argued against it; the record does not clarify this situation.) All of the comments received, whether relative to this hearing or the next, are now part of the full record of these proceedings. Undoubtedly,the Chief Engineer will seriously consider and resolve these concerns in the next phase of these proceedings. Even so, the existing comments may be submitted again, along with additional public comments, in the next stage of this process. Pursuant to the LEMA statute, the Chief Engineer shall conduct another public hearing, after which the Chief Engineer may approve or reject the proposed LEMA plan or return it to GMD4 for revisions or modifications, as long as the modifications do not impose reductions in groundwater withdrawals greater than those proposed in the LEMA plan. K.S.A. 82a-1041(c)(3)(4).

SUMMARY OF FACTUAL FINDINGS

Based on substantial competent evidence, as provided by the testimony and comments offered at, or in relation to, the initial public hearing, the following facts are found to be true:

(1) one or more of the circumstances specified in subsection (a) through (d) of K.S.A. 82a-1036, and amendments thereto, exist, specifically that groundwater levels in the area in question are declining and have declined excessively and the rate of withdrawals within the area in question exceeds the rate of recharge in the area; and

(2) the public interest of K.S.A. 82a-1020, and amendments thereto, requires that one or more corrective control provisions be adopted; and

(3) the geographic boundaries are reasonable, pursuant to K.S.A. 82a-1041(b).

THEREFORE, the Groundwater Management District No. 4 District-Wide Local Enhanced Management Area proposal satisfies the three initial requirements for approval as set forth in K.S.A. 82a-1041(b).

ENTERED THIS 23RD DAY OF SEPTEMBER 2017.

Constance C. Owen

Constance C. Owen, Hearing Officer

CERTIFICATE OF SERVICE

On this 23RD day of September 2017, I hereby certify that the original of the foregoing Order on Initial Requirements of the Groundwater Management District No. 4 District-Wide Local Enhanced Management Area (LEMA) was sent by electronic mail and by U.S. First Class Mail, postage prepaid to:

David W. Barfield, Chief Engineer
Division of Water Resources
Kansas Dept. of Agriculture
1320 Research Drive
Manhattan, KS 66502
David.Barfield@ks.gov

and true and correct copies of this Order on Initial Requirements of the Groundwater Management District No. 4 District-Wide Local Enhanced Management Area (LEMA) were sent by the same methods to:

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Constance C. Owen

Constance C. Owen, Hearing Officer

KANSAS DEPARTMENT OF AGRICULTURE

BEFORE THE DIVISION OF WATER RESOURCES

In The Matter of the Designation of the Groundwater Management District No. 4 District-Wide Local Enhanced Management Area (LEMA) in Cheyenne, Decatur, Rawlins, Gove, Graham, Logan, Sheridan, Sherman, Thomas and Wallace Counties in Kansas.

PROCEEDINGS had before CONSTANCE C. OWEN, Hearing Officer, Division of Water Resources, Kansas Department of Agriculture, in the Cultural Arts Center at Colby Community College, 1255 S. Range Avenue, Colby, Kansas on the 23rd day of August, 2017 at 9:00 a.m. and reported by Marilyn F. Bailey, CSR, RMR, CRR, Colby, Kansas.

I N D E X

HEARING OFFICER OWEN: Good morning. Thank you all for coming this morning. My name is Connie Owen and I'll be serving as the Hearing Officer this morning. I have a few preliminary comments before we will accept information from the agencies and people who are here to make presentations and share their comments today.

For the record, this hearing is being conducted for the proposal for a Local Enhanced Management Area District. The title of which is In the Matter of the Designation of the Groundwater Management District Number 4 District-wide Local Enhanced Management Area in Cheyenne, Decatur, Rawlins, Gove, Graham, Logan, Sheridan, Sherman, Thomas and Wallace counties in Kansas.

We are at the Frahm theatre at the Arts and Cultural Center in Colby, Kansas. Today's date is August 23rd, 2017. This hearing was scheduled to begin at 9:00 a.m. It is now 9:08.

We have a court reporter present to record today's proceedings. There are sign-in sheets in the lobby that I think you probably all saw. If you're here to attend and listen, thank you, and I hope you signed in. If you would like to offer

public comment a little bit later in the proceeding, I hope you signed in too, because I need a roster of the people that want to comment.

If you signed in to comment, and you changed your mind, that's okay too. I'll call out the name later and you can certainly pass if you changed your mind.

The sequence of events this morning is first we will hear from the Groundwater Management District and any witnesses or evidence they have. Then we'll hear from the Division of Water Resources, and any other entities that have signed up to speak. And then we'll hear from members of the public. And there's a microphone down here in front of the stage when we get to the members of the public segment of our hearing.

People who wish to submit written comments may do so today, or they have -- you have until September 13 to submit written comments. That means the comments need to be received by DWR before the end of the day on September 13. They can be mailed, they can be e-mailed. And there are representatives from DWR here today that can tell you the specifics of that if you need to know. They were also published in the notice of

hearing that was published about today's date.

After the close of business on September 13, there will be no more comments accepted for the purposes of today's hearing. Should the LEMA process continue, there will be opportunity for public comments in the future.

Under the LEMA statute, K.S.A. 82a-1041(b), this hearing can only address three specific matters of fact. This hearing does not get into whether or not a LEMA should ultimately be approved. This hearing does not address the proposals or corrective controls. The only thing this hearing can address are the three statutory preliminary facts that have to be established for the process to continue.

In brief, those three issues of fact are:

Whether one or more of the circumstances specified in that (a) through (d) of K.S.A. 82a-1036 apply. Basically, is there a need?

The second is whether the public interests, as described in K.S.A. 82a-1020, requires that one or more corrective control provisions be applied. In other words, is it in the public interest to have any corrective controls to address the need?

And third, whether the geographic boundaries are reasonable.

Those are the three things that we cover today, and those are the only three things we cover today.

At the beginning of each speaker's time I would like the speakers to identify themselves. If they're representing an agency or an entity, I'd like them to identify that. When members of the public come up I'd like you to please give your name and address and then we'll be happy to hear your comments and your information. The agencies and entities are invited to come up on the stage so that it's easier for the members of the public to hear what they have to say, and for our court reporter to understand what they have to say.

So we will begin with Groundwater Management District, so GMD4, you're at the plate.

RAY LUHMAN: Okay. My name is Ray Luhman. I'm the manager of Groundwater Management District Number 4 here in Colby. We have provided the Hearing Officer and DWR with our written testimony. I will go over that. I have a little

bit to add at the end and then I will stand for questions if you have any.

This written testimony is from the Northwest Kansas Groundwater Management District Number 4. It, again, addresses the following questions that you had already noted that you can take into account.

Number one, whether one or more of the circumstances specified in section (a) through (d) of 82a-1036 exist. These circumstances are whether the groundwater levels in the area are declining or have declined excessively.

The rate of withdrawal of groundwater within the area in question equals or exceeds the rate of recharge.

The preventable waste of water is occurring or may occur within the area.

And unreasonable deterioration of the quality of water is occurring or may occur.

Groundwater levels in GMD4 are declining or have declined excessively. Townships used in those calculations which were based on the KGS section level data have at least 15 foot of saturated thickness in the GMD areas marked as red, yellow or purple. And that would be in the

testimony that I had given which is part of the actual proposal. Those are -- there's at least .5 percent annual decline in the aquifer over an eleven year period.

Therefore, groundwater levels are declining excessively in those areas. Townships exhibiting less than .5 percent decline rate have no restrictions proposed, only additional monitoring criteria.

The rate of withdrawal of groundwater within GMD4 equals or exceeds the rate of recharge. Specifically Kansas Geological Survey data estimates the District-wide recharge at 126,910 acre foot to 160,320 acre-feet.

And again you can see our attachment to our testimony.

District-wide water rights have been allocated at approximately 848,500 acre-feet to be allowed to be pumped. District-wide yearly pumpage range from 307,051 acre foot to 539,567 acre foot from 2009 through 2015. Therefore, there was an excess of between 688 and 721,000 acre foot allocated and recharged. And between 146,000 and 412,000 acre foot of water pumped more than recharged in the period 2009 through 2015.

The second question is whether or not the public interest of K.S.A. 82a-1020 requires one or more corrective control provisions.

The 82a-1020 is the legislative declaration relative to establish the groundwater management districts in Kansas. It declares that in the public interest it is necessary and advisable to permit 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.

So long as the LEMA process comes from the local board of directors and whatever corrective control provisions are requested out of that process are consistent with state law, we contend that the public interest of K.S.A. 82a-1020 has been satisfied.

With a little bit more detail, the District-wide LEMA process was presented to the public at two different public meetings, multiple GMD4 meetings with many interested people attending between January 15th -- or January, 2015 and June, 2017. This represents significant public involvement in the process that resulted in

the locally developed and locally requested plan that the chief engineer is hearing today.

You know as kind of a side note, this past February we had our annual meeting in Goodland. At that meeting we had three board of directors positions up for election. One seat was unchallenged. The other two seats had challengers. Each seat that had a candidate that supported the District-wide LEMA and one that opposed the District-wide LEMA. The candidates supporting the District-wide LEMA were voted into office in excess of 60 percent of the votes. Again, there's an attachment in the -- in the testimony that we provided.

In any event, GMD4 has provided GMD4 water users information very early in the discussion of a District-wide LEMA. The evidence provided the water users showed that adopting and implementing corrective control provisions that would reduce water use and would extend the life of the regional aquifer.

Additionally a web page was created to keep the process available to the public and was updated regularly by the GMD4 staff. Beginning in January of '15, the process was covered by at

least 28 board meetings.

Along that line I have some additional testimony that does not at this time exist in our written testimony we provided. From the Groundwater Management District management plan, there is a section that -- that states that the public interest, or it handled -- or -- or deals with public interest. The Groundwater Management District Act made a state policy that the board, that the local landowners and water users were to determine their own destiny in regard to Groundwater Management District so long as local decisions are consistent with state law. In this spirit the management program is being written to embody the more local definition of public interest which the board believes is the best for the landowners and the water users of this GMD, and hence, best for the state of Kansas.

Furthermore, in our management program, one of the policies or programs we have is the direction and influence of existing development. This -- this particular sub problem of depletion may necessitate policies encouraging and mandating higher efficiencies of water use along the efforts that reduce consumptive water use.

So we would maintain that it is also in the public interests as per our management program that we propose this District-wide LEMA.

Then the final question to be answered was whether or not the geographic boundaries are reasonable.

The proposed LEMA has very definite boundaries. Those boundaries being the entire area of Groundwater Management District 4.

We kind of go into some detail in the written comments about how the District was formed and that type of thing. Basically, they're not germane to this particular issue. But it does pertain to the entire Groundwater Management District boundaries.

Now within these larger boundaries of the District there are sub-boundaries. These boundaries are each township within the District. Each township was analyzed for its respective annual decline rate from 2004 through 2015, using KGS section level data. Based on this decline rate various restrictions in pumping are proposed.

These restrictions are based on zone values for the District. The zoned values being based on the Natural Resource Conservation Service

Net Irrigation Requirements. And we have cites in the written testimony that direct you to the background information on the development of the Net Irrigation Requirements.

The State of Kansas has used these NIR amounts since at least 1994 and referenced the NIR amounts in at least K.A.R. 5-5-9, K.A.R. 5-5-10, K.A.R. 5-5-11 and other regulations. The GMD Board, or 4 Board used the NRCS, Net Irrigation Requirement, for 50 percent and 80 percent values for corn by county. The 50 percent net irrigation represents the net irrigation requirement for corn that would be sufficient in five out of ten years, which is considered to be normal, based on precipitation that would be expected in that five year period.

The 80 percent NIR represents the net irrigation requirement for corn, which will be sufficient in eight of ten years, considered to be a dry year number, and that, again, would be based on the precipitation that would be expected in eight out of ten years.

These figures were interpolated to derive a value at the western edge of each zone within the District. Townships exhibiting greater than 2

percent annual decline rate were assigned the 50 percent net irrigation requirement for corn by that zone. Townships exhibiting between 1 and 2 percent annual decline rate were assigned the 80 percent net irrigation requirement for that zone. Townships exhibiting between .5 and 1 percent annual decline rate were universally assigned an 18 inch allocation District-wide. Those townships that are below the .5 percent decline rate will not have restrictions on their diversions imposed. The only provisions of this request that will apply to them are the increased compliance and enforcement.

The GMD4 Board determined the townships with less than .5 percent annual decline appropriate, because 75 percent of the saturated thickness in those areas will remain in 50 years. Given the limited five year scope of this proposal, the GMD4 Board deems such decline rates are acceptable for now.

In addition, we are currently proposing that stockwater rights be restricted based on their zones. Livestock and poultry use will be restricted to 76 percent of the quantity of water deemed to be reasonable for livestock and poultry

in K.A.R. 5-3-22 in townships greater than 2 percent average annual decline. By the way, we don't have any facilities in those townships. And 85 percent of that same amount would be the average annual decline -- would be set for the township with average annual decline between 1 and 2 percent.

And that's based right now on the -- on the permit in effect December 31st, 2015.

I think there is a possibility that if this procedure goes forward, that the District may make some testimony at the second hearing requesting some revision in that stockwater use. But that's -- that's kind of an issue for a later date.

In sum, we contend that the majority of the invested persons were made aware of the process and invited to participate. That the public had ample time to discuss the issues brought up. That the GMD4 staff appropriately facilitated the meetings and discussion resulting in a LEMA proposal that has been locally crafted and adopted by the board of directors. And that the public interest as envisioned in 82a-1020 will be served by the adoption of these corrective

control provisions included in a District-wide LEMA.

That concludes my testimony. I will stand for questions.

HEARING OFFICER OWEN: I don't believe I have any questions at this time.

RAY LUHMAN: Okay.

HEARING OFFICER OWEN: Thank you very much.

RAY LUHMAN: Okay. If I can get back down the stairs I got her made.

HEARING OFFICER OWEN: The next agency that I'll invite to the stage will be Kansas Geological Survey.

BROWNIE WILSON: My name is Brownie Wilson. I am the Geographic Information Systems and Support Services Manager for the Geohydrology Section at the Kansas Geological Survey.

The KGS is a research and service division under the University of Kansas and has been directed by the Kansas Water Plan to provide technical assistance to the three western Groundwater Management Districts, the Kansas Water Office, and the Kansas Department of Agriculture Division of Water Resources, in the assessment,

planning and management of the groundwater resources of western Kansas.

At the request of GMD4 in May of 2016 the KGS looked at the changes in the saturated thickness of the Ogallala/High Plains aquifer from 2004 to 2015, within the District boundaries.

The saturated thickness is defined as the thickness of the aquifer in which the pore stages are saturated with water. For the High Plains aquifer this is the difference in elevation between the underlying bedrock and the water table for a given year.

In northwest Kansas the bedrock surface is typically composed of shale layers underlying the unconsolidated aquifer sediments. Because of its impervious nature to groundwater flow, the bedrock represents the bottom of the aquifer. In 2006 the KGS reviewed the lithologic descriptions from tens of thousands of driller's logs and published updated maps of the Ogallala bedrock surface across western Kansas. And I have those references at the back of the written testimony.

Each year the KGS and the Kansas Department of Agriculture Division of Water Resources measures the depth to water from a

network of approximately 1400 water wells across the High Plains Aquifer as part of the state's Cooperative Water Level Program.

Customized software developed by the KGS coupled with Global Positioning Systems data is used to make sure the same wells are visited each year. The majority of water level measurements are taken in late December and early January using steel or electric tapes with precisions down to the hundredths of a foot. Measurements are field checked on-site at the time of the visit to ensure locational accuracy and that the current measurement is in --within historical trend -- the historical trend of past measurements. Additional statistical and GIS reviews are conducted later to identify abnormal or anomalous measurements. If deemed necessary well sites will be remeasured the same day or within a month, depending on the circumstances.

Collected water levels from the Cooperative Water Level Program, along with additional measurements from local, state and federal sources are stored and served online through the KGS' Water Information Storage and Retrieval Database, called WIZARD. WIZARD evolved

from the U.S. Geological Survey's Groundwater Site Inventory in the mid 1990s, and today represents the largest repository of depth-to-water measurements in Kansas.

Well site locations in the High Plains Aquifer and their associated water-level measurements were downloaded from WIZZARD to estimate the water table elevations for the 2004, 2009, and 2015 calendar years. The well site locations, based on their listed geographic coordinates were spatially mapped into the ArcGIS software platform, a GIS mapping software. Within GMD4 all of the measured well locations used in this project have been surveyed with hand-held GPS units, which typically have horizontal accuracy ranges of 12 to 40 feet.

The WIZARD database contains codes indicating the status of the site at the time the water level was measured. Most of the water level measurements across GMD4 were taken in late December and early January and contain blank or null status codes indicating static or near static water level conditions.

Past water level measurements that were coded to be anomalous from previous statistical

and geostatistical reviews were not included in this project along with measurements taken from locations where the well was obstructed, was pumping at the time of the measurement, had recently been pumped, or had nearby sites that were being pumping -- that were pumping at the time of the measurements.

The water level measurements were used to calculate the three year average winter depth to water at each site location -- at each well site, centered on the calendars years of 2004, 2009 and 2015.

For example, a well's three year average winter depth of water for 2004 are based on measurements taken in the months of December, 2002, January, 2003, February, 2003, December, 2003, January, 2004, February 2004, December, 2004, January 2005 and February of 2005.

Given most wells are only measured once a year, most of the well sites averages are based only on three measurements. One for each year in a three year period. Although some could contain over ten additional -- over ten individual measurements depending on the frequency a well is measured. The three year average water table

evaluations for 2004, 2009 and 2015 were then computed by subtracting the average depth-to-water values from the land surface elevation listed at each well location.

Three year winter averaging of water levels help smooth out single year variations in the water table caused by late or early season pumping, and allows for more well sites to be used for temporal reviews of water levels over decadal periods. For this project, only wells containing a computed three year winter average water level centered on the calendar years of 2004, 2009 and 2015 were considered. If a well site was missing a three year average value for one of these target years it was removed from the data set.

In addition, only wells in and within 20 miles of District boundaries were selected for further analysis. Under these selection criteria, 328 well sites were used with 277 of them located within the boundaries of GMD4.

To estimate the water table evaluations across GMD4, the well sites and their respective three year winter average values of 2004, 2009 and 2015 were interpolated into continuous water table services using ArcGIS's "Topo to Raster"

interpolation routine. Topo to Raster is an interpolation method specifically designed to create digital elevation models. For this project the interpolated surfaces were composed of uniform grid cells, 250 by 250 meters in size, each containing the estimates of the water table evaluations for 2004, 2009, 2015.

Within ArcGIS a polygon layer representing the Public Lands Survey Systems, PLSS sections, were overlain across the interpolated water table surfaces. The mean interpolated water table elevation, based on the cells occurring within each PLSS section was computed for 2004, 2009, and 2015. In a similar manner, each PLSS section had the mean bedrock elevation assigned from interpolated surfaces using published KGS reports along with the land surface evaluations downloaded from the USGS' National Elevation Dataset.

GMD4 was provided a Microsoft Excel spreadsheet and GIS files of the PLSS sections within the District, each coded with their average land surface, bedrock 2004, 2009 and 2015 water table elevations. Because the water table elevations are based on interpolated surfaces from wells measured during each time period, the change

in the water table between those years and the saturated thickness can readily be computed at the PLSS section level.

A review of the data was -- after a review of the data, it was mutually decided by GMD4 and the KGS to remove the well in Township 11 South, Range 27 West, Section 13. This well showed a significant water level decline from 2004 to 2015, not seen in any other well in the region over that same period, and was felt to be biasing the overall section-based estimates in the southeast portions of the District. The well was removed from the dataset and the interpolation process and assignment of mean values for the overlying PLSS sections was repeated.

A second review of the data centered on the possible influence of alluvial wells. The Alluvial aquifer systems are associated with stream deposits, are a relatively shallow, close to the land surface, and have highly connected ground and surface-water interactions. In past High Plains Aquifer water level mapping exercises, both alluvial and Ogallala wells were used to estimate water levels as the two systems are in hydrologic connection to each other. However, if

the hydrologic connection between the alluvial deposits and the underlying Ogallala aquifer is small or impeded by a low permeable formation between the two systems, the interpolated water table surfaces could be slightly elevated or there could be a more dynamic temporal change in the water table introduced by including shallower depth-to-water measurements associated with alluvial aquifers.

To remove this possible influence, well sites coded as being screened solely in alluvial deposits were deleted from the dataset. If the geologic units were unknown or unlisted, wells that were located spatially within the extent of alluvial aquifer deposits or had drill depths less than 80 feet were individually reviewed relative to their surrounding neighboring wells. In these cases the wells were coded as being alluvial if their drill depths and past water level measurements reflected alluvial-type conditions.

A total of 60 wells were classified as alluvial with 11 being located within GMD4. All of these wells were found along the northern and eastern edges of the District. With these alluvial wells removed from consideration, the

interpolation process and assignment of mean values for the overlying PLSS sections was repeated.

Figure 1, which is presented in the written testimony, displays the three year average saturated thickness of the aquifer by PLSS section for 2004 and 2015 calendar years with the alluvial wells excluded. The average saturated thickness for GMD4 was 76 feet in 2004 and 70 feet in 2015. The greatest areas of change in the water table occurred in the southwest portions of Sherman county where the average rate of decline from 2004 to 2015 was over 20 feet.

Much of Sherman county and portions of Thomas and Sheridan county averaged declines of 12 feet. The major driver for these water declines is groundwater pumping as illustrated by published reports which shows statistically significant correlations exists between annual water level change and the annual groundwater use across GMD4. Thank you for your time today and I'd be glad to answer questions or provide additional information.

HEARING OFFICER OWEN: Thank you. I don't have any questions at this time.

BROWNIE WILSON: Okay. Thank you.

HEARING OFFICER OWEN: And our next agency representative will represent the Kansas Department of Agriculture, Division of Water Resources.

LANE LETOURNEAU: Thank you. My name is Lane Letourneau. I'm the Water Appropriation Program Manager for the Kansas Department of Agriculture's Division of Water Resources. I'm here today to provide testimony in support of the request by Northwest Kansas Groundwater Management District Number 4 to initiate a full District Local Enhanced Management Area.

As Mr. Luhman provided on the record, they provided us a copy of their plan, and after our review, we feel the request to initiate meets the standards established in K.S.A. 82a-1041, to start the hearing process.

We also feel the plan in its current form meets the requirements of K.S.A. 82a-1041 and K.S.A. 82a-744 requiring the chief engineer to provide due consideration to water management or conservation measures previously implemented by the water-right holder.

Because this plan provides allocations

based on inches -- acre inches per acre, and therefore someone who is conserving, and they're already at or below the acre inches per acre, and below that threshold, a pumping reduction is not required. Therefore they're currently meeting the goal.

And as the agency that administers the Kansas Water Appropriation Act and other laws applicable to water management, we fully support the local initiative to establish water management goals that conserve and extend the usable life of the Ogallala aquifer. We want to continue working with our stakeholders and be able to provide the conservation tools necessary.

And then lastly I want to say that this board needs to be proud of themselves for making the tough decisions now that will benefit future generations in northwest Kansas. Twenty years from now the people out here are going to look back and say, "Who did this for us?" And this board did it.

So with that I close.

HEARING OFFICER OWEN: Thank you. I have no questions.

Are there any other state or federal

agencies or entities that are here to speak today? I don't see any on the list.

The next entity I see is Scott Ross with the Water Rights Investigational Services.

Pardon me, we're adjusting the lights so we can see you.

SCOTT ROSS: I'm not much to look at. My name is Scott E. Ross. I'm a principal at Water Rights Investigative Service, LLC at 209 South Ash Street, Stockton, Kansas. But I'm here representing family ag and business interests of northwest Kansas.

I just want to very briefly express my concern for the development of this broad-based LEMA. As the name implies, LEMA is more the Local Enhanced Management Area. And I believe the initial development of this, I was involved in from basically the early 1990s through the adoption of the LEMA statutes in 2012, and I think the intent was always to have a smaller, more personalized local group develop processes that it worked so well. As an example of Sheridan 6 where a group of local users got together and formulated their plan and have made a great success.

And I believe that example can be used in

the future to develop other areas as the aquifer sub units that have already been developed have the potential of seeing that kind of progress. I think the broad-based process of a District-wide LEMA is probably wasting some effort that could be used in a more localized setting.

I presented some written testimony, I'll leave that as consideration, and thank you very much for your time.

HEARING OFFICER OWEN: Thank you. Now we're ready to go to the roster, members of the public who signed up to speak. Forgive me if I can't read your handwriting, I will read names and you're invited to come to the microphone. If you've changed your mind and you'd would rather pass, that's okay too.

Shawn Hendrich? Do I have that right, sir?

JOHN HENDRICH: No. John Hendrich, Goodland. And I do not have any testimony to give, I guess I signed the wrong sheet. I might make some comments during the public session but I have no testimony.

HEARING OFFICER OWEN: That's fine. And the public comments is what this is for.

JOHN HENDRICH: Right. And I guess I want to find out what all the information is provided me before I say much. Thank you.

HEARING OFFICER OWEN: All right. Thank you.

So just to clarify, the presentations from the governmental entities is over. So now is when it's time for us to hear from members of the public who wish to speak.

The next thing on my list is Pat Haffner. Do I have that right?

And before you start, sir, please tell us your name and address.

PAT HAFFNER: Pat Haffner. I'm from Hoxie. I'm here to voice my concerns about several things. But the main thing is the data that this is being based on, and the boundaries.

In my research and some other research, I feel it's incomplete. Not -- there's just not been enough work done to get the boundaries right. I -- I don't know that we meet the criteria for -- for some of these statutes, because of the -- there's -- there's a -- this 10 -- let me look at it here. 1036, "Groundwater levels" -- "(a) groundwater levels in the area in

question are declining and have declined excessively."

Well I don't believe that's, when referring to the District unit, there are areas of decline. But there are some large areas that haven't.

HEARING OFFICER OWEN: I'm sorry, sir, I couldn't quite understand what you said regarding that.

PAT HAFFNER: Well, I'm reading 1036 -- 82a-1036, and it's supposed to meet these criteria that "groundwater levels in the area in question are declining or have declined excessively."

I agree there are excessive decline in areas, but there's a lot of areas where there isn't. And we're throwing the whole District into, you know, we just put the boundaries around the whole thing. And I believe it needs to be studied quite a lot more to find out where the boundaries really need to be and then we're taking townships instead of -- if we're going to do this right, I think we ought to go a lot more intensive measurements and things like that. I do believe if you go to the eastern part of the District, there's only maybe 16 wells that have ever been

monitored in that area. And some of there are alluvial.

The other thing here is (b), "The rate of withdrawal and groundwater within the area in question exceeds the rate of recharge."

Well, we can go back to some of these same areas, and I don't believe we can support that in some areas.

And then we go -- but what I'm -- what I'm trying to get to the point is, I believe we might be pushing this a little fast. I don't believe the data's there to support a lot of what's trying to be pushed through here. And in my opinion we ought to, if we're going to do it, we ought to have it right, we ought to have the boundaries right and we ought to know what we're really doing here. And I don't think we're to that point yet, along with a lot of questions about why and what for on some of this stuff.

Other than that -- I'll go through my notes. Well, let's just leave it at that. You know, the question was whether one or more circumstances exist. Well, I think in our area there's not all the area --

(reporter asked for clarification)

PAT HAFFNER: I think there's areas that you meet criteria in GD4, but there's a lot of areas you don't meet this criteria. And to throw the whole District in, I think we're way off on our boundaries. And that's basically all I need to say today.

HEARING OFFICER OWEN: Thank you very much.

The next thing on my list is Ron Ball?

RON BALL: Pass.

HEARING OFFICER OWEN: Pass. The next name is Mike McKenna. Again, please state your name to make sure we have it right and where you live.

MIKE MCKENNA: Mike McKenna, Jennings, Kansas.

HEARING OFFICER OWEN: Thank you. Please go ahead.

MIKE MCKENNA: I'm here representing a property owner in Sheridan county. And I also express concern over item 3, is whether or not the geographical boundaries are reasonable.
I don't believe GMD4 has demonstrated the need for the townships that are colored in green and blue to be included in the geographical area

of the new proposed LEMA.

I believe it will establish an additional level of regulation and bureaucracy that the operators and property owners in that part of Sheridan county will be exposed to.

Thank you for allowing me to address you today.

HEARING OFFICER OWEN: Thank you very much.

The next thing is Lori Wilson. Please state your name and tell us where you live.

LORI WILSON: I'm Lori Wilson. And we live Colby, southeast of Colby. Township is actually North Randall.

But this isn't really -- I'm not used to doing this kind of a thing, but I have a huge concern, and I know that restrictions are never fun for anyone, and nobody ever, I guess no one desires to be put under more restrictions. But where we live on the -- on the, like, color-coded map that they sent out, like, we're on a, umm, like, where the water has declined quite considerably. And where we live, we can't go any deeper. Like, our home place, we're as deep as we can go for water, and we've drilled two different

wells on the place, and then we have access to a windmill south of Colby and access to a windmill that's just east of Colby. Both of them have been dropped 21 feet this year to keep pumping water for the cattle there. And I just think for the generations to come, for the livelihood of this -- of this county and just the whole District, we all have to do this for the best interests.

HEARING OFFICER OWEN: Okay.

LORI WILSON: Thanks.

HEARING OFFICER OWEN: Thank you.

The next name is Chastity Mader.

CHASTITY MADER: Hi, I'm Chastity Mader, and we have ground that is north of Quinter in Sheridan and Gove County, both. My main concern is, I agree that we all need to do our part to conserve the water, because, you know, we live in a section of Kansas where the weather is not reliable to back us up and we need that access to the aquifer.

My concern though is what is being done to limit the water by town too? Because maybe I missed it in there, I was trying to re-read all that. But is there any restrictions coming down on the people who live in town too, or is this

strictly agricultural related?

And if so, you know, from what I've been reading real quick, it doesn't seem like -- and I'm not trying to play, you know, rural versus town, I'm just trying to figure out where we're all standing, because we don't pump a lot of water. We have one circle that we irrigate. And we do our best to rely on the weather and turn it off when it needs to be turned off. We don't run it during the day. We run it at night to conserve evaporation.

We also try to -- we run a very small herd of stock cattle, and we're trying to do our best. I don't even water my lawn, it looks like a desert in there, and if it gets too bad, like if we have numerous days of hundred degree weather and we're not getting a storm coming through, that I might run our sprinkler system for our windbreaks, but that's it.

So I just kind of want to -- sorry, I'm kind of not used to doing this either. But I'm really concerned about, you know, I see a lot of things being done in certain towns and it seems like we are actually pumping way more water out than what we're doing.

And so I just want to know what's being done on that end. Is it strictly rural that's, you know, that you're wanting to re -- how do I say that? Sorry. You know, are we just strictly looking at the rural areas, or are we looking at what our -- the actual town's doing, like the bigger towns, like Hays or some -- I'm not trying to pick on them or anything, but just as an example. That's what I want to know.

Oh, sorry. Blind me. There was actually something else.

Umm, on -- I don't know if you can answer this or point me in the right direction, but we were grandfathered in. We -- our farm had flood range -- or flooding done first before they switched over to a central pivot, and we were kind of grandfathered in under, you know, I think they had, like, 200 acres? I think we have just kind of right about a little bit under that. Is that going to change, like how much we're able to pump for that next year?

HEARING OFFICER OWEN: Actually these are questions I cannot answer.

CHASTITY MADER: Okay, well that's fine. And, like, I didn't know, like, if it was in the

papers that we can access somewhere?

HEARING OFFICER OWEN: I'm sure you can get answers. Check with your Groundwater Management District people because they will be able to answer those for you.

CHASTITY MADER: Okay. And you know, just, I totally get the conservation part, I'm not trying to start anything here.

Thank you very much.

HEARING OFFICER OWEN: Thank you.

The next name on the list is Harold Murphy. Will you please tell us your name, sir, and where you live?

HAROLD MURPHY: I'm Harold Murphy. I live south of Selden. Of course, I'm in the LEMA.

I'm wanting to address a concern dealing with what Ray brought up earlier about the boundaries and livestock operations.

I'm only -- the livestock operations I'm kind of lumping in as an example.

But Ray brought up about the boundaries being by the township. Now my understanding is, is that where we've already been in the LEMA, that's been factored in, and we'll still have our LEMA.

But what I want to point out is, for instance, I live in what's called Parnell Township. Originally that was east and west Parnell. So if you went by the township, it would almost extend across the county.

And what I'm wanting to use is this factor of within a couple, two miles, you can have wells pumping, say, 200, 250 gallon, and 500 gallon.

And one of the provisions that we've been under, and I gather we'll be in the new one, is us being able to lump wells together as part of management in dry years, and so forth.

That can be -- have consequences in the sense that if enough is lumped together, you're literally pumping out from underneath your neighbor.

And the reason I bring this up is, something that I have never heard addressed at these meetings, is that when, you know, the public can state here, or holding hearings, in a sense we're having a contract, whether it's oral, written or not. It's implied. And the reason I bring this up is, and I'm going to quit here, I would urge everyone to read the front page of Sunday, August 20th of the Hays paper of what can

happen.

Going back to the livestock operations. This is what can happen in many instances of what we're trying to deal with. Of special privileges, if you want to say, or exemptions to whether it's livestock, cities, so forth. And that's really all I have to say. Thank you.

HEARING OFFICER OWEN: Thank you very much.

And the next one is Greg Cure. I see none.

Bert Stramel. Do I have that right?

BERT STRAMEL: Yep. I'm Bert Stramel. I farm just south of Colby.

I've followed this LEMA process pretty intensively for the last year or so. And it's a very complicated issue, and it's very difficult for somebody that hasn't followed it for this period to understand what some of the restrictions and some of the implications that this has.

That's why the informational meetings that the Groundwater Management District had before this were so terribly ineffective. There's so many people with so many more questions that nobody is totally familiar with this plan. And

we're talking about billions of dollars in the local economy that this could affect.

The way the LEMA was started in the beginning, it was not in the spirit of how the LEMA rules were designed. I worked intensively with Farm Bureau to get this LEMA process opened up, and it was meant for locals to submit in a smaller area to the chief engineer through the GMD4, or through a GMD. And this has been more of a GMD designed plan that has been forced upon the irrigators -- or against the water users, I should say.

And don't get me wrong, I wholeheartedly believe we need restrictions in the entire District. We've had 30 plus inches of rain this year, and people are still watering. I have neighbors that have never shut a pivot off throughout this whole year. And so if -- if that kind of rain and that kind of moisture doesn't get some people to shut down, I don't know what will.

My problem with this is that it also takes, or at least denies access to a private property right. It also goes retroactively and takes away some possibility of wetted acres that were not established before 2015, even though

today that is still acceptable under the current rules.

Throughout this whole process boundaries were drawn and changed multiple times. Colors were added and subtracted, and the map was moved around. And in my opinion, this is just my opinion, it was manipulated in order to get the most amount of votes in order for passage.

I also heard today testimony that they were trying to tie the votes of board members to a support of the LEMA, and I find that highly offensible. There were so many more interactions or different personality issues, you're voting for a Thomas County representative and Sherman county. There's so many more influences that it would be a terrible stretch to say that was a vote in support of the LEMA.

Thank you.

HEARING OFFICER OWEN: Thank you very much.

And the next name is Jon Friesen?

JON FRIESEN: Jon Friesen, Colby, Kansas. J-o-n. Okay?

My first point is the protection of the actual water right. Okay? Now I stand there even

though we don't have full use of our water rights today, we still need to protect our water rights, and any time we allow bigger government to take part of that and change that. I think that's an admiral goal to try to keep the protection of them, okay?

I served 12 years on the GMD Board here.

I fought for those water rights all through those 12 years.

We've referenced from the GMD Board, from the GMD staff here earlier that we had an annual meeting. We had a contested election, first time that I ever can remember in history.

Oddly enough, yes, it was a contested election. I want to go on record that the vote count was done by the board attorney and Tracy Streeter at the Kansas Water Rights.

The reason to throw a reason of objection into that is we need to go back, and I can't verify the year of 2014 or '15, of handling an election of the annual meeting. So there is a little distrust. Our GMD Board represents us. It is solely funded from us, the water users and the landowners. The LEMA is a Local Enhanced Management, uh --

HEARING OFFICER OWEN: Area.

JON FRIESEN: Area. Thank you. This has no -- no feeling of that whatsoever. There was never a show of hands in any of the meetings. There was never a vote taken, whether people accepted this idea or opposed this idea. We as farmers, we're naturally thinking of conservation. That's part -- that's part of our vocabulary, that's part of our ideas. But to come down from an agency that we're funding, this carries so much part of a state interaction. Every meeting that I have gone to that the state has been involved with, the state runs it. The State says how about if we write something like this? When the board members or the committee members can sit there and say, maybe we shouldn't do anything. Maybe we don't know the ramifications of what we're doing and maybe we need to step back.

So -- so that finishes that part of it, okay?

The other part is, is I really want to, going with the Brownie Wilson in this thing. And while my 12 years of service to the GMD Board, not one board member, and not one person in a board

room ever asked to verify the data that we looked at. We actually have on minutes and a motion approved that said we would only accept KGS's deal.

This is a pretty big undertaking. Brownie had a pretty good speech there of -- writing there that says what we were actually doing. But from the standpoint of all of us producers out here, we've got a pretty good idea what's going on out there also. It's pretty hard to put what we know down on paper. We do lack a few names, a few letters at the end of our name, of Ph.Ds, and so on and so forth. But as farmers we're all Ph.Ds in this water District. We know what we've got. We know the depth of water. We know what we're declining that water table at.

The data that's misskewed is, I have a measurement observation well that was read in January. 2016 the well was read in January, and it was a -- and I can't verify it exactly to the inches of how much, but it was three feet higher than it was in 2014 -- 2015. Did I get that? '16. Okay. I probably got you confused. You got a question, did you follow me through that?

HEARING OFFICER OWEN: I think so.

JON FRIESEN: Okay. We came back and read that well 30 days later before the annual meeting, and we wrote on that that it was the same level that it was the year before. This is where I get into question whether we got accurate data. We can skew these data. What was that well?

And the point is, is how do you -- to take one sole points of data to make this decision, I would think that KGS would try to be verifying what they're saying to us in common terms and common sense, and not be burying us in this stuff that we can't even understand it all.

And I have no further comments. Thank you.

HEARING OFFICER OWEN: Thank you very much.

Those are the only names that were on the list sign-up to provide comments. Would anyone else like to provide comments before we close today? Even if you didn't sign the sheet?

Okay. It's kind of dark out there, but I'm not seeing any hands.

I did also receive one written comment. If there are other written comments to leave with me before the end of today, please do so before

you leave the theatre. Any other written comments can be supplied, as I said, at the beginning, no later than the end of the day, September 13, and those are supplied to Division of Water Resources, either by mail or by e-mail. And details can be provided to you before you leave today, or on their website, give them a call, catch them at the field office and ask how to do that.

On September 13th at the close of business, then the hearing will officially close in terms of the comments taken. Then as soon as possible I will evaluate everything that's been provided, and I will issue a written order that determines whether or not the LEMA process moves forward.

As I said before, it's only on the three factual matters that we talked about. Is there a need? And is it in the public interests that there be at least one corrective control provision? And are the proposed boundaries reasonable?

So I thank you all very much for coming today. I applaud you for your participation in an incredibly important issue facing not just you, but our state and the world.

So for now that will close the hearing for today. Thank you much.

* * * * *

STATE OF KANSAS,

THOMAS COUNTY, SS

C E R T I F I C A T E

I, Marilyn F. Bailey, a Registered Merit Reporter and Certified Realtime Reporter of Kansas, certify that the foregoing is a full and correct transcript of all the and oral proceedings had in this matter at the aforementioned time and place.

IN WITNESS WHEREOF I have hereunto set my hand and official seal at Colby, Kansas this 16th day of September, 2017.

Marilyn F Bailey

MARILYN F. BAILEY, RMR-CRR

Average Annual Percent Decline 2004-2015

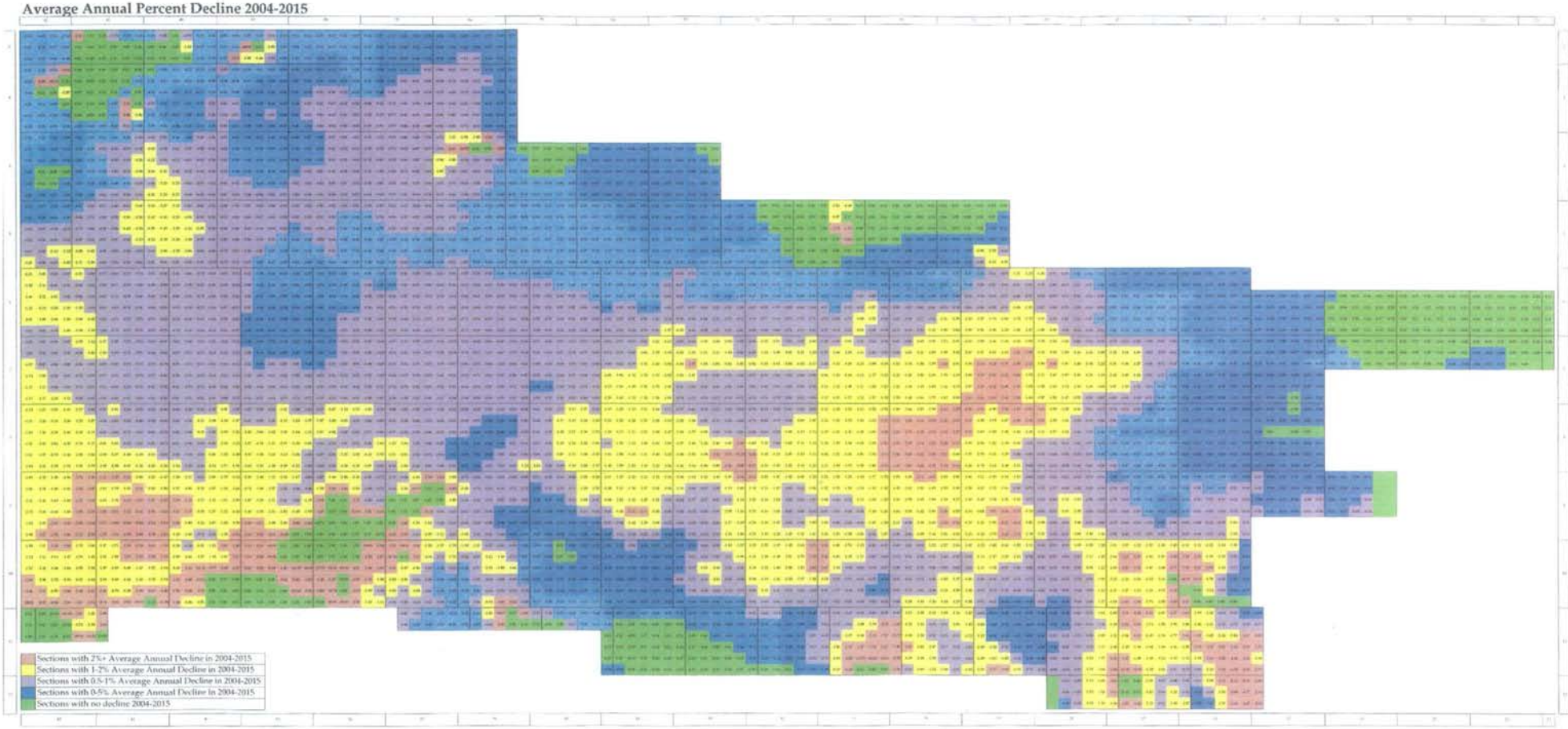

Exhibit D

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Saturated Thickness by Section

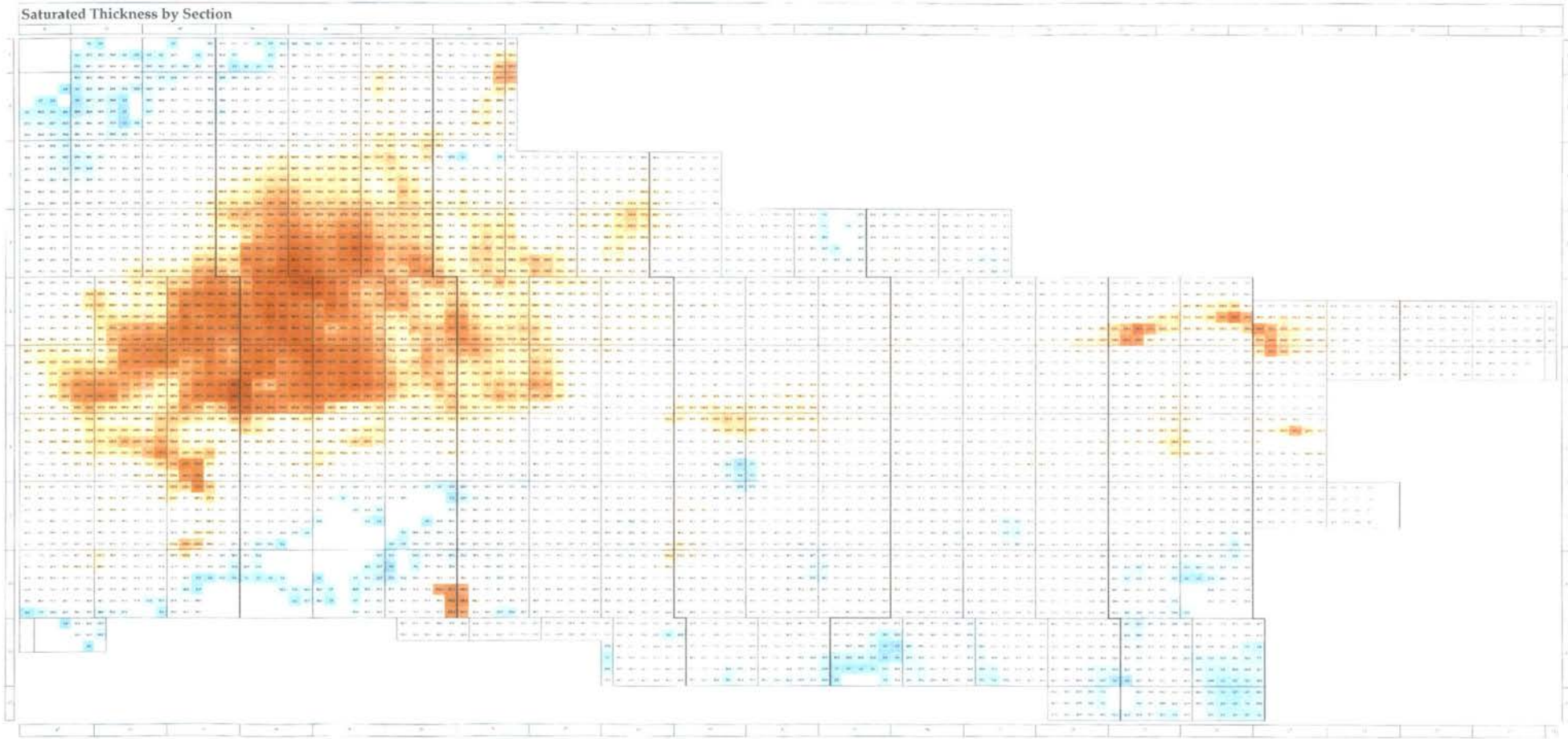

Exhibit E

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Water Level Drop from 2004-2015 (Feet)

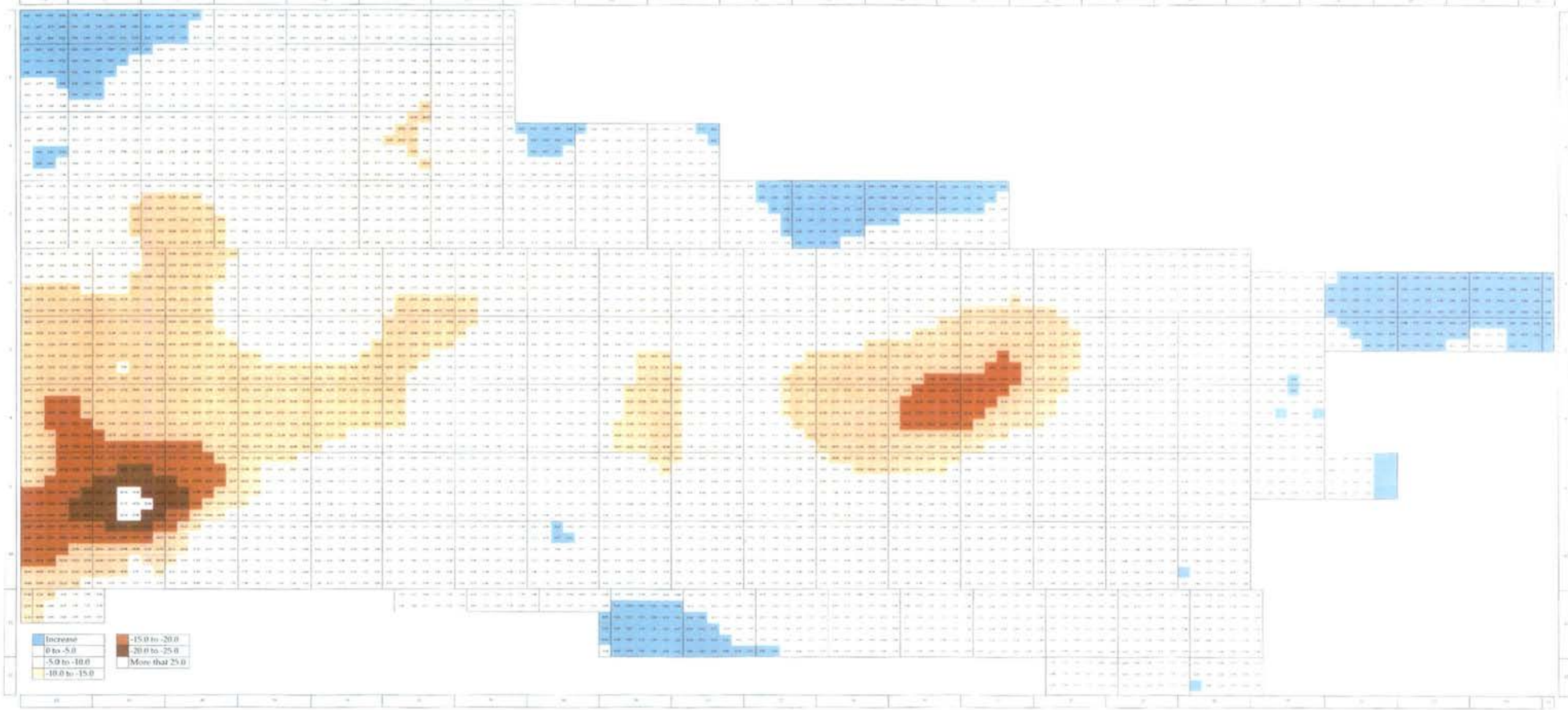

Exhibit F

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March 31st 2016

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PROPOSED DRAFT

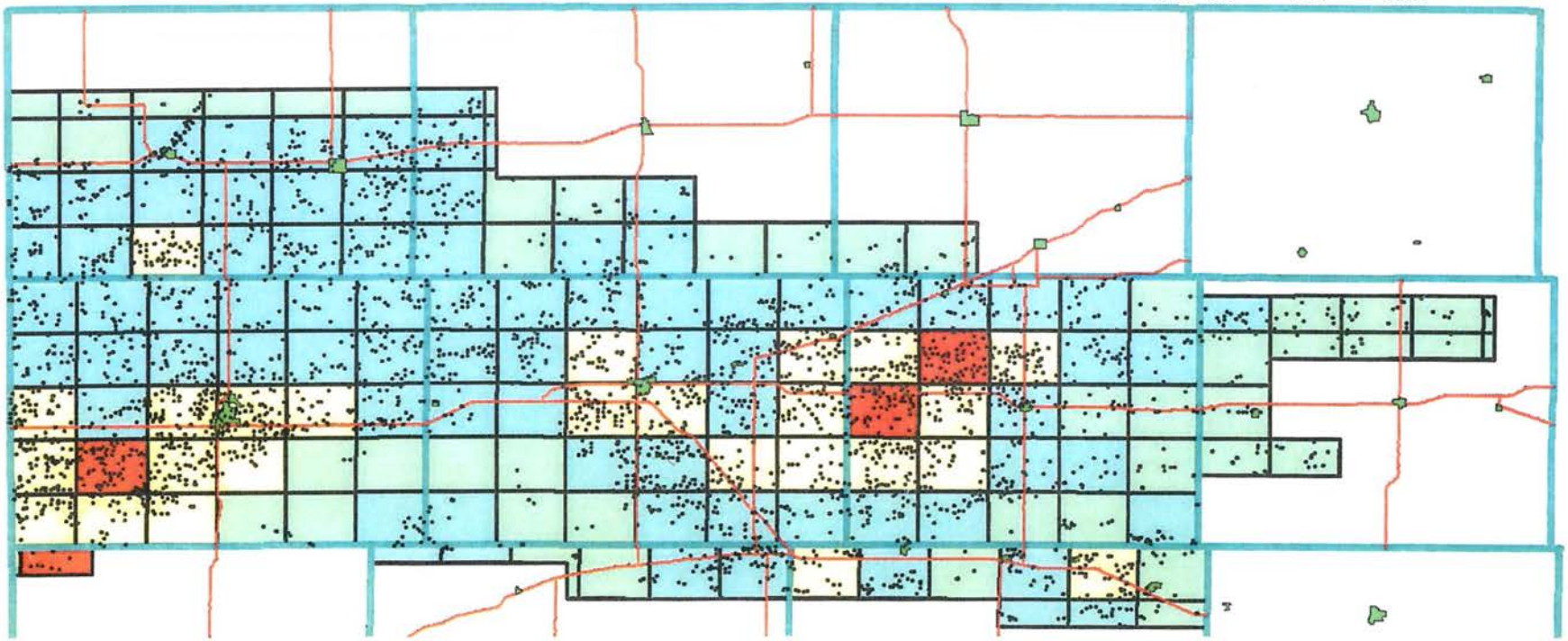
GMD 4 WELLS
SHADED TOWNSHIPS
GREEN - NO DECLINE OR MAX PUMP 2009 - 2013 < SAFE YIELD
BLUE - 0% - 1% PER YEAR DECLINE 2004 - 2013
YELLOW - 1% - 2% PER YEAR DECLINE 2004 - 2013
RED - > 2% PER YEAR DECLINE 2004-2013

5-YEAR ALLOCATIONS

	GREEN	BLUE	YELLOW/RED
CN	77.0	68.5	61.6
DC	74.0	63.5	59.2
GH	73.5	62.0	58.8
GO	76.5	65.5	61.2
LG	79.0	69.5	63.2
RA	75.5	66.0	60.4
SD	75.0	64.5	60.0
SH	78.5	70.5	62.8
TH	77.0	67.5	61.6
WA	80.5	71.5	64.4

AVERAGE ANNUAL AMOUNTS

	GREEN	BLUE	YELLOW/RED
CN	15.4	13.7	12.32
DC	14.8	12.7	11.84
GH	14.7	12.4	11.76
GO	15.3	13.1	12.24
LG	15.8	13.9	12.64
RA	15.1	13.2	12.08
SD	15.0	12.9	12.00
SH	15.7	14.1	12.56
TH	15.4	13.5	12.32
WA	16.1	14.3	12.88



40 0 40 80 Miles

Exhibit G

es

The GMD4 proposes to reduce the annual quantities of water that can be diverted from irrigation wells in townships that have an ***annual rate of decline of 0.5% or greater.*** The formula for this calculation is as follows:

$$\text{Percent of Annual Decline} = \left(\left(\left(\frac{\text{Ending Value}}{\text{Beginning Value}}\right)^{\frac{1}{\text{Number of years}}}\right) - 1\right) * 100$$

Excerpts from the GMD Plan with emphasis added:

> 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.
>
> 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
>
> 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.

From the attached map:

> Townships with 2%+ *Average Annual Decline* in 2004-2015
> Townships with ***1-2% Average Annual Decline*** in 2004-2015
> Townships with ***0.5 - 1%AverageAnnual Decline*** in 2004-2015 (18 inch max restriction)
> Townships with ***0-.5% Average Annual Decline*** in 2004-2015
> Townships with no decline 2004-2015

Exhibit H

es

Towship 8 South-Range 33 West										
Section	Township	Range	Bedrock Elevation	2004 Ave. Winter Table Elev. v3	2015 Ave. Winter Table Elev. v3	2004 Sat. Thkness	2015 Sat. Thknes	2004-2015 change (feet)	2004-2015 change (percent)	
1	8	33	2848.40	2975.87	2966.51	127.47	118.11	-9.36	-0.69	Purple
2	8	33	2855.86	2987.00	2977.74	131.14	121.88	-9.26	-0.66	Purple
3	8	33	2873.63	2997.82	2988.48	124.19	114.85	-9.34	-0.71	Purple
4	8	33	2891.93	3008.53	2998.96	116.60	107.03	-9.56	-0.78	Purple
5	8	33	2911.08	3019.33	3009.46	108.25	98.38	-9.87	-0.86	Purple
6	8	33	2904.86	3028.70	3018.58	123.84	113.72	-10.12	-0.77	Purple
7	8	33	2946.62	3026.33	3016.07	79.71	69.45	-10.27	-1.25	Yellow
8	8	33	2942.95	3016.51	3006.61	73.56	63.66	-9.89	-1.30	Yellow
9	8	33	2904.55	3006.36	2996.80	101.81	92.25	-9.56	-0.89	Purple
10	8	33	2879.95	2996.30	2986.95	116.35	107.00	-9.35	-0.76	Purple
11	8	33	2857.87	2986.13	2976.83	128.26	118.96	-9.30	-0.68	Purple
12	8	33	2847.77	2975.63	2966.21	127.86	118.44	-9.42	-0.69	Purple
13	8	33	2867.93	2976.06	2966.89	108.13	98.96	-9.17	-0.80	Purple
14	8	33	2882.11	2985.93	2976.83	103.82	94.72	-9.10	-0.83	Purple
15	8	33	2901.63	2995.79	2986.60	94.16	84.97	-9.19	-0.93	Purple
16	8	33	2921.92	3005.66	2996.18	83.74	74.26	-9.48	-1.09	Yellow
17	8	33	2944.37	3014.69	3004.78	70.32	60.41	-9.91	-1.37	Yellow
18	8	33	2955.17	3024.21	3013.73	69.04	58.56	-10.48	-1.49	Yellow
19	8	33	2951.86	3022.00	3011.44	70.14	59.58	-10.56	-1.47	Yellow
20	8	33	2947.75	3013.16	3003.37	65.41	55.62	-9.79	-1.46	Yellow
21	8	33	2941.06	3004.17	2995.00	63.11	53.94	-9.17	-1.42	Yellow
22	8	33	2936.73	2995.11	2986.28	58.38	49.55	-8.82	-1.48	Yellow
23	8	33	2938.44	2985.63	2976.89	47.19	38.45	-8.74	-1.85	Yellow
24	8	33	2938.93	2976.53	2967.74	37.60	28.81	-8.79	-2.39	Red
25	8	33	2965.89	2976.88	2968.51	10.99	2.62	-8.37	-12.23	Red
26	8	33	2961.34	2985.78	2977.46	24.44	16.12	-8.32	-3.71	Red
27	8	33	2956.02	2995.08	2986.79	39.06	30.77	-8.29	-2.14	Red
28	8	33	2953.26	3003.63	2994.95	50.37	41.69	-8.67	-1.70	Yellow
29	8	33	2950.34	3011.67	3002.15	61.33	51.81	-9.53	-1.52	Yellow
30	8	33	2949.75	3019.91	3009.52	70.16	59.77	-10.39	-1.45	Yellow
31	8	33	2950.19	3018.18	3008.02	67.99	57.83	-10.16	-1.46	Yellow
32	8	33	2954.23	3010.75	3001.36	56.52	47.13	-9.38	-1.64	Yellow
33	8	33	2958.21	3002.94	2994.58	44.73	36.37	-8.36	-1.86	Yellow
34	8	33	2954.30	2994.38	2986.45	40.08	32.15	-7.93	-1.98	Yellow
35	8	33	2955.53	2985.09	2977.02	29.56	21.49	-8.07	-2.86	Red
36	8	33	2959.76	2976.23	2968.15	16.47	8.39	-8.08	-5.95	Red
							AVERAGE		-1.81	

Towship 9 South-Range 30 West										
Section	Township	Range	Bedrock Elevation	2004 Ave. Winter Table Elev. v3	2015 Ave. Winter Table Elev. v3	2004 Sat. Thkness	2015 Sat. Thknes	2004-2015 change (feet)	2004-2015 change (percent)	
1	9	30	2693.96	2752.93	2742.17	58.97	48.21	-10.76	-1.81	Yellow
2	9	30	2703.95	2765.51	2754.10	61.56	50.15	-11.42	-1.85	Yellow
3	9	30	2720.07	2778.98	2767.15	58.91	47.08	-11.84	-2.02	Red
4	9	30	2735.59	2792.71	2780.77	57.12	45.18	-11.94	-2.11	Red
5	9	30	2745.21	2807.19	2795.24	61.98	50.03	-11.95	-1.93	Yellow
6	9	30	2754.33	2822.44	2810.57	68.11	56.24	-11.87	-1.73	Yellow
7	9	30	2756.00	2828.54	2817.78	72.54	61.78	-10.76	-1.45	Yellow
8	9	30	2747.89	2813.96	2803.18	66.07	55.29	-10.79	-1.61	Yellow
9	9	30	2740.90	2799.45	2788.76	58.55	47.86	-10.68	-1.81	Yellow
10	9	30	2729.47	2784.92	2774.43	55.45	44.96	-10.49	-1.89	Yellow
11	9	30	2708.76	2771.07	2760.98	62.31	52.22	-10.09	-1.59	Yellow
12	9	30	2696.52	2757.72	2748.38	61.20	51.86	-9.34	-1.49	Yellow
13	9	30	2695.55	2761.69	2753.30	66.14	57.75	-8.38	-1.22	Yellow
14	9	30	2715.96	2775.32	2766.33	59.36	50.37	-8.98	-1.48	Yellow
15	9	30	2740.41	2789.59	2780.24	49.18	39.83	-9.35	-1.90	Yellow
16	9	30	2747.33	2804.49	2794.94	57.16	47.61	-9.55	-1.65	Yellow
17	9	30	2751.71	2819.75	2810.07	68.04	58.36	-9.68	-1.39	Yellow
18	9	30	2761.96	2834.89	2825.23	72.93	63.27	-9.67	-1.28	Yellow
19	9	30	2767.64	2839.58	2830.93	71.94	63.29	-8.65	-1.16	Yellow
20	9	30	2751.04	2823.94	2815.23	72.90	64.19	-8.71	-1.15	Yellow
21	9	30	2749.31	2808.63	2799.98	59.32	50.67	-8.66	-1.42	Yellow
22	9	30	2749.63	2793.92	2785.51	44.29	35.88	-8.41	-1.90	Yellow
23	9	30	2739.75	2779.85	2771.68	40.10	31.93	-8.16	-2.05	Red
24	9	30	2715.80	2766.40	2758.64	50.60	42.84	-7.76	-1.50	Yellow
25	9	30	2737.07	2769.44	2762.14	32.37	25.07	-7.31	-2.30	Red
26	9	30	2751.10	2782.14	2774.64	31.04	23.54	-7.50	-2.48	Red
27	9	30	2749.89	2796.58	2788.90	46.69	39.01	-7.68	-1.62	Yellow
28	9	30	2748.78	2812.98	2805.10	64.20	56.32	-7.88	-1.18	Yellow
29	9	30	2749.41	2828.43	2820.57	79.02	71.16	-7.87	-0.95	Purple
30	9	30	2771.33	2844.09	2836.37	72.76	65.04	-7.72	-1.01	Yellow
31	9	30	2778.55	2847.22	2840.17	68.67	61.62	-7.05	-0.98	Purple
32	9	30	2753.47	2831.52	2824.23	78.05	70.76	-7.29	-0.89	Purple
33	9	30	2749.97	2815.43	2808.08	65.46	58.11	-7.36	-1.08	Yellow
34	9	30	2750.42	2798.83	2791.61	48.41	41.19	-7.21	-1.46	Yellow
35	9	30	2746.83	2784.82	2777.73	37.99	30.90	-7.10	-1.86	Yellow
36	9	30	2729.76	2772.44	2765.41	42.68	35.65	-7.03	-1.62	Yellow
							AVERAGE		-1.58	

Towship 9 South-Range 34 West										
Section	Township	Range	Bedrock Elevation	2004 Ave. Winter Table Elev. v3	2015 Ave. Winter Table Elev. v3	2004 Sat. Thkness	2015 Sat. Thknes	2004-2015 change (feet)	2004-2015 change (percent)	
1	9	34	2946.08	3026.35	3015.89	80.27	69.81	-10.46	-1.26	Yellow
2	9	34	2948.95	3036.01	3025.83	87.06	76.88	-10.18	-1.12	Yellow
3	9	34	2968.23	3046.35	3036.55	78.12	68.32	-9.79	-1.21	Yellow
4	9	34	2994.30	3057.16	3048.01	62.86	53.71	-9.15	-1.42	Yellow
5	9	34	3010.36	3070.43	3061.86	60.07	51.50	-8.57	-1.39	Yellow
6	9	34	3043.35	3088.78	3081.08	45.43	37.73	-7.70	-1.67	Yellow
7	9	34	3046.45	3090.51	3084.18	44.06	37.73	-6.34	-1.40	Yellow
8	9	34	3022.21	3070.58	3063.59	48.37	41.38	-6.98	-1.41	Yellow
9	9	34	3002.15	3057.63	3049.86	55.48	47.71	-7.77	-1.36	Yellow
10	9	34	2986.41	3047.46	3038.88	61.05	52.47	-8.58	-1.37	Yellow
11	9	34	2948.13	3036.45	3027.14	88.32	79.01	-9.31	-1.01	Yellow
12	9	34	2934.03	3025.87	3015.87	91.84	81.84	-10.01	-1.04	Yellow
13	9	34	2935.58	3026.98	3018.23	91.40	82.65	-8.75	-0.91	Purple
14	9	34	2967.86	3038.30	3030.18	70.44	62.32	-8.11	-1.11	Yellow
15	9	34	3005.57	3049.53	3042.17	43.96	36.60	-7.37	-1.65	Yellow
16	9	34	3016.56	3060.86	3054.35	44.30	37.79	-6.51	-1.43	Yellow
17	9	34	3037.39	3074.03	3068.38	36.64	30.99	-5.65	-1.51	Yellow
18	9	34	3049.37	3094.82	3089.70	45.45	40.33	-5.12	-1.08	Yellow
19	9	34	3050.15	3099.64	3095.42	49.50	45.27	-4.22	-0.81	Purple
20	9	34	3050.37	3081.74	3076.99	31.37	26.62	-4.75	-1.48	Yellow
21	9	34	3040.72	3066.64	3061.22	25.92	20.50	-5.42	-2.11	Red
22	9	34	3023.48	3052.87	3046.71	29.39	23.23	-6.15	-2.11	Red
23	9	34	2991.62	3040.64	3033.79	49.02	42.17	-6.85	-1.36	Yellow
24	9	34	2948.36	3029.26	3021.93	80.90	73.57	-7.32	-0.86	Purple
25	9	34	2954.29	3031.59	3025.62	77.30	71.33	-5.97	-0.73	Purple
26	9	34	2995.19	3044.23	3038.80	49.04	43.61	-5.43	-1.06	Yellow
27	9	34	3021.64	3057.27	3052.39	35.63	30.75	-4.88	-1.33	Yellow
28	9	34	3041.54	3071.56	3067.16	30.02	25.62	-4.40	-1.43	Yellow
29	9	34	3049.85	3087.80	3084.02	37.95	34.17	-3.78	-0.95	Purple
30	9	34	3051.09	3105.26	3101.94	54.17	50.85	-3.32	-0.57	Purple
31	9	34	3052.40	3110.39	3107.94	57.99	55.54	-2.45	-0.39	Blue
32	9	34	3048.46	3092.42	3089.53	43.96	41.07	-2.89	-0.62	Purple
33	9	34	3038.57	3076.29	3072.98	37.72	34.41	-3.31	-0.83	Purple
34	9	34	3020.35	3061.43	3057.81	41.08	37.46	-3.61	-0.83	Purple
35	9	34	2983.98	3046.97	3042.99	62.99	59.01	-3.99	-0.59	Purple
36	9	34	2927.48	3033.58	3029.01	106.10	101.53	-4.57	-0.40	Blue
							AVERAGE		-1.16	

Exhibit K

es

Towship 8 South-Range 32 West										
Section	Township	Range	Bedrock Elevation	2004 Ave. Winter Table Elev. v3	2015 Ave. Winter Table Elev. v3	2004 Sat. Thkness	2015 Sat. Thknes	2004-2015 change (feet)	2004-2015 change (percent)	
1	8	32	2799.06	2915.71	2903.78	116.65	104.72	-11.92	-0.98	Purple
2	8	32	2807.87	2928.06	2916.88	120.19	109.00	-11.19	-0.88	Purple
3	8	32	2824.79	2938.67	2928.23	113.88	103.44	-10.43	-0.87	Purple
4	8	32	2835.53	2948.17	2938.27	112.64	102.74	-9.90	-0.83	Purple
5	8	32	2840.34	2957.35	2947.72	117.01	107.38	-9.62	-0.78	Purple
6	8	32	2844.46	2965.93	2956.36	121.47	111.90	-9.57	-0.74	Purple
7	8	32	2841.53	2965.66	2956.02	124.13	114.49	-9.64	-0.73	Purple
8	8	32	2842.74	2957.71	2948.00	114.97	105.26	-9.71	-0.80	Purple
9	8	32	2844.48	2948.91	2938.92	104.43	94.44	-9.98	-0.91	Purple
10	8	32	2837.17	2939.44	2928.88	102.27	91.71	-10.56	-0.99	Purple
11	8	32	2821.00	2929.92	2918.50	108.92	97.50	-11.42	-1.00	Yellow
12	8	32	2806.41	2919.53	2906.93	113.12	100.52	-12.60	-1.07	Yellow
13	8	32	2819.05	2918.92	2906.85	99.87	87.80	-12.07	-1.16	Yellow
14	8	32	2840.63	2930.58	2919.48	89.95	78.85	-11.10	-1.19	Yellow
15	8	32	2849.32	2940.65	2930.33	91.33	81.01	-10.32	-1.08	Yellow
16	8	32	2851.67	2949.90	2940.12	98.23	88.45	-9.78	-0.95	Purple
17	8	32	2852.06	2958.69	2949.24	106.63	97.18	-9.45	-0.84	Purple
18	8	32	2860.88	2966.69	2957.36	105.81	96.48	-9.32	-0.84	Purple
19	8	32	2921.48	2968.25	2959.39	46.77	37.91	-8.86	-1.89	Yellow
20	8	32	2889.13	2959.88	2950.88	70.75	61.75	-9.00	-1.23	Yellow
21	8	32	2861.47	2950.99	2941.66	89.52	80.19	-9.32	-0.99	Purple
22	8	32	2850.73	2941.42	2931.57	90.69	80.84	-9.86	-1.04	Yellow
23	8	32	2842.89	2930.34	2919.82	87.45	76.93	-10.53	-1.16	Yellow
24	8	32	2822.81	2917.39	2906.22	94.58	83.41	-11.16	-1.14	Yellow
25	8	32	2829.63	2919.38	2909.01	89.75	79.38	-10.37	-1.11	Yellow
26	8	32	2846.09	2931.94	2922.11	85.85	76.02	-9.82	-1.10	Yellow
27	8	32	2859.66	2942.79	2933.54	83.13	73.88	-9.25	-1.07	Yellow
28	8	32	2877.05	2952.07	2943.36	75.02	66.31	-8.72	-1.12	Yellow
29	8	32	2903.71	2960.41	2951.98	56.70	48.27	-8.42	-1.45	Yellow
30	8	32	2952.61	2968.88	2960.49	16.27	7.88	-8.39	-6.38	Red
31	8	32	2950.63	2968.57	2960.57	17.94	9.94	-8.00	-5.23	Red
32	8	32	2917.55	2961.63	2953.80	44.08	36.25	-7.83	-1.76	Yellow
33	8	32	2898.86	2953.67	2945.62	54.81	46.76	-8.05	-1.43	Yellow
34	8	32	2877.60	2945.54	2936.94	67.94	59.34	-8.60	-1.22	Yellow
35	8	32	2857.67	2935.00	2925.86	77.33	68.19	-9.14	-1.14	Yellow
36	8	32	2846.44	2921.24	2911.55	74.80	65.11	-9.69	-1.25	Yellow
							AVERAGE		-1.34	

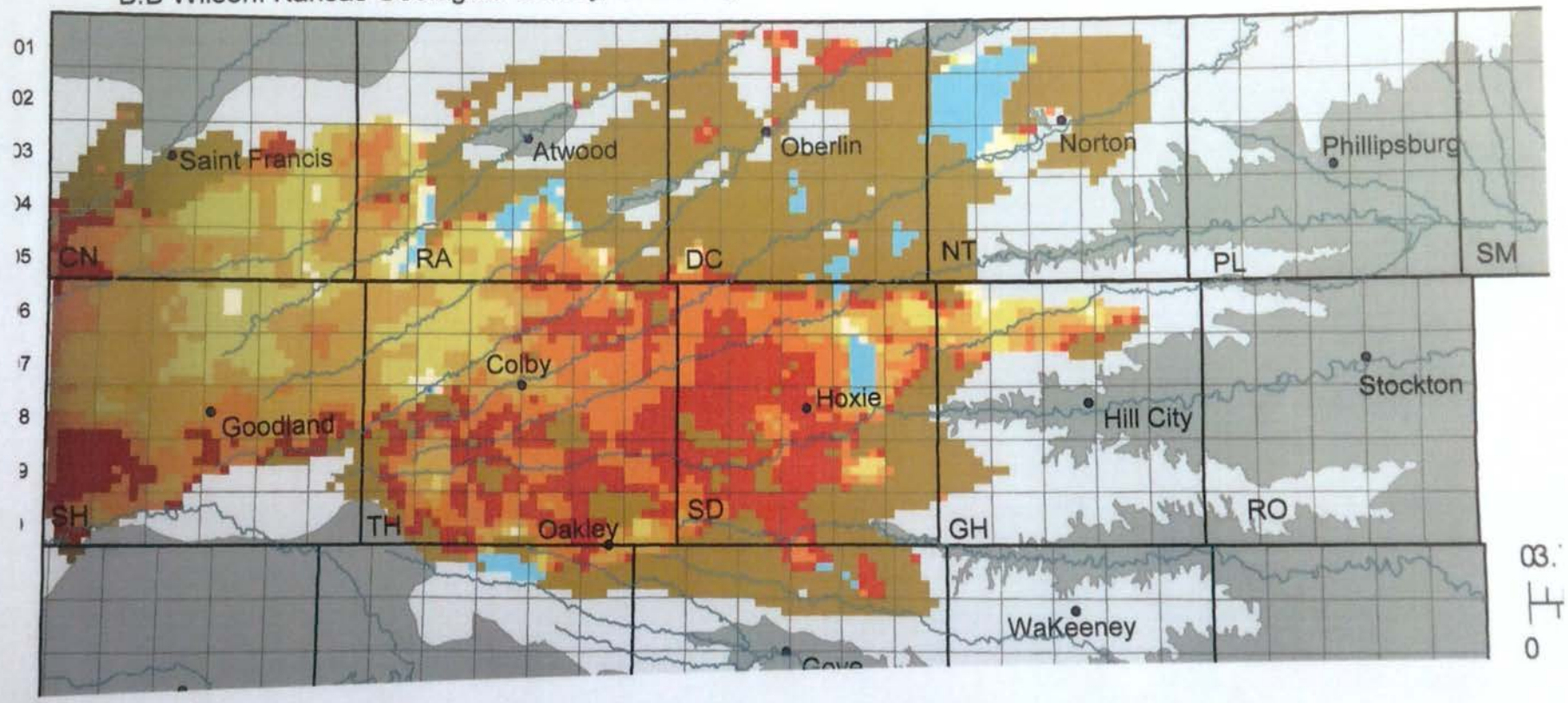
Exhibit L

es

Estimated Usable Lifetime for the High Plains Aquifer in Kansas

(Based on ground-water trends from 2000 to 2005 and the minimum saturated thickness required to support 400 gpm well yields under a 90 day pumping period with wells on 1/4 section)

B.B Wilson. Kansas Geological Survey, University of Kansas. 1930 Constant Avenue. Lawrence, KS 66047



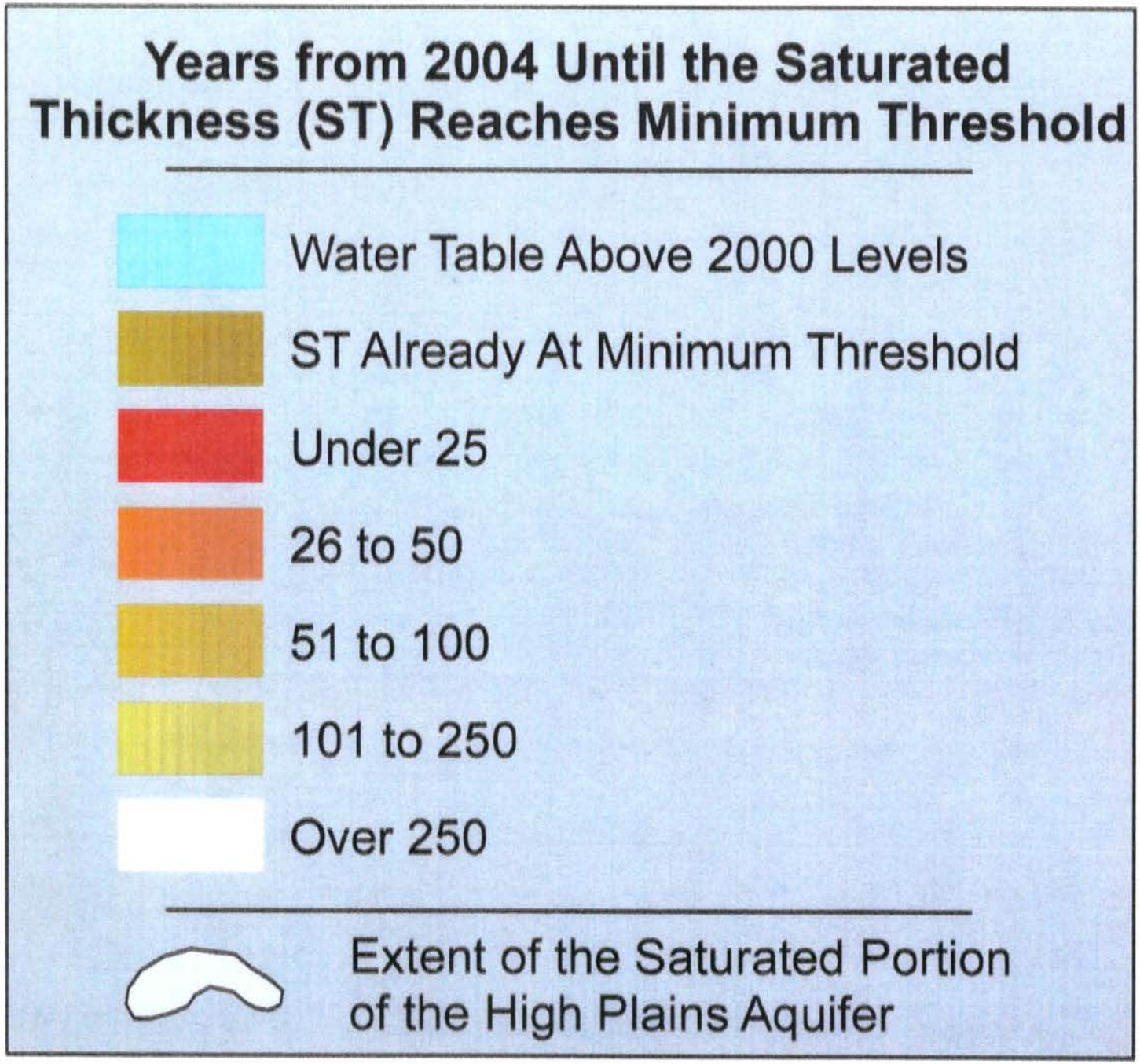


Exhibit III-1

es

Kansas State Board of Agriculture
Division of Water Resources

ADMINISTRATIVE POLICY
NO. 83-33

Subject: Allowable Quantities/Certificates of Appropriation/Irrigation use

Reference: K.S.A. 82a-714 and K.A.R. 5-3-8

Date:

Supersedes: Memorandum of 1-5-79 and Memorandum of 6-22-79, by Warren D. Lutz, Hydrologist

Approved by: Guy E. Gibson
Chief Engineer-Director Guy E. Gibson

During the preparation of Certificates of Appropriation which set forth the extent a water right has been perfected for irrigation use within the terms, limitations, and conditions of the approval of applications for permits to appropriate water, the following policy shall be adhered to:

In that area of Kansas located between the Kansas/ Missouri border and Township 5 East, the allowable quantity shall be based on the maximum annual usage within the time allowed to perfect the right, not to exceed an average of 1.15 acre-feet per acre irrigated, and shall not exceed the quantity set forth by the approval of the application.

In that area of Kansas located between the Township 5 East/Township 6 East line and the Township 20 West/Township 21 West line, the allowable quantity shall be based on the maximum annual usage within the time allowed to perfect the right, not to exceed an average of 1.7 acre-feet per acre irrigated, and shall not exceed the quantity set forth by the approval of the application.

In that area of Kansas located between the Township 20 West/Township 21 West line and the Colorado border, the allowable quantity shall be based on the maximum annual usage within the time allowed to perfect the right, not to exceed an average of 2.25 acre-feet per acre irrigated, and shall not exceed the quantity set forth by the approval of the application.

NOTE: For good cause based on unique circumstances such as the irrigation of of specialty crops, exceptions to the policy set forth herein may be be made by the Chief Engineer.

EXHIBIT
N

Kansas State Board of Agriculture
Division of Water Resources

ADMINISTRATIVE POLICY
NO. 83-33

Subject : Allowable Quantities/Certificates of Appropriation/Irrigation use

Reference : K.S.A. 82a-714 and K.A.R. 5-3-8

Date : September 26, 1983

Supersedes : Administrative Policy 83-33 (undated)

Approved by: David L. Pope, P.E.
Chief Engineer-Director

During the preparation of Certificates of Appropriation which set forth the extent a water right has been perfected for irrigation use within the terms, limitations, and conditions of the approval of applications for permits to appropriate water, the following policy shall be adhered to:

In that area of Kansas located between the Kansas/ Missouri border and the Range 5 East/Range 6 East line, the allowable quantity shall be based on the maximum annual usage within the time allowed to perfect the right, not to exceed an average of 1.00 acre-feet per acre irrigated, and shall not exceed the quantity set forth by the approval of the application.

In that area of Kansas located between the Range 5 East/Range 6 East line and the Range 20 West/Range 21 West line, the allowable quantity shall be based on the maximum annual usage within the time allowed to perfect the right, not to exceed an average of 1.50 acre-feet per acre irrigated, and shall not exceed the quantity set forth by the approval of the application.

In that area of Kansas located between the Range 20 West/Range 21 West line and the Kansas/Colorado border, the allowable quantity shall be based on the maximum annual usage within the time allowed to perfect the right, not to exceed an average of 2.00 acre-feet per acre irrigated, and shall not exceed the quantity set forth by the approval of the application.

NOTE: For good cause based on unique circumstances such as the irrigation of specialty crops, exceptions to the policy set forth herein may be made by the Chief Engineer.

EXHIBIT
O

Kansas State Board of Agriculture
Division of Water Resources

ADMINISTRATIVE POLICY
No. 86-8

Subject: Allowable Rates of Diversion and Maximum Annual Quantities for Irrigation Use - Permits and Approvals

Reference: K.S.A. 82a-708a and K.A.R. 5-3-1

Date: November 5, 1986

History: Effective November 5, 1986

Approved by: David L. Pope
Chief Engineer

David L Pope

During the review of an APPLICATION FOR PERMIT TO APPROPRIATE WATER FOR BENEFICIAL USE for irrigation purposes the following guidelines shall be considered in determining the maximum reasonable rate of diversion to be allowed under any APPROVAL OF APPLICATION AND PERMIT TO PROCEED:

Area, Place of use	Max. Allowable Rate	
up to 10 acres	450 g.p.m.	450
10 - 40 acres	(+) 450 g.p.m.	900
40 - 120 acres	(+) 8 g.p.m./acre	580 + 8X
more than 120 acres	(+) 7 g.p.m./acre	700 + 7X

EXAMPLES:

A. 37 acres requested; since this area is less than 40 acres, a rate of up to 900

B. 83 acres requested;

	10 acres	= 450 g.p.m.	900 g.p.m.
(+)	40 acres (10 + 30)	= 450 g.p.m.	
(+)	43 acres @ 8 g.p.m./acre	= 344 g.p.m.	+
		1,244 (allow 1,245 g.p.m.)	

A further limiting factor of this procedure is the availability of water from the proposed source of supply. In those instances whereby the source of supply is incapable of yielding a reasonably, sustainable (computed) rate, then the source becomes a further limiting factor.

A further limiting factor is well design and equipment, which shall be reasonable to divert the requested rate.

EXHIBIT
P

Further, the rate authorized should not impair senior water rights in the area, including domestic rights.

In reviewing an APPLICATION FOR PERMIT TO APPROPRIATE WATER FOR BENEFICIAL USE for irrigation purposes, the following guidelines shall be considered when determining a maximum allowable annual quantity of water request:

In that area of Kansas located between the Kansas/Missouri border and the Range 5 East/Range 6 East line, the maximum allowable quantity shall not exceed an average of 1.00 acre-foot per acre to be irrigated.

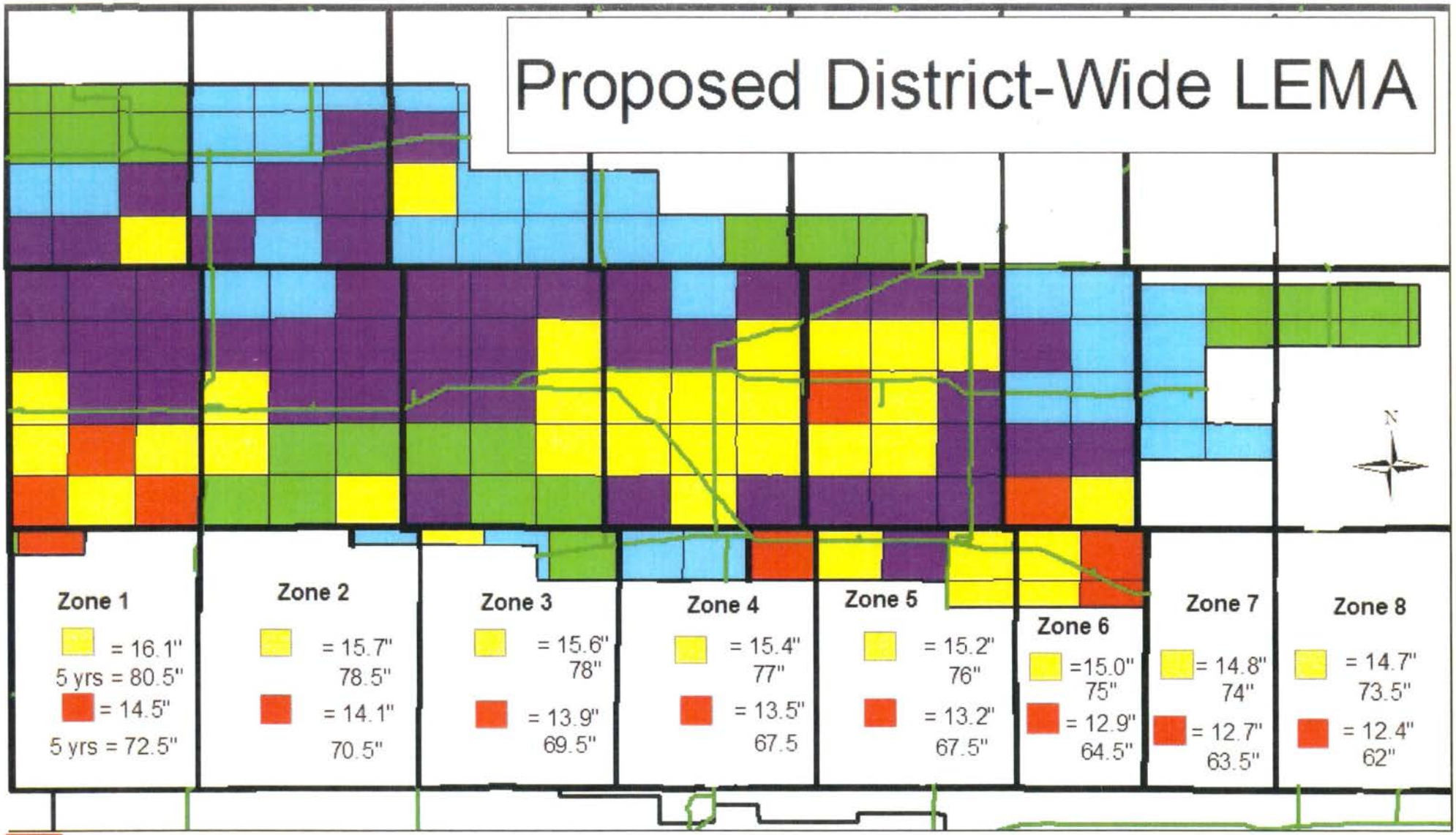
In that area of Kansas located between the Range 5 East/Range 6 East Line and the Range 20 West/Range 21 West line, the maximum allowable quantity shall not exceed an average of 1.50 acre-feet per acre irrigated.

In that area of Kansas located between the Range 20 West/Range 21 West line and the Kansas/Colorado border, the maximum allowable quantity shall not exceed an average of 2.00 acre-feet per acre irrigated.

A further limiting factor to maximum allowable quantity is the availability of water from the proposed source of supply. If the source of supply is incapable of yielding a reasonably, sustainable (computed) quantity during the irrigation season in that area of the state, then the source becomes a further limiting factor.

That if an applicant can show that his or her system design is reasonable for the use intended and approval of the proposed rate and/or maximum annual quantity will not impair any senior water right or prejudicially and unreasonably affect the public interest, the Chief Engineer may waive the above guidelines. Documentation shall be placed in the file clearly demonstrating any exceptions to the above policy.

Proposed District-Wide LEMA



Townships with 2%+ Average Annual Decline in 2004-2015

Townships with 1-2% Average Annual Decline in 2004-2015

Townships with 0.5 - 1% Average Annual Decline in 2004-2015 (18 inch max restriction)

Townships with 0-.5% Average Annual Decline in 2004-2015

Townships with no decline 2004-2015

Exhibit Q

es

PUBLIC MEETINGS:

Nov. 29: Colby City Limits Convention Center; 1:30 pm

Nov. 30: NW Tech - Union Hall, 1:30 pm MTN

Dec 1: CN County 4H Building; 1:30 pm

Dec 5: Hoxie Elks Lodge, 1:30 pm

Prepared by Shannon Kenyon GMD 4

LATEST DISTRICT-WIDE PROPOSAL

1. Use newest section level township decline map.
2. Use the zone map to determine amounts allocated.
3. <0 – no action
4. 0 – 0.5 – no action
5. 0.5 – 1 – 18 inch maximum
6. 1 – 2 – use the 80% chance value from the zone map
7. >2 – use the 50% chance value from the zone map
8. Total allocation will be 5 times the annual amounts determined above.

No pumpage in 1-2 or > 2 in excess of 18 inches. No right will experience a greater than 25% reduction except those being reduced to the 18 inch maximum.

No flexibility. If flexibility is desired recent usage would have to be taken into account, or person could pursue a WCA.

Stockwater will be held to a maximum of 12 gal/hd/day based on licensed feedlot capacity.

Municipalities would be encouraged to work toward reducing unaccounted water, and would also be encouraged to reduce gal/person/day consumption.

Other users would be encouraged to use best management practices.

Data would be periodically reviewed to determine if there was a change in the depletion category of any township. Allocated amounts could/would be adjusted after these reviews.

4

January 10, 1968

Redacted
Satanta, Kansas

Re: Appropriation of Water
Application No. Redacted

Dear Mr. Redacted:

Your application has been examined and is found to be in proper form. Further, we find that the proposed use is for a beneficial purpose and is within reasonable limitations. If priorities are observed and respected, the proposed use will neither impair any use under existing water rights nor prejudicially and unreasonably affect the public interest. The application has therefore been approved.

There is enclosed the approval of the application, which constitutes a permit, authorizing you to proceed with construction of the proposed diversion works, to apply the water and otherwise perfect the proposed appropriation. There is also enclosed a memorandum setting forth the procedure to obtain a certificate of appropriation and containing other information which may be helpful to you. If you are unable to develop the project to the extent desired within the time allowed, you should request such extension of time as may be needed. An extension may be given for good cause shown on your request.

Should you have any questions or if we can be of any assistance to you, please feel free to write or call us.

Very truly yours,

R. V. Smrha
Chief Engineer

RVS:WHS:cap
Enc.

RECEIVED
JAN 24 1968
Division of Water Resources
GARDEN CITY

MICROFILMED

EXHIBIT
2

December 20, 1972

Redacted

Garden City, Kansas 67846

Re: Appropriation of Water
Application Nos. Redacted

Gentlemen:

Your Application No. Redacte has been examined and is found to be in proper form. Further, we find that the proposed use is for a beneficial purpose and is within reasonable limitations. If priorities are observed and respected, the proposed use will neither impair any use under existing water rights nor prejudicially and unreasonably affect the public interest. It is presumed that the application is made in good faith, and that you are ready to proceed with the proposed diversion works and the application of water to the proposed use. The application has, therefore, been approved.

There is enclosed the approval of the application authorizing you to proceed with construction of the proposed diversion works, to divert such unappropriated water as may be available from the source and at the location specified in the approval of application, and to use it for the purpose and at the location described in the application.

There is also enclosed a memorandum setting forth the procedure to obtain a certificate of appropriation which will establish the extent of your water rights.

Our records under Application No. Redacte show Redacted as owners of the Redacted in Haskell County, Kansas.

Information submitted with Application No. Redacte shows Redacted Redacted as the owner of the Redacted Redacted, and on this basis we will change our records under Application No. Redacte accordingly.

MICROFILMED

RECEIVED
JAN 4 1973
Division of Water Resources

E-N

February 12, 1976

Redacted

Satanta, Kansas 67870

Re: Appropriation of Water
Application No. Redacted

Dear Mr. Redacted :

Your application has been examined and is found to be in proper form. Further, we find that the proposed use is for a beneficial purpose and is within reasonable limitations. If priorities are observed and respected, the proposed use will neither impair any use under existing water rights nor prejudicially and unreasonably affect the public interest. It is presumed that the application is made in good faith, and that you are ready to proceed with the proposed diversion works and the application of water to the proposed use. The application has, therefore, been approved.

There is enclosed the approval of the application authorizing you to proceed with construction of the proposed diversion works, to divert such unappropriated water as may be available from the source and at the location specified in the approval of application, and to use it for the purpose and at the location described in the application.

There is also enclosed a memorandum setting forth the procedure to obtain a certificate of appropriation which will establish the extent of your water rights.

Should you have any questions or if we can be of any assistance to you, please feel free to write or call us.

Very truly yours,

Riley M. Dixon
Hydrologist

RECEIVED
FEB 23 1976
Division of Water Resources
GARDEN CITY

RMD:eel
Encs
cc: Redacted

MICROFILMED

Redacted

Redacted

App.

3

RECEIVED
FEB 17 1981
FIELD OFFICE
DIVISION OF WATER RESOURCES
STOCKTON

E-N

January 26, 1981

Redacted

Hays, Kansas 67601

Re: Appropriation of Water
Application No. Redacted

Gentlemen:

Your application has been examined and is found to be in proper form. Further, we find that the proposed use is for a beneficial purpose and is within reasonable limitations. If priorities are observed and respected, the proposed use will neither impair any use under existing water rights nor prejudicially and unreasonably affect the public interest. It is presumed that the application is made in good faith, and that you are ready to proceed with the proposed diversion works and the application of water to the proposed use. The application has, therefore, been approved.

There is enclosed the approval of the application authorizing you to proceed with construction of the proposed diversion works, to divert such unappropriated water as may be available from the source and at the location specified in the approval of application, and to use it for the purpose and at the location described in the application.

Your attention is particularly directed to Paragraph Nos. 12 and 14 of the approval of application. Paragraph No. 12 stipulates that failure to comply with any of the provisions of the approval of your application will result in the revocation of the approval of your application, dismissal of your application, and forfeiture of the application's priority. Paragraph No. 14 requires that you install a meter on each of the well pump discharge pipes before you pump water. A copy of the minimum meter specifications is enclosed.

There is also enclosed a memorandum setting forth the procedure to obtain a certificate of appropriation which will establish the extent of your water rights.

DWR 01437

MICROFILMED

4

Smoky Hill

D-- App

Redacted

Should you have any questions or if we can be of any assistance to you, please feel free to write or call us.

Very truly yours,

Paul C. Clark
Hydrologist

PCC:ERW:eel
Encs.
cc: Stockton Field Office

DIVISION OF WATER RESOURCES
KANSAS STATE BOARD OF AGRICULTURE

Redacted

Re: Appropriation of Water, Application No. _____

It is my judgment that

1. The application (was) (~~was not~~) made in good faith.
2. The application (is) (~~is not~~) in proper form.
3. The proposed use of water (is) (~~is not~~) for a beneficial purpose.
4. The proposed rate of diversion (is) (~~is not~~) within reasonable limitations for the proposed use.
5. The proposed quantity (is) (~~is not~~) within reasonable limitations for the proposed use.
6. The proposed use (~~will~~) (will not) impair a use under an existing water right.
7. The proposed use (~~will~~) (will not) prejudicially and unreasonably affect the public interest.

Comments Groundwater irrigation, well is located approx. [Redacted] but

Recommendations Approve it but in valley alluvium

Date January 8, 1986

Robert F. Sulle Jr.
Hydrologist

List other applications or vested rights covering same diversion points or land covered by this application.

If an additional paragraph needs to be added to the approval of application, limiting the quantity and/or rate combined with other rights, then show the quantity and rate and how computed.

DIVISION OF WATER RESOURCES
KANSAS STATE BOARD OF AGRICULTURE

Redac
ted

Re: Appropriation of Water, Application No.)

It is my judgment that

1. The application (was) (~~was not~~) made in good faith.
2. The application (is) (~~is not~~) in proper form.
3. The proposed use of water (is) (~~is not~~) for a beneficial purpose.
4. The proposed rate of diversion (is) (~~is not~~) within reasonable limitations for the proposed use.
5. The proposed quantity (is) (~~is not~~) within reasonable limitations for the proposed use.
6. The proposed use (~~will~~) (will not) impair a use under an existing water right.
7. The proposed use (~~will~~) (will not) prejudicially and unreasonably affect the public interest.

Comments See memo

Recommendations Approve

RECEIVED
OCT 30 1990
Division of Water Resources
GARDEN CITY

Date 9-19-90

Douglas E Bush
Hydrologist

List other applications or vested rights covering same diversion points or land covered by this application.

If an additional paragraph needs to be added to the approval of application, limiting the quantity and/or rate combined with other rights, then show the quantity and rate and how computed.

DWR 1-100.3