

**Bear River Water Conservancy District
Board Meeting
Wednesday October 23, 2019 7:00 p.m.
102 W Forest Street
Brigham City, UT 84302**

Minutes

Present: Trustees: Charles Holmgren, Mark Larson, Russ Howe, Jay Carter, David Forsgren, Jay Capener, Tyler Vincent, Richard Day, Jeff Scott

Absent: Roger Fridal, Neil Capener

Staff: General Manager Carl Mackley, Systems Operator Robert Thayne, Administrative Assistant Jill Jeppsen, Bill Bigelow Hansen, Allen & Luce

Welcome: Vice Chairman David Forsgren

Invocation: Tyler Vincent

Pledge of Allegiance: Russ Howe

Declaration of Conflicts of Interest: none

Adoption of the Agenda –Vice Chairman Forsgren

A motion was made by Board Member Larson to approve the agenda. The motion was seconded by Board Member Vincent. Vice Chairman Forsgren Financial Chairman Holmgren and Board Members Howe, J. Capener, Carter, Day and Scott voted in favor of the motion.

Approval of the Minutes for the Board Meeting held August 28, 2019 and September 11, 2019

The minutes of the Board Meeting held August 28, 2019 and September 11, 2019 were included with the packet that was provided to the Board Members.

Board Member Larson made a motion to approve the minutes for the meeting held August 28, 2019. The motion was seconded by Financial Chairman Holmgren. All Board Members voted in favor of the motion.

Financial Chairman Holmgren made a motion to approve the minutes for the meeting held September 11, 2019. The motion was seconded by Board Member Day. All Board Members voted in favor of the motion.

Financial Business – Charles Holmgren

The financial statements for August 2019 and September 2019 were prepared and provided to the Board Members. Financial Chairman Holmgren has reviewed the reports and asked for the Board to approve the financial reports.

A motion was made by Board Member Vincent to approve the financial statements as presented. The motion was seconded by Board Member Howe. All Board Members voted in favor of the motion.

Project Updates

Bill Bigelow - Flat Canyon Well

We thought because we were so close to the mountain we would hit bedrock quite rapidly, instead it took us to almost 650' to get there. Point of reference, Deweyville's well hit bedrock at about 150'. We are about the same elevation and thought we would have the same result, but we didn't. All the way down it was nice looking gravel, with very little clay. In coordination with Carl and the driller we decided to continue and to find how much water there is in the 650'. An 8" well in alluvium could easily produce 350-400 gallons per minute. We are getting ready to put the casing on the hole. We were going to case it anyway; we are just much deeper. We will also grout it so that it can be later approved by the state as a drinking water well. After they install the casing, they will clean it out and do some air lifting to find out how much water we have.

There was a discussion regarding the amount of casing and the fact that we should be able to use this well, not only as a test well, but later as a production well. It was noted that if we don't get the amount of water we want the way it is, we will be able to continue to drill deeper through the bottom of the well. After drilling about 165' they found the hole was unstable because of the alluvium, they had to use drilling mud in the process to keep the hole open. The mud drilling was included as an optional bid item. Question: How much water we would need before deciding to drill deeper. Answer: We are hoping to develop 300 to 500 gallons per minute with this 8" hole, that will be about as big a pump as we can put in a well that size. We also hope when we produce water, we can see how much draw down there is. If there is not much draw down that would indicate that we could move over about 25 feet and drill a larger well, when it is needed. Based on the geophysical tests in the well we believe the static water level will be about 135'. The first perforations in the casing are at 430', we have from 135' to 430' for draw down. The decision on where to perforate the casing was made by reviewing the well cuttings and geophysical logs and getting an interpretation on them from a geologist and the District's Engineer, Bill Bigelow. The well cutting sample trays were shown to the board members. With air lifting, the tests will be able to show how much water is there, what the static level is and what the draw down is.

We are very happy with the process so far; the driller has been very good to work with. Question: if there was good flow would we choose to not go deeper. We are leaving the bottom of the well so that at anytime we decide we can drill deeper. We have 3 monitoring points on ground water levels in the area. As we produce water in the well, we will take very close look at that data and see if there is any impact to the local water level. If there is a significant impact, then we might need to go

deeper and not take this high water. General Manager Carl Mackley added: Because we are doing an 8" well here, and it produces like we think we can in this alluvium then even if we go deeper, we will not be able to pull more water out, so to drill deeper through the bedrock would just be an added cost to find out what is there, but not get any more water out of the well.

This is an exciting time for the well driller and for the District. The operators have been there the whole time they have been drilling. The drilling started October 2nd and stopped on the 13th. They will start casing on the 24th. The drilling mud should keep the hole open so the casing can be easily set in. the hole is 14", there will be an 8" casing and add a gravel pack to the outside. We will put a 6" pump, up to 60hp in this well.

At next month's board meeting we will have a more complete report on the flow of the well.

General Manager Mackley provided a graphic to the board members of the geophysical logging of the plumbness of the well. An interpretation of this data could be that we are actually right on the fault. It is possible that we hit bedrock around 130' and we found the face of the fault and the angle was not sharp enough to go through the fault, instead it scraped along it. Everything is going to the southwest, it is like we are in a canyon. From additional geophysical logging and information from the geologist they think there is a lot of water in that canyon and in that gravel. The data shows we could be getting a good yield from this area. There was a discussion regarding the plumbness of the well and the effect it could have on the pump. There was a discussion regarding the well being in a fault. Mr. Bigelow explained that it is common to have more than one geological fault in a fault zone. We knew from the beginning that we would be in the fault zone when we drilled the well. There was a discussion regard the difference between the submersible pumps versus the line shaft pumps. We will be using a submersible pump on this well.

Robbie Thayne – We are looking to move a fire hydrant in South Willard. We will need an easement from the property owner to proceed. The systems operators have been spending most of their time working at the well site. The goats went to their winter home in Deweyville yesterday.

Trustee Reports

Charles Holmgren – reported to hear about 42 homes to be built southwest of Procter & Gamble that will be in the West Corinne Water Company (WCWC) service area. WCWC may need to purchase more water from the District to meet the needs of these homes. There is concern about the homes being built too close to the canal structures.

There was a discussion on County lot sizes, septic requirements, and water tables.

Jay Capener – The canal company will be turning water out of the canal by the end of October.

Tyler Vincent – Reported things are good in Brigham City. There was some light snow in the mountains from the last storm.

Mark Larson – Reported Spring Hollow Water is looking for a water system operator.

Richard Day – Reported South Willard is still looking into incorporating but nothing official yet. Secondary water has been shut off for the season.

Russ Howe – No report

Jay Carter – Reported has been dry in his area for a while. He showed a picture of a large bull moose that was in his field near his home. The meadows are still wetter than they have been in several years at this time of year. They received about 2.5 inches of rain a couple of weeks ago.

Jeff Scott – Reported all is well in the County.

David Forsgren – Reported things are good in Honeyville.

General Manager's Report – Carl Mackley

There was a power point presentation given to the Board with pictures and details of the Flat Canyon Well project. General Manager Mackley gave details on the additional costs due to having to go to approximately 650' using the bigger tools to find bedrock. This also added more time to the original schedule.

A motion was made by Board Member Scott to expend the funds to finish the project. The motion was seconded by Board Member Vincent. All Board Members voted in favor of the motion.

The Board Members requested an email update in 2 weeks of the performance of the well.

Christmas Dinner Date was set for December 11th. Details will be announced to the Board Members.

A motion was made by Board Member Larson to approve the new pay dates to the Tuesday following the end of the pay period. The motion was seconded by Board Member Day. All Board Members voted in favor of the motion.

There was a short discussion on the Bothwell generator. It was noted the vendor has tuned the program changes and made the soft start better. Everything seems to be working well now and this tune-up should help prolong the life of the well pump.

Public Comment – No comments

A motion was made by Board Member Day to adjourn the meeting. All Board Members voted in favor.

The meeting adjourned at 8:50 P.M.