APPENDIX A

Minutes of Public Meetings

LEA COUNTY 40-YEAR WATER PLAN PUBLIC MEETING MINUTES

Eunice Community Center Eunice, NM April 18, 2000, 6:30 p.m.

- 1. Bob Carter introduced Dan Boivin and Jerry May of Leedshill-Herkenhoff and Roger Peery of Shomaker and Associates.
- 2. Dan Boivin briefed those present on what a 40 year water plan is and what it is supposed to do. The ISC, in response to the developing water crisis in New Mexico has asked different regions within the state to develop comprehensive ways of looking at what their water reserves are and planning for the use of that water in the future. Two things Leedshill-Herkenhoff have are a description of our available water, the way it has been used, and demand for water, the way it will be used. It was made clear that the Ogallala will be the main topic of discussion but all other basins in the County will also be defined. The nuts and bolts planning has been done, now they are looking for public input for the plan.
- 3. Roger Peery discussed water quality in the Jal and Lea County Underground Water Basin. It is a basin of alluvial fill that runs in a north-south direction. The alluvium (interbedded layers of sand, silt, gravel, clay, etc.) gets up to 750 feet thick in the deepest areas. A small part of the aquifer is in New Mexico, but it extends farther south into Texas, and in the last twenty years there have only been a few feet of draw down. Water quality is pretty good. Some manmade problems such as hydrocarbon contamination are present. Total dissolved solids are around 750 milligrams per liter, which is classified as moderately hard water. Fluoride concentration ranges from 2 to 3 milligrams per liter. These levels are not considered harmful, but higher concentrations produce mottling in teeth of younger children. Even higher levels are known to cause crippling skeletal sclerosis. Overall, we are in pretty good shape as long as there isn't a lot of extra groundwater development, or as long as Texas doesn't see this as an opportunity, since the some wells produce hundreds of gallons a minute in some areas in the deeper part of the aquifer. Mr. Carter asked if there is a lot a farming in this area. It was replied that this is mostly ranch area. Mr. Carter then asked if the Santa Rosa is in this area. Mr. Peery replied that the Santa Rosa is above this. Contamination of wells and water was mentioned by Ms. Doom. Mr. Peery noted that this is one thing that the report is lacking. LH and Shomaker tried to find evidence of contamination so as to identify it in the study, but neither the New Mexico Environment Department nor the Oil Conservation District records indicate any problems here, even though there obviously are. Mr. Stephenson suggested that Bob Allen, owner of Safety and Environmental Solutions in Hobbs, be contacted and he may be able to help with this. Mr. Allen conducted tests on wells that are being contaminated by oil.

Due to a malfunction with recording equipment, the minutes are incomplete. However, since those present were members of the Lea County Water Users Association, the engineers, government representatives and the press, the presentation was given roundtable and discussion was mostly informal.

LEA COUNTY 40-YEAR WATER PLAN PUBLIC MEETING MINUTES

Hobbs Office Complex, 1923 N. Dal Paso Hobbs, NM April 19, 2000, 6:30 p.m.

- 1. Dennis Holmberg, Lea County Manager made introduced Jerry May, Dan Boivin and Roger Peery and gave a brief history of the water plan to date.
- 2. Dan Boivin gave the project introduction.
- 3. During Roger Peery's discussion of water quality in the county, it was asked if the red contour lines on the maps were where the water quality was the best. Mr. Peery replied that these lines show only contour intervals. Mr. Holmberg mentioned that Lea County Water Users association is paying U.S.G.S. to monitor wells in the county.

It was asked exactly how much of an affect of agricultural use in Gaines and Yoakum County was having on water supply. Mr. Peery answered that they looked at all the data in the county and the overall effects of the declining aquifers, but didn't try to estimate how much pumping in Texas actually drew down the aquifer in that area. But it is obvious by the open contours on the map that Texas pumping is having as big of an impact as New Mexico pumping in this area. This only holds true on the border. As you start to move farther away from the border, the pumping impacts don't carry over that well.

Dennis Holmberg pointed out that the State Engineer used to fund the monitoring of wells. However, they stopped funding that project last year, so this year Lea County Water Users is paying U.S.G.S. to monitor eighty wells in the same areas.

It was asked what will happen to the Ogalalla in the future if water is still consumed at the same rate that it is being consumed now. Mr. Peery replied projections were made by the State Engineer's Office and that they will be that this question will be answered later in the presentation.

In areas where new draw down is shown, it was suggested that this might be where the Cummings plant, Conoco wells, potash mines or Carlsbad's city wells are located.

A citizen asked if similar volumes are being lost to Texas every year. Mr. Peery replied that as the draw downs continue, less and less water will be lost to Texas because there is less and less aquifer to move the water through.

4. Mr. May said that domestic use is expected to remain about the same. Mr. Holmberg asked if "domestic use" means use in individual homes in the county. Mr. May replied that yes, this is self-supplied water for households, typically farms. Mr. Holmberg continued by saying that most of the growth right now is in the unincorporated areas that are not served

by the municipalities, so even one percent growth will more in the unincorporated areas. Mr. May pointed out that Leedshill-Herkhoff showed a small increase in domestic use for this reason. Typically, the State Engineer allows three acre feet a year per household. The plan increases domestic use from 1,000 acre feet a year to just over 2,000 acre feet a year to include over 300 households. However, the average household probably will not use all of the allowed water.

- No questions.
- 6. Would it be possible to work with pump installers to monitor water wells? Mr. May answered getting farmers to record their water levels would also help. The more data you have, the better to show what is happening in the area.
- 7. No questions.
- 8. Do we have less water on earth now? There is less water in Lea County.

The problem with the Ogalalla is that it is under the Caprock which does not allow rainwater into it so that, at most, half an inch of the annual 16 inch rainfall will get in. Can holes be drilled in the Caprock to allow more rainfall in? It is possible to drill holes in the Caprock and create capture areas for the rainwater. The Caprock is 60 feet in some places. Possibly target decent size drainages, build some structures to bring water to a point, get it to the Caprock, and develop an efficient way to get that water into the aquifer. Mr. Holmberg said that this is something that was tried thirty years ago. Holes were drilled in buffalo wallows, but there were problems with contamination. But surely we will know more today to prevent this sort of thing from happening again. Mr. Peery noted that something like this is not without cost. A citizen stated that since water is necessary, the expense is unavoidable.

How far to the north is the Santa Rosa? It comes up to and underneath the Caprock because of the way it tilts.

The Ute project to run water to Elida has spent over \$2 million. Would it be cheaper to drill deeper wells and pump from underneath? Unfortunately, the water that is deeper is of worse quality, so it would have to be treated also.

So what is the next step for the water plan? Leedshill-Herkenhoff associates will take these comments into consideration, put the recommendations that have made here into a draft for that will be issued to the Lea County Water Users Association Plan Review Committee. Any feedback from the Committee about that draft will then be put together in a final draft for presentation which will be in the city libraries for public review. Then, finally, it will be sent to the Interstate Stream Commission. They will also address such issues as cloud seeding or the time frame in which some of the water-saving suggestions can take place.

Did the engineers assume that the future climate would be similar to that of the last twenty years? Yes, they assumed the climate would be the same as in the recent past. They have

addressed the idea of drought in terms of recommending drought management plans and drought management strategies. They have not been put together for the plan, but they have been recommended. So if a drought does hit (as some are predicting) the squeeze could be more severe. Drought is not unusual; there is a dry period every decade.

Concerning the protection of groundwater, why are there are no regulations on the construction of water wells? There are on artesian wells, but the wells in Lea County are allowing rainwater to wash contaminants down wells. Mr. Peery state that 100 foot seals were recommended to the State Engineer, but most likely 50 foot seals will be required.

Will the engineers check on any of the large-scale drip-irrigation systems? There is a pilot study in Dona Ana County, possibly Deming, the results of which they are very interested in even though it has just been implemented. This is the only one known of in New Mexico at the moment. It is probably very conscious of initial costs. This system is best for even household irrigation.

There was no actual "O.K." for blaming the oil industry for contaminating the ground water. Mr. Boivin recalls that the problem was the unlined pits up until the '60s.

What is the timetable for having the water plan ready to present? Depending on how long it takes the committee to get back to them, LH could have everything together in a month to six weeks for another review for the committee. Then the final draft could be finished in half that time, so a copy could be presented to ISC by August.

How many water plans have been submitted and accepted by the ISC? One, Estancia Basin.

LEA COUNTY 40-YEAR WATER PLAN PUBLIC MEETING MINUTES

Lea County Courthouse 100 N. Main, Lovington, NM April 20, 2000, 6:30 p.m.

- 1. Dennis Holmberg introduced the water engineers, Dan Boivin and Jerry May of Leedshill Herkenhoff, Inc. and Roger Peery of Shomaker & Associates, Inc.
- Dan Boivin gave the project introduction.
- 3. When showing the water quality map for the mid 1980s, it was asked if the circles inside the Lovington area show an increase or a decrease in water quality. Mr. Peery replied that this indicates an increase in specific inductants, which means a decrease in water quality. This means that more salts have gone into the water.

What is the impact of the lowering of the water table or the thinning of the saturated thickness? Usually when you get closer to the bottom of a zone like the Ogalalla, you might increasingly pick up naturally occurring salts. Has LH differentiated those impacts of oilfield and natural activity or is this overall quality? This is overall quality. The reason it has been attributed to oilfield activity is because in 1967-1968, once the State required brine to be disposed of differently to keep it from going into the aquifer, the water quality increased.

Has LH delineated on any maps where poor quality water is the result of natural draw down, and would this be a useful suggestion for the water plan? LH can attempt to look at this, but the difficulty is that there is so little data on the water quality currently in the aquifer. How about producing an overlay of oil and gas productionary with the water to attempt to begin to differentiate? To go a step further, retrieving brine production records from the OCD might be helpful. Mr. Peery replied that they have been in contact with OCD and have found their records to be cumbersome and incomplete.

It was also suggested that saline water would show up again later, since it is heavier and would sink to the bottom of the aquifer.

How deep are the water samples taken? There is no set depth they are taken from, it depends on how the particular well is completed. It's like comparing apples and oranges in terms of well depths. Some wells are all the way through the entire saturated thickness of the aquifer; some may be just in the upper portion.

Is the Ogalalla receiving that much recharge that it is improving water quality? There is only about ½ inch of precipitation a year that makes it back into the aquifer, but it is better water quality than was going in with the brine. Another thing to think about is, as you pump that water from areas where the contamination was occurring, it is going to start moving

toward the production wells and add some dilution to the aquifer.

With a 65 foot decline in some of the border areas, how much water is left? 100 to 150 feet in some areas, 150-200 feet of saturated thickness in others. There is some water there, but it is being mined out at a fairly quick rate.

Is this 150 feet from ground level to the bottom of the water? This measurement is from the top of the water to the redbeds.

How far will water flow toward one well? Will it draw water five or ten miles away? Not in this type of aquifer. You're not able to measure draw down at that distance of a single well. If draw down is heavy on the Texas border, how far in will it go? It's difficult to say. Pumping creates cones of depression, which all overlap and create a domino effect, so it is difficult to determine what is the result of Texas pumping. Obviously, along the NM-TX border there is an impact from their pumping, but probably no more than five miles into New Mexico, but that is just a guess since there are so many wells pumping in New Mexico also.

- 4. How about pursuing gene technology for improving water efficiency in crops? This is something that will have a great impact on the future, but LH is trying to get Lea County to work with the available technology that is capable of being implemented now.
- 5. No questions.
- 6. How deep is the water underneath the Ogalalla? Depending on where you are, it is about 600 feet down or so. But the main problem is these wells don't generally yield a lot of water, maybe tens of gallons a minute. There are rare reports of hundreds of gallons a minute. So this might not be the answer for agriculture. It might be a help, but not a total solution.

Is the fact that El Paso is taking cleaned up waste water and returning it to the aquifer for future use making salt water rise in Mexico? The effects depend on how the aquifers are set up. If fresh water is put in, does it push the salt water aside? This would not happen here because our water table is dropping down, and we're basically replacing water.

Can oilfield water be treated and put back in? Yes.

- No questions.
- 8. What is the range of error for irrigated agriculture water use since wells aren't monitored? Probably + or -35 to 40%. The State calculates it in different ways. They look at delivery requirements, precipitation for a period of record and come up with an estimated number for that year. This is done in five year increments. Does it matter how far off they are? The fact is the water table is dropping, and something must be done now to start saving water. Short of some people volunteering to meter their wells, there won't be any firm numbers. The biggest reasons people don't meter their wells are 1) they don't have to; and 2) the State Engineer's rule has always been "you use it or you lose it." Either you put all your water to

beneficial use or, in theory, they could say that you are subject to forfeiture or abandonment In actuality, they must issue a letter saying you've got four years to put this water to beneficial use.

How much water returns to the ground? One third acre foot returns to the ground for every acre foot used.

What is the efficiency of the old sprinkler system? 35 to 40% efficient. The efficiency of the drip system is in the high 90s, close to 100%.

Can the federal government require LEPA systems? There is a program going on right now with the Farm Coop here in which the federal government give matching funds (spend \$1000, they will give \$1000) to change to the new system.

What is the water level at the state line? South of Hobbs along the border, there is less than 50 feet of saturated thickness; immediately east of Hobbs along the border, 100 feet; and just a few spots with a little over 100 feet of saturated thickness.

Mr. Holmberg noted that High Plains Underground Water District did a study on air injection to force water water levels to rise. There are issues with this practice, such as how it will affect the recharge. They also looked at many of the things that we have discussed tonight, including alternative water sources, transporting water, different pipelines.

He then introduced Mary Helen Follingstad of the ISC and asked her if we are asking the right questions or if she feels that there is anything we have missed. She replied that she is encouraged that Dan Boivin mentioned he idea of sustaining water. She felt that the atmosphere was more open and our group was not afraid to ask the hard questions.

Mr. Holmberg then invited any one who may have questions or concerns about the water plan to address them to their LCWUA representatives or him at the courthouse.

APPENDIX B

Minutes of Steering Committee Meetings

LEA COUNTY WATER USERS ASSOCIATION

MINUTES OF STEERING COMMITTEE MEETING

NOVEMBER 19, 1998, 10:30 AM

Note: This meeting was conducted with the interim steering committee composed of Mr Don Bratton, Mr Scott Bussell and Mr Bob Carter, pending selection of the final committee membership.

- 1 See attached attenders list
- Mr Roughton gave an overview of activities to date. The Request for Proposals for Funding from the Interstate Stream Commission (ISC) has been responded to as a combined effort of Leedshill Herkenhoff (LH) and Mr Holmberg's office. LH will respond to a request for applications for funding from the Bureau of Reclamation. \$25,000 will be applied for in conjunction with other non-federal funding (matching funds).
- An outline of the proposed report was passed out for review. The outline is directly from the ISC produced Regional Water Planning Handbook (Handbook) with the addition of a discussion of the recommended plan. The steering committee had no changes to the outline.
- Data gathering procedures were discussed. Much of the required data must come from association members. Discussed the needs for the plan document and the fact that just gathering data is not sufficient to allow production of a comprehensive plan. All interested parties/stakeholders must be involved and must both understand and agree to the final plan. The method of requesting data was discussed and it was agreed that all correspondence will flow through Mr Goff as the Association Chairman, addressed to Mr Holmberg's office. The flow of information from the association to LH will be through Mr Roughton.
- The project schedule will be updated to reflect the contract starting date (October 1, 998). A status report and updated schedule (if necessary) will be included in the minutes of each monthly steering committee meeting.
- The next monthly meeting format was discussed. LH will produce a draft press release for distribution by association members in order to attract as many participants as possible to the next meeting. The format of the meeting will be to provide an overview of

LEA COUNTY WATER USERS ASS.

NAME .	AFFILIATION	PHONE / PAX
BES ROUGHTON	-EETSHILL HETCTENHOFE	177-0294/242-48
John Shomaker	Shomoter & Assoc.	345-3467/345.99
DAN BOIVIN	LEEDS AFEK	247-0291/42-4
DON Brotton	John West / City of Hobbs	505/393-2937
Scott Bussell		383-3117 ex
BOL CARTER	City of Lavengton	396-2884
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Meeting Notes February 16, 1999 Page 2

- Mr. Hemann submitted an article from the magazine Beef fated January, 1999 regarding efforts to conserve water in the Ogallala Aquifer. Mr. Roughton will copy the article to all Steering Committee members and return to original to Mr. Hemann.
- A discussion was held regarding the project schedule. As the gathering of data is a slow process Mr. Roughton will discuss the possibility of extending Phase I of the project into Phase II, making the work of both phases both due at the same time to allow more data gathering time. The project schedule will be reviewed along with a status report at each monthly Steering Committee meeting.
- The next monthly meeting was discussed. We will continue to hold meetings on the third Tuesday of each month. The next meeting (March 16, 1999) will be held at 6:00 PM in the Lea County Cultural Center. Subsequent meetings may be moved to later in the evening to allow use of daylight hours by Steering Committee members.

Respectfully submitted,

ROBERT E. ROUGHTON, P.E.

Project Manager

Leedshill Herkenhoff, Inc.

cc: Buster Goff, Chairman - c/o County Managers Office Dennis Holmberg, County Manager Roger Perry, JSAI including assessing potential sources of groundwater contamination from data at the OCD, TNRCC, and NMED. Considered using data request form for domestic users and arial photographs for locating domestic and agricultural wells as well as oil and gas activities that may impact the groundwater.

- The association members stated their concern and interest in the legal issues associated with the regional water plan. They hope to raise some of their questions and concerns to a member of the team working on the legal aspects of this project.
- The association members agreed that the extension of Phase I of the project into Phase II is a good idea to allow for responses to the data request forms and more data gathering.
- Mr. Nims agreed to provide copies of the Regional Water Planning Handbook and related information by the next Steering Committee Meeting in order to give association members a better idea of what type of data is important for this project.
- The next monthly meeting was discussed. The next meeting (April 20, 1999) will be held at 7:00 PM instead of 6:00 PM to allow use of daylight hours by the Steering Committee members. It will still be located in the Lea County Cultural Center and Mr. Nims agreed to notify the County of the time change.

Respectfully submitted,

5.

Joshua S. Nims Staff Hydrogeologist John Shomaker & Associates, Inc.

cc: Buster Goff, Chairman – c/o County Managers Office Dennis Holmberg, County Manager Robert Roughton, LH

LEA COUNTY WATER USERS ASSOCIATION MINUTES OF STEERING COMMITTEE MEETING

MAY 26, 1999, 7:00 PM

I In attendance:

Ernie Wheeler - Municipal Leon Hemann - Farming/Ranching Mark Alexander - Farming/Ranching Bob Roughton - Leedshill Herkenhoff

The meeting was held following the LCWUA Board meeting.

- Bob Roughton gave an overview of activities to date (see attached status report). Information is coming in slowly. Board directed LH to produce a revised letter requesting Farming/Ranching well data for Board review and third mailout. As of this meeting about 20% of all mailouts have been returned.
- 3 Ernie Wheeler continues his efforts to gain access to the remaining municipal users information.
- 4 Consultant team continues to receive conservation issues data as it pertains to regional water plans. Reviewed the SEO guidelines for conservation, which is not in the form a rules at this time, only guidelines.
- 6. Reviewed results of preliminary mapping (hand entered information on top of the GIS base map).
- The next Steering Committee meeting is scheduled for June 15, 1999 at the Lea County Cultural Center in Hobbs at 7:00 PM. LH will work with Monica (County Manager's Office) on notifying all Steering Committee Members.
- 6 The meeting was adjourned at 8:30 PM.

Respectfully Submitted,

787

ROBERT E. ROUGHTON, P.E.

Project Manager

Leedshill Herkenhoff, Inc.

cc: Buster Goff, Chairman, LCWUA
Dennis Holmberg, County Manager
Roger Perry, JSAI
LCWUA Steering Committee Members

LEA COUNTY WATER USERS ASSOCIATION MINUTES OF STEERING COMMITTEE MEETING

JULY 20, 1999, 7:00 PM

I In attendance:

Leon Hemann - Farming/Ranching
Mark Alexander - Farming/Ranching
Bob Roughton - Leedshill Herkenhoff
Jerry May - Leedshill Herkenhoff
Scott Bussell - Lea County Water Users Association

- 2. Bob Roughton gave an overview of activities to date (see attached status report). The majority of background and hydrogeologic information has been gathered including a significant amount of information from the State Engineer Office in Roswell. Individual well data from agricultural users continues to come in slowly. LH has produced the revised letter requesting Farming/Ranching well data and is in the process of mailing it out. As of this meeting about 25% of all mailouts have been returned (150 returned filled out, an additional 40 returned as undeliverable). Discussed additional data needs on water quality. Project team will contact municipalities directly for any information they have. Discussed various sections of the report and the status of report development to date. Scott Bussell requested that the project team further expedite the project schedule to have a reviewed draft ready by the legislative session in 2000. LH will discuss with the team and submit a revised schedule reflecting our best ability.
- The Steering Committee suggested not meeting in August due to mid August work loads for everyone. The next meeting is scheduled for September 21, 1999 at the Lea County Events Center in Hobbs at 7:00 PM. This will be an important meeting as the team will have preliminary report sections and information to be reviewed and discussed. LH will work with Monica Russell (County Manager's Office) on notifying all Steering Committee Members.
- The meeting was adjourned at 9:00 PM.

Respectfully Submitted.

ROBERT E. ROUGHTON, P.E.

Project Manager

Leedshill Herkenhoff, Inc.

cc: Buster Goff, Chairman, LCWUA
Dennis Holmberg, County Manager
Roger Perry, JSAI
Galen Buller, M&A
LCWUA Steering Committee Members

LEA COUNTY WATER USERS ASSOCIATION MINUTES OF STEERING COMMITTEE MEETING

September 21, 1999, 7:00 PM

1 In attendance:

Leon Hemann - Farming/Ranching Mark Alexander - Farming/Ranching Ernie Wheeler - Municipalities John Benard - Public Utilities Cleve Griffin - Domestic Users Jerry May - Leedshill Herkenhoff

- Steering Committee members, with the exception of Mark Alexander, had received the Preliminary Draft Report of the Lea County 40 Year Regional Water Plan the previous Friday. Members stated that they did not have enough time to fully review the document and suggested another meeting (see item number 4 below) should be held.
- Jerry May, Leedshill-Herkenhoff, discussed the contents of the Preliminary Draft Report, in particular the future water use projections and conservation measures. Comments from Steering Committee members generally consisted of questions and suggestions regarding proposed future data collection and conservation measures. Future aquifer drawdown predictions by the NMSEO were also discussed.
- The Steering Committee suggested that another meeting or teleconference be set up in two weeks in order to further discuss the Preliminary Draft Report. Leedshill-Herkenhoff will contact the Lea County Water Users Association regarding the additional meeting. The next monthly meeting is scheduled for October 19, 1999 at the Lea County Events Center in Hobbs at 7:00 PM.
- 5 The meeting was adjourned at 8:30 PM.

APPENDIX C

Public Involvement Data

LEA COUNTY BOARD OF COMMISSIONERS RESOLUTION NO. 00-OCT-029R

A RESOLUTION APPROVING THE FORTY YEAR WATER PLAN AND SUPPORTING THE OBJECTIVES OF THE PLAN.

WHEREAS, Lea County Water Users Association was formed by a joint powers agreement approved by the NM Department of Finance and Administration on September 18, 1997.

WHEREAS, Lea County is a member of the Lea County Water Users Association and is represented on the Board of the Lea County Water Users Association.

WHEREAS, through local government appointments, all sectors of Lea County are represented on the Board. This includes, but is not limited to, oil and gas, farming and ranching, dairy industry, soil and water conservation district, as well as city and county governments.

WHEREAS, the Lea County Water Users Association contracted with Leedshill-Herkenhoff, Inc. to prepare a forty year water plan under the guidelines of the New Mexico Interstate Stream Commission template on September 24, 1998.

WHEREAS, the water plan is now ready for submission to the Interstate Stream Commission for acceptance.

NOW, THEREFORE BE IT RESOLVED by the Lea County Board of Commissioners that the forty year water plan is approved and that this Board supports the initiatives and objectives of that plan.

PASSED, APPROVED AND ADOPTED) this, 2000.
	LEA COUNTY BOARD OF COMMISSIONERS
	Ken Batson
	Ken Batson, Chairman
	Son Black
	Ross Black, Vice-Chairman
	Migrenatal
	W.H. Brininstool, Member
	Zeak Williams, Member
	Hams League
	Harry Teague, Member

ATTEST:

Lea County Clerk Pat Chappelle

By: Deputy

LEA COUNTY WATER USERS ASSOCIATION RESOLUTION

A RESOLUTION APPROVING THE FORTY YEAR WATER PLAN AND SUPPORTING THE OBJECTIVES OF THE PLAN.

WHEREAS, Lea County Water Users Association was formed by a joint powers agreement approved by the NM Department of Finance and Administration on September 18, 1997.

WHEREAS, the City of Eunice is a member of the Lea County Water Users

Association and is represented on the Board of the Lea County Water Users Association.

WHEREAS, through local government appointments, all sectors of the City of Eunice are represented on the Board. This includes, but is not limited to, oil and gas, farming and ranching, dairy industry, soil and water conservation district, as well as city and county governments.

WHEREAS, the Lea County Water Users Association contracted with Leedshill-Herkenhoff, Inc. to prepare a forty year water plan under the guidelines of the New Mexico Interstate Stream Commission template on September 24, 1998.

WHEREAS, the water plan is now ready for submission to the Interstate Stream Commission for acceptance.

NOW, THEREFORE BE IT RESOLVED by the Eunice City Council Members that the forty year water plan is approved and that this Board supports the initiatives and objectives of that plan.

Lea County Water Users Association Members

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Buster Goff, Chairman
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Juny 1 may
Gary Fonay Member
E. A. Woodell, Jr., Member
E. A. Woodell, Jr., Member
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Jun bhutter
Sim Britton, Member
Litt Busself
Scott Bussell, Member
Λ
Ricky Jo Doom
Becky Jo Doom, Member
Ball arts
Bob Carter, Member
John Norris, Member
Detty Kickman
Betty Rickman, Member
Bill Bruto
Bill Brininstool, Member
X My
J. W. Neal, Member
1
Attive Race
Steve Pearce, Member

ATTEST: County Clerk Pat Chappelle

By:

Eunice City Council Members

Maurice Gardner, Member

Sailand h. Diertos
Gailand L. Overton, Mayor
dan Land
JoAnn Davis, Member
Ea Bookello
E. A. Woodell, Jr., Member
Paul Major
Paul Najeya, Member
Hogen Gold
Roger Holland, Member
Natalie Meyers, Member
Hoy Simpson
Lloyd Simpson, Member
marin He 6

ATTEST:

City Clerk JoAnn Jones

Jolenn Jones

PASSED, ADOPTED AND APPROVED this 26th day of October, 2000.

HOBBS CITY COMMISSION

JIMMY E. WOODFIN, Mayor

GARY FONAY, Commissioner

MARK BAWCUM, Commissioner

HECTOR RAMIREZ Commissione

OF CALDERON, Commissioner

ATTEST.

N FLETCHER, City Clerk

TATUM TOWN COUNCIL RESOLUTION NO. 104-00-01

A RESOLUTION APPROVING THE FORTY YEAR WATER PLAN AND SUPPORTING THE OBJECTIVES OF THE PLAN.

WHEREAS, Lea County Water Users Association was formed by a joint powers agreement approved by the NM Department of Finance and Administration on September 18, 1997.

WHEREAS, the Town of Tatum is a member of the Lea County Water Users Association and is represented on the Board of the Lea County Water Users Association.

WHEREAS, through local government appointments, all sectors of the Town of Tatum are represented on the Board. This includes, but is not limited to, oil and gas, farming and ranching, dairy industry, soil and water conservation district, as well as city and county governments.

WHEREAS, the Lea County Water Users Association contracted with Leedshill-Herkenhoff, Inc. to prepare a forty year water plan under the guidelines of the New Mexico Interstate Stream Commission template on September 24, 1998.

WHEREAS, the water plan is now ready for submission to the Interstate Stream Commission for acceptance.

NOW, THEREFORE BE IT RESOLVED by the Tatum Town Council that the forty year water plan is approved and that this Board supports the initiatives and objectives of that plan.

PASSED, APPROVED AND ADOPTED this _ 26 day of _ October . 2000.

TATUM TOWN COUNCIL

Robert Singleton, Member

Rue Mauk, Member

ATTEST:

City Clerk

Deanne Gruben

JAL CITY COUNCIL RESOLUTION NO. 001026-1

A RESOLUTION APPROVING THE FORTY YEAR WATER PLAN AND SUPPORTING THE OBJECTIVES OF THE PLAN.

WHEREAS, Lea County Water Users Association was formed by a joint powers agreement approved by the NM Department of Finance and Administration on September 18, 1997.

WHEREAS, the City of Jal is a member of the Lea County Water Users Association and is represented on the Board of the Lea County Water Users Association.

WHEREAS, through local government appointments, all sectors of the City of Jal are represented on the Board. This includes, but is not limited to, oil and gas, farming and ranching, dairy industry, soil and water conservation district, as well as city and county governments.

WHEREAS, the Lea County Water Users Association contracted with Leedshill–
Herkenhoff, Inc. to prepare a forty year water plan under the guidelines of the New Mexico
Interstate Stream Commission template on September 24, 1998.

WHEREAS, the water plan is now ready for submission to the Interstate Stream Commission for acceptance.

NOW, THEREFORE BE IT RESOLVED by the Jal City Council that the forty year water plan is approved and that this Board supports the initiatives and objectives of that plan.

PASSED, APPROVED AND ADOPTED this 26th day of October, 2000.

JAL CITY COUNCIL

Mary C. "Claydean	" Elkins, I	Mayor	
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Darrold Stephenso	Mamb	wor	
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Keren 21	0 110	<u>.</u>	
Theresa Herrera, M	(00-		
 Curt Pittman, May	or Pro-T	 em	
John Allen, Memb	er		
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Roberta Barnes, M	ember		
Rick Little, Membe	<u></u>		
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Vacanyo	Adamba	ning2	
Dewayne Jernings	, ivkembei	. 0	
Bedney Lennis	.	·	

ATTEST:

City Clerk Skeet Posey

By:

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MR. TROY HARRIS: Here.

MRS. ANNA TRUJILLO: Here.

MR. PAT WISE: Here.

MRS. MONICA RUSSELL: Pat Wise.

MRS. MONICA RUSSELL: Bill Shipp.

MRS. MONICA RUSSELL: Anna Trujillo.

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LCWUA MEETING, 10/26/00
                                                                                                             Sheet (2) of (1)
                      MR. ROGER HOLLAND: Here.
        2
                      MRS. MONICA RUSSELL: Natalie Meyers?
                                                                       1
                                                                            (No Response).
        3
             (No response).
                                                                       2
                                                                                     MRS. MONICA RUSSELL: Dixie Drummond.
                      MRS. MONICA RUSSELL: Lloyd Simpson?
                                                                            (No Response).
       5
                      MR. LLOYD SIMPSON: Here.
                                                                                     MRS. MONICA RUSSELL: Representing
                      MRS. MONICA RUSSELL: Maurice Gardner.
                                                                      5
                                                                           Tatum. Betty Rickman.
       7
                      MR. MAURICE GARDNER: Here.
                                                                                    MRS. BETTY RICKMAN: Here.
       8
                     MRS. MONICA RUSSELL: Billy Thrash.
                                                                      7
                                                                                    MRS. MONICA RUSSELL: Judy Lambert.
       9
                     MR. BILLY THRASH: Here.
                                                                      8
                                                                                    MRS. JUDY LAMBERT: Here.
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                     MRS. MONICA RUSSELL: Representing
                                                                      9
                                                                                    MRS. MONICA RUSSELL: Ronald Glover.
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           Hobbs, Jimmy Woodfin.
                                                                     10
                                                                                    MR. RONALD GLOVER: Here.
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                     MR. JIMMY WOODFIN: Here.
                                                                    11
                                                                                    MRS. MONICA RUSSELL: Robert
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                     MRS. MONICA RUSSELL: Gary Fonay.
                                                                    12
                                                                          Singleton.
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                    MR. GARY FONAY: Here.
                                                                    13
                                                                          (No Response)
     15
                    MRS. MONICA RUSSELL: Mark Bawcum?
                                                                    14
                                                                                   MRS. MONICA RUSSELL: And Rue Mauk.
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                    MR. MARK BAWCUM: Here.
                                                                    15
                                                                                   MR. RUE MAUK: Here.
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                    MRS. MONICA RUSSELL: Hector Ramirez.
                                                                    16
                                                                                   MRS. MONICA RUSSELL: And for Lea
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                    MR. HECTOR RAMIREZ: Here.
                                                                   17
                                                                         County, Ken Batson.
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                   MRS. MONICA RUSSELL: Joe Calderon.
                                                                   18
                                                                                  MR. KEN BATSON: Here.
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                   MR. JOE CALDERON: Here.
                                                                   19
                                                                                  MRS. MONICA RUSSELL: Ross Black.
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                   MRS. MONICA RUSSELL: Representing
                                                                   20
                                                                                  MR. ROSS BLACK: Here.
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         Jal, Mary C. Elkins.
                                                                   21
                                                                                  MRS. MONICA RUSSELL: Bill
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         (No response).
                                                                   22
                                                                        Brininstool.
   24
                   MRS. MONICA RUSSELL: Darrold
                                                                  23
                                                                                  MR. BILL Brininstool: Here.
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         Stephenson.
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                                                                                 MRS. MONICA RUSSELL: Zeak Williams?
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                                                                        (No response).
                                                             6
                  MR. DARROLD STEPHENSON: Here.
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                  MRS. MONICA RUSSELL: Theresa Herrera?
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                                                                                 MRS. MONICA RUSSELL: And Harry
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                  MRS. THERESA HERRERA: Here.
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                                                                       Teague.
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                  MRS. MONICA RUSSELL: Curt Pittman.
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                                                                                MR. HARRY TEAGUE: Here.
   5
        (No Response).
                                                                                MR. DENNIS HOLMBERG: Mr. Chairman, we
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                 MRS. MONICA RUSSELL: John Allen.
                                                                      have a quorum of all city commissions present.
   7
        (No Response).
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                                                                                MR. BUSTER GOFF: Each commission has a
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                 MRS. MONICA RUSSELL: Roberta Barnes.
                                                                      quorum. Could we all stand for the pledge, please?
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                 MRS. ROBERTA BARNES: Here.
                                                                      (Pledge recited).
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                 MRS. MONICA RUSSELL: Rick Little.
                                                                               MR. BUSTER GOFF: Our first item
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       (No Response).
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                                                                      would be the presentation of the 40-year plan by
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                MRS. MONICA RUSSELL: Dewayne
                                                                     Leedshill-Herkenhoff.
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       Jennings.
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                                                                               MR. DENNIS HOLMBERG: You can use the
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                MR. DEWAYNE JENNINGS: Here.
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                                                                     mike there.
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                MRS. MONICA RUSSELL: And Sydney
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                                                                               MR. ROGER PEERY: Okay. I'm Roger
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      Kennedy.
                                                                     Peery. I'm with John Shomaker and Associates. We
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17
                                                                     have worked with Leedshill-Herkenhoffon on this 40
               MRS. SYDNEY KENNEDY: Here.
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               MRS. MONICA RUSSELL: Representing
                                                                    year water plan. And what I'm going to do tonight
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     Lovington, Troy Harris.
                                                                    is just give a brief presentation of the plan, and
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the involvement from various people we had during

the course of the plan. I'll focus primarily on

Jal, and the Lea County underground water basin,

those that have not happened, due to water pumping

and some of the things that have happened, and

over time. Also, a little bit of summary about

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diverted, and projections for the next 40 years at the 20-40. Also here tonight is Charlie Leader with Leedshill-Herkenhoff.

What we did as part of this study is look at all the different underground water basins within Lea County, and starting at the top of this diagram, this clear area up here is the undeclared basin. That's everything up North where the Ogallala ends outside of the Caprock area. And this central portion is the Lea County underground water basin, which consists of the Ogallala Aquifer, and there's a little section of the Roswell Basin in here, which we did not consider because it's such a small portion. There's really not much water to develop or use in that area. And we have the Capitan Aquifer in here, and the Carlsbad Aquifer down at the very bottom. And this little small piece right here is the Jal underground aquifer. I'm going to start off with Jal. There's not a lot to say about the Jal Aquifer in terms of it hasn't been impacted by the pumping that they have done there for their municipal users. There's been very little decline over time. The aquifer essentially is a little bowl of alluvium of sand and gravel material. It

MR. ROGER PEERY: Sure.

MR. DENNIS HOLMBERG: So that the people in the back can see the things?

MR. ROGER PEERY: Yeah, It's pretty thin writing there. It's kind of a white cross section. The Ogallala Aquifer again consists primarily of sand, silts and gravels. Very permeable material. It yields a lot of water to wells as you know. And what it is, is this little thin piece of aquifer up here, it's underlaid by 1,000 or more feet of red beds in some places, so you are working off of a pretty limited supply of water in terms of actual saturated thickness. The saturated thickness at its maximum is a little over 200 feet in some places, and as you get out towards the margins of the aquifer, it essentially pinches out to zero along Mescalaro Ridge or what's known as the Caprock. The ground water development in the Lea County underground water basin or the Ogallala essentially started in the 1950's. Prior to that it was maybe 500 acres feet a year. Pretty limited development, but in the 1950's with the advent of the drilling technology and pumps, ground water development really took off and hit a peak of about 170,000 acre feet per

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extends to about a depth of 750 feet below the surface at its maximum, and it's really only used by Jal. It does extend into the Texas side, so it is subject to some development there if anybody had the opportunity to use that aquifer. This is the geologic cross section which is essentially just a slice of the earth, so if you slice the earth down and stood beside it and looked at it. this is, you know, just a diagram of what it would look like. And what you have is the red beds that surround this little alluvium -- little ovial aquifer there. And this blue line represents the water table. So you have got up to about 750 feet of saturated sediments there, and as I said, the pumping over time hasn't affected the water draw downs hardly at all. There have been some water quality problems associated with naturally occurring fluoride as I recall with concentrations being near the MCL in some cases, which is the maximum contaminant level allowed by the Environmental Protection Agency. This next diagram is again a cross section of what you see in the Ogallala aquifer.

MR. DENNIS HOLMBERG: Roger, can you move that up a little bit higher?

year withdrawals in about 19 -- I think it was 1957. And all through the 50's it was pumped pretty high.

This area right here, I'm following with my pencil shows the extent of the Ogallala Aquifer where it's essentially zero saturated thickness of 70's. And these red lines indicate draw downs that occurred in the aquifer -- let me move this up so you can see it -- during the period from 1950 to 1960. So what we have is we have draw downs of 20 feet in this area. This is Hobbs down here for reference. Lovington. Draw down to 25 feet East of Hobbs, or Lovington rather. Draw down to 10 to 25 feet North of Hobbs. So the early development is starting to have its impact on the aquifer quite readily, quite quickly. And these draw downs, if continued over time, what I'm going to show you the next couple of pictures is just two different time periods where we're going to compare the draw downs in the aquifer, or look at how they have continued. Now this is the period from 1968 to 1981. Looking at the changes in the aquifer over that time. And what we're looking at here is

accumulative effects. We have got another 10 feet

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of draw down in this area starting from Hobbs, going off to the North, and then up to 20 feet along the New Mexico-Texas Border. And those are in addition to the draw downs that you saw over that 1950 to '60 period. So in some of these areas we are now approaching, you know, 40 to 50 feet of draw down in the aquifer. As you can see, the contour was extended to open it to the -- is in the Texas side, and that's because of pumping in Texas is also drawing down the aquifer in that area as well. And draw downs into New Mexico from pumping in Texas are projected to come in a couple of miles. That was primarily work done by the State engineer's office in the model that they had developed in 1999. So that it is having some impact in that area. And this is again more draw downs over the period from 1981 to 1998. The area we saw last time that was starting to get bigger along the New Mexico-Texas Border, again we have another 10 to 25 feet of draw down there. A little bit of recovery in the aquifer to the West of Lovington, and to the North of them a little bit. A little bit of recharge in through there. Again we have more -- more draw down of 10 to 20

1 150 to 170,000 acre feet per year in the Ogallala 2 Aquifer. We made some projections for water use out to 20-40. There's been a lot of new 3 4 development going on with needing to supply milk 5 to the cheese plant, and if we start to assume 6 that a lot of the land that's in the CRP right now 7 comes back out of that program, and goes into 8 production, instead of having to haul in feed from 9 outside the county, water use is actually 10 projected to more than double by 20-40. And as I 11 said at some of the public meetings that we had 12 early on, the good news is there's actually the 13 paper water rights to provide that water, but the 14 reality is we don't have a physical wet water to 15 provide that much water out of 20-40. One other 16 thing that was brought up at some of the public 17 meetings and some of the meetings we had with the 18 Water Users Association was we know Texas is 19 pumping more water all the time. So therefore, 20 they have increased the gradient or how steep the 21 water table is from New Mexico into Texas. So the 22 natural thought was, well, if the water table is 23 steeper, it's moving faster, and therefore, Texas 24 is sucking our water over at a faster rate. And 25 to kind of show you what I mean, as you look at

downs since 1950 of upwards to probably 65 feet or more in some areas. So we are continuing to draw down the aquifer, in addition to the impacts that we're seeing from pumping in Texas. Water quality declined a little bit over time in terms of total dissolved solids. Once the state engineer, and the Oil -- the OCD changed the procedure where it couldn't discharge brine into unlined pits, basically the water quality has improved since that time and gotten back to what it was historically.

feet. So now we are looking at accumulative draw

This is a pie chart that just shows basically the users of water and what the total diversions were during 1995. As you can see, irrigated agriculture accounts for the largest use at 131,000 acre feet. And as you recall, I said back in the late 50's it was a maximum of about 170,000 acre feet. The next largest user is the public water system at 16,000 acre feet. And then the mining industry at a little over 11,000 acre feet. The total diversions over that period of time were about 175,000 acre feet. What the State engineer did with their model was to predict a 40year period up to 20-40 assuming pumping was going to continue the same at essentially today's rate,

16 1 the -- this is just kind of a schematic to show you. It's not the real gradient or anything, but 2 3 in 1950 we had more or less a platter aquifer at 4 that time before development started real hard in New Mexico and in Texas. And in 1998 the water 5 6 table moving from New Mexico into Texas has 7 steepened. You can kind of think of it as a pipe 8 that was laying flat, and now it's on angle a 9 little bit. So you say, yeah. We are definitely getting a lot of our water taken away from us, but 10 what really happens is you have less water in the 11 12 aquifer because of all of these draw downs we have 13 had. We are now missing this upper part of the 14 aquifer. There's, even though the pipe, if you 15 will, is tilted a little bit more steeply. The 16 water is moving more steeply there, the pipe isn't 17 as full. It can't carry as much water. So we are 18 actually losing less water to Texas every year 19 than we did predevelopment. And this shows my 20 calculations as to how much water has gone from 21 New Mexico into Texas. In 1968 about 59,000 acre 22 feet per year were naturally going across. 23 Decreased to about 46,000 acre feet in 1981, and

then came up a little bit, because there was some

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every year to about 49,000 acre feet, but the general trend is still, they are getting less water over there, because there's just less water to go over there. And with that, I would like to conclude with my presentation, and certainly be willing to take any questions you might have.

MR. BUSTER GOFF: Is there any questions from each -- any of the commission members?

MR. DENNIS HOLMBERG: Mr. Chairman, I think there may be some questions then after Mr. Leader with Leadsil finishes his presentation.

MR. ROGER PEERY: Charlie?

CHARLIE LEADER: I think the only thing I would like to add, following Mr. Peery is what we have in Chapter 8 is the framework, and it's a flexible framework for plans to try and maximize the water resources that are available. It combines conservation. It combines management alternatives. It combines ways to make the best use of the aquifers that are there, in terms of what might be further developed, and we present a possible time table for implementing the various alternatives that are there, and this is there for your consideration. We've tried as best we could

MR. LEN STOKES: Do you want me to do that, Charlie?

MR. DENNIS HOLMBERG: I don't know which one of you feels appropriate in doing that. I think maybe before Len starts, for the commissioners to know, through this process we had our first meeting, we had approx -- what, Buster, what did we have? 250, 300 people at the original meeting. We broke into groups representing the various aspects of water users. Oil and gas; mining, and utilities, municipal, and in the private sector, as well. And had them review what some of their needs, and concerns were, specifically supply and demand at the current time, and then kind of brought those issues together so we would see what the supply and demand is now, and to project out what was needed in the future, and that's where Chapter 8 kind of comes in to them look at where we are at with our supply, where we are at with the demand we have, and how we can better make this aquifer last longer. And through that process, we had, I think -- Len, was it three other public meetings in various areas, or was it two? I can't -- but anyway, we had two or three other public meetings

to leave this as a flexible plan, because at this point in time, we need the buy in from the representative governments that are here tonight, because as said in our work groups, the Water Users Association is not in a position to buy any of the entities here, to make a commitment and that's why you all are here tonight, to give us your buy in on this plan. And one of the ideas is that over time we will work out an implementation strategy that is suitable, and combines the elements that are described in Chapter 8. And let's see. That's really about all I have to say. If there are some specific questions on some of the recommendations that we have made, I would be happy to take them.

MR. DENNIS HOLMBERG: Mr. --

MR. BUSTER GOFF: Any questions?

MR. DENNIS HOLMBERG: Mr. Chairman?

MR. BUSTER GOFF: Yes.

MR. DENNIS HOLMBERG: I might suggest if you could go into some of the -- either you or maybe Len together go into some of those recommendations for the commission members to understand how that -- why those recommendations

25 were made.

in various areas of the county to solicit participation in this, as well. And our consultant for the Water Users Association has been Len Stokes, and he has kind of been our voice when we had certain concerns. Len, would you like to go from there?

MR. LEN STOKES: Thank you, Dennis. My name is Len Stokes. I have worked for your Water Users Association for a little over a year. One of my jobs was to kind of get this, and tie it in to where it fit the area, and it still met the template dictated by the Interstate Stream Commission. One of the things that we found in looking at the template, and what was wanted was alternatives, and those alternatives if you look through here range everything from low flow toilets to desalinization or importing of water. So what we did was not just jump in and say, we need to do A,B,C,D,E, because I don't think anybody was ready to start doing that at this point in time. So we tried to be a little more flexible with the implementation schedule, and I

think if you look, and it's on page 824 of your

schedule is. It's in Table 8.3.

water plan is where the sample and implementation

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the next year or so, you develop your management
strategy and then over the next -- not just three
years, but 40 years you implement that, and you do
what you can to make your basins sustainable and
your fresh water supply sustainable for growth and
the benefit of the county. Dennis, did that
handle that?
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MR. DENNIS HOLMBERG: I think that kind of covers that.

MR. BUSTER GOFF: Any questions?

Concerns?

MR. DENNIS HOLMBERG: Mr. Chair --MR. BUSTER GOFF: Yes. We have a

question.

MR. PAUL NAJERA: Well, what I was going to say was, I know that around Buckeye. there's a lot of wells that's pumping fresh water to the mines. And you know, eventually them wells are going to deplete.

MR. LEN STOKES: Uh-huh.

MR. PAUL NAJERA: And that might be one thing that we need to start looking at, and maybe we could use other different water, other than fresh water for the mines.

MR. LEN STOKES: That -- let me find

for approval. It goes to the Interstate Stream Commission for acceptance. And acceptance is 2 based upon us following the template. Now one thing, I don't know if everyone knows here, when 4 the grants were handed out in the State of New 5 Mexico to fund these 40 year water plans we didn't 7 get any of it. And so you all funded this water 8 plan. I know that that was costly, but I will tell you one thing that is a very great benefit I 9 feel is that this is your water plan. This water 10 plan wasn't dictated to you on how it would be 11 done. The template was followed. I see no reason 12 that this plan will not be accepted. On to the 13 next part of the question. The purpose of the 40 14 year water plan is to protect the water in this 15 region. And the 40 year water plan concept was 16 developed in the 1980's after the City of El Paso 17

tried to go in and appropriate waters in New 18 Mexico for use in El Paso, Texas. And when the 19

20 Supreme Court threw out the, just the straight barring of exporting of water during the commerce 21

clause, one of the issues that was brought up was, 22 23

and the way to protect this water was to show that this water was going to be needed in New Mexico. 24

Well, that's -- that was the inception of the 40 25

it, but that is one of the alternatives that's listed in Chapter 8 is to start using monpotable water. Either brackish or brine water.

MR. PAUL NAJERA: Yeah.

MR. LEN STOKES: Not only for the mines, but different parts of the petroleum industry where it can be used is well instead of using fresh water. So that is part of the alternative.

MR. BUSTER GOFF: Any other questions? A good question.

MR. W.H. GRAHAM: Len, if you will, refresh us, looking ahead a little bit with the report assuming that it's approved, it comes from the local organization, that it goes through the Interstate Stream Commission for their review and approval. Is that correct? And how is the State engineer, the state engineer's office involved in any way, and what is the result, what benefit, what are we driving for by getting an approval of this? What are we trying to put in place in terms of benefits to the local group and the county?

MR. LEN STOKES: Okay. Your statement was basically correct. There's one difference. It does not go to the Interstate Stream Commission 1 year water plan. And that's what this 40 year water plan does. If you look at the water plan 2

and the predictions, those -- those are possible scenarios that show that the water will be needed

here, and that will protect our water from being 5 appropriated, for example, if the City of Lubbock, 6 7

and I'm not saying -- there has never been any -that's probably a bad analogy, because they have 8 never made an attempt or question coming in here 9

and drilling wells, but let's just say that if a large city in Texas wanted to drill wells here,

this water plan would protect our water from that. 12 13

It would also protect our water from an

14 appropriation going over to the Pecos or anywhere out of this basin, because what we have shown in 15 16

the water plan is that there is a need for this water in Lea County. The State engineer does not

-- really doesn't have anything to do with this. 18

This is all part of the Interstate Stream 19

20 Commission. The office is joint, but they are 21

really two separate divisions. The State engineer 22 serves as the secretary of the Interstate Stream

Commission. This plan has been developed with the 23

24 Interstate Stream Commission. They have been to the last two or three meetings, I believe. They

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have taken an active role. We have talked to them -- here again, you get to some of these different alternatives back there. They wanted originally set in stone we would do this, in this year and this the next year, and we have met with them, and dealt with them and shown them that that's not just possible. Plus that's not required in the 40-year plan. So I think that we're in good shape in acceptance, and I think that the plan that you have here will protect the water in the Lea Basin. I think that the management alternatives that can come out of this plan are what are really going to benefit the county as a whole in the future. Did that answer it? Is there?

MR. W.H. GRAHAM: That's great. MR. LEN STOKES: Is that?

MR. W.H. GRAHAM: Yes. Thank you.

MR. LEN STOKES: Yes, sir.

MR. BUSTER GOFF: Any other questions?

MAN'S VOICE: Mr. Goff? MR. BUSTER GOFF: Yes.

MR. BILL BRININSTOOL: Bill

Brininstool. Len, are they going to honor our commitment that we are trying to make 55,000 acres in Lea County? Are they going to honor that, or

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just put it in limbo, or what?

MR. LEN STOKES: Mr. Brininstool, I don't know. We haven't pursued it. I think that. you know, there's several alternatives left. What we are really pushing for is for them to close this basin and go to appropriations. At that time we can take our appropriations, and look and see if we wish to pursue any of those. If any of the entities wish to pursue those, or if we let those drop, because we basically done what we wanted to and closed off the basin to future new appropriations because there's a sufficient amount of water rights there right now. I mean that will be a decision that you all are going to have to make in the future, but what we did is we have kept other appropriators out of this basin while we got our water plan done. And that was the, you know, that was the objective of filing those applications to begin with. Now there's going to have to be a decision made based on the reaction of the state engineer to our request to close the basin is what I would (inaudible). I don't know exactly what your policy decision is going to be

on that, when that time comes. And I know that

didn't answer your question very well, and I

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couldn't because I just don't really know what you
all are going to do.
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MR. BUSTER GOFF: Well, it did what we was needing to do.

MR. LEN STOKES: Yes, sir. That's correct.

MR. BUSTER GOFF: Any other questions? Comments? Do you have anything else?

MR. LEN STOKES: No.

MR. BUSTER GOFF: Well, at this

point --

MR. LEN STOKES: Buster --

MR. BUSTER GOFF: Yes.

MR. LEN STOKES: -- let me make one statement. There's a little bit of stuff in here. When you all approved this, if that's what you decide to do, there's, I would like to approve this, and allow us to do a few little verbiage changes such as changing the stuff in the brine. The major concept, none of that will change, but

21 as far as, instead of saying, we are wasting 22 brine, that we are disposing of it, I have

23 spent -- we have really spent a lot of time on the last two chapters, because they're the, you know, 24

the alternative chapters, and I need to go back

25

through and reread this just pointed out to me. I need to go back through and really reread these earlier chapters and maybe make a few minor verbiage changes, but besides that, I think your plan is in very good shape.

MR. BUSTER GOFF: Okay. Are we ready for the vote of the resolution?

MR. DENNIS HOLMBERG: Yes, sir.

MR. BUSTER GOFF: Let me -- I really don't want to have my back to the Hobbs I don't know why. connection.

MAN'S VOICE: (Inaudible).

MR. BUSTER GOFF: Yeah. The first one would be the Lea County Water Users. Now. should we have a motion to accept these first?

MR. DENNIS HOLMBERG: Yes.

MR. BUSTER GOFF: Okay.

MR. DENNIS HOLMBERG: Yes. What you'll do is have a motion and a second with each

one -- within each one of the entities for adoption. According to your -- if I might,

Buster, when your water plans were sent to city

23 clerks and city managers, they came along with a

24 resolution that hopefully each one of you 25

received. And that resolution is required as a

24

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MR. BUSTER GOFF: Oh, yeah.

MRS. MONICA RUSSELL: Yeah.

MR. BUSTER GOFF: He took. Sorry.

MRS. JOANN DAVIS: Yes.

MR. E.A. WOODELL: Yes.

MRS. MONICA RUSSELL: E.A. Woodell?

MRS. THERESA HERRERA: Yes.

MRS. MONICA RUSSELL: Judy Lambert?

14 the decision, remember the pie chart that Roger had up there that showed all the various users of 15 16 water. And as municipalities, we certainly aren't 17 the largest users, and so you have, as you vote. 18 as municipalities were voting really for the 19 county, many of the representatives that you 20 appointed to the Water Users Association may not 21 even be in your municipality districts. The 22 representatives we have were not representing 23 their entity, but representing their interests as 24 they represented the dairy industry, as they 25 represent the municipalities, oil and gas, and the

have read in the newspaper -- it doesn't matter if you know much about it, but have read about the Mesa Petroleum wanting to ship water up at Lake Meredith all the way down through Texas on down to San Antonio. How many of you have just seen that?

- 19 They are wanting to do that in a 96-inch pipeline. 20 Now think for a second how many inches 96 are.
- 21 That's about nine or 10 feet. Something like
- 22 that. Eight feet, whatever. We have got an eight 23
 - foot pipeline carrying water that's pumped out of
- 24 the Ogallala aquifer that's going 300, 400 miles. 25
 - That's what the state of water is today. Just

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this last three months you have read about the 2 endangered species thing there in Albuquerque 3 where they had to let water go down through the 4 river to keep the silvery minnow alive. They 5 released 225,000 acre feet of water in 90 days. 6 Now just so you put that in perspective, the city 7 of Albuquerque uses consumptively 50,000 acre 8 feet. They let 225,000 feet go out into the 9 storage reservoirs. Albuquerque in one year uses 10 50,000 acre feet. All of the irrigation in the 11 middle Rio Grande, that is North of Albuquerque, 12 down to Elephant Butte uses only about 100,000 13 acre feet. 120,000 acre feet, and that's in a 14 year. The city of Las Vegas, Nevada is trying to 15 get water from anywhere they can get it. And 16 pipeline it from anywhere in the Southwest to the 17 city of Las Vegas. In South Dakota, they had 300 18 million dollars worth of water projects in the 19 Southeastern corner of the state. The southwestern 20 corner of the state where the aquifer exists. The 21 Ogallala aquifer exists. 300 million dollars in 22 order to create drinking water systems because 23 they are so close to being out of fresh water. So 24 what we're doing here tonight is that we are 25 recognizing that the aquifer is not going to be

1 they used to buy oil rights. So it's not a small 2 problem. It's something that if we're going to 3 exist as a county and as a state, that we have got 4 to address, and again, I thank the people in this 5 whole county who have worked on this so hard. 6 It's a good project. I appreciate Len Stokes' 7 constant advice. Dennis Holmberg and Chairman 8 Goff of this committee. So again thank you very 9 much, and keep in mind what the stakes are. 10 (APPLAUSE). 11

MR. BUSTER GOFF: Anyone else? Yes?

MRS. BECKY JO DOOM: Becky Jo Doom,

Jal. When can we expect this final plan to go
through the ISC before they accept it?

THE REPORTER: I'm sorry, ma'am. I

THE REPORTER: I'm sorry, ma'am. I can't hear you.

MRS. BECKY JO DOOM: When can we --THE REPORTER: Can you use the microphone? Maybe that will. Thank you.

MRS. BECKY JO DOOM: When do you think that we might be able to have this plan presented to the ISC for final acceptance?

MR. BUSTER GOFF: Len?

MR. LEN STOKES: Becky Jo, we intend to present this plan at the ISC, at the Interstate

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with us forever. That we need to do something
now, or if we wait until we are out of water then
it's too late. There are outside sources who
would come and take our water, and pump it to San
Antonio, or pump it over to Carlsbad and clean the
potash mines. And that's completely legal. The
U.S. Supreme Court has said it's legal, and so
this document that we have approved tonight in its
flexibility provides us a protection mechanism,
but number two, it should give us all the urgency
that we have got to plan how we are using this
water. How are we going to do it? What are our
value systems in this county for the use of water,
and we need to get about implementing those value
systems today, because we have got wells that are
daily running dry in Lea County, and so it's not
that we have got 20 years to think about it. We
need to start today, and each of your individual
City Commissions needs to start doing things that
will cut and curtail their use, and then we need
to protect what water we do have from outside
sources. And that's what's going on here, it's
nation, world wide water is going to be far more
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strategic from now on than oil has ever been. The

Arab countries are buying up water rights now like

Stream Commission meeting next month. That meeting has not, the day has not been scheduled yet, but as soon as it is, we will let you know, and we will be on the agenda. I have already spoken with them.

MR. BUSTER GOFF: Will they accept it? I mean, or?

MR. LEN STOKES: What we will do, we are supposed to take so many copies up there and hand them to the staff. We are just going to hand them to the staff at the meeting, and give a presentation on what we have done to the entire board. It's kind of a publicity deal, but I think it will work well. We want the board to know that we have done our own plan, and we are submitting it for acceptance, and we will do a run down of what we have done in the plan. It's doing a little extra than just taking it into their offices and putting it on their desk.

MR. BUSTER GOFF: When do you expect
the acceptance of that? At that board meeting?
MR. LEN STOKES: No. They won't accept
it then. The staff will have to go and review it,
but the staff has already been, you know, they
have been looking at it. It will probably be

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      after the first of the year. I'm going to say
      February or maybe March before they do an
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      acceptance of it. I mean we're, with their
      different lawsuits over the minnow, and other
      items in the Interstate Stream assistance, it's
      hard to get on their priority list, but I think we
 7
      can look for acceptance sometime after the first
 8
      of the year, and I'll say February or March would
 9
      be my best guess.
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                MR. BUSTER GOFF: Okay. Any other
11
     questions?
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                MR. DAN FIELD: Mr. Chairman.
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                MR. BUSTER GOFF: Yes.
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                THE REPORTER: I'm sorry. I can't see.
15
                MAN'S VOICE: Dan Field.
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                THE REPORTER: Thank you.
17
                MR. DAN FIELD: Dan Field. The
18
     Interstate Stream Commission granted us two years
19
     to have a four-year plan in place. Where are we
20
     on that time frame?
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                MR. DENNIS HOLMBERG: Mr. Chairman, if
22
     I might -- Dennis Holmberg.
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                THE REPORTER: Thank you.
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                MR. DENNIS HOLMBERG: Dan, we are
25
     probably six months past that. We are probably at
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30 months instead of the 24 months that we had
      hoped for, which even at 24 months, I believe, Len
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      is the quickest any water plan has been done.
      There are some water plans that are now in their
 4
 5
      eighth and ninth year and still haven't been to
      the ISC to ask for acceptance.
 7
                MR. LEN STOKES: That's correct.
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                MR. BUSTER GOFF: Any other questions?
 9
      If there's no other questions, I would like to
10
     recognize each of the members of the Lea County
11
     Water Users Association for their dedication these
12
     last 30 months or more. And they have done an
13
     outstanding job for each of the commissions that
14
     they represent. Each of the cities that they
15
     represent. We've, as you saw on page 824, we have
16
     finished the first step of a long implementation
17
     schedule, and we certainly intend to continue to
18
     be active in this role, and we would appreciate
19
     the continued support that each city and town has
20
     given us. Thank you.
21
     (APPLAUSE).
22
                MR. BUSTER GOFF: We are adjourned.
23
                   (Meeting concluded at 7:24 P.M.)
24
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3-14-97

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APPENDIX D

Geologic Time Scale and Stratigraphic Nomenclature Chart

<u></u>		GEOLOGIC TIME SCALE			1
	ERA	PERIOD	EPOCH	M.Y.B.P.	1
		QUATERNAR' (Q)	Holocene Pleistocene		
	<u>)</u>		Pliocene	2 5	
	CENOZOIC		Miocene		
	ËN	TERTIARY		25	
	O		U Oligocene Eocene	38	
_			Paleocene	55 67	
			Upper		
		CRETACEOU:		100	
	200		Lower		
·	OZC		Upper	140	
	MESOZOIC	JURASSIC	Middle		
	Σ	(1)	Lower	180	
	-		Upper	<u>200</u>	
		TRIASSIC (%)	Middle Lower	215	
			Upper	250	
	•	PERMIAN (P)	Lower	270	
		PENNS	YLVANIAN (P)	290	
	()		SSIPPIAN (M)	330	
	<u>201C</u>		Upper	365	
	EOZ	DEVONIAN (D)	Middle Lower	390	
	PALEOZOIC	SILURIAN	Upper	415	
	luiu	(S)	Lower Upper	425	
	-	ORDOVICIA (#)	N Middle	485	
		CAMBRIAN	Upper	500 515 540	

Generalized etratigraphic section in the Southern High Plains, New Mexico

	Precentian	to Ordovician		Permian	frianic	Cratacaous	Tertiary	gy <u>stem</u> Quatermary	(*Moorn or pro
rocx	and igneous		1	Bedlmentary	o bockum droup	b Tucumcari Shale	* Ogalialm Formstion	gtratigraphic Unit • Alluvium	probable aquifer, regardle
		6,000	3,000 to	8,000±	1,000 (7) to	0 to 180	0 to 400, averages about 200	(feet) 0 to 200±	egardless of ar
		Underlie entire area.	Underlie entire area.	Underlie entire area.	Underlies entire area. Crope out locally in High Plains and extensively around edges.	Crops out locally fouth of Portniss Valley, underlies Cenozoic strate in Rosswelt Co. south of Portnies Valley and in northeast third of Jas Co. Thickest in southeast Rosswelt Co.	Crops out or underlies alluvium throughout entire area except in portales valley where removed by early pleistocene erosion preceding Quaternary alluviation.	Distribution Attains greatest thickness in Portsies Attains greatest thickness in Portsies valley. Crops out extensively on and at edges of High Plains, where it is up to 40 feet thick.	deneralized attactigreprice recent or production potential)
		Granite and volcanic rocks.	Limestone, dolomita, shale, sand- stone.	5,000 feet of predominantly dolomita Permea and limestone, overlain by 3,000 ft. water of salt and anhydrite.	Upper part red shale with lenticu- lar sandstone and limestone inter- bedded, up to 1,200 ft. thick; lower part sandstone with red shale, up to 600 ft. thick.	Upper member yellow clay silt with thin anniatione and limestone lower member blue shale thin sendetone and limestone; sand and gravel in erosion channels at base is up to 100+ feet thick.	gand, silt, clay, with rine grave al generally near base. Wostly poorly consolidated. Contains many caliche beds; caliche at present land surface well developed.		
		probably contain little or no water.	parmeable units contain only highly warring water.		. 1	Bend and grave. Onc. I have years below in locally large quantition of water; wells in Causay-Lingo area, Rocsevelt County tested as high as 1,200 gpm. Generally yields fresh to slightly saline water.	quate. Has yielded more than 1,000 grm to wells in Curry Co., up to 1,700 grm to wells in las Co. Generally yields fresh water.	In portains Valley some waits produce water than 1,000 gpm. Elsewhere yields small quantities of water where not above water table. Generally yields fresh water.	Weter-bearing characteristics