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              KANSAS DEPARTMENT OF AGRICULTURE
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                                                                                EXHIBITS
            BEFORE THE DIVISION OF WATER RESOURCES
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                                                                       No. Description
                                                                                                    Marked
                                                                     4
 5 In The Matter of the Designation of
the Groundwater Management District
6 No. 4 District-Wide Local Enhanced
                                                                        A Pre-filed Written Testimony by DWR and
                                                                     5
                                                                         GMD4
                                                                          DWR Written Testimony
Management Area (LEMA) in Cheyenne,
7 Decatur, Rawlins, Gove, Graham, Logan
Sheridan, Sherman, Thomas and Wallace
8 Counties in Kansas.
                                                                          Record of 8/23/2017 initial hearing
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16 a.m. and reported by Elaine Shogren, CSR, Satanta,
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                                                                                HEARING OFFICER BARFIELD: All right.
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 2
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                                                                          Please come to order. We will now go on the record.
                                                                     3
                                                                                My name is David Barfield. I am Chief
   Opening Comments HEARING OFFICER BARFIELD
                                                                          Engineer of the Division of Water Resources, Kansas
                                                                     4
   Testimony of RAY LUHMAN
                                                 18
   Testimony of BROWNIE WILSON
                                                   210
                                                                     5
                                                                          Department of Agriculture, and I will be your
   Testimony of BRENT ROGERS
                                                 238
                                                                          Hearing Officer today. With me is Kenny Titus,
                                                                     6
   Testimony of LYNN GOOSSEN
                                                 241
                                                                          Chief counsel for the Kansas Department of
                                                                     7
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    Testimony of KELLY STEWART
                                                                     8
                                                                          Agriculture, and he will be assisting me in this
10
   Testimony of LANE LETOURNEAU
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   Testimony of BERT STRAMEL
                                                 2.67
                                                                     9
                                                                          hearing.
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                                                                                Today is November 14th, 2017. The time is
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              PUBLIC COMMENTS
                                                                          9:05 a.m. and we are holding this hearing at the
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                                                                          City Limits Convention Center in Colby, Kansas. If
                                                                    12
   IRENE SIEBERT
                                          107
                                                                          you have not already done so, I would ask that
    SCOTT ROSS
                                        114
                                                                    13
                                             126
   AARON POPELKA
                                                                    14
                                                                          everyone present, please go and sign the attendance
    JERRY BINNING
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                                                                    15
                                                                          sheet located by the door. If you plan to give
                                           139/282
   JACE MOSBARGER
                                                                    16
                                                                          testimony, please indicate that on the sign-in
    MIKE MCKENNA
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                                             146
                                                                    17
                                                                          sheet.
    KENT VOORHIES
                                            148
                                                                    18
                                                                                Thank you each for taking time today to
   STEVE ZIEGELMEIER
                                              150
19
                                                                    19
                                                                          attend this hearing related to this very significant
    MIKE SCHULTZ
                                           277
                                                                    20
                                                                          matter of groundwater management within the
20
   Closing Comments CHIEF ENGINEER BARFIELD
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                                                                          boundaries of Northwest Kansas, Groundwater
                                                            286
21
    Certificate
                                    289
                                                                    22
                                                                          Management District No. 4.
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                                                                    23
                                                                                This hearing is being held pursuant to
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                                                                          K.S.A. 82a-741, which governs the establishment of
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                                                                          local enhanced management areas, or LEMAs as we tend
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to call them.

This is the second of two hearings to consider the management plan proposed by GMD No. 4, Groundwater Management District No. 4, otherwise known as GMD No. 4. In the plan, I will refer to it as the GMD4 District-Wide LEMA.

Pursuant to K.S.A. 82a-1041(b), timely notice of this public hearing was published in the Colby Free Press on October 13th, 2017; the Goodland Star News on October 13th, 2017; and the Kansas Register on October 12th, 2017. Each water right owner within the boundaries of the proposed LEMA was also mailed an individual notification of this hearing.

I would like to provide just a little bit of history on sort of what has transpired here, and particularly on sort of my role in the plan development. The GMD board, as I understand it, started its discussion and development of the district-wide plan, or LEMA, in 2015. My first knowledge of it was when I attended their 2016 annual meeting. I believe it was in February of 2016. I and several of the staff from Manhattan went and participated in the annual meeting. We attended a board meeting just before the annual

to make sure that the control provisions would accomplish the goal, and you will hear more about that as we go forward today.

So ultimately then the plan as it is before us today was sent to me for review and then we have the process since then.

So this hearing process then was formally initiated in June, when I found the proposed plan submitted by GMD4 was acceptable for consideration. As part of the hearing process, it was necessary to hold an initial hearing to resolve three factual matters to determine -- one, to determine if one or more of the circumstances identified in K.S.A. 82a-1036 existed; two, whether it was in the public interest to adopt one or more corrective controls; and, three, whether the geographic boundaries were reasonable.

I delegated the authority to preside over the initial hearing to Ms. Connie Owen. Ms. Owen held this initial hearing on August 23 in Colby and issued findings on September 23. Ms. Owen's findings were favorable on all three required issues and as required by K.S.A. 82a-1041(b) and (c), I am holding this second hearing on the proposed management plan.

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meeting and were briefly briefed on their concepts for the plan at that point. It has evolved since then. And our basic involvement was to give them input, particularly to ensure that the plan that

input, particularly to ensure that the plan that they would develop ultimately would be consistent with state law and its requirements more broadly.

From there, the GMD, after kicking off and making the public aware at that annual meeting in 2016 of the plan, had a significant public involvement process. Several of our staff attended some of the public meetings. I did not personally.

My next knowledge of really the plan was when they set it up early this year. They set up a plan that was, as I understand it, substantively the same as the plan we have today, that I am required to review the plan and make sure it complies with state law and a number of other requirements before we kick off the public process.

In reviewing it, I found a number of things that needed to be clarified, you know, just written in a more clear way. And so we did provide the GMD with some input in terms of how to make the plan just be written more clearly. They took that input and ultimately rewrote the plan, again to be more clear. I also directed staff to assist the GMD

I would note for the record, and to provide additional background on our hearing procedures today, that on October 10 we received a notice of intervention and a motion for continuance by attorney David Traster on behalf of the group of intervenors. The Liner [phon] motion sought to delay this hearing. Additional pleadings were filed on October 27.

On October 31, I conducted a prehearing conference to allow for discussion of the hearing procedures for today and on the motions filed. On November 6 -- I am sorry, on November 1 and November 6th, I issued orders of decisions related to these motions and November 6 I issued a prehearing order to outline the procedures we will use for today's hearing. All of these pleadings and orders have been posted on the department's website.

So let me discuss the procedures for today's hearing then. As outlined in my prehearing order, today's hearing will be divided into two phases. First, we will hold the formal phase of the hearing. The formal phase of the hearing will consist of testimony and questions presented by those parties that have requested to participate in this portion of the hearing. Those parties are

Page 9 Page 11

Groundwater District No. 4, the Division of Water Resources and the Intervenors. And each of these parties is represented here by legal counsel.

The public will not participate in the formal portion of the hearing. Testimony in this formal portion will be presented by the parties in the following order. Number 1, GMD4; Number 2, the Division of Water Resources; and Number 3, the Intervenors represented by David Traster.

During this formal phase of the hearing, the parties may present their testimony and call witnesses to present testimony. The other parties will be allowed to cross-examine or ask clarifying questions of all witnesses, once they complete their testimony. I may also ask questions of each of the witnesses at any time during the proceedings.

While I will not be allowing the public to participate in cross-examining witnesses, you are free to provide your comments or questions on that testimony or on any testimony provided here today in the informal phase or written comments provided after the hearing within the time period that we will allow.

Again, as noted in my prehearing order, I will not be strictly applying the rule of evidence

complete record.

As outlined in my prehearing order the parties, after I have asked my clarifying questions, may also ask clarifying questions. However, such questions shall not constitute formal cross-examination or an attempt to undermine someone's comments.

So while you may not be a party here represented by legal counsel, I want you each to know that your comments will be carefully considered as I seek to decide this matter pursuant to statute.

If anyone wishes to respond to a question in writing following the hearing, they will be allowed to do so. You may also provide your testimony or comment in a written form. These may include rebuttal testimony based on anything you heard today. I will accept written comments here today or you can mail that testimony to Ronda Hutton at the Kansas Department of Agriculture, 1320 Research Park Drive, Manhattan, Kansas 66502.

The deadline for submitting the testimony is Tuesday, December 12, 2017. It must be postmarked by this date. There is also an information sheet with further instructions located by the door. So the dates and the address for the

Page 10 Page 12

in these proceedings, but I expect all cross-examination to bear some reasonable relationship to the testimony presented by each witness.

Overall, my purpose here is to ensure that each party has the fullest opportunity to be heard and to present evidence for the record.

So following the formal phase of the hearing, we will probably take a break at that point and then we will proceed to the informal phase of the hearing. During this phase, the public will be allowed to comment on the GMD's proposal. Public comments may be made by any member of the public including water right owners, businesses, organizations or anyone that wishes to place a comment on the record.

Prior to starting the informal phase, I will again ask that anyone who wishes to comment would put their name and the organization they represent, if any, on the sign-in sheets located by the door. I will then call for those comments in the order they appear on the sign-in sheets.

Again, during the informal phase of the hearing, I may ask clarifying questions of anyone who provides comments to ensure that we have a testimony are on that information sheet. Written comments will be compiled and posted on DWR's website for public review. Prior to today's hearing, comments have already been submitted. These comments will be made part of the record and posted on DWR's website, along with any comments received today and prior to December 12th.

So I guess -- does anybody have comments on the procedures for the hearing before we start the formal stage?

MR. TRASTER: I am wondering -- harvest is --

HEARING OFFICER BARFIELD: Oh, yes. Can you -- thank you.

MR. TRASTER: Harvest is ongoing and there may be people who might want to make comments and leave. Others may want to stay and listen to the whole thing. We could be tomorrow before we get to the public comment. And I am just -- a suggestion. It is not -- would it make sense to have at least some people be given the opportunity to make their comments so that they can get back out in the field or do whatever they want? Obviously they can stay and listen, maybe have comments afterwards. I maybe should have brought this up before, but it just

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occurred to me today. It is up to you. Thank you.

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2 HEARING OFFICER BARFIELD: All right. 3 Thank you. So again, as I outlined, we are going to 4 have a formal phase that probably will last -- it is 5 hard to know at this juncture, but it certainly 6 could last through the morning, easily. I guess if 7 there is a member of the public who wishes to make a 8 statement, an oral statement, I guess -- you know, 9 we could go to an informal stage at any point, pause 10 the formal phase and go to the informal stage if 11 somebody needs to make a comment. So if you wish to 12 make an oral statement, please -- I tell you what, 13 Chris Beightel, raise your hand. If you wish to make a formal statement on the record today, an oral 14

All right? MR. BEIGHTEL: I will stand back there. HEARING OFFICER BARFIELD: Well, this could happen later in the morning. Okay, that is good. Of course, again, everyone is free to provide

let Chris know and he will let me know and we will

find a way to accommodate you, okay, at any point.

statement on the record, and you have to leave,

a written statement before December 12th as well. Any other questions before we get started? All right. Seeing none, we will go ahead and then

When we are in the informal stage, the public will come to the podium just in front of me.

We would ask that you speak clearly enough so she hears you. If she cannot understand your comments, she will interrupt and ask you to repeat those so they can be accurately recorded.

Before you make your comments or give testimony, Ms. Bailey (sic) will place you under oath. You will be asked to state your name and address before testifying. And please remember that, you know, we need obviously only one person speaking at a time.

Finally, please remember that the primary purpose of this hearing is to determine whether the local enhanced management plan with the corrective control provisions proposed by GMD4 should be

If the district-wide LEMAs adopt it, it will result in additional restrictions to use currently authorized from the underlying base rights within the proposed LEMA boundary. And these restrictions will vary according to the rate of decline by township within GMD4.

This decision must be supported by the record of these proceedings. It is appropriate to

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start the formal phase of this hearing.

As a preliminary matter, I have pre-filed testimony that I received from GMD4 and from the Division of Water Resources, which we again have posted on our website. To the extent they are not presented here today, they are incorporated into the record of these proceedings. These have already been marked by the court reporter as Exhibits A and

(Marked Exhibit A, Exhibit B.)

Since this hearing may only be held following an initial hearing, I am incorporating the record from the initial hearing conducted on August 23, 2017 into this record, the complete record from that hearing into this hearing. These have already been marked by the court reporter as Exhibit C.

(Marked Exhibit C.)

I would also like to remind everyone for this hearing that it is being transcribed by a court reporter, Ms. Elaine Shogren. If you are giving oral testimony today, we will ask you to come forward, the witnesses will come forward to this because here during the formal stage, just to my left.

provide testimony regarding groundwater conditions, the management plan's sufficiency to deal with these conditions or any other topics you believe are relevant to the criteria set forth in K.S.A. 82a-1041 and to my ultimate decision whether or not to approve the district-wide LEMA.

All right. With these preliminaries completed, before I commence with the formal phase I would again ask if anyone has questions on our proceedings today? Okay.

With that, I would now call upon Adam Dees, attorney for GMD4, to come forward and to call his witnesses.

MR. DEES: Chief Engineer, I am Adam Dees. I represent the Northwest Kansas Groundwater District -- Management District No. 4. And in the spirit of having a more informal hearing, we are going to have Ray Luhman testify. He is going to give his presentation and then I believe Mr. Traster will have an opportunity to ask him questions.

HEARING OFFICER BARFIELD: All right. Very good. Ray, if you could come to the because.

For those testifying, these mics apparently -- I tried to put it on my lapel, but it did not work. You really pretty much have to have

Page 17 Page 19 the mic -- you have to hold it in your hand and put 1 1 started out that -- we said we are submitting this 2 it right next to your mouth. That is not true for 2 testimony in support of the Chief Engineer finding 3 the public for this mic, but for the lapel mics you that our proposed local enhanced management area 3 4 pretty much have to have it in your mouth. with one modification will conserve water and 4 5 MR. DEES: And just briefly, we had 5 educate water users on further conservation methods 6 submitted -- or GMD has submitted written testimony to extend the life of the Ogallala Aquifer in 6 7 that I believe has already been recorded on the 7 Northwest Kansas. 8 website. But we have copies for the intervenors, GMD4 provides a short history of the Water 8 9 for DWR, for the Chief Engineer and counsel, for the Appropriation Act, Groundwater District Act, the 10 court reporter. These copies also include the LEMA Act and previous actions taken in this 10 11 various citations and articles that support the 11 proceeding, then we restate our goal. Lastly, GMD4 12 written testimony. If I can approach? shows how our corrective control measures should 12 13 HEARING OFFICER BARFIELD: Certainly. 13 reach the goal in this case. MR. TRASTER: What exhibit is this? How 14 Basically then we go through a brief 14 15 is it marked, is this A? history of the Kansas Water Appropriation Act. We 15 UNKNOWN SPEAKER: D, as in dog. 16 16 go through additionally some history on the 17 MR. TRASTER: Okay. 17 formation of the Groundwater Management District HEARING OFFICER BARFIELD: Just a second 18 Act. And then -- so I am not really going to go 18 19 here. Adam, is this Exhibit A then, the pre-filed 19 through that. I think that is fairly common knowledge. 20 testimony that we have already marked as Exhibit A, 20 21 or is this something different? 21 One thing I do want to bring out then was 22 MR. DEES: It is Exhibit A, although it --22 in 2012, the Kansas Legislature passed a local 23 in Exhibit A, we had referenced varying articles and enhanced management area statute, K.S.A. 82a-1041. 23 24 publications and those types of things. This 24 Any LEMA is a creature of that statute. This includes all of those references that are not 25 statute allows the GMDs to address groundwater 25 Page 18 Page 20 submitted but are in testimony. declines and other conditions of concern through 1 2 HEARING OFFICER BARFIELD: So do you want management plans that include specific goals and 2 3 us to replace Exhibit A or make it Exhibit D? 3 corrective control procedures while being consistent 4 MR. DEES: It is whatever is most with state law. 4 5 convenient for you guys. 5 This local autonomy over the management 6 HEARING OFFICER BARFIELD: All right. If plan distinguishes LEMAs from (inaudible). It needs 6 7 it is okay with you, I would like to replace it as 7 to be stated that, you know, a LEMA is basically --8 Exhibit A. It is just a more complete version; is we present our plan, the Chief Engineer can review 8 9 that correct? and look at that plan, but he cannot change that 10 MR. DEES: That is correct. We can plan in any way that is more restrictive than what 10 11 replace it or we can --11 we propose. 12 MR. TRASTER: However you want to do it is 12 The history of these proceedings. On June 7th, Jim Defore [phon] submitted a revised LEMA 13 fine with me. 13 14 HEARING OFFICER BARFIELD: All right. We 14 proposal to the Chief Engineer. Before submitting 15 will call this Exhibit A then, this fuller version. 15 that proposed LEMA, GMD4 held four public meetings 16 MR. DEES: Thank you. 16 in Colby, Goodland, Hoxie and St. Francis and had 17 TESTIMONY OF RAY LUHMAN 17 multiple board meetings with many interested people attending over a two-and-a-half-year period between 18 My name is Ray Luhman. I am the manager 18

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at Northwest Kansas Groundwater District No. 4. I

approved by the board of directors of GMD4, and I

As we go through the testimony -- I have

got to get my glasses here. Basically, you know, we

am going to present this testimony that has been

will go through it briefly. I am definitely not

going to read the whole thing.

January of 2015 and June of 2017 to discuss the

proposal. This represents significant public

involvement in the process that resulted in a

locally-developed and locally-requested plan.

presented a more restrictive program, had an

Additionally, GMD4 had previously

additional four meetings. Public acceptance of that

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program was less positive and, therefore, the board rejected that program.

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On June 27th, the DWR and Chief Engineer found that on its face, the proposal met the threshold requirements of 1041 and initiated these proceedings.

The determination on whether the proposal met the K.S.A. 1041 threshold was not a final determination, but an initial determination that the proposal warranted further review, input, investigation, testimony and consideration.

To begin that review, the Chief Engineer delegated his authority on the first hearing to Independent Hearing Officer Constance C. Owen to conduct that initial hearing. Notice of that hearing was given as required by K.S.A. 82a-1041.

On August 23rd, Ms. Owen, the Hearing Officer, conducted the initial hearing. As David previously stated, that could cover just three main questions. Those were whether or not the boundaries were reasonable, whether or not it was in the public interest to institute corrective control measures and -- let's see, what is the other one? Well, I have lost it. The third one is -- well, I will look. But, anyway, it is in the testimony. I got

public, and the board did listen to comments that were given at those meetings.

Basically we go through that the corrective control measures should reach the LEMA goal. One of the goals of the LEMA is improved management of water and not to exceed irrigating 1.7 million acre-foot over a five-year period of time.

Through that process, you know, we feel that the proposals that we have made will reach this goal and, therefore, we should go forward with those.

Some basic information on the corrective control measures is basically we went in and it was kind of a two-tiered process. We, first of all, went in and used Kansas Geological Survey section level data, which I think Brownie will cover here in a little bit. But basically that section level data establishes a bedrock elevation and a water table elevation for the center of every section in the district.

We looked at that data for the period of 2004 through 2015 and established an annual decline rate for each section in the district. Then at that time, we coalesced the sections into the legal townships, six-by-six sections, and came up with an

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it, but I forgot it.

Anyway, based on that hearing she found that that -- that the proposal met the initial hearing bar. And on September 23rd of 2017, she issued her initial order concluding that the proposal satisfied those three initial requirements.

Basically we go through some additional information on Ms. Owen's findings on that, which I won't go through here now.

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

In any event, GMD4 provided the water users information very early in the discussions on the district-wide LEMA. The evidence provided the water users showed that adopting any corrective control provisions of water use would also extend the life of the regional aquifer.

A web page was created to keep the process available to the public and was updated regularly by GMD4's staff. Beginning in January of 2015, the process was covered by at least 28 board meetings, many of which were attended by members of the

average annual decline rate for every township within the district.

Those townships were then ranked from no decline, zero to .5 percent decline, .5 percent to one percent decline, one to two percent decline, and then greater than two percent decline. Those townships then were set in these categories.

Then we went into the Natural Resources Conservation Service irrigation requirements for corn for our area, and we zoned out our district from east to west, basically setting two zones per county. I interpolated the net irrigation requirement figures to the western edge of each one of the boundaries that are in the district.

Then at that time, depending on which zone they fell in and what the decline status of the townships were, we then assigned an amount of water on an acre-inch-per-acre basis. The acreage was determined from the Division of Water Resources WRIS system, Water Rights Information System, of reported acres. And I believe we used 2009 through 2015.

The reason that we started with 2009 was the fact that that is the first year that all water use in Groundwater District 4 was metered and we ended at '15 because that was the last data

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available at the time we were putting together this plan.

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Based on that, then we assigned an amount for each water right in the district and then converted that into an acre-foot amount for each water holder. It needs to -- also one thing we did was for some of the more heavy users, we said that we will not decrease anyone more than 25 percent except for those that are going to be decreased down to a maximum of 18 inches. In the areas of the district that will have corrective control measures provided, there will be no pumpage over an average of 18 inches per acre.

So we will -- it is our contention that this LEMA proposal does have the effect of establishing or identifying aquifer subunits. Although it is district-wide, by using the decline status for each township it does differentiate between areas that have little or no decline and areas that have high decline. And from that standpoint, I believe that we do look at local aquifer subunits.

Each allocation for irrigation will be a total five-year amount. There is not any annual inches-per-acre requirement or anything. It is just Page 27

livestock and poultry operations to only use 90 percent of the amount they are allocated. The proposed modifications read, in Part 2(a), livestock and poultry use will be encouraged to maintain their use at 90 percent of the said amount provided by K.A.R. 5-3-22 based on the maximum amounts reportable by the number of animals authorized by current facility permit. Again, at no time will a stock water right be authorized to pump more than its authorized quantity.

The GMD board will still encourage

Part 2(d), we would request that that be converted [sic] to read, "When converting from irrigation to non-irrigation use, the base water right will be converted under the procedures in K.A.R. 5-5-9, 5-10, or any Groundwater Management District regulation. And the appropriate non-irrigation, the locally enhanced management area allocation will apply as found in Section 2 for the remainder of the LEMA. Parts 2(b), 2(c) and 2(e) of the proposal would remain the same.

Again, let me restate our thoughts that there really doesn't need to be any additional restrictions and we don't think we want to restrict water use to our animal feeding and dairies.

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a total five-year quantity of water that the individuals can use as they see fit, as long as they do not over-pump their water right.

If, in fact, an individual wants to possibly over-pump that water right, we have a multi-year flex account available or those water rights can negotiate with the Division of Water Resources on a water conservation area.

After completing this calculation, about 65 percent of the wells or well groups slated for LEMA allocations will have a LEMA allocation that is less than their combined diversions from 2009 through 2015.

Now, this is an area that we do want to request that a modification be made in our regional proposal. For the non-irrigation use type, the GMD board requests that the following language modify the stock water portion of the proposed LEMA modification for two reasons.

First, the total acres allocated for stock water usage in GMD4 is less than 0.5 percent of the total appropriations. Secondly, the animal feeding and dairies represent a significant market for our local crops and the GMD board reasoned that animal feeding and dairies should not be unduly restricted.

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As we get further into this, we have proposed an appeal process whereby people who believe that their acre allocations have been not figured correctly will be able to meet with GMD staff to see if the situation can be rectified. And then if they cannot come to an agreement with the staff, they can bring their appeal to the entire Groundwater District 4 board.

We did this just to make sure that there weren't any discrepancies in the irrigated acres. And this appeals process is an effort by GMD4 to make sure that the allocations are correctly set.

Okay. We go into violations. In our proposal this time, we just note that they will be consistent with the violations section of the Sheridan 6 LEMA. Also as an attachment to today's testimony, we do have the entire proposal attached to that, so there is more detail as far as the violations in our proposal.

One thing that we have added was that -it concerns meter tampering. And we say if a preponderance of evidence suggests that actions have been taken to remove or alter the meter's ability to accurately measure flow, the offending water right will be suspended for a period of five years and any

Page 31 and as described above. remaining LEMA allocation will be lost. And that is 1 2 probably about all the detail I was going to give on 2 With that, I will stand for questions. 3 that. 3 HEARING OFFICER BARFIELD: Mr. Dees, do 4 Economic viability. We have had several you have any questions for Mr. Luhman? 4 5 5 studies done, mainly by Dr. Bill Golden at Kansas MR. DEES: If you have got questions, State University. Most of his studies have focused 6 6 Chief Engineer, you can go first. on the Sheridan 6 LEMA, where he has found, at least HEARING OFFICER BARFIELD: Well, I tell 7 8 in the first four years that he has studied, that 8 you what, I would like the parties to go. And if 9 cash flow and profitability within that LEMA, which 9 the parties don't clarify things, I can ask my 10 by the way has a significantly lower allocation than 10 questions. 11 what we are proposing in the district-wide, have 11 DIRECT EXAMINATION OF MR. LUHMAN 12 remained pretty much the same as their peer group BY MR. DEES: 12 13 around the outside of that. Q Really quickly, Ray, just to refresh your A previous study done by Dr. Golden and 14 recollection a little bit. On Ms. Owen's order, was 15 then Peterson and O'Brien, which was the potential the third finding that there was a need for 15 economic impact of water use changes in Northwest 16 corrective controls? 17 Kansas was done in 2008. It was a very large study. 17 A We had declining water tables. 18 But one of the main issues that was brought out in 18 Q Okay. 19 that is that if you are going to reduce water use in A Yeah, we had declining tables. That was the third an area, the absolute worst thing you can do is 20 21 dried-up acres, which use of a reverse order of 21 Q Okay. 22 priority system would do. A Good catch. 22 23 He maintains and shows that keeping the 23 Q And it appears that you and the Division of Water 24 most acres wet is the best way to institute Resources have worked fairly extensively on creating corrective control measures, and that was one of the 25 this plan and, for lack of a better term, massaging Page 30 Page 32 overriding plans or overriding things that the board it and getting it into shape; is that correct? found out when we were doing this proposal. A Well, you know, I wouldn't necessarily put it that 2 3 I guess about the end of this is, 3 way in the fact that the plan has been pretty much 4 furthermore, this proposal does not contain any 4 entirely developed by the Groundwater Management restrictions that are below the average water needs 5 5 District board. We have had some conversations with 6 for corn. And most of the wells or groups of wells the Division of Water Resources about legalities and 7 have allocations at or above the 80-percent chance that type of thing, but the proposal itself has been 7 NIR for corn. 8 done by staff and the board. Lastly, the greatest restriction, Q Okay. But you believe that the GMD4 and the 10 25 percent, is well within the zero reduction to 10 Division of Water Resources can effectively monitor 11 30-percent reduction language as contemplated by the and enforce this plan to meet the corrective control 11 12 Golden reports. And we feel that we can maintain provisions? 12 13 economic viability in the area with this proposal. A Yeah, I do. And that is maybe one thing I left out 13 14 In conclusion, we contend that the Chief 14 is the fact that, you know, through this proposal we 15 Engineer should adopt Hearing Officer Owen's order 15 will turn over the enforcement to the Division of on initial requirements on the Groundwater Water Resources. We have sent our initial 16 17 Management District-Wide LEMA and incorporate it spreadsheet to them that has the allocations. And 17 18 into the Chief Engineer's order. Two, that the 18 it is kind of a dynamic sheet, but it is now in the 19 Chief Engineer should issue an order of decision 19 hands of the Division of Water Resources. There is 20 accepting the proposal with the modifications and, 20 a site where you can plug in your water right number in turn, the proposal with modifications to GMD4 for 21 21 and get your allocation. It is on their website. 22 approval. And on approval by GMD4, the Chief Q Okay. And that relationship, you assume, is going 22 23 Engineer should issue an order of designation to continue? 24 designating all of GMD4 as a LEMA and implementing A I would hope so.

Q That is good. Really quickly. By using the decline

the modified corrective controls within the proposal

Page 33 Page 35 I maintain that people in those areas 1 rate at the township level to determine the LEMA 1 2 allocations, does that reward water users that have 2 probably have a large incentive to maintain their 3 status in that blue or green township so that if, in 3 conserved water in the past? fact, in five years they decide to go through with A You know, that was kind of an issue -- you know, I 4 5 another LEMA process that they are not targeted. don't know if it is really germane, but one of the 6 earlier plans that we had looked at actually was 6 As far as meeting the 1.7 million 7 acre-foot over five years, what I did on that was I looking at each individual water right in the 8 district, saying how much have you pumped and how 8 just did a calculation of all of the water users and 9 much of a restriction should you take. 9 said, okay, if you pumped -- the average amount you 10 have pumped or the LEMA quantity, whichever is 10 I don't remember the year, but the Kansas 11 Legislature has put language in several places in 11 more -- or whichever is less, what will that total come up to. 12 state law that says if you are looking at doing some 12 13 sort of conservation cutbacks, that you have to take Q Okay. And that total is under the 1.7 million acre-feet? 14 into account previous conservation requirements. A Yes, it was. 15 So from that standpoint, we could see 16 early on that each individual that might have a 16 Q Okay. And then -- I know that, you know, there is a 17 allocation given to them was probably going to claim limited ability for us to project in the future what 17 could happen in subsequent LEMA iterations of this 18 that they were conserving, whether they were or not. 18 19 But, you know, you could see with 3,600 wells, that 19 site. 20 was going to be quite an extensive process. 20 A Uh-huh. 21 So we did go back and we just decided to Q But is there a provision in this LEMA that would --22 go across the board with an allocation based on that encourages future groundwater management boards 23 their irrigated acres and we did not take into 23 to reward or --24 account cropping type or anything like that. It was 24 A There is -- you know, and I need to make that clear 25 just based on acres. 25 is the fact that this LEMA as proposed is not one Page 34 Page 36 I need to further state that this proposal that can be extended or anything like that. It is 1 1 proposed for a flat five-year period. If, in fact, does not apply to vested rights either. I forgot to 2 3 bring that up. 3 in that sixth year or during that time that the 4 Q Okay. But how does it reward users who have 4 people in charge at that time want to do it again, 5 conserved in the past? 5 we have to go through this whole process. A Well, I think in several ways. Well, I know in 6 One thing in our proposal was that if this certain ways people that have been conserving water, would happen, that the board of directors at that 7 you know, doing it just because they can conserve or 8 8 time would consider up to a 10 percent carryover of because their well capacities have backed off, 9 anything left in the existing LEMA accounts. actually could receive allocations under this MR. DEES: Thank you, Chief Engineer. 10 10 11 proposal that is in excess of what they have been 11 HEARING OFFICER BARFIELD: All right. 12 pumping. So I think -- you know, from that 12 Mr. Traster, I will go ahead and take your questions 13 standpoint I think they were not further knocked next. 13 down because of the conservation efforts. 14 14 MR. TRASTER: I thought the Division was 15 Q Okay. And then real quickly, can you explain one 15 going first. 16 more time to me how and why the corrective control 16 HEARING OFFICER BARFIELD: All right. 17 measures are going to reach the goals of additional 17 That is fine. We can do that. education and that 1.7 million acre-feet? 18 MR. TRASTER: I am happy to do whatever. 18 A Well, basically on the additional education, as you HEARING OFFICER BARFIELD: Either way. 19 20 can see from the map, there are some very large 20 Mr. Oleen, do you have any questions? 21 areas -- or not large, but there is a very 21 MR. OLEEN: No questions for the DWR. 22 significant area of the Groundwater Management 22 HEARING OFFICER BARFIELD: All right. 23 District that will not have LEMA allocations 23 Mr. Traster.

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MR. TRASTER: Thank you.

CROSS EXAMINATION OF RAY LUHMAN

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areas.

assigned to them because they are in low decline

Page 37 Page 39 BY MR. TRASTER: 1 Q No. I am talking about the initial review that he 2 Q Will you give us a little background? And, by the makes to cover those five or six points. way, my name is David Traster. We have met before. 3 A No, it would not have been. 4 A Right. Q Okay. But it is being submitted. Is the plan that 5 Q I am a lawyer from Wichita. you are asking him to approve --6 A Right. A Uh-huh. 7 Q How long have you been at GMD? How long have you Q -- is it -- has the board formally amended it? been employed there? A I don't know if they have formally amended it. Now, 9 A Since 1979. Which is, what, 37, 38 years, something they have formally adopted the proposed change in like that. 10 the stock water use. And so they have not modified 11 Q 1979? the plan per -- you know, to-date. Again, we are 11 12 A Right. 12 requesting that through this process. 13 Q And what has your role been at the GMD? Q Sure. I am trying to get to technically, you know, 13 14 A I was originally hired as the assistant manager 14 whether it has been -- the plan has been amended. I field coordinator on February 1st, 1979, and I 15 mean, the Chief Engineer has four options under the remained in that position up until 2015 when I was statute: He can approve it as written; he can send 16 16 promoted to manager. 17 it back and disprove it; he can send it back with a 18 Q When Wayne retired? 18 few comments; or he can say, hey, start over. He 19 A No. Actually when Wayne retired, we had an interim 19 has four options. A Yeah. But through the hearing process, there is a 20 man -- or not an interim manager, but we had another 20 manager hired at that time. And then she moved away provision in there that the Groundwater Management 21 21 District can or may -- or can request revisions 22 and I took that position. 23 Q Okay. So when did Wayne retire, if you recall? I 23 through the hearing process. He can consider those and return them to the district. Either he accepts mean, how long was she [sic] there? 24 them or doesn't. 25 A I think Wayne retired in 2014, I think. Page 38 Page 40 1 Q All right. 1 O Sure. 2 A That is fine. 2 A But if he does, he can return them to the district. 3 Q Would you agree that conservation -- everybody wants Q Well, I am not suggesting that he can or can't. All to conserve water? I am just trying to make sure is I understand what 5 A Right. 5 the Chief Engineer can do with this order --6 Q I mean that is a given, right? 6 A Right. 7 A Uh-huh. Q -- and, you know, sort of what that amendment is for 8 Q I mean there isn't any controversy about that, and what it does and how it works so that I -- I right? mean, which one of those four options is going to 10 A Right. 10 be -- I mean -- I guess what I am asking you to say 11 Q You testified that you submitted this plan to the definitively is the plan as submitted, has it been 11 Chief Engineer for approval on June 8th and then amended or not? I mean, they have adopted this -that you made a minor modification, correct? 13 13 A No, it has not. 14 A We have not made that minor modification. We are 14 O So he could adopt it without the amendment --15 requesting that through this hearing. 15 A Yes. 16 Q I see. So the minor modification, when was that --16 Q -- and we would be done? 17 you submitted that to the DWR for review and 17 A Supposedly, yes. approval; is that --18 Q Okay. Under that first option, right? 19 A No. We thought we would do this through this 19 A Uh-huh. hearing process. 20 Q But you want him to amend it, correct? 21 Q Okay. So the minor modification has not been 21 A Yes. 22 reviewed according to the three steps that take 22 Q And the board has approved the amendment? 23 place in the LEMA process where the Chief Engineer --24 24 Q Okay. And can you explain in a little more detail 25 A Oh, are you talking about the first hearing? No. what that amendment does, what it is for?

Page 41 Page 43 1 A Basically the -- I think the proposal as submitted really affect these water rights, existing water stated that stock water used would be restricted to rights, it would affect water rights that were 2 a given amount -- let me see if I can find that. changed from irrigation to stock water during the 3 4 The plan as proposed said that livestock LEMA? and poultry use will be restricted to 76 percent of 5 A Yeah. That is as proposed, yes. 6 the quantity of water deemed to be reasonable for 6 O That is what? A That is as proposed, yes. livestock and poultry provided by K.A.R. 5-3-22 in 8 townships with greater than two percent average Q As proposed. But you are asking that that be -annual decline and 85 percent of that said amount in A Be done away with. Q Okay. So I guess what I am -- what you are asking 10 townships with average annual declines between one 10 11 and two percent based on the maximum head the Chief Engineer to do or what you are asking him 12 supportable by a feedlot per head in effect on not to do is approve it as submitted; you are asking 12 13 December 1st, 2015. him to submit it back to you for --14 A Yeah --14 Q So the plan as it was submitted cut back --A Well, it will put restrictions on -- it would put 15 Q -- because the plan -- let me finish. 16 A Okay. restrictions on stock water, yeah. 17 O Right. And it would put restrictions on stock water 17 Q The plan has not been amended? that were different than the restrictions on 18 A Right. 19 irrigation rights, correct? Q We can agree? 20 A Yes, yeah. 20 A Right. Q And so if he is going to make this adoption, he 21 Q And so that was the plan as submitted. But what is the amendment you are asking for today? doesn't get to do -- approve it as written, he has 23 A Okay. What we are asking for now is that that be 23 to come back under the third or fourth option set out in the statute, resubmit it back to the GMD for modified to the Part 2A, which we would say 24 25 livestock and poultry use will be encouraged to 25 the plan to be amended, correct? Page 42 Page 44 maintain their use of 90 percent of the said amount 1 A Right, yeah. And if he adopts -provided by 5-3-22 based on the maximum amount Q That is all right. I got it. 3 supportable by the number of animals authorized by a A Okay. You got it? current facility permit. 4 Q I got it. Thanks. 4 5 And then, again, there was -- a A Okay. 6 modification was proposed in Part 2(d), whereby we Q You indicated that you had not had any -- that you would say that the conversions from that -- if you 7 developed the plan. And by "you", I mean the GMD, are going to convert irrigation over stock water, 8 the board and staff working together. And I have that we use the current state regulations rather been able to review very briefly your minutes over 10 than -- I think our original proposal said that it 10 the last couple of years and see that there has been 11 would have to be held back to the LEMA quantity was 11 quite a bit of discussion about it, so I understand the maximum that could be converted. 12 what you are saying. 13 Q So under the original proposal which the Chief What was the genesis of this plan? Why 13 Engineer could adopt --14 did you start? I mean --15 A Uh-huh. A Basically back -- let's see, in -- I don't know if I 15 16 Q -- a water right that is for stock water --16 have got that note with me. I think it was back in 17 A Uh-huh. early 2015, the board of directors have -- really at 17 18 Q So a water right that is for irrigation, that is the urging of some of the general public that was at 18 changed to a water right for stock water during this one of our board meetings stated, you guys need to 19 process -- during the LEMA -have a goal statement. And so basically we started 20 20 21 A Uh-huh. 21 to work on a goal statement.

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And at that time -- and I am probably not

adopted a goal statement that said by 2016, I think,

that we would have in place a district-wide -- some

going to get it all right, but at that time we

22 Q -- would be -- would be permanently set at this

25 Q Right. And so would you say that this doesn't

lower level, at the lower level in the --

24 A Through that conversion process, yes.

Page 45 Page 47 sort of program that would decrease water use and to the public on that second round of public would increase the conservation of the area. I 2 meetings probably was slightly more restrictive than don't have -the final plan. And the reason for that was we went 3 4 Q I understand. back in and did some additional -- looked at the 4 5 A But that is kind of where the process started at data, whereby we took out the sections that had 15 5 foot or less of saturated thickness out of the 7 Q Well, you testified, though, that there was a 7 calculations, re-ran the calculations and came up previous plan --8 with a map that was less restrictive, especially around the fringes of the district. 9 A Yes. 10 Q -- that was rejected? Was that before or after 10 Q Okay. But my question is whether or not there was a draft plan that was actually submitted and available 11 12 A That was after that. 12 to the public during those meetings or did you simply describe it to the public in the meetings? 13 O That was after --13 14 A -- after the goal statement. A I probably just described it, although the plan did exist and was a public record, so it was available. 15 O I see. 16 Q But was it readily available? Was it on the 16 A And -- basically I do have a map on that, but it is not that one. But anyway, we had taken that first 17 website? 17 18 A I don't -- I don't know if it was at that time. It 18 out to a series of public meetings also in Hoxie, may have not gone on the website until we made the 19 Colby, Goodland and St. Francis. And although there proposal to the Division. 20 was some support for that, it was not as strong as Q Okay. So when you say "it may not have been", I 21 we would have hoped and we went back to the drawing mean, it wasn't -- is it fair to say it was not on 23 the --23 Q So when were those meetings, roughly? I mean, what 24 A I don't know. month in 2015, if you recall? 25 Q Let me finish. It was not on the website until it 25 A It seemed like they were -- I am thinking they were Page 46 Page 48 in December, but I don't know for sure. I would was submitted to the district -- to the DWR? have to look. A I can't tell you that for sure. I truly don't know. 3 Q That is fine. And when were the public meetings, If I was over at the office, I could tell you. those four public meetings on this plan, when were Q And that is absolutely a perfectly good answer. "I they held? don't know" is fine. 6 A They were held about this time last year, I believe. 6 A Okay. 7 Q So August? Q I will accept that every day. 8 A Well, no, it would have been, I believe, later in the year. Q I don't want you to tell me anything you don't know. 10 Q All right. Well -- so was it during harvest? 10 Okay? 11 A No. No, it was not. 11 A Okay. 12 Q Okay. So you had those public meetings a year ago, O I don't want you to guess. So would it be fair -- I roughly? 13 am asking you, would it be fair to say that the plan 14 A Roughly. Right, uh-huh. 14 as drafted, the written detailed step-by-step plan, 15 Q Was the plan formulated at that time? 15 was placed on the website at about the time it was 16 A The plan had been formulated or had been put submitted to -- in the time frame, within weeks of 16 together by the board and was presented to the the time it was submitted to the Chief Engineer? public at that time. A Yes. Yes, I would say that. 19 Q I see. So the complete plan with all terms and all Q And so it was available to the public if they had of its conditions -- I mean, I guess there were some 20 filed an open records request? minor modifications clarifying amendments that were 21 21 A Yes. 22 along -- after that. So the public had access and 22 Q But it wasn't readily accessible without doing that 23 had copies of the plan that is in the draft form at before sometime around in June, maybe late May that time? of 2017? 24 24 25 A Not really, in the fact that the plan that we took 25 A Yes.

Page 49 Page 51 1 Q Okay. In your testimony you spend some time talking the beginning of my cross-examination, that about the -- your written testimony, this idea that conserving water is in the public interest? it meets the public interest. And I was confused by A Right. that section because I didn't understand what point Q All right. But there are other things that are in 5 you were making. the public interest too, right? Can you tell me what point you were trying 6 A Yeah. I would assume so, yes. to make with your -- the section of your -- I am Q So, for instance, 82a-1020 says it is the policy of 8 looking at Exhibit A, I think. this act to preserve the basic water use doctrine; 9 MR. TRASTER: Is that what we said? does it not? 10 HEARING OFFICER BARFIELD: Yes, Exhibit A. 10 A Yes, it does. 11 And what page of the testimony? 11 Q And it says that groundwater management districts 12 MR. TRASTER: I am looking here. are to -- that local water users get to determine 13 Q (BY MR. TRASTER) Page 4 of 45 has a section here their own destiny insofar as it does not conflict 14 where it talks about the public interest. And I with the basic laws and policies of the state of 14 think you testified -- well, on Page 5 of 45 it 15 Kansas, correct? talks about the public interest as set out in 16 16 A Right. 17 82a-1020. 17 Q So there are other -- are you -- you have been at 18 A Uh-huh. the GMD since 1979 --19 Q What was your point in this --19 A Yes, sir. Q -- and you have read the Water Appropriation Act? 20 A Basically we at least referenced in this testimony the follow-up testimony that we gave in conjunction 21 A Right. 22 with the first hearing. And in that process, I had 22 Q Several times, I bet, in that time? 23 a rather large excerpt from the Groundwater 23 A Right. Management District management plan that deals with 24 Q You know that the Water Appropriation Act is the public interest. And I think, you know, through referred to in the Groundwater Management District Page 50 Page 52 Act several times, right? the preparation of this, maybe that got left out. 1 2 A Right. But basically what we maintain is by our 2 management program, this -- you know, this proposal 3 Q For instance, the district powers include the ability to propose regulations that the Chief will meet the public interest as defined by our 4 Engineer then adopts that are applied only within 5 management plan. 6 Q Okay. But you are also testifying here that it the Groundwater Management District, correct? 6 meets the public interest as defined by 82a-1020, 7 A Yes, sir. 7 Q And that provision, K.S.A. 82a-1028 Subsection O correct? 9 A Yes, sir. requires that the regulations implement the 10 Q And 82a-1020, what is that? What does that say? 10 provisions of the groundwater -- or of the Water And just for your -- your recollection. I don't --Appropriation Act, correct? Subsection O clear at 11 I have got it here, I know what it says, so I the bottom. am -- but what is your --13 A Yeah, I have got it. So, yeah, I agree. 13 14 A I don't really even find it. 14 Q Okay. And in addition, the statute -- the 15 Q That is all right. So the public -- 82a-1020, you Groundwater Management District Act in 82a-1029 says would agree with me, is the first section in the that before you can undertake a management program 16 Groundwater Management District plan? 17 you have to -- before you can undertake active 18 A Oh, okay. Right. 18 management you have to propose a management program 19 Q And it sets out the basic Kansas public policy with 19 and the Chief Engineer has to review and approve it, 20 respect to the establishment of a groundwater 20 right? 21 management district; does it not? 21 A That is correct. 22 A Right. 22 Q And in 1977, the GMD proposed a management plan and 23 Q And we would all agree that basic Kansas public it was approved, correct? policy -- let me back up. Strike that. 24 24 A Yeah. I think they even proposed one before that, It is in the public interest, we agreed at but I don't know that for a fact because I know --

Page 55 Page 53 1 Q Okay. Well, the ones that were produced, the 1 A Uh-huh. earliest one you have produced so far is the 1977 Q That has already virtually been done, right? 3 A Right. Yes, that has been done. 4 A Okay. 4 Q So one of the options is to determine the total 5 Q So that is the one I am going with. permissible withdrawal of groundwater within the LEMA. And you are suggesting 1.7 million acre-feet 7 Q At least by 1977, you had -- the district had -- and be the total? this was before you were there, obviously. A That is the goal statement, yes, sir. 9 A Right. Q Okay. But it also says that it is supposed to be 10 Q But there was a management program that had been apportioned, insofar as possible -- I want to get 10 approved by the Chief Engineer in place at that this right -- insofar as may reasonably be done, 11 11 12 time, right? 12 apportion the permissible withdrawal in the area in accordance with relative dates of priority, correct? 13 A Yes, sir. 13 14 Q And that provision, 82a-1029, says that the 14 A Yes, that is what it says. Q And that is not what you did here, is it? management program can only be approved if the Chief 16 A No. But Paragraph 3 right after that, because it Engineer finds that it is compatible with the Water does not say that the Chief Engineer has to do those 17 Appropriation Act, correct? 17 18 things. It says it should include that. 18 A Yes. It has got to be consistent with state law. 19 Q Right. So in 1978, the legislature enacted the 19 Paragraph 3 right after that says reducing 20 the permissible withdrawal of groundwater by anyone 20 IGUCA statute, right? 21 A I think that is when it was, yes, sir. 21 or more appropriators thereof or by the wells in the Local Enhanced Management Area. 22 22 Q And this is sort of -- the LEMA is sort of the baby 23 brother of an IGUCA, wouldn't you say? I mean, it 23 Q So you are relying on this third option? 24 A Yes. 24 25 Q Reducing the permissible withdrawal of groundwater 25 A Well, it may be the other way around. But, yeah, Page 56 Page 54 they are definitely related. by anyone or more appropriators thereof or by wells. 1 2 Q Okay. Well, what do you mean by "the other way So are you saying, in essence, that this 2 around"? amends or changes the prior appropriation doctrine 3 4 A Because the IGUCA statute existed for many years that is set out in -- I mean, you don't -- you know 4 before the LEMA statute was passed. 5 what the prior appropriation doctrine is and how it is applied? 6 Q Okay. Well, you are supposed to listen to what I meant, not what I said. A Right, uh-huh. Q And that would be pretty devastating really to have 8 A Oh, okay. the prior appropriation doctrine apply strictly in 9 Q So the LEMA statute is the baby brother -the district; would it not? 10 A Right. 11 Q -- of IGUCA? 11 A Yes, it would. 12 Q Now, let's just take off as a little bit of aside on 12 A I would agree with that. 13 Q All right. And the LEMA statute has many of the that. You said something about a study that was done that you need to keep everything wet? provisions of the IGUCA statute copyrighted, doesn't 14 it? 15 A Yes. 15 16 Q Tell me about that. 16 A Yes, sir, it does. 17 Q And the LEMA statute is -- the legislature said this 17 A Okay. Just a brief overview on that is basically Dr. Bill Golden and others back in -- it was amends the Groundwater Management District Act; in sometime back in -- before we came up with the 19 other words, it gets included in the overall 19 20 Sheridan 6 LEMA had done a study that said what is 20 Groundwater Management District Act? 21 the impact to the local value-added economy due to 21 A Uh-huh. reduced -- or water right reductions or water use 22 Q So the control provisions that are authorized by 22 23 reductions in Northwest Kansas. both the LEMA statute and the IGUCA statute include, 24 And he -- it is a thick study. But, among other things -- close to the district's new 24 25 anyway, he went through -- he had several different appropriations?

Page 57 Page 59 scenarios that he outlined on that. And basically 1 A I would contend -- and this is just me personally, we met with him several times as the board had but I but content that any certificate of 3 questions of him and as he worked his way through appropriation issued after safe yield was reached 3 in -- in any part of the High Plains Aquifer is not 4 that. 5 But one of the principles in that was an actual water right because it is not sustainable. Q Okay. So you know how water appropriation rights 6 that, you know, the absolute worst way, whether it are created, right? was through KREP [sic] or whether through a reversal 8 A Yes. of priority or buying out water rights, the worst Q Somebody files an application? thing you could do to affect the local value-added 10 A Uh-huh. economy was to dry up acres. 10 11 Q And if it is in the GMD, then the GMD reviews and O So that is more of an economic issue than it is a concern about how land is farmed? approves -- reviews that water right and makes a 12 13 A Yeah. Yeah. recommendation to the Chief Engineer? 14 Q Okay. 15 Q It is submitted to the Chief Engineer. The Chief 15 A Yeah. That was basically an economic study, yes, Engineer then submits it for review to the board and they make the recommendation back to the Chief 17 Q Sure. Okay. All right. I think I understand that. Engineer? 18 You would agree with me that the prior appropriation 19 A Right. doctrine is a key element of the Kansas Water 19 Q And the Chief Engineer then either issues the permit 20 Appropriation Act, right? or he does not? 21 A Yes. 22 A Correct. 22 O It also says that -- are you familiar with K.S.A. Q And when he issues that permit, he has to make 82a-707(b) that says that the priority of every 23 certain findings; does he not? 24 water right and not the purpose of use determines 25 A Yes, he does. 25 the right to divert user water? Page 58 Page 60 1 Q He has to make a finding that it is in the public 1 A Yes. interest, right? 2 Q And so what this is is that -- that you don't get to decide -- you don't get to allocate water based on 3 the idea that it is either stock watering or Q He has to make a finding that the quantity is municipal or irrigation, but you have to follow the 5 reasonable, right? prior appropriation doctrine? 7 A Yeah. Q He has to make a finding that it is not going to 8 Q And you are not doing that here? impair existing rights, right? 9 A No, we are not. A He is supposed to. 10 Q And the reason you are not doing that here is Q So are you saying that he issues permits without because of that third option that you mentioned? making that finding? 12 A Yes. 12 A He could. 13 Q Okay. But you come back to the public interest 13 Q How could he do that? being -- implementing -- you are trying to implement 14 A I don't know. the public policy statement in 82a-1029, which says 15 15 Q Can you give me a specific instance where he issued preserve the basic water use doctrine, which a permit in GMD4 without making a determination that 16 17 includes the prior appropriation act, right? 17 didn't impair? 18 A Not -- not a specific one. But there are plenty of 19 Q Okay. It is also true, is it not, that water 19 them out there, you know, especially back when we right -- the water appropriation right is a real 20 had the quarter-mile well spacing days. I will property right, correct? 21 guarantee you, there is a lot of those wells that 21 22 A Well, to a certain extent, yes. cannot sit in there and exist a quarter mile apart 22 23 Q It either is or it is not. 23 and not impair one other. But that was a different 24 A Then it is not. 24 administration, a different time, a different 25 Q It is not a real property right? 25 philosophy.

Page 61 Page 63 don't think that that is the case today. But I do 1 Q Sure. But that -- I mean, the Chief Engineer has 1 established policies and procedures for how he is 2 believe that in the past there were water right applications that were approved that -- at least going to make those determinations, right? 3 given today's way of thinking, that are causing 4 A Yeah. And they have evolved and they are much 4 impairment. better today than they were in the old days, you Q That is really not the question though, is it, Ray? 6 know, I will tell you that. Because we used to -even locally, we had regulations that we thought A Well, I don't know. What did you ask me? 8 covered impairment, but it was just more or less a Q And maybe that's my fault. I am perfectly willing blanket regulation. I think now in today's day, to accept the idea that I didn't ask a very good TICE [phon] equations are used, all kinds of question. 10 10 calculations are used to make those possible 11 The act requires him to make that finding, 12 impairment determinations. So I am not really 12 does it not, the finding that there is not -- that 13 saying that they are doing that today, but it has it won't impair existing rights? I mean, that is one of the findings he has to make? been done. 15 Q Sure. So those determinations that it is not going 15 A Yes, it does. 16 to impair is a perspective of looking into the 16 Q All right. And it is a prospective -- it is a 17 finding based on what he knows that day; is that 18 A Right -right? 18 19 Q -- of we don't think this is going to impair 19 A Yeah, I agree with that. 20 someone, correct? 20 Q Circumstances change and maybe there is impairment now, but at the time he didn't believe there to 21 A Uh-huh, right. 21 22 Q When the aquifer was full, early in its development, 22 did quarter-mile spacings cause impairment? 23 A Given the knowledge that we had in those days, you 24 A Probably not. are probably right, yes. 25 Q So it was after the aquifer started to be drawn down 25 Q Okay. I am probably right or I am right? Page 62 Page 64 that you started to see the possibility that a 1 A Yeah, probably. quarter-mile spacing for a new appropriation right Q Okay. You are going to make this hard on me. All could possibly impair another one? right. So the Chief Engineer issues this permit, he 4 A Right. makes these several findings --5 Q And there could be impairment based on -- from older A Right. water rights that had been issued previously because Q -- set out in the statute? And then once the permit the spacing was too narrow, correct? is issued, at least today you can -- before 1978 8 A Correct. you could drill a well and you didn't need a permit? 9 Q But at the time, there was no -- the Chief Engineer A Right, that is correct. 10 had to have found that impairment is not likely to 10 Q But in order to establish a water right, you had to 11 occur, right? get a permit? 12 A I think you are right. 12 A Right. 13 Q In any event, the Chief Engineer, when he issues a 13 Q So you apply, he makes the findings, he issues the permit, makes a determination about the potential permit, then what happens? 15 impairment, right? 15 A Basically it goes through a perfection period, 16 A Yes. 16 typically five years. It couldn't be extended 17 Q And one way he makes that determination is to make beyond that. But then, you know, at the end of that 17 sure that the well spacing is adequate? perfection period then the state audits your water 18 19 A Right. right and bases the final certificate on the maximum 19 20 Q I am going to come back to what I think you said; amount of water that you have used during that 20 21 and that is, that the Chief -- were you suggesting 21 period of record. 22 that the Chief Engineer has issued permits in the 22 Q Limited by the amount issued in the permit, right? 23 GMD in the past where -- that he didn't make a 23 A Yeah. finding that it would not impair other water rights? Q So if you had a water right that allowed you to use 25 A I don't know. You know, that is hard to say. I a hundred acre-feet, you could use up to a hundred

Page 65 Page 67 acre-feet, but if you only used 90 that is all --1 Q And it is in Exhibit A, correct? 2 that is the quantity on the certificate, right? 2 A I think that is what they labeled it. Q So it is Attachment 1 on Page 24 of 45 of 3 A Right, yeah. Like I say, it was based on your Exhibit A; is that a fair statement? 4 maximum year of pumpage that was within the terms, A I think so, yes. limits and conditions of your water right 6 Q All right. Now, you testified that these 6 application. percentages or these reductions were based on an 7 Q So a water appropriation right is defined as -- you are familiar -- well, you have already said you are analysis of each township, right? A Yes, sir. familiar with this Water Appropriation Act. But a water appropriation right is a water right that was Q And you also testified, if I heard correctly, that 10 10 you looked at the net irrigation requirement for created during -- using the process that we just 12 discussed, right? 12 corn in each township and based the yellow townships on the 50 percent net irrigation requirement and the 13 A Yes. 13 14 Q And it gives the ability to divert a definite --14 red townships on the -- excuse me, yellow on 80 from a definite supply, a specific quantity at a 15 percent net irrigation requirement, red on the 50 percent? specific rate, correct? 16 17 A Yes. 17 A Yeah. Now, I didn't do that for each -- because you 18 misunderstood. I didn't do that for each township. 18 Q And then once it is perfected, it is -- that quantity is set out in the certificate, right? 19 I set the zones that you can see -- they don't show 20 up too good on that map. But basically each county 20 A Yes. 21 Q And a water appropriation right is a water right as 21 was split from north to south into two zones. And so that net irrigation requirement applied to every 22 defined in the statute, correct? 23 township that was in that portion of the county. Do 23 A Yes. you see what I am saying? 24 24 Q And the statute defines a water right as a real 25 Q I think I do, but I want to make sure. property right, correct? Page 66 Page 68 1 A Through the use of the water. 1 A Okav. 2 Q It is a permit to use the water; it is not -- you Q So you used the net irrigation requirement to set don't own the water? from -- for each county. There is a net irrigation 4 A Right. requirement in the DWR regs for each county, right? 5 Q But you own a water appropriation right, which A Right. But basically I used the NRCS, national itself is a real property right, right? engineering handbook, which is the same data. 7 A To the use of the water, yes. Q That is where the net irrigation requirement in the 8 Q Okay. So when we look back at 82a-1020, the opening regulation comes from, right? section of the Groundwater Management District Act, A Yes, sir. 10 and we look at what the public policy in Kansas is, 10 Q So --11 A But just to be clear, it was by county and it wasn't 11 we are looking at water rights as real property by township. We did it --12 rights and the whole of the GMD Act requires that it be -- that we preserve the basic water use doctrine 13 Q Okay, good. Thank you for clarifying that. So --13 and it doesn't conflict -- and nothing in the GMD but there is a net irrigation requirement, whether 14 15 Act conflicts with the basic laws and policies of 15 it is an 80 percent or a 50 percent net irrigation the state of Kansas, correct? requirement, for each county, but you have split 17 A Yes. 17 each county into two zones? 18 Q I need to see if I can get this fired back up. Mr. Luhman, I am going to direct your O And the zone to the west is different than the zone 19 attention to the screen here. Is that document that to the east? is on the screen familiar to you? 21 A Yes. 2.1 22 A Yes, it is. That would be the map that went in with 22 Q And I think I heard you say that you base the net irrigation requirement on the western -the LEMA proposal. 24 Q Went in what? A Yeah. What I did was took the county net irrigation requirements -- you know, each county has got one. 25 A Went in with the LEMA proposal.

Page 69 Page 71 I centered that on the center of that county. And on anything in the green or blue areas. 2 then based on distances between each one, I A Basically our philosophy on that is there will be 3 interpolated an amount for the western edge of each the additional monitoring requirements as far as 4 zone. 4 what you have to do if your meter goes down, that 5 Q Is the net irrigation requirement in the irrigation type of thing. guide different than the net irrigation requirement And then, of course, the meter tampering 6 in DWR regs? policy would apply to every -- everywhere in the 8 A No. No, it is not. But what I did was I was district. I agree that there are no cutbacks in setting two zones per county. Basically I was allotments, but the other provisions of the LEMA interpolating figures as we went onto the west. I request would apply to those areas. 10 10 don't think you will find anything in there that is Q But doesn't DWR have a pretty robust meter --12 less than the value for that county. A I think this is more robust than DWR's. 13 Q All right. Well -- so the western county is Q Is it? Okay. Thank you. That helps me understand basically Zone 1 -- or Zone 2 on that map, right? what you are doing here. 15 A Right. A Okay. 15 16 Q And that is Sherman County? Q All right. Back to the net irrigation requirement. 17 A Yes, sir. 1 and 2 would be Sherman. 3 and 4, What did you say -- you were telling us that the net Thomas. 5 and 6. Sheridan and the associated irrigation requirement is going to allow, what? I 18 counties north and south and then --19 mean, why -- I mean, the reasonable quantity --20 Q Sure. So Zone 2 says that the net irrigation regulations for reasonable quantity of water that 20 requirement -- or the yellow townships in Zone 2 use 21 21 can be used for irrigation in this district is the net irrigation requirement 50 percent chance 22 22 one and a half acre-feet per acre, right? 23 rainfall of 15.7, right? A That is correct. 24 A That would be the 80 percent, not the -- that would 24 Q And these are generally -- 18 inches is -be the 80 percent. 25 A 18 inches is --Page 70 Page 72 1 Q Thank you. I am having trouble with this, keeping 1 Q And so in the yellow and red, it is -this straight. But it is 15.7 percent --A Less. 3 A Right. Q -- less? 4 Q -- in Sherman County? A Right. 5 A Right. Q But you said that somehow that the net irrigation 6 Q And so you basically used the net irrigation requirement allows you to grow corn -- still grow requirement for the eastern zone in each county and corn -increased it a little bit for the western --A Basically -- and it gets confusing. But basically A Yeah. Basically, yeah. there are two main values that are set by the NRCS 10 Q I wanted to understand what you did here. 10 for these net irrigation requirements. There is a 11 A Yeah. 50 percent chance rainfall net irrigation 11 12 Q I am not challenging you. I just -- when I look at requirement and an 80 percent chance rainfall 12 the net irrigation requirements in the regs, it is irrigation requirement. 13 the eastern zone in each county that you used? 14 14 The 50 percent said that that is enough 15 A Right, yeah. Because what I did would have been, 15 water to irrigate corn five out of 10 years, with through that interpolated value, set it for the the rainfall that you get five out of 10 years. So 16 maximum value at the western boundary of that zone. that is 50 percent of the time. 17 18 Q I got you. The 80 percent chance value, which is 18 19 A So if in a county -- the county average would have 19 higher, says that is enough water to irrigate corn been that for the eastern zone in each county. 20 eight out of 10 years. So it still does not take 21 Q You kind of confused me when you said something into account the two -- you know, the two supposed 21 22 about western and I wanted to get that cleared up. drought years, but that is -- that is the way those 22 23 One of the things I don't understand about figures are set.

24

Q But it is a net irrigation requirement -- it is the

quantity of water that is needed to grow the crop

24

this map is why you want a district-wide LEMA when

you are not imposing any requirements or limitations

Page 73 Page 75 water? over and above rainfall, correct? 2 A Yes. Yeah, that would be the combination of A I don't --Q Did you tell them that, Mr. Luhman? rainfall and irrigation water. 4 Q So if there is a net irrigation requirement, there 4 A I don't remember, sir. Q Okay. That is fine. I just need to know. And so is also a gross irrigation requirement? were those meetings recorded? 6 A Yes, there is. 7 Q And the gross irrigation requirement takes into A No, they weren't recorded. You know, the comments account irrigation efficiency, does it not? and -- you know, basically what we did was ran kind 9 A Irrigation application efficiency, yes. of a question and answer setup and basically we took 10 Q So in order to actually be able to grow the same down questions and that type of thing from them. 10 Q Well, you probably made a presentation; you told amount of corn on the same tract of land, you would 12 have to have at least normal rainfall, and the two them what was going to happen, right? 12 drought years, you wouldn't be able to grow corn? A Right. 14 A Right. 14 Q So you outlined the procedure, even though they 15 Q You apply in Zone 1, 16.1 or 14.5 inches, but you didn't have a copy of it or have access to a copy of would have to apply it at a hundred percent of it, you told them what was going to happen, the 16 17 efficiency to get the same result, wouldn't you? 17 basics? 18 A That is correct, yeah. 18 A Basically, yes. 19 Q So it doesn't -- I mean, is irrigation a --O Sure. All right. One of the factors that was 20 A No, it is probably -- a lot of the newer systems are considered in the first hearing is -- one or more of probably at least approaching 95 percent. 21 the circumstances that was present in that was 22 Q Okay. So --22 whether or not groundwater tables are declining? 23 A And that is irrigation application efficiency. 23 24 Q So if I am a farmer and I want to grow corn, I am 24 Q And the Hearing Officer found that water tables are going to be -- that five percent -declining? Page 74 Page 76 1 A Yes, sir. 1 A You are going to be five percent short. 2 Q Well, not necessarily. I am going to have some 2 Q Not a controversial finding, is it? rainfall, so it is a little less than five. But if A No. I don't have a brand new system --4 Q But didn't DWR promulgate a regulation for the Groundwater Management District in 1983 that talked 5 A It doesn't have to be a new system. It is just basically if you have got a good nozzle package and about plan depletion? are applying -- which, frankly, most of our folks up A I think there was a plan depletion either regulation 7 or policy back at that time, yes, sir. here do. Q Okay. So back in 1983, K.A.R. 5-24-2 was titled 9 Q All right. And so --"Plan Depletion." 10 A You know, I think I can jump forward on this. Basically we are saying that the producer has to eat 11 A Okay. 12 Q And it was based on the idea of a two percent per the irrigation application efficiency loss. 12 year reduction in the water table at that time, 13 Q Okay. But that is not what you testified to when right? 14 you were giving your main testimony, is it? 15 A I think -- let's see, what did I say? I don't know. 15 A Yes. I will have to go back and look, but probably not. Q And before that, there wasn't a formal plan depletion policy --17 Q Okay. A Before that, we just --18 A Okay. (Talking over each other.) 19 Q What did you tell them at the public meetings? 19 20 A At the public meetings? Basically that there would Q (BY MR. TRASTER) Let me put it in question and 20 answer -be -- you know, that --21 22 Q Did you tell them that they are going to have to 22 A Okay. 23 Q I am not trying to cut you off, but she can't take upgrade their systems and they are going to have down -- if she is like every other court reporter, to -- and if they can't get a hundred percent 24 she doesn't like to have to take down when two of us efficiency, they are going to have to use less 25

Page 77 Page 79 public policy in the state of Kansas, right? are talking at the same time. I am not trying to be rude or difficult, but -- it is her, not me. A It was at that time, yes, sir. 3 A Oh, okay. Q Well, it still is because 7-11 and 7-11(a) haven't 4 Q Anyway, in 1983 the GMD asked the DWR to issue a been amended, have they? A No, but the -- I guess what I am saying is the regulation calling for a plan depletion of the development criteria have changed over time. aquifer at the rate of two percent per year, right? Q Sure. And will likely settle. I mean, as we have 7 A Yes. 8 Q And that regulation was adopted? grown more, the regulations have tightened down. We have just been through that from two percent to one 10 percent to a calculated recharge and now you can't 10 Q And in 1987 or so, they reduced that to one percent, 11 right? 11 get a new water right in GMD4 unless you can meet 12 A Yes. 12 some very specific requirements, right? 13 Q And in 1991, they reduced it to safe yield or 14 O You mentioned that the district -- that the -sustainable yield, however -- whatever language you A Can we -want to use? 16 Q We can take a break. It is the Chief Engineer's 16 A Yes. 17 Q It is the calculated amount of recharge. So since 17 prerogative. But if you need to take a break, tell him and depending on whether he likes you or not, he 1991, all new permits have been based on the 18 19 might let you have a break. 19 calculated recharge available in a two-mile radius circle around the proposed point of diversion? 20 HEARING OFFICER BARFIELD: Mr. Traster, do 21 you have any sense of how much longer your questions 21 A Yes. 22 Q So prior to 1983 there wasn't a plan depletion 22 are going to go? 23 MR. TRASTER: Yeah. It is going to be a 23 policy, right? 24 A No. It was just well spacing at that time. 24 while. 25 25 Q Right. And so -- but the Water Appropriation Act HEARING OFFICER BARFIELD: It is going to Page 80 Page 78 specifically says that new water rights can be 1 be a while? granted even though they might deplete the aquifer, 2 MR. TRASTER: Yes. HEARING OFFICER BARFIELD: Well, I will correct? 3 4 A I think it does. 4 want to take a break about 11:00, if not before. 5 Q Okay. If that is 82a-711 and 711(a), is that --5 MR. TRASTER: I have no idea what time it is, so if we need to take a break --6 A It sounds good to me. 6 7 Q Okay. So any water right with a priority date HEARING OFFICER BARFIELD: It is 10 to 7 11:00 now. So if we are not going to complete him before 1991, there has been a finding that it is in 8 the public interest to allow that water right to be before a break, then I think maybe we ought to take a break. So why don't we do that. We will take a 10 granted at either two percent or more, or after '83 10 11 two percent, and after '86 or '87, one percent, 11 break until 11:00 and then we will reconvene. 12 correct? 12 (Recess taken at 10:45 a.m. Resumed at 10:57 a.m.) 13 A Yes. 13 14 Q So it is not surprising that Ms. Owen would find 14 HEARING OFFICER BARFIELD: We will go back 15 15 that there has been a decline in the water table on the record while Mr. Luhman is finding his seat. because that was the policy for many years, right? 16 So what we will do here, we will let this 17 continue until 11:45. At 11:45, we will take a 17 A Yes. 18 Q And if allowed -- I mean, most of the water rights 18 break from the formal phase. And if you need to --19 were granted under that two percent per year or and we will take public comments, basically. If you 20 earlier, '83 or earlier. I mean, the vast majority 20 need to leave before our lunch break, I would like were already granted when the Groundwater Management 21 to provide opportunities for public comment starting 21 22 at 11:45 and we will go through everyone who needs District was formed in the first place? 22 23 A Yeah, you are right. 23 to testify before the lunch break. 24 Q And so of course it has declined because there is a 24 So if you want to be one of those persons, plan depletion policy in place and that is the 25 you need to go and talk to Chris and he will make a

Page 81 Page 83 list of those who need to testify before our lunch 1 you tell me. There is a limitation based on break. Again, I will make sure that if you are here location in the township of a certain number of 3 today and you want to make a public comment, that acre-feet per year --3 4 you have an opportunity to do that before the day is A No --5 out. We can switch back and forth as is necessary Q -- multiplied by five? to accommodate this. And we can continue this into A Yes. 7 tomorrow, if we need to as well. I am hoping we can Q So, for instance, in Zone 1 in the yellow -- in the 8 get through it today. townships that are designated in yellow, you get 16.1 inches per year for five years and you can use 9 So with that, Mr. Traster, you can 10 continue. Again, if you need to make a comment, that however you want to; you can use up to the 10 amount of your water right in one year, you just 11 talk to Chris and we will take your comments at 11 12 12 have to cut back in a later year? 13 O (BY MR. TRASTER) Mr. Luhman, we are back on the 13 A Yes. 14 record. You understand that you are still under 14 O Is that fair? 15 A Yes. 15 16 A Yes, yeah. 16 Q But if you didn't use -- okay. So the five-year allocation in Zone 1 or someone in a township 17 Q You have provided through your attorney a number of designated yellow is 80.5 inches, right? documents pursuant to my request; have you not? 18 19 A Yes. 19 A Yeah. 20 Q According to the map. And if a farmer, an irrigator 20 Q And some of the documents I requested I haven't in that area uses less than -- he can carry 10 21 received yet, right? percent over at the end of that five-year period if 22 A I don't know. I thought you had all --23 Q Well, I will tell you. Some of the documents that I he or she hasn't used the full 80.5 inches, right? A Yes, that is correct. Now, in the proposal it just have asked for, I haven't received yet. says that if they propose a second district-wide 25 A Okay. Page 82 Page 84 1 Q And some of them, I haven't received in the format I LEMA that they could consider up to a 10 percent carryover. needed them. In other words, I was looking for 3 formats like spreadsheets and I don't have those. Q Right. The LEMA on Exhibit A, Page 17, subparagraph right above the second 2 says that the And that is not a criticism at all, because we 4 board will consider a maximum of 10 percent 5 are -- we have been working under some pretty tight 5 time frames. But I am just saying that I haven't carryover, right? 6 A Yes. 7 seen all the documents that I -- even the documents 7 Q Now, in a meeting on March 2nd, 2017, there was a 8 that I have got, I haven't had time to really look 9 motion made to include a carryover amount, correct? 10 The board made a motion to include a carryover 10 So in some respects -- I am really trying 11 to find out what is going on or what these issues 11 amount in the LEMA plan? 12 are. In my review of the documents, I noticed 12 A I think -- that is correct, I think. 13 Q But it doesn't say anything about consideration. It several places where -- especially in the minutes of 13 the board meetings -- there was extensive discussion says -- well, let me just read it to you. Mr. -- is 15 about carryover, allowing some carryover? 15 it Goson [phon] or Goossen? 16 A Yes. 16 A Yeah, Goossen. Q "Mr. Goossen moved to include a carryover amount of Q Okay. Tell me, what does carryover mean? 17 18 A Basically as it applies to the district-wide LEMA up to 10 percent of the LEMA allocation in purple, 18 yellow and red areas. The motion was seconded and and, as I have stated before, the LEMA itself is 19 19 20 only for a five-year period. But there was a 20 passed." 21 provision in there to say that up to 10 percent of 21 So I guess there is "up to" in that 22 the original LEMA allocation could be carried over 22 motion, but there is no idea about the board being if it still existed in each individual's account. 23 able to either grant or not grant that 10 percent in 24 Q All right. So if I understand the LEMA correctly, 24 a second LEMA? I mean, what I guess I am trying to get to is do you get the 10 percent or not? I mean,

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and please make sure -- I mean, if I say it wrong,

Page 85 Page 87 is it up to the board's discretion? What does "up through this whole process again. Not me, but to" mean? someone could. 3 A Basically it would be up to the discretion of the Q Why wouldn't you want to? I mean, it is so much board of directors, you know, five years from now. 4 A Yeah, right, but -- I hate to miss it, but --6 A Ostensibly that they could consider up to 10 Q Yeah. We are having fun. percent, but they are not required to. A There you go. 8 Q Okay. So if one farmer conserves and uses 72 Q All right. I am going to represent to you that what I did is to take the data that Brownie Wilson acre-feet instead of 80, he might get that moved over into the next LEMA, but he might not? provided to you and that you based your information 10 10 11 A That is correct. on and I took that data and put it in a spreadsheet 11 12 O But that is not what the motion was back in March 12 and did this section by section instead of township by township. of 2017, is it? 13 Then I used your colors. They are a 14 A I thought you said that it read that they could 14 consider up to a 10 percent -little bit different. I didn't use the bright red 15 because it covered up the text that you can't see 16 Q No. It just says that they could -- to include a 16 anyway. But essentially this is a district map carryover amount of up to 10 percent. So, I mean, 17 it either includes -- the board says it is included. 18 with -- the best job I could do, and I will tell you 18 that I am not sure that I did it just perfectly. 19 The plan says that it is to be considered. There is 19 20 no consideration in the motion approved in the 20 But, generally speaking, this is section by section rather than township by township. minutes? 21 21 22 Does that -- I mean, just looking at it 22 A But the motion says up to 10 percent. generally, I am not asking you to verify that I did 23 Q Right. So --23 24 A So zero to zero is up to 10 percent. 24 it right, but generally is that -- does that look close to you? 25 Q Okay. I just wondered how that worked, because it 25 Page 86 Page 88 wasn't clear. So is there no guarantee -- somebody 1 A I would think it looks fairly close to me. Again, could conserve and still not be able to carry that based on what I can see right now. 3 Q Right. And I am not asking you to verify that it 4 A That is correct. If, in fact, a new LEMA was is. But what I am troubled by or have questions proposed. about are the townships. There are numerous 5 6 Q And there is quite a bit of discussion in the townships here that are mostly one color, mostly documents about the idea that in a new LEMA, then -blue or mostly purple, some mostly yellow. But 7 there are some townships in here that are varied. I mean, while this is a LEMA that ends in five years, the consideration or the belief at this point Now, you testified that you took out all of the town -- all of the sections -- let me ask 10 is that it probably is going to go forward; wouldn't 10 vou. You took out all the sections that had less 11 you say? than 15 feet of saturated thickness? 12 A You know, that is really hard to say because you A Yeah. I removed those from the calculations that I don't know what the circumstances are going to be 13 14 five years from now. The board could consider going 14 15 Q And I did not do that because I didn't know you did 15 into a new LEMA but, you know, they don't -- you 16 know, that is just going to be a decision for down 17 A Okay. the road. Q So I will tell you that those -- if it is less than 18 Q I see. So you think maybe there is not going to be 15 acre-feet -- and the reason you did that too, any more depletion in five years? because when you do the percentage calculation it 20 A No, I don't think that. But I don't know what every 20 21 ends up with a huge percentage, doesn't it? 21 board of directors we have five years from now, what 22 A Yeah. Yeah, a relatively small decline given a 22 their decision will be. 23 small saturated thickness comes up to, I thought, an 23 O Sure. But the door is wide open for a new LEMA unreasonable percentage. after that, right?

25 A It definitely could be proposed and we would go

25 Q In some cases over 2,000 percent?

Page 89 Page 91 HEARING OFFICER BARFIELD: Right. Okay. 1 A Well, yeah. Yes, sir. 1 2 Q All right. So this is inaccurate from the 2 MR. TRASTER: And I will provide copies to 3 counsel and to -standpoint of your map to the extent that you have 4 HEARING OFFICER BARFIELD: Right. 4 got an area that has got a saturated thickness less MR. TRASTER: -- the Hearing Officer so 5 than 15 acre-feet -- or 15 linear-feet, correct? that you have it. 6 A Yeah. Especially down along -- primarily along the 6 southern border of the district, down -- yeah, down 7 HEARING OFFICER BARFIELD: Without any of 8 through there. 8 the additional corrections made; it is just the pure 9 section-level data? 9 Q So this is a map that shows the saturated thickness MR. TRASTER: I used the information that and it is one of those -- it is just by section. 10 10 Again, if I did the math right, which I was careful, was available to me and I didn't know that -- that 11 11 was a big question I had is if we were going to take 12 but I am not a mathematician by any means. 12 13 So in the blue, if it is dark -- the 13 20 minutes to figure out about the percentages. But 14 darker blue is less saturated thickness, the orange 14 he has already taken that out. So, no, I didn't -is more. And so when we see percentages in these --15 I didn't know that he had taken that out. in the -- I used a formula that if it was -- if it 16 HEARING OFFICER BARFIELD: Okay. That is 16 17 increased, if there was an increase, there was just 17 no color. So those are areas that are either no 18 18 MR. TRASTER: But you are right. It is 19 data -- and some of them there is just no data. In 19 not corrected to reduce -- to take out the sections 20 others, there is an increase. So it is -- I mean, I 20 that are 15 feet of saturated thickness or less. 21 am trying to make sure you understand the map here. 21 But they show up in either green or blue on this 22 So the areas down in the southeast corner 22 map, I think. 23 is an area where there is very limited saturated 23 HEARING OFFICER BARFIELD: Right. I was 24 thickness and across the bottom border, in that 24 going to wait to ask my questions later, but since area, in the southeast quarter of Sherman County, 25 we have got the map up --Page 92 Page 90 right? 1 MR. TRASTER: Sure, that is fine. 2 A Yes. HEARING OFFICER BARFIELD: When you say, 2 Q So back to the map --3 Ray, that you removed them, what does that mean? MR. TRASTER: And I have got copies of --4 MR. LUHMAN: Basically what I did is any 4 single copies of these maps. I am going to talk to 5 section that showed 15 foot of saturated thickness 6 Mr. Titus ahead of time and we will mark the copy. or less, I removed from the database and then redid 6 7 I didn't make multiple copies of these, but I can 7 my calculations -- let's say I pulled 10 sections 8 provide them to you. 8 out of one township, then my average went back down MR. DEES: I appreciate it. 9 to dividing that by 26, that type of thing. So I Q (BY MR. TRASTER) So this map that -- in fact, let's 10 10 removed it completely from the database. 11 mark it so we get the record straight. 11 HEARING OFFICER BARFIELD: So there 12 HEARING OFFICER BARFIELD: That would be 12 weren't any of these townships -- the whole township good. 13 was less than 15 feet, that didn't exist? 13 14 (Marked Exhibit D, Exhibit E.) 14 MR. LUHMAN: I don't believe so, no. 15 Q (BY MR. TRASTER) For the record, the map that I am 15 HEARING OFFICER BARFIELD: All right. going to show on the screen is going to be Exhibit D Thanks. 16 and it is the map that has the percentages based on 17 17 Q (BY MR. TRASTER) Now, that township on the south 18 section by section versus township by township. And 18 end about the middle, that is mostly green but it 19 Exhibit D -- no, E is the saturated thickness map has a little bit of blue, would mostly be less than 20 that I showed you a moment ago. 15, right? Or not? I may be --21 HEARING OFFICER BARFIELD: Mr. Traster, so 21 A Yeah, I think it would be. I really do. 22 Q But it is --22 the first one is for the same period they 23 considered. This is just your attempt to replicate 23 A Yeah. 24 it using the KGF section-level data? 24 Q There are some townships, particularly down in the 25 MR. TRASTER: It is my attempt, yes. southeast corner, where you have got -- in the same

Page 93 Page 95 township you have sections that that are green 1 capacity down there. showing no decline, sections that are purple, then 3 the very southeast corner there is blue, which is A But, you know, on the other hand, we have got some 4 less than five percent and -- but, I mean, you have fairly good wells in there that -- we are showing 5 got some red sections in there too. But the declines. And, you know, that is one thing that saturated thickness in that area is pretty light? 6 when I went in and took the 15 foot and less 7 A Yeah, it is a very thin aquifer and very variable saturated thickness out, that is one area that down in that area. 8 concerned me because the original map had both 11-26 Q And so -- but you are still -- those irrigators are 9 and 12-26 period as red. going to be reduced to 18 inches or to the yellow 10 And so when I pulled those less than 15 designation on your map, right? 11 acre-foot or less than 15 foot saturated thickness A Yes. 12 out of there, it changed one of them to yellow and 12 13 HEARING OFFICER BARFIELD: Can you point one of them to purple. So --Q So you already accommodated some of my concern? 14 out the townships you are talking about? A Well, I think I have. I don't know what your 15 MR. TRASTER: I will try. concern is, but --16 MR. LUHMAN: They would be right there 17 O Well, I have just expressed that isn't it [indicated]. self-limiting? I mean, that is my --18 HEARING OFFICER BARFIELD: Okay. So at 18 19 19 the very southern and eastern side --Q Why impose an additional requirement on a township 20 MR. LUHMAN: Right. 21 that is virtually self-limited, is my concern or 21 HEARING OFFICER BARFIELD: -- when I look 22 question? 22 at those particular townships? A Okay. So we did go ahead and put it in the -- you 23 23 MR. TRASTER: I am talking about townships 24 11 and 12 south and 20 -- 11 south, 27 west and know, the modified map, there is -- one of those 25 down to 15 inches and the other one, of course, 25 28 -- no, 11 and 12 south and 27 and 28 west. Page 94 Page 96 HEARING OFFICER BARFIELD: Okay. would be 18 inches. I -- I don't know without 1 MR. TRASTER: Down in that southeast looking at the data. I seriously doubt that a lot 2 3 corner. 3 of the wells in that area could pump that anyway. HEARING OFFICER BARFIELD: Right. I am 4 O Okay. 4 with you now. Can you switch back to the other map? HEARING OFFICER BARFIELD: So, 5 5 MR. TRASTER: Yes. Mr. Traster, the map you have here is our Exhibit E 6 6 HEARING OFFICER BARFIELD: Okay. So as 7 7 map, correct? you say, they are variable at one point and then 8 MR. TRASTER: No, this is going to be they are either purple or yellow. Okay. Thank you. 9 Exhibit F, I think. Q (BY MR. TRASTER) So as the Chief Engineer said, HEARING OFFICER BARFIELD: Oh, this is a 10 going back to your map that is part of the -- it is 11 new one? Attachment 1 to the plan, you have got those folks 12 MR. TRASTER: A new --HEARING OFFICER BARFIELD: Are you going restricted either to 14.7 inches per year times five 13 13 or 18 inches, depending on whether they are purple 14 to use Exhibit E anymore? And the reason I am or yellow. And all of those sections down there are 15 asking is I was just going to clarify what it was. 15 restricted, even though the saturated thickness is 16 MR. TRASTER: Yeah, go ahead. Let's do 17 fairly -- across those townships is limited? that so that it is all in the record at the same 18 A Yes, sir. 18 point. If I could find which one it was. 19 Q And this is a question. I mean, isn't the 19 HEARING OFFICER BARFIELD: It was the 20 aquifer -- doesn't that self-limit their ability 20 saturated thickness map. And I guess I just wanted 21 to -- I mean to be able to divert the water, is it 21 to clarify for -- is this the current, latest really necessary to do that? 22 22 saturated thickness map? 23 A Really in that area -- again, there is a lot of 23 MR. TRASTER: No. It is the 2015 variability. And I would agree that, you know, the 24 saturated thickness map. thin aquifer does limit just basically diversion 25 HEARING OFFICER BARFIELD: Okay. Thank

Page 97 Page 99 you. 1 is the most, right? 2 MR. TRASTER: It is based on the data from 2 A Yes. 3 KGS provided to be by Brownie Wilson that was used Q And, generally, this map shows where the decline is 3 4 by the GMD, according to Brownie and Brownie's section by section. And, again, there is a 5 testimony in the original -- in the first hearing. variation. Some of the townships have very little 5 6 That is the data I used. variation. I mean, it is -- the decline is roughly 6 7 HEARING OFFICER BARFIELD: Okay. I just 7 the same. 8 wanted to clarify what it was. Mr. Dees? 8 In other sections, in other townships 9 MR. DEES: Can I ask one real quick 9 there is variation. And, again, where you have got 10 question on these exhibits? Did you create these, 10 more or less, in some cases, increases in -- I guess 11 Mr. Traster, or did someone else create these? 11 what I am trying to get to here, Mr. Luhman. When 12 MR. TRASTER: I did it all my by myself. 12 you look at Exhibit F and compare back to Exhibit D, 13 MR. DEES: Okay. Good deal. Thank you. 13 which is my section-by-section map, compare back to 14 RAY LUHMAN: Good job. 14 your Attachment 1. In some cases, this appears to 15 MR. TRASTER: Well, when you get the data, 15 be equitable as far as the amount of decline and the percentage of decline across the entire township is you may say it is not -- you may be, what the heck. 16 HEARING OFFICER BARFIELD: Should we go 17 17 roughly or similar. But in other townships you have got areas 18 ahead and mark the next exhibit? 18 19 MR. TRASTER: Yeah. I am not sure -- what 19 that are -- you have got no -- a lot of variation. And I am trying to understand how that is fair. And 20 time is it? 20 HEARING OFFICER BARFIELD: It is 11:26. 21 let me go back to Exhibit D and to particularly 21 22 MR. TRASTER: Okay. 22 point out Township 9 South-Range 34 West. And I am HEARING OFFICER BARFIELD: Chris, no one going to see if I can approach here. I believe it 23 23 24 has actually indicated -- okay, that is fine. If no is this township that I am pointing to right here. 25 A Okay. one needs to, we will just continue on then. 25 Page 98 Page 100 1 MR. TRASTER: This young lady said she Q In that township you have got a couple of red 2 wanted to speak. sections. In other words, there is more than two 3 HEARING OFFICER BARFIELD: All right. Do percent decline. But within just a mile or two or 3 4 you want to provide a comment before lunch? Okay. three, you have got areas with half a percent or 5 So we do have one here. Anyway, why don't you carry less decline. Because the two sections in the 5 6 corners of that particular township are in blue and 6 7 (Marked Exhibit F.) then purple and then the rest of it is yellow. I 7 8 Q (BY MR. TRASTER) Mr. Luhman, I have placed on the 8 mean, how is it fair to take the person who has screen another iteration of this map that I have those two blue townships in the southern part of 9 been working on and we have marked it as Exhibit F. 10 10 that -- the two blue sections in the southern part And I will represent to you that it is the gross 11 of that township and treat them differently than the 11 12 number of feet of decline from 2004 to 2015 based on people who have water rights in the section 12 13 that same dataset that we have been using. immediately below it that is almost entirely blue 13 14 And I marked anything that was increased 14 and don't have any restrictions? in blue. And then it varies as the orange gets 15 A Well, first of all, I wish -- and I don't know that darker, it goes from a zero to five-foot decline, you have it. I wish we had an overlay on that that 16 17 five to 10, 10 to 15, 15 to 20, 20 to 25. And then shows the actual points of diversion for the wells. 17 if there is no color, like down in the southwest I don't know what that -- I don't know what the 18 corner where there is no color, that is more than

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level of development down there is. I suspect that

there is not much development there whatsoever.

your question, where we did the designation by

townships, there is some variability that is in

there. So I don't know. I really don't know.

Because I know a lot of the areas down in that

So, again, I guess, you know, to answer

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25 feet of decline is what I tried to do. And I

So the decline in Attachment 1 to your

report, those two red townships correspond roughly

to the two bright -- the two spots where the decline

think that is -- to the extent any of this is

accurate, that is accurate.

Page 101 Page 103 southwestern part of Thomas County, there are no is 9 South-34 West and we note that both of the 1 1 wells whatsoever. As a matter of fact, there is not sections 30 [sic] and 36 in that township are in 3 much water there at all. 3 blue, right? 4 Q Okay. 4 A Yes. 5 HEARING OFFICER BARFIELD: So, Ray, you Q And --6 are saying they are blue because there is probably 6 HEARING OFFICER BARFIELD: Actually that 7 not wells there; is that what you are saying? is 31 and 36, correct? 7 8 RAY LUHMAN: That is what I think. I 8 MR. TRASTER: Correct. Again, he is 9 don't have that map with me. I have got it at the supposed to listen to what I meant, not what I said. office, but I don't have it here. 10 Q (BY MR. TRASTER) So in looking at Exhibit G, there 10 11 HEARING OFFICER BARFIELD: Let's mark aren't any wells in Section 31, but there appear to 12 this. 12 be wells in or around Section 36, correct? 13 THE REPORTER: This is Exhibit G. 13 A Yeah, there are wells in 36, 25 and you will go on north from there. 14 (Marked Exhibit G.) 15 Q Right. So my question is --15 HEARING OFFICER BARFIELD: Can you describe Exhibit G? 16 A If you are talking 31, there is no wells over in 17 Q (BY MR. TRASTER) I am going to hand you what has 17 been marked Exhibit G. Can you tell me what that 18 Q Right. So my question is, how is it fair to the guy 19 that -- the irrigators in Section 36, Township 9 19 is? I mean, it is something, I think, that you 20 South-Range 34 West, when -- and that is a section 20 produced. or township that you designated as yellow, and so it 21 A Basically what this is a copy of a map. It is an 21 is given a decline -- they get, whatever, 16 inches earlier map of the first proposal, but it does have 22 roughly, whatever it is on your map? the wells plotted on here. 23 24 Q Right. So --25 Q But how is it fair to those irrigators when the guy 25 A And I can go to --Page 102 Page 104 1 Q Hang on just a minute. Let's make sure the record directly across the road, assuming there was a road 1 is clear first. and a township line, is in a section -- in a 2 3 A Okay. township that is blue and gets no reduction? 3 4 Q I mean, it is a map of the GMD. It is an earlier A I think that is just the nature of the data and the proposal with different colors on it that aren't way that it was chosen for this project. 6 relevant here, so we are not paying attention to the Q So the idea is that by going township by township 7 colors on the map, but it is a map of the district instead of section by section or some other 7 8 and it has the points of diversion shown, meaning designation, the owner of the wells in the southeast the wells, correct? corner of that township, 9 South-34 West, gets 10 A Yes. treated differently than the owner of the wells in 10 11 Q All right. And when you look at that particular the township directly south? 11 township that we have been talking about, and let me A Yeah. Unfortunately -- and you understand this. But when you do water policy or whatever, there are 13 get my bearings again, it the 9 South-34 West, there 13 14 are wells in the -- at least there were wells in the 14 lines. 15 15 Q Right. southeast corner of that township, right? 16 A Yes. There are wells clear along the east half of A And you just can't get around that, you know. If, in fact, you chose different boundaries, there is that township and up in the northwest quarter of 17 17 going to be a line. 18 that township, but basically no wells whatsoever in 18 Q Right. 19 19 the southwest quarter of that township. A So it was our board's determination on this to go on 20 Q All right. the township basis, knowing full well that as you 21 HEARING OFFICER BARFIELD: In the 21 22 get more of a coarse look at that, there will be 22 southwest is where the blue was; is that right? some --23 23 MR. TRASTER: Let's zoom in here. Q Unfairness. 24 RAY LUHMAN: Yes. 25 A Well, if that is what you want to call it. 25 Q (BY MR. TRASTER) So I zoomed into the township that

Page 105 Page 107 1 A No. 1 Q That is what I want to call it. 2 A Okay. Well, you can call her that. 2 Q Okay. 3 Q I mean, it is not fair. It is not -- I mean, to 3 HEARING OFFICER BARFIELD: Well, we have have -- to treat one water right owner who -- and I 4 reached 11:34, so is this a good breaking point 5 or -don't know why his percentage is lower. Maybe it is MR. TRASTER: It is a good breaking point because of saturated thickness, maybe because it is 6 because he is the one that conserved. 7 for me or we can go on, either way. 8 A Or couldn't pump it. 8 HEARING OFFICER BARFIELD: Why don't we do 9 what we said and sort of stop the formal process and 9 Q Well, any number of things that could happen, right? provide an opportunity for at least the one 10 10 A Right. informal, and then I think maybe a lunch break from 11 11 Q But one of the possibilities is that it was because 12 he and his neighbors conserved and the others 12 there. Thank you. 13 MR. TRASTER: Thank you. 13 didn't, right? 14 A That is one possibility. 14 HEARING OFFICER BARFIELD: All right. 15 Q And you are familiar with the tragedy of the commons 15 So we will take whatever public comments, if you need to leave before lunch, and when that is concept about who -- you know, take all you can get 16 17 while you can get it, right? 17 done, we will take a lunch break. 18 So did you have a comment you wanted to 18 All right. Well, you moved one township 19 to the east and you have -- in Section 1 you have 19 make? And, Chris, did you have anyone else? Okay, 20 so we will take this one public comment and then we 20 got greater than two percent. In Section 31 you 21 have got less than half a percent. So you have got will take a break. 2.1 22 22 this variability across a number of townships. I If you could state your name and address 23 mean, more than just one or two townships here, 23 for the record and then we will ask you to be sworn 24 24 right? MS. IRENE SIEBERT: My name is Irene 25 A Yes, sir. 25 Page 106 Page 108 Siebert. I live at 2932 East 96th Place in 1 1 Q Now, when we zoom back out on the map that is Thornton, Colorado. 2 Exhibit D, you could draw up -- I mean, I agree you HEARING OFFICER BARFIELD: Ma'am, can you 3 have to have lines and those lines don't 3 4 spell your last name for me, please? necessarily -- I mean, the water doesn't know that IRENE SIEBERT: S, as in Sam, I-E, B as in 5 5 we have a section line here or a property line. But Boy, E-R-T, Tom. 6 6 there are -- township designation has some 7 HEARING OFFICER BARFIELD: Okay. Please rationality in some cases. In other cases it is 7 8 make your comment. just not fair, right? 9 A I don't know that I would agree with that. But, you (Ms. Siebert was sworn.) 10 IRENE SIEBERT: Okay. I grew up in Thomas 10 know, you do run into some variability in a subsection of a township. 11 County. I believe the township was Sumner, if that 11 12 Q Now, one of the things about doing townships in 12 would be right. And it is not an eight-hour day that you spend as a child, as an adult, working the terms of draft of the plan is it makes it a lot 13 13 14 easier, doesn't it? 14 land, working with the animals, working with the 15 poultry and all that. We experienced everything 15 A It does to a certain extent. Although, you know, given today's computers and stuff, you can take it 16 like that. It is not an eight-hour day, ever. 17 to about any level that you want to. It doesn't So my question is, how many of you have a 18 take that much -background in agriculture, hands-on, feet on the 18 19 Q Right. Even a lawyer can figure out how to do it if 19 ground, boots on the ground, to use that expression? 20 he just --20 I would encourage you, by way of -- to get 21 A That is what I was thinking. 21 acquainted with farmers on a personal level. I 22 think you would find it really enlightening and 22 Q -- misses church, you know. I hate to miss church. 23 So -- I mean, you would agree with me then encouraging. 23 24 that it would -- there is a way to do this that Now, my parents were in the 1930s. You 24 would be more equitable? 25 know, the Depression years. And I was born in that

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era and we -- we did a lot without. There was no -nothing like wells until 1940. That certainly was encouraging to us as farmers, to have the ability to irrigate land and grow crops very well and supply food for other countries maybe, supply food for military. My husband was -- instead of going to the military, went into the medical field because that is -- they said, you know, we need some help -supply that kind of thing for the ones who don't

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living.

So then my question is, I think we are living on the edge of the aquifer right now and I think we -- I can see from the map that we are probably going to be hitting clay as well. Some of these -- when the big wells go -- they are going to be digging into clay and so forth. And you just have the aquifer -- we are kind of thinking we are living on the edge of the aquifer.

know and don't have the means to supply their own

We have a wonderful tenant and he keeps us informed and he is a very, very -- in spite of having not [sic] a degree in anything agriculture, he does supply tests for the land to the state college and gets a lot of data through them, how he can irrigate and fertilize and so forth so that it

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- 1 you have with Colorado agriculture to provide -- to
- 2 kind of limit -- you know, we are all getting our
- 3 water from the same aquifer. Colorado, Nebraska,
- 4 Kansas, what -- how are we going to see that
- 5 everybody has a fair chance. That word "fairness"
- has been brought out a lot in the last hour or two.
- 7 And I think -- I appreciate that.

So anyway, that is my concern, our concern, that we have water for the needs of the people in their homes. You know, God only made so much water and it circulates the world. So that is how we have to live. And the lady next to me this morning said, "Let's just be sure that everybody has a fair chance at having the water they need."

Thank you, sir.

HEARING OFFICER BARFIELD: All right. Thank you for your comments. Very good.

18 It is 11:50. Why don't we go ahead and 19 take a break. Let's take an hour break. Let's seek 20 to reconvene at 10 minutes to 1:00.

(Recess taken at 11:46 a.m. Resumed at 21 22 12:53 p.m.)

HEARING OFFICER BARFIELD: We are now back

During lunch we visited about sort of the

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best procedure here for moving forward. And I have 1

talked to the parties and we would like to go ahead 2 3 and switch to the informal phase, as we are already

4 sort of paused anyway here, and let members of the 5 public who want to make a comment make those now.

And then after that is complete, we will switch back

to the formal stage and continue.

And if any of the public -- we will make sure after the informal -- after the formal stage is completed that if any of the public want to make additional comments based on what they have heard, they can do so. But that way you can make your statement and if you have had enough, you can move

So we are going to switch. I have got the sign-in sheets that we provided and I am going to go ahead and call in order, at least there in front of me, and if you would like to come and make your statement, I would ask you to come to the microphone and state, again, your name and address and be sworn in and then make any comments you have concerning the district-wide LEMA.

You know, I would appreciate you just telling us a little bit about yourself and your interest in the area, your experience as a water

will be profitable and grow crops. And he can

determine from that which crop he will grow. Corn is, of course, the most appropriate, most wished

Also I want to say that my husband spent very much time leveling land here in the state and in the county for the wells to be put down. And I appreciate the work that they have done. I just think sometimes -- I have a feeling today that there are so many regulations that are proposed. And I can appreciate what Mr. Traster has said, and he is very scientific and I appreciate that. But I think you are asking for a lot of regs and maybe he is going to help us decline some of those. It would be helpful.

So anyway, the next thing I wanted to say is I live in Colorado. And as you may know, people are flocking to our state by the hundreds every month. They are going to be having housing that supplies them with water. They are going to be having lawns. And we have people in the eastern part of the state that have irrigation wells for crops, and they are looking for -- they run their wells -- you can tell they run their wells a lot.

So my question is, what kind of liaison do

Page 113 Page 115 user, or whatever special expertise you have in your 1 depletions through safe yield. 2 statement. 2 And in 1987, the US Geological Survey 3 And so with that, the first person is Lynn adopted their numbers for recharge across the state 3 4 Goossen. Hopefully I am saying that correct. of Kansas. And those numbers were later, in 1992, 4 5 MR. DEES: Chief Engineer, he is actually adopted by the Division of Water Resources as part 5 of their safe yield calculations. 6 one of the witnesses for the -- he is one of the 6 7 board members for the Division of Water Resources. Those numbers indicate that the far 7 8 HEARING OFFICER BARFIELD: All right. 8 western counties are receiving something on the 9 order of a quarter of an inch, while the eastern 9 Thank you. Yes, I guess we were anticipating having finished that and knowing the difference. So, yeah, 10 counties of the district are receiving a bit over an 10 inch -- excuse me. The western counties are 11 he can make his testimony as part of the formal 11 receiving a quarter of an inch; the eastern counties process later then. 12 12 are over one inch. 13 Scott Ross is next on the list. Mr. Ross, 13 14 So my question is, if those water rights 14 are you here? established under safe yield and allowable depletion 15 15 SCOTT ROSS: Right here. were afforded excessive recharge in the west, but 16 16 HEARING OFFICER BARFIELD: If you would deprived of the additional recharge in the east, how come forward. Are you ready to make your statement 17 17 18 can the entire district have a declining water 18 now. table? Either the USGS is wrong in their 19 19 SCOTT ROSS: Yes. 20 determinations of recharge or the district has been HEARING OFFICER BARFIELD: All right. 20 wrong in their assessment of decline. I am assuming 21 THE REPORTER: Sir, your name is Scott 21 22 you will determine which that is. 22 Ross? The other point is the equitable and 23 23 SCOTT ROSS: Scott E. Ross. I live at 24 uniform distribution of measurement points that are 24 209 South Ash Street, Stockton, Kansas. included in the determination of drawdown or 25 25 HEARING OFFICER BARFIELD: Will you swear Page 114 Page 116 1 him in? declines. 1 2 THE REPORTER: Yes. In 1980, the Division of Water Resources 2 3 (Mr. Ross was sworn.) 3 required that water level measurement tubes be 4 SCOTT ROSS: I understand this is an installed on all new points of diversion and have 4 administrative hearing and it provides only limited 5 5 continued that process since then. opportunities for any cross-examination. But I have My question is, what effort has been made 6 6 7 put a portion of my testimony in the form of 7 to compile a list of wells in the district that are required to have water level measurement tubes, has 8 questions. I am not expecting a response, but I 8 know that as a truth-seeking individual, the Hearing that list been used to improve the water level measurement network? Has current water level 10 Officer will see that the appropriate answers are 10 11 acquired and incorporate them in the decision. 11 database been compared to the High Plains basal map that was developed during the initial high priority 12 So, first, additional property of the 12 move by the district to provide section level data district. Jim Defore has, since its beginning, the 13 13 14 district-wide recharge value of one-half inch per 14 on the basement of the Ogallala. And have any acre. This has prevailed through several 15 efforts been made to incorporate all of this 15 16 different -- you really did break it. 16 additional data into the water level management 17 network? HEARING OFFICER BARFIELD: Try it again. 17 SCOTT ROSS: In any other calculation 18 What efforts have been made by the 18 district to collect or monitor wells independently 19 for --19 HEARING OFFICER BARFIELD: Just a second. of the KGS and the Division of Water Resources? 20 20 Is the current water level data network 21 There must be a connection issue here. Why don't 21 you try mounting the mic so it doesn't go in and 22 consistent and uniform enough to make decisions 22 23 regarding the district on a section level basis? 23 out. Thank you. I am concerned about the physical impacts. 24 24 SCOTT ROSS: The half-inch recharge has 25 I understand from testimony this morning that some prevailed throughout their computations of allowable

Page 117 Page 119 individuals to put their -- put in place their own 1 minimal efforts have been made, but I am concerned 1 2 that if land values are based on productivity and 2 restrictions with the goal of preserving their own 3 way of life. When did that happen with this LEMA? 3 productivity is based on a degree of irrigation 4 versus dryland, doesn't it stand to reason that more 4 Thank you. HEARING OFFICER BARFIELD: All right. I 5 5 water availability will result in lower land values? 6 If such is the case, will lower land values lead to 6 guess, Scott, just before you leave, the parties a lower tax base, ultimately resulting in a lower 7 don't have cross-examine [sic] but, you know, I and 8 tax and changes in the tax base, which will 8 they have the opportunity to maybe ask clarifying adversely impact schools, cities, hospitals, 9 questions, if the testimony is not fully understood counties and eventually perhaps even the state of 10 just, again, to make sure we --10 11 Kansas? 11 SCOTT ROSS: At your service. 12 And would these lower appraised values, 12 HEARING OFFICER BARFIELD: -- understand 13 along with lower revenue streams, impact those 13 your testimony. 14 citizens, and how will they impact those citizens 14 I guess I have actually got a written copy 15 who don't even get to vote in a district election? 15 of this. Do you want this entered in the record or 16 Next is the equity of those water rights 16 not? 17 being protected under K.S.A. 82a-718 Subsections D 17 SCOTT ROSS: You have my written testimony and E. They seem to be left out in the cold. They 18 18 that I want entered into the record. These are just 19 don't receive an allocation if they haven't been 19 my verbal comments. used since 2009. Under this proposal, only the HEARING OFFICER BARFIELD: Right, okay. 20 20 irrigation rights are subject to limitations. So we will make sure that is made a part of the 21 21 What consideration is afforded to those 22 22 record. 23 that have been engaged in water conservation under 23 I guess for my part, I don't think I have these programs of water conservation plans, WRCP any specific questions for you. You raised a number 24 24 contracts and even changes that have been made to of questions. I guess, are you for or against it, 25 25 Page 120 Page 118 82a-718 under Subsection E, protecting those water 1 maybe is the question? 1 SCOTT ROSS: As a general matter, I am in rights from abandonment? 2 2 3 And finally in this area, what opportunity 3 favor of LEMAs. I am in favor of the way LEMAs were originally designed, as a ground-up opportunity for 4 do those have who are not irrigators to speak as 4 locals to have impact on their situation. 5 regards to their impact or the impacts of LEMA on 5 their way of life? I am not in favor of district-wide LEMAs. 6 6 7 Whose problem is being solved with this 7 I think they are too broad based. I don't think LEMA? We have seen from this morning's testimony 8 they adequately represent individuals or their that there have been declines. We agree -- most of individual situations. Candidly, I don't think they us will agree there have been declines. Those 10 10 solve too many problems. 11 declines are subject to review in terms of their 11 HEARING OFFICER BARFIELD: All right. 12 actual accuracy. But we don't seem to be setting 12 That helps. Mr. Traster, do you have any clarifying out to solve the problem; we just -- this is like 13 13 questions about Mr. Ross's testimony? 14 putting a Band-Aid on a busted leg. 14 MR. TRASTER: Yeah. 15 How will those in Sherman and Graham 15 Just generally, I am interested in this 16 County, who have no declining static water levels, idea that you said how it was originally designed, 16 17 benefit from being placed under the shadow of the 17 because I have heard that too. LEMA? Will their bankers and county appraisers take 18 18 Can you give us -- fill in some blanks that into consideration? 19 19 there? What was the -- how was it originally And, finally, what analysis of the 20 20 intended, if you know, if you were involved in that 21 established high priority areas illustrates that the 21 process? I would like to flesh that out a little 22 proposed LEMAs will address their problems? 22 bit. 23 And finally, and perhaps most important of 23 SCOTT ROSS: Okay. Well, it has been a 24 all, I would ask you to recall the LEMA process was 24 while ago and, you know, us elderly folks may originally designed to allow a group of courageous 25 struggle a bit.

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Page 121 After the original Mack and Tack [phon] Reports that were published, I believe, in the early 2000s, Management District No. 4 embarked on the process that was outlined to determine, based on the best ability of the scientific data high priority areas, those areas who were struggling with severe declines and were in need of regulation or help, for lack of a better term. Groundwater Management District No. 4

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followed the process, developed six high priority areas. Meetings were held in each one of those. This was not done lightly. It was a lot of work, a lot of input by the board, a lot of input by the staff. Analysis of both groundwater level trends. There was a lot of work done to -- it was called "tenting". That was a process used by the Kansas Geological Survey to balance or sort of smooth out those curves rather than putting them on strict political boundaries, section lines, township lines.

Ultimately, after holding meetings in each one of those -- by the way, each one of those high priority areas, those that attended, and they were generally well attended, agreed something needed to be done. They just -- in Sherman County, they actually proposed that they cut everybody's use by

themselves in a position where there was no legal remedy to implement the process.

At that point, they came to the Division of Water Resources and made the proposal. And in through the Division of Water Resources and their legal staff, the LEMA statutes were drafted and ultimately shepherded through the legislative process and put in place so that the very first allocation period, I believe, was in 2012. That has certainly demonstrated in my view great success, and it was all due to those local gentlemen who were willing to stand up and, you know, put their family fortune and sacred honor on the line to get it done. And I just don't see that happening in this process.

Did that answer your question?

MR. TRASTER: Well, for the record, we need to know what your role was.

SCOTT ROSS: I was the water commissioner for the Division of Water Resources. So I was basically sitting on the sideline cheering them on.

MR. TRASTER: And when did you leave that position?

SCOTT ROSS: I retired September 13th of 2013.

MR. TRASTER: So you were there during the

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50 percent, which I think shocked all of us. But ultimately, they really lacked sort of the local leadership to move those things forward.

In that process of discussing that, Mitchell Baalman and Brent Rogers rose to the occasion and, from my perspective at least, rather loudly and perhaps forcefully challenged the board to bring together those people in the Sheridan 6 area and begin a dialogue to discuss how they would solve the problem. Mitchell simply wasn't going to led it ride. This continued for several board meetings.

They formulated a plan. They notified all of the landowners and tenants in the area. I wasn't involved in the early meetings, but I was advised that some of those were relatively spirited discussions regarding how to move forward.

Ultimately, after 25 or 30 meetings, that group came together with a consensus, it certainly wasn't unanimous, but a consensus of how they would like to move forward with those 11-inch designations over the five-year period of time. They wanted an umbrella. They wanted the flexibility to move water rights around if they got into trouble.

And after all of that work, they found

development of all this and the passage of the LEMA,

so you have some background information? 2

3 SCOTT ROSS: Yes.

MR. TRASTER: No further questions.

HEARING OFFICER BARFIELD: Mr. Dees, do

you have any clarifying questions? 6

MR. DEES: Just a couple real quick.

Can you hear me okay?

THE REPORTER: Yes, sir.

MR. DEES: Mr. Ross, are you here as an

11 individual or are you here representing other folks? 12 SCOTT ROSS: I am here as an individual.

I don't represent anyone else.

MR. DEES: Okay. Great. And are you familiar with the LEMA statute? I think you are; is that correct?

SCOTT ROSS: Yeah, generally.

MR. DEES: Okay. And so the

19 recommendation in the LEMA statute needs to come 20 from the groundwater management district; is that

correct?

SCOTT ROSS: That is correct.

MR. DEES: Okay. And in your written testimony you note that the total economic impact

has not been evaluated in talking about the

Page 125 Page 127 Sheridan 6 high priority area, correct? 1 1 percent of water use. 2 SCOTT ROSS: That is my perception, yes. 2 When we looked at this proposal, we had MR. DEES: But it appears that the water some significant concerns when it came to the stock 3 3 levels in that area have stabilized; is that 4 4 water allocation. As it exists now -- and I will 5 correct? say we have worked with the board in generating some 5 SCOTT ROSS: That is my understanding, 6 6 of their suggested changes. We may have a few 7 tweaks, but we generally agree with them. But just yes. 7 8 MR. DEES: Okay. And no immediate 8 to get it on the record, I want to explain the laws 9 evidence suggests anything but good economic news, 9 that exist in the proposal and why we object to it. 10 10 As it exists now, the allocation for stock SCOTT ROSS: Nothing that I heard. 11 11 water right is given either 76 percent or 85 12 MR. DEES: Okay. So the economic news at 12 percent, depending on the area where the water right is located, of the maximum reasonable quantity for this point is at least -- it is either positive or 13 14 at least maintaining; is that correct? 14 livestock as set forth in K.A.R. 5-3-22 for beef SCOTT ROSS: It's policies were neutral. 15 15 cattle that I am going to base most of my testimony MR. DEES: Okay. I don't think I have any 16 16 on, and that is 15 gallons per head per day. And 17 more questions at this time. then that was taken times the maximum head supported 17 HEARING OFFICER BARFIELD: All right. 18 18 by the feedlot permit in effect on December 31st of 19 Thank you. Mr. Oleen? 19 2015. MR. OLEEN: No questions. 20 20 And it is really with that date, December HEARING OFFICER BARFIELD: Thank you, 21 21 31st, 2015, I think that our first objections come 22 Mr. Ross, for your comments. 22 23 SCOTT ROSS: Thank you. 23 We are now approaching close to two years HEARING OFFICER BARFIELD: Next on the 24 24 from that date and things have changed. For list I have is Brent Rogers of Hoxie. Are you here? instance, one of our members, Timmerman Feeding 25 Page 126 Page 128 MR. DEES: He is part of our formal phase. Corporation, has since engaged and began and now 1 1 He is the president of the GMD. 2 should be nearing completion, if it is not done 2 3 HEARING OFFICER BARFIELD: I should 3 already, an expansion. That expansion was based on 4 probably know that. Irene Siebert. Is that the available water that was under their authorized 4 5 lady that made the comments? 5 permit. And if the original proposal as in the 6 Then Aaron Popelka is next. document that went out with the notice for the 6 7 THE REPORTER: Can you spell your last hearing were to be finalized, they would be -- not 7 8 name? 8 have sufficient water to water the cattle involved AARON POPELKA: Sure. It is Aaron, 9 in that expansion. 9 A-A-R-O-N, Popelka, P-O-P-E-L-K-A. 10 10 And I think that is -- and really what we 11 I am the vice president of Legal and 11 are looking at with any LEMA, allocation for stock Governmental Affairs for the Kansas Livestock 12 water. When you look at an acre of irrigated corn, 12 Association. 13 I can apply less water to a certain extent and, 13 14 (Mr. Popelka was sworn.) 14 using better management techniques, still raise MR. POPELKA: I think to start off, just 15 15 something from that acre of corn. If you apply less 16 to clarify, I am here representing our members who water to a steer, that steer will die. 16 live within the GMD boundaries and would own water 17 17 So our only remedy is to then cut the rights, both irrigation and stock water. 18 number of head that populate that feedyard. So in a 18 19 I think I would like to start off by --19 situation where someone has expanded since the 20 and I think this was pointed out by the GMD manager 20 December 31st, 2015 date, they have now lost a 21 that less than one percent, he used the number 21 significant amount of their investment or are faced 22 .05 percent, depending on the year it could be a 22 with buying a water right in a captive market. 23 little more or a little less, but the point is it is 23 In addition, I think it is also important a very small fraction of water use where the 24 to point out that even though, for instance, 24

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Timmerman Feeding Corp. is in the 85 percent

irrigation is closer to over 97, approaching 98

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reduction -- or 83 percent of their beneficial use calculation, that is actually not a cut to the water right. If you look at the documents put out by the GMD, their total authorized quantity is 336 acre-feet. But under the LEMA account calculation, which again is based on a head count from December 2015, they get 257 acre-feet. That is actually -- it is not a 15 percent reduction, as the document might suggest, it is actually 23. It is hard to tell exactly why that might happen, but it -- I would surmise that it would have to do with head count being reduced potentially from environmental regulations from the time the water right was perfected. So December 2015, there were

less head than when it was perfected.

The second problem with the language is that it just says based on the operating permit. For those who may not be familiar, if you operate a feedyard you actually have two permits from the state of Kansas. One is from the Kansas Department of Health and Environment for water pollution control and the other is from the Department of Ag, Division of Animal Health. Typically these permits have different numbers.

The KDHE permit, they are going to want to

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cleaner way to do this is to make it consistent with the other non-irrigation rights is to simply delete Section 2, Paragraph A, which is a reference to stock water, and then rely on the previous portion of that paragraph that simply says non-irrigation rights are to utilize the best management practices.

The next portion I would like to bring up, and it was also brought up by Mr. Luhman, deals with the conversion formula from irrigation to non-irrigation use.

Currently, the LEMA document put out for notice says when converting irrigation to non-irrigation, the most restrictive of the LEMA allocations and GMD regulations were converted and outlined in K.A.R. 5-5-9, were used to determine conversion allocation amount.

That alone is confusing as to how exactly that might be applied. But more concerningly, it violates the Water Appropriation Act for changes in use. Changes in use of a type are governed under 82a -- K.S.A. 82a-708 (b). And that has some very specific requirements. But mostly the change is you have to file an application with the Chief, and it is for any owner of a water right may change a place of use for the point of diversion over the use of

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push to as high as you can get for the amount of pens that you have, and the health permit is annual and you are going to want to push it as low as you can get it based on the number of cattle you think you will have because it is more expensive. So the language on its face leaves us wondering which permit is meant.

The other thing I would like to raise is stock water is considered a non-irrigation use when you look at the document. And the other non-irrigation uses, municipal and industrial, are essentially relegated in this document to utilization of best management practices; whereas, in the original document, stock water is given a hard allocation that reduces available water.

It would be our contention that if we are going to have differences based on irrigation and non-irrigation, that all rights use -- utilize best management practices.

I am aware that the GMD has proposed some language that suggests feedyards being -- or stock water uses being encouraged to maintain their use at 90 percent of the K.A.R. 5-3-22. While that, I think, would work because it is not a mandatory reduction, we would suggest the better way, the

native [phon] water without losing priority of right.

And it also goes on to limit the authority of the Chief in accordance with the procedures, provisions and procedures prescribed from processing original applications or permission of [inaudible] water.

By putting in the LEMA document the paragraph that is in there now, it essentially tries to apply a non-temporary change to what the statute requires be a permanent change in the water right status.

And if you look at the LEMA document itself, it says the basic water right will not be altered by an order and that the LEMA shall exist only for a five-year period. And so while the LEMA may apply some allocation to a type of use, if a water right owner applies for a change in the base water right, that is governed under the Water Appropriation's Act, 708(b) in the accompanying regulations.

So -- and I believe the GMD, for the most part, has adopted or is suggesting the same language. We are suggesting one difference. Our language says when converting irrigation and

Page 133 Page 135 property rights and also some of these issues with 1 non-irrigation, the base water right will be 1 2 converted under the procedures in 5-5-9 and 5-5-10 2 conservation of water. and then the appropriate non-irrigation LEMA 3 So with that, I think I will stop and 3 4 allocation in Paragraph 2 will apply for the 4 simply ask at this point -- again, I want to 5 5 remainder of the LEMA period. reiterate the GMD's suggestions on the stock water 6 I think the only difference between our 6 allocation and conversion; we are willing to live suggestion and GMD's suggestion is they suggest 7 with it, but we would -- and this is in written 7 8 that -- unless they have their own regs. We think 8 testimony I also submitted. We would prefer our 9 the DWR statewide regs that were just recently 9 language. We think it is more technically accurate 10 adopted should be applied statewide, and so our 10 and a little cleaner. suggestion is it is not put in, or any other reg the 11 11 And on the irrigation component, I think 12 GMD may have. some changes need to be made in order to fully 12 13 The final point I would want to raise at 13 comply with the statutes. So I will stand for any 14 this point is on the irrigation allocations 14 questions you might have. 15 themselves. If you look at the document, it bases HEARING OFFICER BARFIELD: And I just have 15 16 the irrigation water rights according to the maximum 16 one. I think your testimony is pretty clear. 17 reported and/or verified acres for years 2009 17 On that last example, you know, the through 2015. 18 18 irrigation, you know, the LEMA process has an appeal 19 As that is written, this will unfairly 19 process where they could sort of bring that issue to penalize some producers who chose to conserve water 20 20 the GMD for dealing with that; isn't that correct? by not irrigating a certain amount of their 21 21 AARON POPELKA: That is true. However, in authorized acres. 22 22 conversations with Mr. Luhman, he said that he 23 By not recognizing this situation where 23 didn't think this board would be inclined to help 24 this occurs, the GMD is not giving due consideration 24 this gentleman out. 25 to water management or conservation measures 25 HEARING OFFICER BARFIELD: All right. Page 134 Page 136 previously implemented. And that is required in two Okay. Well, that is the only question I have. 1 places in the law; K.S.A. 82a-744 and in the LEMA Mr. Traster? 2 3 statute itself, K.S.A. 82a-1041(a)(4). 3 MR. TRASTER: No questions. HEARING OFFICER BARFIELD: Mr. Dees? 4 For instance, I am aware of a landowner in 4 MR. DEES: None. 5 the district who has three quarters authorized under 5 HEARING OFFICER BARFIELD: Mr. Oleen? 6 one water right; one has a pivot, two flood 6 7 irrigated. Due to the situation with some labor 7 MR. OLEEN: No. HEARING OFFICER BARFIELD: All right. 8 shortages, only the pivot was run. And under this 8 formula, only enough water to water one of those 9 Thank you very much. Okay. Jerry Binning of McDonald. I may have the name wrong. 10 circles would go forward, despite the well testing 10 11 well over 900 gallons a minute. This clearly is an 11 JERRY BINNING: You got it right. inequitable situation that is not addressed by the 12 HEARING OFFICER BARFIELD: Okay. current formula. There is no consideration given to THE REPORTER: Can you spell your name for 13 13 14 the amount of water saved voluntarily and would 14 me, sir? 15 maintain that unless it is corrected, that it would 15 JERRY BINNING: J-E-R-R-Y, B-I-N-N-I-N-G. 16 violate state statute. 16 (Mr. Binning was sworn.) 17 17 JERRY BINNING: I live in McDonald in Our suggestion is that whether the Chief recommends this himself or the GMD, or recommends Rawlins County. I just have a problem. I won't 18 18 19 that the GMD re-look at it and have another hearing, 19 take up near the time these other gentlemen did, I 20 is that rather than the system we have now based on 20 hope. 21 verified acres, that we look at the actual percent 21 But anyway, I have just got a problem with 22 reduction for the authorized quantity of water. 22 where the lines are drawn in Rawlins County on the 23 Because at the end of the day, that is the actual 23 east side of the GMD. They have got a little sliver property right that is being considered and that is 24 there going right down our road. And my neighbor 24

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has water wells on the east side and I have them on

the best way, I think, to look at dealing with

Page 137 Page 139 the west side. And I had the state come in there HEARING OFFICER BARFIELD: Okay. So he is 1 1 2 and analyze the water there for depletion -- for 2 not here. All right. Larry Schaefer? Oh, Shultze. 3 hampering my water right impairment. And the state 3 Are you present? Apparently not. Well, that is all 4 has told me that he is hampering my water rights I have. 4 from five to 12 percent. And I was just wondering 5 5 Is there anyone else who -- maybe I have why I am going to -- the GMD is going to nail me for missed that would like to make any public comments? 6 6 JACE MOSBARGER: I think I would. more impairment on the -- on their deal and my 7 8 neighbor is not going to be in there. That was just 8 HEARING OFFICER BARFIELD: Please come 9 forward. Your name, sir? my opinion why that little sliver there, he wasn't JACE MOSBARGER: Jace Mosbarger. 10 included in there with the rest of us. Because 10 (Mr. Mosbarger was sworn.) 11 there is no other wells on east of where we are at, 11 12 and south of us there is no wells for quite a ways. 12 JACE MOSBARGER: My address is 331 13 So I thank you for your time. 13 Cottonwood Road, Goodland, Kansas 67735. So I am 14 HEARING OFFICER BARFIELD: So are you 14 just going to read a little bit here of what I wrote 15 15 after some questions by Mr. Dees about the economic within the Groundwater Management District? issues. 16 JERRY BINNING: Yes, sir. 16 17 HEARING OFFICER BARFIELD: Okay. But your 17 Pertaining to Sheridan 6 as being stable and then implying that the trend would be carried 18 18 neighbor is not? JERRY BINNING: No, he is in the 19 over to the entire district, I believe, is a 19 20 stretch. As a farmer and a rancher in the district, 20 Groundwater Management District. 21 I can speak with much confidence that our economic 21 HEARING OFFICER BARFIELD: He is within 22 the GMD? 22 engine has a very different set of factors from 23 Sheridan 6. So far those worth mentioning are crop 23 JERRY BINNING: Yes. 24 HEARING OFFICER BARFIELD: Okay. But he 24 options and viable planting dates. 25 Weather patterns force us to drill our 25 is within a different color on the map? Page 138 Page 140 1 JERRY BINNING: Right, yes. wheat in the west before harvesting corn. This 1 2 HEARING OFFICER BARFIELD: But you are hampers our ability to rotate insurgent crops that 2 3 restricted and he is not? 3 would allow us to achieve the profitability levels 4 JERRY BINNING: Right. they can just 60 miles east of us. 4 5 HEARING OFFICER BARFIELD: Okay. Thank 5 Forty-five miles to our east, it has been 6 you. Does anybody have any further questions? 6 common practice for many generations to harvest corn 7 MR. TRASTER: No questions. 7 and then drill our wheat, like I said, allowing them MR. DEES: No. 8 8 crop options. 9 MR. OLEEN: No. 9 We are unable to effectively reach the HEARING OFFICER BARFIELD: All right. 10 10 dairy and feeder cattle market located 90 miles to 11 Thank you very much. our east that sits right out their back door. This 11 12 Nathan Emig from Goodland? Sorry if I -limits our possibility of certain crop options 12 NATHAN EMIG: I just have written 13 13 drastically. 14 testimony. 14 Furthermore, rainfall intensity is not 15 HEARING OFFICER BARFIELD: Oh, I am sorry. 15 considered on the allocation map that we have seen 16 That is correct. Thank you throughout this whole deal. The variance from 16 17 Mr. Friesen. Mr. Traster, is he going to 17 county to county is rather small on the allocations 18 be part of your --18 because the yearly precipitation does not vary as MR. TRASTER: Yes, sir. 19 19 much as we would think. 20 HEARING OFFICER BARFIELD: Very good. 20 However, in the west we historically 21 Brent Meeden [sic] from Quinter? 21 receive a larger portion of the annual precipitation 22 UNKNOWN SPEAKER: Meranda. snow, which favors winter wheat farming, which at 22 23 HEARING OFFICER BARFIELD: That is 23 the moment, once you reach the negative cause of 24 probably right. 24 production. Or each of our neighbors receives a UNKNOWN SPEAKER: He had to go. 25 larger amount of their moisture as summer rainfall.

Page 141 Page 143 This allows corn, milo and other feed soft 1 You know, all it required is some additional labor 2 production. It also lines in with the market that 2 work, measuring a couple of more wells. And we are 3 they share. in an area where -- I don't believe any of the 3 4 So I guess briefly, my biggest concern 4 measurement wells are in our township. 5 with this whole idea is that the study is over 10 I became interested and involved in 5 years old [inaudible] many times as encompassing the 6 watching the development of the LEMA at the 6 entire district as a whole, but I feel that it was a 7 encouragement of my client. I attended 8 very micro-climate study that is now outdated and 8 informational meetings in Hoxie and I have attended 9 pushing 10 years old. some of the GMD4 board meetings held in Colby. 9 10 As a concerned citizen, I would like a 10 In 1990, I prepared a map of Sheridan 11 renewed interest and a new current study 11 County noting where the water rights were at. And 12 encompassing the entire district as a whole before 12 it has been my contention all along, based on that 13 we enact legislation to -- that will affect all of 13 data, that a lot of the problems were due to 14 us. That was all. 14 concentration; concentration of water rights, 15 HEARING OFFICER BARFIELD: Okay. Thank concentration of wells. 15 If you look at the Sheridan 6 out west of 16 you. I don't have any questions. 16 MR. TRASTER: No questions. 17 17 Hoxie, a lot of those sections have four wells on MR. DEES: No. it. So it is a matter of concentration. And I 18 18 19 MR. OLEEN: No. 19 still believe that if you have got more straws HEARING OFFICER BARFIELD: All right. drinking out of the same cup, you are going to use 20 20 21 more water. 21 Thank you for your testimony. 22 So is there anyone else who would like to 22 Probably the most important issue that I make a public comment? Come on forward, please. 23 feel that you are going have to deal with today is 23 24 THE REPORTER: Your name, sir? 24 what is happening to this property right. And the 25 MIKE MCKENNA: Mike McKenna. 25 KOA -- excuse me, the KLA representative gave a Page 142 Page 144 (Mr. McKenna was sworn.) perfect example, and I thank him for that. His 1 1 HEARING OFFICER BARFIELD: If you could 2 customer has a water right that entitled him to 2 3 tell us your address and a little bit about 3 water 480 acres. That property had one center pivot 4 yourself. and two quarters of flood irrigation. He chose, for 4 5 MIKE MCKENNA: You bet. Good afternoon. 5 whatever reason -- I believe he probably chose to 6 My name is Mike McKenna. I live at Jennings, Kansas conserve water, he was only running water through 6 7 in Decatur County, which neighbors Sheridan County. the sprinkler. Under the current guidelines of the 7 8 And, by the way, I came here with full intentions of 8 proposed LEMA, that is all the water that he is listening through the entire day and coming back going to get. 9 10 tomorrow to make my comments. But I understand that 10 So what have we got to do? We are going 11 this hearing is a project in motion, and so I to farm -- that man is probably going to farm those 11 12 appreciate having the opportunity to address you. two quarters of flood irrigation dryland. And so --12 13 And, please, I apologize if I am not very well oh, and by the way, I forgot to tell you that I am a 13 organized. 14 14 licensed appraiser working for customers throughout 15 My wife and I own ground that is in the 15 Western Kansas, and it is my job to estimate land 16 GMD4, but I am not an irrigator. I have dryland values. Some would say I am still practicing, but 16 17 ground and pasture. But I do represent today a 17

irrigated, and I am here to express our concerns about the proposed LEMA. Many of the concerns are similar concerns that you have already heard. A lack of data. Scott Ross gave a perfect example of where we could obtain additional data. Because I have helped a client re-drill a well and we had to put in a measure tube.

client that is a landowner in GMD4, which is

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that is the way it is.

But if that man is no longer -- does no longer have that property right, which is the irrigation water plan, then some in my profession would say the sprinkler irrigated quarter is probably irrigated ground, the two quarters that can no longer have water applied to it are something less than irrigated property.

And so basically you have taken the real

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Page 145 Page 147 property from that individual. And it has always this year. Of course, this year was an anomaly. We 2 been my understanding if you take a right from a have -- I have a licensed feedyard, a 10,000-head 2 person, they are entitled to just compensation. And feedyard. I am kind of neighbors to Timmerman. I 3 4 I think that is a perfect example of taking without also have ownership in two other feedyards in 4 just compensation. 5 Groundwater Management District 1. 6 With that, I would close and address any And water, to me, has become relative. 6 7 questions that you may have. 7 You know, if you are going to want water for HEARING OFFICER BARFIELD: All right. whatever purpose it is going to be -- and I also 8 8 9 Thank you very much. I don't have any questions. 9 have property in Idaho and I have learned to deal MR. TRASTER: No questions. 10 with how that works up there. It is -- whether you 10 11 MR. DEES: Really quick, Mr. McKenna, if 11 are at the end of the canal, you got free water, or you are pumping out of a pipe and you are 12 you are comfortable. 12 13 You say that you are here representing 13 repressurizing and paying the irrigation district someone; is that correct? for the water, repressurizing it, there is a cost to 14 14 15 MIKE MCKENNA: Yes. 15 it all. But we have learned to deal with less water in my area, and I border Sheridan 6. 16 MR. DEES: Who is that? 16 17 MIKE MCKENNA: I -- I represent the A.L. 17 And as far as the stock water deal, it is Abercrombie Marital Trust out of Wichita, Kansas. 18 a problem because I thought about expanding on my 19 MR. DEES: Thank you. feedyard and that would be a problem. But I know I 19 HEARING OFFICER BARFIELD: All right. 20 20 would have to give up irrigation, which I have on Anything else? All right. Very good. Thank you myself there beside it to do it. And I have 21 21 22 very much. 22 experienced that in Groundwater Management Would anyone else like to make a public District 1. It is relative. You are going to have 23 23 24 comment at this point? 24 to buy it, if you don't have it. That is all I 25 BRIAN BAALMAN: Yes. 25 got. Page 146 Page 148 HEARING OFFICER BARFIELD: Yes. Come 1 HEARING OFFICER BARFIELD: All right. Any forward, please. If you could start with your name 2 2 clarifying questions? 3 and address. 3 MR. TRASTER: No questions. 4 BRIAN BAALMAN: I am in Menlo, Kansas. I 4 MR. DEES: No. 5 5 MR. OLEEN: No. am a farmer --6 HEARING OFFICER BARFIELD: I would like 6 HEARING OFFICER BARFIELD: All right. 7 the court reporter to swear you in. 7 Thank you for your comment. 8 (Mr. Baalman was sworn.) 8 Would anyone else like to make a public 9 HEARING OFFICER BARFIELD: Thank you, sir. 9 comment? Yes, sir. BRIAN BAALMAN: I would like to speak 10 THE REPORTER: Your name, sir? 10 maybe in opposition to Mike's testimony there. 11 11 KENT VOORHIES: Kent Voorhies. 12 I have three quarters also with one well. THE REPORTER: Can you spell your last 12 13 But, you know, I put -- I got three pivots there. I 13 name? only run one pivot. I can't -- I don't have enough 14 14 KENT VOORHIES: V, as in Victor, 15 water to run three pivots and I am -- I would almost 15 O-O-R-H-I-E-S. probably say that that fellow does too, or he has 16 (Mr. Voorhies was sworn.) 17 just elected not to pump. 17 KENT VOORHIES: My concern is -- or the 18 But I know I have tooken full depreciation 18 concern of this whole deal is the sustainability of 19 from pivots, wire, pipe. I have built my home on 19 the Ogallala. And basically the LEMA is put in this section. And it is just the way it is; we have 20 20 place for this very thing. lost the water. So there is them scenarios out 21 21 I think at the latest brochure or pamphlet 22 there. 22 put out by District Management No. 4 [sic], there 23 And I am not in the Sheridan 6. I border 23 was a plan to reduce pumping by a 95 percent factor, 24 it. I have basically learned to practice -- or 24 if that is correct, to help sustain across the board learned to live without water. I have an example 25 as far as commercial irrigation goes. Is there any

Page 149 Page 151 truth to that? 1 1 hero. And I just want to appreciate for a moment 2 HEARING OFFICER BARFIELD: Are you asking 2 the fact that we can have this discussion and this 3 me? process in the democratic way. And I think we need 3 4 KENT VOORHIES: Yes. to remember that; that no matter what side of this 4 5 HEARING OFFICER BARFIELD: Well, that is issue you are on, it is a privilege to live in this 5 6 not exactly how the deal is structured. They 6 country and be able to have this discussion. And 7 basically provide for allocations based on the 7 almost a paradox to that, I can understand why 8 amount of depletion. So the townships that are 8 nothing gets done in Washington. 9 going down more rapidly have a lesser allocation 9 I have a couple of questions I will ask. 10 than those that aren't -- don't have a reduction. And one is: Does this LEMA do away with the current 10 11 So --11 law, which is basically senior water right first in 12 KENT VOORHIES: Well, that is kind of time, first in right? Does it do away with that? 12 13 interesting because the brochure put out by District 13 If so, is it only for five years and at the end of No. 4, I think I am in that district, was that there 14 this five years is it back to the way it was? That 14 15 is just a question I might have. 15 would have to be -- to make the sustainability Because if we don't have a LEMA, the factor, there would have to be a reduction over 16 17 all -- over all pumping. Am I completely off base 17 current law, as I understand it, is that if someone files an impairment claim, then the Chief officer, 18 here? 18 19 Chief water officer, has the right to take action. 19 HEARING OFFICER BARFIELD: Well, I guess I 20 And it is not with input from the board necessarily, 20 can't speak to -- without seeing that information --21 it is what needs to be done to correct that problem. 21 KENT VOORHIES: Okay. I can bring it to 22 That is the law, if I understand it, currently and 22 vou. 23 anyone in this room who feels that they have an 23 HEARING OFFICER BARFIELD: Okay. There is an opportunity for written comments. You could 24 impaired water right could do that. Right or wrong, 24 25 I believe that is correct. 25 present that brochure with your additional Page 150 Page 152 1 testimony. That would be fine. So there is a process already in place. 1 2 KENT VOORHIES: I should have brought it Sucking it dry is not an option, in my opinion, but 2 3 in. All right. Thank you. 3 I believe this is what concerns me. As I listened 4 HEARING OFFICER BARFIELD: Thank you. Any earlier to testimony and the question was asked by, 4 5 questions? 5 I believe, Mr. Traster. He said I believe we all 6 MR. TRASTER: No. 6 are in agreement that we need to conserve. 7 MR. DEES: No. 7 Conservation is where we need to head. 8 MR. OLEEN: No. 8 I am disturbed by that in a couple of ways HEARING OFFICER BARFIELD: All right. 9 because I have had people personally tell me, let's 10 Thank you. Yes, please come on forward. 10 just suck it dry. Maybe you know some folks. To me 11 THE REPORTER: Your name, sir? that is not an option. My kids are the sixth 11 12 STEVE ZIEGELMEIER: I am Steve generation to be raised on this land. Sucking it 12 13 Ziegelmeier, Z-I-E-G-E-L-M-E-I-E-R. 13 dry is not an option. But I believe to make a 14 (Mr. Ziegelmeier was sworn.) 14 blanket statement saying that we all are in this 15 STEVE ZIEGELMEIER: I am going to give you 15 together is incorrect. Whatever reason, whether it 16 a little bit of opinion and probably a couple of is an outside landlord who is in it just for some 16 questions. 17 17 money and realizes just -- let's just suck it dry 18 I do not expect an answer obviously today, 18 and see what happens in the next 20 years, whether 19 but maybe something for our crowd to think about. I 19 it is someone who has no connection to the land and 20 realize there is people on both sides of this issue. 20 won't be here, maybe because they don't have kids 21 I want to start with -- I went to a funeral 21 that will stay in this area, I don't know. But it 22 22 scares me to death that is some people's yesterday of a World War II veteran. That was thoughts. And I know that exists. I have had 23 probably a more pleasant experience than it is 23 today. But he was a World War II veteran who flew 24 people tell me that. And it might surprise you off of aircraft carriers and he is a great American 25 those people who had that opinion.

Page 153 Page 155 MR. TRASTER: I would move for the If you don't believe we can suck it dry, 1 just take a trip to Leoti. Go down to some of the 2 admission of Exhibits D through G. 3 HEARING OFFICER BARFIELD: Yes. Exhibits other districts where they are dealing with no 3 D through G are admitted. I assume there is no 4 water. And I am not talking about no water to 4 5 objection of the parties to D through G? 5 irrigate. I am talking about house wells that are MR. DEES: I am sorry? 6 drv. 6 So I guess I just want to challenge some 7 HEARING OFFICER BARFIELD: Mr. Traster 7 8 thoughts today, whether you are in opposition to 8 wants to include D through G in the record. I guess this LEMA the way it is proposed. Again, it reminds 9 9 I am just affirming that there is no objection. me a little bit of Washington, D.C., [inaudible] the 10 MR. DEES: Yes. No, there is no 10 repeal and replace plan then. If this is what you 11 11 objection. 12 like, let's see what you want. And this process 12 MR. OLEEN: So long as it is clear that he 13 isn't something that just started. This has been in 13 created them, no. the works for years. My hats off to the board. 14 HEARING OFFICER BARFIELD: Right. That is 14 15 Those of you that have served on the board in the 15 recorded in the record. past and present, to Ray, to all of those who have CONTINUED CROSS EXAMINATION 16 16 17 worked on this process, because you are never going 17 BY MR. TRASTER: to please everyone. 18 Q Mr. Luhman, I will remind you you are under still 19 And whether the lines are drawn, I know it 19 under oath. has been argued today and I know there is a lot of 20 20 Where did the 1.7 million acre-feet come 21 different feelings about this needs to be 21 from and how was that treated? 22 district-wide, and maybe it does. Maybe we all A That was a calculation that I ran. Basically I took 23 share in this together. Maybe this thing needs to 23 the reported average from the wells or groups of be by the section well. I know we have heard 24 24 wells, and then I also took what their allocation testimony that, hey, why isn't it? Or whether it is 25 would be. And I said, okay, what is the amount of Page 154 Page 156 1 township. water that would be pumped if they pumped either 1 2 You know, I don't know what the right their LEMA allocation or their average use from '09 2 3 answer is there. I know what seems maybe easiest to 3 through '15, whichever was less, and totaled up that 4 implement, at least making more sense to me. But I column. 4 5 think we have to ask the real question: If we drag Q Okay. So by "the allocation", you are talking about 6 our feet and continue to do so, are we willing to go the allocation -down the road like they are at Leoti, Kansas? A Uh-huh, the proposed LEMA allocation. 7 Q Okay. So the 1.7 came after the allocation? 8 I think it is time that we get on the ball 9 and do something. I think that is all I have. A Yes. Yeah. 10 Thank you. Q Is that fair? 11 HEARING OFFICER BARFIELD: Any questions? A Yeah. We did the process and then came up with the 12 MR. TRASTER: No questions. number. 13 MR. DEES: No. 13 Q Okay. So -- and how did you break down the 14 MR. OLEEN: No. percentages or what basis did you use to break down HEARING OFFICER BARFIELD: Seeing none, 15 zero to a half percent, half to one, one to two and 15 16 thank you very much. All right. Anyone else? 16 above two? 17 A There again, that was on the -- using the KGS Okay. Seeing none, we are going to switch back to 17 section level data and combining that data for a 18 the formal stage as we started. But I will -- when township. 19 19 we conclude the formal stage, I will ask again if Q But how did you choose those breaking points? 20 anybody wants to make a statement or even to 21 A Oh, as far as those actual points? supplement your statement based upon anything you 21 22 Q Yes. 22 have heard. All right. 23 A Originally we had had it zero and then zero to one 23 With that, I would call Mr. Luhman back and then one to two. And our board of directors 24 24 and invite Mr. Traster to continue his cross 25 just felt that there needed to be some break between examination.

Page 157 Page 159 depends on how many decimal points you want to go the zero and the one is a fact that decline rates at 1 that lower portion -- you know, barely over zero 2 out. Okay. probably were not that significant, but something 3 So, for the record, Exhibit H contains the 3 4 above that would be. So that was a board decision. formula I used, for what it is worth, right or 5 (Marked Exhibit H.) 5 HEARING OFFICER BARFIELD: Okay. And it 6 Q (BY MR. TRASTER) Okay. That is helpful. Thank 6 you. I am going to hand you several exhibits. And 7 is Mr. Luhman's testimony it is not what he used I have got that formula from -- this is Exhibit H, I 8 precisely? think. Yeah, Exhibit H. And the formula is on the 9 MR. TRASTER: Yeah, that is what I am 10 screen. 10 hearing. 11 But is that -- I mean, that is the formula 11 HEARING OFFICER BARFIELD: Right. 12 I used to determine the reduction in the quantity --12 (Marked Exhibit I, Exhibit J, Exhibit K 13 the percentage reduction. Is that the same formula and Exhibit L.) that you used? Q (BY MR. TRASTER) Okay. So I also handed you 14 15 A I don't think this is the formula that I used. In Exhibits I, J, K and L and I will represent to you 15 fact, again we established the allocation amount 16 that those are from the spreadsheet that I prepared 17 based on the zones, as we discussed this morning, 17 that is the basis for the maps. And what I did is and then established that for each township 18 18 in each section, that I put the color in the -- on 19 depending on its color and which zone it resided in. 19 that far last column to say -- you know, I just 20 And then that was just an amount, as you can see --20 would point out all I am showing is that there are or could see from the old -- from our folded map. at least those four representative townships that 21 21 And then we just took that amount times the reported 22 have variations, and it is back to this whole 23 acres, maximum reported acres, 2009 through 2015. question of fairness that I raised before lunch; the 23 24 Q Well, what this -- I am going to switch gears on you 24 idea that it is not fair for water rights in a little bit here. I am asking about how you 25 townships with highly variable percentages of Page 158 Page 160 calculated the annual rate of decline starting --1 depletion being lumped together. And I am just --2 that is what they are worth. I am explaining what you start with --3 A Oh, okay. I am sorry --3 they are and would ask that they be admitted. 4 HEARING OFFICER BARFIELD: I guess I need THE REPORTER: Y'all are talking over each 4 5 5 other. a little help. 6 A Okay. I get you. I know what you are talking about 6 MR. TRASTER: Sure. HEARING OFFICER BARFIELD: I understand now. Yeah. I think that would be a fairly accurate 7 Exhibit I is the formula you used -- I am sorry, formula on how I determined annual decline rate. 9 O Okay. So -not I. Exhibit H is the formula you used to 10 A You know, for clarification, basically what I did 10 determine the rate of decline, right? 11 was I took the saturated thickness in 2015, I took 11 MR. TRASTER: The percentage rate, yes. saturated thickness in 2004. I determined what that 12 HEARING OFFICER BARFIELD: The percentage difference was, then I divided that by the saturated 13 rate of decline, which is not exactly the same, but 13 14 thickness in 2004 and that came up with a gross 14 similar. So then these spreadsheets, these are each 15 decline over that period of time. And then I 15 for a different township; is that right? 16 divided that by 11 years to come up with an annual 16 MR. TRASTER: Right. 17 decline. 17 HEARING OFFICER BARFIELD: Okay. 18 Q Okay. So it was a little bit different formula. 18 Representing your calculations then using the data You just took how much was -- how much was the 19 19 that Brownie Wilson provided, I presume? 20 decline over 11 years and divided by 11? 20 MR. TRASTER: Correct. 21 A Right, yeah. I took the 11-year decline and then I 21 HEARING OFFICER BARFIELD: And using the come up with the annual decline and just divided it 22 22 formula to determine the rate of change and what by 11. I think your formula would come up with the 23 type of township then it would fall in? same thing, I think. 24 MR. TRASTER: Each of those townships on 25 Q It comes up close, but it didn't -- you know, it 25 the GMD map are yellow. But I am showing you in the

Page 161 Page 163 last column that there are -- that if you do those 1 different areas -- but if you have a well that has a 2 section by section you will have some yellow, some hundred foot of saturated thickness and 80 at -- a 2 3 red, some blue, whatever the colors are. hundred at the beginning and 80 at the end, it is 4 HEARING OFFICER BARFIELD: Okay. I am the same percentage as 10 to eight, correct? 5 with you. So these are section calculations A That is correct. O And if you have a thousand foot of saturated 6 illustrating the variation? 7 MR. TRASTER: The variation within the thickness, wouldn't we love that, reduced to 800 8 townships. When I showed you the map of the whole [sic], it is still the same percentage? 9 township -- of the whole district, there were A The same percentage. 10 townships that had various -- everything is the Q So in areas where you have got greater saturated thickness, you have got a much longer life? 11 same, some that are different. This is sort of the 12 A Yeah, that is correct. That is one reason that we 12 extreme example to follow along with that map. used the percentage value versus just feet of 13 HEARING OFFICER BARFIELD: Right. So this is the math behind your math? 14 decline or something like that. 14 Q And you took the 15 -- the saturated thickness that MR. TRASTER: Yes. 15 15 was 15 feet or less out of the equation because at HEARING OFFICER BARFIELD: All right. 16 16 that point it is -- it is not helpful? I mean, when 17 Thank you. you have got less than that, it is -- because I MR. TRASTER: For individual townships as 18 18 think I said self-limiting. I don't know if you 19 19 designated. 20 agree with me or not, but --20 HEARING OFFICER BARFIELD: All right. A Yeah. 21 Thank you very much. Q -- it is self-limiting, isn't it? Q (BY MR. TRASTER) You have read Mr. -- well, you A Yes, it is. And, again, it is like I said before. 23 read Brownie's testimony that he gave at the prior You know, it doesn't take very much of a decline in 24 hearing? a 15-foot or less saturated thickness area to become 25 A Yes, I have. Page 162 Page 164 a heck of a percentage. 1 Q And it specifically says that Mr. Wilson provided O Agreed. 2 you with an Excel spreadsheet and GIS files with all 3 the sections coded and the bedrock in 2004, 2009 3 MR. TRASTER: Let's mark this. 4 THE REPORTER: This is Exhibit M. and 2015 water table elevations. And he says, 5 MR. TRASTER: And let's just mark this as 5 "Because the water table elevations are based on interpolated surfaces from wells measured during M1 because they go together. 6 6 each time period, the change in water table between 7 (Marked Exhibit M, Exhibit M1.) 7 Q (BY MR. TRASTER) I am going to hand you what has those years and the saturated thickness can be readily computed at the PLSS section level." You been marked Exhibits M and M1. Have you seen that 10 map or maps like that before? 10 recall that testimony? A I have seen something similar to this, yes, sir. 11 A Right, yeah. 12 Q Okay. And can you tell us -- I mean, I am handing 12 Q So the data is validated at the section level? that to you out of the blue here, but can you tell 13 A It is calculated at the section level, yes. us what it is? Q And his -- okay. The water table between those 14 15 A Basically this is -- it is a little bit dated, but 15 years and the saturated thickness can be readily computed at the section level, and that is what it is based on groundwater trends from 2000 to 2005 16 17 and a minimum saturated thickness required to you -- that is the data you used? 18 A Yeah. 18 support a 400-gallon-a-minute well. It gives the 19 estimated usable lifetime until 400 gallons per 19 Q Very good. Thank you. 20 minute over the district. 20 A Yeah, that is correct. 21 Q Right. And the legend that you have in your hand, I 21 Q Now, if you do a -- if you have a section or a well 22 mean it goes from already depleted to, what, and you have got 10 feet of saturated thickness at 22 23 250 years? the beginning of a period and eight at the end, you 23 A Over 250 years. come up with a percent decline. And that is what 24 25 Q And there are areas in GMD4 that you have got over you did and what I did using maybe slightly

Page 165 Page 167 250 years of saturated thickness available before I mean to preserve this for -- preserve the area of you get to the point -- I agree it is dated. This the district for a long period of time? is over 10 years old already. But at that time, you 3 A Well, it is not -- it is not an effort to put the had over 250 years in some cases. And what is the district at a sustainable level. It is an effort to 4 next category down? reduce the decline rate and extend the life of the 5 6 A 101 to 250 is the -- kind of the light green. There 6 aguifer. But there is a lot of difference between are some big areas on that also. 7 reaching sustainability and doing what we are 8 Q Okay. And so you have got water rights that were 8 proposing to do. granted to people based on the factors that we Q Well, you heard some testimony earlier about -- and 10 discussed this morning in areas where there is a 10 I am not sure what it means, but I heard the guy very long period of water availability and you have say, well, it takes 90 percent. And the way I 11 12 got areas that are already depleted --12 interpreted that is you would have a 90-percent 13 A Yes. 13 reduction to get to sustainable. Is that -- I mean, 14 Q -- for practical purposes within the district? But 14 I don't know. I am guessing. Is that right? they are all treated, except for those areas that A I don't -- I don't think it is that high. And I 16 have 15 feet or less of saturated thickness, don't know for sure what article he was referencing. excluding those, but all the other water rights are 17 17 O I am not either. I am --18 treated exactly the same under this plan? 18 A I just -- I know basically from the newest 19 A They are to the extent that the -- they are in the calculated data we have got up here, we probably 20 same decline category. Let's put it that way. So, 20 recharge about 165,000 acre-foot a year on average 21 you know -- yeah, if you have got -- I think we have 21 and we will pump anywhere from 3 to 500,000 got some areas up there that has got 200 feet of 22 22 acre-foot a year, you know, pumpage. 23 saturated thickness, yeah, that was a good one. But 23 Q Okay. Well --24 if their decline rate -- now, that could take a HEARING OFFICER BARFIELD: Mr. Traster, 24 two-foot decline in that area to equal a six-inch 25 are you going to move onto a new subject? Because Page 166 Page 168 decline in some others. But from that standpoint, 1 there is a little bit of that last discussion I 2 didn't follow. yes, they are all treated equally. 3 MR. TRASTER: All right. 3 Q Okay. So you have got areas that are going to be --4 HEARING OFFICER BARFIELD: You two seem to that under your program they are going to be 5 understand each other, but I didn't. And I might depleted much faster than other areas, correct? reading the transcript, but -- so obviously there is 6 A Yeah, that is right. 6 different saturated thicknesses in different areas, 7 Q But your view and the board's view here is that but they treat a rate of decline the same no matter everybody needs to take the same reductions across if it is 40 feet of saturated thickness remaining or the whole district, even though there is plenty of a hundred feet, right? We are looking at the rate 10 10 water for uses in portions of the district? of decline to determine the allocation? 11 A Well, to a certain extent. Although the allocation 11 amounts are the same in different areas. You have 12 MR. TRASTER: Right. That is my also got to realize that -- again, like I said, a 13 13 understanding. 14 two-foot decline up there where I have got 150 foot 14 RAY LUHMAN: That is correct. 15 of water is not near what two foot is in an area 15 HEARING OFFICER BARFIELD: So I guess, where I have got 50. So, you know, those decline 16 what was the point I was supposed to get from the 17 categories do change. 17 questioning that you made to Mr. Luhman? MR. TRASTER: That if you are trying to 18 But if you are -- if, in fact, you are 18 19 declining at two foot a year even though you have 19 preserve this aquifer for the long term, there is no 20 got, what, maybe over a hundred years left on that, 20 indication whether we are trying to preserve it for 21 you still got that decline. And so that would -- we 21 20 years or 50 years or a hundred years or 200. 22 would suppose that that would continue for quite 22 That if you have got a minimum amount of saturated some time until you start to see reductions in well 23 23 thickness, you are treating that area -- you know, 24 24 it makes sense to me to conserve. And I am not 25 Q Right. But isn't the whole point of this to stop --

25

suggesting that I agree with the approach. But it

Page 169 Page 171 illustrations of particular townships. 1 makes sense to me to conserve in that -- the drive 1 2 to conserve in those areas ought to be -- is more 2 MR. DEES: Okay. important or more compelling than where you have got 3 MR. TRASTER: And they just show that they 3 250 years of saturated thickness. I mean, why is it 4 are treated -- the color coding in the last column 4 5 that we have a district-wide LEMA back -- so as is the same color coding as on the map that is 5 6 Scott Ross was saying, this is designed -- the LEMA 6 Exhibit, whatever it is. And I am just -- they are process was never designed for a district-wide 7 just to follow onto that map to show that there is 7 8 approach. 8 variation in these four townships, instead of them 9 RAY LUHMAN: I disagree with Mr. Scott 9 being homogenous. Ross on that in the fact that I think the 10 MR. DEES: Sure. And really just a 10 11 development of each township based on its own 11 question, one other question about these. depletion criteria or depletion rate in there does, 12 REDIRECT EXAMINATION OF RAY LUHMAN 12 13 in effect, establish local aquifer subunits. So he 13 BY MR. DEES: and I disagree on that. Q Did you take out the 15 feet of --14 MR. TRASTER: Well, I understand that it 15 16 Q -- saturated thickness? So that is still in this 16 develops those. But it develops those based on 17 lines that are more artificial than the lines he 17 described for the high -- the high -- whatever the A If it is -- to the extent that it is relevant, yes. 18 19 term --19 I didn't know to do that. 20 RAY LUHMAN: Oh, the high priority areas? 20 MR. DEES: All right. Then I don't see MR. TRASTER: High priority areas. But, I 21 any reason that can't be admitted, with those 21 mean, I am not here to debate it. I was just trying 22 comments. 23 HEARING OFFICER BARFIELD: Okay. 23 to -- well, I guess I am. But I was trying to 24 explain. My point is that the district-wide LEMA 24 Mr. Oleen? treats different situations the same, rather than 25 MR. OLEEN: What was the purpose of these 25 Page 172 Page 170 allocating or looking at the specifics of a 1 excerpts? Did you go over this first page? 2 MR. TRASTER: No. Those are just excerpts 2 particular area. out of the -- I didn't -- I wanted to make sure I 3 HEARING OFFICER BARFIELD: All right. 3 Thank you. 4 was using the proper formula. And the excerpts are 4 MR. TRASTER: Did I answer your question? 5 all instances where it says it is based on the 5 HEARING OFFICER BARFIELD: Yes, I think 6 annual rate of decline for the period in 6 7 so. What is the date of that map? 7 percentages. And so these are just excerpts out of MR. LUHMAN: It is based on groundwater 8 the GMD management plan and -- at the bottom from 8 9 trends from 2000 to 2005. Let's see. I don't see a the map attached to the plan, to make sure that it 10 10 date on that. It is a fairly old map, but it is -was clear that that is the language from the plan you know, it still brings across the point, I think. 11 that I used to come up with this idea that is the 11 12 Q (BY MR. TRASTER) Let me just -- it is just an 12 annual rate of decline formula. excerpt of a map, of a bigger map. I didn't want to 13 MR. OLEEN: I have no objection then. 13 14 produce the whole thing because it -- anyway, that 14 HEARING OFFICER BARFIELD: All right. So 15 is -- I will provided the larger map to counsel. 15 they are admitted, noting that Mr. Traster's 16 MR. TRASTER: So I think I moved for the 16 calculation using his method to determine the annual 17 admission of H through L, and I am -- but I don't --17 rate of decline, not dealing with the 15-feet did you admit those or not admit them? 18 18 minimum saturated thickness and the variability in HEARING OFFICER BARFIELD: I don't think 19 19 the sections. 20 we have dealt with them, so let's deal with them. 20 MR. TRASTER: Right. It is for what they 21 MR. DEES: Have we gone -- maybe I missed 21 are worth. 22 it, but I don't think we have gone over any of the HEARING OFFICER BARFIELD: Thank you. And 22 23 information in L through K [sic] at this point. 23 then also we have got Exhibit M here. Any MR. TRASTER: Well, I just explained that 24 24 objections to that? they are representative. They are just 25 MR. DEES: I haven't seen that, but --

Page 173 Page 175 HEARING OFFICER BARFIELD: Okay. Why request until later and --1 1 don't we take a look at it here. So do you still 2 HEARING OFFICER BARFIELD: Okay. have areas that the method says have 250 years of 3 MR. LUHMAN: And he is right in the fact 3 4 life? that there was a map provided at those meetings, but 4 5 RAY LUHMAN: I would think we do in a few 5 the -- "X" number of pages of the proposal itself 6 areas. 6 was not available. HEARING OFFICER BARFIELD: Just because 7 MR. TRASTER: Sure. I just wanted to make 7 8 there is little development in --8 sure we were clear about that. 9 RAY LUHMAN: There is very little HEARING OFFICER BARFIELD: Now, 9 10 development is the main reason on that. And we have 10 Mr. Traster -- and actually I was going to let you got some areas that have some fairly substantial 11 11 finish your cross examination before I got my 12 saturated thickness, yet it has very little questions. But I was going to ask the GMD to 12 development in it. 13 13 provide in the comment period that follows, I guess HEARING OFFICER BARFIELD: All right. 14 14 I would like to know, you know, what was presented 15 So what was the consensus? 15 at each -- at the annual meeting I referenced as 16 MR. OLEEN: Well, it appears that those 16 well as their public outreach meetings. I think it 17 maps were created by someone who is here to testify. 17 would be helpful to see what was presented. But, 18 HEARING OFFICER BARFIELD: Sure. 18 again, my recollection is you did present the 19 MR. OLEEN: So we would -- I think the 19 previous version of that map. 20 consensus is we agreed to -- let's hold off on 20 MR. LUHMAN: Right. actually formally admitting them until a little bit 2.1 HEARING OFFICER BARFIELD: But I will ask 21 22 can be discussed by the creator. 22 the GMD to provide --23 HEARING OFFICER BARFIELD: All right. 23 MR. TRASTER: Yeah. I have asked for that 24 That is fine. Since he is here, we will do that. too, but it is just -- the timing has been bad 24 Thank you. 25 and --Page 174 Page 176 HEARING OFFICER BARFIELD: Sure. 1 MR. TRASTER: I have a question, Mr. Chief 1 Engineer. 2 MR. TRASTER: -- I am sure it is on its 2 3 way. 3 At the beginning of your opening HEARING OFFICER BARFIELD: Right. Okay. 4 discussion, did you say that the plan was provided 4 5 FURTHER CROSS EXAMINATION OF RAY LUHMAN to the public at those public meetings? Is that --5 BY MR. TRASTER: do you -- I don't remember what you said about 6 6 Q In some earlier testimony you -- maybe in your 7 whether the plan -- it was provided -- Mr. Luhman original testimony -- you indicated that the testified that it wasn't; it was public record. It 8 could have been available, but --Sheridan 6 LEMA, that preliminary indications are HEARING OFFICER BARFIELD: Yeah. Well, 10 10 that income or production or whatever it is, is 11 good question. My recollection of what I said, I 11 sustainable or on par. I mean, I don't want to was basically giving a little bit of background with 12 mischaracterize what you said. respect to my involvement. And I did reference 13 A Yeah. What Dr. Golden has found, and he has gone 13 14 the -- I think it was February of 2016 -- annual through now I believe four years of data -- of meeting that I attended where they discussed the 15 15 course, 2017 is just finishing up. But his 16 LEMA proposal. If I said they presented a plan, I preliminary assessment at the end of 2016 shows the 16 didn't mean a detailed plan. I meant an overview of 17 17 profitability within Sheridan 6 remaining basically 18 what they were thinking. 18 the same as that on the area -- just the fringe area MR. TRASTER: All right. 19 19 surrounding Sheridan 6. HEARING OFFICER BARFIELD: That is my 20 20 Q Right. But you have also said publicly that 21 recollection, anyway. 21 during -- that you have had quite a lot more 22 MR. TRASTER: That is fine. I just wanted 22 precipitation over the last two or three years? 23 to make sure the record is clear that the plan A I know we have had -- at least two of those four 24 itself, the written details, weren't available to years, I would say, were at or above normal precip. the general public without doing an open records 25 Q And we know that the drought is coming again, right?

Page 177 Page 179 1 A Yeah. A That land has changed hands. He failed to tell you 2 Q And that the data could change based on the fact that the individual that was doing all of this that we had a climate change -- climate cycles? I conservation -- which he wasn't, he was just old and 3 didn't say that -- strike "climate change". But we didn't irrigate anymore -- but that land has sold. 4 4 had cyclical drought? And I think under that set of the circumstances, I 5 6 A I would agree. 6 don't know that we would go back and say, okay, back 7 Q So the jury is still out on the question of whether in 1974 you irrigated all this other land. the Sheridan 6 LEMA is going to -- will be at Q He didn't fail to tell me that. He did tell me that, just not here. long-term profitability --10 A I don't know if the jury is still out, but that is a 10 A Okay. 11 fairly short period of time to be doing a study like Q Okay. So for whatever reason -- so putting it in a 12 that. CRP program is conservation, but just being old 12 13 Q Okay. So there was some discussion about water use isn't conservation? between 2009 and 2015, and that is what you are 14 14 A Correct. basing this -- I mean, you are looking at acres from 15 Q Now, that is -- you are discriminating against, you 16 2009 to 2015 and then multiplying that times the know, guys like you and me. 17 number of inches you got? 17 A (Witness indicated.) 18 Q So --18 A Right. We selected the maximum number of acres reported irrigated in that 2009 through 2015 period. 19 A And I do need to say on that, too. I think -- you 20 Q And there was an example mentioned of three quarter know, on that appeal process, I think where he met 21 sections, but only one of them had been watered 21 with the staff first, I don't think I would give him 22 during that period. And so you would only get the 22 those extra acres. But that still gives him the 23 130, or whatever acres, that were under that center 23 ability to meet with my board of directors. And if 24 pivot system that would be -- that allocation would 24 they can make a compelling argument there, then we be based on that 130 --25 can change those acres. Page 178 Page 180 1 Q All right. So if -- but what about CRP? If I have got CRP, am I automatically back in or is that still 2 Q So what about CRP or other programs? Where do 3 subject to the board's decision? 4 A I think on any type of a government program to set 4 A Basically there is a provision, I don't know how well it is written in there, but through that appeal aside whatever you have got, if it is an official government program, I think you are automatically 6 process someone that has either been in CRP, 7 Equip [phon], you know, there is several programs back in, or you would be under my estimation. Q Well, does the plan say that or does it not? I out there where they idle land, we can go back in -if they are going to put that land back into mean. I --10 A It doesn't really -- it doesn't really speak to 10 production through all or part of that LEMA period, 11 we can assign them an amount based upon probably that, I don't think. their last reported acreage before they went into 12 Q So it is not clear? 13 A I have got to check, but it may not be. 13 that program. 14 Q That are reduced by the number of years. I mean, it 14 Q Well, you have given me -- sorry. would be the inches per acre times three years or HEARING OFFICER BARFIELD: Well, if you 15 15 16 four years --16 are looking at the plan allocations, Number 1, for 17 A Right. 17 water rights and royalty, Equip [phon] or AWEP 18 Q -- or one year depending on when they brought it 18 [phon], that will be coming out, the allocation back in, correct? quantity shall be set by the annual allocation for 19 20 A Yes, sir, I agree with you. 20 only the remaining years. It seems to be pretty --21 Q So the situation where it wasn't in a program but 21 Q (BY MR. TRASTER) So it is straightforward; it shall just wasn't irrigated, is that subject to that? 22 come back in? 23 A You know, I personally know about the individual 23 A Right. that Aaron is talking about. 24 Q All right. Back to the map that is in 25 Q Okay. Attachment 1 to the GMD LEMA plan. And I want you

Page 181 Page 183 O (BY MR. TRASTER) Okay. So the folks in 941 who to pay attention or focus on the two red townships. One in Zone 6 that is 13.2 inches times five years. had, for instance, two or two and a half acre-foot 3 water rights are going to get reduced to 18 inches? And then on the west end, 14.5 inches times five 4 A Right. And that is not water rights; that is what 4 years. But the plan says in Section K, 1K, that 5 they have actually pumped. And what I did under there will be no more than a 25 percent reduction those is I went in and said, okay, what is your 6 except when there is an 18-inch cap. average -- I don't remember what -- average or So there is no 18-inch cap for the red townships? 8 maximum pumpage through that year. I took 8 9 25 percent of that. That was the value. Then I got A We do have a situation, at least in 941, where some 10 14.2 or the 14.5 inch and set that as a value. And of those water rights pumped in excess of 24 to 26 10 11 inches every year. And we are going to reduce those 11 we took whichever one would have been the greater of 12 those two, provided -- but a max of 18. 12 down to 18 inches per acre, even though that is 13 bigger than a 25 percent reduction. Q All right. So the 14.5 is the low end, but it can go up to 18? 14 Q Okay. The plan doesn't say that though, does it? A Yes. 15 A Yes, it does, sir. 15 16 Q All right. I am just trying to make sure I 16 Q Where does it say that? 17 A Where it says we will not reduce anyone over 17 understood how that worked. 25 percent except for those being reduced to the 18 HEARING OFFICER BARFIELD: And now I want 19 18-inch maximum. 19 to make sure I understand how it works. All right. 20 Q Right. And so that is in Section 1K. But these are 20 So in the purple townships we have got the 18-inch not being reduced to the 18-inch maximum? 21 21 max, right? 22 A No. It goes on to say that -- let's see, 1K. Okay. 22 RAY LUHMAN: Right. The LEMA allocation will not reduce water users by HEARING OFFICER BARFIELD: So in those 23 23 24 greater than 25 percent except for those being 24 townships, there could be some water right holders 25 reduced to an 18-inch per acre per year cap. No 25 that will experience a reduction of more than Page 184 Page 182 LEMA allocations within areas of decline greater 25 percent? 1 than 0.5 percent will receive an allocation in RAY LUHMAN: Yes. They are going back to 2 3 excess of 18 inches per year. This amount -- these 3 the 18-inch max on that and they pumped whatever, 4 you know, 20.4, whatever that figure would be. 4 amounts apply to those water rights in red, yellow 5 HEARING OFFICER BARFIELD: Okay. But in and purple townships. 6 Q Where are you reading from? in the red townships that they started --6 Mr. Traster started with, they are going to get this 7 A From my testimony. 7 allocation, but you are going to do a check, you are Q Okay. But I am not interested in your testimony. I 8 am interested in the plan. going to compare the historic use -- well, I assume 10 10 A Okay. That says no water right shall be reduced by the average of 2009 to 2015, right? You are going more than 25 percent of their average historical 11 to come up with a value and make sure their 11 pumpage based on years 2009 through 2015 unless it 12 allocation is not reduced -- you are going to make sure they are not cut more than 25 percent in would allow a quantity of water over 18 inches per 13 13 14 acre to be pumped. 14 setting their allocation? 15 RAY LUHMAN: Except if they are going to 15 Q Okay. 16 A I think that is fairly clear. 16 get reduced to a maximum of 18 inches. And in some 17 cases, that will result in a higher than 25 percent Q Where are you, what section? 18 18 A Let's see. That is in Attachment 1. It is actually 19 HEARING OFFICER BARFIELD: Right. But 19 on Page 17 of 45 of my testimony, 10K. those are only the purple townships? 20 HEARING OFFICER BARFIELD: So it is in --20 MR. LUHMAN: No. Every township -- no 21 yeah, Page 17 of 45, which is -- it is the second 21 22 22 township will pump more than 18 inches per acre. In page of the proposal and it is Section 1, 23 some cases, in 941, although that is only a 23 Subsection K is what you are reading from, correct? 24 14.5-inch township, I have actual usage in the 26, MR. LUHMAN: Yes, sir. 24 27-inch range. I am going to reduce those back to 25 HEARING OFFICER BARFIELD: All right. 25

Page 185 Page 187 18 inches. 1 1 A I don't recall. 2 HEARING OFFICER BARFIELD: So 941 is which Q Did you provide any evidence? 3 township? What color is it? A I think we did, but it would be in -- it would be in 4 RAY LUHMAN: It is the red township in the record of that first hearing, but I don't 5 Sherman County. It is the one over here on the remember for sure what that was. 6 Q All right. Very good. You would agree with me, 7 HEARING OFFICER BARFIELD: Okay. So that though, that people who, in those two townships that 8 is a red township. They should get an allocation of 8 we have been discussing, the red ones on your map --9 the 50 percent NIR -- well, actually 14.5? 9 I mean, if they produced -- or pumped less water 10 RAY LUHMAN: 14.5, yeah. 10 table they were attempting to conserve are being 11 HEARING OFFICER BARFIELD: Right. So 11 treated worse than people who pumped the heck out of 12 aren't you -- where does the 18-inch come into that 12 their wells? 13 red township? 13 A I think there is that possibility. RAY LUHMAN: Well, normally what would --Q Thank you. Again, Mr. Popelka pointed out that --14 or suggested that the quantities -- the reductions 15 let's say that we have this individual that is be based on a percentage of the authorized quantity pumping 25 or 26 inches. He would have got reduced 16 17 to 14.5. But we said we are not going to reduce him 17 rather than looking back at acreage. But you have looked at acreage irrigated 18 18 more than 25 percent except in the case when that 19 during this period of 2009 to 2015 and you have 19 reduction takes you down to 18 inches. And from 25 based that -- you have based the reductions on those 20 20 inches down to 18 inches is bigger than a 25 percent 21 acres. What analysis did you do to determine that 21 reduction. 22 that was the important approach? I mean, why -- did 22 HEARING OFFICER BARFIELD: Okay. Thank 23 you look at allocations based purely on authorized 23 quantities and determine that that wasn't going to 24 24 Q (BY MR. TRASTER) So a water user in township 941 or 25 work some way? in township 830 who conserved, who spent -- who Page 186 Page 188 didn't pump 25, 26, 27 inches, gets reduced to 13.2 1 A Yeah. I think through the process we had looked at, and 14.5? you know, what both were the authorized quantity of 3 A Yes. 3 water rights and what were the authorized place of 4 Q But a producer who didn't try to conserve gets 4 reduced just to 18? 5 Q Right. 6 A The acreage for a water right. And it was the Q And you heard Mr. Pop -- Popelka, a good friend of board's determination on that that we were better mine, cite 82a-1041(a) that says that you have to off using recent past historic usage as we were give consideration to people who have conserved, going back to the base water right. 10 right? 10 Q All right. And I am just asking you, you know, what 11 A Yes. 11 difference that made. I mean, did you look at the 12 O So when you submitted your plan to the Chief quantity that --12 Engineer -- the process is you submit your plan to A Actually we did -- I did not go back and do a big 13 13 14 the Chief Engineer and he looks at it and makes a 14 analysis on what would have happened if we would have gone against authorized acres. It would -- you 15 determination about those factors 1 through 6, 15 16 right? And once he says, yeah, that all complies, 16 know, it is just intuitive that we would have had to then you have your first hearing, which we have go a little bit less on our allocations if, in fact, 17 17 we were going to use entire places of use. 18 heard that Connie was the -- Ms. Owen was the 18 Hearing Officer. Q Well --19 19 20 What evidence did you provide to the Chief 20 A And one example of that would be, I would say a 21 Engineer to support the -- he has made a finding 21 majority of the water rights up here at least cover 22 that this treats people who conserved, gives them the full quarter section, 160 acres. And we are --22 23 favorable consideration? What evidence did you 23 you know, everybody is irrigating with a pivot now, so that is going to run 120 to 125 acres. So right provide to support that when that example, at least, 24 24 is not -- doesn't appear to be the case? 25 there, you are figuring your allocation then based

Page 189 Page 191 1 Q Okay. Thank you. I am just trying to understand on actual irrigated acres and not those corners. 2 what you did. 2 Q So your concern is that you have got a quarter 3 MR. TRASTER: I am reluctant to say this, section that was -- that was flood irrigated and the 4 but I don't have any further questions at this time. 4 authorized quantities based on flood, but they are 5 HEARING OFFICER BARFIELD: All right. 5 now center pivots and you want to multiple by 130 or 6 Mr. Dees, would you like to ask any sort of 6 whatever acres rather than 160 and -- but what 7 redirect, more or less? percentage of those water rights -- I mean, I have 8 seen a lot of water rights that were authorized for 8 MR. DEES: I would, Mr. Chief Engineer, 9 although it is 2:50 and I don't know if the court 160 acres, but they were only perfected for 130. 10 reporter would like to take a break at this point, And so because of the acre-feet per acre 10 and I think this would be a natural stopping point. 11 limitations, the quantities were reduced when the 12 12 certificate was issued based on acre-feet per acre HEARING OFFICER BARFIELD: Okay. We can 13 13 during the perfection period. I mean, is that not do that. We can take a 15-minute break. We will 14 what is going on here? 14 return at 3:05. 15 15 A I don't know that as far as the place of use being (Recess taken at 2:47 p.m. Resumed at 16 3:04 p.m.) reduced through the certificate that we have that 17 many of those -- is that what you are getting at? 17 HEARING OFFICER BARFIELD: You can call your next witness now. 18 Q No. The place of use isn't reduced; they will still 18 19 issue a certificate for --19 MR. DEES: I think I am going to ask A Not anymore. They will only issue it for the land 20 20 Mr. Luhman just a couple of questions. 21 21 that was actually irrigated. HEARING OFFICER BARFIELD: Oh, I am sorry. 22 22 Q Well, okay. But I have looked at a hundred water You are right. And I have a couple of questions for 23 rights ---23 Mr. Luhman as well. 24 A Well, I have looked at thousands of them. So --24 FURTHER DIRECT EXAMINATION OF RAY LUHMAN 25 O What is that? 25 BY MR. DEES: Page 190 Page 192 1 A I said I have looked at a thousand of them and --1 Q These questions are going to try to track a little 2 Q I bet you have. All I am saying is that often the bit with the pathway that Mr. Traster laid out, place of use is 160 acres. The quantity is based on 3 although that path has been quite long so it may 4 deviate somewhat. 130 acres. And I don't -- the water rights I have 5 Just really quickly, Mr. Luhman, can you 5 looked at are not -- very many of them in this explain the difference between an appropriated right 6 district. 6 7 And so I am asking you whether those 7 and a vested right? A Yeah. Basically a vested right, by Kansas law, was perfected quantities, certified quantities, are based on 160 acres or 130, generally, in this area? a water right that was in existence in, I believe, 1945 when the Kansas Water Appropriation Act was 10 A Boy, you know, that is all over the place. You 10 know, a lot of the area water rights would have been 11 passed, and so they were given preferential 11 12 based on full quarters and -- you know, we have got 12 treatment at that time. An appropriated right is anything that was 13 13 a lot of 320 acre-foot water rights out there for 14 160 acres which, you know, hasn't been pumped for 14 done through the current Water Appropriation Act. 15 Q And the appropriated right can be subject to 15 years. So -- and, you know, looking at the 16 authorized quantity of water rights, you know, an additional regulation; is that correct? A As we understand it, yes. 17 example I could give you there is we have got 17 MR. TRASTER: Objection. It misstates the 18 probably 845,000 acre-foot appropriated out to 18 law. irrigate right now. And we probably in 2012, which 19 19 HEARING OFFICER BARFIELD: I am sorry? 20 was an extremely dry year, pumped about 500,000. So 20 21 MR. TRASTER: It is a misstatement of the you can see that we are not coming anywhere close to 22 pumping our appropriated amounts anymore. 22 law, for the record. 23 HEARING OFFICER BARFIELD: Okay. Thank 24 24 A So that is another reason that we decided to go on recent past pumpage. 25 Q (BY MR. DEES) Okay. Just real quick to clean up

Page 193 Page 195 the request for the modification. It seems to me K.S.A. 82a-1041 also a public policy of the state of like Mr. Popelka also had some suggestion Kansas at this time? modifications as well. Mr. Popelka had come to the 3 A Yes. You know, it was passed by the legislature, so GMD4 board with a proposed modification; is that 4 it also is Kansas state law. correct? 5 Q And I believe -- I may get my section number wrong, 6 A I don't recall if he came with proposed but I also believe 82a-702, that designates the use modifications, but he did come to the board with his 7 of the water to all the people in the state of concerns about the way that stock water was being 8 8 Kansas and gives the Chief Engineer the authority to handled under the current proposal. regulate and control that use; is that also part of 10 Q Okay. And based on that, the GMD4 board requested the public policy of the state of Kansas? 10 that this modification occur, correct? A Well, yes, it would be. I mean, that is part of the 12 A Yes. 12 Water Appropriation Act. 13 Q And not that the plan be resubmitted to the Chief 13 Q Okay. And under 82a-1020, is it also the policy of Engineer in its entirety, but that the Chief 14 the state of Kansas that the creation of groundwater 14 Engineer simply consider that in making an order of 15 15 management districts occur because they recognized a decision? 16 16 need existed for the creation of special districts 17 A Yes. for the proper management of groundwater resources 17 18 Q Okay. And so looking at the statute, that would 18 for the state, for the conservation of groundwater 19 have been a modification proposed under 19 resources for the prevention of economic 20 82a-1041(d)(4), which allows the Chief Engineer to deterioration, for associated endeavors with the 20 21 change the plan but not impose reductions in 21 state of Kansas through the stabilization of groundwater withdrawal, but exceed those contained agriculture, and to secure of Kansas -- to secure 22 for Kansas the benefit of its fertile soil and 23 in the plan, correct? 23 24 A Yes. 24 favorable location? 25 Q Okay. And the proposal, does it impose reductions 25 A Yes. Page 194 Page 196 in the groundwater withdrawal that exceed those 1 Q Okay. So in your opinion, it is the public policy contained in the actual proposed plan? of the state of Kansas to allow a LEMA to come into 3 A No. Actually it is more lenient. 3 existence, correct? 4 Q Okay. And so it is under that section that the 4 A It is in my opinion, yes, sir. board is asking that that modification be made? 5 MR. TRASTER: Calls for a legal 6 A Yes. 6 conclusion. 7 O Okay. And then that would be resubmitted to the HEARING OFFICER BARFIELD: I am sorry? 7 board where we can, you know, presume that that MR. TRASTER: It calls for a legal 8 conclusion that he is not qualified to give. would be accepted? HEARING OFFICER BARFIELD: Objection 10 A Yes. 10 11 Q Okay. And if that was presumptuous of me, I 11 Q (BY MR. DEES) And just for the record, Ms. Owen did apologize to my board members. And, again, this is find it was in the public interest to adopt a 13 just to kind of clear up the record early on. 13 conservation plan, correct? 14 Mr. Luhman, is it your belief -- and I 14 15 A Yes. 15 have a memorandum here from November 7th, 2016 I am reading from -- that the informational meetings 16 Q Okay. And, Ray, quickly. This goes back to the 17 about this LEMA were held on November 29th, 2016 17 discussion about the NIR amounts. You have stated actually here in the Colby City Limits Convention 18 that you had used the western edge of the zones in 19 19 Center; on November 30th, 2016 at the Northwest Tech determining -- in setting those allocations; is that Community Hall [sic] in Goodland, Kansas; on 20 correct? 20 21 A Yes. 21 December 1st, 2016 at the Cheyenne County 4H 22 Building in St. Francis, Kansas; and on December 22 Q In those western edges, are they drier or wetter 5th, 2016 at the Hoxie Elks Lodge in Hoxie, Kansas? 23 than the eastern edge? 23 24 A That is right. 24 A The NIR -- or the interpolated NIR for the western 25 Q Okay. Kind of moving on. Is the LEMA statute under 25 edge of the zone would be the driest amount for that

Page 197 Page 199 1 Q Okay. And really quickly, moving onto the motion to 1 zone. 2 Q Okay. And so by using that, I guess -- and require a 10 percent carryover that was heard on generally speaking, as we go west it gets drier, 3 March 28th, 2017 and apparently approved by the 4 correct? board and then the June 8th, 2017 proposal that 5 A Yes. basically says that the board shall consider whether 5 6 Q Okay. And by using that number, that gives us --6 or not to allow a 10 percent carryover. that builds in, I guess, a cushion or a buffer in 7 Do you remember what some of the board that amount. Is that correct, or am I off there? 8 members' concerns were about limiting future boards 9 9 A Well, to a certain extent, yes. The -- you know, as far as a 10 percent carryover or, you know, the net irrigation requirements, as I -- as I took 10 consideration? 10 them, were established for the center of that A There was some discussion on what they could and 12 county. So, you know, given just the climate out 12 could not do as far as limiting future boards to 13 here, the further west you get, the drier it gets. 13 what they might do. But I do know there was a So that is why I interpolated those moving west to concern on the board of directors that they at least 14 14 put something in the plan that would say that any 15 the higher value. 15 16 Q And Mr. Traster asked about those, kind of moving succeeding LEMA would or could consider a carryover. 17 on, and I just wanted to make sure. Q Okay. And the 10 percent amount was an amount that 17 In regulating individuals in the green and was put in there; is that correct? 18 18 19 blue townships, is there any incentive for them to A Yes. 19 20 continue conserving water under this plan? Q But they could consider a 20 percent carryover if they wanted to; is that correct? 21 A Well, I would think so. You know, you would have to ask the individuals that are in those areas. But I 22 A Yes. Yeah, because this in no way binds the board 23 think that it would be in their mindset to make sure to any type of decision on any succeeding LEMA, if 23 24 that they keep their decline rates at a level that, they would decide to do one. 25 if a new LEMA were proposed, that they would still 25 Q And that language was ultimately adopted on, I Page 198 Page 200 not be subject to any substantial regulations. believe, June 8th of 2017 when the board approved the proposal as presented that day? 2 Q Okay. Kind of going on to the discussion 3 Mr. Traster and you had about what he would call A As I recall, yes. 4 plan depletion, where in 1983 they said a two 4 Q Okay. And the approval of that plan, there was a 5 percent reduction in 1987, a one percent in 1991, motion and a second to approve the proposal? safe yield or sustainable yield at that point, 7 obviously during those years there was a change in Q And it passed -- it passed by at least a majority? what was believed to be a reasonable amount of Q Okay. Real quickly. Mr. Traster had presented you depletion to be set at the GMD level; is that 10 correct? with a map that showed the number of years remaining 11 A Yes. And you have got to realize in those days, you in the aquifer. It hasn't yet been admitted into 11 know, although it doesn't sound like a lot now, how 12 evidence, but I imagine it will be. 12 13 much more restrictive each one of those policy -- or Do you remember what date was used -- what 13 the succeeding policy was than the one before. 14 data and dates were used? 15 Q Okay. And so over time, things have a tendency to A According to the title on the map, it is based on change, correct? groundwater trends from 2000 to 2005. 16 17 A Yes. 17 Q Okay. And what date has been used as far as a time 18 Q And so this is kind of another step in that period goes for the LEMA proposal for the map? succession of change; is that correct? 19 A Well, the decline data is from 2004 through 2015. 20 A Yes. Although it is not necessarily a regulatory Q Okay. So the decline data is after that map that 20 21 like a -- like our development criteria is; this is Mr. Traster presented to you from 2004 -- or from 21 22 another attempt by the board to reduce water use, 2000 to 2004; is that correct? 23 yes. A Yeah, that would be subsequent to that. 24 Q As approved by the Kansas legislature? 24 Q Okay. And lastly, really quickly. I want to clear 25 A Yes, sir.

up some of the confusion on the 25 percent reduction

Page 201 Page 203 versus the 18-inch reduction. the section level data? 2 Mr. Luhman, has this proposal been a A Oh, yeah. That is -- basically the section level balancing act from the beginning? 3 data -- which I think Brownie will explain far 4 A I would almost say yes. You know, we have tried better than I can here in a little while. The to -- we have had several issues that we have section level data is the foundation of the 6 discussed and re-discussed and looked at other maps information that we used. and different ideas. So, yeah, I would say it has Q However, trying to, you know, use political 8 been kind of a balancing act, yes. boundaries to make -- you know, to draw lines, is it 9 Q And one of the balancing considerations was that you your understanding that, you know, the township 10 wanted to make a cap of 18 inches for everybody level would be an easier way to make decisions than 10 11 across the board; is that correct? 11 the section level? 12 A For everything other than the blue and green A Oh, yes. And, you know, you have got -- I 12. townships. understand where you are coming from in the fact 14 Q Right. But did the board feel like someone taking that political boundaries seldom, if ever, match 14 more than a 25 percent reduction would -- could hydrologic boundaries. But, you know, it was just a 15 16 excessively harm their irrigation rates -- where did 16 choice made that for the ease both of administration 17 that 25 percent come from? 17 and calculation, that the townships would be used. 18 A I think you are exactly right in the fact that the Q Okay. And those were decisions the board of board did feel like, except in the case for those directors made, correct? being reduced from a higher number down to 18, that 20 20 A Yes. anything in excess of the 25 percent reduction could 21 21 Q Okay. have the possibility of being more restrictive than 22 MR. DEES: At this time, I don't have any 22 23 what they want it to be. more questions; although, I may have further 23 24 Q Okay. And so the balancing act that you talked 24 questions if Mr. Traster asks a few more. about ended up with an 18 percent cap with --HEARING OFFICER BARFIELD: All right. 25 Page 202 Page 204 1 A An 18-inch. 1 Mr. Traster, do you have any questions to follow up 2 O Excuse me. An 18-inch cap. on -- or Aaron? 2 MR. DEES: Have I been saying percent for 3 MR. OLEEN: The DWR doesn't have any at 4 three or four questions? 4 this time. 5 HEARING OFFICER BARFIELD: Huh-uh. 5 HEARING OFFICER BARFIELD: All right. Any MR. DEES: Okay. follow-up --6 6 7 Q (BY MR. DEES) An 18-inch cap and a -- but if you 7 MR. TRASTER: A couple. are under 18, it is only going to be 25 percent; is HEARING OFFICER BARFIELD: -- based on the 8 that correct? questions that Mr. Dees asked? If you would like a 10 A Yes. 10 couple of minutes to get organized, I could ask my 11 Q Okay. And that is a policy choice that the board 11 questions. 12 made? 12 MR. TRASTER: Go ahead. 13 A Yes. HEARING OFFICER BARFIELD: All right. Let 13 14 Q Okay. The last thing, and I promise we are not 14 me just do that. A couple of -- they may just be 15 going to get too much into this, but let's talk a 15 typos. little bit about township level data versus section 16 On Page 6 of your testimony and Page 8, 17 level data. 17 both of those have a number of .05 percent. Were 18 First of all, just to make sure. When he those supposed to be 0.5 percent? 18 19 did his calculations, he did not remove any part of 19 RAY LUHMAN: What page? the GMD that had less than 15 feet of saturated 20 HEARING OFFICER BARFIELD: On Page 6 near thickness; is that correct? 21 21 the top there is a reference to -- in the second --22 A I believe so. 22 well, the first full paragraph. 23 Q Okay. But when you are making -- when the board was 23 RAY LUHMAN: Yes. That should be 0.5. 24 making decisions about this proposal, did they take 24 HEARING OFFICER BARFIELD: Right. Okay. a look at the township level data or -- excuse me, 25 And then also on Page 8, kind of in the middle there

Page 205 Page 207 1 I guess lastly then, I would -- as I sort is another .05 percent that I assume should be 0.5 2 of alluded to earlier, if the GMD could sort of 2 percent? RAY LUHMAN: That is correct. 3 supplement somehow on this comment in the coming 3 4 period, its testimony or whatever to just provide a HEARING OFFICER BARFIELD: All right. 4 5 summary of the initial plan, public meetings, and Okay. Page 9 on the penalty, there is a paragraph 5 what information was provided, as well as what 6 on penalties. I just want to make sure. I am fairly confident I understand. But if somebody has information was provided at the public meetings, 7 8 an allocation under the LEMA that would be 300 both written and in terms of presentations, I think it would be helpful to the record. acre-feet and they have a 50 acre-foot penalty, you just subtract that and give them a 250 allocation? 10 Okay. Mr. Traster, any follow-up based on 10 11 RAY LUHMAN: Yes. Or in the case of if 11 Mr. Dees's, I guess, redirect? someone has actually had their pumpage suspended for 12 MR. TRASTER: I hate to say I have two 12 13 a period of time during the LEMA period, they would questions because whenever a lawyer says one more lose those number of years times their allocation. 14 14 question, he is lying. HEARING OFFICER BARFIELD: Okay. The 15 15 FURTHER CROSS EXAMINATION OF RAY LUHMAN 16 paragraph just at the bottom of that same page, 16 BY MR. TRASTER: 17 "After completing these calculations, about 17 Q Mr. Dees asked you about what he said I would call 66 percent of the wells or well groups slated for 18 "Plan Depletion". But that is what the 1983 19 LEMA allocation will have a LEMA allocation less regulation called it? 20 than their combined diversions for 2009 to 2015." 20 A Correct. Just tell me a little more of what that says. 21 21 Q It wasn't me; it was --22 RAY LUHMAN: Basically it is just saying 22 A No. You were just quoting the regulation. 23 if we have established a LEMA allocation for a water 23 Q Right. And so the 1987 regulation was also titled 24 right and we take that times five, basically that "Plan Depletion"? amount is less that what their combined pumpage 25 25 A Correct. Page 208 Page 206 through that six-year period, 2009 to 2015. 1 Q In 1991 they changed the title to "Allowable HEARING OFFICER BARFIELD: So we are 2 Withdrawal"? 3 talking about the red and yellow townships? A Yes. And I think the reason for that was at that 4 RAY LUHMAN: And even the purples, to a time we no longer were under a depletion formula. 5 certain extent. Because there would be some It was just a safe yield. 6 allocations there. I think in most cases, the 6 Q Right. So Mr. Dees also asked you about the map. 7 18-inch allocation probably is not a restriction And we acknowledged and we talked about this when I 8 very much, but -- you know, you couldn't a hundred presented it, and we are talking about Exhibit M, percent throw the purple townships out of there that it was 2001 to 2005 data, right? 10 either. A 2000 to 2005, yeah. 11 HEARING OFFICER BARFIELD: I guess let me 11 Q Okay. Thank you. And the idea is that that 12 ask about the purple townships. My understanding predated -- I think it overlaps one year, but 13 is -- well, is it limited to 18 inches in any one 13 basically predated -- I mean, the 2004 data that was 14 year or is it an allocation of --14 used was a combination of 2003, 2004 and 2005? 15 RAY LUHMAN: It is an allocation. 15 A Uh-huh. 16 HEARING OFFICER BARFIELD: So it is five 16 O So it is at the end of that, the tail end of the 17 times 18? data that was used for the map, Exhibit M, right? RAY LUHMAN: Yes, sir. 18 inches times 18 18 A Yeah, correct. 19 their program acres times five. Q And that -- but the 2004 to 2015 time frame that you 20 HEARING OFFICER BARFIELD: All right. So 20 are using here to come up with these reductions 21 for the purple, yellow and red townships, 65 percent 21 doesn't -- I mean, the point of that map was that it 22 are getting less than their historic use? 22 was a hundred-year discussion and it doesn't overlap 23 MR. LUHMAN: Yes, sir. that, does it? 24 HEARING OFFICER BARFIELD: All right. 24 A No. No, it doesn't. Thank you. 25 MR. TRASTER: Thank you. No further

Page 209 Page 211 1 questions. 1 a directive from the state water plan to assist the 2 MR. LUHMAN: Okay. 2 GMDs and the Division of Water Resources in their 3 HEARING OFFICER BARFIELD: Very good. Any management, especially except for the Ogallala. 3 4 more? And in May 2016, we had a request from 4 5 MR. DEES: Real quick. 5 GMD4 to look at the water level changes for those 6 FURTHER REDIRECT EXAMINATION OF RAY LUHMAN years that were given; 2004, 2009, 2015. 6 7 BY MR. DEES: 7 So we basically pulled the data on what we Q Mr. Luhman, was there anything you wanted to add in 8 call our Wizard database and we focused on the wells response to Mr. Traster's last question? 9 in and around -- within 20 miles of the GMD4 10 A You know, not really in the fact that, you know, the 10 boundary. And we threw out the wells that we 11 map that he provided basically was an estimated 11 have -- we have status [inaudible] in all our 12 usable lifetime for the High Plains Aquifer. And I 12 measurements, on the ones that we know are abnormal. 13 don't know -- I think, you know, it would probably 13 Like if somebody measured the well and it was -- one 14 nearby was pumping, we will flag that if we know 14 change some. Again, you might want to ask Brownie 15 about it. We threw all those kinds of wells out. 15 about that. I think it might change some if we used And so we then interpolate surfaces a different time frame on the groundwater trends. 16 17 because across the -- the Ogallala is based on 17 But, you know, I don't really see anything that these -- on this network of wells that we have. And 18 really bothers me about that map. 19 19 so our interpolated grids are actually down to Q All right. 250 by 250 meters. And then just for the sake of 20 20 HEARING OFFICER BARFIELD: All right. 21 convenience, we store that information on averages 21 Thank you. Actually I have one more question, even 22 for each POSS section. And then that is how we 22 though I am not an attorney. 23 get that data a lot of times that way. 23 The vested rights, they are not regulated 24 And so the process, we kind of went under 24 by the LEMA proposal. Their use is not in that 25 a couple of iterations. The first time we used all 25 1.7 million either; they are just -- when you --Page 210 Page 212 1 right? the data we had, all the wells and all those well 1 RAY LUHMAN: That is correct. 2 measurements that met that criteria. We went 2 3 HEARING OFFICER BARFIELD: Okay. That is 3 through that iteration where we had some questions 4 all I have. All right. You may step down. about a well in the southeast portion of the 4 5 MR. LUHMAN: It is about time. 5 district in 11 south 27 west, 13 that has been 6 HEARING OFFICER BARFIELD: Yeah. All 6 showing a little more accelerated groundwater 7 right. Mr. Dees, you can call your next witness. declines than his neighbors has. So we decided 7 8 MR. DEES: Our next individual that is that -- in consultation with GMD4, to remove that. 9 going to testify is Mr. Wilson, Brownie Wilson. And then we had some questions about what influence 10 HEARING OFFICER BARFIELD: All right. 10 alluvial wells had on the process, and so we went 11 MR. DEES: And if it is all right with the through and flagged the ones that we knew and then 11 12 Chief Engineer, I will let Mr. Wilson go ahead and reviewed some others and we threw out some more 12 13 just give us his presentation and then we will have 13 wells and repeated that whole process. And then we 14 an opportunity to ask questions afterward. 14 provided them that data. So it is in the GIS format 15 HEARING OFFICER BARFIELD: Sure. 15 and then a spreadsheet that shows the elevation of 16 THE REPORTER: Will you spell your first 16 the land surface, the elevation of the bedrock, and 17 name for me, please? then the water table elevation in 2004, 2009 and 17 BROWNIE WILSON: B-R-O-W-N-I-E. 18 18 2015 based on the wells that met that flexible 19 (Mr. Wilson was sworn.) 19 criteria. TESTIMONY OF BROWNIE WILSON 20 20 And, again, that is all further outlined 21 I provided written testimony in the first 21 more in the written testimony. I don't know, do I 22 hearing in August. And I have no changes to that 22 need to resubmit that or is that part of the record? 23 whatsoever, so it still stands, I guess. 23 HEARING OFFICER BARFIELD: It is part of

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the record already.

BROWNIE WILSON: Okay. Then I will stand

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I won't read it again, like I did the

first time. But really our role in this is we have

Page 213 Page 215 by it. It doesn't change from that. 1 1 A It was the same. I had a focus on the physical 2 DIRECT EXAMINATION OF BROWNIE WILSON geography and in the geographic information systems, 3 BY MR. DEES: the mapping. 3 4 Q Mr. Wilson, just real quickly. And I may have Q Okay. And I know Mr. Traster is probably going to missed this. But based on your research, is the bring this up, so I might as well at this point. major reason for the decline in water tables the You can map things at a township level or a section irrigated groundwater pumping? level; is that correct? 8 A Well, I don't say irrigation. I just say 8 A I can map things at all kinds of levels. It is just groundwater pumping, yeah. a matter -- you know, the challenging matter with 10 Q Okay. 10 the groundwater system is that it is subsurface. 11 A It is the groundwater used -- and we -- we had a And so we have to use point data and we have to use 11 12 couple of recent studies we put out that show real 12 interpolation processes to get an idea of what it looks like over a continuous space. 13 high correlations between water level change and 13 14 water use -- groundwater use. And that is 14 There is a lot of different ways that you 15 can interpolate data. There is statistical means. especially true up here in Northwest Kansas. We get really strong correlations that we don't get 16 There is mathematical means. But the success and 16 the failure of those is always the input data and 17 elsewhere necessarily. That depends on the data and 17 the time periods. 18 what the density of that is. 18 19 Q You have been here for all of the testimony that has 19 And so whether you are talking about how 20 comfortable you are with the township level estimate 20 been presented today, right? 21 or the sectional level estimate; again, it all kind 21 A Yes. 22 of goes back to what are my inputs that help me form 22 Q Okay. And you heard the discussion about section level data versus township level data; is that 23 that surface. Because if I don't have any input 23 24 data, you are guessing on wells that are quite a bit 24 25 away. But if you have a lot of higher 25 A Yes. Page 216 Page 214 1 Q And, in fact, you have supplied Mr. Traster with his concentrations of wells at a particular location, 1 raw data that he created those maps from, correct? you will have a greater confidence in that 2 3 A Yes. 3 interpolated surface. 4 And also the aquifer kind of determines a 4 Q Okay. Real briefly, before we get into that conversation, can you tell me, how long have you 5 little bit of it, too. Because the more homogeneous been a hydrologist? 6 it is, you know, the less number of wells you might 6 7 A I started with the Division of Water Resources in need. Or if you get in some situations where just 7 '93 and I worked there until about 1999. I went to based on the geology, it may add more wells. the water office for a couple of years, and then I Q Okay. And would you describe the Northwest Kansas 10 have been with the Kansas Geological Service since 10 Groundwater Management District No. 4 as fairly 11 2001. homogeneous? 11 A I would say -- like relative to some of the other 12 O Okay. 13 A I have always been an analyst of some sort, 13 Ogallala ones, I would say it is a little more 14 especially with GIS. So the geographic information, 14 homogeneous compared to like GMD3, where you have 15 the spacial mapping and data side is my forte, if 15 other aquifer systems below it. Sometimes it is in 16 you will. 16 contact with the Ogallala. Sometimes it is not. 17 Q So making maps is what you do? 17 GMD4 is actually very similar to GMD1 in 18 A Yeah. I really don't like making maps, but I like terms of what their historical water level changes 18 dealing with spacial data. Actually making 19 19 have been. I think the water supplies in GMD1 20 production maps gets a little tedious. So I don't 20 are -- traditionally are a little bit shallower, so 21 do it unless I have to. But I definitely like they are a little bit more in a depleted 21 spacial data and map forms, I will put it that way. 22 22 environment. So they are starting to get more 23 Q Okay. And do you have degree for this or --23 diversity just from that reason alone. But, yeah, I 24 A I have a master's degree in geography. 24 would say it is probably closer to being more of the

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same than it is different.

Q Okay. And what is your bachelor's degree in?

Page 217 Page 219 1 Q (BY MR. DEES) Can you spell that? 1 Q Okay. 2 A On the GMD1 -- or a GMD4 scale, for sure. 2 A No, I can't. 3 THE REPORTER: I can't either, but I will 3 Q And I have heard of bunch of your presentation 4 before. So based on your experience, generally if A I was always the first one out of the Spelling Bee. there are conservation measures taken in the O (BY MR. DEES) Okay. And so when you look at the 6 Northwest Kansas Groundwater Management District. will the Northwest Kansas GMD benefit from those GMD, and I appreciate Mr. Traster keeping that 8 conservation efforts as it relates to the water 8 picture up on the screen for us --9 MR. DEES: Thank you. table? 10 MR. TRASTER: Do you want it --10 A Yeah, definitely. In a place where conservation 11 efforts take place, the people in that direct 11 MR. DEES: Yes, I do. That is great. 12 Q (BY MR. DEES) In order to have good data, you need 12 immediate area get the benefit of that, for sure. 13 O Okay. So to steal a shorthand phrase, what happens to have multiple data points, correct? 14 A Yes. I would like so. 14 in the Northwest Kansas Groundwater Management District stays in the Northwest Kansas Groundwater Q Okay. And based on the sectional level data and the 15 Management District? measuring -- or the points that you have within the 17 A That is right. 17 GMD that you are taking measurements from, you are most comfortable using that section level data to 18 Q Okay. So based on this, the conservation efforts 18 19 that are proposed by this plan, the water users in 19 make decisions; is that correct? 20 GMD should reap those benefits as far as 20 A Yeah. Township scale in terms of making comparisons of what the water levels are doing directly in that 21 conservation goes? 21 22 A Okay. 22 township, I am more comfortable with that scale than I would be at the individual section level scale. 23 Q Okay. Going back to township level/section level 23 24 data, you could actually go down clear to lots; is 24 I am not saying either one is right or 25 that correct? 25 wrong. It is just that confidence that you have in Page 218 Page 220 1 A Yeah. I mean, we do a lot of groundwater models, the value that is being represented by that sub area 1 accurately represents the input points that are for example. And the one we are working on now is 3 400 feet by 400 feet. We interpolate that down to 3 around it. that level. Q So you are more comfortable with the section level 5 Q Okay. But what is the difficulty -- and I think you rather than the township level or -kind of explained this a little bit. What is the A It all depends on how many input points I have difficulty as you kind of drill down further and 7 around there. I may have a township that has no 7 further? points in there; I got no confidence, or I have A Well, it is not so much drilling down; it is that little -- I have littler confidence in that than if 10 the confidence you have in making a decision in this 10 I had a lot of input points [inaudible] I would 11 cell versus this cell, whether that is a section or 11 rather measured wells. And the same goes for 12 that is a township -- because, again, the value that 12 sections. The more -- the better -- you know, the interpolation process is just using those input 13 is in those sub areas is based on input data that 13 points to spread that value across space. And, 14 was interpolated. And the more you have those input 14 15 15 again, the more you have and the denser they are, points around or even in that area, the greater 16 confidence you have in there. then the better your decision is going to be. Q And you are a scientist, right, Brownie? 17 Q I got you. A I guess, yeah. 18 A The farther away they are or the less dense they Q Okay. And so looking at political subdivisions is 19 are, you have less confidence into them. But, not necessarily something that you enjoy doing; is 20 again, the more homogeneous your aquifer is, then 21 that correct? 21 that helps, versus where there is a lot of 22 A Say that again. 22 heterogeneity to it. 23 Q Looking at -- trying to carve this GMD up using 23 THE REPORTER: It has a lot of -political subdivisions like townships or sections, BROWNIE WILSON: 24 you would much prefer that we just look at the 25 H-E-T-E-R-O-G-E-N-E-I-T-Y.

Page 221 Page 223 hydrology underlying that? 1 A Okay. 2 A It makes it easier, yeah. There is not -- you can Q Are those crosses on the map the data points that make a case for the township or the section level in you used? terms of people can relate to that better. 4 A Yes. 4 Q And so when you say interpolating the data, what you 5 Q Okay. 6 A And that is probably one of the reasons why we store are doing is you are taking two -- any two of those data at the section level is that it is easy to points that are adjacent to one another and looking 8 at the value there and whatever else you know about query and databases and people can relate exactly that area and trying to come up with the water level where that is located at as opposed to trying to 9 in between them, in essence? 10 10 describe it in other ways. 11 A Right. That is a general characterization of the 11 O In hydrological terms? 12 A Sure, yeah. 12 interpolation process. And there is nuances, depending on what you pick, but it is -- that is 13 Q Okay. And does it make it easier then for, you 13 14 exactly it, yeah. know, DWR or a GMD or some other political body to Q Okay. So what are -- I mean, can you give -- I 15 15 regulate those subunits or is that kind of -don't want you to go into all the nuances, but what 16 16 A I guess. I mean, with those agencies, everybody has got staff and computing power and the knowledge so 17 do you mean by "nuances"? 17 18 A Well, like in the simplest case, like there are some that it results with the subunit, yeah. 19 areas that are just purely mathematically based. So 19 Q Okay. I got you. So based on your expertise, if we 20 I have got a value here; I have got a value there. had to choose to -- or if the Chief Engineer has to 21 Let's divide it by the distance. Just pure math. 21 choose to make a determination of a section level or And then there is others that say, okay, I want to 22 a township level, where would you -- which one of 22 23 try to fit a surface over all my data points so that 23 those would you prefer? it is -- everybody is a little bit happy and then 24 24 A If I had to pick between those two, the political 25 there has not been -- I want to make sure I honor boundaries, I would -- with water levels, I would be Page 224 Page 222 more comfortable with a township scale. the points and this and that. Those are the 2 Q Okay. Because you -- then using those numbers, you nuances. know that you have the data points that you need? 3 Q So you have got a data point with an elevation at 4 A Right. Our network was designed to look for some -- you have got two data points with an regional variations in the water table, and that is elevation that are the same, but in the middle you 5 6 the appropriate scale for that. have got a higher one. It is not a straight line up 6 and a straight line down; it is a curved line. Is 7 Q Okay. Sounds good. 7 8 MR. DEES: I don't have any other that kind of what you are saying? questions. Thanks, Brownie. A Well, it could be. It depends on -- again, there is HEARING OFFICER BARFIELD: All right. 10 different processes. The one I use was developed by 11 Mr. Traster? 11 the ESRI Corporation that makes the ArcMap Software. MR. OLEEN: No questions from the DWR. 12 Q Right. 12 HEARING OFFICER BARFIELD: Thank you, A They developed a routine that is designed for 13 Mr. Oleen. 14 elevations. CROSS EXAMINATION OF BROWNIE WILSON 15 15 Q And that is a routine that is commonly used by lots BY MR. TRASTER: of people --17 Q I guess I am a little confused, which is kind of 17 A Yeah. 18 Q -- across the county -normal. Don't shake your head. 19 A No. I am not. 19 A Yes. 20 Q All right. So I understand your testimony about the Q -- for any number of things, including DWR staff 21 that you interact with? 21 more data points you have, the more confidence you 22 have in the data. And would you -- you have got a 22 A I am sure I don't know [inaudible] used. But, yeah, 23 copy of your testimony from the previous --23 that comes up, yeah. Q Okay. And that is -- the KBS, that is the standard 24 A I do. 25 you use? 25 Q Would you turn to the map on the fourth page or so.

Page 225 Page 227 1 A It is one of them. We have a lot of statisticians. 1 A Yeah. We were -- I guess -- let me back up to that They like Kriging. first one. 3 Q They like what? 3 Q Sure. 4 A Kriging. It is another interpolation method that is A Version one, version two, version three was -out there. There are dozens of them. version one, I used all the wells that we had in our 6 Q Okay. But you have already told us that you are system. like me on -- I was in the third percentile in Q Okay. spelling. A And then my criteria. Q Right. 9 A Okay. A Version two was we had to have one well in 27 -- we 10 Q Can you spell --11 A Kriging is -- I think I can get that one. That is had the one well that was in 11 south, 27 west, 12 K-R-I-G-I-N-G. 12 Section 13 that showed a significant water level decline that we didn't really see in any other wells 13 Q Okay. But the data that you used to provide to the 13 14 GMD is the kind of data you normally rely on? 14 around it. So I took that well out and repeated all 15 A Yes. of the same interpolation process. Q Okay. You took that out in consultation with the 16 Q And in your testimony you specifically -- you heard 16 me probably read, if you were paying attention, your 17 GMD? testimony? 18 A Yeah, right. 18 19 A I was. Q So they agreed with that? 20 Q You were? Okay. So -- I mean, at the bottom of the A Yeah. They were the one that brought it to my second page and onto the third page, you say that it attention, that area. And then -- either then or it 21 22 was later brought to my attention that they wanted 22 can be readily computed at the section level. Are 23 you now saying that you don't have confidence in 23 to see what it looked like without any alluvial wells in there and try to focus solely on the that data? 24 24 Ogallala. And so that was -- I went through --25 A No. What I meant by that statement was not so much Page 226 Page 228 a validation of the data, but that it was set up at most of our wells have a geologic code that 1 the section level. And the selection of the wells describes what material they are pulling it from; 2 3 that I chose, it was then set up so that you can 3 the Ogallala, or in this case the much younger, 4 make water level changes appropriately between 2004, shallower alluvial sediments. 5 2009 and 2015. 5 So I -- those ones that I knew were A lot of times people do interpolated 6 alluvial, we took those out. And some of those, I 6 7 surfaces of one year and they have got wells for had to review by hand based on the well data and 7 8 that set. And then they do another year and they whatnot. And we ended up taking those out and have got wells for that set. And sometimes you have repeating the entire interpolation process. And 10 wells that may come in one year and they are not 10 that is version three. 11 there the next. You can generate artificial highs Q Okay. And so version three is the data that is the 11 12 and lows by doing that. most conservative in the sense of the most accurate. 12 And so my point by that is it was readily 13 but taking out the data that might not really help 13 set up so that they can do those computations of 14 us figure out what the groundwater contours are? 15 water level changes for that time frame. A It would be a lot more focused solely on the 16 Q And the data that you provided to the GMD, and then Ogallala. 16 subsequently to me, has -- there were three versions 17 Q All right. 18 of it. And you testified that you started and then 18 A And it ignores the -- you know, there is some you took out some wells and then you took out some 19 19 connection with the alluvial systems, but it is felt 20 more wells. And so there was a version one, version 20 to be pretty small, pretty light layers in between. two and version three for each of the three levels So we take those out of consideration. And most of 21 that you took? 22 those, honestly, were outside the district anyway. 22 23 A Yes. O And so -- you and I had a conversation about this at 24 Q And as I understand it, the level for 2004 was based the Governor's Conference --24 on readings during December of 2003, 2004 and 2005? 25 A Uh-huh.

Page 229 Page 231 1 Q -- and I asked you which set of data to use and you 1 A Yes. suggested to use version three? Q And to the extent that there is a higher density of 3 A Yes. wells across this district as shown on your map, you 4 MR. TRASTER: And for the record, that is have confidence in the section level data? 5 the version I used. A Yes. 6 HEARING OFFICER BARFIELD: Okay. 6 O Is that fair? 7 Q (BY MR. TRASTER) So I am going to show you what is A Yes. marked as Exhibit -- and I can't remember --Q I am going to show you -- I will also tell you that 9 HEARING OFFICER BARFIELD: I think it not only can I not spell, I have a very good friend 10 was D. who is a mathematician and he says, Dave, you just 10 Q (BY MR. TRASTER) So I am going to show you what has don't have -- you are not very sophisticated in 11 been marked as Exhibit D, and I have that up on the 12 math. So -- I did a search on Google. And this is 13 screen 13 what I understood to be the correct formula for 14 That, again -- you were here this morning 14 determining the annual date of decline for -- the 15 and I am sure you were enthralled by my direct 15 percent of annual decline. Is that formula the 16 examination and so you know what I am -- that it is right formula? 16 17 that I am showing you here. It is the section level A That is not the one I use. I typically follow the 18 data using the values that -- or the colors that the one, I think, Ray described. I take the difference 18 19 GMD used. 19 between -- it is close. I take the difference between the absolute change from one year to the 20 Mr. Dees asked you several questions about 20 next, for one time period to the next, and then I 21 the confidence level at the township level. But is 21 divide that by the number of years in there to come 22 it your -- I mean, isn't it your understanding that 22 23 this is the data they actually used to come up with 23 up with an annual rate. And then you just -- you are still dealing with an absolute, and then you 24 24 their allocation? just divide that by the original thickness and come 25 A Yeah. Yeah, and I am confident at the section 25 Page 230 Page 232

- level, too. Again, it is more -- it is more -- is
- there -- whatever that subunit area is, how does
- that relate to my input points. 3
- 4 Q Okay.
- 5 A And it doesn't matter if it is a section or a
- township; if I don't have as much wells in there
- that that interpolated surface is trying to come up 7
- with values for, then I have less confidence in
- that
- 10 Q All right. So looking back at your testimony and
- the map on the back in your testimony, there is an
- area that is in green in the center part of Sherman 12
- County, if you get --13
- 14 A Yes.
- 15 Q That is on Exhibit D. And that area on the maps in
- your -- on your testimony, it doesn't have very many
- wells in it?
- 18 A No wells, yeah.
- 19 Q And so that area, you are not very confident about,
- 20 if I am understanding. I don't want to put you -- I
- 21 want to -- let me ask you.
- 22 A That is right.
- 23 O You don't have a lot of confidence in that area, but
- you have more confidence in the area where there is 24
- a higher density of wells?

- up with a percent change of what that is.
- Q Okay. Can you -- I appreciate that. But, again, I
- am not all that sophisticated. Can you write that
- formula down so I could follow it?
- 5 A Sure.
- Q Because I don't how to -- tell me again how you do
- A Well, it is just -- [inaudible] saturated thickness.
- Q All right.
- 10 A And then it drops down two -- I am sorry, I am doing
- something for myself here. Let's say it dropped 11
- down five feet in five years. 12
- 13 O Okav.
- 14 A So the annual rate of the decline is about one foot
- per year. So I found it by taking five minus 10, I
- have negative one, it looks like [inaudible] a 16
- decline on an annual basis of one foot per year. On 17
- 18 a percentage basis, then I take that one divided by
- 10 to give me that it was a nine percent, or .1
- 20 percent of whatever the original thickness was.
- 21 Q All right.
- 22 A It looks like you take it to a power and -- but,
- yeah, I guess it gets to that point. That is just
- the way I do it. 24
- 25 Q Okay. I would appreciate it if you would write it

Page 233		Page 235
so that I can put it in a formula and run it so	1	would have on a large scale?
	2	A I don't know if I would say it increases the
	3	accuracy. It increases my confidence level.
data matches their data because I don't want	4	Q Okay.
lead anybody. I want to be I want to make	5	A Because it is just again, you are dealing with an
nat we compare apples to apples.	6	interpolated continuous surface, and so you are only
is the way I do it, and I guess that is the way	7	going to be accurate in terms of how you aggregate
oes it, but so, yeah.	8	that up or down. And I don't think it
<i>1</i> .	9	necessarily it gives it maybe a bigger a
MR. TRASTER: No further questions.	10	better representation a greater probability of
HEARING OFFICER BARFIELD: All right.	11	representing what is actually accruing within that
ees, any follow-up?	12	sub area at a township level.
MR. DEES: Yeah, real quickly.	13	Q I am glad you answered the question I wanted to ask.
EDIRECT EXAMINATION OF BROWNIE WILSON	14	RECROSS EXAMINATION OF BROWNIE WILSON
R. DEES:	15	BY MR. TRASTER:
sing the township levels, does that ensure that	16	Q But the data that you provided to the GMD was
•	17	section level data?
ate determinations?	18	A Right.
		calculate the section the township level from the
•		data you provided. But you provided them section
		level data; that is the data they used to come up
-		with their map?
		A Right.
		Q Thank you.
	-	
Page 234		Page 236
hey did it. They didn't do it by township;	1	HEARING OFFICER BARFIELD: All right.
did it by section.	2	Mr. Oleen, do you have anything?
HEARING OFFICER BARFIELD: Let me you	3	DIRECT EXAMINATION OF BROWNIE WILSON
e one that sort of brought up the section	4	BY MR. OLEEN:
s. That is what your data is.	5	Q Mr. Traster just said that the sectional level is
MR. TRASTER: Well, but I am just I am	6	the data that the GMD used to come up with their
ding my objection that it assumes facts that	7	map. What map? When you answered yes, what map
in evidence.	8	were you referring to?
HEARING OFFICER BARFIELD: Okay. I will	9	A The one you just had up there. Well, the second
ead and let the question be answered, but	10	one. The township map right there was made from
MR. TRASTER: Sure.	11	that section level data. It was aggregated up to
HEARING OFFICER BARFIELD: with that	12	the township level minus sections that didn't have
tion.	13	15 feet of saturated thickness in there.
MR. TRASTER: Absolutely.	14	MR. OLEEN: And that is Attachment 1 to, I
	15	think, Exhibit A?
-	16	HEARING OFFICER BARFIELD: Yes.
than I did the last time.	17	MR. OLEEN: Okay. No further questions.
	18	HEARING OFFICER BARFIELD: All right. I
	19	think we are done with Mr. Wilson.
		BROWNIE WILSON: Do you want me to comment
y. By using townships as your geographical	21	on this stuff?
Year and an account of the Paragraph of	1	
lary that encourages additional points of data.	22	HEARING OFFICER BARFIELD: Oh. veah. mavbe
dary that encourages additional points of data, use you have additional test wells and because	22 23	HEARING OFFICER BARFIELD: Oh, yeah, maybe so. That is right. Mr. Dees, why don't you ask him
dary that encourages additional points of data, use you have additional test wells and because allows for those additional data points, it	22 23 24	HEARING OFFICER BARFIELD: Oh, yeah, maybe so. That is right. Mr. Dees, why don't you ask him some questions about what who wants to do that?
	data matches their data because I don't want lead anybody. I want to be I want to make hat we compare apples to apples. is the way I do it, and I guess that is the way be it, but so, yeah. MR. TRASTER: No further questions. HEARING OFFICER BARFIELD: All right. ees, any follow-up? MR. DEES: Yeah, real quickly. EDIRECT EXAMINATION OF BROWNIE WILSON R. DEES: sing the township levels, does that ensure that the enough data points that you need to make the determinations? esn't ensure it; it just helps. It is a bigger to it covers more points. increases your probability that you are going et a more accurate picture because of the redistance? MR. TRASTER: I am going to object. It es facts not in evidence. And that is not the Page 234 hey did it. They didn't do it by township; did it by section. HEARING OFFICER BARFIELD: Let me you et one that sort of brought up the section is. That is what your data is. MR. TRASTER: Well, but I am just I am ding my objection that it assumes facts that in evidence. HEARING OFFICER BARFIELD: Okay. I will ead and let the question be answered, but MR. TRASTER: Sure. HEARING OFFICER BARFIELD: with that tion. MR. TRASTER: Absolutely. you ask that question again? MR. DEES) Sure. So and maybe I can do it	data matches their data because I don't want lead anybody. I want to be I want to make lead anybody. I want to be I want to make list the way I do it, and I guess that is the way loes it, but so, yeah. MR. TRASTER: No further questions. HEARING OFFICER BARFIELD: All right. lees, any follow-up? MR. DEES: Yeah, real quickly. EDIRECT EXAMINATION OF BROWNIE WILSON R. DEES: listing the township levels, does that ensure that live enough data points that you need to make little determinations? lesn't ensure it; it just helps. It is a bigger o it covers more points. increases your probability that you are going e a more accurate picture because of the r distance? MR. TRASTER: I am going to object. It les facts not in evidence. And that is not the Page 234 hey did it. They didn't do it by township; lid it by section. HEARING OFFICER BARFIELD: Let me you e one that sort of brought up the section s. That is what your data is. MR. TRASTER: Well, but I am just I am ding my objection that it assumes facts that in evidence. HEARING OFFICER BARFIELD: Okay. I will ead and let the question be answered, but MR. TRASTER: Sure. HEARING OFFICER BARFIELD: with that tin evidence. HEARING OFFICER BARFIELD: with that tin evidence. HEARING OFFICER BARFIELD: with that tion. MR. TRASTER: Absolutely. you ask that question again? MR. DEES) Sure. So and maybe I can do it than I did the last time. So by using townships and townships are r than the sections, right?

Page 237 Page 239 FURTHER REDIRECT EXAMINATION OF BROWNIE WILSON will be beneficial to me if I can keep my township 1 BY MR. DEES: 2 the same color if, and when, there is another 3 Q Mr. Wilson, are you the one that created that map? 3 five-vear iteration. 4 A Yes. 4 In the far western portions of my 5 Q Okay. And it is a true and accurate representation 5 irrigated acres, we see significant drawdown in the of what -- that map is a true and accurate latter part of the pumping season. I have had to representation of what you created? re-nozzle two pivots in that area. This area sits 7 8 A Right. 8 on the edge of a purple township. If the status quo 9 O Okay. 9 continues, I will most certainly have a township 10 MR. DEES: Those are all the questions 10 color change coming in the next iteration. 11 that I have on that. And I think at this point we 11 I have adopted moisture [inaudible] and can just enter it into evidence, unless Mr. Traster 12 timely irrigation to what they are telling me. We 13 has other questions about it. 13 are also seeing some tremendous yields with Flex FURTHER CROSS EXAMINATION OF BROWNIE WILSON 14 hybrids, planting at lower populations, while 14 15 BY MR. TRASTER: watering and fertilizing less. 15 16 Q It is old data. I mean, it is data from the time 16 My point is is if we try to conserve even frame and -- right. 17 the areas that are not affected in this LEMA, we 18 A I think I made two of them. I think I made that one 18 will only help ourselves in the future. We have in conjunction with the one from the '90s when the 19 seen SD6 do some wonderful things with larger cuts 20 decline rates are different. 20 than anyone will receive in the proposed LEMA. 21 Q Sure. 21 I want to see my kids have the opportunity 22 A Yeah. 22 that I have had to irrigate in the future. Thank 23 Q But it shows that there are areas that have a large 23 vou. 24 HEARING OFFICER BARFIELD: Thank you. Any saturated thickness a long time, whether it is 250 25 years or a hundred; it is a long time? 25 questions? Page 238 Page 240 1 A Relative to the decline rate for that period, yes. MR. DEES: I don't have any questions. I 1 Q Exactly. Thank you. don't know if Mr. Traster has any. 2 3 MR. TRASTER: I move for the admission of 3 MR. TRASTER: Just briefly. 4 Exhibit M. DIRECT EXAMINATION OF BRENT ROGERS 4 5 HEARING OFFICER BARFIELD: All right. So 5 BY MR. TRASTER: admitted. Q Were you here for Ray's testimony? 6 7 MR. TRASTER: Thank you. A Yes, I was. HEARING OFFICER BARFIELD: Thank you. You Q And you heard it all? 8 9 may step down. Mr. Dees? A Uh-huh. 10 MR. DEES: We just have a couple of board Q I mean, is -- do you have anything to add to that or members that have been gracious enough to come and take away? Is there anything that -- I am not 11 11 suggesting that he got it wrong, but I am just 12 make some comments. Who wants to go first? Brent 12 wondering if there is anything that you want to 13 Rogers, President of the Groundwater Management 13 14 District Board. He will go first. supplement or add to or --15 A No. I -- can I make a comment? 15 (Mr. Rogers was sworn.) 16 TESTIMONY OF BRENT ROGERS 16 Q Yeah. A I think something that just struck me, finally, in 17 17 I am Brent Rogers, GMD board president, the last several hours sitting here, looking out 18 and I represent Sheridan County. I live at 322 18 19 across this audience. 19 North Road 30 N. I farm and irrigate in the If you take all the lawyers and all the 20 20 Northeast part of the county as well as western 21 representation by DWR and all the organizations that 21 Graham County, so I am in that finger that sticks 22 are here, the Kansas Corn Commission, and you take 22 out clear on the eastern side. them out of this scenario, how many people are 23 23 I have no restrictions with this proposed 24 actually here as water users? We have 3,600 water LEMA. Although I am not directly restricted, I want 25 rights. And we see this at a lot of our meetings. to do all I can in this LEMA to conserve because it

	Page 241		Page 243
1	It just we don't I mean, I know there is	1	Mr. Traster?
2	harvest going on and I know it is that is very	2	CROSS EXAMINATION OF LYNN GOOSSEN
3	important to people, but this is really important.	3	BY MR. TRASTER:
4	And it is hard for us board members to wrap our	4	Q I didn't catch where you farm. Where is your farm?
5	heads around these things when we don't we come	5	A I farm in southern Thomas County about
6	to a meeting like this. I expected to come in here	6	Q Thomas County?
7	today and not be able to get a seat. I really did.	7	A Yes.
8	And it shocks me. Thank you.	8	Q Thank you.
9	HEARING OFFICER BARFIELD: All right.	9	MR. TRASTER: No further questions.
10	Mr. Oleen, I assume you have nothing?	10	HEARING OFFICER BARFIELD: All right.
11	MR. OLEEN: No questions.	11	Thank you very much. I would like to take just a
12	HEARING OFFICER BARFIELD: My apologies.	12	five-minute break so we can sort of come up with our
13	All right.	13	plan from here. So we will reconvene at 4:20.
14	MR. DEES: And then our last, as far as I	14	(Recess taken at 4:11 p.m. Resumed at
15	know at this point, witness is Mr. Goossen.	15	4:24 p.m.)
16	THE REPORTER: Can you give me your name,	16	HEARING OFFICER BARFIELD: We will go back
17	please?	17	on the record.
18	LYNN GOOSSEN: It is Lynn, L-Y-N-N,	18	Mr. Dees, you are done; is that correct?
19	G-O-O-S-S-E-N.	19	MR. DEES: Yes.
20	(Mr. Goossen was sworn.)	20	HEARING OFFICER BARFIELD: Very good. So,
21	TESTIMONY OF LYNN GOOSSEN	21	Mr. Oleen, if you would like to go ahead and call
22	My name is Lynn Goossen. I have been	22	your witnesses.
23	farming in the southern Thomas County area for	23	MR. OLEEN: Again, my name is Aaron Oleen,
24	34 years. I have watched the water table decline in	24	attorney for the Division of Water Resources. And
25	my area and I want to testify that I believe that	25	at this time, we call Mr. Kelly Stewart to the
	Page 242		Page 244
1	this LEMA is a good start to slowing down the rate	1	stand.
2	of decline.	2	(Mr. Stewart was sworn.)
3	I think it is better for the whole area,	3	DIRECT EXAMINATION OF KELLY STEWART
4	for all of us, to solve this problem together rather	4	BY MR. OLEEN:
5	than for senior water rights to attempt to shut down	5	Q Mr. Stewart, could you please explain your current
6	junior rights. And if we all cut back a little bit,	6	position with the Division of Water Resources?
7	by cutting back we slow the rate of decline. This	7	A Okay. I am currently in the position of water
8	should allow all to continue to irrigate, instead of	8	commissioner at the Stockton Field Office.
9	the junior right owners being shut off completely.	9	Q And the Stockton Field Office, what is its relation
10	All of my irrigation wells will have an	10	to the GMD4 area?
11	allocation given to them under this LEMA. I am	11	A Well, the entire GMD board district is within my
12	willing to work with all of my neighbors to save	12	field office boundaries.
13	water for the next generation.	13	Q Mr. Stewart, you previously, in conjunction with
14	HEARING OFFICER BARFIELD: All right.	14	Mr. Lane Letourneau, submitted some written
15	Mr. Dees?	15	testimony prior to today's hearing; is that correct?
16	DIRECT EXAMINATION OF LYNN GOOSSEN	16	A That is correct.
17	BY MR. DEES:	17	MR. OLEEN: Forgive me, Chief Engineer,
18	Q Lynn, I may have missed this. Can you give us your	18	has that written testimony been assigned an exhibit
19	address where you live?	19	designation?
20	A Yeah. It is 1154 County Road 22, Colby, Kansas.	20	HEARING OFFICER BARFIELD: Yes, it is B.
21	Q Okay. Thanks.	21	MR. OLEEN: Exhibit B?
22	HEARING OFFICER BARFIELD: Mr. Oleen,	22	HEARING OFFICER BARFIELD: Yes.
22	anything?	I	MD OLEEN, Olean Thank won
23	anything.	23	MR. OLEEN: Okay. Thank you.
24	MR. OLEEN: No questions. HEARING OFFICER BARFIELD: All right.	23 24	Q (BY MR. OLEEN) Mr. Stewart, can you explain a

	GILDA					
	Page 245		Page 247			
1	what extent your office was involved with the LEMA	1	A Right. Yes, our staff did work with GMD4 and			
2	that we are here discussing today?	2	developed a tool where you could plug in your water			
3	A Okay. Well, over the course of the last two years,	3	right number and look up your potential allocation			
4	my office either myself or another staff,	4	under the LEMA.			
5	we attend every board meeting. We like to go to	5	Q If the Chief Engineer chooses to designate this			
6	every board meeting to stay abreast of what the	6	proposed LEMA as it is currently proposed, or even			
7	board and staff are discussing. We are often in a	7	in any form really, will your office provide any			
8	position where we answer questions. You know, we	8	assistance to the GMD with respect to insuring that			
9	have a lot of interaction with staff and board on a	9	the LEMA collective controls are followed?			
10	regular basis. And, you know, we have attended	10	A Yes. We are prepared to work together with GMD4			
11	basically every meeting leading up to this LEMA	11	and, you know, manage the LEMA, oversee the			
12	proposal.	12	allocations, work with the public, compliance and			
13	Q Did your office instruct or recommend that the GMD4	13	enforcement. You know, we are prepared we are			
14	initiate the LEMA proceeding?	14	staffed to do that. In fact, we even added a			
15	A No, we did not. That was a board of directors'	15	special position in Stockton whose primary duties			
16	decision to move forward on that proposal.	16	are to work with GMDs and also folks interested in			
17	Q You said that as part of you or your staff attending	17	water conservation areas. So we are prepared to do			
18	the GMD4 meetings on this LEMA issue that did you	18	that.			
19	say you provided some support in connection with	19	Q Is it the opinion of the Division of Water Resources			
20	their formulation of this proposed LEMA?	20	that this LEMA will be successful in meeting its			
21	A Well, from the aspect of looking at the data that	21	stated goal?			
22	they had come up with, analyzing their spreadsheet	22	A Yes.			
23	to see if we agreed with the numbers, and just a	23	MR. OLEEN: No further questions.			
24	little bit of cross-checking.	24	HEARING OFFICER BARFIELD: Okay.			
25	Q You said some or you just now mentioned some	25	Mr. Dees, anything?			
	Page 246					
			Page 248			
1		1	Page 248			
1	analysis. Were you referring to well, one	1	MR. DEES: No.			
2	analysis. Were you referring to well, one moment.	2	MR. DEES: No. HEARING OFFICER BARFIELD: All right.			
2 3	analysis. Were you referring to well, one moment. MR. OLEEN: Chief Engineer, which exhibit	2 3	MR. DEES: No. HEARING OFFICER BARFIELD: All right. Mr. Traster?			
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	analysis. Were you referring to well, one moment. MR. OLEEN: Chief Engineer, which exhibit designation is the actual proposed LEMA? HEARING OFFICER BARFIELD: It is included within A. MR. OLEEN: Okay. Q (BY MR. OLEEN) The proposed LEMA's goal of saving a certain amount of gallons over a period, are you aware of that stated goal, Mr. Stewart? A Yes. Q And what is that stated goal, to your knowledge? A Well, basically their goal is to limit the total amount of pumping in the townships that are being restricted to 1.7 million acre-feet of water over a five-year period. Q And did you say that your staff did some analysis of whether the proposed LEMA's corrective controls will meet that goal or not? A Yes, we did review that data, or my staff did review the data, and we agree, it does appear that that goal can be met under the proposal.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	MR. DEES: No. HEARING OFFICER BARFIELD: All right. Mr. Traster? MR. TRASTER: No questions. HEARING OFFICER BARFIELD: No questions? Very good. I don't have any questions. Mr. Oleen, your next witness? MR. OLEEN: The Division calls Lane Letourneau to the stand. (Mr. Letourneau was sworn.) DIRECT EXAMINATION OF LANE LETOURNEAU BY MR. OLEEN: Q Mr. Letourneau, what is your current position with the Division of Water Resources? A I am the water appropriation program manager. Q And what duties does that entail? A The water appropriation program entails administering the Water Appropriation Act. Q So you heard the testimony of Mr. Stewart; he is the water commissioner at the Stockton Field Office. Are you in charge of overseeing or assisting with all of the Division's water commissioners?			

Page 249 Page 251 1 Q Mr. Letourneau, have you been here in the audience 1 if any. And we would make a determination of what throughout today's hearing? 2 percentage then that junior was impacting the 3 A Yes. senior's water right and we would curtail pumping 3 4 Q Did you hear some testimony or mention given of the based on that percentage. 4 prior appropriation doctrine? Q So this LEMA as proposed, with its different 6 A Yes. 6 allocations based on different townships, that will 7 Q Sometimes it has maybe been referred to today as not prevent a junior -- a senior water right from "first in time, first in right"? claiming -- from being able to claim to your agency 8 9 A (Witness indicated.) that an impairment exists? They will still be able 10 Q Is that a yes? 10 to make that claim and you will still analyze that claim? 11 A Yes. 11 12 Q I can't recall whether one of the witnesses said 12 A Absolutely. Q And if you find that impairment has occurred by the this, I think so, but I won't -- so I won't phrase the question this way. junior, you will perform some sort of action to 14 honor the priority of the senior; is that correct? If this LEMA is designated as currently 15 16 A Correct. proposed, will that be the end of the prior 17 appropriation doctrine? Q If someone is issued a certificate of appropriation, does that guarantee that they -- well, let me back 18 A No. 18 19 Q Can you explain what you mean by that? 19 up. Strike that. 20 If someone is issued a certificate of 20 A Absolutely. Water rights in Kansas have a priority 21 appropriation, they are given an authorized based on the time the application was filed. And 21 22 quantity; is that correct? 22 this proposed LEMA is a management plan that establishes allocations. Those allocations were A Correct. 23 Q Is that a guarantee that they will always be able to 24 going to be across the board, not based on priority. withdraw that quantity of water from the aquifer? 25 But you heard priority first in time, Page 250 Page 252 first in right and things. This LEMA does not touch 1 A No. Just because you have a water right, it doesn't guarantee you have water. the first in time, first in right for priority if 2 MR. OLEEN: No further questions. 3 impairment would occur. If there was interaction 3 between two water rights, then the junior water 4 HEARING OFFICER BARFIELD: Mr. Traster. 4 right will still be curtailed to meet the senior 5 anything? 5 water right's needs. 6 CROSS EXAMINATION OF LANE LETOURNEAU 7 Q Okay. So looking -- currently on the projection, we 7 BY MR. TRASTER: Q I have told this joke five times and it gets funnier have Attachment 1 to the GMD's proposed LEMA. And this is their map that shows the different colored every time. You know, I finally get to cross 10 10 townships, correct? examine you under oath. 11 A Correct. 11 How long have you been the program manager 12 O So I am going to ask you to -- for example, look at 12 13 A The program manager, Dave, I think 2008. It is now any two townships where there are two different 14 colors that are adjacent to each other. Okay? nine years, I believe. 15 Q And what were you -- how long have you been with the 15 A Okay. 16 Q If a senior water right is in the more restrictive DWR? 16 17 of the two townships and the junior is across the 17 A I have 30 years now. 18 Q What was your role before program manager? 18 township line on the less restrictive of the two colored townships, if the junior claims to DWR 19 A Okay. I came in 30 years ago as a Hydro 1, 20 that -- I am sorry. If the senior claims to DWR 20 processing new applications. that the junior across the township line is 21 21 Q Okay. 22 impairing the senior's water rights, what action 22 A Then a number of years after that when -- I believe 23 will the Division take? 23 a law changed to where we -- we were required --24 A Actually in that case, we would conduct a pump test 24 folks were required to file annual water use to see how much interaction between the two wells, 25 reports, and so I became the state's water use

Page 253 Page 255 coordinator, was that title. Then as -- because 1 A Yes. that had a civil penalty attached to it, when our 2 Q I have just one notebook. I didn't know there were 3 laws were changed then for civil penalty authority, two. What is -- I mean, is it --4 I got handed that also. So I was in compliance, 4 A I imagine what Denise Rolfs kept was the history. And so I think our books are -- would have every enforcement and water use for a number of years. 6 Q So reviewing new appropriations, compliance and iteration of the policy. Q Sometime I would like to see your books. enforcement, and then in charge of the whole A Absolutely. program, generally? Q That is fine, a different issue. All right. So 9 A Yeah. Then, David, I got added -- while I was take a look at Exhibit N and tell me what it is. 10 working on new applications, I also worked on change 11 A This is Administrative Policy Number 83-33 and the applications. So --12 Q Okay. 12 subject is Allowable Quantities, Certificates of 13 A I worked on everything but the certificate. 13 Appropriation For Irrigation Use. 14 Q And the certificate -- I mean, basically this 14 Q All right. So the Division of Water Resources has provides that when you issue a certificate -- now, had a number of -- very briefly, there was -- in the water right has been applied for and perfected 1999, there was a statute change and DWR took its 16 17 policy and procedure manual and put it into 17 and you are issuing the certificate. When you are issuing a certificate, you are supposed to reduce 18 18 regulations; you were familiar with that process and 19 how that came about? 19 the quantity in this to two and a half -- two and a quarter acre-feet per acre, correct? 20 20 A Yes. A Yes, if it was higher than two and a quarter. 21 Q Generally speaking, tell me about the policy and Q Right. So -- and if you look at the map that is procedure manual versus the regulations. 23 projected on the screen, which is Attachment 1 to 23 A Okay. And I will just state it based on how I 24 Exhibit A, the easternmost township shown on that 24 understand it. map is Township 21, correct? 25 Q Yeah, absolutely. Page 256 Page 254 1 A We -- when I first started, we had two large books, 1 A Correct. still have and I still maintain. Denise Rolfs 2 Q And so if you compare that map to the last [phon] was David Pope, the previous Chief Engineer's paragraph, the last indented paragraph in Exhibit N, secretary. She maintained what was called policies all of GMD4 is west of the Township 20-21 line, 5 and procedures established from the Chief Engineer. 5 correct? 6 And those were policies that we used then 6 A Correct. 7 to, you know, process new applications, change Q So at the time this policy was in effect, every 8 applications, certificates, on how we did things. water right that is certified got reduced if it was Well, then in 1999 the law changed from when we were higher to two and a half -- two and a quarter 10 the Board of Agriculture and became the Department 10 acre-feet per acre? 11 of Agriculture. And we -- our secretary then got 11 A Yes, if it was higher. 12 some administrative authority. It is my 12 O And if it was perfected at a lower quantity, then it 13 understanding then our policies and procedures did was perfected, that was the limit. Okay. Can you not have the force and effect of law, so we had to 14 take a look at Exhibit O, which is the next document 15 put those in rules and regs. 15 in the series? 16 Q Okay. I think that is enough. It is kind of fun to 16 A Yes. 17 go into the details, but let's not. Q And that is, again, the same policy, 83.3 [sic], but 18 A Okay. it supercedes the undated version that is in (Marked Exhibit N, Exhibit O, Exhibit P, 19 Exhibit N, correct? 20 Exhibit R.) 20 A Correct. 21 Q (BY MR. TRASTER) So I have handed you a series Q And it reduced the quantity in GMD4 and other areas 22 of -- this stack of documents. The top document is to two and a quarter to two acre-feet per acre, 22 23 Exhibit N, as in Nathan. Is that an example of a right? policy of -- the kind of policies that were in place 24 A Correct. 24 that were in this -- in these two notebooks? 25 Q And take a look at Exhibit P. And this is dated in

Page 257 Page 259 1986, right? And the second page, it has the same 1 effect that we find that the quantity is reasonable standards showing two acre-feet per acre west of the 2 and if you -- let me make sure I -- in looking at Township 20-21 line, right? Exhibit R in that stack -- and I will represent to 3 4 A Correct. 4 you that these came out of my files. They are not 5 Q But in this policy, we have moved from changing the necessarily in GMD4, but they are typical letters -certificate to the allowable quantity for a new well, they are letters that came out of my file. permit, correct? Are these -- take a look at them, 68, 72, 76. I 8 A Or it was considered reasonable to apply for a new mean, these are sort of typical form letters that 8 permit. DWR has used over the years; are they not? 10 Q Right. Okay. So then in 2000, you -- stepping back 10 A Yes. a little bit. DWR publishes regulations, O And then toward then end, there are a couple of established regulations at the request of 12 judgment sheets, right? Groundwater Management Districts, correct? 13 13 A Yes. 14 A Correct, yes. 14 Q And those judgment sheets contain the information 15 Q And those regulations -- are you familiar with the and findings that DWR has to make -- that the Chief regulations from '83 -- you didn't come to the Engineer has to make in order for him to issue a agency until '87, did you? 17 permit, right? 17 18 A I mean, if they were in place, I would be familiar A Correct. with them, sure. Q And those findings include good faith, proper form, 20 Q Sure. But you are aware that there was a plan beneficial purpose, within reasonable limitations, 21 depletion policy in GMD4? one [inaudible] use and doesn't create [inaudible] 22 A Yes. or unduly affect the public interest, right? 23 Q And how to calculate that? I mean, you weren't in 23 A Yes. the -- you were doing permits back --Q Those are the findings that he has to make before he 25 A Correct. can issue a permit by statute, right? Page 258 Page 260 1 Q -- when you first came? So it was a two-mile radius 1 A Right. Q And so when he does that and somebody perfects the circle and it was two percent? 3 A Correct. water right, that water right has characteristics, 4 doesn't it? It has a priority date, it has a file 4 Q And then it changed to one and then it went to safe number, it has a rate, it has a quantity, it has a yield, sustainable yield, whatever that --6 A Yeah. Then we were very fortunate in the new place of use, it has a point of diversion, it has applications unit because we actually would make like eight or nine characteristics --8 A And use made of water. sure that that application was in proper form and we Q Use made of water. So -- and you are familiar with sent it out to the Groundwater Management District the Clawson versus DWR case? for their recommendation. 10 11 Q Sure. And so all these permits that were issued 11 A Yes. either up until '91 would have been for two 12 Q And it says that once that permit is issued, the Chief Engineer doesn't have authority to reduce it, acre-feet per acre, and then later it was -- when 13 13 14 the regulation was amended, it went to 1.5, right? 14 doesn't it? 15 MR. OLEEN: I will object. That is a 15 A Correct. 16 Q And so -- now, when you issue a permit -- when the 16 conclusion of law. I think Mr. Traster has had a similar objection, so I will put mine on the record 17 Chief Engineer issues a permit, he makes findings of 17 fact, doesn't he? 18 HEARING OFFICER BARFIELD: Okay. 19 A Yes. 19 20 Q The statute requires him to make findings of fact? 20 MR. DEES: I concur in that objection. 21 HEARING OFFICER BARFIELD: All right. 22 O And in each one of those cases, he issues a cover 22 Very good. letter; does it not? Q (BY MR. TRASTER) You have read the Clawson case? 24 A Yes. A Yes. 25 Q And the cover letter will say something to the 25 Q And it says that he can't retain jurisdiction to

Page 261 Page 263 make reductions after the permit is issued, right? Q So if you got a position to coordinate and help with If you know. this LEMA, but it hasn't been approved yet, can't 2 3 A You know, there is -- I do know that we can't retain one conclude that it is complete? 3 jurisdiction, but I don't know about reductions. I 4 A No. I can -- to explain our plans on staffing. I will be honest about that. was on the Governor's Water Vision Team. And we went out, I don't know, 500 meetings, I think, is 6 Q All right. That is fine. So --6 A Well, and I don't know if we are -- we are not the number of meetings we had with thousands of actually reducing the water right with this LEMA. people. And what we heard was we need to do 8 9 Q Right. I understand that. something and we need to do it locally. And so what 10 A It is a management plan that sets an allocation. 10 we -- then knowing that the LEMA process would Someone can still pump their authorized quantity as 11 require additional staff time from us and then also 12 long as it is within the five-year allocation, over 12 the water conservation areas was going to require 13 five years. So we are not making a reduction. We 13 additional staff time from us, so it wasn't just thinking that this LEMA is going to go through; we 14 are -- this is trying to implement a management 14 plan. 15 have got multiple conservation plans that we needed 16 Q I see. Okay. So it doesn't change the terms of the additional staff for. 16 water right, it just means that you -- you just 17 Q And that was pretty much what Kelly testified to as can't use it according to its terms; fair? well, right, that -- well, it was more than that. 18 18 19 A You can within one or two years probably, but not 19 But in your written testimony that you submitted, every year for five years. you say it is a dedicated staff person with the 20 20 21 Q Right. Okay. But -- and without this, this water primary responsibility of assisting within the field 21 right gives you the use -- the ability to divert the 22 office area, including GMD4 stakeholders, in 22 23 full quantity every year, not only for five years, 23 developing and administering LEMAs and water but until there is no more water available, right? 24 conservation hearings. I mean, really it looks like 24 25 A Right. you hired somebody to administer this LEMA, even 25 Page 262 Page 264 1 though it hasn't been approved yet? I am just 1 Q If you want to do that. If that is -- and that is telling you how it looks. I am not -- I mean, I am the tragedy of the comments that we are dealing with just saying. Do you see what I am saying? in Western Kansas? A Yeah. We do, but we also know that we will have 4 A That is correct. water conservation areas also that -- where we 5 Q In your written testimony, according to -- well, how needed help. many LEMAs are there now; do you know? 6 Q All right. A One. 7 MR. TRASTER: I don't have any further 8 O Just one? A Correct. questions 10 HEARING OFFICER BARFIELD: Very good. 10 Q And that is in the Sheridan 6? 11 A Yes. 11 Thank you. Any follow-up? Mr. Oleen? 12 REDIRECT EXAMINATION OF LANE LETOURNEAU 12 O Okay. And there are a lot of others under BY MR. OLEEN: 13 13 consideration? 14 A Not LEMAs. We have got a number of water Q Mr. Letourneau, do you know when the LEMA statute was passed? 15 conservation areas under consideration, but this is the only -- oh, there is another one that is being A I can look it up. 2011, maybe. 16 17 HEARING OFFICER BARFIELD: '12. considered in GMD5. 18 O There are some on the horizon? 18 A '12? Okay. 19 Q (BY MR. OLEEN) Was it passed after all these -- I 19 A Correct. 20 Q People are discussing this? 20 think it was Exhibits N through R that Mr. Traster 21 A Yes. 21 referred to, some old policies and old letters. Was 22 Q And in your written testimony, you say that you have 22 the LEMA statute passed after those exhibits were hired staff to coordinate this, this LEMA, if it 23 created? 24 A Yes. is -- is that position filled?

25

MR. OLEEN: No further questions.

25 A Yes.

Page 265 Page 267 HEARING OFFICER BARFIELD: Very well. 1 1 your name and address. 2 Mr. Dees, anything? 2 BERT STRAMEL: Bert Stramel, 1267 K25, 3 MR. DEES: No. 3 Colby, Kansas. I live and farm here in Colby. 4 HEARING OFFICER BARFIELD: Okay. DIRECT EXAMINATION OF BERT STRAMEL 4 5 MR. TRASTER: No further questions. 5 BY MR. TRASTER: 6 HEARING OFFICER BARFIELD: Very good. I 6 O And you are --7 THE REPORTER: Hold on. I haven't sworn just found one correction in your testimony. I 7 8 don't know when you became program manager, but it 8 him in yet. MR. TRASTER: Oh, swear him in then. 9 was 2007. You were in place when I became Chief 9 10 Engineer. Maybe it was during 2007. I am not sure. 10 (Mr. Stramel was sworn.) 11 All right. Anything else from the DWR? 11 Q (BY MR. TRASTER) You are one of the intervenors in 12 MR. OLEEN: No further witnesses from DWR. 12 this case? 13 HEARING OFFICER BARFIELD: All right. 13 A I am. 14 MR. TRASTER: We call Bert Stramel. 14 Q And did you give us an address? You might have. HEARING OFFICER BARFIELD: All right. 15 A Yeah. 1267 K25, Colby. 15 16 Bert Stramel. 16 Q And just like we have done elsewhere, go ahead and 17 THE REPORTER: Did you have an Exhibit Q? say what you need to say. 17 A I would like to put just a little bit of a personal 18 Was there a Q? HEARING OFFICER BARFIELD: Yeah. So I aspect to this. 19 19 20 guess we didn't deal with the exhibits. Do you want 20 This has probably been the most all the exhibits entered? 21 21 informational meeting we have had on this whole 22 MR. TRASTER: I move for the admission of 22 process the whole time. I don't know if that is 23 the exhibits. 23 because you are in charge or what the case is. 24 THE REPORTER: I don't remember Exhibit Q. 24 But as a farmer, we start everything with HEARING OFFICER BARFIELD: Okay. So 25 25 a process and we try and know everything we can Page 266 Page 268 Exhibits N, O, P and R have been requested. Any about that process going forward when we pick out 1 objections? Aaron? 2 hybrids, when we pick out machinery that we use. We 2 3 MR. OLEEN: One moment. Let me make sure 3 try and get as much knowledge and as much data about 4 I --4 everything and we try and max it out to the absolute 5 MR. TRASTER: Are there any skips in that? 5 max that we can in order to be profitable and 6 We have got -efficient. 6 HEARING OFFICER BARFIELD: There is no O. 7 7 And in this case, many of the things we MR. TRASTER: No Q, but A through R is --8 asked for at the very beginning, like increased 9 HEARING OFFICER BARFIELD: As far as I 9 measuring points or increased data points so that we 10 know, we have done everything. 10 can actually find out where we can do the most good MR. OLEEN: Mr. Traster, did you 11 and do the most good, and to back up some of these 11 redact -- did you say you redacted some information 12 maps have been ignored from the beginning. 12 from the letters on Exhibit R? Many of us today have talked about this 13 13 14 MR. TRASTER: I didn't say that, but I 14 being a real property right, and I believe it is. did. 15 15 It has value. I have had the City of Colby offer to 16 MR. OLEEN: Okay. What did you redact? 16 buy some of mine. And they didn't want the land, they wanted the water and access to it. And that 17 MR. TRASTER: I just redacted any personal 17 18 information to -- I wanted the forms of the letters 18 shows that it has a cash value. And I have five kids at home and I want 19 that are typical to be in the record. And, by the 19 20 way, those same letters are attached, and so it 20 them to be able to have all the types of enjoyment is just --21 and use of the water that we have now. But I also 21 22 MR. OLEEN: No objection to N, O, P and R. 22 want them to have other rights that have been HEARING OFFICER BARFIELD: All right. So granted to them. And I don't foresee, just because 23 23 it is for the greater good, to take away a right or 24 we will have all those admitted and there will be 24 no Q admitted. All right. Have a seat and tell us 25 restrict it. I feel that is a slippery slope.

Page 269 Page 271 It is like today, this was the first time been marked as Exhibit Q. Can you identify that? the 25 -- no more than 25 percent reduction was A I believe this is the handout we were given at the actually explained to an extent that it could be informational meeting here in Colby. understood. 4 4 Q And so when you turn it over and look at the front 5 We have never had a full explanation of page down in the lower corner, there is a -- if you how this appeals process is going to work. I have 6 will turn it over, there are some dates for 7 several of my personal water rights that I know are meetings. Do you see those? 8 going to need to go through this appeal, and I am 8 A Yes. 9 not sure how well I am going be served by it without Q And those are the same dates that were announced 10 knowing the process, without knowing who is going to earlier today, when the public meetings were, 10 be in charge of it, if it is going to be this 11 11 correct? 12 current board, if it is going to be the current 12 A That is correct. staff. I mean, who knows what future staff or 13 13 O And so what is on the back of that document? future boards are going to look like. And to just 14 A It is just a few highlights. It has a couple of 14 15 walk into this without having some of these bullet points here of the plan. 16 questions answered is reckless. We wouldn't go into 16 Q Let me take a look here real quick. So you were 17 our fields and plant something without having some 17 here for Mr. Luhman's testimony, right? 18 idea of what to expect. 18 A I was. 19 I am closely related to two of the board 19 Q And he testified that the plan itself with all the 20 members. And I don't know how that affects it, but detail was published on their website about the time 21 there could be some family issues there and I am not 21 or in the time frame when it was submitted to the 22 sure how that is going to work out. 22 DWR for review. Your heard that? 23 Also, some of the board members were 23 A I believe so. 24 competitors. We have bid on the same property. We 24 Q Okay. And so this document that you are seeing now, work in the same neighborhoods. We bid on the same is that -- did you receive or were you aware of Page 270 Page 272 contracts or same leases. And there is going to be 1 other documents between the Colby meeting and some dynamics in that. And only being able to that -- published on the website that gave you the 2 appeal to staff -- and then how much further you can 3 specific details that are in the plan now? 4 take it past that, there is no -- there is no third A I may have been given a handout at a GMD4 monthly party. There is no jury of your peers. It is just meeting. Other than that, no, there was no handout 6 too much to give up without knowing in the beginning of the actual LEMA plan --6 Q Okay. 7 what we are getting into. 7 8 A lot of the people aren't here today, and A -- prior to that. it is because a lot of people -- this is a big year. Q The plan was explained at the these public meetings? 10 We have had two years of declining farm incomes, and 10 A In pretty big generalities. 11 there is a lot of people just hanging on. And if 11 Q Okay. Tell me about that. 12 you didn't fully understand it, which I think there 12 A Well, after reading the plan now and looking back, is a lot of people that don't fully understand, you 13 there was no discussion as to the meter logging, 13 14 are going to go home and you are going to take care 14 where you would need to, I believe, keep an accurate 15 of your home. 15 log of your -- of all water meters every two weeks. 16 So in those regards, that is most of my --16 And there was no mention that if that log was 17 my deal. I just -- today was -- I would almost ask 17 incomplete or inaccurate and you have a meter you to hold another one of these hearings because of 18 failing, that you could possibly lose an entire 19 so much information that has come out that never 19 year's allocation because of it. came out in the informational hearings we had before 20 20 Q Okay. And this -- you mentioned the appeal process. 21 this. 21 I mean, it is to the staff and then the board. But 22 MR. TRASTER: Can you mark that as Q? 22 if the board votes against you, there is no further THE REPORTER: Yes. 23 23 process that you are aware of? (Marked Exhibit Q.) 24 24 A Not to my knowledge. Even reading the LEMA document

25

now, I believe that it is an appeal to staff and

25 Q (BY MR. TRASTER) I am going to hand you what has

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1	then an appeal to the board.	1	Chief Engineer. I believe there was a handout			
2	Q And that is it?	2	then			
3	A And that is it. I don't know where else you would	3	Q Okay.			
4	go after that.	4	A that we were able to take a look at.			
5	Q All right. Very good.	5	Q Were you at the annual excuse me, the 2017 annual			
6	MR. TRASTER: No further questions. Is	6	GMD4 meeting?			
7	there anything else you need to add? Okay. No		A Was that in Goodland at the water yeah, I was			
8	further questions.	8	there.			
9	HEARING OFFICER BARFIELD: All right.	9	Q Okay. And was the LEMA discussed there, that you			
10	Mr. Dees?	10	know of?			
11	MR. DEES: Real briefly.	11	A Yeah, I believe it was.			
12	CROSS EXAMINATION OF BERT STRAMEL	12	Q Okay. Have you ever asked for the plan, outside of			
13	BY MR. DEES:	13	being handed the plan at that GMD4 board meeting			
14	Q So is it your testimony that you did attend the	14	where it was then approved?			
15	Colby public meeting where is it Exhibit S	15	A I am not sure what you would have asked for at the			
	A Q.	16	time. I think it was still under under			
1	Q Q. Where Exhibit Q was handed out?	17	construction or under			
17	A Yes.	18	Q Okay. So			
18	Q Okay. And is it your testimony today that you have	19	A I don't know I never had a rough draft or			
19	attended multiple board meetings over the last, I	20	anything, that I know of.			
20		21	Q Okay. Did you ever ask for a rough draft?			
21	don't know, two years?	22	A No, I didn't.			
	A Yes.	23	Q Okay.			
23	Q Okay. And at those board meetings, have there been	24	MR. DEES: Thank you.			
24	discussions about the LEMA?	25	HEARING OFFICER BARFIELD: Mr. Oleen,			
25	A Yes.	23	TILARING OF TICER BARTIELD. WII. OICH,			
	Page 274		Page 276			
1	Q Okay. Have there been open forum sessions where you	1	anything?			
2	could make personal comments?	2	MR. TRASTER: No.			
3	A Yes, you can make comments.	3	MR. TRASTER: Mr. Traster, anything			
4	Q Have you made comments?	4	further?			
5	A I have.	5	MR. TRASTER: No further questions.			
6	Q Okay. Have they been about the LEMA?	6	HEARING OFFICER BARFIELD: All right.			
7	A I have.	7	Thank you very much.			
8	Q Okay. As well as, I believe did you attend the	8	BERT STRAMEL: Thank you.			
9	initial hearing in front of Hearing Officer Owen?	9	HEARING OFFICER BARFIELD: All right. Do			
10	A I did.	10	you have anymore witnesses?			
11	Q Okay. And did you make did you submit testimony	11	MR. TRASTER: We are done.			
12	there?	12	HEARING OFFICER BARFIELD: You are done?			
13	A I did. I did oral and written testimony.	13	Okay.			
14	Q Okay. And then you have come today and you have	14	I guess we didn't talk about closing			
15	presented oral testimony in I am not sure if you	15	remarks. Do you-all want to make any closing			
16	have presented written testimony. Have you	16	remarks? You obviously have the opportunity to			
17	A Not today, I haven't.	17	provide some written comments.			
18	Q Okay. But you may do that or you may not, depending	18	MR. DEES: We have a			
19	on what you want to do?	19	HEARING OFFICER BARFIELD: Yeah, I was			
20	A Correct.	20	going to see if anybody else wanted to make any			
	Q Okay. And you did say that you had thought you had	21	public comments, if that is what you are getting to			
21	been given a handout at the GMD4 board meeting that	22	there.			
22	had more specifics of the plan; is that correct?	23	So that concludes our formal process. I			
23	A It is when I think at the meeting that they	24	will, before we sort of move to conclusion, ask if			
24	the motion was presented to forward it onto the	25	there is any public that would like to make any			
25	the motion was presented to follward it onto the	23	and it and paone that would like to make they			

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additional statements. Yes. Come on forward,
 please.

All right. I would ask if you could state your name for the record.

MIKE SCHULTZ: My name is Mike Schultz. I live in Brewster, Kansas, 118 6th Street, S-C-H-U-L-T-Z.

(Mr. Schultz was sworn.)

MIKE SCHULTZ: I thank you for having me here today. I want to thank GMD4 for this work. I have been serving on the [inaudible] River Basin Advisory Board for the governor of Kansas, I guess, or the Groundwater Management District. So I have been involved in the water industry for years and years. I have been a past irrigator, a farmer/rancher. I own land here in Thomas County. My family homesteaded in the 1890s. By the way, we have never had an irrigation well on our own land. We have rented irrigation land before. I have done that.

I would ask that, has anybody here ever not had water? Go turn the spigot on some day and find out. I am a stock guy. I own a cattle operation. And I am really concerned about the impairment clause in the water law because I have actually increased the water there versus us -declining usage here in the Untied -- in Kansas. So that is a big concern to me of what's going on.

But if you look at the problem, it is overproduction. We have people that have abused the water rights. I know in the '70s, we had ditch irrigation and we wasted tons of water. Everybody thought it was never going to end. Well, guess what? The days are here. We have got to pay attention.

I think, too, also back in the early days irrigation was developed to help with the livestock needs in these counties out here in Northwest Kansas. One of the biggest reasons the irrigation took off was for livestock. It wasn't so much it produced \$2.90 corn, but that is what we have got to deal with. Border [inaudible] does that.

You know, I see the biggest problem in the water deal -- and, you know, I have made the statement several times. We are getting into a position of trying to curb water use when we have got people that think they are going to farm every acre in the county and they are going to feed the world. And 80 percent of the world's population makes less than \$1,200, and we are not going to do

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been impaired by irrigation. I have not taken it to task yet. I have got a neighbor that I seriously think about doing that with. But to drill a well is 6 to \$8,000. I have been through that. So we have spent some money dealing with those things.

The one thing I want to do is ask the question to people about water quality versus water quantity. The reason I bring that up is I am also a city administrator for a city superintendent for the City of Brewster. We are getting ready to spend \$1.5 million, possibly, on a water treatment plant, if we can't find an alternative source. And that comes into the issue of agriculture, because it is a nitrate contamination problem.

So I would tell some of you that less than three percent of the world's water is potable, is good to use, and that the Ogallala Aquifer is some of the best in the world. We found out that in the 1940s, I believe it was, there was an article that came out when they kind of discovered the Ogallala Aquifer and they thought it was an inexhaustible supply of water. It was designed for people to put back and maybe go home tonight and just Google a search "Kansas" and then scroll up and look at the pivots. And Nebraska is a unique place. They

that.

So my deal with the water concern is -- and I know because I -- but at \$8 a thousand for -- even Eastern Kansas towards the Hays/Wilson area, you do the math on a simple 120-acre pivot. At \$8 a thousand -- and come tell me what your corn is worth at \$8 a thousand. And it takes up to 3,000 gallons of water to produce a bushel of corn today. And at \$8, you do the math.

So I guess that we are all coming at it with a little different deal and a pretty conservative deal. And I think the LEMA even needs to be more strict. If we don't see a decline stopping, we have got to go to the next level. And so I want to lay that out there.

I heard a comment made today that, you know, maybe people are being treated worse. And I would like to say this. You think about treated worse. What happens when the public runs out of water? And, you know, a public vote on this issue -- right now, we can control our own destiny. I don't think people realize what is going to happen if it goes to a vote.

I deal with the city municipal side and I talk to people every day about it. It is a big

Page 281 Page 283 it out, 15 minutes later we had a public session and 1 concern and you want to be careful what you wish 1 2 for. 2 then went back behind the doors and approved it to 3 be sent off to the Chief Engineer. So that is my 3 We have about -- I think they said the people in the world, you know -- water abuse and public knowledge of how -- what I was exposed to 4 that is what you get into when you [inaudible] 5 to actually see the language and protest the -- the 5 6 quality water versus non-potable water. And I can't 6 public meetings just were not very detailed. Like stress enough the importance of taking care of what 7 everybody said, they were so vague. Nobody really 7 8 we have got here. 8 even knew how to find it or how to approach it I hope we continue. My kids -- I would 9 9 because we didn't understand it. 10 like to have people come back. I have people that 10 Today, like Bert said, was the first day work for me. I am just like everybody else. I know 11 11 we have ever understood that 25 percent and how that 12 that these rents are going to get us in trouble. We 12 plays into our water right. And for a lot of these 13 have got \$2.90 corn and people have got to pay their 13 water rights, that is a very important issue of the 14 bills. I know what they are fighting. It is not a 14 issue. 15 big deal. It is financially. I know. I have been HEARING OFFICER BARFIELD: And what was 15 in the deal. I have been in the stock market in the 16 16 the date of that annual meeting; do you know? 17 '80s. We lost a lot of money. You make decisions 17 JACE MOSBARGER: Ray would -- somebody that sometimes don't work out. 18 18 else would know the actual date. 19 So if you are going to over-produce and 19 RAY LUHMAN: It was in February, but I 20 waste the good water, I just can try to warn people, 20 couldn't tell you the date without looking at it. 21 pay attention. It is worth more than the oil or 21 MR. TRASTER: If it was the day it was 22 anything underground, what you produce on top. But 22 approved, it was June 8th. 23 I think water is very important. 23 HEARING OFFICER BARFIELD: Well, there 24 So with that, I just wanted to make sure 24 were two -- there was a version sent -- they sent a people understood how important water is. 25 version in February, and so it was approved to send. Page 284 Page 282 HEARING OFFICER BARFIELD: Thank you very 1 So that is probably the version. much. Any questions from either side? 2 JACE MOSBARGER: I think it was in 2 MR. TRASTER: No questions. 3 3 February of 2017, the day of the annual meeting. 4 MR. DEES: No. 4 HEARING OFFICER BARFIELD: Right. 5 HEARING OFFICER BARFIELD: All right. 5 JACE MOSBARGER: It was predate -- or the 6 Thank you. Last call. Any public comments out 6 top of the page said June 8th, or it was, you know, 7 there? Yes. forward-dated to when it was going to kind of be 7 8 JACE MOSBARGER: Jace Mosbarger again. Do 8 sent off. you need --9 HEARING OFFICER BARFIELD: Okay. Sure. THE REPORTER: You have been sworn. 10 10 UNKNOWN SPEAKER: When you said "behind HEARING OFFICER BARFIELD: Yeah. I will 11 11 closed doors", did you mean like in executive 12 just remind you, you are under oath. 12 session or just --JACE MOSBARGER: Okay. So a lot of people JACE MOSBARGER: No. The door was open to 13 13 are really struggling with when some of this 14 14 the public, but it wasn't easily accessible? As a 15 information came out to the public. I still state 15 person -- the public, you kind of needed to know 16 my recollection of the information and actual 16 where you were heading; you didn't stumble upon it. 17 language of the LEMA. 17 HEARING OFFICER BARFIELD: Right. 18 So the first time I had open access to the 18 JACE MOSBARGER: And I just wanted to go 19 actual language of what the fleshed-out LEMA plan 19 on record lastly to say that I am a third generation 20 was going to appear to be was the day of the annual 20 farmer in Sherman County with two young boys that 21 meeting -- the morning of the day of the annual 21 have already expressed a high interest in farming 22 meeting in a back room behind closed doors with some 22 and that there are many people like me that would 23 coffee and donuts at the Northwest Kansas Technical 23 oppose this current LEMA, but have a long-vested

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interest in this community and this water.

HEARING OFFICER BARFIELD: Thank you. Any

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College Union.

This was also the day of -- after handing

Page 285 Page 287 After it is closed, I will review the 1 questions? 1 2 MR. TRASTER: No questions. 2 record and make a decision on how to proceed HEARING OFFICER BARFIELD: Very good. 3 pursuant to the GMD's request. Just as in statute, 3 MR. TRASTER: One thing. I just want to 4 4 there are two separate hearings for a successful be -- make the record clear that we have had an 5 LEMA process. And actually the statute requires two 5 separate orders. First, pursuant to statute, I have 6 interesting hearing and it has been helpful, but 6 there are a lot of unanswered questions still. We 180 days to issue my order of decision. In this 7 7 8 need more documents. And I believe that both Aaron 8 order of decision -- 120 days. Yeah, I have 120 9 and Adam are working real hard to get those 9 days to issue my order of decision. 10 documents to us. 10 In that order, I have the following But in terms of -- I mean, there are going choices. I can accept the LEMA plan as proposed. I 11 11 12 to be more questions. And you have given us the 12 can reject the LEMA plan as insufficient to address 13 opportunity to submit additional -- make additional 13 the conditions. I can return the plan, if it is 14 submissions and we understand that and appreciate 14 determined to be deficient with reasons and options it. But I don't think the record can be closed at for the GMD to revise and resubmit the plan. Or, 15 15 this time. There are a lot of questions and maybe fourthly, I can return the plan with specific 16 16 17 not an opportunity to answer them, but I just want 17 suggestions or improvements, which the GMD can to be clear that there is still more to come. I 18 accept or reject. 18 19 think. 19 If the order of decision accepts the plan, 20 HEARING OFFICER BARFIELD: Mr. Dees? 20 then I will subsequently issue an order of 21 MR. DEES: Just a real quick response to 21 designation, designating the area of the LEMA and 22 that. 22 ordering the specific corrective controls within the 23 I don't think the record is going to be 23 closed until December 12th for submission of written 24 Since the GMD has already proposed changes 24 25 to the proposed plan, it is likely that the order of 25 testimony. If I --Page 286 Page 288 HEARING OFFICER BARFIELD: Yeah. I will decision will return the plan to the GMD for further 1 get to the record in a minute. That is correct. 2 consideration, proposed changes, and any other 2 3 MR. DEES: Thanks. 3 matters that I determine necessary. 4 HEARING OFFICER BARFIELD: Very good. I appreciate your appearance and your 4 Well, I appreciate everybody attending 5 5 comments today. And, again, with that we will close today. It has been a long day and I appreciate the the oral testimony in this matter. Thank you. 6 6 **** 7 group here that has participated in the hearing. So 7 8 let me go ahead and move us toward conclusion. 8 Again, as we just alluded to, you will be g 10 free to provide written testimony, whether you 10 11 provided oral testimony here or not. Again, back on 11 the back table there is a little card that sort of 12 indicates how you can go about providing that 13 13 14 testimony. 14 15 15 Written comments must be submitted or 16 postmarked by December 12th. Anyone may submit 16 17 17 written testimony before that date and your comments 18 will be made part of the record of this hearing. 18 19 19 Information is available -- well, those instructions 20 are back there. I already referred to that. 20 21 As we receive written testimony, it will 21 22 22 be posted on our website. We will also post a 23 23 transcript of this hearing on our website as soon as 24 it becomes available. The record will close on 24 25 December 12th, 2017.

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 2 STATE OF KANSAS,
 3 THOMAS COUNTY, SS
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           CERTIFICATE
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         I, Elaine Shogren, a Certified Court
8 Reporter of Kansas, certify that the foregoing is a
 9 full and correct transcript of all the oral
10 proceedings had in this matter at the aforementioned
11 time and place.
         IN WITNESS WHEREOF I have hereunto set my
13 hand and official seal at Holcomb, Kansas this 11th
14 day of December, 2017.
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                ELAINE SHOGREN, CCR
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