

**SUPPLEMENTAL WRITTEN TESTIMONY OF THE WESTERN KANSAS GROUNDWATER
MANAGEMENT DISTRICT #1**

**To Hearing Officer Earl Lewis,
Division of Water Resources, Kansas Department of Agriculture,
For the Hearing Scheduled February 2, 2023.**

Submitted by: Katie Durham

This written testimony is from the Western Kansas Groundwater Management District #1 (“GMD 1”) regarding its proposal for a Local Enhanced Management Area (“LEMA”) for Greeley, Lane, Scott, and Wallace Counties, the Four County LEMA (FCL). This testimony is offered as a supplement to the previously submitted written and oral testimony by GMD 1. On February 2, 2023, the second public hearing was conducted by hearing officer Earl Lewis, related to GMD 1’s Proposed Four County LEMA (FCL).

Following this hearing, GMD 1 offers the following clarifying testimony addressing the District’s testimony submitted to the Division of Water Resources and supporting documentation to finalize the Division of Water Resources’ record for the Four County LEMA.

Through the Written Testimony, GMD 1 offered one proposed clarification and one correction to the Four County LEMA Plan that was submitted. GMD 1, through the Written Testimony, which was approved by the Board, *See* Exhibit “A”, offers Exhibit “B” as an official Appendix to the GMD 1 Proposal for the Four County LEMA Plan, as submitted to the Chief Engineer and the Division of Water Resources on July 1, 2022.

During the presentation of oral testimony at the second hearing by Katie Durham, the Chief Engineer posed the question of ‘how many water rights within the FC LEMA boundary would be exempt from the FC LEMA as uncertified water rights?’ The total number of uncertified irrigation water rights within the proposed FC LEMA boundary is three. *See* Exhibit “C”. Exempting these uncertified rights from will result in substantially no change to the effectiveness of the FC LEMA in reaching the stated goal. See also Exhibit “C”, which modifies Attachment A to the FC LEMA Plan, to strike these three water right and their associated points of diversion and allocation.

Further, during the oral testimony of Katie Durham, a misstatement was made regarding the FC LEMA’s treatment of Vested Water Rights. To clarify, Vested Water Rights are exempt from the FC LEMA plan. Vested Water Rights are not encouraged, recommended, or provided an avenue through the FC LEMA plan to voluntarily enroll in the program.

GMD 1 further presented oral testimony during the second public hearing from David Barfield, consultant for the District with KWR Consulting. Mr. Barfield presented his testimony with the aid of a PowerPoint presentation. His slides from that presentation are included here as Exhibit “D” for the record. During Mr. Barfield’s presentation, he made reference to the work of Dr. Nathan Hendricks of KSU. Dr. Hendricks is also cited in GMD 1’s Written Testimony at page 6. Dr. Hendricks presented at the GMD 1 2022 Annual Meeting through a PowerPoint presentation. His slides from that presentation are included here as Exhibit “E”. The nature of Dr. Hendricks work was to survey GMD 1 to gage public interest in the formation of a LEMA. This was done in the formation stages of the FC LEMA. A summary of Dr. Hendricks’ results and findings are included here as Exhibit “F” to be added to the record.

GMD 1 emphasizes and reiterates the content and rational of the previously provided
Written Testimony for the 2nd Public Hearing.

Respectfully Submitted,

/s/ Katie Durham
Katie Durham
Manager, GMD #1

Exhibit A

WESTERN KANSAS GROUNDWATER MANAGEMENT DISTRICT NO.1
January 27, 2023 Board Meeting Minutes

BOARD MEMBERS PRESENT

Mark Callender – President, Lane County
Travis Weaver – Vice President, Greeley County*
Ray Smith – Wallace County Member*
Brian Bauck – Wichita County Member
Steve Compton – Treasurer, Scott County

STAFF MEMBERS PRESENT FOR ALL OR A PORTION OF THE MEETING

Katie Durham – District Manager
Toni Palen – Office Administrator

OTHER PEOPLE PRESENT FOR ALL OR A PORTION OF THE MEETING

Reece Hiebert*	Adrian & Pankratz Law Office
David Barfield*	KWR Consulting
Keadron Pearson*	Kansas Water Office
Mike Meyer*	Division of Water Resources
Don Smith*	

- I. **CALL MEETING TO ORDER BY MARK CALLERDER** – President Mark Callender called to order the January 27, 2023 Board of Directors meeting of the Western Kansas Groundwater Management District No. 1 at 9:03 a.m. at the District Office in Scott City.
 - a) **Review & Approve Agenda** – The Board reviewed the January 27, 2023 Agenda. Brian Bauck made a motion to approve the Agenda. Steve Compton seconded the motion which passed unanimously.
 - b) **Review & Approve Minutes** – Mark Callender requested a change to the January 10, 2023 minutes in section II under “Blair Snyder Notice,” it should say Mark Rude not Mark Callender. Steve Compton made a motion to approve the January 10, 2023 minutes with the change above. Brian Bauck seconded the motion which passed unanimously.
 - c) **Review and approve the financials** – The Board reviewed the December 31, 2022 financials. Katie Durham mention that we are starting to receive our assessment checks in the mail. Katie also mentions that we no longer have trash service at the hangar but has spoken with Faurot Heating & Air Conditioning who agreed to let us use theirs for \$30.00 per month. Katie reported that Pat Ryan received a quote from Cheney Door for \$4,000.00 for framing and putting garage door in at the Hangar. Brian Bauck made a motion to approve the financials. Steve Compton seconded the motion which passed unanimously.
- II. **CORRESPONDENCE:**
 - a) Katie Durham reported to the Board that she and Mark Callender returned home yesterday from Topeka. Katie and Mark stated they attended the Legislative Sessions for the Senate Ag Committee, the House Committee where GMD1 and GMD4 were invited to do a presentation and participated on a House Floor event.

Katie stated both presentations went well, had good feedback and overall, very positive. Also, Katie shared that she and Shannon Kenyon from GMD4 received a framed certificate in recognition from the House Floor. Katie went on thanking everyone who has supported in the efforts with the LEMA's. Mark gave positive feedback from the experience stating he met with Lindsay Vaughan and acknowledged Sean Miller and all his efforts and help. Katie feels we are in a very positive place as a District.

III. **NEW BUSINESS:**

- a) **Review Four County LEMA Appeals Spreadsheet** - Katie stated she, Travis Weaver, and David Barfield are working on a spreadsheet for the LEMA appeals. David shared his power point to review with the Board.
- b) **Review LEMA hearing written testimony for February 2nd** - The Board discussed and reviewed the draft written testimony which will include reference to the two proposed clarifications to the Four County LEMA. First, clarifying that uncertified water rights that are still in their perfection period should not be included in the FCL and second, that there would be a revised map of the LEMA boundary.
- c) **Review and approve revised voting criteria** - Reece shared by power point the revised voting policy. The Following changes have been made:
 - Same day registration is required. GMD1 staff will have a list of eligible voters on site for registration.
 - One person – One vote
 - At this time no mail in ballots allowed
 - If you plan to vote for a Trust or Landlord, as a corresponding tenant the District will need supporting documentation to the District Office by February 23rd. (5 days before meeting)

Reece clarified we cannot use last year's documentation since this is a new revised policy. Reece stated officers should be selected every year. Katie suggested that the Board vote to assign an officer and accept this as a resolution. Steve Compton made a motion to except the new revised registration policy. Brian Bauck seconded the motion which passed unanimously. Brian Bauck made a motion to select Tom Adrian or if not available someone from Adrian & Pankratz Law Office to be the Election Officer at the Annual Meeting. Steve Compton seconded the motion which passed unanimously.

- a) **LEGISLATIVE UPDATE** - NONE
- b) **DWR REPORT** – Mike Meyer reported his office is working on water use reports and still in need of applicants. Mike reminded Katie Durham he needs a recommendation on Steve Frost.
- c) **KWO REPORT** – Keadron Pearson reports that Katie Durham is a new member of the Upper Smoky Hill RAC. Keadron reminded the Board that March 23rd is the WISE tour in Dodge City and Montezuma, with more information to come.
- d) **PUBLIC COMMEN**- NONE
- e) **MEETING AJOURN** – Brian Bauck made a motion to adjourn the meeting at 10:30 a.m. Steve Compton seconded the motion which passed unanimously.

Respectfully Submitted:

Approved:

Toni Palen, Office Administrator

Mark Callender, President

DRAFT

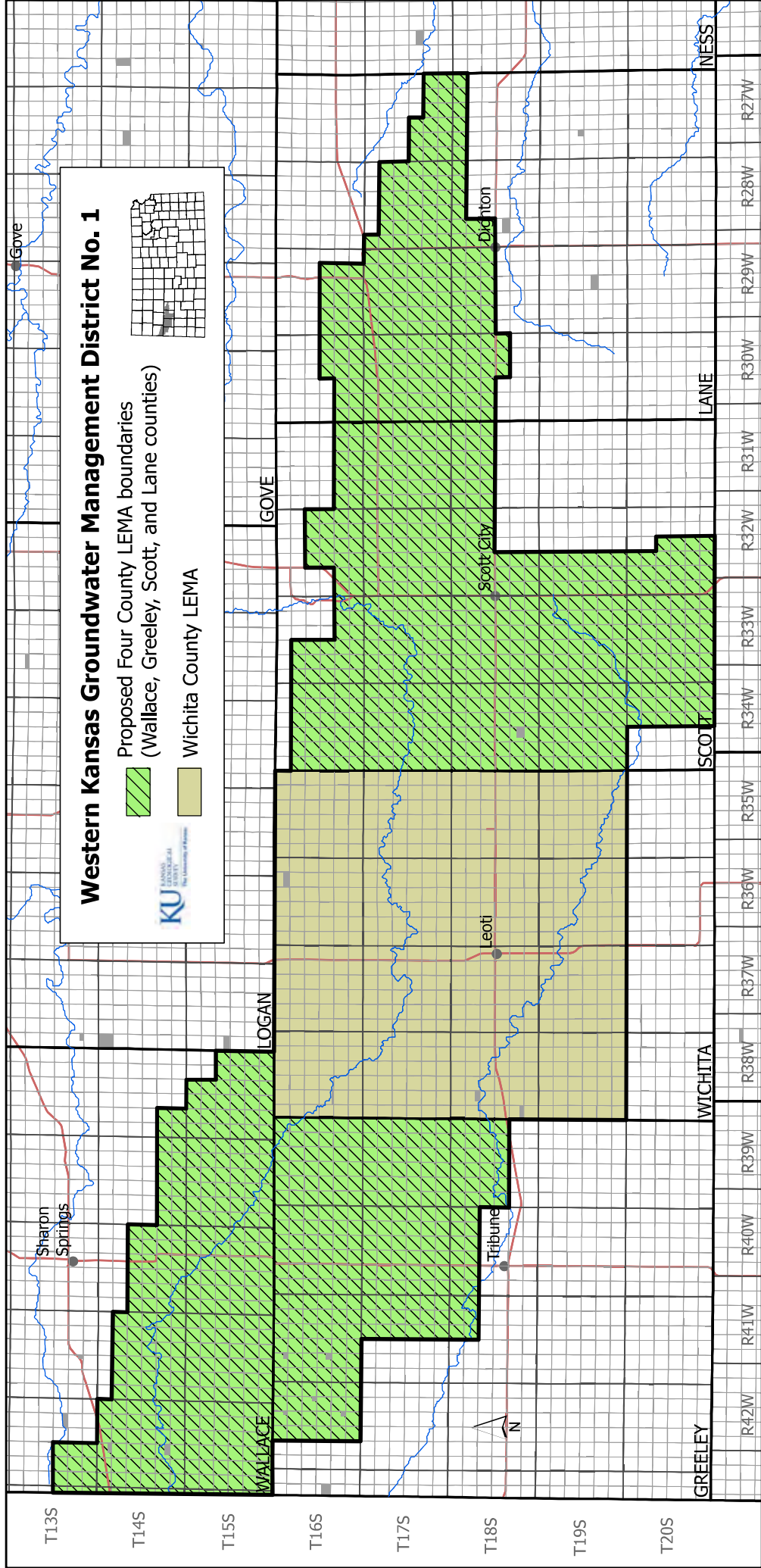
Exhibit B

Appendix
Four County LEMA
Submitted to the Division of Water Resources
July 1, 2022


1. **Uncertified Water Rights.** Uncertified Water Rights are not subject to the corrective controls or other restrictions of the Four County LEMA. Uncertified Water Rights are those water rights that are still in their perfection period and have not yet received an official allocation based on their use. Any and all water rights which are currently in the perfection period, or any new water rights which may be approved during the time period of the FC LEMA, shall not be subject to the corrective controls of the FC LEMA, during such period of perfection.

2. **LEMA Boundary.** The Proposed Four County LEMA, Attachment B, is hereby replaced by the following Attachment B(1). The Boundary of the FC LEMA has not changed, but the map, originally found in the Proposed Four County LEMA at Attachment B, is hereby replaced to correct the township numbers.


Attachment B(1)




Western Kansas Groundwater Management District No. 1



Proposed Four County LEMA boundaries
(Wallace, Greeley, Scott, and Lane counties)



Wichita County LEMA



T13S T14S T15S T16S T17S T18S T19S T20S

WALLACE LOGAN GOVE LANE NESS
 WICHITA SCOTT
 R42W R41W R40W R39W R38W R37W R36W R35W R34W R33W R32W R31W R30W R29W R28W R27W

Sharon Springs

Tribune

Leoti



Scott City

Dighton

Gove

GREELEY

Exhibit C

Group No.	File Numbers	Points of Diversion	5-Year LEMA Allocation, AF
1219	42556; 42715	14-18-31W 2 4095N 5220W; 14-18-31W 3 3750N 5088W; 14-18-31W 4 3858N 5054W; 14-18-31W 5 3728N 4854W	1242.44
1220	43197; 43198; 43199	16-19-32W 2 4345N 1920W; 16-19-32W 3 2740N 4105W; 16-19-32W 4 4280N 1940W; 16-19-32W 5 4410N 1900W; 16-19-32W 6 2815N 4180W; 16-19-32W 7 2665N 4030W; 17-19-32W 1 4040N 1398W; 17-19-32W 2 4258N 1416W; 17-19-32W 3 3822N 1380W	353.25
1223	14683-D1; 14683-D2; 14683-D3; 14683-D4; 14683-D5	28-17-31W 1 190N 1720W; 33-17-31W 1 5150N 2550W; 34-17-31W 1 5000N 2540W; 34-17-31W 2 3380N 3300W; 34-17-31W 3 1980N 2310W	1936.19
1227	6622-D1; 6622-D2; 17880-D1; 17880-D2	18-18-28W 3 2360N 2580W; 18-18-28W 4 3100N 2580W	892.62
1229	44773	24-18-33W 9 3452N 2902W	33.92
1231	11045-D2	3-18-32W 1 2300N 3840W	0.00
1233	20636-D1	10-16-41W 2 5210N 3860W	776.78
1239	15997-D1	1-15-41W 1 4650N 2650W	837.55
1240	15997-D2	2-15-41W 1 5208N 592W	333.39
1243	23956	30-20-32W 2 796N 1371W	969.68
1244	10808; 31852	29-14-40W 1 NE NW NE; 29-14-40W 2 2600N 1730W	411.86

Total

~~471,391.76~~
471,038.51

Exhibit D

**Western Kansas GMD No. 1
Testimony in support of its
proposed Four County LEMA**

Second Public Hearing, February 2, 2023



**David Barfield, P.E.
Consulting for GMD 1, assisting in LEMA Development**

Kansas Water Resources Consulting, LLC

1

Overview of testimony

- The Board's process for determining the LEMA's Goal
(written testimony section 3a)
- The Board's process to select the Plan's corrective controls
(written testimony section 3b)
- A demonstration that the corrective control measures of the LEMA Plan will result in greater reductions in areas of greater use and need of conservation
(written testimony section 4d)

2

The Board's process for determining the LEMA's Goal

- Survey of water right owners and wateruse correspondents
- Review of KGS data and analysis
- Feedback from waterusers throughout the process
- Ultimately the Board decided the LEMA's goal of reducing overall use by 10% from the 2011-2020 average water use was the most appropriate balance of meeting today's needs and extending the water resources of the District.

KGS Sustainability values and LEMA reductions

County	Q-stable	Half Q-Stable	% reduction from Proposed LEMA
GMD1 overall	29	14.5	10.5
Greeley	30	15	11
Lane	16	8	9.7
Scott	18	9	8.7
Wallace	46	23	12.2
Wichita	27		NA

3

The Board's process to select the Plan's corrective controls

General Parameters:

- Vested Rights will not be restricted by the LEMA,
- Wateruse of 2011-2020 to be used as a basis for the allocations
- a maximum reduction of 25% to individual water users, with smaller reductions for those with limited water supply,
- providing flexibility via a single, shared, 5-year allocation among water right groups, and
- including a robust allocation appeal process in the LEMA plan.

4

The Board's process to select the Plan's corrective controls

Initially the Board reviewed four allocation methods, not dependent on historic water use including:

1. Allocations based on **fixed** percent of authorized quantity
2. Allocations based inches per authorized acre
3. Allocations based inches per maximum acres of a recent period
4. Allocations based inches per average acres of a recent period

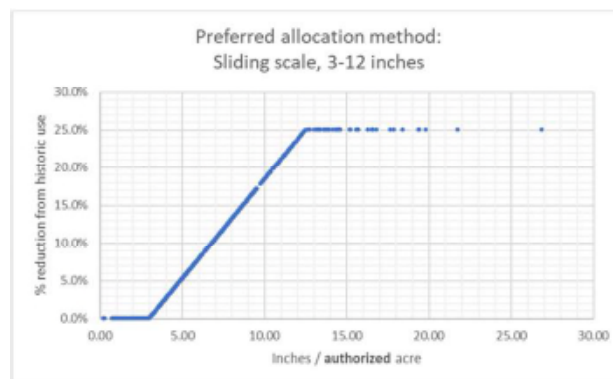
None of these were found suitable as each method gives allocations greater than historic use to some; thus necessitating greater reductions of others to accomplish the overall reduction goal.

5

Hybrid approaches reviewed

Ultimately, the Board focused to two hybrid approaches, which base allocations on historic use with varying levels of the required reductions from this use, based on the water right's historic use as either:

- a percentage of its authorized quantity or
- as inches applied historically on authorized acres.

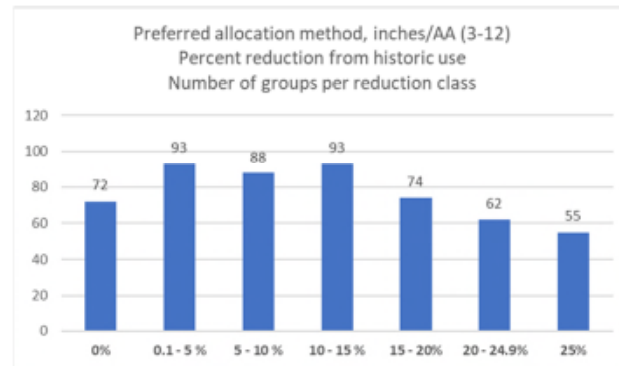


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The Board's selected corrective controls and its effects

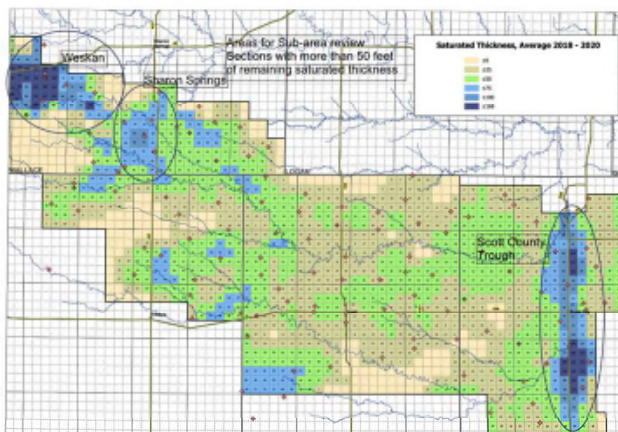
The GMD 1 Board adopted the use of inches per **authorized acres** as basis to determine a Group's required reductions from historic use, as it more evenly and fairly distributes pumping reductions, without penalizing short water rights.

- 87% of water right groups have some levels of required reductions
- 10% of groups have the full 25% required reductions.



7

The corrective controls will result in greater reductions in areas of greater use and need of conservation



Three sub-areas of higher saturated thickness and use were identified:

- the Weskan area of Wallace County,
- the Scott County Trough,
- and an area in Wallace County south of Sharon Springs.

For these three sub-areas (high-use areas), as well as the portions of the counties outside these sub-areas (low-use areas), use statistics were tabulated and the required percent reductions from the final FC LEMA's corrective controls were determined.

8

Sub-area review statistics

	Historic Use	Proposed Allocations basis		
	Average Wateruse 2011-20	Average Group Inches on Auth. Acres	Average Group Percent reduction	Total Group Allocations
County totals/averages				
Greeley	16,360	6.94	11.0%	14,557
Lane	14,652	6.69	9.7%	13,231
Scott	39,151	5.14	8.7%	35,730
Wallace	42,277	7.13	12.2%	37,116
Total	112,441	6.22	10.5%	100,634
Wallace County Sub areas				
Weskan	15,900	9.27	18.5%	12,956
Sharon Springs	8,513	7.74	16.8%	7,084
Outside	17,864	5.73	4.4%	17,076
Scott County Sub areas				
Trough	17,194	5.52	9.3%	15,592
Outside Trough	21,957	4.88	8.3%	20,138

- While the average required reductions in Wallace County are 12.2%, higher than the Four County average, the high-use areas have significantly higher required reductions: 18.5% for the Weskan sub-area and 16.8% for the area south of Sharon Springs. Conversely, for the remainder of Wallace County (low-use areas), the required reduction averages 4.4%.
- Thus the FC LEMA's corrective controls accomplish more reductions in high-use areas. This is consistent with KGS' findings on the need for larger reductions to stabilize groundwater levels in areas of higher use.

Exhibit E

GMD 1 Survey Results

Nathan P. Hendricks
Department of Agricultural Economics
Kansas State University

KANSAS STATE
UNIVERSITY | Agricultural Economics

1

Response Rate

- 832 surveys delivered
- 184 surveys completed or partially completed
- 22% response rate

2

County

	PERCENT OF ACRES	NUMBER OF RESPONDENTS
WALLACE	23%	27
GREELEY	4%	8
WICHITA	36%	43
SCOTT	30%	34
LANE	8%	10

3

Operator versus Landlord

	AVERAGE
OWNER-OPERATOR	34%
TENANT	27%
LANDLORD	39%

4

Other Characteristics

	AVERAGE	MEDIAN
AGE	64	67
% INCOME FROM FARMING	70	82.5
IRRIGATED ACRES	816	400
NONIRRIGATED ACRES	2,947	1,500
PASTURE ACRES	1,220	278
LIVESTOCK HEAD	236	40

5

LEMA Questions

6

LEMA Scenarios

Goal for Reduction in Use
10%
15%
20%
25%

Allocation Method	Description
Percent of Historical Water Use	Allocation is equal to a percent of the average volume pumped in a recent multi-year period.
Percent of Water Right Authorized Quantity	Allocation is equal to a percent of the water right's authorized (certified) quantity.
Inches using Average Irrigated Acres	Allocation = Inches \times LEMA Acres where LEMA Acres are calculated as the average of irrigated acres for a recent, multi-year period.
Inches using Maximum Irrigated Acres	Allocation = Inches \times LEMA Acres where LEMA Acres are calculated as the maximum of irrigated acres for a recent, multi-year period.
Inches using Water Right Authorized Acres	Allocation = Inches \times LEMA Acres where LEMA Acres are the authorized acres according to the water right.

7

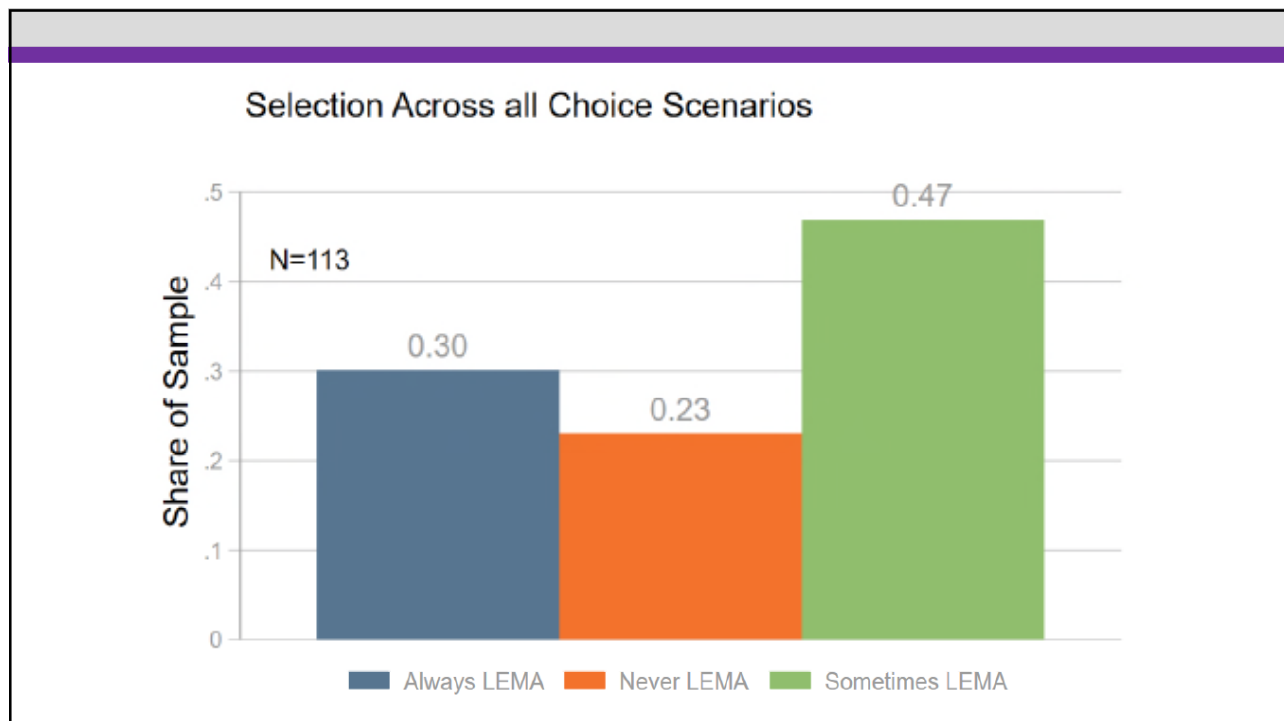
1. Most respondents support a LEMA.

8

1. Choice Scenario #1

	LEMA	No LEMA
Goal for Reduction in Water Use	10%	Water use only limited by existing water rights.
Method of Assigning Allocations	Inches using Average Irrigated Acres	
I would prefer... (check one)	<input type="checkbox"/>	<input type="checkbox"/>

9



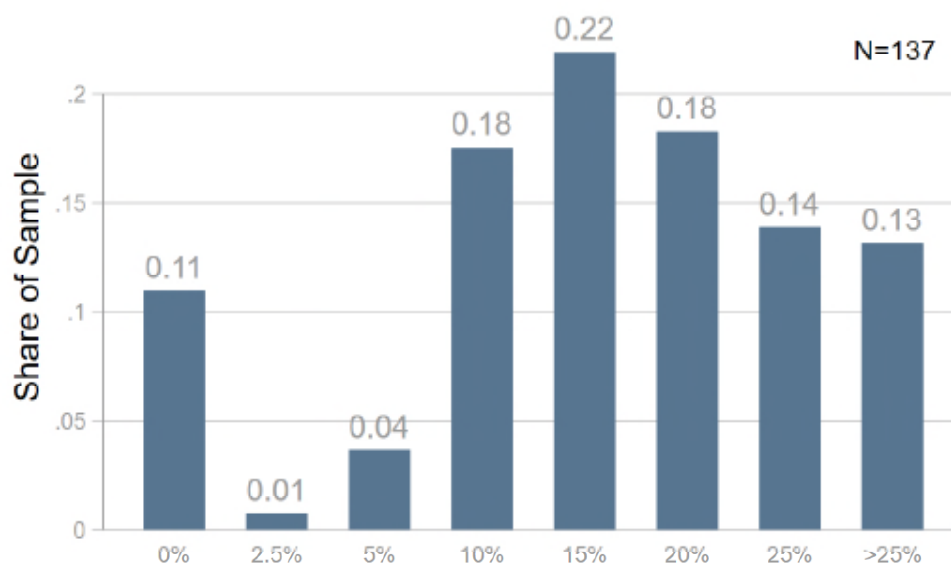
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11. Indicate below what you think is the 1st best, 2nd best, and worst option for the overall goal of reductions in water use in the area where you irrigate.

	0%	2.5%	5%	10%	15%	20%	25%	>25%
1 st Best	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 nd Best	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worst	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11

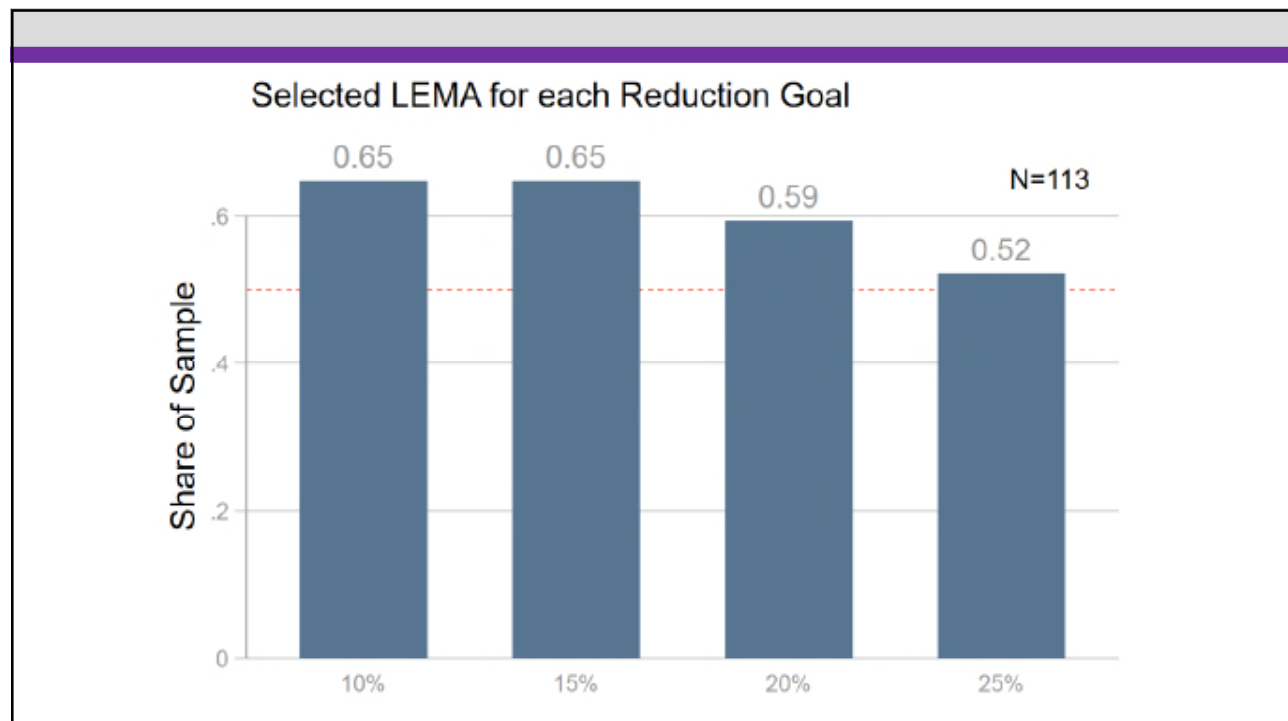
Reduction Goal that was Ranked 1st



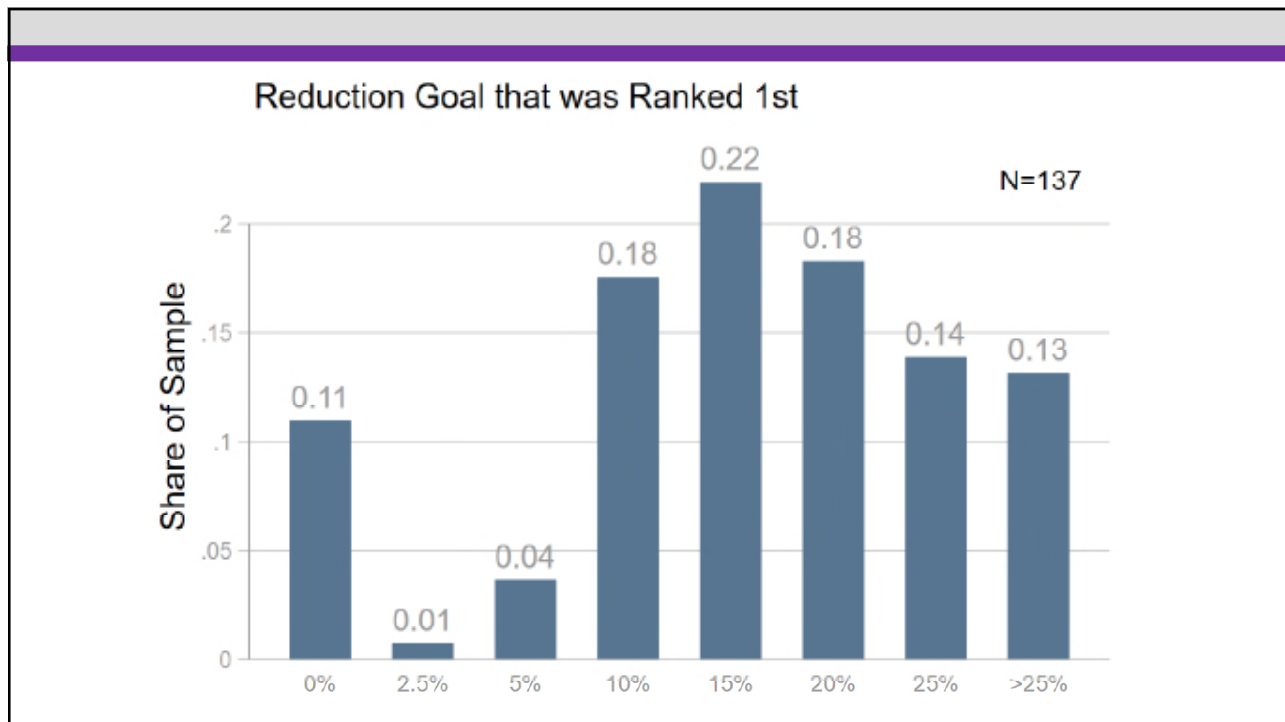
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2. Support for a LEMA decreases with reduction goal of 20 or 25%.

13



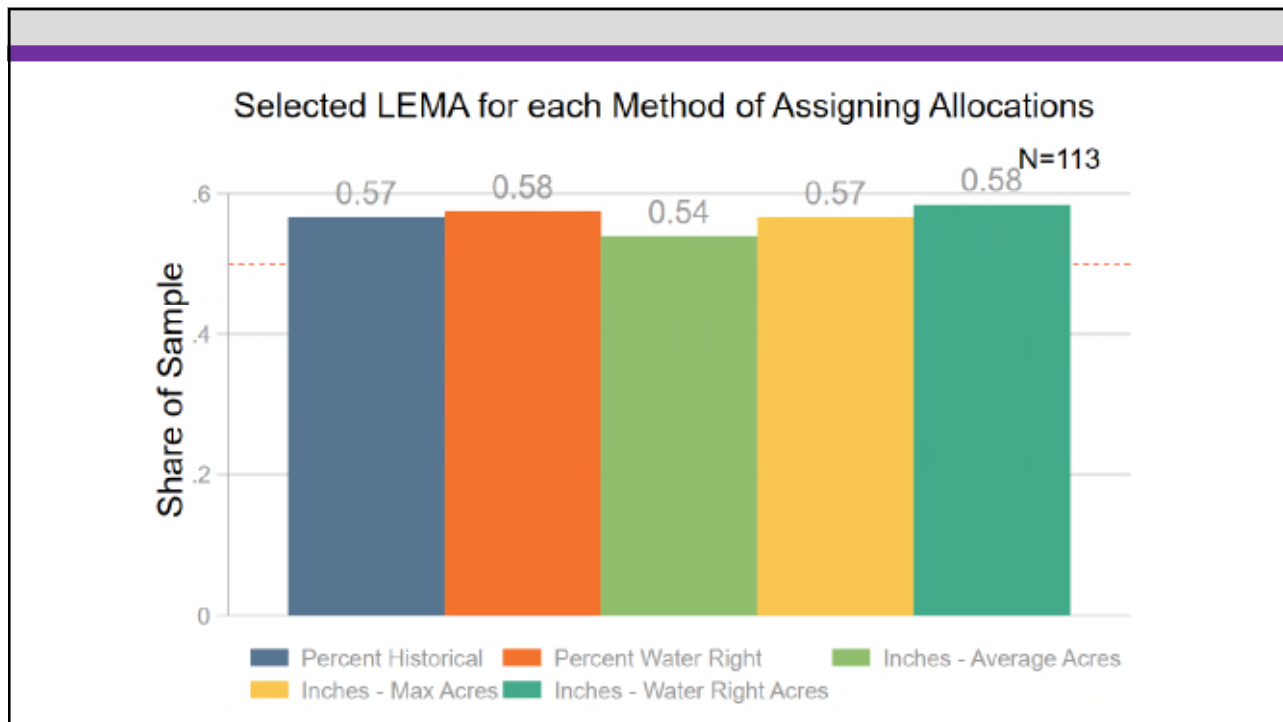
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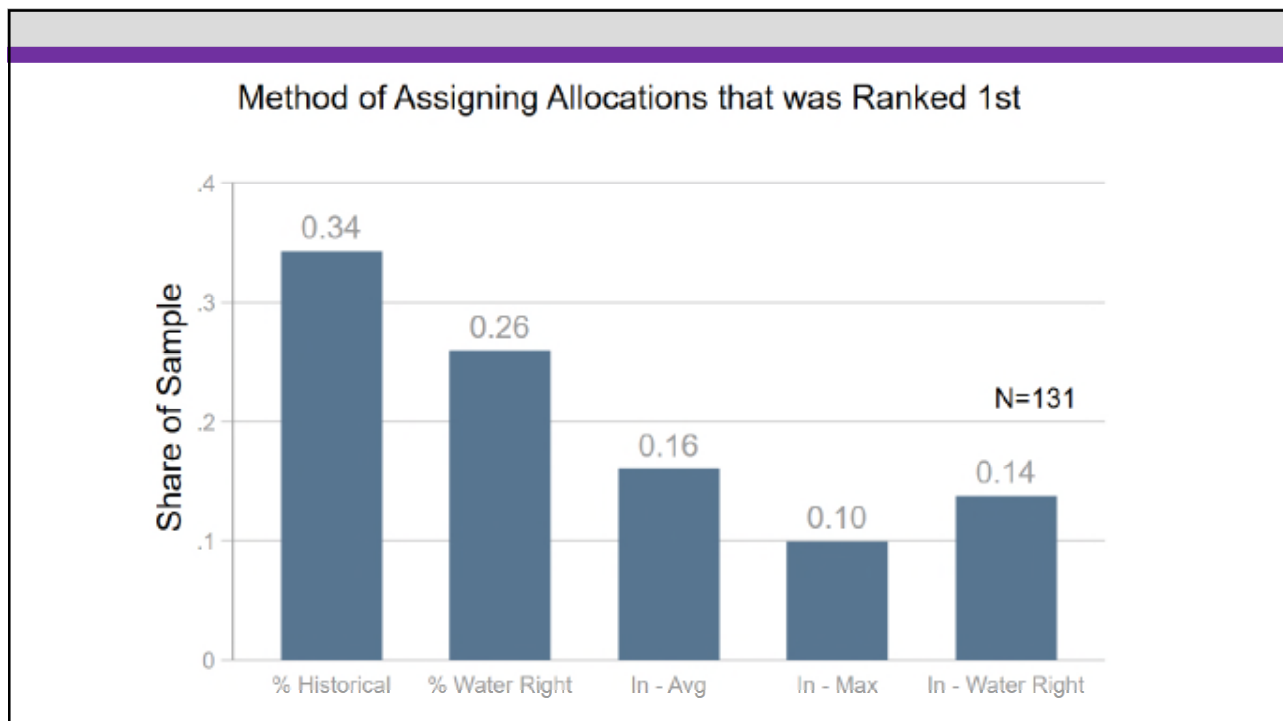
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3. No clear most preferred method of assigning allocations.

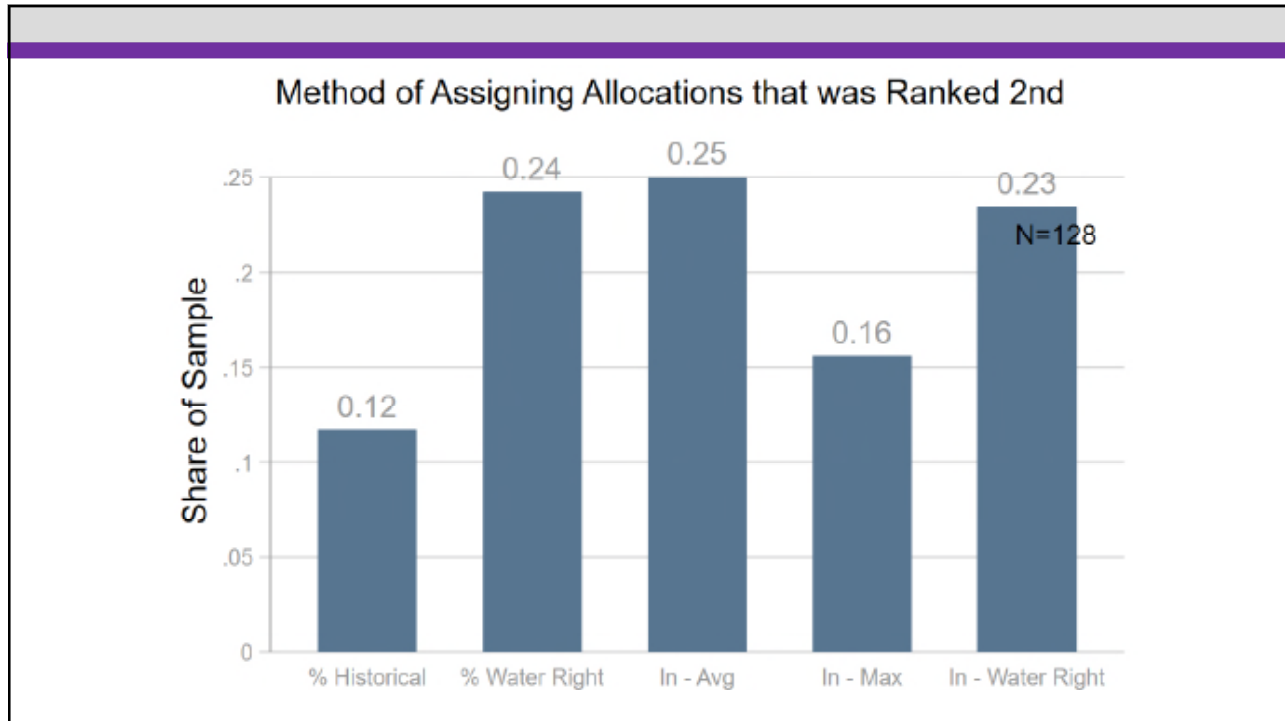
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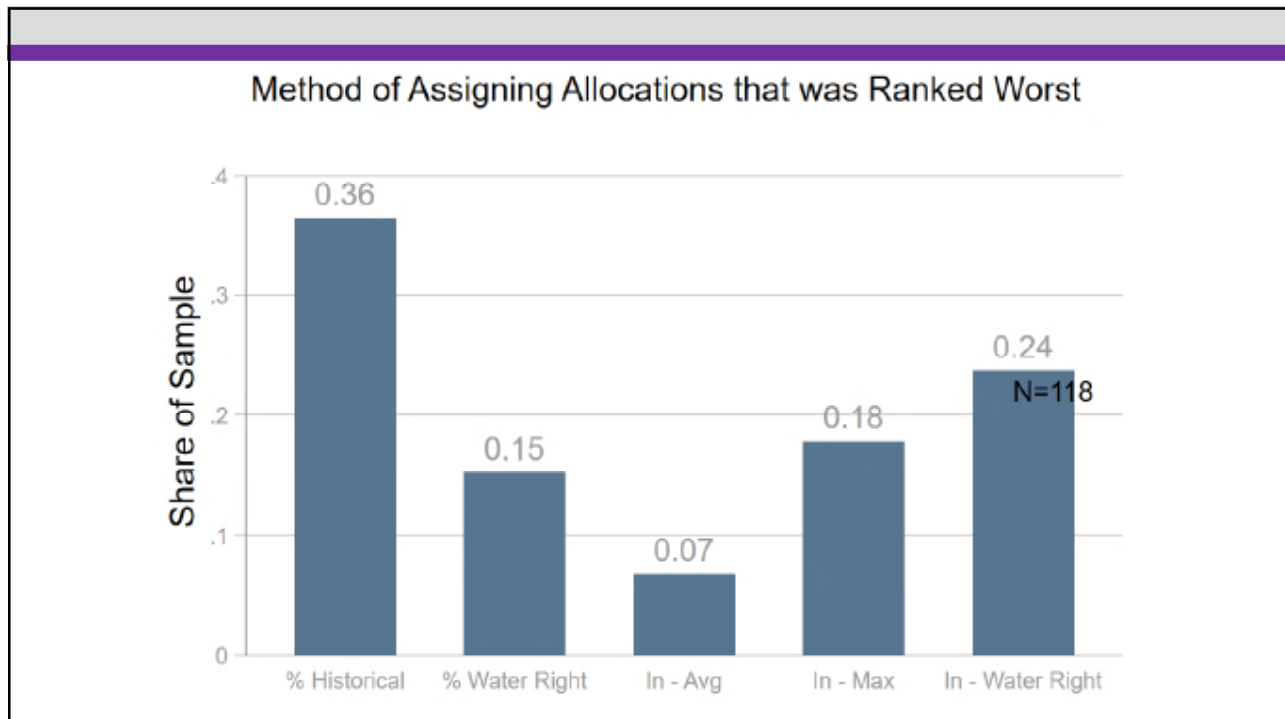
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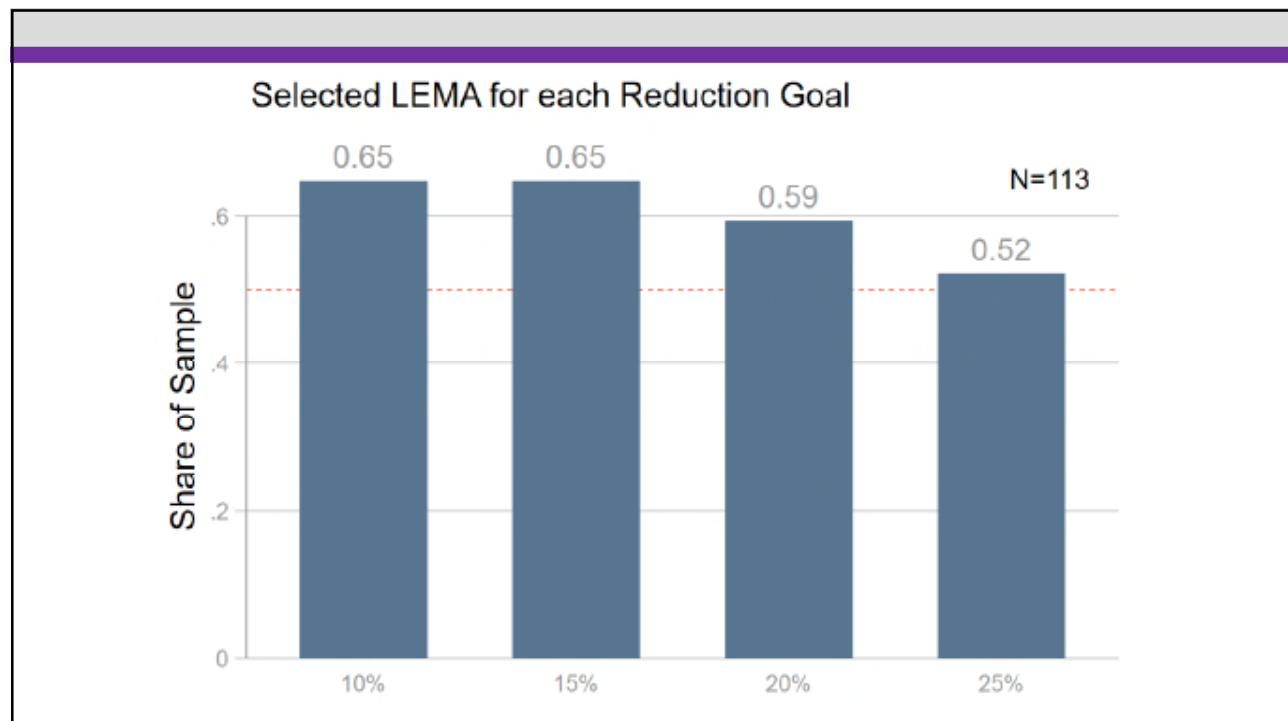
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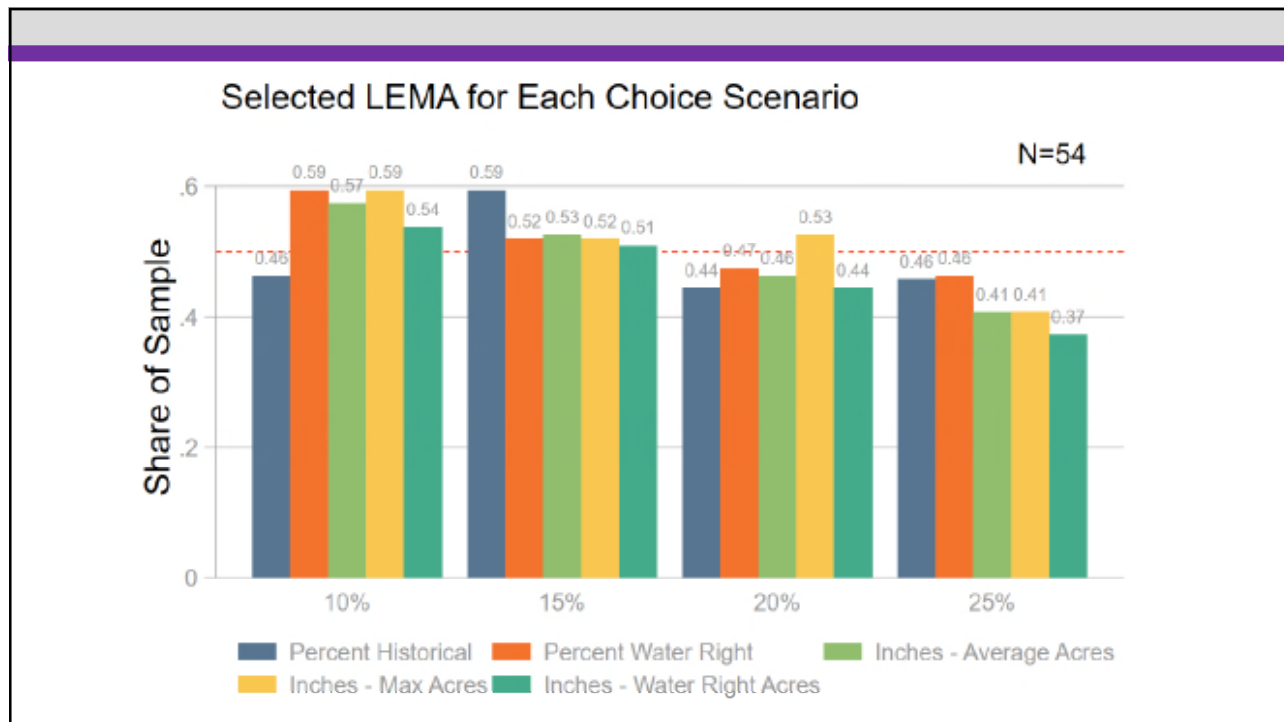
20

4. Support for LEMA decreases about 10-20 percentage points once allocation method is defined.

21



22



23

5. Support for LEMA was similar inside and outside Wichita County.

24

6. Support for LEMA was similar between landlords and operators.

25

7. Local landlords tend to be more favorable towards LEMA than landlords living outside region.

26

8. Young farmers (less than 50 years old) are generally just as favorable towards a LEMA, but they are more particular about the allocation method.

27

9. Overall support for a LEMA was similar between farmers with small and large well capacities. Allocations as % historical has more support among those with small well capacities.

28

Other Opinion Questions

29

There are some areas in GMD 1 that have a larger remaining saturated thickness of the aquifer. These areas of the aquifer are often declining at a faster rate but also have a longer estimated life of the aquifer due to a larger current supply. Which option do you think is best?

- | | |
|---|-----|
| Decrease water use less in these areas | 9% |
| Decrease water use the same in these areas | 77% |
| Decrease water use more in these areas | 14% |

30

Water right seniority is determined by when a water right was first established. Older water rights are more senior and have greater protection under the law. Should more senior non-vested water rights within the GMD be given larger LEMA allocations than junior water rights? (Note: Vested rights are exempt from any LEMA.)

Yes	35%
No	65%

31

Questions?

Nathan Hendricks
nph@ksu.edu

32

Respondents in Scott Trough

(Scott County with predevelopment saturated thickness >125ft)

There are some areas in GMD 1 that have a larger remaining saturated thickness of the aquifer. These areas of the aquifer are often declining at a faster rate but also have a longer estimated life of the aquifer due to a larger current supply. Which option do you think is best?

Decrease water use less in these areas	12%
Decrease water use the same in these areas	59%
Decrease water use more in these areas	29%

N=17

33

Respondents in Weskan Area

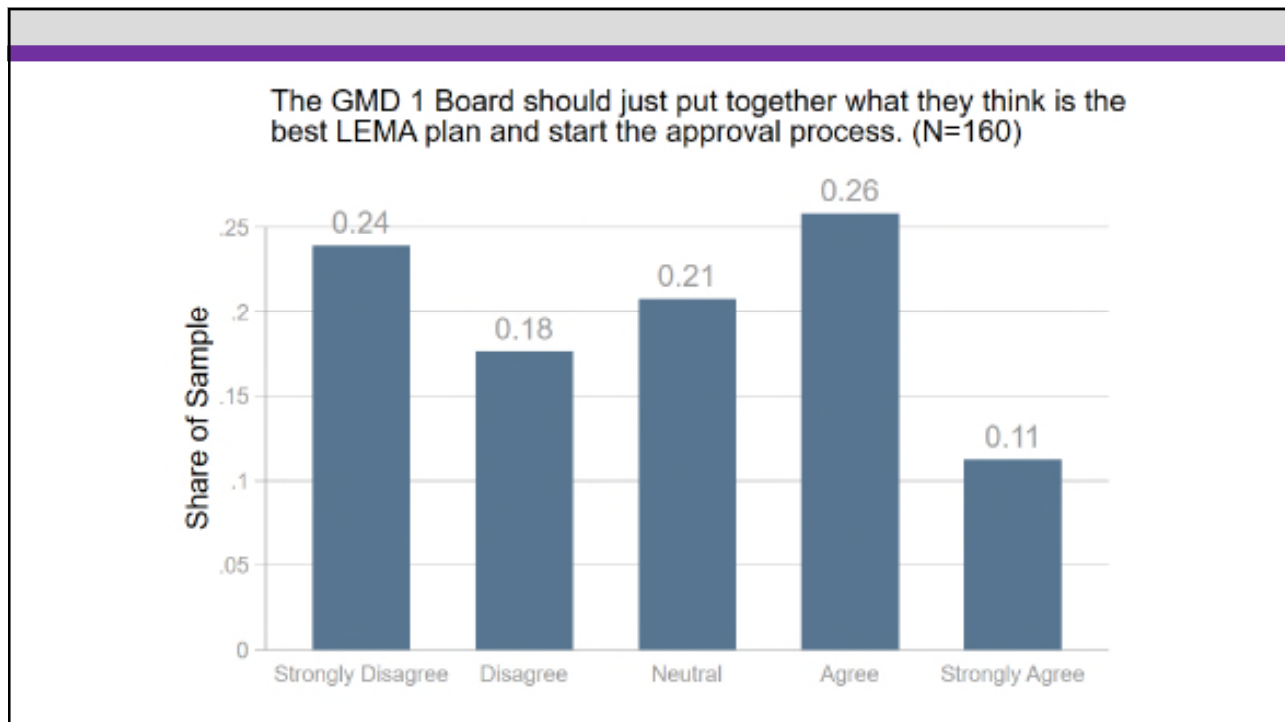
(Wallace County with predevelopment saturated thickness >150ft)

There are some areas in GMD 1 that have a larger remaining saturated thickness of the aquifer. These areas of the aquifer are often declining at a faster rate but also have a longer estimated life of the aquifer due to a larger current supply. Which option do you think is best?

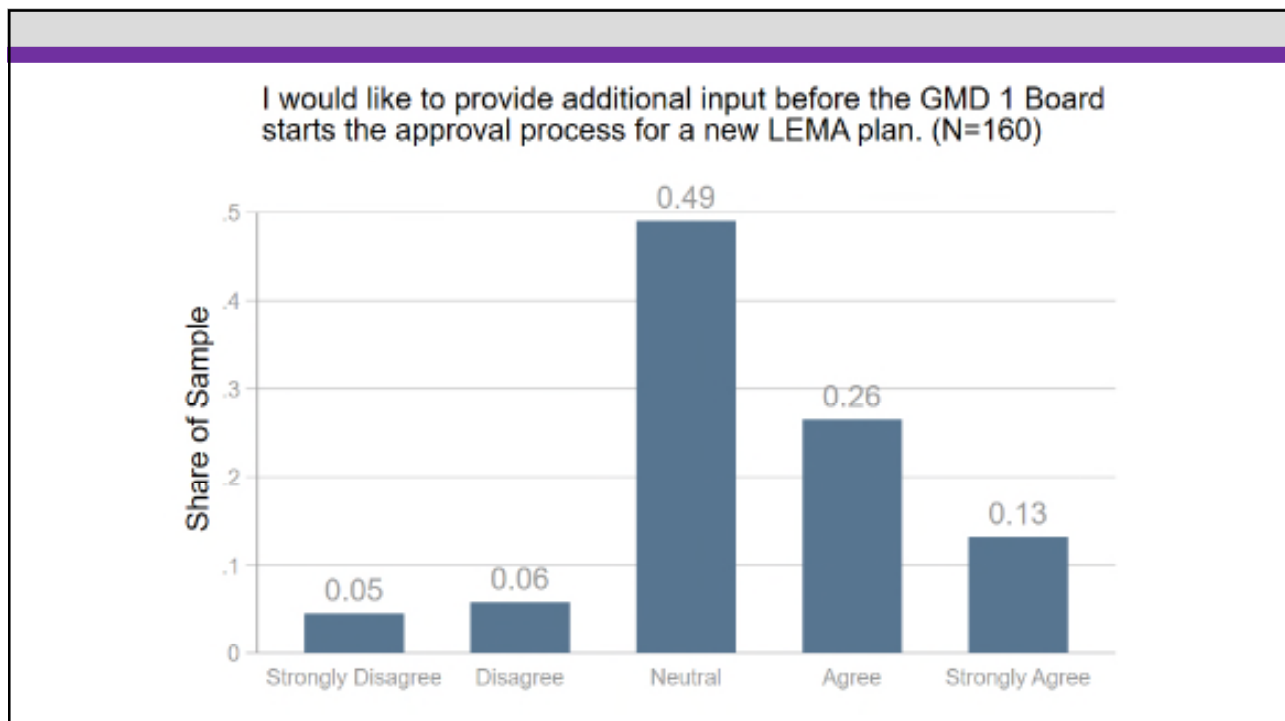
Decrease water use less in these areas	13%
Decrease water use the same in these areas	81%
Decrease water use more in these areas	6%

N=16

34



35



36

Exhibit F