SKYLINE IMPROVEMENT AND SERVICE DISTRICT
MINUTES OF SPECIAL BOARD MEETING
May 31, 2018

A public meeting of the Directors of the Skyline Improvement and Service District was held on May 31, 2018, in the Berkshire Hathaway offices. The following directors, constituting a quorum, were present: Kurt Harland, Latham Jenkins and Jim Lewis.
Homeowners present: Emily Ambler, Jim Ambler, Susan Dong, Mary Lohuis, Warren Machol, Ila Rogers, and Francis Warziniak.

Also attending were Shawn O'Malley, Jorgensen Engineering and Emily Hanner, Clearwater Operations.

Kurt, serving as Chairman, called the meeting to order at 4:00 pm.

1. Approval of 5-10-18 regular board-meeting minutes
Action: As there were no changes or comments, Kurt made a motion to approve the minutes as submitted. Latham seconded. The motion passed unanimously.

2. Jorgensen Engineering- Status of Water Infrastructure study, recommended capital improvements, estimated costs, and 2-year timeline
Shawn O'Malley was introduced and he circulated a handout to the board and homeowners (a copy is attached to these minutes as Exhibit A).

Shawn summarized their review and analysis of the entire Skyline water system, from the wells and pumps, to the pressure tank, the linear feet of the main water line and the curb stops. From that study, Jorgensen has identified all our water assets and have placed a replacement value on each asset, and identify an annual funding amount for the replacement of these assets over a 60-year period.
Generally speaking, wells last 30 years, pump buildings last 50, pipes 60 years and Jorgensen is recommending to the board that it start to build up funds in reserves to pay for improvements in the system as it deteriorates over time. From the analysis it became very apparent to both Jorgensen and Clearwater that the "elephant in the room" is the 5,000-gallon pressure tank, it's age, the inability to inspect the tank, and the appearance of sand in the water under some circumstances. Additionally, the wells need upgrading to Variable Frequency Drives (VFD's) that will help maintain pressure in the system. Shawn then made reference to the handout explaining sequential steps to take over a two-year time frame, with the estimated costs indicated. Final estimates would come when the board seeks actual bids. In year 1 (FY 18-19) improvements totaling $122,000 could be accomplished before, in year 2, the roof of the pump-house would have to be removed and new, tanks (perhaps 4 smaller tanks) are installed. The total estimated costs for the improvements in year two, is $ 82,000.
The items on the second page were things that were brought up by the board specifically 3-4 fire hydrants for both fire suppression and periodically flushing the

pipes. Additionally, there was some discussion of upgrading water meters to digital but that may be a phase 2 consideration, and in the meantime, getting reading from homeowners 2 times a year should provide the usage data needed. These are placeholders for consideration, although the fire hydrants could be moved to the 1st year and the leak detection is something that should be done annually.

Jim said that a few years ago, it was mentioned in Board meetings, that Skyline may need a 3rd well and a related easement from Crane Creek Ranch, in order to meet increasing water needs. Jim asked whether that was likely in the medium to long term and something we should be concerned about. Shawn stated that there is no need for a new well, and with the VFD's, perhaps only initially installed on one well, to allow the wells to operate more efficiently. Shawn said that with we have so much water, that the current system pushes too much water into the tank, so the wells are continually starting and stopping abruptly, which leads to increase wear and tear. Shawn said we have plenty of well capacity and that we would never need a new well, especially if we do the periodic servicing of the wells and pumps. Shawn reiterated that we do not need more capacity.

Jim and Kurt asked about the sand that appears in some homeowner's water after we experience a power outage and the pumps restart, and whether that's in the water, or it's in the tank and pipes. Shawn and Emily said that the sand is likely in the tank and pipes, and that having 4 strategically placed fire hydrants around Skyline would allow for periodic flushing.

Warren Machol asked that from a best practices standpoint, how often should lines be flushed as our lines haven't been flushed in 40 years. Shawn responded that flushing should occur only when you see silt/debris show up and given the photo he saw of the sand in the bathtub, after the May 30 pump shut down, the pipes should be flushed. Warren also mentioned he'd experienced gravel in his backflow preventer and barn water heater. Emily stated that with VFD's in place, that would regulate the pressure and water flow, so that we experience those surges.

Kurt asked where the sand is coming from and whether there's a break in the line. Shawn said that it due to the accumulation of sediment that's in the tank and that there's been no flushing of the pipes. And the sand could have been introduced on Day 1 when the pipes from the wells to the tank were initially installed, or minute amounts being pulled from the wells, which have accumulated over 40 years. Jim asked whether the filters at the bottom of each well could get clogged and would have to be replaced? Shawn said that as you haven't seen any drop in water production, the filters or screens are probably not clogged, particularly how many years the pumps have been running. A blocked screen would reduce production.

Jim said that only for this current fiscal year did the board put a hold on charging a variable water usage, as it was $1.90/1000 gallons for the previous two years and before that, $1.25/1000 for 18 years. The reason for this hiatus was to get this a study of our system completed, a list of improvements needed, their cost, and a road

map and time line to make the improvements. Jim said that currently we have approximately $300,000 in water reserves and with the estimated costs totaling in excess of $200,000, we would come close to using all our water reserves if everything was done. Therefore, we will continue to need to build our water reserves given the age of our system and the estimated replacement cost of over $ 2 million, including the water lines and curb stops. Jorgensen has determined a proxy for the depreciable life of each component of our system and the total comes to about $30,000 per year, compared to the current depreciation of about $6,000 which is based on the acquisition dates, over time, of the various components of our system, including the turnover of the water pipeline from the developers to the ISD. So replacing parts of the ageing water pipes, as breaks occur, we will need to continue building water reserves.

In order to account for a higher level of water contingency reserves, beyond the $6,000 in depreciation currently accounted for, the board will have to determine at it's June 7th meeting, the appropriate base rate and, if decided upon, a variable water usage rate.

Susan Dong asked Shawn how close the cost estimates were to reality. Shawn responded that it depends on the year you'd go out for bids, but Jorgensen does a lot of work in this area, and he felt they were within +/- 10%.

Kurt asked whether some filter could be put in between the pressure tank and the main line, to filter out any material, before it gets to the homeowners. Shawn said something could be done, if necessary, as the water is so clear. The TOJ doesn't have such a filter in their system.

Emily Hanner joined the meeting and briefed the board about the reason for the water outage. It's believed that the lightening strike blew out a relay switch. That particular type of relay is not available in Jackson, so it's being delivered from SLC and will be picked up in IF tomorrow and installed. Meanwhile, the one well is running so water is back on, but with only one well, we have no redundancy until the relay is installed. Emily said that there are 5 relay switches on the system, which are different models.

Warren asked if the PLC controller, the re-plumbing and the well motor controls are all related to changing the pressure tank (see Exhibit A). Shawn explained how these would all work and that these are being used throughout the whole valley in other systems. Essentially the controllers are automatically gauging the pressure in that pressure tank and telling the pumps when to start and stop to keep the water system optimized. Additionally, the PLC controller would automatically notify Clearwater if there were a problem. Shawn said that in the pump and well world this is a normal part of a system.

The motor controls modulate the power input and controls the wells for production. When they are full on, the wells are producing 280 gallons/minute and when water

is not needed (middle of the night), the motor control is ramping down the production of the wells to maintain the right air pressure. The current process is not automatic.

Warren asked about the new controls and whether it makes sense to put them in the existing pressure tank building, which is leaking. Shawn said these are very sturdy and the plan is to hang them on the wall. Jorgensen has completed a structural review of the building and found it to be a pretty sound structure, including the foundation. The roof is really bad, so the plan is to put the controls in a place that's protected from the leaks until the roof is repaired.

Latham asked about the cost/benefit of spending the $100,000 for the well motor controls vs. what we have now. Shawn and Emily said there would be less wear and tear on the pumps. The discussion then moved to the small 5,000-gallon pressure tank, as with current peak summer production of over 260,000 gallons and in the winter 20-50,000, it's not really addressing the needs of Skyline and the wells/pumps re starting and stopping numerous times a day. The controls would modulate the usage so automatically keep the pressure where it needs to be. Jorgensen's conclusion is that it doesn't make sense to fix the roof, put in modern controls, and leave a 60-year old tank in place, which doesn't serve the needs of Skyline.

Warren asked whether there's another more cost-effective option to the VRD on-demand system, such as putting in a 20,000 gallon tank vs. the 5,000 gallon tank given in order to have more storage, since Skyline was out of water in a couple of hours when the pumps went down at night. Was there other alternative that may be more cost effective and give us more redundancy? Shawn said that first, we'd need a whole new building given the size of the tank, which would really be about 30,000 gallons in volume to account for the amount of air the tank needs. The best thing for any water system is to have a large tank reservoir sitting on a hill, for example the TOJ has three 2 million gallon tanks to service the town in case of need. Saddle Butte has a large tank but it has 5 pumps that has to push the volume of water up to the tank, and that's a complicated system. Shawn said that if we had enough elevation on the site of the building, that would be the way to go but. Skyline doesn't. Shawn said that each 2.3 cubic feet of water weights one pound. Skyline needs to maintain a certain pressure to get water to the houses. Therefore, a calculation could be done to determine the size of a buried tank, but it would be very expensive, easily $600,000. If it were above ground, you'd need a 75-foot high tank.

Latham asked in a perfect world how much storage would we need. Shawn said if you took your maximum daily production in the summer of 260,000 gallons and increase that by 1/3 to account for air, you'd need a tank of approximately 345,000 gallons. Shawn said he didn't know whether bladder tanks that big are even made today. 650 gallons is big now, because everyone is using VFD. Latham responded that in his mind, the problem with the VFD is if the power goes out, you still only have the water you have in the smaller tanks. Both Emily and Shawn said that the

VFD is reliant on power, and that's why we already have a propane-powered generator. We could also better protect our wells from lightening strikes. The TOJ has installed these at every well as they were being hit every two years.

Shawn said that if you stick with this plan, these are the major cost items; there will be smaller items, as you get more deeply involved, such as having an electrician down at the pumps and generator analyzing everything.

Latham asked if there are any best practices in terms of how many days of water we should have. He asked if the solution to the tank being driven by the desire to keep the existing building. Shawn said that it isn't, and perhaps its more difficult to understand today having just experienced a complete loss of water, but having a VFD system 4 tanks and an operating generator, with the automatic controls, that's really the best that you can do. We can put as many tanks as we can fit in there if we want, at a cost of $6,000 each. Shawn did not think this was the best use of our money. The system is there to give you some buffer, during your lowest period of use, so your pumps don't have to run at 280 gallons a minute when the need is 5 gallons a minute. Your idea of storage has to go away, as it's not a storage system. Your storage is the water in the ground. It's an on-demand system, which optimally and automatically operates your entire system.

Warren asked if there is a short-term solution to maintaining the water pressure in the tank. Kurt asked whether a compressor could be used as a short-term solution vs. Emily weekly visit to the tank house to read the sight glass. Shawn said the PLC upgrade would address this. Kurt said that regarding the tank, the other issue is that it's old, can't be accessed, and there has to be sand/sediment in the bottom of the tank, and rather than spending $30,000 on the new roof, we really need to address the tank, and upgrading to modern technology.

Latham asked if we're being constrained by our existing system, i.e. we have to fit with our current infrastructure, rather than looking at it from the standpoint on a system to serve a new 90 lot development. Shawn didn't think so. If this were a brand new structure, it would be a VFD system, with all the controls, and state of the art, just like what is being recommended. You have to get out of your mind, that this is a storage system. It's not. The storage of water is in the ground. If you do have the rare catastrophic event, like you just had, you will be out of water, until it's repaired. But to have that storage, it's going to cost a great deal of money for a once in 10-year event. Emily added that if the water isn't used in the storage tank, particularly in the winter, it can get stale and bacteria develop, given that there would be some dead air in the tank.

Latham asked if all the guts of the system located next to the pumps is typical as we have to push the water up the hill to the tank. Shawn said ideally they would be located together, and that's the reason for a fiber optic line from the tank house to the pumps so you have good communication all the time between the units.

Latham asked if lightening had hit either wellhead making it inoperable. Emily responded that it would depend if lightening hit one well or both wells, as we have redundancy, as one well can serve all of Skyline's needs. Both well motors would have to be fried, and neither, Emily or Shawn had been aware of such a dual event occurring on the same system.

Emily mentioned that in doing research, we could apply for a grant/loan program for our system upgrade. We wouldn't met the criteria for just a grant alone, as it is based on median income and Teton County would not be that low.

Latham asked about the pipes, as those are pretty old. Shawn said that the mainline pipes are in the Capital plan as the various components of the system are broken out. Jim said that of the $2.3 million of replacement cost of our system, the pipes account for $1.3 million of that and these have a depreciable life of 60 years. Jim said that that's 60 years from today, not taking into account that they're already 40 years old. Shawn said that if you start experiencing leaks in the line and water appearing, then you might decide to fix a stretch of line that's experiencing the leaks.

Warren asked what the criteria were for the State's grant/loan program. Emily didn't have all the information but water has to be metered and there has to be a charge per 1000 gallons. Just to prove you can repay the loan. Shawn said that you also must have a capital plan.

Jim said this meeting was for the board and homeowners to hear about Jorgensen's and Clearwater's recommendations and that the board will make decisions at the June 7th board meeting, incorporate these into our FY 2018-19 budget, which will then be formally approved at our July meeting. Kurt asked if we should be making any decisions at today's meeting about water. Jim said that this meeting was just information download from Jorgensen, but after looking at the budget numbers and now having Jorgensen's capital plan (replacement cost of system) he reiterated the need to increase the $300 base rate, which has been fixed since around 1999-2000, to $475, simply based on the CPI increase for the Western Region over that period of time. We simply have to start looking at things in current dollars. Now with Jorgensen's capital plan and our potentially using up a good part of our current water reserves on the recommended improvements. Jim said that in his view, the variable usage rate, from the first gallon, should at a minimum be $1.30/1000 gallon, to a maximum of $1.40/1000 gallons. Jim reminded everyone that the last usage rate was $1.90 for fiscal years 2014-15 and 2015-16 and before that $1.25/1000.

Given where we were a year ago, we have a lot more information to base our rates on and a much better idea of the replacement cost of our system, and the improvements we should be considering to upgrade our system.

Kurt asked when we have to decide on this. Jim said June 7th.

Jim said that the ISD now has two-meter readings from homeowners for the prior 12 months and he has calculated, based on these homeowner provided readings, their approximate annual usage for this 12 months. That usage will be used as the base usage for the calculation for the invoice (for the annual amount) that will go out in July 2018. The homeowner can pay that all at once, which many of the lower usage homeowners will probably do, or quarterly at set dates. There would continue to be two required meter readings, and the invoice for the next year FY 19-20, would be based on the reported annual estimated usage in FY 2018-19. In essence we're looking at the past 12 months usage as the base for the next 12 months invoice.

This way we're sending out one bill and 3 reminders at each quarterly due date.

Jim said that 43 homeowners are on paper billing and in this day and age, we shouldn't have to do that. The ISD's postage is almost $500 annually. Arne said we should probably charge an extra fee for paper billing and a discount for email. Kurt said that as an ISD we probably couldn't do that.

Latham posed a question to the attending homeowners whether they feel good about what they heard, or do they think we're trying to fix something that isn't broken.

Arne Jorgensen- the information we're receiving is getting better and better.
Susan Dong- The understanding of what is needed from a budgeting standpoint is critically important.
Mary Lohuis- The presentation provides a good baseline. It sounds very logical and rational and I don't think you can ever plan for any 10-100 year investment, for an event that happened to our water last night.

Adjournment
As there was no other business, Kurt adjourned the board meeting at 5:28 pm.

Respectfully submitted:

Jim Lewis
Secretary

Kurt Harland
Chairman

Latham Jenkins
Vice Chairman