CORBETT WATER DISTRICT
BOARD OF COMMISSIONERS
SPECIAL BOARD MEETING
NOVEMBER 19, 2019

BOARD MEMBERS PRESENT: Sara Grigsby, Bob Gaughan, Fred Sanchez, Dan Graff and Jeff Hargens
BOARD MEMBERS ABSENT:
STAFF PRESENT: District Manager Jeff Busto, Assistant District Clerk Lynda Ronell
AUDIENCE MEMBERS: Chris Augustine, SCS Engineers, Tim Shell of Wallis Engineering, Christine Witka, Malcolm Freund, Victoria Purvine, Al Martinez, Rais Davis, Jerry Mishler, Gary Purvine, Linda Hargens, Gordon Fulks, Cindy Fahy, Clair Klock, Nita Wilton, Loren Wilton, Teanya Bohag, Bob VanSpeybrock, R. Dennis Wiancko, Ander Meyer, Robert Grott, Carlyn Mitas, Ed Bell, Betty Bell, Cloudy Sears, Karen Horn, Don Horn, Matthew Peterson, Dave Stefonek, Karen Stefonek, Sonny Boyd, Andrew Parker, Chris Wyckoff, Bill Bohag, Fendall Winston, Dave Flood, Kit Dixon, Michael Arion, Angi Kimpo, Jonathan Mohler, John Paananson, Paula Battiston, Sandy Kube, David Jacob

Meeting called to order at 7:15 p.m.

START UPS

President Jeff Hargens thanked everyone for attending the meeting. He introduced himself and the Board members He introduced District Manager Jeff Busto, Engineers Tim Shell of Wallis Engineering and Chris Augustine of SCS Engineers.

President Hargens asked Treasurer Sara Grigsby to go over the Agenda for the meeting. Sara Grigsby addressed the group and read through the Agenda items. She noted we will try to honor the times as listed on the Agenda. We will honor the fact that we want to answer your questions. We will have more meetings.

CURRENT SITUATION

Jeff Hargens explained where we are currently. TheWater District Board has been working on a well project for approximately three years. We have learned that we cannot drill a well in the Sandy River basin which covers about 95% of the Corbett area. We had the Eagle Creek Fire that did not come into the Watershed ,but, the ash fallout has caused problems with our water. We do not own any of the property in the watershed. It is mostly owned by timber companies. We have two intakes, the southfork and the northfork of Gordon Creek. We are vulnerable to commercial operations, such as logging and we are vulnerable to fires. We have been in a drought since 2012 according to the US Forest Service. We have not taken water from the southfork intake for over a year. We are down to one source, the northfork intake. It is a good source, but, it is a surface source. Those are the major reasons we are looking at a well. The other reason is we are very limited on storage. We only have storage for two days.

Jeff Hargens continued the Board has decided on a location for the well. The property for the well is owned by he and his wife. There would be an easement arrangement with the Water District for the well. There would be no charge for the well site. The easement would remain in effect as long as the site is used for Corbett Community water. If the use ends the property would go back to the estate.

Jeff Busto, District Manager, introduced himself. He addressed the group. Jeff Busto stated we are down to one source and as District Manager he has to forecast for the future of the community. The well project is very important for the community to invest in. Jeff Busto continued that he does not see a way that this community will survive long term unless we have a viable source of water. He said he does not see the northfork or southfork of

Gordon Creek being a viable source of water in the future. There are changes happening environmentally and changes in regulations. It is getting harder to take surface water. We are allocated two cubic feet per second which is roughly 900 gallons a minute. We never exceed that amount. We are within our ability to use our water. There are times during high peak use in the summer that we cannot keep the reservoirs full. Going through our system we can only get 650 gallons a minute through our treatment facility. Upgrading our treatment facility would cost far more than putting in a well.

Jeff Busto continued. A well would provide a huge amount of storage with Aquifir Storage and Recovery (ASR). Storage tanks above ground or in-ground would cost about $2.00 per gallon. The cost to build a one million gallon tank would be about $2,000,000.00.

Jeff said he is concerned about the future of the community. If a town loses its water then there is no town any more. If we have no water coming out of taps we cannot live here.

QUESTIONS:

Q: Fendall Winston : Is there any way to separate our agriculture and domestic use? Basically during August we are running out of water due to farming.

A: Jeff Busto: It is not the farmers. It is domestic customers using the water. We do keep track of water use. We can tell who is using it domestically, agriculturally, parks, schools etc. The lions share of the water use when it is hot out is domestic use.

Q: Michael Arion: How much water that comes out of northfork gets lost due leakage in all the pipes.

A: Jeff Busto: It is hard to say. We just put in a new meter system which will allow us to do an accurate water audit. That will allow us to audit how much we produce and how much we sell. Loss is probably under 10% but no accurate number at this time.

Q: Clair Klock: By digging a well and using a well we are not giving up the water rights to north and southfork are we? If we do not use the creek for five years do we lose the water rights. That needs to be checked on.

A: Jeff Busto: No. We will be using the stream. We are trying to resurrect southfork right now.

A: Jeff Hargens: We are not drilling this well and just using the well. We will be using the northfork and southfork whenever the water is available in conjunction with the well.

Q: Angie: What percentage of water are we not capturing as it goes by and is it a lot?

A: Jeff Busto: It depends upon the stream flow. It is thousands upon thousands upon thousands of cubic feet per second going through. Some summers the entire creek runs through our intake. We do that because we have a fish screen and if we let water go over the dam the fish can't pass but by having it flow over our intake it is better so they can go past our intake and go up stream.

Q: Ed Bell: When or how soon could the well be put in place.

A: Jeff Hargens: Probably looking at four years.

Q: Fendall Winston: What altitude is the well at?

A: Jeff Hargens: Approximately 1,250 feet. Location is Larch Mountain and Deverell Road.

Sonny Boyd noted the property is 1 mile below our current treatment plant. It is 280 feet in elevation change.

Q: Gary Purvine: There is an impediment surfacing here regarding the location of the well. You are obstructing a beautiful view of Mt. Hood and a couple thousand acres of timber if there is going to be buildings on it. So the location for a lot of us is not an ideal situation and we would like you to consider moving the well to the south maybe 600 to 700 feet where it is down over the crest of the mountain where it cannot be seen from the highway. Thousands of people travel that road during the year and photograph that. It is one of the areas where there is a large land mass and no buildings.

A: Jeff Busto: Logistically that is the only place that the well is feasible to go. There are many other factors that will cost a ton of money. To move it we would have to drop in a PRV station which costs about $100,000. We would have to cross the road with two 10" ductile lines and then run the lines down the road. From the road I do not think the building will exceed the height of the horizon you can see. It is going to be an eight foot building.

LOOKING TO THE FUTURE (Power Point presentation attached to minutes)

Hydro-Geologist Chris Augustine of SCS Engineers introduced himself. He has been assisting the District in planning and feasibility of installing a deep ground water well and other alternatives to provide sustainability, flexibility and better operation of the water District which will benefit the customers. Chris Augustine used a power point presentation.

Chris Augustine addressed the audience. Switching to a deep ground water source because of availability. It is available relative to surface water. The Oregon Water Resources Department (OWRD) in the 80's passed the Sandy Basin Program rules. This limits new surface water rights and shallow ground water rights and use due to over appropriations of the Sandy River Basin and its tributaries. Ground water is still available based on criteria. Ground water is less seasonal depending upon time of year. It is a consistent source with less variability. It is less susceptible to contamination such as a truck driving into Gordon creek our current source could be threatened. It would eliminate problems with high summer demand. It can provide additional storage capacity. Deep water wells do not connect with surface water which benefits fish and other users of surface water.

We are in the feasibility stage of the program. The audience received handouts on Aquifer Storage and Recovery and Artificial Groundwater Recharge. (copy attached) We are evaluating where the water is going to occur, the water quality, permitting and cost considerations.

We are moving to the drilling and testing of an exploratory well. In a perfect world we would be very sure about what we are doing because there are other wells. In this area there are no wells. This gives us the opportunity to be "first" and get a senior water right in Oregon for the ground water. We are also the first so we have to determine the ground water is there and it will serve our purpose. We looked at all of the information currently available to us and we believe there will be ground water. After the exploratory well we will go through permitting and then a supply well. Once the supply well is in we will do aquifer storage and recovery testing.

Chris Augustine continued through his Power point and information from 2016 Mark Yinger and Associates Study. In 2018 we gathered additional information to prove feasibility. The well location is almost at the top of the District and be able to serve the District. The aquifer that is suitable is the Columbia River Basalt Group. We will drill

down and seal off areas unsuitable. We should come to a thick sequence of Columbia River Basalt at 700'. That is where our water bearing zone should be. We will then characterize the geology, the water bearing zones yield, production capacity and the water quality as we go down. The goal is to determine if the water supply well is feasible and if aquifer storage and recovery is feasible. The test well is an 8" bore and a production well is 12" to 16".

Chris Augustine reviewed information on Aquifer storage. Surface water from Gordon Creek that is treated is pushed down into the well. It pushes out water in the well. When we pump it out we are pumping out treated water. All additional water we have now in the winter can be stored in the well and then used in the summer dry months.

Q: How much storage?

A: Chris Augustine: About 100 million gallons.

Jeff Busto stated that currently we produce 325 gallons per minute. We can produce 650 gallons per minute. We need every bit of that in the summer months of high use. It would be really nice to store the water and provide it to customers when it is needed.

Q: Cindy Fahy : Is there going to be a water tower or a "water plant" in that area? Will we be looking at a water plant?

A: Jeff Hargens: You will be looking at approximately a 12 x 12 building 10' tall that is masonry with parking about the size of the Fire Hall.

Q: Cindy Fahy: I have a well and are you saying we cannot have wells and why was this particular piece of property chosen?

A: Chris Augustine: Sandy River Basin is closed to Municipal uses and non-exempt uses such as irrigation. Pretty sure you can still put in a domestic well. Costs are high. Restrictions on amount of water per size of property.

Q: Dave Stefonek: What is the elevation of the aquifer and what feeds it? Is it snow melt or rain water or what?

A: Chris Augustine: There is information in the hand outs. Elevation is 1,250' which will put the bottom of the well if we drill 1,400 feet it will be 250' below sea level. We will be in geologic and hydro geologic conditions that make the ability to use the well for municipal purposes, beneficial uses, that make it acceptable to the Oregon Water Resources Department.

Q: Angie Kimpo: So if you get down there and the water is no good and you push it out of there and put the good water down there how long does water have to be underground before it starts tasting like aquifer water? Tasting a lot different?

A: Chris Augustine: A long time, but there are a couple things with ASR as you put the water in and pushing other water out there will be some mixing.

Q. Fendall Winston: Does this well actually provide water or does it just store water? Are you planning just to pump it down there or use the water that is there.

A: Chris Augustine: It can do both. There are two ways to operate the well. A lot of ASR wells started out as ground water supply wells, but, because the water is thousands of years old there is not water going in. Over time the water levels go down if there are a lot of people pumping water out. The ASR provides a sustainability. If you put the water in and we are the only user, we get our water back. It is high quality water. You can operate an ASR well without having a ground water right for the well.

Q: Chris Wyckoff: Is the water treated when it comes back out of the storage or is only treated when it goes in?

A: Chris Augustine: It is treated when it goes in and is dosed when it comes out just to meet the residual requirements.

Q: Anders Meyers: The piece of property is at the southwest corner of the intersection. How many acres?

A: Jeff Hargens: Yes the Southwest corner. It is 168 acres.

Q: Anders Meyers: What is determining the actual location on the parcel? There appear to be concerns with it being located right next to Larch Mountain Road. Could it be located in a different spot on the property.

A: Jeff Hargens: The location in the corner of the property there is three-phase power, the further you go away there is no power down Deverell Road. You have a pressure reducing station at that corner. To the south is Buck Creek. The Water Master requires us to prove that we do not effect creeks in the area that is why we are going with a test well.

A: Chris Augustine: When you put your request in for a well in Oregon you submit your application for a water right. They look at where the well will be located and if you are within 1/4 mile of stream or creek it is automatically deemed to be in surface water connection and causes problems. It is a very difficult process and by going deep we are avoiding some of those problems.

A: Jeff Busto: It is also the most cost effective place in the District and it is the only place we can put a well where we can feed the entire community with water. Otherwise we will only have part of the people served. In a few years there will be trees covering the building.

Q: Victoria Purvine: The County is saying they will require 3 ½ to 4 acres. There was discussion regarding an easement but there is nothing in the County pre-conference notes that addresses an easement and getting waivers. You are coming up on your six month time limit with the County pre-application are you going to get back with the County to get that all nailed down?

A: Tim Shell - Wallis Engineering: I arranged the pre-application meeting with the County. We talked about the easement with the County at that meeting. They said the easement is allowable.

Q: Victoria Purvine: I followed up with Lisa Estrin of the County and she said they would have to do research into the possibility of an easement in the exclusive farm use land.

A: Tim Shell : We were not told that at the meeting.

A: Sara Grigsby : We will contact the County about the easement.

Q: Chris Wyckoff: Going 200 extra feet does not really drive up the cost of a drilling project much. Does the aquifer not exist a mile away or at the treatment plant.

A: Chris Augustine: Cost for drilling an extra couple hundred feet do not really drive up the costs relative to the whole project. It does add costs probably $200 per foot. The water treatment plant is located next to a creek which is a problem . The other consideration is the faults. This location fell into a sweet spot.

A: Jeff Hargens: There is no three phase power at the Treatment Plant.

Q; Loren Wilton: My property borders that. Because of well head protection will it limit use of property around it? How close will the well be to the west property line?

A: Chris Augustine: There is a requirement for the Water District. There is a buffer zone. Cemeteries,, septic tanks, applications of pesticide. 100' around the well.

A: Jeff Hargens: To the west probably 1,000 feet plus.

Sara Grigsby said we could look at adjacent properties and see if they are impacted by any setbacks.

Tim Shell of Wallis Engineering introduced himself. He stated there are going to be three parts of this project. We have the test well, the production well and the aquifer storage and recovery well. We are putting in the test well so we can have more certainty before we invest a lot of money in a production well. The production well will provide a back up water source as well as additional capacity when needed. The ASR will provide the added storage and some environmental benefits for the fish in the creek.

The cost for the test well and feasibility study is about $570,000. This is to put in the well, doing the required tests, doing the feasibility to make sure that things are going to work. (information was provided in a handout attached to these minutes)

The cost of the production well and ASR are about $1.9 million for the well and about $200,000 for the ASR to store water underground. Both are in the same hole.

Q: Audience Member: How sure are we that we will hit water?

A: Chris Augustine: We have looked at the geology. We know the Columbia River Basalt group is present at the Gorge and in the Bull Run. In the Bull Run they have about 500' of very productive basalt. We anticipate we are going to see the same 500 to 600 feet of basalt here with the same water quality and very productive. The wells in the Bull Run without pumps flowed at 800 gallons per minute.

A: Sara Grigsby: The Board and staff have discussed whether we need a test well and have gone back and forth. When we met with the Agencies they want us to do a feasibility study

A; Chris Augustine: The OWRD has lottery dollars that they have put toward water projects. They are broken into three categories. Feasibility grants where you go out and test things. No projects can be built. The test well falls under this grant. The funding is 50% match. When you get a ground water right, by doing a test well we could have lower conditions from the State of Oregon.

Q: Cloudy Sears: Where were the wells in the Bull Run Watershed?

A: Chris Augustine: Right below the second reservoir. There are some up further. They drilled them in 2002.

Q: Jerry Mishler: Do we know that the current water treatment plant has the capability to treat well water and make it good?

A: Jeff Busto: We would never treat that water. It would be chlorinated.

Q: Jerry Mishler: So you are really counting on injecting treated water into the well.

A. Jeff Busto: If the water quality is good enough. We don't need to treat it. We would just chlorinate it and it would meet Oregon drinking water standards straight out of the ground.

FINANCING OPTIONS

Hand outs were available to the audience and attached to these minutes.

Tim Shell said there are three major costs the test well, the ASR well and the production well. Other costs to be considered are Operation and Maintenance costs. These will be ongoing costs that will always have for the well. Approximately $7,500 per year for electricity, chemical costs $1,000 per year and equipment repairs or replacement. Approximately $10,000 per year for O & M. When you receive grants there are compliance costs. The site development, the building, parking lot, etc. are included in the well project.

Tim Shell continued the next step is to figure out how to pay for this. We have been to a number of meetings with the state. There are a number of projects available. There is a low interest state revolving fund loan available. We just received word that the project has been awarded a low interest loan. Maybe at 3%. We are going to go out and find grant money to supplement the loan. We have applied for a feasibility study grant through the Oregon Water Resources Department (OWRD). That grant will pay up to 50% of the cost of the test well program. That is 50% of the $570,000 costs. We will hear about that probably in May of 2020. Last time there were seven grant applications submitted and six of those were awarded so that may be a good possibility. Once the feasibility study is done and if everything looks good we will apply for another grant from OWRD called a Water Projects Grant. That would pay 75% of the $2.9 million. Those grants are very competitive. Sometimes you have to apply more than once. Last time there were four of fourteen awarded. It does depend upon how much the State has to award.

Chris Augustine said we have to prove feasibility before we can apply for a project grant.

Jeff Hargens said if you look at the handout. There are four alternatives. Jeff Hargens went down the list and dates that the well would be completed . The Board selected choice D on the list. The Board considered the timeframe and cost to customers. The Board decided to go through both grant processes with August of 2024 and the estimated $2.19 monthly costs to customers. He noted that for under $5.00 per month to have an additional water source we can depend on is really big.

Gordon Fulks said the total amount you would want from the customer's hide for this project is $2,084 plus interest. So for every one that is $3,000 to $4,000 over 30 years. It is pennies a minute but it is a lot over time.

Fire Chief Dave Flood addressed the group. The lions share of your homeowners insurance is based on fire and 40% of the Fire Districts rating is based on the Water District and if you live in the Water District. If your home is within

1,000 feet of a hydrant it saves you money. Having an additional source of water should drive our fire insurance rates down even more. It will take time. We are a ISO class five now and could go to a four when the well is in and we are re-rated. Chief Flood thanked the Water Board and Manager for going down this road.

Q: Ed Bell: Is there a hydrant on Hurt Road.

A: Chief Flood: There is a hydrant at the far end on Wand Road. We have plans in the next ten years to get hydrants within a 1,000 feet of every home in the Water District.

President Jeff Hargens stated we have plans to install nine hydrants in next summer. Chief Flood said there is around 75 hydrants in the District and we need to add 45 to get everyone within 1,000 feet of a hydrant.

Robert Grott commented the cost is more affordable than I thought. I think about me and my property and resale value with zero water supply. This is cheap.

Sara Grigsby asked if anyone had any further questions for Tim Shell on the financial information.

Q: Sonny Boyd: The far right column. New rate per EDU.

A: Tim Shell: What I did was add the projected cost per EDU to what is currently the average water rate. EDU is the average household.

Q: Malcolm Freund: I think we need to be honest to the community when you said 50% then changed it to up to 50%, in the last two meetings I have been to you said the realistic number was 25%. I think that needs to be noted.

A: Tim Shell: I gave you that information before we had the pre-application for the grant. When we had that meeting we found that the whole cost of the test well is grant eligible. It is up to 50%. Best case scenario we will get 50%.

Q: Fendall Winston: It would be a better comparison to compare the base rate per month . Currently $25.00 per every two months and this is only going to affect the base rate and not the water rate.

A: Jeff Hargens: These EDU's are the average of every household. It has not been determined by the Board if we would change the water rate or the base rate or a combination of both to cover costs.

Q: Kit Dixon: Will this require additional personnel and will they need additional training and also if you drill a well and it went dry is it an insured project.

A: Jeff Hargens: There is no insurance for drilling a well. That is why we are going with a test well and grants so our exposure is half of $570,000 to see if the quality and quantity of the water is there.

A. Chris Augustine: There is additional training if you go to an ASR system. It is somewhat automated.

A. Jeff Busto: It should not require additional personnel.

Gordon Fulks commented I like the idea that you are trying to minimize risk. This project requires an awful lot of money for a very small district. Things can go very wrong and a small dry hole is better than a very big dry hole. I think you are minimizing the water quality. Arsenic is one of the substantial problems with wells around here. I would not want any measurable arsenic in my water. Radon contaminates. Cancer hazards noted. Hard water is a problem for plumbing.

Sonny Boyd I was on Water Board for quite awhile as Secretary Treasurer. When I first heard about the well and that it was going to be on Jeff Hargens property I was dead set against it. I did research. I like that the District is doing a test well. I looked at the property at the corner and there is a ridge there that will block the area.

Sara Grigsby thanked everyone for attending the meeting.

Jeff Busto said please call me at the office if you have any questions or concerns.

WRAP UP

Jeff Hargens announced we will continue to have a few of these meetings throughout this project.

Everyone is always invited to come to Water District Board meetings the third Tuesday of every month at 6:30 p.m. We almost always will have a Well Update on the Agenda.

The next date for a meeting like this will probably be May or June of 2020 when we find out about the feasibility grant.

Thank you to everyone.

Meeting adjourned at 9:01 p.m.