

**BOARD OF COMMISSIONERS EXTREME WEATHER AFTER-ACTION REPORT
HYBRID MEETING: IN-PERSON ~ VIRTUAL MEETING VIA ZOOM**

Tuesday, February 20, 2024, 6:30 p.m. ~ Corbett Fire Hall 36930 E Hist. Col. Riv. Hwy

BOARD MEMBERS PRESENT: In-Person: Michael Arion, Dan Graff, Sara Grigsby, Kelly Piper.

BOARD MEMBERS ABSENT: Angie Kimpo

STAFF MEMBERS PRESENT: District Manager Ana Linden, District Clerk Heather McGivney, DRC David Jacob

AGENDA

- 1. Call to Order** – Board President Kelly Piper called the meeting to order at 6:30pm.
- 2. Roll Call** – Michael Arion, Dan Graff, Sara Grigsby, and Kelly Piper were present. Angie Kimpo was absent.
- 3. Approval of the Agenda** – Michael Arion moved to approve the agenda, Sara Grigsby seconded. *(motion passed 4 yes votes: M. Arion, D. Graff, S. Grigsby, K. Piper; 0 no votes)*
- 4. Announcement of Protocol for Public Comments** – All comments were limited to 3 minutes, and, due to time constraints, questions weren't answered. In-person public comments occurred first, followed by verbal comments on Zoom. Finally, comments entered into the Zoom chat were read by the District Clerk. No comments were read from Facebook.
- 5. Grant Committee Recommendations for Infrastructure Grant** – Lauri Aunan presented two options to pursue a System Optimization Review (SOR) grant from the US Bureau of Reclamation, which would help us to identify and prioritize system upgrades. She reviewed the prior activities of the Grant Committee. Since the last update, the committee has reviewed engineering estimates and agreed to recommend applying for the SOR that would create a hydraulic model, assess the condition of pipes and assets, and make a list of recommended projects. There are two options for pursuing the grant:
 - Option 1: Collects field data and uses current maps to perform a system analysis that would produce a prioritized list of projects to reduce leaks and improve service. This is a less costly option and would be finished within two fiscal years. Estimated cost is \$115,950.
 - Option 2: Will expand on Option 1 and would help create a Geographic Information System (GIS) to map infrastructure, and provide a more thorough system analysis that would allow better tools for in-house water management and problem solving. This option costs more money and takes more time, including staff hours. It would take place over three fiscal years. Estimated cost is \$138,354.

Mark Knudson of Special Districts Association of Oregon commented that he was surprised to learn how outdated the Corbett Water system maps are, and he thinks that a GIS would be highly useful for future projects and routine maintenance, and would be a smart long-term investment. However, the results of this planning effort will create a list of system improvements that will require significant investment. He recommends doing a rate study to learn about possible funding mechanisms: including grants, loans, and rate increases. Kelly Piper conducted a vote of Board Members to choose which Option to advance to a resolution. All Board Members voted for Option 2.

**6. Resolution 2024.02.20 U.S. Bureau of Reclamation System Optimization Review Grant
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District Clerk Heather McGivney read Resolution 2024.02.20 aloud. Sara Grigsby moved to approve Resolution 2024.02.20 as presented, and Dan Graff seconded. (*motion passed 4 yes votes: M. Arion, D. Graff, S. Grigsby, K. Piper; 0 no votes*)

7. Opening Comments/State of the District – District Manager Ana Linden

- Ana Linden went over the history of the District Manager position, and how the position came to be filled by someone without water certifications. From 2016 to mid-2021 there were District Managers who possessed water certifications. Starting in Fall of 2021 the search for a new Manager became challenging, and the job description was changed to focus on managerial qualifications, and did not require water certifications. It took several months to find a candidate. This candidate did not take the offer. In 2022, the Board consulted with Special Districts Association of Oregon to try to make the job more attractive, including raising the wage. They found a candidate in May 2022, but he turned down the position. The Board then considered trying to hire a Field Manager and an Administration Manager. In September 2022, the Board hired Ana Linden as the District Manager, under the mentorship of our DRC David Jacob, and with one year probation.
- 47% of our treated water goes “missing” and unbilled. This could be because of leaks, mistakes in measuring the quantity of water, or other use that is not billed.
- Corbett Water is a Special District, which is not directly funded by City, County, or State governments. Also, Oregon has an Urban Growth Boundary which makes it unlikely that we will have significant new construction in Corbett, which would yield system development charges as our water system expands. Our two sources of funding are property taxes, and water and base rate charges.
- Rate history: in 2002 the rates decreased, in 2012 the base rate was increased, in 2015 a special limited-time charge was added to fund filter pond improvements, in 2021 there was a water and base rate increase, and in 2023 there was a water and base rate increase.
- We currently have one single source of water: the Gordon Creek watershed. After the large fire in the Gorge in 2017, the Board sought to create a secondary source of water by drilling a test well for Aquifer Storage and Recovery (ASR). Unfortunately, after spending nearly \$1 million (of which \$250,000 was grant funds), the drilling reached 1200 feet and there were inconclusive results.
- Our assets include our water source, which is very pure, with little sediment, our system is gravity-fed, and we use simple technology to treat the water. Our customers are amazing! The water system was built in the 1930s, mostly by volunteers. There’s been an extraordinary amount of cooperation between land owners who allow water lines to run through their property. We have new equipment that will allow us to do many repairs in-house. Our staff is willing to work hard and learn how to do these jobs. We are creating a database for tracking maintenance of water system components and their GPS location, grants to fund projects like expanding our Master Plan, and our goal is to improve the water system into the future.

At this point in the meeting, there were several verbal and visual disruptions from participants on Zoom.

8. Extreme Weather Event Incident Timeline – Kelly Piper went over the events of the winter storm between January 11 and 23, 2024, the impact to the water system, and our recommendations for improvement.

- On January 11 & 12 the level transducer and flow meter at the Larch Mountain reservoir began to malfunction. They disabled the level transducer and the flow meter began to work again. At the treatment plant, the raw flow meter malfunctioned.
- January 13 the Cabbage Hill reservoir stopped filling, and system telemetry showed a large outflow of water, about 1300 gallons per minute. It was unknown at the time where the water was leaving the system, except that it was upstream of the Larch Mountain reservoir.

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The visual Zoom disruptions had continued for online meeting participants, so there was further discussion about whether to end our Zoom meeting. Several suggestions were offered for how participants could avoid the disturbing images. The District Clerk adjusted the Zoom settings to try to eliminate the problem, but it was ultimately decided to keep going with the meeting.

- January 13, cont. staff tried to look for the source of the water loss above Larch Mountain reservoir, and utility crew brought a generator to Cabbage Hill reservoir to thaw the intake line. We decided to send an automated phone call to customers informing them of the water loss, and urging precautionary measures. Later that night, staff came across what appeared to be a large leak on Pounder Rd. Upon advice from our DRC, the crew turned off the water to Evans Rd and Pounder Rd to try to stem the flow.
- January 14 the Cabbage Hill reservoir continued to empty, and crew attempted to thaw the vault. The large water loss was determined to be an intake valve that was frozen open. The crew found a valve to reduce the overflow, with assistance from a former District Manager. An automated phone call was sent to customers on Evans and Pounder urging them to boil their water when service was restored. An emergency Board meeting was convened that night to bring Board members up to date on events.
- January 15 the Larch Mountain reservoir valve was further throttled to reduce the overflow. The vault was thawed with a heater, and the reservoir came back online that afternoon. The Cabbage Hill reservoir was thawed and slowly filling. The crew went to investigate the water flowing on Pounder and determined that it was not chlorinated, therefore not a leak from our system. The water service for Evans and Pounder was restored.
- January 16 was relatively quiet, and staff spent the day taking samples to the lab and other storm tasks. There was an emergency Board meeting that night with the public to let them know about storm events.
- January 17 the ice was very problematic, freezing locks and doors. The Treatment Plant was losing water, approximately 1330 gallons per minute. The Larch Mountain reservoir was frozen open again and overflowing. The Cabbage Hill reservoir was not filling.
- January 18 the Cabbage Hill reservoir was not cycling normally and the water level was low. The Mershon reservoir was also not cycling normally.
- January 19 the crew reset the valve at Cabbage Hill reservoir to keep the water flowing, and they turned off meters for customers who had frozen pipes.
- January 20 the crew fueled generators and worked on storm events around the District.
- January 21 the Mershon reservoir was extremely low, and eventually ran out of water due to large leaks in customer lines. Boil water notices were sent to customers on Mershon.
- January 22 the thaw began and all staff were able to report for work. The utility crew began checking customer meters for large leaks (over 10 gallons per minute).
- January 23 and the rest of the week was spent responding to hundreds of customer inquiries. The level transducer at Larch Mountain reservoir was replaced. Boil water notices were lifted. All customers should have had water flowing to their meter.

9. After-Action Debrief and Data-Gathering – Sara Grigsby gave the highlights of the After-Action debrief from two staff sessions; and the information gathered from customers, Board members, and Emergency contacts.

- The staff meetings included forming the timeline of events and actions, asking what went well and what could be improved upon, and ideas to mitigate the next event. The focus was on communication methods, company resources, system infrastructure, general liability, staff safety and readiness, developing standard operating procedures (SOP), and developing community confidence.
- Customer feedback from an online survey indicated that 42% of customers lost water, mostly from the District side. About 25% of customers lost water because their pipes froze. 79% of

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customers received some sort of communication from the District. Approximately 20% responded that the communication was not helpful, 40% said that the District could do better, 30% said that the communication was satisfactory, and a little over 10% said that communication from the District was outstanding.

- Customers rated the overall response and actions taken during the weather event on a scale of 1 to 4. 27% gave CWD a one, the lowest score possible; 31% scored CWD actions at a two; 27% rated CWD actions at a three; and 14% gave a four, the highest score possible.
- Corbett Water Board members answered a similar questionnaire and all agree that the crew worked very hard, but we have a lot to learn.
- We asked several community contacts who work in emergency preparedness to answer their own questionnaire. Their help during this event included engineering assistance, providing water and generators for the CWD office, and addressing water issues for livestock and animals. These contacts rated their interactions with CWD: 66.7% rated satisfactory, and 33.3% said outstanding.

10. After-Action Feedback and Recommendations

- Examples of staff recommendations include developing emergency procedures, more fuel cans, and build shelters at each reservoir around the tools to provide insulation, and so that the staff can work out of the weather. Evaluate our vehicles and prepare them for weather. Make sure utility staff have adequate safety gear and clothing. Office staff recommended developing a communication plan, and investing in a laptop with all of the District software that a worker can take home to work.
- Customer recommendations for improvement included better communication with customers; more advanced planning; bring water to customers; and coordinate with other agencies, particularly the Corbett Fire District.
- Some customers offered to help during future extreme events, from having useful equipment, to expertise in large scale logistics, and strong skills in electronic communications.
- Recommendations from the Board members include pre-planning, updating equipment, making sure staff have more training and water knowledge. Board members want to help during these situations.
- The community contacts recommended creating a “rapid response team,” developing SOP for emergency situations, coordinating with local agencies, and using already developed tools like the Occupational Safety & Health Administration cold weather response requirements and advice.

11. After-Action Follow-up and Next Steps

- CWD has purchased: 2 lightweight generators, heat tape, heaters for reservoir vaults, long extension cords, snow chains for each truck fitted by the dealer, insulated tarps for Larch Mountain reservoir, a laptop for remote access, a sump pump at the overflow at Larch Mountain reservoir, and we’ve had all utility crew gain access to telemetry on their phones and laptops. We’ve done research about the snow capabilities of our vehicles, found a generator tech to service our diesel generator. We are creating new checklists and procedures, including altering our automated phone call procedure to always include Corbett Fire District so that they may know of possible interference with hydrants.
- We will continue to process the feedback we are getting from customers and community members, creating and updating SOPs as we go. We will also incorporate emergency preparedness needs into our upcoming budget.

PUBLIC COMMENTS

- **In-person comments**
 - Jim Morgan stated that he is grateful for our clean drinking water. He volunteers for the District and urges that we get a GPS and GIS system in place so that we can document

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- our system and know the location of each meter, valve, and component. He also urges the District to take steps to protect our watershed.
- Torey Redfern urged the District to continue to learn, but he feels that Ana Linden is the wrong person for the District Manager position. She appears to know administrative tasks, but not the operations side. He also wondered why there are only two utility workers out of 6 employees. That doesn't seem like enough. He felt like a water loss of nearly 50% is too much. He remembered that several years ago, the water loss was down to about 30%. We need utility workers who are trained and committed to staying in Corbett. He doesn't like that our DRC is offsite.
 - Robert Hattan has been working with GIS modeling with the Air Force Reserve for 16 years. Data collection is a never-ending task. He believes that considering the low cost of the current plan, he doesn't think it will yield the results that we are expecting. Fixing the problems will cost more than the grant funds, and he doesn't think that customers will look favorably on rate hikes without infrastructure improvements to show for it. He also urged seeking an employment time commitment from staff for the education they will be receiving about GIS modeling. The GIS project will require extensive staff time and energy. Are we willing to continue on this path if we don't get the grant?
 - Klaus Heywe is extremely impressed with the utility workers. The problem is that there is no institutional memory. Current workers needed the advice of a former District Manager to find a crucial valve. He feels that employee retention is especially crucial, and that the team we have now is the best he can remember in 30 years of residency in Corbett. He reminded us that multi-billion dollar company PGE took three days to assess a problem on Loudon Rd, and then another four days to fix the problem. Some events are so big that you can't plan for them, but trying to plan for them is a brilliant idea. Within the small scope of what CWD can do, he thinks we are on the right track.
 - Andrew Kurkinen read a statement from his spouse Helene. She said that they lost water for a few days during the storm, but she wasn't surprised. When she's had questions about our water, District Manager Ana Linden pulled out a map of the watershed to explain the system. This led to more questions, and Ana led Helene on tour of our Treatment Plant, and the intakes. What she came away with is the impression that the District is in need of modernization, and full of aging infrastructure, and a sizeable backlog of issues to resolve. She believes that our rates cover the maintenance of the system, but not replacement. Through the District communication during the storm, she was reminded of the many challenges our system is facing. She closed by thanking the hardworking staff and the many volunteers, including the Board members. She hopes that the community can begin to work together to proactively solve some of our problems.
 - Victor Schmidt served on the Board many years ago. Back then, the water loss was much lower, so he is surprised to see the water loss figure so high. He said that many of the old District Managers who had certifications had problems too. What we need right now is continuity, intelligence, and dedication. He's not necessarily endorsing Ana Linden as District Manager, but he doesn't feel that just because she lacks certifications, she can't do the job. He feels like much of our technology should have manual controls as well as digital.
 - Sara Grigsby urges everyone in the audience to continue to put their comments into the survey on our website. Having this down in writing is crucial.
 - Benno Lyon got a message that water service might be lost early in the storm, but then didn't hear an update for several days. He doesn't use Facebook, so that isn't a viable way for him to get information. He urged the development of a better communication strategy, perhaps using the automatic phone call system to give people a daily update, even if it's just to tell people that the situation is the same. System-wide it sounds like we

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need a massive overhaul. It sounds like the time for applying patches is over and that we need a big financial investment. But we also need the confidence that this investment will last into the future, including a new water source and new infrastructure.

- Ron Rhew asked if we are connected to any of our surrounding water systems like Troutdale or Gresham? Is there a way to get backup water from another source? Ana Linden answered that we don't currently have a backup water source. Mr. Rhew urges us to get a backup water source.
- Bonnie Knopf wants to thank the staff and volunteers. She particularly recognized Kelly Piper for wanting to give back to her community. During this storm, she saw the best of people in this community. Someone brought them gas, and she's proud of how the Corbett community stepped up during this storm.
- Eric Eaton says that he's confused about the things that went wrong during the storm. He listed a lack of freeze protection at the Larch Mountain reservoir, and a leak at Stark Street Bridge. He asked if anything else went wrong. He feels like there were simple problems that could have been avoided with proper preparation and freeze protection. He's embarrassed by the storm response of the CWD. He would like to see changes in leadership including management and the Board.
- Terry Cook wanted to comment on the money issue. He understands that the money for improvements may not be there. But there were rate increases in 2015, 2021, and 2023. The most recent rate increase was done on the promise of building new lines. However he saw new trucks and equipment, but we still have the same old lines. He looked at his own bills from between 2021 and 2023 that were within 2 units of water difference. His bill in 2023 was 66% higher than in 2021. Why do we have these expenses, but nothing to show for it? Where are the priorities? Is it staff? Facilities? Equipment? He feels that the priority should be to get water from the mountain to the faucet. Where is the infrastructure that was promised for each of the last two rate increases?
- **Zoom comments**
 - John Smith pointed out a date error in the powerpoint. They had a problem with Ana Linden admitting that she is not qualified for the District Manager job, but she's earning \$70,000 per year, whereas Smith has two Masters degrees, but doesn't make over \$40,000 per year. They think it's embarrassing for the District. They wonder if we ran out of water during the storm. They felt that the mention of the Gorge fire in this presentation was fear-mongering. They feel that we are embarrassing and ridiculous.
- **Virtual chat comments will be read aloud**
 - Rebecca Gandy asked if there is a way to submit the Extreme Weather After-Action Survey online anonymously? She pointed out that you have to share an email. While the survey says that the email will not be shared, does that ensure that the data will be collected anonymously? Ana Linden said that we don't have time to answer questions in this forum, but all questions will be answered at the next Board meeting. The questions and answers will be featured in the meeting minutes for the Board meeting on February 28, 2024.
 - Roel U. wonders if the grant committee has considered any USDA rural development grants and loans such as water and waste disposal loan grant program currently open for applications. Emergency community water assistance grants are also currently open for applications.
 - Dave Selden commented that the Grant presentation was not on topic and he would have liked to get to the stated purpose of the meeting quicker.
 - Char said that their road was in danger of being washed out by the overflow from the Larch Mountain reservoir. What strategies will you use in the future to prevent this stream of water from the Larch Mountain reservoir?
 - John Jordan says bravo.

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- Michael Demshki says that the presentation was useful, but the communication would be a lot better to the audience if it was streamlined and prioritized. Presentations 101.

ADJOURNMENT OF MEETING – Kelly Piper made a motion to adjourn the meeting at 9:00pm. Sara Grigsby seconded. (*motion passed 4 yes votes: M. Arion, D. Graff, S. Grigsby, K. Piper; 0 no votes*) The meeting was adjourned at 9:00pm.

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