

Las Cruces Utilities

Minutes of the Work Session on
Thursday, November 5, 2020
1:30 pm
via Zoom Video Transmission

Board Members Present:

William Little, Chairman
Ed Archuleta, Vice-Chairman
Johana Bencomo, Commissioner
Jim Carmichael, Commissioner
Dr. Harry Johnson, Commissioner
Dr. Harry Hardee, Commissioner
Gill Sorg, Commissioner

Ex-Officio Members Present:

Ifo Pili, City Manager
Delilah A. Walsh, Utilities Director

Others:

Cassie McClure, Public Outreach Consultant,
McClure Publications
Elizabeth Bardwell, League of Women Voters
John Shomaker, John Shomaker &
Associates
Annie McCoy, John Shomaker & Associates

City Staff Present:

Robert Cabello, Senior Assistant City
Attorney
Carl Clark, Deputy Director Environmental/
Technical Support
Rhonda Diaz, Water Conservation Program
Coordinator
Lucio Garcia, Deputy Director Natural Gas
John Mrozek, Deputy Director Wastewater
Lizeth Nanez, Senior Office Assistant
Jose Provencio, Deputy Director Business
Services
Mario Puentes, Gas Business Analyst
Peggy Risner, Administrative Assistant
Alma Ruiz, Senior Officer Manager
Lisa Valleroy-Djang, Office Assistant Senior
Temp
Adrienne Widmer, Interim Assistant Utilities
Director/Deputy Director Water

Chair Little called the Work Session meeting to order at approximately 1:30 p.m.

Chair Little: Session of the Utilities Board to order. We are operating remotely, and so we are operating under the Attorney General's rules, which require that the public have access to this, and they have had an opportunity to obtain a Zoom link to observe it. Has any member of the public asked to join us by Zoom? Alma.

Ruiz: Yes. There are currently five participants/attendees for the public. This is Alma Ruiz, Senior Office Manager for the record. Ms. Cassie McClure, Ms. Elizabeth Bardwell, and then three others that are staff members.

Chair Little: Okay. Thank you. We will begin the discussion. Everyone needs to remember as they begin to speak to identify themselves. If the communication link fails, we will have to suspend the discussion until the audio, or the video are reestablished. There will be no votes today, so there's no need for that. There



will in fact be minutes prepared and published. I believe that covers all of the elements that the AG asked us to cover.

1. 10-Year Water Development Action Plan:

Chair Little: What I would like to do today, you'll recall from last month is this is an opportunity for the Board to discuss among itself what our values are, what our desires are for the future, and to give each one of us a chance to share those with the rest of the Board. But to begin with Shomaker and Associates has prepared an update for us on the Water Supply Action Plan as of today. And so, John or Annie would you prepare, present those, that update?

Shomaker: Thank you, Mr. Chairman. This is a presentation that Annie prepared so I'm going to ask her to proceed with it if you'll let us. Thank you.

McCoy: Yeah This is Annie McCoy with John Shomaker and Associates. Thank you to the Chairman and Commissioners for the opportunity to talk with you briefly today about the progress we're making on the 10-year Water Development Action Plan. As you're aware, this Action Plan was developed by John Shomaker and Associates in coordination with Adrienne Widmer and Dr. Garcia as a follow on to the 40-year Water Development Plan.

And today, I can provide an update, a brief update on two components of the Action Plan that are currently in draft form. It's the study of aquifer storage and recovery or ASR (Aquifer Storage and Recovery) with reclaimed water, and the study of groundwater availability for the Mimbres Basin for groundwater importation project. So, we can go to the next slide.

Chair Little: Okay, who is in charge of the slides?

Ruiz: Alma Ruiz, Senior Office Manager. I will be advancing the slides. Thank you Chair.

Widmer: Mr. Chairman, Commissioners. This is Adrienne Widmer, Deputy Director for Water. Just want to make sure that we understand where we are going. Shomaker and Associates will be presenting their presentation and will open it up for any discussion you would like. We will then provide some of the maps, and then a session on potential options and explore the potentials for you to talk about so can have an open discussion.

Chair Little: Okay. I'll guide that. Thank you.

Widmer: Thank you.

Chair Little: Ms. McCoy. Go ahead.

McCoy: Yeah, we can start with the update on the study of ASR (Aquifer Storage Recovery) and reclaimed water. We just prepared a second draft that I think



made its way to you in the links yesterday, dated November 3rd, I believe, based on the input and review from Las Cruces staff. It's a technical memo that covers the potential for ASR using reclaimed water from East Mesa Water Reclamation Facility or the West Mesa Wastewater Treatment Facility. And evaluates the potential for ASR with respect to aquifer properties and the availability of existing recovery wells to recover the water that is either injected back into the aquifer or infiltrates back into the aquifer. It includes a pretty detailed review of the current regulatory framework. And then the next step, which will happen next week is some preliminary meetings with the State Engineer's Office and the Environment Department to discuss limitations and potential approaches and sites for ASR that they may be able to support for Las Cruces.

So, we're looking at potential for aquifer injection, or Vadose zone infiltration of reclaimed water from the East Mesa Water Reclamation Facility, and also from the West Mesa Wastewater Treatment Facility. In terms of aquifer injection in the region of the East Mesa Water Reclamation Facility, we're looking at locations of inactive Las Cruces supply wells that could be converted to ASR wells or replaced with ASR wells, if the wells are, existing wells are too old or in poor condition. We're looking at proximity to existing active supply wells that could be used to recover the water that is injected or infiltrates to the water table. There are a number of these opportunities in the Interstate 25 (I-25) corridor area of the Mesilla Basin.

In terms of Vadose zone infiltration within proximity to the East Mesa Water Reclamation facility, we're looking at sites where we could utilize the existing topography for impoundment, such as adjacent to the earth dam in the I-25 corridor area, and also parks or undeveloped parcels. It can be a challenge to demonstrate to the State Engineer's Office that Vadose zone infiltration works in areas with relatively deep water levels, like 300 or 400 feet depth to water. But in a number of cases around the State, we've seen evidence for surface water infiltrating in this type of environment and reaching the water table nearby in a relatively short timeframe, so we know that it happens.

We are also in this evaluation looking to not interfere with the Griggs and Walnut Plume remediation. Actually, in some scenarios, ASR has the potential to assist remediation by controlling and moving the plume. And in other cases, we've had to rule out wells because it could potentially interfere in a problematic way.

So, in terms of aquifer injection or Vadose zone infiltration of reclaimed water from the West Mesa, we're looking at locations of inactive supply wells on the West Mesa to potentially convert to ASR wells, and the proximity to the existing active supply wells there. And In terms of Vadose zone infiltration, looking at infiltration basin locations near to an upgradient of the cluster of three active City wells on the West Mesa. Those are wells 36, 46, and 63. We'll see a map here on the next slide.



And so, this map shows the City's active and inactive supply wells. There is a white outline around the I-25 corridor area in the Mesilla Basin. You see a lot of yellow squares in that area, which are the inactive supply wells, which we evaluated for ASR potential. Some of those have pretty good potential or are close to the East Mesa Water Reclamation Facility. For example, existing wells 54 and 57, which are kind of hard to see, but they are within that white outlined area and they are kind of on the East side of it. We also looked at some inactive wells on the East Mesa, the former Mesa Development Wells under LRG 5039 et al., and you see those as the yellow squares sort of in the upper part of the map. Those are so we have identified a well there that would have good potential. Unfortunately, they're a little bit distant from the main part of the East Mesa wellfield where we've seen higher rates of water level decline and so you know, wouldn't necessarily be so beneficial in offsetting the observed water level declines there. And in every case, you know, a first step would be evaluating current well condition to see whether the well is in good enough condition to be converted to an ASR well, or whether we need to drill a replacement well at that location.

This next slide is a table summarizing the potential for ASR application at inactive supply wells. And most of these opportunities are in the I-25 corridor area, as you can see in the second column on the table within pretty close proximity to the East Mesa Facility. And you look at the third column, unfortunately many of these wells are quite old dating back to the 1960s. If you look at the last column you see that some wells with an "N" for no have been ruled out due to potential effects on the Griggs and Walnut Plume remediation or lack of a recovery well within close proximity. Some wells have been ruled out for injection but could serve as a recovery well due to close proximity to another well that may be good for injection. And well condition has already been assessed for a couple wells and we know that a replacement well would be necessary, as in the case of Well 10, the first one listed, and well 23. The condition of those wells has been evaluated more recently. Then if you look to the second to last column and sort of the range of depth-to-water you see that this area also has potential for Vadose zone infiltration with water levels generally under 300 ft depth—the brief summary of that technical memo on ASR with reclaimed water.

I also want to give you an update on this Mimbres Basin study of groundwater availability that we have prepared a draft that's dated June of 2020 and is still under review by the City staff. If everybody's okay to move on to that quick update. In the Mimbres Basin around the Deming area we estimate the consumptive use amount of water that might be physically transferable from irrigated agriculture to range between about 12,000 and 18,000 acre-feet per year based on the net pumping that we think has been going on for irrigated agriculture in recent years.

This map shows the location of the Deming area and the Mimbres Basin and with respect to Las Cruces. And we put this hypothetical pipeline route on here



in the white and red dashed line. As it plots on there, it's about 64 miles long and would utilize right-of-way along the Interstate and the railroad and state highways. One thing you see is that it does look like it would have to extend fairly far south from Deming about 15 miles to access a lot of these agricultural rights that are kind of scattered throughout this area.

All through, it's not a main topic of this evaluation, did want to point out that from Deming, a 20-mile long extension north or to the northwest to the Grant County line could connect in theory to water supply wells for Chino Mine which actually does represent a very good water supply in terms of quality and quantity that could become available in the future if the mining were to stop at Chino Mine. Some of those wells are actually already permitted for municipal use as they used it for water supply at Hurley.

On this slide we are showing in the pink rectangle our study area within the Mimbres Basin. The Bolson aquifer here which includes the quaternary sediments, and the underlying tertiary helix conglomerate is fairly thick, quite a thick aquifer in this area, 800 to 1,300 ft thick with wells up to 1,500 ft deep. Well yields up to 1,000 gallons per minute. The long term water level declines of one to two feet per year and throughout much of that area, these are lower decline rates than we saw in our study of the Nutt-Hockett Basin, for example, which we studied previously as part of this 10-Year Water Development Action Plan. There's evidence that the amount of pumping has not so greatly exceeded the recharge to this area as compared to the Nutt-Hockett Basin, which we studied previously just as a comparison when we start to think about groundwater importation projects.

Chair Little: This is William Little. Would you repeat that last few sentences?

McCoy: Sure. These water level decline rates of one to two feet per year in the Deming area are lower than what we saw in our study of the Nutt-Hockett Basin, where you are seeing more like three feet per year, pretty consistently throughout that area. Estimates of recharge to Nutt-Hockett Basin are very small compared to historically what's been pumped for agriculture in the basin. In the Deming area, you know we have a larger estimate of recharge to the Mimbres Basin, some of that is intercepted upgradient, but it's still closer to the number you know the number that we think is recharge coming into the Deming area. Groundwater system is closer to the amount that's been pumped in that area for agriculture historically and in recent years.

Chair Little: Okay. Thank you.

McCoy: Here's a map of our study area and the Deming area of the Mimbres Basin with locations of wells used for irrigated agriculture, those are the green dots, and also for municipal use and other uses. One important finding of our study is that a lot of these irrigation rights are relatively small and distributed, and quite scattered throughout the study area such that you'd have to round up



quite a few rights, perhaps a dozen to develop a significant supply. This is again in comparison to our study of the Nutt-Hockett Basin where those water rights tended to be larger, and you would need a grouping of fewer water rights and fewer wells in the Nutt-Hockett Basin to sort of develop a significant water supply there.

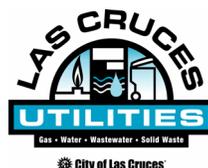
So, we developed our "Strawman Development Plan" for the Mimbres Basin. In terms of water rights, it's not possible that the sort of preliminary planning stage to identify specific rights that may actually become available for lease or purchase. It might be reasonable to assume about 4,700 acre-feet per year, in any given year. To put it in context, that's about a third of the estimated consumptive use that might be transferable for irrigated agriculture in the Deming area. That might be about 11 of the larger irrigation rights and permits that we selected from a list of the larger water rights in the area.

Also, we need to evaluate existing wells, again in comparison to the Nutt-Hockett Basin. We would need to evaluate more wells associated with more smaller water rights scattered throughout the basin. This could take several years to access and eventually evaluate over a dozen wells. Then applications to the State Engineer can take three or more year-long process. Environmental assessment that may or may not be required because of the utilization of rights-of-way along Interstate and Highways. If it were required, it would be a three year more year process in tandem with the application process to the State Engineer's office. Construction of the infrastructure and rehabilitation or replacement of wells would be a six to seven year period. Considering how long the pipeline would need to be and how many wells might need to be replaced.

On this next slide, we present the summary of the planning level capital cost estimates for groundwater importation project in the Deming area of the Mimbres Basin, assuming water rights available for transfer of about 4,700 acre-feet per year. I think when we studied the Nutt-Hockett Basin we were talking around 4,000 acre-feet per year as sort of being a significant supply that could reasonably become available that would potentially warrant the resources that would go into developing something like this.

Well evaluation costs estimated about \$1.3 million, that is a higher cost than we had for the Nutt-Hockett Basin because we have again more wells under these smaller water rights that we would need to evaluate. Water right purchase cost about \$9.4 million plus the \$400,000.00 that we estimated for transactions, about \$9.8 million total. There are more rights to acquire so more transactions, so that's a little more expensive than Nutt-Hockett Basin but it looks like the price of water rights is lower, so it kind of balances out a little bit there.

Pipeline cost estimates \$92.4 million based on comparable projects. New wells possibly \$113 million for developing new wells. Those costs broken down to a



cost per acre-foot per year of water, about \$24,000.00 per acre-foot per year of water. Very similar to what we came up with for the Nutt-Hockett Basin. Those are the aspects of the Mimbres Basin study that I wanted to quickly share with you today before we move on to discussion.

On this last slide, it includes our contact information. Of course, any time you want to follow up with us via email—we are more than happy. Thanks for listening to this little update.

Chair Little: Okay. This is William Little. Do we have comments or questions about this first part of the afternoon?

Archuleta: This is Ed Archuleta.

Chair Little: Go ahead.

Archuleta: Yes, on the aquifer storage and recovery you don't show any treatment costs yet. Have you done any work on that?

McCoy: No. Part of the preliminary meetings with the Environment Department is to get a better idea on that. We've looked at the water quality of the treated affluent from the East Mesa Water Reclamation Facility and kind of come up with a summary of that. We know where the trouble spots might be. In terms of a very important one to discuss with the Environment Department will be the presence of fecal coliform in the in the affluent and whether they will allow that at all for water that's put to an ASR application. You know, nitrate concentrations are not bad for that treated affluent. If you took a sort of an average value, it would probably be a little bit under the standard of 10 milligrams per liter. Another question for the Environment Department is the total dissolved solids and the sulfate concentrations.

Archuleta: Right.

McCoy: In terms of drinking water our secondary non-enforceable standards, that they may hold us to the discharge standard. Again, for TDS (Total Dissolved Solids) we may meet that, if they will accept, say an average of many samples, or does every sample have to meet the standard? We're looking for a little bit more information from the Environment Department to get an understanding of what level of treatment would be needed for different ASR applications. Hopefully, we can get some clarification on that even next week on Tuesday when we start to discuss with them.

Archuleta: Okay. Thank you.

Widmer: Chair and Commissioners. This is Adrienne Widmer Deputy Director Water. Just wanted to update you. One of the things that Annie mentioned was a meeting with the NMED (New Mexico Environment Department), which we do



have a meeting with them to actually go over some of the water quality standards and some of the other requirements. We felt that that would be prudent before we have them go any further on trying to figure out what kind of additional treatment would be required.

Archuleta: Thank you.

Chair Little: Thank you. Anyone else?

This is William Little again. Some of the ASR practices will require legislative action. The City of Albuquerque or the Albuquerque Bernalillo County Water Authority are working on a similar issue. Are people in fact walking the halls of the Roundhouse working on legislative initiatives that will allow us a freer hand in all this?

McCoy: I don't know maybe John has a better sense for that.

Shomaker: I don't think so Chairman Little. Right now, I think that the State Engineer permitting process requires very strictly limited category of water rights that can be part of an ASR project and I think we would like to see that broadened. I do not know who, if anybody, is stalking the halls of the Roundhouse to do that.

Chair Little: Okay. I read those requirements and I would think that it's too late for the 2021 session, but by the 2023 session, the City of Las Cruces and Albuquerque, and a few other interested people are probably going to need to get moving. Delilah has a question.

Walsh: Mr. Chairman. To speak to that, part of this 10-Year Action Plan is going to be for us as a team, not only our executive team, but as a Board is to form those legislative priorities of what changes we'd like to see. We already know in talking with New Mexico Environment Department there is some reluctance on their part to change anything on the legislative level or the requirements, just because of I don't want to say lack of knowledge, but maybe lack of understanding. That's why we've been talking about possibly doing a pilot ASR and doing some test projects on our side with their blessing. Meaning that, maybe we do an injection at some of our well sites, do a pilot project on what water we're pulling out and how that works in order to have a scientific study to support that.

With this 10-Year Action Plan we are also going to be exploring what those legislative changes need to be. My plan was once we go through this process is to identify that in the next year. The 2023 legislative session, unfortunately this type of item will not be germane because it is only a budget or money session. Now of course if it's something important to the governor she can put it on her call, and we can get it through that way. We really should be starting strategic planning for lobbying and that legislative change to present that in



the 2023 subcommittees of legislature for the 2024 session. Part of this process in the 10-Year Action Plan and understanding what needs to change, how it needs to change, and how it will impact our agencies—you are absolutely hitting the nail on the head. That is something we do plan to prepare for in the upcoming sessions.

Chair Little: Thank you. I slipped a year obviously. As you prepare for this, do remember that you could have some friends in Bernalillo County.

Any other comments, questions? Okay. One of the things that I did want to do today was to give the Board Members a chance to share some of their long-range concerns. I know Mr. Carmichael was worried about actually quite a laundry list of items that were going to have to be taken care of as our planning went forward. I do not have that laundry list with me.

Adrienne, go ahead.

Widmer: Thank you, Chairman, Commissioners. Well one of the things I'd like to do, if you don't mind is kind of move more towards what we had discussed just a little bit earlier was to go ahead and show you a little bit of the water rights. I think as we go through part of this discussion some of the questions that Commissioner Carmichael had will actually be answered or give you an opportunity to think about those if you don't mind.

Chair Little: Okay. Then do go ahead. Do remember that nearly all of us are literate and we did get this information yesterday.

Widmer: Mr. Chairman, Commissioners. Exactly. I know that was a short timeframe, but right now you all have been provided the four drafts of the different things that we have provided, including the water level monitoring, the Corralitos, Nutt-Hockett, now the ASR and the Mimbres. After this meeting, you will be able to look at those, mill through them, make comments, whatever it is that you think. As we are moving forward this is just to give you an understanding of potential options and explore potentials.

So, I am going to attempt to share my screen. With this sharing of this screen, I wanted to give you an idea to kind of have something for you to be able to pull up and take a look at. What we've got here is our different water rights that are set up. I did want to go ahead and give you what we used in 2019. It shows the groundwater rights, which ones we have that do not have offset requirements, others that do, what that offset amount is, what the source would be, and the comments kind of associated with that.

In looking through this, just wanted you to be aware that out of our 51,000, almost 200,000 ground water rights in 2019 we use about 42% of that. One of the main areas that is positive about part of this is that our East Mesa wells that are underneath the 3200 Series is that we have 10,200 that we can end



up utilizing. Last year, we only used close to 2.2 million acre-feet. The offset amount of that for 2018/2019 was 2.3 acre-feet. The return flow to the river is on a sliding scale. After 100 years, our return to the river is 644 acre-feet. That's one of the easiest ones as far as getting those developed.

One of the difficult things to understand when it comes to the water rights, in groundwater in the State of New Mexico it is "use it or lose it." The sooner that we can actually put these to beneficial use, then theoretically those are protected. Of course, we do realize that the Texas v. New Mexico, we have no idea how that's going to turn out, and until we actually get that we need to move forward with the normal operating procedure when it comes to groundwater rights. There are others in here that you can take a look at that are other potentials. We do have our comments. Some of those have questions. Some of these have been declared. We're wondering well do we go ahead and drill a replacement or do we try to move these water rights into other wells.

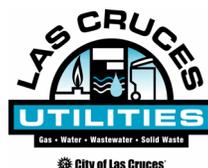
With that, I am going to move on to show you—let's try that again. Let's go to the 3200 Series that we were looking at. You can see from this particular map it shows the existing wells that we have out there right now. It also has the wells, areas where we have the ability to actually drill those wells. One of the things, when we were talking about the water level monitoring and being notified as exactly what's going on—one of the things in talking with Shomaker is, if we get some of these other wells drilled, that takes off additional stress on these other ones that are closer by. That should help minimize the draw down so close to each other.

If we did move on, I wanted to show you our West Mesa permits. Now on the West Mesa of course that has for these 3275s, these out here, that 8,000 acre-foot does require an offset of one to one. If we are pulling an acre-foot out, then we need to put an acre-foot back in. We also have LRG for 30 wells, which is part of our original well permit, our big one with the 21,000. These are also LRG 430s. Depending on how we develop this is going to help determine how those water rights are being used and what kind of return flow. We also have the LRG 5818 we purchased from Jornada a few years ago, which includes this particular one I'm pointing at, the LRG 5818 S7, that is Well 66. That is one that has been drilled and it's just a matter of getting that one equipped and tying it into the system.

McCoy: I think we're still seeing the East Mesa map.

Archuleta: Yes, it's just the East Mesa map.

Widmer: All right. Let me get rid of the East Mesa map. I am so sorry. Here is the Well 66 that I was discussing. Here is the 3275 that has the 8,000 acre-feet that do have offsets one to one. Then I am going to stop sharing that one and then



bring up—I think those were the only other two that I was going to show other than the spreadsheet.

With you all having that kind of information, I want then to have more of a discussion for you all. They have finished the four drafts that we had discussed further, that is plenty of reading material for you to take a look at and digest and provide comments if you would like as we're moving forward.

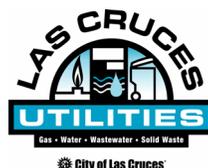
We also have two additional tasks that if you would like for them to do, you can choose a couple of different tasks, and I came up with just a list for you all to consider and even have a discussion on. With those, I would like to kind of go through them. Other things that they could potentially look at would include direct reuse. That would actually be the expansion of the East Mesa Water Reclamation Facility, and treat that water to drinking water standards where then it would go into a tank, which then would be tested to make sure that it meets all drinking water standards prior to be putting directly back into the system.

Another potential thing to take a look at is to utilize stormwater for the ASR portion, which they've given us a draft, which obviously still has a little bit of work that we want done. The only thing with that that I think that we need to consider is that stormwater is rain dependent and we have all noticed that this year we did not really have a monsoon season.

Another thing for us to really potentially take a look at for your consideration would be to coordinate with the State Engineer for the two deep aquifer permits that we've already submitted for the use of brackish water that is near the Foothills Landfill. Those permits are in there. We can always get with the State Engineer and find out if we can move forward on those or not. Obviously, those are going to have less effect on the river system, potentially even less than the LRD 3200 Series, but that would require some hydrology modeling.

Another thing that potentially could be looked at is coordinating with the State Engineer to find out the potential of transferring surface water rights into the well for offsets. We are very well aware that Elephant Butte Irrigation District (EBID) is not in favor of that type of action, but many of these permits do bring it up as for offsets or to utilize surface water as part of an offset. That would require coordination with the State Engineer and potentially EBID.

One of the things that may actually end up getting affected is that a lot of the time once you take land out of production and utilization of surface water, what EBID will do then is modify where their actual service area is so that they can maintain their 90,640 acres for irrigation purposes. Just because we transfer service waters into wells for offsets doesn't mean that EBID is going to be using less water.



Something else that has the potential to be discussed is to work with other nearby water systems to develop perhaps a water authority. That's always good to do, but when we really think about it, because the City has--our rights are older, so we have a lot of seniority is that the City may end up actually benefiting the other water systems. Ultimately, it is not going to bring additional wet-water into the system of which I think is part of what we're trying to accomplish.

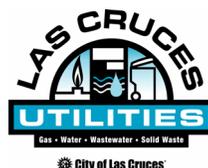
Another thing that we could do is perhaps work with the legislature to limit growth of permanent high use crops, such as the pecans as some of you have brought up before. Obviously, that would be controversial, and it would require a recommendation to City Council to push forward that through legislative purposes, if that is something you would be interested in.

Another thing we could do is perhaps work with other water suppliers and other states to actually bring water from other states and have them put that into the Rio Grande. If we were able to do that, then that excess water that they have will help sustain Elephant Butte Dam for annual irrigation allotments. Ultimately if that river is full during full seasons, then that makes the lower Rio Grande aquifer more sustainable.

Another thing perhaps to consider is to purchase agricultural land and take it out of production. We chatted a little bit about us moving our surface water rights into wells, but if we were to purchase agricultural land and take them out of production—we believe that it could have the same effect as transferring those water rights and that EBID may just readjust their service area to maintain their acreage for water use.

The last one, I am sure I have given you enough to think about already, is perhaps limiting the growth in the City service area outside of our current water rights and offsets. That's a pretty big deal. I've seen it in other areas. I was telling someone the other day that that is something that Davis, California did. They felt that their area was growing too fast and their City Council made the decision that they weren't going to grow more than 1% per year. Obviously, that has happened before and that is something to think about. Obviously, we don't want to limit that growth because we do want to have economic development and we want to see everyone have a productive society.

With that, that is a lot for you to digest. Obviously one of the things I also wanted to bring you up to date on is that the water conservation plan is still under production. I know with the COVID, the Steering Committee wasn't able to meet that much, but it is my understanding that they are getting together to meet for the rewrite. I think from what Rhonda (Diaz) tells me, they will be looking at the rebates, incentives, and other methods to lower the GPCD (Gallons Per Capita Per Day) for residential and the system. I don't know if that answered all of Commissioner Carmichael's questions, but that sure puts



a lot on all of you. With that, I will let you all do your talking. Chairman. Thank you.

Chair Little: All right. Thank you. This is William Little again. Adrienne, would you please just publish for us a bullet list of what you just read to us and ask Alma [Ruiz] to distribute that.

Widmer: Mr. Chairman, Commissioners. I will definitely print that out and I will make a photocopy for her to hand out to you all.

Chair Little: Thank you. It's good that the water conservation plan is going forward, because one of the things we will want to do is to talk about that when we do have a draft in front of us. It's probably premature to talk until we do see that draft.

Looking back at the 40-Year Plan, it looked as though under the high growth scenario, that by 2055 we would need about 10,000 acre-feet a year more than we have. Is that right?

Widmer: Mr. Chairman, Commissioners. I would need to look that up. Right now, when we're taking a look at what's showing up in the 40-Year Water Development Plan, is that although we're having growth, we're still showing that people are working harder at conserving. We're still closer to the low to medium growth. That kind of shows in the amount of water that we are using is staying pretty constant.

Chair Little: Okay. Then perhaps and I think its Figure 8 in the plan. Perhaps it's time to revisit that particular figure. It's what drives all of this planning is what are we going to need by the end of the period? And if it is really different from what was envisioned a few years back then that makes life different for us. Now, other Board Members, pipe up.

Carmichael: This is Commissioner Carmichael, Mr. Chairman.

Chair Little: Go ahead, please.

Chair Little: Yes, I agree with your comments about reverifying in goal or target, and make sure we understand that. On the conservation side, I'm not sure how to in their calculations, what I'm thinking there, but that reminded me how many acre-feet are we going to be short at some point in time. I don't know how we can relate the conservation opportunity to that. In other words, how far can conservation take us toward that with an all-out effort including incentives or whatever might be possible. I would encourage the conservation folks to try to relate that in some way to how far that might get us toward our goal. Otherwise, we need to do it anyways, but we need to know that.



The other—I had a question, I guess about what you mentioned, the brackish water in the East Mesa Landfill. I don't know what the state of technology is with desalinization and all that. If there is any information on that when you summarize some of your comments, I would be really interested in understanding it a little bit more.

My only other question I guess goes to the Mr. Shomaker. Anyone that they come across that is importing water from wherever, the most expensive thing out of that besides developing it is, obviously the pipeline. Does anybody ever start out with some other approach? It may sound pretty silly, but like trucking water to begin with—just approve the process or something. I guess that's the only other thing right now in my mind. Thank you, Mr. Chairman.

Chair Little: Thank you. Adrienne, you had a comment.

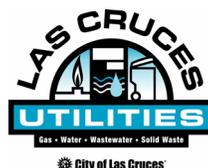
Widmer: Yes, Mr. Chairman. Thank you. One of the comments that I think that Commissioner Carmichael had is a very excellent one on the conservation side and how is that going to relate to the water use. One of the things that Rhonda [Diaz] and I have been discussing—she is now having discussions with Lee Wilson and Associates is to say, if we get our GPC (Gallon Per Capita) down in accordance with the 40-Year Water Plan and what conservation plan does, what does that really mean? How many acre-feet a year are we actually end up saving that can move forward or be used for increased population? How much farther along will that make us? Rhonda and I were talking about that, and she was going to talk with Lee Wilson and Associates to discuss it. I'm thinking that's what you meant Commissioner Carmichael, and if not, please correct me.

Carmichael: Yes, that's correct. Thank you.

Chair Little: Okay. Anyone else? Go ahead, please.

Archuleta: One of the things I'd like to see sometime in the future would be to take a water demand and water supply graph showing the three assumptions that are in the 40-Year Plan. The Water Conservation Committee is using the low growth right now, using low growth for predicting how much water we might be able to save. And basically, assuming that in the next 20, next 10 years, if we implemented these incentive programs, we would not have to increase our water demand beyond what it is today. That's one of the basic assumptions of the water conservation plan that has been developed so far.

One of the questions I have is, what can we do in-house within the boundaries of the City of Las Cruces with the water rights that we have? How much time do we have before we must go outside to consider other areas like importation of water and desalination? Looking at reclamation and reuse as part of the in-house development plan because it is local, how much can we do before we have to start thinking about going to importing water?



I do not have that kind of gut feeling right now based on the information I have been provided. I don't understand all of the water rights and what's possible. We have plenty of water rights—it seems like we have plenty of water rights to meet our demand for a long time, but I don't have a good feel for that at this point in time based on the information that has been provided.

Chair Little: Okay. Ms. Widmer again.

Widmer: Thank you, Mr. Chairman, Commissioners. One of the things that we are very excited about is our NO-DES (Neutral Output-Discharge Elimination System) machine has come in. Probably one of the things that Rhonda (Diaz) has probably told you all is as we are going forward, a lot of what ends up showing up in our GPCD is our water lost. That is through main breaks, service line leaks, or flushing due to water quality, which we have had discussions before that one of the problems right now with our system is that our water lines are sized for fire protection. So we've got great fire protection, but the more people are conserving, the longer that water is sitting in the pipes and is becoming essentially stagnated, which means that we have to open up and we have to flush that water in order to make it fresh. We are using the same amount of water to keep it fresh that we were originally selling.

One of the things that we are excited about this year, we just got it in, we're waiting to get some training on is the NO-DES machine, which we have presented to most of you before. That is, we are essentially cleaning the water and freshening it up without having to waste any water. It goes from one fire hydrant to another one. We set it up, it's kind of like a vacuum and it circulates through there. We're pulling out the iron and the manganese, and we are inputting chlorine, which is freshening it up. Therefore, we are not having to flush the hydrants.

What we are hoping, is that within the next couple of years is really see that amount of water-waste, so to speak, go away. Even though we are flushing and it ends up either going into the sewer or the storm drain—if we put it into the sewer, the positive thing about that is, it's actually going through the wastewater treatment plant and being returned back to the river. We would like to see that amount end up getting lower. If we do that, then that allows the opening of water rights to actually be used to supply water.

We can certainly go ahead and try to put down the demand and the supply and put our assumptions and see what's going on. I am really excited about the NO-DES machine that I think it is going to be great for the Utility as a whole. When that gets underway, we are going to let you know about it, so that you can come and take a look.

Just to let you know, we are doing everything that we can to lower the amount of wasted water due to the main breaks and the line leaks, which we've discussed with you before. On the line leaks, with the new meters that we



have, with the leak sensors, we are able to capture a bunch of those before they ever show themselves. We are definitely making great strides on keeping water-waste down. I hope that helps answer your question Commissioner Archuleta.

Archuleta: It does. And so, whenever the Water Conservation Committee finishes its report, we can show the amount of water conservation that's going to reduce demand, and then the rest of it would be new water so to speak. Show when it's needed and when it's required before we have to go outside the City to import water.

Chair Little: Thank you. Back to the importation. One of the ideas that has been floated is not quite importation, but trading. If somehow or another New Mexico were to allow the salt basin water to go to the City of El Paso, the City of El Paso in turn could allow New Mexico to keep more of the flow from the main stem of the Rio Grande, and no pipelines are involved or shorter pipelines are involved.

The other line of thinking I wanted to mention was that there's some evidence, mostly from California, that the growth in population and in economic activity and gross domestic product and all that can in fact be uncoupled from the water use. It's not a fluke, but it does take some careful work. Anyone else?

(Commission Sorg and Commission Bencomo joined meeting at 4:05 p.m.)

I noticed that Commissioner Sorg and Commissioner Bencomo have also joined us. Thank you for catching up. Do you have any comments?

Bencomo: None at this time Chair. Thank you.

Sorg: No, Chairman. No.

Chair Little: All right. Thank you. Dr. Johnson, you've been silent today.

Johnson: I'm afraid I don't know enough to ask an intelligent question in here. I need to study this a little bit further before I can really bring things forward.

Chair Little: Okay. All right. We've been going now for just a little bit more than an hour. What do we have left on the agenda for today?

Widmer: Mr. Chairman, Commissioners. That was it. We just wanted to kind of leave it open with you to have your open discussion. If you all do have a couple of items you would like Shomaker and Associates to look into a little bit further, you can either wait now or you can think about it and have a discussion at the next Board meeting to let us know what else you would like them to do. Otherwise, we will just wait for you to continue forward in reviewing and then if you want another Work Session to talk about it some more, we certainly can do that. In the meantime, we will also be looking at some other questions that



you have so that we can come and talk to you a little bit more about the comments and questions that you have provided.

Chair Little: Okay, Delilah Walsh. Do you have more for today's agenda?

Walsh: Mr. Chairman, Commissioners. I want to reiterate for today's purposes, we do want to hear from you all if there are options that you want us to pursue. Obviously, as Adrienne mentioned, the perfection of those Jornada water rights is a priority for us. Carl [Clark] is working on our Master Plan for the entire Utility. Part of that Master Plan will be the plan of how to put those water rights in use. Followed by that of course, is going to be well improvement and full development of the well fields that we have available to us today. They are all expensive options no matter what, but we are going to have to start being very out of the box and very creative and very collaborative when it comes to other users throughout the Valley.

If you have any suggestions or things that we need to pursue, whether it be an expanded partnership with agricultural users, reclaimed water to add, anything in that effect or that you see beneficial, that's what we want to pursue. It's a big elephant and it's an expensive elephant, but it is something we need to address. We are on a good path now, in the sense that our Water Conservation Committee is doing good work. Once we have a better handle on what those projections are going to be, coupled with the growth of the City, or the projected growth of the City—we are headed in the right direction. I just want to encourage you if there's anything you need us to pursue or any opportunities you think we have, please let us know.

Chair Little: Dr. Shomaker. Did you have something to add?

Shomaker: I guess what's been going through my mind is the uncertainty that the Texas litigation is presenting to us. Depending on how that comes out, if things go the way New Mexico would like them to go and Las Cruces would like them to go, and we proceed under basic New Mexico State Water law conditions that we're used to, then Las Cruces has a senior position in this basin even ahead of EBID for the LRG 430 Rights. If our conservation program continues to be successful, and the per capita demand continues to go down, we are in a good position both with respect to quality and quantity, and with respect to water rights.

On the other hand, if the litigation ends up with us being in a position with all the other water users in the basin as contractors to the United States, a completely different set of plans might turn out to be in order. I think everything we do is subject to that uncertainty for a while yet. I think Las Cruces Utilities is certainly pursuing the answers to important questions in a very timely way. We are very happy to be a part of it.



Chair Little: Thank you. Agreed. The trial will not begin until late 2021 and so we are looking at another two years before anything can crystallize unless there is a deal struck ahead of time.

Let me attempt to speak for the Board without calling any votes or any decisions. The department and its contractors have got several items that are in progress, their drafts, their drafts in review that need to be returned and finalized. Certainly, we are eager to see all those separate planning documents pushed forward.

If we can get that suggested bullet list from Ms. Widmer that would be a help. I personally am going to take a pretty dim view of a lot of them. What I am going to ask is that everybody receive those and return their immediate comments to Alma [Ruiz] to share with the Board. If this happens rapidly, we can set aside some time during Board General Discussion next Thursday. If it doesn't happen that fast, we will be having a Board meeting in December. I would anticipate that there is no need for another Work Session on all this until at least January. And by all means, let us circulate a bullet list of possibilities and return our comments again to Alma [Ruiz] to share with us all. We'll see how many comments we have accumulated by next Thursday. If not then, then a month later.

Meanwhile, the sense of the Board is that important discussions and important planning is continuing, and please do so. If any great revelations occur to us, we will be sure and share them. Anybody have any final comments?

Delilah, we'll get to you at the very last.

Walsh: Okay.

Chair Little: Okay. Seeing none. Delilah Walsh gets the last word.

Walsh: Mr. Chairman. I just want to emphasize that I very much appreciate this discussion, as well as the Board's efforts to push through this 10-Year Action Plan. It is a three-pronged approach. It's going to be one that we need to do a better job at, and you mentioned it earlier is a legislative and regulatory approach. How do we become an active participant to make beneficial change on the regulation side and the legislative side? That's the first one. The one that we've been a little bit neglectful toward, but we will take better action moving forward on that.

The next is administrative management. It's not just about the water, but it's how we manage the water and the reclamation projects, the ASR projects, conservation projects, those all fall under that prong, and so that's another opportunity for us to continue exploring. Then of course it is the hydrogeological, and that's what we have our consultants on board for to see what those possibilities are. If you just keep thinking of it in that framework



of that three-pronged approach, I think we are ready to go and that would be a great direction for us.

Chair Little: Okay, thank you. Then without objection we will close the Work Session. And look forward to seeing everyone at 3:00 p.m. next Thursday afternoon for our Regular Board Meeting. No Work Session in advance of that meeting. Okay? Thanks again.

Meeting was adjourned at approximately 2:40 p.m.

Ed Archuleta
Las Cruces Utilities Board Vice-Chair

Date

