

**Bear River Water Conservancy District  
Board Meeting  
Wednesday October 27, 2021 6:00 p.m.  
Bear River Water Conservancy District Conference Room  
102 West Forest Street, Brigham City, Utah**

**Minutes**

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

Electronic Access: Charles Holmgren, Neil Capener

Absent:

Staff: General Manager Carl Mackley, Systems Operations Manager Robert Thayne, Assistant General Manager Andrew Beecher, Administrative Assistant Jill Jeppsen

Other: Beaver Dam Residents as shown on roll

**Welcome:** Chairman Roger Fridal

**General Manager Report – Carl Mackley**

**Presentation on Beaver Dam Impact Fee Study**

The Impact Fee Study is being updated to follow legal counsel given to the District because of new interest in water connections on the Beaver Dam system. New users may not have an alternate source for outdoor irrigation which changes the ERC (Equivalent Residential Connection) from the initial Impact Fee Study from 2012. The updated Study is to determine the current demand on the system and plan for future connections.

The slides used in the presentation are attached to this document.

**Question and answer period:**

**Robert Ashby:** *Said he had asked for a report or any data showing how much water is supposed to be let down Beaver Creek, what we have been monitoring and what is required by law to be let down. I have not gotten any response from anybody on the Board or from Mr. Mackley. If that information is available, why don't I have it?*

**Carl Mackley:** *You are making an assumption that has to be done, which it does not.*

**Neal Fisher:** *We have water rights to that overflow dating to 1881, that pre-dates the District's water rights. On the lower systems, your water rights date to 1889, ours date to 1881. You are required by law to let water flow down the system for our irrigation purposes.*

**Carl Mackley:** *These things are spelled out in the approval requirements, or if there is a distribution system. Neither of which are in place.*

**Neal Fisher:** *We have been irrigating out of that creek for over 100 years, with water rights that date to 1881.*

**Carl Mackley:** *We are not disputing that.*

**Robert Ashby:** *Maybe you could clarify, do you feel that you are required to let any water flow down our stream, if so, how much?*

**Carl Mackley:** *Again, if there was a distribution system where this was being regulated that would be a requirement. So, in the past 10 years, no one has said anything about doing this kind of thing.*

**Neal Fisher:** *Our rights allow us to take water directly from the creek, that is our distribution system.*

**Carl Mackley:** *I am not disputing that.*

**Robert Ashby:** *Are you saying since no one has come to you with a full written complaint, that you are not responsible for this?*

**Carl Mackley:** *What are you doing to measure your water?*

**Neal Fisher:** *Our water rights are 445 acre-feet.*

**Carl Mackley:** *We are getting hung up on an issue here?*

**Robert Ashby:** *My question, I suppose, I have a list of 19 things that you have read. I see some of the verbiage here, but I don't see the real issues of the matter being addressed.*

**Carl Mackley:** *Are you a retail customer.*

**Robert Ashby:** *Yes.*

**Neal Fisher:** *Yes.*

**Carl Mackley:** *I would assume that you would want full culinary water and your irrigation water.*

**Neal Fisher:** *I would hate to see my irrigation water get dried up because it was all going to the culinary system. It is kind of like you said, we have alternate ways of irrigating, one is our irrigation system you are proposing to take away. Now we do not have an alternate system.*

**Carl Mackley:** *Let me trace this back to when the water right application was made, for 37.22 acre-feet, that was the time to settle this particular issue.*

**Neal Fisher:** *We granted that many acre-feet. Of those 37 acre-feet, you have rights to, 27 of them date to 1870, but the remaining rights that we signed over; correction, the irrigation rights were never signed over to the District. So how can you justify taking all the water from us? You said you are going to take all the water out of the lower springs for the culinary system. You don't have the rights to all that water. We have rights that pre-date yours to that water.*

**Carl Mackley:** *I think we can discuss this more in a different venue.*

**Neal Fisher:** *I think you are over-looking this matter and it needs to be taken into account with this proposal.*

**Carl Mackley:** *Thank you for your feedback.*

**Robert Ashby:** *Another question; some of what you said: Beaver Dam uses 'very small amounts of water'. You talk about us being fantastic and great, and so we are using very small amounts of water, we understand it is precious, we understand it is life. And taking the idea of 'well they use this much water' so let's pull everybody down to that much water, not what the Utah Division of Water Resources recommends of .45 acre-feet, that you are starting with. Let's suck everything down to figure out how many more connections we can tap in for this continual, very small uses of water, that is supplemented outside. And what you are saying is anyone that gets on the system, well, sorry you won't have any significant water for outside watering. Go drill your own well when there is a well moratorium all over our area. Along with this fact of water rights that go down there, that flowing water is demonstrated in so many areas of the state, that brings up the water table. That helps people that have*

wells and springs, and wells in our area are going dry. We can start listing off names of people who are having problems. Your own paper is saying that these sources are showing a steady decline going down. We may be part of that problem; it may not just be a little less rain this year or that year. We are using up what we have available, it is disappearing and now we are creating a plan that is based off the best ultimate 37 acre-feet, which you yourself said you have never been able to pull out of that. So, whether or not you have a piece of paper is one thing, do you actually have...

**Carl Mackley:** I am going to stop you there; I have not said we have never been able to pull 37 acre-feet.

**Neal Fisher:** It is in your report, and it is in the meeting minutes from May.

**Robert Ashby:** There are inconsistencies from what you are showing in 2012, 2017 and what you are showing right now. Your own report showed your 60,000 allotments for fire and emergency all of a sudden dropped to 15,000 in the last two weeks. How much are we trying to make the numbers fit the picture we've already decided we want to fit, and how much are we looking at what is available and what can be supplied to help benefit the existing customers that have rights to use the water. You said you have 8 customers that have not pulled a drop yet. And the long term effect of those 8 connections, almost 25% of existing connections, haven't pulled a drop. And we are going to sit here and count like it is 52 and add on another 65 and water magically appears out of the sky? I don't think the studies of what we showed, everything I showed in this letter, which I hope all of you read. I had links to sources, I had links to your own documentation, there are inconsistencies, and it does not match what is being proposed. And even when we match what is being proposed in here, we are telling everybody, sorry, you cannot use a drop of outside water, let's figure out some way to water your property. You are telling that to existing customers that some can't pull a drop out of the ground now, you are telling those that are pulling out of the stream, which is going to go down, because you are upstream, and you figure you can take every drop out of it. And you are telling the new guys, go dig a well when you have a whole room full of people that don't want more wells, and are worried what digging more wells are going to do to their own backyard. I'm already having problems with water, it keeps dropping more, so you are going to put another 16 connections in here to pull that water down more. Now I have a problem so if my well goes dry, then I just dig deeper and deeper and you say, oh, I'm sorry, we will add on another few thousand dollars to an impact fee for connections. When that impact fee for connections does not cover your continual rising costs for new construction. You already showed that each time you come back and estimate it, it is higher, higher, and higher. And yes, the monthly supply cost is going to be a different meeting, but how can those construction costs going up not affect the monthly cost of our water?

**Carl Mackley:** I appreciate what you are saying. You are welcome to make comments later, this is a question and answer portion. You will have a chance to make your comments.

**Stacie Maxfield:** I talked to Mr. Forsgren, regarding the impact fees; does this just affect those hooking on or is all our numbers going down, which you clarified for me. One thing he said was is the new user would only be allowed the indoor use only, which you have said here. How do you manage that? Because there are only 10 registered wells out of all the people on Beaver Dam Road, out of 32. How are you going to manage them only using 6,000 gallons, and only using it indoor?

**Arlinda Hansen:** How do you determine right now with the connections that are being used, how much we are using indoor and how much we are using outdoor? How do you determine that? Or is that just an average?

**Carl Mackley:** *That is a pretty easy thing to do. We look at the water use between November and March or April and that establishes a baseline of what the indoor use is. Then we assume that amount during the irrigation months and whatever is in excess of those amounts, month by month, is how much water is being used outdoors. This is a standard practice in the water business. It is a moving target, one of the main points we can pull from this is the existing sources of water. This is what we are trying to do. We are trying to stretch out the existing sources of water that we have now to meet the demand. The demand is here, and we are trying to do the best we can to meet the demand. We understand that this is not the last meeting that we are going to have. This is not going to solve the problem for very long. It is evident that we need an additional source of water from somewhere. That has to come from somewhere, and it will.*

**Stacie Maxfield:** *How can you manager new users, saying you can only use the water for indoors. We typically use 13,000 to 14,000 gallons.*

**Carl Mackley:** *One of you neighbors might use a lot less than that, and one may use a lot more than that. These new connections, we anticipate will use more than what has been used by the existing customers. We are simply trying to maximize the sources that we have now knowing that we are going to have to supply some additional water. People are going to use what they are going to use; we cannot control it. So, we have a plan that will account for that. This is what we are trying to do.*

**Jay Capener:** *We put in a rate structure that penalizes those that use in excess, correct? This would be a way to control it.*

**Neal Fisher:** *Would the new rate structure be for new customers only?*

**Carl Mackley:** *No, it would be for all users. The tiered rate structure that is standard in the water business, is you identify blocks of water. The first block of water is your base cost, and that is the indoor use amount. Then you add blocks of water on top of that and those get successively more expensive. Good questions.*

**Lane Miller:** *I get that we are trying to figure out what we can do for everybody to utilize the water. But we are already on a restriction plan for the drought. If we are already on restriction and we are trying to manage it, why are we trying to add connections, that will restrict it even more. We will dry out in no time. I do have my own well, but it has bacteria in it and that scares me. Without water we have nowhere to live. We are courteous with the water that we use, we are all trying to conserve. Now it is being held against us.*

**Carl Mackley:** *Please restate the question.*

**Lane Miller:** *Why are we overloading the system when it is barely keeping up with what we have now?*

**Carl Mackley:** *On the one hand we are using 13 acre-feet of water per year. This is based on 2020 usage. We do not have a well that we can pump, and turn on, right now.*

**Lane Miller:** *Why are we assuming? We all know what that does?*

**Carl Mackley:** *We are trying to remove as many assumptions from 2012 as we can based on the data that we now have through 2020. And the rest is always a guessing game, we do our best. In answer to the question, why are we doing this? The concern was new users are coming in droves, we have only seen in past years, maybe one new user on the Beaver Dam system in a year. And all of a sudden, we have several requests for connections. This is a small system which the sources are small, the numbers are small, everything is small, which makes it much more sensitive to change than any of our other systems. The reason why we are doing this is because we wanted to change the ERC value*

*based on planning for new use. The legal opinion that we received was if you are going to change the ERC, you have to update the report. We are following our legal counsel.*

**Neal Fisher:** *Wouldn't it be more prudent to cap the system?*

**Carl Mackley:** *There is always a cap on the system.*

**Neal Fisher:** *You are trying to expand the system, and we are barely holding on.*

**Carl Mackley:** *We are redistributing.*

**Unknown:** *The issue is the water is not there.*

**Carl Mackley:** *That is part of the issue.*

**Unknown:** *You made a comment that you are going to have to bring in more water from somewhere else.*

**Carl Mackley:** *I did.*

**Unknown:** *If we are going to have to bring water in, why don't we take care of what we have now and not expand more people coming in.*

**Carl Mackley:** *It is an option. If you want us to do nothing right now, the developers are going to file their own applications. You also don't want them to do that.*

**Robert Ashby:** *We had a division of water resources number of 0.45 that was in the original report, let's look at the historical use. Why are you pulling away and punishing us for conserving? And say that Beaver Dam and people along that stream can get along with less water than the state feels is a good allotment.*

**Carl Mackley:** *In the first place, in 10 years you have not used more than .34 acre-feet indoors. So, we are looking at the data, and the .45 'magic value' that has been used for a long time, really does not apply anymore. And there is a policy from the state engineer dated 12/28/2018 that amends how much water can be used for domestic use. It can be less than .45, it can be whatever it needs to be. In 10 years, you have not used more than that, so there is nothing being taken away from you. We guessed a number that was high, now we are saying in order to make room for everybody we are quantifying the number at a more accurate number.*

**Robert Ashby:** *I disagree with your answer that you are not taking anything away. You are taking something away, the .15 feet that you had previously allotted and said this was a fair and equal connection because we have been good with our water.*

**Carl Mackley:** *I feel that you are using the question time to state your concerns, this was for questions.*

**Tyson Peterson:** *You said something important earlier, because of the way that Beaver Dam has grown, there has been only 1 connection per year. Which really adds to the system we can add it and evaluate it. But because of what has been going on, there has been tons of connections that have been added and I think the number was 8, that are not currently using any water. If we go to .45 and add 8 connections, where there was originally 22, can you tell us what 40 connections will put on the system right now? You are right, we have had this pretty number forever, but we've added 8 immediately so what is going to happen to the system when these 8 connections start using water?*

**Carl Mackley:** *It is always a guess looking forward to what is going to happen. I don't know any better than you. Perhaps we do know better, based on what happens in our systems.*

**Tyson Peterson:** *8 users are about 25% more, so can we say 8 users are going to use 25% more?*

**Carl Mackley:** *The report assumes that the new use will be the same as the old use. We are updating the values and we are saying it is .572 a/f per year. We are planning to account for the water*

*rights and the sources. At .572 that accounts for what people are doing now, and we are trying to make everybody as equal as we can because it helps us for planning purposes.*

**Brodie Calder:** *With some of the concerns that Neal Fisher has with his older water rights; is there a way you could drill a well and do a change to the point of diversion, at your water sources, and pull enough water out to make sure you are getting the flow that you should be getting and/or that they should be getting as well?*

**Carl Mackley:** *We can file a change application; any water right application is going to take water from the mountain. The water is coming from the mountain, and if you drill a well, you take it quicker vs. if you take what's coming from the springs when it reaches the surface. You are limited to what the mountain is telling you can do.*

**Board Member Jay Carter** *asked of those that have wells if they are drilled or hand dug wells and how deep are they?*

**Answer:** *There are 10 drilled wells, depth goes to 140 feet.*

**Brian Bowen:** *On the calculations, if there are 32 active connections, we all know by accessing records that we have been able to pull off the internet that there are not 32 customers actually pulling water. So, if you average it based on 32 the data is skewed. If there are 8, 10 or 12 that didn't use hardly any water, the data for the amount per connection is wrong.*

**Carl Mackley:** *Pointed out the water use data report that is published by the Division of Drinking Water. We report how many of each type of connections and the annual use. In Beaver Dam they are all residential connections except one institutional connection which is the church building. If you look at the number of residential connections, it has gone down due to only reporting the active connections.*

**Neal Fisher:** *Looking at the 2020 data, it shows the average user is 12,000 gallons per month.*

**Carl Mackley:** *Usage is not the same per month through the year.*

**Neal Fisher:** *Lowering the ERC will bring this number down.*

**Carl Mackley:** *There seems to be a misunderstanding in the numbers, .572 a/f = an average of 186,000 per year.*

**Neal Fisher:** *Right now, the users have been using quite a bit less than that.*

**Anthony Richards:** *On the safe yield, you are showing 40 gallons per minute as your safe number, in the first part of the report. You said that the flow of the springs between the upper and lower is about 44 gpm you reduced it down to 40 gpm as a safe yield. In 2017 Master Plan, the engineering firm went through the flow data off those springs as well. They put it at 22 gpm. You haven't developed any of the other springs, they are not feeding into the system, nothing has changed since 2012 to this point as far as source, why have you gone from 22 gpm in the Master Plan report in 2017 to 40 gpm safe yield?*

**Carl Mackley:** *I have not looked at the context of the 2017 report, I cannot give you a good answer to that right now. The 2017 Master Plan is conceptual, any of the plans can change at any time. It takes a couple of years to make a Master Plan. A lot can change in two years, so it is almost out of date as soon as you publish it. I don't know what the discrepancy is there. Whenever you use a number, someone is going to question it. All we did was look at this year's numbers as an aggregate.*

**Anthony Richards:** *You are counting 40 gpm as depending on the 14 gpm from the springs you haven't developed. Take the 14 gpm out and you are close to what the 2017 report recommended on 36 connections beyond the system to be able to meet peak day demand. What has changed from then to now; you are saying 65 connections.*

**Carl Mackley:** *Mathematically there is only one answer to your question. Because of the ERC value that was used in the 2017 report. We don't know why there was a different value used from the 2012 report. They chose a number which may have reflected a more county-wide average. Both reports were done by the same engineering firm. The whole reason we felt like we needed to do this process is because we knew the 'magic number' (ERC) value was going to change because the new uses were not going to match the old uses. As I looked at this, I could have done one of two things. One; we will just continue with the current value, or two; we are going to establish a new value. If it went up, it would just be a guess. If it went down, there would be more certainty involved, this seemed like better planning.*

**Anthony Richards:** *You are using an expected amount that you are going to gain if you are doing the development. You are talking about 65 connections that will have more demand on the system. Why are we talking about eggs that haven't hatched? Why not back it up to what you have right now? Why are talking about adding more connections before the improvements are made?*

**Carl Mackley:** *It depends on our planning. It's in the planning scheme that I presented....*

**Troy Belliston:** *If the Board approves the 65 connections you are on the hook for that the day they approve it, right?*

**Carl Mackley:** *This is the water business, there is always going to be more requests tomorrow.*

**Troy Belliston:** *What I am seeing is; you have 56 ready to go now. Do we have the water for 56 currently?*

**Carl Mackley:** *It depends on how we set the ERC.*

**Several comments were made,** *repeating the question if the water is there, do we have the water or not, and we almost ran out this summer.*

**Carl Mackley:** *We found some leaks in the system. One customer had an 11 gpm leak. I am making a plan with the assets we have on hand. I am also saying it is not going to meet all the future demands here. We are trying to make a plan with what we have, and I am telling you that we will quickly need to update the plan.*

**Dave Richards:** *You are counting on water you don't have. We have water rights in those springs that you want to develop in your system. I irrigate 12.5 acres out of that creek. You are not going to take my water from me.*

**Carl Mackley:** *I am not saying I am going to. When you have a water right application, you file the application. That doesn't mean you are taking the full amount on day one, you work up to it. We are trying to optimize our water right by developing the other springs.*

**Several comments were made** *about taking away to water rights of the residents.*

**Carl Mackley:** *I am not taking anything away.*

**Unknown:** *There isn't enough water in the creek to water my livestock.*

**Carl Mackley:** *After the rain today, there may be. It would be nice if we could have this rain in July and August.*

**Arno Copley:** *I think one of things I am hearing, and it is a concern, is if you develop the other springs that are there and part of your water rights, what kind of affect will it have on Willow Creek? Has this been factored into the study?*

**Carl Mackley:** *You are asking good questions, but a lot of things you are bringing up is stuff that should be appropriately brought up at a water right hearing.*

**Roger Fridal:** *We are going to stop this part of the conversation. We are going to move on. Carl has done a good job at answering your questions.*

*We have a period of time now that is a public comment time. Please state your name and you have 2 minutes to say what you want to say.*

### **Public Hearing to hear public comments on the Beaver Dam Impact Fee Study report**

**Randy Bowen:** *I really think there is about 30 water rights [connections] on the system now. I think it would be a good idea to get all the connections using water so we can see if we have enough water before we add another 15 connections to help Brodie out.*

**Vice Chairman Dave Forsgren** was asked what he thought of the situation. He answered: *I think we are selling water that we do not have.*

**Unknown:** *Carl, if you click on the button next to water right areas on the screen you are on, it will show you every person that has a filed water right next to our springs. There are people...*

**Chairman Fridal** clarified this is time to comment, there will be no more questions answered.

**Troy Belliston:** *We do not have the water to go further than the 52 connections and you have 56 applications. I would strongly suggest that you re-evaluate this proposal.*

**Neal Fisher:** *According to the 2017 Master Plan done by Hansen Allen & Luce, there is barely enough water for the existing 32 users. It shows 36 connections are the maximum connections this system can support. You have already sold 40, authorized 52 and now want to authorize 65. The limit of 36 connections has been demonstrated to be accurate, by the fact that we nearly ran out of water this year. At one point I was told the total input into the system was a mere 10 gpm. The current Master Plan also states that peak day demand is a limiting factor on the system, not water rights, yet this is ignored. This plan takes us right up to the water right limit of 37 a/f, in addition according to your meeting minutes and report, the springs are only producing 27 a/f. Why is this ignored. If the plan is to develop the other lower springs of the water and add to the culinary system, it must be understood that water you would be taking is from our irrigation rights. The water rights we gave to BRWCD 10 years ago date from 1899, our irrigation water rights date from 1881. The 2017 Master Plan says the limiting factor is peak day demand. The bottom line is, it doesn't matter what numbers you use, and we could argue all day which numbers are accurate and which ones should be relied upon moving forward, the fact of the matter is we nearly ran out with 32 users this year. And that is with us using, by your own admission, extremely good conservation measures. You guys have been managing this water system for 10 years, our families in this community have been managing it for over 100 years. We can assure you that if you add these additional connections we will run out of water. I think you need to consider capping it at the current level of 40 connection and preserve our water.*

**Mark Davis:** *I have a well and it is running out of water, it gets worse every year, especially the last couple of years. You can take that into account. There was no mention here that we are in a state of emergency with the Master Plan. The State is trying to come up with a Master Plan and these guys*



*didn't say how they are going to incorporate the State's plan. There is no mention of how we are working on a state level. There is a drought resiliency plan, two words were said in this plan about that. I am sure we have no idea what is coming next year or the next five years. To max us out and deplete the flow of the springs is ridiculous.*

**Robert Ashby:** *I am reminding you of what I put in my letter (to the Board Members). Two of your mission statement plans are to 'conserve and protect water and water rights', plural, not my water right, but water rights. And second 'use these resources to best serve the residents of Box Elder County', and I stated I am a resident of Box Elder County and a resident of Beaver Dam in the letter. This small system that is subject to wide variations and fluctuations in the spring waters, which we are now using as this rock solid source that we are now going to supplement things with. My opinion is a lot more connections exist of what we can see of how water here affects water there. I think we have seen it demonstrated in our little community in a lot of different ways. I apologize if I was a little heated before, I should not have been. I will do better next time. I really do think that we are putting the desire of new customers above the needs of existing customers. And we need to figure existing customers for their needs and their usages and don't penalize them for being good consumers. And don't penalize them for using other sources that are in the process of drying up. The needs are going to grow, we have a lot of science showing that the water is getting scarce. It is getting to be a bigger problem. We cannot assume that things will even stay the same as what they are now. For the future your own records show a steady decrease through the previous years, your own records show they can't support these additional connections and was stated by Carl earlier, the only way to support the new connections is to drill wells for these new users. We have heard there are people drilling new wells and trying to find other sources because what they had before doesn't work anymore.*

**Therina Simmons:** *I want to ask you to raise your hands if you have been part of the County survey. How many surveys have you taken? I'm not going to ask, but you can answer to yourselves. I work for the county; we have exponential growth in our county. It is happening everywhere. We have to plan for it and be ready for it. So, they put out a survey starting last year, and I hope you have participated in it. It designated Beaver Dam zoned the way it is zoned. It has been applied three times to change this year, it has not been granted. So why is there a need to update the system when it is not functioning, or barely functioning now, to add more in, if the county isn't allowing zoning changes that doesn't allow for big subdivisions to come. I am just saying, what is here is adequate for what we are zoned for. If you have not been a part of that, I think you are employers and supporters of the county, I hope you plan to move forward to grant water rights, look at that to support what the county and the people are doing. We have a perfect opportunity to create the county we want. We can have it developed straight like Salt Lake to Davis County if we want, or we can promote growth in specific ways. Beaver Dam is a different, our plan has been made, please look at that and consider that when you make future plans.*

**Larry Bowen:** *I have some concerns when we sell these new lots, are you going to tell people that you are barely going to get enough water to run your household? You are not going to be able to have a yard. In good conscience, I don't think you can sell a lot, without a good water hookup. That is my concern. Who is going to tell these people, the realtor is not going to say that, the developer is not*

going to say that. You barely have enough water to run your household with no outside irrigation. It is dishonest.

**Arno Copley:** *If I am going off the letter of September 24<sup>th</sup> values it shows total allowable connections at 52. 2017 Master Plans says 36 connections we will max out. Currently there are 32 meters and 8 hookups that have been sold that have not been hooked up, that's 40. There is another 16 pending. That puts it at 56. If we go to the proposal of 2021, that puts it at 65, that leaves 9 hookups remaining. I understand this is looking towards future growth, but the concern is those 9 remaining could be gone in a year or two, that's not 20 years. We have had growth on the system of 1 or 2 homes per year, for the past 10 years, and sometimes none. So, the concern is even if we go with the 2021 value we going to be out of water hookup in 2 to 3 years, and what is to prevent some developer to come in and buy all the hookups so they can put in a 20 house subdivision that will over tax the neighborhood and our street? The other point is, once again, I think we really need to look at if we choose to develop the springs that are up there, what affect is that going to have on the streams. Anyone with any knowledge of hydrology knows that if you are pulling water out of one place you are going to affect water somewhere else. And so, I think this is something that should be looked at before we move forward on any of this. Carl, I don't envy you to be in that seat.*

**Suzette Hernandez:** *I am a want-to-be archeologist. I am not there yet, but I am taking a class at Utah State. I am telling you right now, this area has never supported as an empire of any kind. It is limited to the climate. And Dr. Judson told us yesterday, we had the Fremont culture here. For 1000 years they cultivated corn and they are the only people in the history of the world that started a grain cultivation that did not keep on going. He has no answer to why they left or why they abandoned agriculture. We had the Shoshones that came after the Fremont culture. I am suggesting that perhaps, and I don't know why the indigenous Fremont Native Americans abandoned their agricultural life here in Utah, could our dry arid land be the cause? But if current Beaver Dam residents are not able to have the water originally allocated to them; they could easily be forced to abandon their way of life, here among family and friends. I ask each of you, after living in our home for 33 years and burying my husband on the hill above me, raising our children here, overcoming the difficulties of life here, in short, living and loving at 16090 N Beaver Dam Road, at the age of 73, where would you tell me to go, and what would be your motive? I am a healthy and happy senior citizen. I have written this in a letter and will give you a copy.*

**Anthony Richards:** *I also have something I will give the Board. I will point out one item that I would like the Board to consider. The irrigation water rights, have been talked about it already tonight. There are 14 irrigation water rights totaling over 430 acre-feet on water rights that have 1881 priority and supersedes 15 acre-feet of your water that you have in Sleepy Hollow. We have been impacted, I came in July and talked to the Board about impact we had for irrigation. Part of our livelihood is that irrigation, it keeps our farm alive. It has been water that we have used, as Neal (Fisher) stated for over 100 years. It will be impacted when there is more demand on the system. It was impacted this year, that is why I came and talked to you. I would like this Board to deny the Impact Fee Study as presented. I recommend that this Board also cap at 40 users, follow your 2017 plan that you have. I would also recommend that each of the Board members read that report and understand it, it has good information.*

*There will be lives that are impacted by your choice tonight. I ask that you deny this draft plan and do not increase the number of allowable connections.*

**Chairman Fridal** closed the Public Hearing and thanked the residents for their comments.

**Board Meeting Business  
Welcome – Chairman Fridal**

**Approval of the Minutes for the Board Meeting held September 22, 2021**

The minutes of the Board Meeting held September 22, 2021 were included with the packet that was provided to the Board Members.

Board Member Vincent made a motion to approve the minutes of the meeting held September 22, 2021. The motion was seconded by Board Member Howe. All Board Members voted in favor of the motion.

**Financial Business – Charles Holmgren  
Approval of Financial Statements**

The financial statements for September 2021 were prepared and provided to the Board Members. Financial Chairman Holmgren has reviewed the reports and asked for the Board to approve them.

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

**System Operations – Robbie Thayne**

We had a sanitary survey in Collinston and in Bothwell. Nothing went wrong, we were absolutely perfect, as we expected.

We have been working on the Beaver Dam information that you heard tonight, with the proposed changes.

South Willard: they were able to remove all the tube and shaft from the well, now all that is left is the 6" pump column. They tried to break it off from the pump at the bottom but could not get it to break off. Now they are going in with a cutting blade, a mills knife, that cuts the inside of the pipe in many places then they can break it off and pull it out. If the worst case scenario happened and we couldn't get that pipe out, we could still put a pump down in it and perforate the pipe and we would still have a well. Either way at this point, we have the well.

There was a short discussion regarding the pump that we would put in the well.

We have been doing some work on a 3 lot subdivision in Beaver Dam. We have been working on a system to provide water to the lots, they are 40 acre lots. We have had some modeling done by Keller and Associates.

Richard has submitted the information for the operating permit for the first phase of the Country Sunset Ranchettes subdivision in Collinston. There are 3 or 4 homes that are being built. There are 17 total lots in two phases.

We have installed a few meters; one in Bothwell, one in Harper. Looking forward; there is a lot of growth going on.

The concerns we have heard from the Beaver Dam residents are the concerns of every small town in the county. We pre-ordered a lot of the meter parts and have been able to obtain most of it. The subdivision in Beaver Dam has 2" meters, which the distributor has in stock. We do have an increased impact fee for the larger meters. They are using the larger meters for fire protection. They are not putting fire hydrants on, this would require an 8" waterline be installed, so the homes will be required to install fire suppression systems. The developer has chosen to use PVC rather than poly pipe.

Board Member Howe asked about the subdivision in South Willard and if there has been any construction started. Occasionally there is some equipment there, but there hasn't been any real activity yet.

Board Member Day added he attended the Planning Commission meeting a few weeks ago and they talked about this subdivision. The developers want to make a lot of change and the Planning Commission recommends that they go talk with Willard City. Robbie Thayne said it would be to our advantage to have the subdivision built out so we can use our well. We are going to treat the well for the iron bacteria. Using the well more will help the bacteria problem, even if we have to pump it to the overflow pond.

General Manager Mackley commented that there are three things that can help; one is we are planning to abandon the lower portion of the well. When we deepened it is when the iron bacteria problem showed up. There could be a correlation between the deeper water and the bacteria, so abandoning the lower portion of the well could help. Also, we still have the chemical we purchased that we can still use to treat the well. Then pumping it and using it more will dramatically help.

Robbie continued his report: the pump that is in the well now will stay there, we will plug off the well above it. It will help fill up the hole.

The goats will be moved to their winter home in the next week or so.

### **General Manager's Report**

General Manager Mackley referred the Board Members to his written report.

### **Beaver Dam Impact Fee Study**

Vice Chairman Forsgren made a motion to table the Beaver Dam Impact Fee Study until further review of letters and comments from the public and discuss it in depth at a future meeting. The motion was seconded by Board Member Vincent. All Board Members voted in favor of the motion.

Vice Chairman Forsgren made a motion that the Board approve any additional connections on any system, and the decision no be left up to the staff.

General Manager Mackley said that we are updating our general policy for new connections. But our existing policy says, the Board is already supposed to reviews all new connections.

Jeff Scott asked if it was before or after the fact. In most cases there is an allotment that has been approved by the Board and asked if this motion meant the Board needed to approve it before the customer could even purchase a connection.

General Manager Mackley said we need to all be more familiar with the policy.

Chairman Fridal asked the General Manager to present more information to the Board so they can be informed.

There was no second to the motion, motion failed.

**The Board Members continued to discuss the matter:**

Board Member Jay Capener stated that he thought it would be cumbersome for the Board to approve every connection, rather than approving a block of connections. There was a short discussion on procedures.

General Manager Mackley pointed out that in the back of the 2012 Beaver Dam Impact Fee Study, there is a resolution that should be handled as policy. The resolution by the Board provides direction for the staff.

Vice Chairman Forsgren said he would prefer that anyone requesting a new connection come and petition the Board. That way we don't have meters that the Board doesn't know anything about.

General Manager Mackley asked the question how do we deny any connection that come to the Board? That is the purpose of the resolution as part of this plan. This is part of the direction our legal council is giving us. This study is more important than what the Master Plan says, because this is policy to us. We have a general policy, but the Impact Fee Study for each system has more specific policy to that system.

Board Member J. Capener said it goes back to the Public Meeting just held on Beaver Dam, when we approve a number of hookups, why do we have to then go back and approve everyone of them individually? We have already decided we can have xx amount, when those are gone, then we would need to readdress it. We cannot care if it is a subdivision or a single home.

Board Member Scott said that would be his concern if we approve them individually. If for any reason one does not get approved, the District could be subject to a lawsuit. It would be a good idea to approve a certain number of connections on the system. And the Board should have a say in approving that number. It was a good idea to table the study for Beaver Dam so we can discuss the issue and decide how many connections we will allow.

General Manager Mackley reminded the Board that on May 26, 2021 when they gave approval to update the Beaver Dam plan, we suspended any new connections until we have something approved by the Board.

Chairman Fridal asked to continue the discussion at our next meeting.

**Trustee Reports**

**Jeff Scott** – The County has published their formal application form for ARPA funds on their website. We are hoping to evaluate the first round of applications before the end of the year.

**Jay Carter** – Received some much needed rain, about 1 ½ inches.

**Richard Day** – No report

**Russ Howe** – No report

**Mark Larson** – No report

**Tyler Vincent** – Appreciates the rain that has been received, our reservoir is up.

**Jay Capener** – No report

**Dave Forsgren** – Troy McNeely reported that the springs were down to 215 in Honeyville.

**Charles Holmgren** – Has spent all day in meetings in Price. There were things mentioned that work together with the Beaver Dam folks. People along the Price River are conserving water so much that they are worried about forfeiture, can't help but make the comparison with the efficiencies in Beaver Dam.

Measured 3.31 inches of water for this month at the farm. It is too wet.

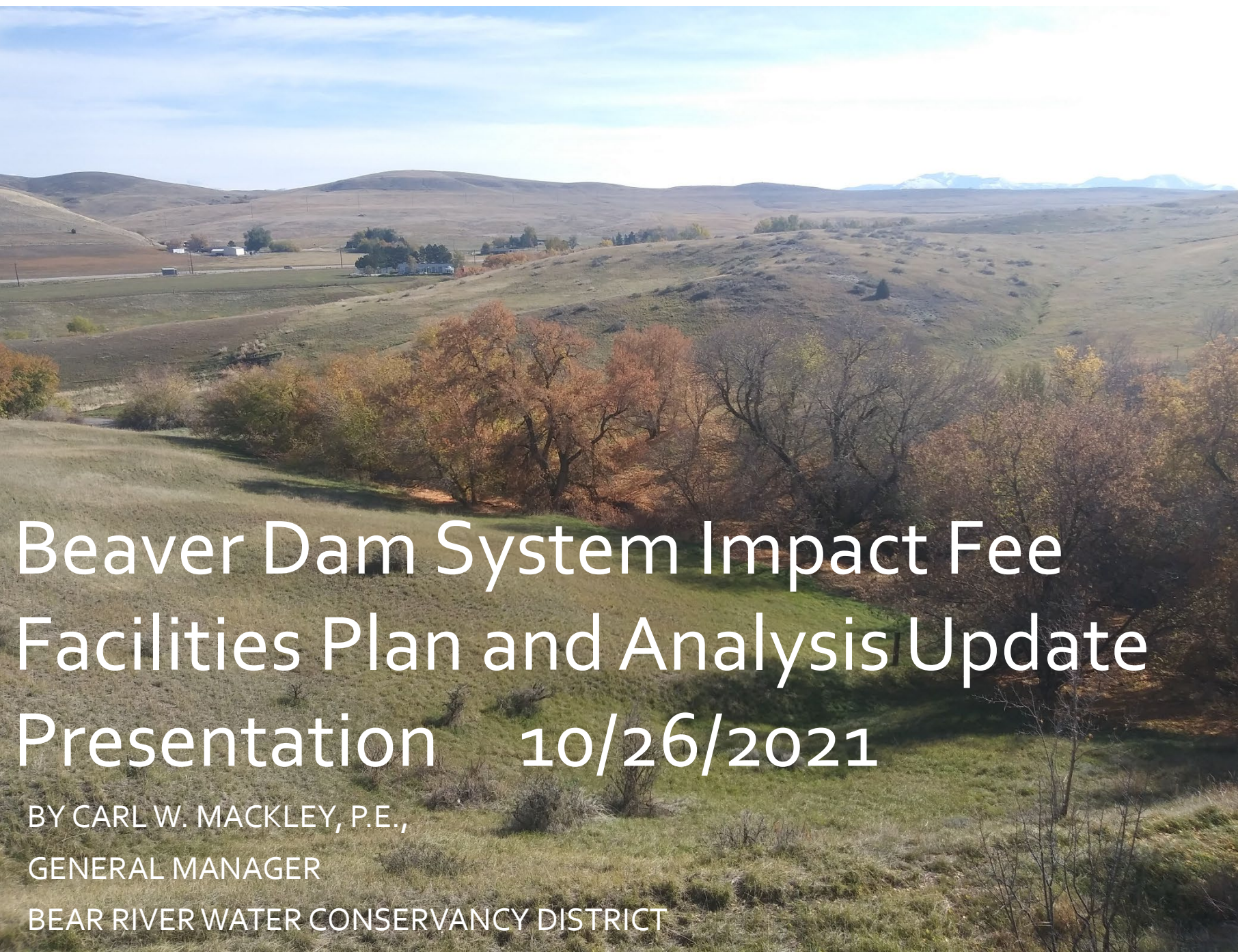
**Neil Capener** – Let everyone know he appreciated the kind words and flowers that we sent at the passing of his wife.

**Roger Fridal** – Things are good in Tremonton, there is a fair amount of building. IFA is moving into the old Shopko building and there are a lot of apartments being built in the area. The water situation in Tremonton is good; we have been very fortunate with the Conservancy District water.

A motion was made by Board Member Scott to adjourn the meeting. The motion was seconded by Board Member Carter.

The meeting adjourned at 8:40 PM.





# Beaver Dam System Impact Fee Facilities Plan and Analysis Update Presentation 10/26/2021

BY CARL W. MACKLEY, P.E.,

GENERAL MANAGER

BEAR RIVER WATER CONSERVANCY DISTRICT

# What is an Impact Fee Facilities Plan and Analysis (IFFPA)?

- Governed by UCA Sec.11, Chapter 36a: Impact Fees Act (Act)
- An Impact Fee is a Payment of Money Imposed on New Development. It must benefit new development but may also benefit existing development.
- An Impact Fee Facilities Plan is a plan required by the Act to determine the public facilities required to serve development resulting from new development activity as required by the Act.
- An Exaction is a non-monetary dedication, such as land or water, as a request for developed approval. (It takes the place of an impact fee or portion of the impact fee.)
- An Impact Fee Analysis is required by the Act to justify the impact fee.



# Why is the District updating the IFFPA?

- District received several requests for water connections for new development in Beaver Dam.
- Concern over how new homes would use water and what impact that would create for the existing water system. New homes would not necessarily have their own outdoor watering sources like the original connections had.
- The amount of water that the new homes would use was thought to be more than the amount of water existing homes were using. The average amount of water that residential customers use in a year is called the equivalent residential connection value or ERC. It also applies to other types of uses, such as a church, a factory or a business, and how much “residential equivalent” use they have.
- District received an opinion from our legal counsel that if the ERC was going to change, then District must do an updated IFFPA.
- On May 26, 2021, the District’s Board of Trustees commissioned the General Manager to do an updated Impact Fee Study or IFFPA.

# Highlights of the Impact Fee Facilities Plan & Analysis

- Water Rights
- Reliable Supply
- Peak Day Demand
- Storage Requirements
- Number of System Connections
- ERC Value
- New System Infrastructure Needs & Costs
- Impact Fee Amount

# Water Rights & Water Usage

## Water Right

- 37.222 acre-feet (AF) per year (over 12 million gallons per year)
- 294 gallons per minute (gpm)

## Table of Water Usage

YEAR	# OF CONNECTIONS	AF USED	AVG. AF/ CUSTOMER	AVG.GALLONS/ CUSTOMER
2020	27	12.57	0.465	152,000
2019	29	10.59	0.365	119,000
2018	28	13.11	0.468	153,000
2017	27	10.82	0.401	131,000
2016	27	13.19	0.489	159,000
<b>AVERAGE</b>	<b>27.6</b>	<b>12.06</b>	<b>0.437</b>	<b>142,000</b>

# ERC Value (in acre-feet)

2012 IFFPA	2012 – 2021 Avg.	Recommended 2021 IFFPA
0.45	0.30	0.35
0.262	0.18	0.222
<b>0.712</b>	<b>0.48</b>	<b>0.572</b>

- 2012 values based on estimates for irrigation and “historic” indoor use amount.
- 2012 – 2021 average values are based on meter readings for last 10 years.
- Recommended 2021 ERC is based on historic use and policy intent. Allows for some additional flexibility in water usage in the future. Policy intent is to require or at least strongly encourage new connections to have their own source for outdoor water use. Creates equality in existing vs new connections. Springs cannot support significant outdoor use during the summertime.

# Water Supply

- Beaver Dam System currently uses 3 springs
  1. Sleepy Hollow #1 or Upper Sleepy Hollow Spring
  2. East Lower Beaver Dam Spring
  3. West Lower Beaver Dam Spring
- Historic measured 3 Springs combined flow ranges from 47 to 82 gpm depending on month and year. 2012 IFFPA based on assumptions of these flow rates.
- From July 2020 – October 2021, 3 Springs produced between 30 to 45 gpm. This is the lowest recorded measurements ever!
- Flows are lowest during the hottest, driest months. (30 gpm in 2021 and 41 gpm in 2020.)
- District has rights to three other Sleepy Hollow Springs (#2 - #4) or Lower Sleepy Hollow Springs.
- Estimated additional flow from untapped Lower Sleepy Hollow Springs: 15 to 45 gpm.
- District desires to use Lower Sleepy Hollow Springs for culinary water system.

# Reliable Water Supply & Anticipated Demand

**Proposed Schedule of Water Use at  
Full Water Right Development**

Anticipated Demand				Reliable Supply* (GPM)	
Month	AF	Gallons	GPM	3 Springs	All Springs
		(x 1000)	Required		
Jan	1.9	619	13.9	24.4	44.4
Feb	1.9	619	15.4	24.2	44.2
Mar	1.9	619	13.9	24.5	44.5
Apr	2.5	815	18.9	44.3	65.1
May	4.2	1,369	30.7	42.0	65.2
Jun	4.2	1,369	31.7	36.3	54.0
Jul	4.8	1,564	35.0	31.0	46.0
Aug	4.8	1,564	35.0	29.9	45.0
Sep	4.2	1,369	31.7	30.6	45.6
Oct	3.0	978	21.9	31.3	46.3
Nov	1.9	619	14.3	43.3	64.9
Dec	1.9	619	13.9	44.9	66.1
<b>Total:</b>	<b>37.2</b>	<b>12,123</b>	<b>35.0</b>	-	-

\*Water Supply based on record of measurements 9/20 - 11/21

- Table shows the anticipated demand at the proposed ERC of 0.572 AF/yr with 65 connections, which substantially reaches the limit of the water right.
- Water supply shown in table represents “reliable supply” based on historic low spring measurements from past year.
- Additional water supply is needed to satisfy anticipated demand.

# Peak Day Demand

- IFFPA must account for peak day demands.
- For this IFFPA, a value of 2321 gallons per day per ERC was assumed.
- At the proposed 65 ERC's to sell; 150,865 gallons per day (gpd) would be used. This is equivalent to a flow rate of 105 gpm.
- There is sufficient storage to meet the peak day demand for the 65 ERC's.
- Ideally, there should be sufficient source capacity to meet peak day demand. Only during the best water years would there be enough source capacity to meet the anticipated peak day demand and the timing of the peak spring flows would likely not coincide with peak day demand.
- An additional source of water (beyond the springs) appears necessary to reliably meet peak day demands.

# Storage Requirements

- Must meet Equalization Storage, Fire Storage and Emergency Storage
- Existing Tank is 200,000 gallons
- Equalization Storage is based on indoor and outdoor uses on peak day. Peak Day use at 65 ERCs = 150,000 gallons.
- Fire Storage must meet minimum standards for Box Elder County Fire Marshall; 500 gpm for 30 minutes = 15,000 gallons.
- Emergency Storage is a reserve amount to keep in the tank for emergencies. Typically this is 10% to 20% of the total required storage. (Use 30,000 gallons)
- Total Storage Requirement = 150,000 gal. + 15,000 gal + 30,000 gal. = 195,000 gallons.
- Total Storage Requirement is met under 65 ERC scenario.



# Number of System Connections

- There were 22 original connections in 2012 when District took over system.
- There are now 32 meters in the ground.
- A total of 40 connections have already been sold.
- 2012 IFFPA set number of ERC's to sell at 52 connections at 0.712 AF/ERC.
- 2021 IFFPA recommends selling 65 connections at 0.572 AF/ERC.
- District Board sets policy for number of connections sold on a water system.
- Requests for 16 additional connections are pending. (would make 56 connections sold)

# System Infrastructure Needs and Costs

- Infrastructure needs identified under the IFFPA was capture of two prominent Lower Sleepy Hollow Springs and replacement of ½ mile of existing 2-inch PVC pipe.
- 1<sup>st</sup> Cost Estimate: \$160,000 This is reasonable.
- 2<sup>nd</sup> Cost Estimate: \$300,000 - \$350,000 This is doable with a few caveats.
- 3<sup>rd</sup> Cost Estimate: over \$500,000 This is unacceptable.
- Additional options for developing water sources need to be explored.
- Even if we could capture the Lower Sleepy Hollow Springs' flow for \$160,000, we would quickly be able to sell as many connections as we have water rights for and likely exhaust the water right within 5 years time.
- Additional sources needed besides Sleepy Hollow Springs necessitate additional infrastructure.

# Impact Fee Determination

Setting an updated Impact Fee determined by:

- Previously uncollected impact fees (\$55,980)
- Cost of new infrastructure (???)
- **IMPACT FEES DO NOT AFFECT MONTHLY PRICING AND AN IFFPA CANNOT ADDRESS THE COST OF WATER BILLS.**

# Considerations

- Additional source(s) needed.
- Demand will soon surpass existing infrastructure and water rights.
- Updated water policy for Beaver Dam is needed now.
- Water usage for customers with their own secondary sources of water is very low.
- New uses will increase the existing ERC by an unknown amount unless policy dictates otherwise. In this case, there are some compelling reasons to not increase or even keep the ERC value the same based on available water from the springs in the summertime.

# Future Options

- Develop Additional Sleepy Hollow Springs
- Drill a Well in Beaver Dam Area
- Do Nothing. New subdivisions can file for applications to appropriate and drill their own wells for all uses.
- Extend a Supply Line Along 2400 W. from Collinston System
- Willow Creek Booster Project
- Explore options with LDS Church at Early Park

