Central Iron County Water Conservancy District
Board Meeting Minutes
September 30, 2015

BOARD WORK MEETING MINUTES
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BOARD MEMBERS IN ATTENDANCE: Board Chair Brent Hunter; Board Members: Rick Bonzo; Paul Cozzens (by phone until 7:58am after which he arrived at the meeting); Tim Watson; and Spencer Jones. Board Member John Black; and Mike Coronado; are excused from this meeting.

STAFF PRESENT: District Manager Paul Monroe; and Office Manager Mandi Williams.

OTHERS PRESENT: Kelly Crane; and Curtis Neilson; (Ensign Engineering); Justin Wayment (District Attorney); Gary Player & Roice Nielson (Citizens)

CALL TO ORDER: Board Chair Hunter called the meeting to order at 7:07 am (6:47)

DECLARATION OF ABSTENTIONS AND/OR CONFLICTS OF INTEREST BY BOARD MEMBERS: No abstentions by Board Members

REVIEW OF PROPOSED WATER DEVELOPMENT PROJECTS: ▪Monroe-I would like to go through the comments on each proposed project. I would like to keep it open for discussion and ask that if any of the Board Members or the other proposal submitters would add their comments as we go.

Project #1- Reservoir at Brafits in the Wind Gap, (10:01) ▪Crane-There are issues with the water rights in this area. If we were to use waste water, those water rights carries with the originators of that water. So Enoch & Cedar City *(Justin Wayment arrived at 7:11 am)* would own the right to that water. It also carries with it the original return flow which would mean that 40% of the water would need to return to the aquifer. There would be issues with the ownership of the water as well as the actual utilization. There would also be a concern with a high hazard dam. For the size of dam that we would have to build we would really only be able to store four or five thousand gallons. ▪Monroe-In comparison Quail Lake is 40,000 and Sand Hollow is 50,000 AF. (15:09)

Project #2 West Well-▪Monroe-This idea was initially to supply the mine with water. The experts thought that this project would be best put on hold with the mine not running right now. With the haircut that you have to take to move those water rights into our area, it would not be worth it. This will really be a wait and see project. I've spoken with Gilbert's and they are aware that if the mine goes into full production again we may need them to drill a well. Board Member Hunter took a moment to explain the term "haircut". 7:19 am (19:17)

Project #3 Submitted by Roice and Gary- Arco Three Peaks-▪Crane-This project would be a really interesting way to gather a lot of information and a very good research project. However, they didn't believe that this would draw from different aquifers as in went down. They looked at all the information that was submitted. ▪Roice-The water in this well is older and definitely different. ▪Gary-We've done draws on this water and we've done aging on it. It is older water. I feel that these experts are basing their opinions on just that, opinions, and not actual research. ▪Monroe-I think it is important to note at this point that Hugh Hurlough from UGS is the one who conducted the first geologic study for this basin in approximately 2003. 2006 USGS Phil Gardner who he is associated with did another study here, then again in 2014 UGS and USGS did another study. So these may be opinions but they are scientific opinions. These men and agencies have spent a lot of time studying our area.
Gary and Roice took several minutes to explain their theories and maps. ▪Crane-I want to take a moment to explain that other concerns that you have to consider when you're taking water from a fracture is that you run the risk of drying up your source. This has happened in other places in Utah.
Rick Bonzo left the meeting at 7:46 am

Project #4 Submitted by Roice & Gary-Sheep Herders Cabin-▪Crane- Discussed the concerns over the location and geology of the area. ▪Gary Player-I didn't include the Brian Head well as a comparison, it is a much shallower well. I included it to show what amazing things can happen if you are brave enough to drill. No one geologically thought it would be a good idea to drill and Brain Head's City Manager said dang it we need a well! He drilled 1500 feet and got a well. ▪Crane- It would be very difficult to move water rights up to that area. Their other concern is that the water is moving west not east. ▪Monroe-I think the bigger issue, is the water rights. Kerry Carpenter explained that it would be very difficult to move water up there. He was the State Regional Engineer in the area when Parowan was moving water up there. He said that it is now called the Parowan two-step. If it was done, you would have to purchase water rights from the senior most irrigation water rights in the valley and then you would have to move it up stream to your point of diversion, then once it is at that point you have to discuss putting it back in the stream. (49:50) The last concern was that you may dry up some of the streams that come out down the mountain.
Paul Cozzens arrived at the meeting at 7:58, Spencer Jones left at that time. Paul Cozzens had been connected by phone until his arrival.
Project #5 Aquifer Balance-Enoch Graben to Quichipa 7:58 am (58:32) ▪Crane-This project as you all know is to move or divert approximately 3,000 acre feet of water from the North end of the valley to utilize on the South end of the valley using our existing infrastructure. The concerns we have on this project are water rights and the way things were divided using Highway 56. We would just have to be cautious of which water rights were transferred. The other concern is that this project isn't producing new water. It could help for a few years but doesn't really fix our problem. Basically, it is a band-aid fix. ▪Monroe-Kerry posed this question which I think is good coming from the public which he is being a water user in the basin. He said would the cost of new infrastructure be outweighed by the value of pumping from the other end of the aquifer. We need to look at that carefully. What we are willing to spend transferring that water? ▪Gary Player-would we be increasing the subsidence in the

Enoch area? That should be looked into. ▪Monroe-That really depends, if within the Graben there is an aquitard. We could potentially move towards the Mud Springs area. ▪Crane-Basically the consensus on the project is to let the economics drive this one. If it works out to be profitable then great go ahead with it. ▪Cozzens-What is the cost to build a storage tank? ▪Crane-It's about $5 million, but by the time you have the additional storage, wells, and Cedar City connection you are looking at closer to $10 million. ▪Hunter-What is the fall from the North end around Rush Lake to the South End? ▪Crane-It falls quite a bit. I think it is around 400 feet. 8:05 am (1:05:22)

Project #5 Recharge Project-▪Crane-The group of experts really liked this project. They believe that putting this water back into the aquifer is a good use of Public Funds. ▪Cozzens-What do they think of our idea of going up by Milt's and dropping the heavy stuff out and also doing the settling down by the canyon. ▪Monroe-They were nervous about how it might work with the sediment loads. They suggested that we do sediment samples during high flows, during flash floods, and during spring runoff. They think the sampling should come from different locations up there so you can get your sediment load to see what kind of maintenance you're taking about. ▪Crane-I tend to agree, it would be nice to understand all of that a little more before we really do a whole lot. We did some sampling during spring runoff, but I think their idea of spreading it through the year and getting samples from points up and down the creek is a great idea. I think they are also concerned that without the sampling we run the risk of doing something that is already happening naturally. ▪Monroe-they tried to brainstorm and think of other ways to utilize the water in Quichipa. They brought up the idea of having a floating dam or a divider. This would keep the good and bad water separated. The problem is once you get down there, the best place to recharge is higher than the alluvial fan. The only other option you have out there is to pump it up to the mouth of the canyon. The experts don't know if scraping Quichipa would work or not. ▪Hunter-I think the issue of being overwhelmed with the sediment can happen but it is on really heavy years. Something people don't realize that is very important is that we have to set up a system to segregate spring runoff from the flash flood waters. There is no value to the flash flood water, it is nothing but mud. However, the spring run-off is sand and gravel which is a totally different animal. You have to have a system in place to handle the water depending on the flows. ▪Crane-I think generally the experts were very much in support of the recharge, they feel it needs to happen and they're glad that we are working together towards that goal. (1:10:46)Monroe-Maybe another idea to consider is pumping that waste water out to the Graben area for recharge.

Project #6 West Desert Project-▪Monroe-The experts didn't have a lot to say on this project other than wondering what it is going to cost. There are no geologic hazards, really no major fault lines between here and there. Obviously it is bringing in a new source of water that compounds as it comes into the valley. They feel that this project addresses a lot of the concerns at the same time they do have the financial concern.

▪Monroe-Gary and Roice of the three projects you proposed which one would you want to recommend first? Which is the best option to get water? ▪Gary Player-I think we said Quichipa first because we've drilled into it already. If you deepen that well another 500 feet you may have a really great source of water. We hit water at about 300 feet. Hunter-is the well that the City built could we continue to drill that?

Tim Watson and Justin Wayment left the meeting at 8:17 am (1:18:52)

The discussion continued with Roice & Gary both further explaining the plans they submitted and a list of questions to consider before going forward with any projects.

Due to lack of quorum Board Chairman Hunter motioned to adjourn; Board Member Cozzens Seconded. Meeting adjourned at 8:28 am (1:30:05)