

Lea County Planning & Zoning Board
Regular Meeting
Tuesday, April 10, 2018 9:30 A.M.
Commission Chambers, Lea County Courthouse, 100 N. Main, Lovington, NM

MINUTES

ITEM 01: Call to Order

Kallie Windsor, chairperson, called the meeting to order at 9:35 am.

ITEM 02: Roll Call:

Kallie Windsor, present; Guy Kesner, present; Kay Hardin, present; Gary Eidson, absent; Johnnie Hopper, present; Dickie Wall, absent; & Daniel Johncox, present.

ITEM 03: Comment from the Public

Having no public comments moved on to item 04.

ITEM 04: Consideration of Approval of Minutes of March 13, 2018, Meeting

Daniel Johncox moved to have the March 13, 2018 Planning and Zoning Board Minutes approved. Seconded by Kay Hardin. Approved by all present.

ITEM 05: Sign Approval Sheet for Minutes of March 13, 2018 Meeting

Approval sheet for the March 13, 2018 Planning and Zoning Board Minutes by all board members present and returned to the recording officer.

ITEM 06: Open Public Hearing

The public hearing was opened and all present were informed that if and when they chose to speak they would have to take an oath and be sworn in as a witness.

ITEM 07: Consideration of Approval of Libba Land Subdivision, Type 2 Subdivision of 51 Lots in Section 34, Township 18 South, Range 38 East, N.M.P.M., Lea County, New Mexico.

Kallie Windsor: (Chair) swore in Bruce Reid, County Planner, stating "Do you solemnly swear to state the truth, the whole truth, under penalty of law."

Mr. Reid: I do. Presentation for Libba Land Subdivision located in the south half of section 34, township 18 south, range 38 East in Lea County, New Mexico. It is going to be a Type 3, I mean a Type 2 subdivision with 51 lots between 2.16 acres and 3.24 acres. Showed the public hearing notice stating it gives the time and location of the hearing. It states the location of the subdivision as stated above and gives common language location of the subdivision being one-quarter of a mile north of Kansas Street between Grimes Street and Dal Paso Street. Shown the plat of the proposed subdivision. Stated the completion of the proposed subdivision would be in three phases. The first phase being Unit One, the eastern most portion of the subdivision, then Unit Two, the middle portion, and finally Unit Three, the western most portion connecting the subdivision to Grimes Street. The proposed subdivision will build Georgia Street from Dal Paso Street to Grimes Street.

Guy Kesner: Obviously the construction of Georgia Street will be done in phases, correct.

Bruce Reid: Yes.

Mr. Reid: Phase One would revamp what is now Cottonwood Street. It will widen to sixty feet and it will be paved or chip-sealed to the western edge of Unit One. And then as they progress they will continue to do the roads. Shown satellite map with floodway areas and stated that the proposed subdivision was outside the flood zone except for the southeast most corner of the subdivision which falls into the flood zone. He continued to show that the southeastern corner was being reserved for the potential flood waters. Mr. Reid through the time line of the application process for Libba Land Subdivision, starting on 22 December 2017 with the submittal of the application, the application fee, disclosure statement, and restrictive covenants to the present day of 10 April 2018 with the actual public hearing for this proposed subdivision. This finished Mr. Reid's presentation.

Mr. Johncox: (a board member and developer for the subdivision, he will recuse himself during the vote.) stated he was just going to remain in his board seat rather than standing at the podium. He started to introduce Mr. Cortez (Chris) and Mr. Atkins (Jack) from Atkins Engineering before Mrs. Windsor: Reminded Mr. Johncox, he needed to be sworn in.

Mr. Johncox: I do so solemnly swear to tell the truth, the whole truth, and nothing but the truth, so help me God and Law. This is Daniel.

Mr. Caldwell: (County Attorney) There is no magic wording to the oath and that it would be acceptable, but that the chair should have administered the oath, but this should be acceptable.

Mrs. Windsor: Do you solemnly swear to state the truth, the whole truth, under penalty of law.

Mr. Johncox: Yes, ma'am. We did redo just a couple things in this subdivision and they were minor and had to do with the restrictive covenants. A lot of times when we do these types of subdivision; we like to restrict a lot of animals, just what happens when a property owner has a lot of animals. But we wanted these potential owners to know that they could have animals and pens for 4-H animals and raise animals in that way. We, also, changed the water usage. We submitted this subdivision as a half an acre foot of water per property owner originally, and the average use in the rural subdivision is three tenth of an acre foot (.3 acre feet), so we actually made that change, as well. So it reflects more the actual usage in the county. Those are the only things that I changed in the terminology of this subdivision proposal. And I will give the floor over to Chris and Jack of Adkins Engineering so they can give the findings of the hydrology study.

Mrs. Windsor: Chris, do you solemnly swear to state the truth, the whole truth, under penalty of law.

Mr. Cortez: For the record my name is Chris Cortez with Atkins Engineering and Associates out of Roswell, NM. We are at 2904 West Second Street in Roswell. Good to be back here. I know we have gone back and forth on this subdivision for a while here. We have a lot and you guys have a lot of paper on it. I will just cut right to the quick, here. The issue is that the Office of the State Engineer (OSE) issued a negative opinion of the water availability of this subdivision. The details of that have been set forth multiple times in these letters and I think I want to talk about why we say there is more than forty years of water. So forty years is the planning period for subdivisions and what we look at is actual decline values demonstrated in the aquifer. I will try not to go to detailed. I will keep it general. The Lea County Aquifer is the western edge of the Ogallala. At the bottom of the aquifer is a redbed and then everything above it is alluvial fill and there is water in there. The water was deposited a long time ago and it doesn't really recharge from rain, but there probably a little bit. It has been varied; different studies have pegged it at different amounts, but as water is removed from storage it declines. There is a bottom and the bottom we would call the redbed or the base of the valley fill or the top of the redbed. The saturated thickness is the difference between the current water level and the bottom. And that is basically it. As the people of Lea County pump water out of the ground whether for irrigation, or oil and gas uses, or domestic uses, or livestock uses the water comes out of the ground and the water declines out of storage. That is basically it. There is a certain amount in and certain amount coming out and the

water is going down. In some places it is going down more than others. Fortunately, there is a USGS (United States Geologic Survey) recording well in this section just north of the subdivision. In the past the USGS and the OSE would go around all over the state and record water levels. We can all go measure a water level in our well, sometime easier than other times. They tried to measure specific wells at specific time over a long period of time to generate a record of decline in the aquifer. The decline only comes from water coming out of the ground. That is the one easy thing. Some places it is harder, like Roswell, where the water levels recharge. But, here you do not have to worry about that what is coming out; is what is coming out. So there is a USGS recording well in the section which is very convenient for us to look at data. That USGS well has, I think, like 70 years of recording level decline. So, it is a long record of data that has been generated for this well. Now, if you look at the overall average which we discussed in our report. The overall average decline through that total period of time and this is through the 2015 data so it has a 73-year record of water level decline. It has declined 67 feet in 73 years. That is an overall average decline of 0.92 acre feet per year. Now, there is a more recent decline. You know decline accelerates, there is more houses out there. Since 1997, the rate of decline, that is a twenty-year average, the rate of decline is 1.19 acre feet per years. And we took it to the next level which would be 2007 forward, that is a ten-year period and the decline is 1.4 feet per year. So, it does appear the decline is increasing. So that is true. The decline appears to be increasing, but we looked at the saturated thickness values, and there is an on-site well that is drilled to the redbed at 242, approximately 242 feet and the water level is at 92 feet subtract that and using the decline that is actually observed we projected the life expectancy of the water supply in this area and underneath the subdivision; using those values we are giving you a range it could be more it could be less, (updating the video slide for this information)

Mr. Kesner: In order to Alluvia field? Is that how you pronounce that?

Mr. Cortez: Alluvium

Mr. Kesner: Alluvium, could you explain that?

Mr. Cortez: Yes, that is just sand and clay. Alluvial type formation that were deposited. Like in the mountains for example, the water comes out of the rock formations or in the rock. Or like in Roswell the water comes out of cavernous limestone, right. Here it is just deposits of sand and silt and clay and it is just generally called alluvial; alluvium; alluvial deposits. So it is deposited a long time ago and it is sitting on top of the redbed. The water comes out of that formation. (Mr. Cortez refers to Mr. Atkins).

Mrs. Windsor: I need to swear you in, Jack. "Do you solemnly swear to state the truth, the whole truth, subject to law."

Mr. Atkins: Yes, I want to add on to alluvium, the Ogallala is the result of large deposits that came down from the top of mountains millions of years ago so you had of the Ogallala or terraced gravels that came off the mountains, sand and gravel and was deposited on the redbed which Chris talked about. Of course, the redbed is an aerobic structure so you will have various degrees of saturated thickness undisturbed. So, when you start disturbing the water is when you get water level declines. That is from disturbance or removal of water it is when you get water level of declines. Same as what he said.

Mr. Cortez: The clay bed or the redbed is what ho...; if the clay bed was not there, then the water would not be in the Ogallala. It would just drop through and you would not have water sitting up here. The really nice thing about the Ogallala, is it is like coarse sand so the water quality is very good. Generally, some places like Roswell; our water is really, really hard because it is coming out of limestone, so it is picking up that calcium carbonate in the limestone. So that is one of the things about the Ogallala, it is really good high quality water. Did we answer your question?

Mr. Kesner: Mostly.

Mr. Cortez: We deal with this information all the time is there something we could make clearer.

Mr. Kesner: I think of it as a big underground lake, and it is not an underground lake?

Mr. Cortez: Right, it (water) is in the inner thistle space. The space between the gravel, the rocks, and the clay. It is in the pores space between those features. When you're pumping your well it is pulling the water out of that formation.

Mr. Atkins: Originally it was at steady state; what was coming in was discharging to the east, very slowly. And had this remained ...

Mr. Kesner: And what was discharge what?

Mr. Atkins was at time difficult to understand because of his voice volume and his distance from the microphone.

Mr. Atkins: What was actually recharging or how it got there from the beginning was a lot of the recharge is from the old sinkholes you see out west. There is a tunnel or recharge zones that would fill up with water and then drain into the aquifer system. But, originally undisturbed the aquifer was a slow discharging eastward into Texas at various levels. And then when man began to disturb it, then it caused the change in the shape of the water table and the saturated thickness and how much water was discharging. Some of the discharge instead of going to Texas was taken out here and used; still through this day with ground water pumpage.

Mr. Cortez: The water actually moves under the ground very, very slowly from the west to the east. And as you guys drive east towards Roswell and get off the cap, caprock, the Mescalero Escarpment, then you get off the Ogallala and then you are down into a different area. Lea County is interesting because that is the western edge of the whole Ogallala which spreads into Kansas and Texas and Nebraska. It is a big aquifer system and you guys just happen to be on the western most edge.

So, I got this now. I will see if I can continue where I was before.

As I was discussing in our report the decline. There are other USGS Wells to the east of the subdivision. This one is a couple miles to the east, a mile or so to the east, and this one shows a shorter record. The one we have in our section has the longest records; it is one of the longest records I have seen that is really helpful. Then we move to the east and we see overall .18, a little bit less. A little bit more in twenty years, then it is holding steady there. This well over here the twenty-year decline is about two feet and this is several miles to the east, closer to Texas. In the last ten years the decline has dissipated a little bit and they are only showing about a foot of decline right now. This is actual data collected over time by the USGS and also by the State Engineers Office of New Mexico. This is actual decline; this is what is coming out of the aquifer. Then we get into usable life span of the water and these are just projections. Obviously, we are making projections based off actual data. Assuming the saturated thickness, yes, it does vary, like Jack said. The redbed is here flat and the land surface is also flat. The redbed has little troughs in it, some place it may be a little higher and some it may be a little deeper. The can move over locally the troughs run west to east. Well just looking at the exploratory well Alan Eades actually drilled in the subdivision. He showed the redbed at 242 feet. The OSE states in their documents that it could have been drilled a little bit deeper and maybe it did not go to the base of the redbed. So there is some play there. But, what we are getting into is we are taking what the value in the water level is; which is around 93 feet in the section in the USGS Well in the well in the subdivision. And subtracting the total depth of the aquifer. And we are saying if we decline at x amount of feet per year, how many years are left? On the low end with the current trend of 1.4 feet per year with the least amount of saturated thickness then there is 89 years of saturated thickness. Which is more than double the 40-year requirement.

Mr. Hopper: At this point you are projecting 89 years of life expectancy for this subdivision?

Mr. Cortez: We are saying there is a range. 89 years is kind of worse case at the current observed declivity. Which is the last ten years of decline. We are saying 89 years that is what we are saying. I

am giving you a range, not because we are trying to be illusive with the data. It is just that it can vary. The decline rates can change they can go up; the decline rates could slightly go down. The saturated thickness in any individual well could a little deeper or shallower. So we are giving you a range.

Mr. Johncox: Could we make a statement that if we used the actual decline rate and the actual saturated thickness, then what would that be. (Asking for the life expectancy of the aquifer with these parameters.) One hundred forty-seven years.

Mr. Cortez: Yes, it is somewhere in there. I am not trying to be illusive, I am just saying ...

Mr. Johncox: I just want to make sure the facts get in.

Mr. Cortez: It is a range. So if you want to say the most current decline rate at 125 feet of saturated thickness; which some of your wells in your subdivision may have a little more saturated thickness in the wells than others; it is going to vary. This would be a low end of the observation. 89 years would be the low end; it could very well be much higher. It is certainly more than 40 years.

Mr. Hopper: If I understand what you just said; you said the current usage out there is .92 feet per year per residence?

Mr. Cortez: No. I said we have a 70-year record in that well. In this USGS recording well, there is a 70-year overall record of water levels and this is current to when this report was written and overall it has declined 67 feet in 73 years, which is less than a foot per year overall.

Mr. Hopper: So that was the historical record of the USGS well which is less than one foot for over about a 70-year period.

Mr. Cortez: Which is a pretty long record.

Mr. Hopper: Right

Mr. Cortez: But, obviously in the OSE reports they talk about that the more current decline is a better measure. They make a lot of statements about that we should use the more recent decline numbers. Okay, which we are and the most recent decline of ten years shows about 1.4 feet per year. And that is ten years of measuring. So there you go. So again it is a range. Now, what the OSE says in their report is the decline their model decline is 4.7 feet per year. That is what their model says. So if you look at the various letters that were provided to you by Ms. Magnuson.

Mr. Kesner: What does their model say?

Mr. Cortez: Their model says; this is why they gave this subdivision a negative opinion. Ms. Magnuson says that for all three model runs that they show the decline of the subdivision to be 4.6 to 4.7 feet per year. So that is what they are showing and that is where the rub is; that is why they gave this subdivision a negative opinion. They ran this model and they say the decline should be between 4.5 & 4.7 feet per year. These model cells, this subdivision, and everyone in and around Lea County would go dry, it is kind of weird they contradict themselves, 2029 dry 2034, then 2038 dry by 2044, they are listing the same models, so I am not sure. Either way they are saying less than 40 years. They are saying less than 40 years and the decline is between 4.5 & 4.7 feet per year. Obviously, that is not what is being observed in the aquifer and not being consistent with the record and that is where the difference is in between our assessing availability and why they have taken this position and given this negative opinion.

Mr. Kesner: Can you explain to us again where they come up with this 4.5-4.7 in decline per year versus the observe decline at 1.4 acre feet per year?

Mr. Cortez: The only way for water to come out (of the aquifer) is for people to pump it. We feel very confident in the record. Why do they get a different number and that is the question everyone should be asking? Really, that is the question we should be asking OSE. Why does their model run not simulate reality and what has been observed?

Mr. Kesner: Has that been asked, Bruce?

Mr. Reid: Yes!

Mr. Cortez: I will just state why. Here is what they do. They say here is the saturated thickness value and here is our model and they propose to pump every water right, every paper file they have at 100%. That is where they are getting it (their decline rate).

Mrs. Windsor: Even if it is not being used?

Mr. Cortez: Even if it is not being used. Even if it does not exist. Even if ...

Mrs. Windsor: Even if the water rights are allocated to a particular area but there is not a well there so they are not being used; they still assume they are being used.

Mr. Cortez: That is correct. OSE saying, "This is what is on paper and we are going to pump all of it." And as you can see it is in excess of what is actually happening. So the question that becomes is Why? And we provide you guys some of the reasons why we believe that is true. One of the major reasons is that a person would get a domestic permit for a year and OSE would give that person 3 acre feet per year (afy). In reality, most domestic users do not pump anywhere near 3 afy. So the national groundwater station says when they look at domestic water wells that are metered and they look at them in aggregate; they say that the average in New Mexico is .29 afy. Obviously some are a little more and some are a little less, but regardless if you are pumping 3 afy instead of .3 afy you are ten times the pumping on paper. And that is OSE's position. They say we need consider "what if all the water rights where exercised?". And Mr. Johncox and the engineers are saying "We have considered it and we do not think it is valid."

Mr. Kesner: Chris, I want to ask you a question. Approximately, how many gallons are in an acre foot of water? I never heard anyone be able to tell me that.

Mr. Cortez: An acre foot is, I just always say it as the number, it is 3,2,5,8,5,1 gallons. 325,851 gallons is an acre foot.

Mr. Hopper: 43,560 sq. ft. is how many gallons?

Mr. Cortez: An acre is 43,560 sq. ft and a cubic foot of water is 7.48 gallons per cubic foot. So multiply 43560 by 7.48 and you get to 325851. Enough water to cover an acre of land to a foot deep is an acre-foot. To an inch would be an acre-inch. So it is a lot of water, just for those who are keeping track, since you are in Lea County, it is about 7700 barrels of water; 42 gallons per barrel. That is one of the reasons domestic wells. The other reason is irrigation. Irrigation use; uses a lot of water and things have changed in Lea County. Obviously, everyone used to use flood irrigation; uses more water than a pivot. And a lot of Lea County is historically fallow; that is, it is in CRP or it is not used. I think this is somewhere where Jack can speak to this because Jack used to work for the OSE of New Mexico and did a lot of the mapping of the irrigation in Lea County. And the thing to remember is the irrigation in Lea County mostly occurs over here. The western half of Lea County, there is not a lot of irrigation. All the irrigation in Lea County occurs on this side of Lea County. So I will let Jack talk to some of that.

Mr. Atkins: I was trying to think about why the declines are so much different. And really, Chris, has answered that correctly. When they fund the model, they fund the model with everything on record. One of the big killers is all the irrigation, water rights. I have been doing this stuff for 45 years. I was working for the OSE in 1973 and one of the jobs I had in the first few years was to begin mapping Lea County irrigated lands and in charge of the water level programs we are talking about back in the 70's. So what actually happens what we map and what was developed for irrigation was around 109,000 acres in Lea County. We mapped all the fallow lands at that time. Back then, there was a huge amount of fallow land. In the last twenty or thirty years the fallow, the lands not being irrigated but with water rights that are pumped in the model. For the last forty years, have been fifty percent fallow; they are not used. They just sit out. You can see the old pumps there and the land fallow. A lot of this was done because of the way Lea County was opened up for development in the 60's. Many of the people that

lived out in the areas wanted to make sure the water was not over pumped, so they went out and got permits and developed the rights and prove up on them and then just let them sit fallow. And we noticed through all these years of mapping is that the main story is had a huge fallow. So, if you look what the model is pumping a 100%, three (3) acre feet per acre, and you look at the fallow parts and you take off half of that to be realistic and the declines are directly proportional to the pumpage. If you take off half the pumpage and then the declines are half as much. Then another reason that the declines so high is using that 3 acre feet per acre. As Chris alluded to the center pivots use much less, they are a lot more efficient, they do not use 3 acre feet per acre; the ones that are in being used. And the property patterns are such there that you cannot use 3 acre feet per acre. So what you are down to there is the land that is being irrigated is down to 2 acre feet per acre in full production per year. So there is no support for 3 acre feet per acre in the model to use that.

Mr. Johncox: Excuse me, Jack. But, I would like to make a point of order. Did we swear Jack in?

Mrs. Windsor: Yes, we did.

Mr. Johncox: Okay.

Mr. Cortez: Let me show you something really quick. So we are not... When Jack says that there is 109,000 acres under irrigation and half of it is fallow. We are actually that (And you guys can have this for your records) This is the water use by categories by the OSE. Ms. Magnuson's on some of these. So this is 1995, they were doing every five years; they moved to ten. I am going to give you 1995, 2000, 2005, & 2010. There is a nice little table here; we just truncated the report for you. There is a table here that shows mapped irrigation acreage by Basin and County. Lea County in 2010, they were due by the OSE (This is a report they put out every year or every five years; I think they are going to ten years now.) they show 48,000 acres under irrigation in Lea County. Where Jack and the water rights people in the 70's & 80's mapped 109,000. When we say half of Lea County is not being exercised; we are not making that up. We are using their own reports and looking at it. And then remember to a lot of you who are farmer's or have farming families a lot of them are put into CRP and just think about if it has been put in to CRP for twenty years and it is not pumping its full water right for twenty years.

Mrs. Windsor: The OSE is assuming it is.

Mr. Cortez: There model assumes 100% pumped. And again that is where we see a discrepancy between model values and actual decline. And then you add in domestic wells pumped very high. You start to see the picture of, there is less pumping so there is less coming out of the ground, so this is this just does not match reality.

Mr. Atkins: I needed to add. That is the reason you use actual in a basin that has been developed like Lea County. There is no new appropriation. You use the actual decline data measured by the OSE & USGS.

I have been involved in many hearings, many litigations have to do with life expectancy, and there is no case where you would use a model in a known area to predict declines. The model is only used in an area where you do not have any development and you are going to allow development. Then you get your model straight to see what is going to happen during that development. In Lea County, we have measured declines all the way through, so we know what the declines are, so every life expectancy we have been involved in with the court hearings has been based on water level measurements. That is the only reliable way to do this. I hope that clears that up for you the difference. The difference between the modeling of the OSE and the actual water levels.

Mr. Hopper: I have one other question, if I heard Daniel right to start with you dropped the maximum usage per unit a lot from .5 to .3-acre feet per unit? And that is all they will be allowed to consume in this subdivision? Who monitors that? Those wells will not be metered is that correct?

Mr. Johncox: No, they will not be metered. No body monitors that. It is, we just use the average usage of a rural well.

Mr. Hopper: That is not a maximum allowable if there bound by a restrictive covenant for something to use. It is just historically saying that is what usage is.

Mr. Johncox: There is no police on this, that is correct.

Mrs. Windsor: Yet. Just a statement I feel like in the next ten to fifteen years the state will meter domestic wells. They are already metering irrigation wells. I just think that is coming.

Mr. Cortez: Right, we speak to that really quick. OSE has reduced the amount of acre feet they give a domestic user. They give a domestic user, they use to give a domestic user 3-acre foot, now they give them 1-acre foot. And they have some specific scenarios where they do require metering. If you have one domestic well for multiple households, you are only allowed one total; they make you meter all households. If you use an irrigation well and also for domestic use; they put two meters so it has a branch. The New Mexico Ground Water Association I urge you to go to their webpage and look at their position on domestic wells. And that is a consortium of ground water professionals and they are a lobbying group. They talk about domestic wells and the role domestic well play in the development of New Mexico. And they talk about that too. Metering, they are in favor of metering of domestic wells. And using actual pumping data to determine these sorts of things. Yes, I think you are going to see domestic wells being metered in the future. I think that is going to happen. OSE has the authority to issue domestic ground water management areas. They do require metering and are restrictive of domestic wells. We have one of those in the Roswell Basin. Around Hagerman, I think. I think it is probably true, for future metering of domestic wells, I think it is good it gives us more data to answer these questions. The water usage is generated in the report by US Census data and how much water people use and those sort of things. But, really the indoor use of water in domestic settings is very small. There is limits. It does have limits on how much irrigation they can do like graphs so that is something that can be physically observed.

Mrs. Windsor: Right.

Mr. Cortez: Those are all based off values. But, domestic well are small users of water compared to other uses, for sure. And they are right there, you do not have to run a bunch of piping, then you lose water in the piping. For rural counties domestic well are a big part of their growth. They have to be because it is too expensive to run utilities out to these areas.

Mrs. Windsor: I have another question, probably Guy can answer this one. If a hundred-unit apartment complex is being built in the city limits. They have to get that approved by the city, correct. Like subdivisions, the plats and all that.

Mr. Kesner: Well, not for water usage.

Mrs. Windsor: No, but that is what I am asking. That is what I am going to ask. Do they have to go to the OSE office and get a positive opinion?

Mr. Kesner: No!

Mrs. Windsor: Okay, I would like to state the water comes from the same aquifer. So, if you have a 100-unit apartment complex in the city limits or 50 houses in the County. They are getting the water from the same place. But, within the city limits because it is on city utilities; they are not required to go through the process, right?

Mr. Kesner: Correct.

Mr. Atkins: The city has an amount for 40-year planning period. To buy and hold rights for future use.

Mr. Kesner: From that statement that development would be considered that the water utility from the city has forty years of water capacity, so it would not have to go that proving out there is forty years of water for that development.

Mrs. Windsor: Right, right, I understand.

Mr. Johncox: Understand that the city gets their water out of the same aquifer.

Mrs. Windsor: I just didn't know if they (city developer) had to go through a process like this in the city limits for a development.

Mr. Atkins: I was thinking how the state could improve what they are doing, of course they did not ask me, but as I said they must use the measured water level data. There is no way around that. If they want to use a model and kept and tried to use a model; they should go out and field test check what these paper rights are. They may not even be any wells. Many of the domestic wells may be replacement of oilfield wells that are plugged or abandoned. Of course, they have done any of this in their modeling, so that leads to an overstatement of declines by a huge amount in this case. That is basically why I am here to try to explain the difference between modeled and measured water levels.

Mr. Cortez: And it is not close. If it were a couple of tenths off or ... It is an order of magnitude, if we read the OSE's paper, they are saying basically, that everyone in the area should sell their house and get out because there is not going to be any water in twenty years. And that does not hold up to what has actually been observed. If your model does not reflect what is actually going on, so the question, then becomes. . . It really should not be about Daniel trying to prove; it should the OSE prove why it (the model) is different. And it is not. It just does not match. And it is not even close. If it were close, you know (so what). It is three times as much. It is a 300% increase. There is no record of that happening in this area. So, the question is why? I bet if you went out there and looked at every well you would find, fewer wells, less irrigation, I mean you could do that but that is beyond what the private sector, Daniel, would want to do.

Mrs. Windsor: Does anybody else have any other questions? From the board? What about from Yes, John.

Mr. Caldwell: Madam, chair, although I think some of these question have been answered. Just for the purposes of the record I suggest that someone on the board consider asking these five questions. Starting at one and going to five. Just for purpose of the record.

Mrs. Windsor: Okay, first question. In your opinion is there sufficient water to fill the maximum annual water requirements for this subdivision including water for indoor and outdoor domestic uses?

Mr. Cortez: Yes.

Mrs. Windsor: Any questions on that one. In your opinion is there sufficient water to meet these indoor and outdoor uses for forty (40) years?

Mr. Cortez: Yes.

Mrs. Windsor: Are these your opinions if each subdivision property uses .3 (three-tenth) acre feet per year.

Mr. Cortez: Say that again.

Mrs. Windsor: Are these your opinions if each subdivision property uses .3 (three-tenth) acre feet per year. So each tract?

Mr. Cortez: Oh, if they, if they use .3?

Mrs. Windsor: Yes.

Mr. Cortez: Yes.

Mrs. Windsor: Does your opinions change if each subdivision property uses .5 (five-tenth) acre feet per year.

Mr. Cortez: No.

Mrs. Windsor: Do you have an opinion about what uses level by each property in the subdivision; There would not be sufficient water for 40-years?

Mr. Cortez: I do not have an opinion on that. I have not looked into that enough to give you a number.

Mrs. Windsor: Any questions anyone?

Mr. Kesner: I will make an observation. The reason I asked about the gallons, I will not bring up my water usage because I do not want to embarrass myself in public, but at .3 acres that is not a lot of water.

Mr. Cortez: That is not a lot of water.

Mr. Kesner: That is not a lot of water. I mean, you are talking about 8000 gallons a month, if my math is right.

Mr. Cortez: Let me show you where that comes from.

Mr. Johncox: I would like to state. That most of the properties that we have sold over the course of the last ten years, if you go back out and look at them; there are not really nice yards. There are not swimming pools, no irrigation systems. And these houses that we sell are HUD code homes and they meet low-flow water requirements by the Federal Government. For example, if I take a shower I am okay. But then if you took a shower it would take a while for you to get your hair wet.

Mr. Kesner: I am just thinking that the .3 is 8125 gallons per month and the City of Hobbs uses 15,000 gallons a month for metering their analysis when they decide what the average usage on residential properties.

Mr. Johncox: I would like to state though that public delivery of water is one of the least effective and most waste in that there is so many leaks. Again, I have a mobile home park we I meter the water and when I divide that by the amount of tenants I have it is in the trench.

Mr. Kesner: And do any of those tenants have any yards they have to irrigate.

Mr. Johncox: They do not. Most of the people that buy the houses that we have live out in the country and they do not have any yards either. Some of them do, but most of them do not and you could observe that if you looked at the subdivisions. Well, some of them do; most of them do not.

Mr. Kesner: I think the .5 foot acres would be a more appropriate number; the .3, by my calculation seems to be pretty low.

Mr. Cortez: It is on the low and obviously the .29 is the average. So some people will use less and some people will use more. We have look at this at .5; we have looked at it at one; we looked at it at all various configurations. At .5 instead of 15 acre-feet you are looking at 26 acre-feet. The thing to remember is Daniel is not going to run out there tomorrow and have 52 lots fully populated. It is going to be a very slow burn. Some of our previous reports look at it at .5 (acre-feet per lot per year). If you are getting into weather .3 is a reason3 some are going to meet that; some of them might be a little more. But it doesn't ... Domestic use is such a small use of water that it does not really contribute that much to drawdown. A percentage wise; it really is a minor use of water. If you are talking about you fill more comfortable at .5, previous reports have put it at .5, .5 increases the water use from 15 to 26 acre-feet per subdivision; fully developed per year. We would still say there was plenty of water to support it at point 5. Remember any of us could go out right now to the state engineer and get it a one (1). .5 is half of what the state engineer would give. The use of the water is not going to.... That difference in water isn't going to make a substantial difference to our observations. So if you feel safer with .5, then we would recommend .5.

Mr. Kesner: The eighty-nine (89) years you referenced earlier, that is based on the historical flow.

Mr. Cortez: Correct. Yeah.

Mr. Kesner: Drawdown might be a more accurate word.

Mr. Cortez: That is using a projected saturation thickness and a little bit off the bottom. The other thing to happen, and this is just you guys to know, is what will happen in the long run. Let us just say everyone is pumping everything; eventually as the water level declines, it does not become tenable to do irrigation, so your irrigation user will actually, if they are irrigating in the first place, they will just stop. Cause it won't be worth their while. They cannot pump enough water. When the irrigation users stop,

then your decline would then slow down some more. You will get back left with domestic users. Eventually you get to where you are just running domestic users. If we want to talk about projecting out into the future about what might happen. There is not enough water in the well to do irrigation. People are not going to irrigate. That is just what is going to happen.

Mrs. Windsor: Which is happened on the Texas state line.

Mr. Cortez: Correct. They have stopped irrigating. And a lot of those people are transacting their water rights to other uses in the county. Yeah, that is what is happening. Yeah, the drawdown of that 26 acre feet that projected drawdown is very minor. I have it here; I can give it to you. We looked at that too.

Mr. Kesner: At one acre per residence.

Mr. Cortez: No, at the .5 acre

Mr. Kesner: Point 5 acres. Okay.

Mr. Cortez: We ran it several different ways. There are general statements I can make towards that. This a good document for you guys too, just so that you have it. Role of Domestic Water Wells in New Mexico. This is where that average come from; here is a copy for you guys. This is right off of the New Mexico Ground Water Association Webpage. We have been quoting them enough, so I thought it would be good for you guys to have that document. Hold on. I can give you guys a couple more pieces of information here. One of our engineer's model, using the state engineer's model, this is before they changed the; they are obviously playing around with their model cell; by adding 26 acre feet to the model cell; the model cell predicted an additional drawdown of .048 feet per year of drawdown. Which is about a half-inch. That is using the OSE Model. So here is looking at the Delta, this is what their model cells now, you just add, it is all proportional. So even if they change the values it is all proportional. That is correct, Jack, right.

Mr. Atkins: Right.

Mr. Cortez: Right. Twenty-six more acre feet out of the model cell, the OSE Model, at the time we ran it. Introduced an additional drawdown of less than half an inch per year so it is a very small amount of water. So that is pretty good. We did the Trice drawdown analysis. Where we looked at; There was a person come in, at one of the events we had; he was concerned. So we looked at it. Daniel, had us look at it. So we could know. We took twenty-six acre-feet per year and went to the westernmost lot of the proposed subdivision; because this guy is on the other side of the road, I do not recall the name of the road to the west.

Mr. Kesner: Grimes.

Mr. Cortez: Grimes. So we said, okay this guy is over here; here is his well. If Daniel put a well over here and we pumped the whole subdivision worth of water. How much would it affect this guy over here (on the west side of Grimes Street)? This is called a Trice drawdown analysis and this is a very standard, Jack can speak for that. We looked at the saturate of thickness starting values, the average rate of decline, using the permeability formula from the OSE Model, the new values, they changed the values, so we used the new ones. The new model values and we ran it. At forty (40) years pumping twenty-six (26) acre feet per year, the Tice drawdown equation shows that this people well would drawdown a half a foot (.5 feet) after forty (40) years of pumping. Half a foot over forty years. That is the effect of Daniel pumping the entire 26 acre-feet (so that would be the half acre foot) 200 feet away from this guy's well. Two hundred feet. You do not induce a lot of drawdown by pumping domestic well. When you pump a domestic well it pulls down and spreads out in a radius from the well. It just does not pump that far because you are only pumping a couple of gallons a minute. You are not pumping a lot of water.

If you pump an irrigation well at 600 gallons a minute, then it spreads way out. Domestic wells do not affect the aquifer immediate. If two wells are pumping close to one another (100 feet apart as required

by State Law) and we are pumping 10 gallons a minute; it does really do much (does not affect the aquifer). They do not influence each other that much. So I want to give this to you guys.

Mr. Hopper: Chris, just for my information, tell me again if the well for the whole subdivision was on the east side of Grimes and they pumped it, then the well on the west side of Grimes would go down one foot in forty years.

Mr. Cortez: Half a foot. .59 feet.

Mr. Hopper: How many feet?

Mr. Cortez: .59 feet at forty years. .59

Mr. Hopper: Just a half of foot in forty years?

Mr. Cortez: Correct.

Mr. Hopper: If he produced (26 acre feet) one well and served the whole subdivision.

Mr. Cortez: Correct.

Mr. Hopper: I know some people that live there and they are going to ask me some.

Mr. Cortez: Domestic wells just don't... You are not pumping a lot of water out of the ground.

Remember not one well sitting this far away but 20 wells spread out and they all spread their pumping affect out.

Mr. Kesner: If you are going to provide the water for the whole subdivision would you pump at a domestic rate. You could not provide enough water?

Mr. Cortez: You are pumping 26 acre-feet.

Mr. Kesner: 26 acre-feet?

Mr. Cortez: It is just the amount come out. Jack can give more information.

Mr. Kesner: It is not a drawdown?

Mr. Atkins: It is based on the annual withdraw of ground water from storage.

Mr. Kesner: Okay.

Mr. Atkins: 26 acre-feet. Actually, we do not even believe that would happen, because we believe there is some return flow from domestic use, anyway, through septic systems. But, in a case like this it is best to use the half acre-foot per acre with no return flow.

Mr. Cortez: I think the problem... We go back to the problem of because the OSE issues to permits but they do not monitor domestic wells. That obviously in a development like this where he (Daniel Johncox) actually has covenants and restrictions and he is controlling the building process, so you are not going to have swamp coolers, you are not going to have the big water using items in a domestic home. Then there is a limit to the irrigation outside, which he can see. He can see if someone is irrigating an acre of land, and not allowed to irrigate an acre, that is something he has the ability to see. I believe that since it is an average; the half-acre is still a better development for water use, then approving 50 new homes in the county that get an acre-foot per year. There are things here that are more organized. Then there are those of you who are planners and developers if there ever came a point where you would have to provide water from a different source the more dense that you are built out your county especially in these areas that are growing outside of Hobbs the easier it is to do that in the future. It is still expense, but it is easier to do. When you get the sprawl of everyone has to have five acres, we get that in Roswell we have five-acre minimums, all that does is just sprawl everyone out. Well, a five-acre lot to a five-acre lot, the distance; if you ever had to plumb water to both people, becomes cost prohibitive. Compact development that put some density, in there, and do not force people to sprawl out into your farm land; does have an advantage to, in the long run from a planning prospective and a land division prospective. It becomes closer to what happens when you have an apartment complex for the people in the city. The same aquifer, the same amount of water out of the ground, but with an individual domestic well I am pumping water from my well to a pressure tank to my

house. In a domestic area, well, the city, their well fields are spread out and they are pumping a ton of water and their pipes are ten-percent to fifteen percent losing a portion of the water they are pumping out of the ground. Some of it goes back some of it doesn't. It is a very efficient way to use water with individual domestic wells.

Mrs. Windsor: I know at my house if I have a leak it is going to make my pump work and work and work, so I have to fix that leak, because a pump is expensive.

Mr. Cortez: Sure. Short runs of pipe less places to leak. More direct consequences for an individual; my pipe is leaking, my well is not getting water to my house, I have got to fix it. As opposed to; there is a leak in downtown Lovington probably does not affect us, but could leak a ton of water. Yeah, hopefully your city people are on top of it.

Mrs. Windsor: Yep.

Mr. Cortez: We see them all the time Roswell infrastructure is aging; has not keep up with the times, there is leaks all of the time in Roswell. It happens. Infrastructure is expensive.

Mrs. Windsor: Any question from the Board. Any comments from the public.

Mr. Johncox: Mr. Estrada do you have anything to say.

Mr. Estrada: Yes.

Mrs. Windsor: I have to...

Mr. Johncox: You have to come up here.

Mrs. Windsor: Could you raise your right hand?

Mr. Estrada: I live on the corner of Delaware and Grimes.

Mrs. Windsor: Could you hold your hand up?

Mr. Estrada: Oh.

Mrs. Windsor: Do you promise to tell the truth, the whole truth, and nothing but the truth subject to law?

Mr. Estrada: Yes, I do.

Mrs. Windsor: Your name please.

Mr. Estrada: Richard Estrada.

Mrs. Windsor: Go ahead.

Mr. Estrada: With this new subdivision, I would like to know, how long it will be before I run out of water or will have to drill another well. And I think there is a friend of mine, Newman Isabel, who lives on Alabama. Last year he had to drill a hole because he was getting sand in the shower. So I was just concerned about that.

Mrs. Windsor: Um.

Mr. Cortez: I mean ...

Mrs. Windsor: And Chris can address this, but if you have a well that was drilled forty to fifty years ago. Back then they did not go to the redbed.

Mr. Cortez: Correct.

Mrs. Windsor: So they only went so far with the well and a majority of those wells we not cased. So you cannot go ahead and deepen the well, you must move over and drill another one, because you cannot just deepen that well. So if you had one forty or fifty years ago, yes, the water has declined some, but those wells were not drilled but to 'eighty feet?'

Mr. Cortez: Well, he said ninety.

Mrs. Windsor: Well, the first time he drilled it.

Mr. Estrada: It was eighty something and now it is over one hundred.

Mr. Cortez: Right.

Mr. Estrada: So, I am just wondering if we are going to have enough water for our tank. Thank You.

Mrs. Windsor: Thank You.

Mr. Cortez: That is kind of a good ... I mean ... He is kind of And I missed his name.

Mrs. Windsor: Mr. Estrada

Mr. Cortez: Mr. Estrada is kind of demonstrating what we are seeing there. If you had a well at sixty feet then you would only punch in like twenty feet or so; eighty foot well; ninety foot well; thirty foot of water; a foot a year; forty years. I mean it is going to go away. It is going away. It is declining. At a certain rate. Not at four or five feet a year. If it is declining at four or five feet a year; Mr. Estrada would have run out of water in five years. So, what you get into is obviously, you know, as a sub-divider Daniel is required to ... someone is going to come and he is saying I am going to build this for you and you are going to invest X amount of dollars and going to pay me for this. And Daniel is going to have to drill... he will be drilling his wells all the way to the redbed. The person buying the property has the maximum life span of water available, because they are investing in that. So if your wells are in the ninety-foot range or one-hundred-foot range and if the decline hold at a foot or a foot point four (1.4') a year. Yeah, you are going to run into trouble in the near future. And that is going to happen in various levels for everyone. Some of the irrigation wells were not drilled deeper than one hundred and ten feet, because the water level was at sixty. Some parts of Lea County the water level was at twenty feet, or thirty feet.

Mrs. Windsor: In Tatum

Mr. Cortez: They only drilled as much as the needed to meet their need at the time. Unfortunately, there is going to be a lot of people in Lea County whose wells are ... were not ... or they were legacy holder wells that are not meeting that goal. I do not know, but that is beyond the scope of what Daniel is doing other than to make sure Daniel puts his well in really deep. I do not know what the outreach to the public ... but that is beyond what we are talking about ... it is going to affect a lot of people; and it is going to affect a lot of people over time.

Mr. Johncox: The water decline is going to affect a lot of people. It has already affected a lot of people. The subdivision is minute. It is not going to cause any addition harm to anyone's well.

Mrs. Windsor: Now, remember, I am not against oil, but the oil companies draw out a lot of fresh water everyday out of the Ogallala.

Mr. Johncox: Mr. Estrada, I would just call the Eades office for your well record to find out how deep the drilled your well. Or you could just do the math or I could help you figure out how long the well is going to last. I would be more than happy to help you with that.

Mr. Kesner: If it was ninety feet on the first well, then it went to one hundred eighty feet, then you got ninety years divided by one point four (1.4) estimated. Who knows? There could be some irrigation move in right next door to you and as they talk about it, could have a huge drawdown. And that could be 1.4; could be 2.8 years. It would not affect the development there; it would affect the agricultural well.

Mr. Cortez: Right. A good thing to know is Mr. Estrada is someone couldn't just suddenly come over and put in an irrigation well next to you ... there is a process. That someone ...

Mr. Kesner: Moves that water.

Mr. Cortez: Yea. Obviously, I do not know how developed it is around your house. A lot of this area and if you look at the area around the Libba division maybe used to be farm land, but that is changing and that has changed. Daniel's subdivision is consistent with ... if you look at the adjoining section. There is a lot of small house lots built in there. It is not like he is going into the middle of virginal farm land and he is putting down this subdivision. It is consistence around him so there is less and less irrigation occurring in these areas for sure. And you can just see it by looking at an aerial and go, well there, even if there is two hundred acres (200) of water rights. There is not two hundred acres of land there that has not been covered up with houses or roads. You could not put 200 acres in without going

in and tearing down properties. You start to balance those things out in your head and go 1.4 and 4.7 what is the difference. It all goes back to that little bit.

Mr. Johncox: If you are really into saving water domesticating water rights saves a helluva lot of water compared to other means. Other industries.

Mrs. Windsor: Daniel did this used to be a farm? Was this farmed at one time ever?

Mr. Johncox: No. I do not think so; I do not think is what is farmed.

Mrs. Windsor: No, but there were water rights associated with them.

Mr. Johncox: No.

Mrs. Windsor: No.

Mr. Cortez: There looks like there is some irrigation in the north half of the section and the section to the north has some very substantial irrigation. But, you would have to look back at the historically aerials and mapping to see how the irrigation patterns have change. What you can do is there is old aerials that can show you how it has change over time.

Mrs. Windsor: Any other questions or comments from the public. Any questions from the Board, comments, or discussion.

Mr. Caldwell: Someone is going to make a motion to approve the subdivision, I would like to hand some suggestive language for their consideration so the record is appropriate for this. I do not know who is considering, but here is some suggestive language if someone would like to do it.

Mr. Kesner: Madam chair we need to close the public hearing first.

Mrs. Hardin: Do you need a motion to close it.

Mrs. Windsor: I will just close the public hearing now.

Mr. Caldwell: Actually, you have just asked if there is any further evidence or testimony and there has been none. I am not sure there is a formal requirement; it may be a practice at some entities, but I do not think it is necessary. But it is your call Madam chair or the board's call.

Mrs. Windsor: Okay. Well, we will just say that the public hearing is closed. And will consider the approval of Libba Land Subdivision. So I will entertain a motion.

Mr. Kesner: I make a motion to approve the sub development based on the findings we heard during the open meeting and based on the testimony of the applicants and their experts that there is sufficient water in the subdivision for at least forty years.

Mrs. Hardin: I will second that motion.

Mr. Kesner: One option correct.

Mr. Caldwell: It is, but

Mr. Kesner: Would you like all four of them?

Mr. Caldwell: You are making the motion. I do think for the record there is one additional finding that you did not indicate and I think that is probably a very important finding.

Mr. Kesner: Sure. In addition to that motion I would like to add—that there was no evidence brought before this board that would be a negative impact on this sub development or other residences in the area based on the usage of the development.

Mrs. Windsor: Do I hear a second?

Mrs. Hardin: I will second it.

Mrs. Windsor: It has been moved and seconded. Is there any further discussion, comments, questions?

Mr. Kesner: We are recommending the County Commissioners approve it.

Mrs. Windsor: All those in favor say 'Aye'.

The Board: Aye.

Mrs. Windsor: All those opposed same sign.

The Board: Silence.

Mrs. Windsor: Motion carries.

Mrs. Hardin: Does he need to mention that he is withdrawing, because he is abstaining? Does he need to state that he is abstaining?

Mr. Johncox: Okay! I am going to abstain from this vote. Obviously.

Mr. Caldwell: Madam Chair? I hate to be picky, but the better practice in a hearing where there is going to be forwarding to another body is to do a 'Roll Call Vote'. I Apologize.

Mrs. Windsor: Okay. That is fine. Okay. Roll call vote: Guy Kesner, yes; Kay Hardin, yes; Johnnie Hopper, yes;

Mrs. Hardin: Kallie Windsor, yes.

Mrs. Windsor: Motion Carries. With Daniel Johncox abstaining.

ITEM 08: Close Public Hearing

With no more evidence to be given; the public hearing was closed and the roll call vote was taken.

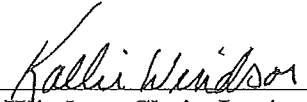
ITEM 09: Confirm Next Meeting(s)

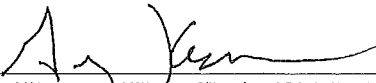
The next meetings were confirmed for May 8, 2018 & June 12, 2018.

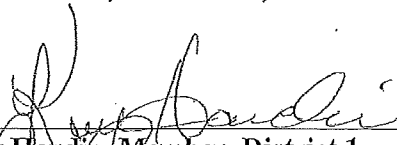
ITEM 10: Adjourn

Daniel Johncox moved for the meeting to be adjourned, seconded by Johnnie Hopper, and approved by all.

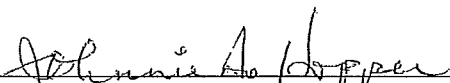
LEA COUNTY PLANNING & ZONING BOARD

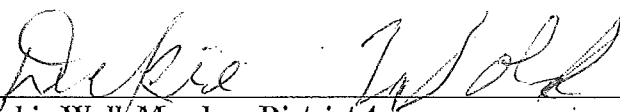

Kallie Windsor, Chair, Lovington Extraterritorial Zoning Board


Guy Kesner, Vice-Chair, Hobbs Extraterritorial Zoning Board


Kay Hardin, Member, District 1

Gary Eidson, Member, District 2


Johnnie Hopper, Member, District 3


Dickie Wall, Member, District 4

Daniel Johncox, Member, District 5