

**BOARD OF COMMISSIONERS SPECIAL BOARD MEETING
VIRTUAL MEETING VIA ZOOM ~Wednesday, August 28th, 2024, at 5 p.m.**

BOARD MEMBERS PRESENT: Angie Kimpo, Kelly Piper, Dan Graff, Sara Grigsby, Michael Arion

STAFF MEMBERS PRESENT: District Manager Ana Linden, District Clerk Kelsey Zavoral, District Clerk Lynda Ronell

CONSULTANT: Jason Melady with Summit Water Resources

AGENDA

- 1. Call to Order** Meeting was called to order at 5:00 pm by Kelly Piper.
- 2. Roll Call** All Board members were present via Zoom.

NEW BUSINESS

1. Review the outcome of ASR Well-

- Kelly Piper gave a reminder to everyone that settlement between SCS and Corbett Water District that is settled. It was agreed upon that the current Board Members and current Management will not make or assist in making any disparaging or derogatory remarks or statements in any form or by any method whatsoever, and will only discuss facts related to the settlement. Kelly Piper also thanked Jason Melady for his presentation and his organization for the cooperation and collaboration during legal proceedings.
- Jason Melady summarized the work to date, and his recommendations for the next steps. Jason Melady was engaged first in peer review initially two years ago. Around August of 2022. He was hired to take a look at the work that been completed, related to the Districts ASR feasibility, study, and test. His work involved review of ASR well drilling, and the steps that led to litigation associated with that work. The district's attorney engaged Jason Melady as an expert witness in that work.
- This provided perspective on what happened on the project. This work was utilized in the mediation that ultimately led to a settlement for the district from SCS Engineers.
- The work evaluated was performed August of 2022 through November 2022.
- The scope of work was to evaluate the cuttings and other information associated with the ASR test well drilling that finished up a couple years prior and had not gone as expected.
- Jason Melady looked at the information that the district had which were meetings from board minutes over the period of well construction and videos of the board meetings. Also, Jason Melady reviewed all the design drawings and documents related to the Well. Jason also reviewed bids from contractors to drill the Well.
- He evaluated the logs that were prepared by the drillers during the construction process. They documented their activities on a daily basis. Jason Melady was able to obtain those from the drillers.
- He also reviewed background documents that the district had prepared prior to the ASR feasibility, study, and ASR test well construction.
- Jason Melady showed a graphed of what the anticipated geology would be in the subsurface in the location of the test well site.
- The target aquifer for the project was the Columbia River Basalt.

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- Based on the review that SCS designed, a test well was constructed to evaluate whether ASR was going to be feasible for the district and that included the design as well. They constructed a 12 inch borehole that would be drilled by a certain method called conventional air or direct mud. In certain zones, they were drilling quickly because they were not that concerned about the materials prior to the basalt. Once they hit the basalt they would stop, they would set casing, to hold the borehole open with steel casing seal, then they would be able to test that zone below in the basalts to evaluate its potential for ASR.
- The confusion that came in was ultimately what was built. This was very different from what this design prescribed.
- What Summit determined was that during the drilling process the drillers proceeded to drill mud down to the top of the basalt. After the fact that it was determined by Summit that they encountered basalt in August of 2020. This was 3 weeks after they started drilling. For some reason there was not a conclusion that they entered the basalt at that point, and so they continued to drill with the same method much further into the basalt aquifer.
- SCS ended up drilling down all the way to below 1,200 feet, with the same method that was not intended to be drilled past the basalt layer and into the aquifer.
- At that time, SCS lost all the mud in the hole, which then set off a chain of events that caused some significant complications.
- SCS spent a month adding additional materials to the hole to try to get the bore hole to solidify. However, the hole did not stop taking mud because it was so productive. This appears to be an artifact of not observing where you're in relation to the aquifer.
- SCS ultimately didn't finish the well construction until late August 2021. They started in July. SCS encountered the basalt in August. SCS spent the rest of the time just trying to get the hole completed.
- Melady suggested that the consultant that was overseeing the well construction process did not identify the top of the basalt. That ultimately led to significant problems in the well construction process. That completely obscured the information that they actually obtained from the well.
- Kelly Piper confirmed with everyone that Schneider was the actual driller and SCS was the engineering firm that was overseeing it.
- After the review of all that information, Melady then moved into the next phase of work that was supporting the litigation for the district. This work started a month after the review of the situation. This continued up through the settlement date in June of 2024.
- That work consisted of providing as needed support to the District's attorney which included a review of documents that were obtained through the discovery process. Melady went through all the files and pieced together what was going on during the drilling process. Who was interacting with who? Where was the knowledge with the geologic materials and what was the understanding of the geologic materials and understanding?
- The design of the well was completed by SCS engineers. Their responsibility was to collect and analyze the drill cuttings. Also, they were to make determinations of knowing when each geologic feature was reached during the drilling process. In essence, SCS was hired to support the well construction on behalf of the district, and ultimately did as their representative. Their responsibility was to ensure that the well was constructed as it was designed and specified.
- Jason Melady documented that his work included looking at all the drill cuttings that were obtained from the well. Jason Melady and his team brought in an expert in this specific geologic formation the Columbia River Basalt group. They did an independent analysis of the drilling cutting that to assess what the geological materials were and what part of the basalt section we were in.
- Ultimately during the drilling process SCS drilled way down to 1,200 feet before realizing that they were in basalt. SCS went through many materials and didn't observe that they were in basalt. Another thing that was determined from analysis of the cutting is SCS actually penetrated the basalt at 1,280 feet.



Then they actually drilled another 120 feet into an underlying formation that was not even the Columbia River Basalt group.

- It was also determined by SCS, that the well ended in the Columbia River Basalt group but in actuality it did not. SCS actually went into the Skamania Volcanic geologic layer before exiting the bottom of the well.
- Settlement was reached. Snyder settled early on in the litigation for \$75,000.00 and that removed them from the case.
- SCS remained and ultimately settled in late June of 2024 for a total of \$425,00.00
- A slide was put together to show what was initially spent. The district spent with Snyder and SCS fees roughly \$800,000.00 on the test well, and the oversight associated with the test well. Once Jason Melady was determined there issues. The district spent roughly \$132,000.00 on litigation. When you combined that with the grant that was awarded as part of the construction process the difference is about \$150,000.00. [Note: what Jason describes don't accurately reflect what was spent on ASR. See notes from 8-20-24 meeting to see accurate costs.]
- Jason Melady feels the viability of the operational storage and recovery for the district in the Columbia Basalt Group is a possibility. The aquifer is productive. The idea of being able to utilize aqua storage and recovery (ASR) is of significant benefit for the district because having a single source, and the vulnerabilities associated with having a single source of water.
- Some feasibility work may be required. It can provide an opportunity to set the record straight with Oregon Water Recourses Department about the final determination of the study. Particularly now with a better understanding of the geology . It provides a new opportunity to get additional funding before a feasibility study at the same site or other locations.
- Oregon Resources Department has 2 funding programs. One of which is the Feasibility Study Program that the original project was funded through (District obtained \$277,000.00 in Grant funds for the 1st test well). The district is eligible for the difference between the maximum contribute for a project \$500,00.00 and the \$277,000.00 up already have. So about \$220,000 is still available under the Feasibility Study Program which requires a 50/50 cost match.
- Jason Melady recommendation would be to proceed with a desktop paper study to try to assess where to potentially look at installing ASR well. That project would be well- funded through a separate grant with Oregon Resources Department and a different program that funds up to 75% of with the District cost with a match requirement of 25%
- Grant program for the feasibility use to be in the Fall. Now it will be moved to the Spring.
- Ana Linden asked, "What do you anticipate a desktop study costing?" Jason Melady advised he has no dollar amount. His guess would be \$100,000.00. Ana Linden asked if Jason Melady thought we have enough information to fund an actual well. Jason Melady thinks the story is compelling and the facts are there and has value. It's solid concept and it is feasible.
- Kelly Piper asked for confirmation on the 1st Grant that we got from OWRD was considered a feasibility study that was physical, but now go for another feasibility study that is more desktop. We're not going to go out and actually drill, we're just utilizing the information we know. Then after that feasibility study is completed, OWRD has an additional Grant for us to actually drill. Jason Melady confirmed that is correct.
- Angie Kimpo asked, "We can't use a desktop study to determine how far this mud has gone." How do we go about this not know how far this mud has gone away. Jason Melady advised that they thought about that early on. Part of the desktop study would be getting detailed assessment of that. There is really not an easy way to measure that 1,000ft down. It's just not something that's easy to do, but there could be an analysis or modeling completed that is conservative.



- Dan Graff stated “knowing what we know now where those layers are at and interflow zones and stuff, if we were going to do feasibility well just to test. Could we just drill a smaller one down there since we know we don’t have to go 1,200 ft?” Jason Melady said it would depend on what you would want. You want a big diameter that you can actually test it. You want to know how big of a pump you need to test it at the rates in which you want to be able to operate this thing at. Then what diameter would accommodate that pump so that’ll set the size in essence is what diameter the hole needs to be.
- Ana Linden advised the Board that her perspective is we should probably put this in a feature agenda, maybe in September for them to discuss what you would like to do for your next steps, and strategy.
- Angie Kimpo asked “what do we know about how the grout and the other materials? Besides, the mud would travel? The worst potential thing is to have some of those materials move.” Jason Melady advised by nature they’re sort of intended to not go far. They’re intended to only go as they can and then block everything else from coming. So they’re in essence designed to not go far.
- Jeff Hargens asked “if there is or was any test done on the potable water that is down there or how was the process so messed up that they couldn’t get any testing done on it.” Jason Melady said unfortunately they were unable to. After construction they were unable to get any water from the well really. Not even 5 gallons a minute came out of the well when they tried to pump it. He thinks they actually dewatered the pump even at 5 gallons a minute. Jeff Hargens asked “even at the static level that’s there now you can’t go out and test it to see if there is water down there?” Jason Melady said there is connectivity between the water and the borehole, and the aquifer is. It’s nonexistent. Jeff Hargens asked if there was any contamination involved in the products that they use to seal it like cement or anything? Jason Melady explained there are metals and other constituents that are in the materials that they put in the borehole. That is going to mix with either injected water or pumped groundwater. The distance at which that is, going to affect the well is really difficult to predict that’s kind of where that be. At least being conservative. Jeff Hargens asked is the State going to require us to abandon that. Well at some point in time? If it’s not being used? Jason Melady does not think so. The state does not have a basis for doing that.
- Kelly Piper asked Jeff Hargens what he would like to do with the well, Jeff Hargens replied that he would be fine if it is left or dealt with in a manner required by law

ADJOURNMENT OF MEETING – Michael Arion made a motion to adjourn the meeting at 6:15pm. Angie Kimpo seconded. (*motion passed 5 yes votes: M. Arion, D. Graff, S. Grigsby, K. Piper; Angie Kimpo*) The meeting was adjourned at 6:15pm.