

Reports from Tim Guishard Enterprises

Water Operator for H & J Water Company

[August 2026](#)

[June 2026](#)

August 5, 2026

Weekly, we continue to monitor the water quality out of the treatment plant and perform manual backwashes. The water quality has been good. We also have been recording the water production from well 2. Unfortunately, the water meter is very difficult to read and impossible to replace in the current location. Several reports are attached to the message. We (Rosa) really need daily water volumes, well pump run times and well water levels, to properly fill out the Drought reports, all of which could be automated with SCADA. Properly filling out these reports is an important step to qualifying for grants.

We have started preparing the Minimum Residual Disinfection Reports, taking this off Rosa's plate. We can take on more reports if requested.

I was contacted by a member of the State DDW about well water level measurement equipment that Spencer Valley School qualified to have installed at no cost. I passed on your water system information to see if you might be able to qualify for similar equipment at no or low cost.

I have also sent in some similar well level monitoring equipment that I pulled from Wynola WD when I upgraded their equipment last month, to the manufacturer to get a cost estimate for repairs. If the equipment can be repaired, I'll pass on the costs to you to see if it will be viable to monitor the levels in your wells. This is not the best equipment, but it is better than what you have now!

On July 19, I responded to another emergency water outage at well 2, possibly related to a lightning strike a couple days earlier that almost completely drained the storage tank and caused the booster pumps to stop working. The coil on the 24VAC Definite Purpose Contactor that actuates the main 230VAC contactor for the well pump failed. I was able to make an emergency bypass to get water flowing again, but needed to return with a new component. On July 20 my team switched out the Definite Purpose Contactor for a control relay. The relay is super simple to replace, and may actually last longer. We left a spare relay on site for future replacement if it is necessary.

As a result of the water outage, On July 20th we also had to collect a set of set of special bacteriological samples for analysis to confirm that the water system did not get contaminated. These had to be hand delivered to a local lab.

A SCADA would have alerted us that the well pump did not start, which would have saved hundreds of dollars in emergency repairs and water sampling. It is likely that the repairs could have been completed during normal business hours.

On July 30, we finally received and installed the Surge Protection Device at the main power supply to well #2 pump control panel. This should reduce issues with power surges at that location.

Water Operator's Report

However it might be wise to also install a pair of low voltage SPD's on the 24VAC power that goes between there and the water tanks. I would recommend installing one at each end, which will provide further protection for the low voltage controls between the water tank and well. These SPD might have prevented the coil on the DP contactor from failing. I still recommend installing a SPD and line reactors on the power supply to booster pump VFD's to reduce issues with those pieces of equipment.

Respectfully,

Tim Guishard

Tim Guishard Enterprises

June 15, 2026

The month of May was a relatively quiet month with no major issues.

We did have a minor issue in maintaining a consistent chlorine residual, which may have ultimately been caused by the issues observed in early June.

One weekly sample was above the SMCL for iron, and we are not sure why. It might be due to excessive usage the day(s) before sampling or the filters did not backwash properly. As a result we have changed automatic backwash intervals from once every 3 days to once every 2 days. The increased backwash intervals are a waste of water, if they are not needed! Unfortunately due to a lack of daily water production records and a water meter on the backwash line to the filters, that could be automated with SCADA, we do not know if there was excessive usage or the filters did not backwash properly.

The first week of June is a whole different story:

- The transmission line from well 2 broke. It appears this might have been leaking for weeks before the break was observed!
- Ants got into an electrical contactor (a large relay) at well 2 and damaged the contact points.
- An electrical surge of some type, also at well 2, damaged more electrical (pump/motor protection) components.

As a result of the above

- The storage tanks almost ran dry. **This water system was just a few hours from being out of water, and likely just avoided thousands of dollars of additional damage to the booster pumps!**
- Water samples collected on June 3rd, 4th, and one scheduled for June 10th could, or may, have been compromised.
- Several damaged pump/motor protection components at well 2 were bypassed to allow the well pump to run without these components.

Water Operator's Report

- This could result in damage to the well pump or motor!
- New electrical components are on order, including an electrical Surge Protection Device (SPD) to help prevent some future damage.
- An emergency repair of the transmission line was completed on a weekend by Josue and Rosa. The community needs to give them thanks for keeping your water flowing!
- June 8:
 - The chlorine residual dropped well below optimum, to potentially unsafe levels.
 - As a result: We had to perform emergency chlorination of the storage tanks, and shut down the well pump for almost another day to get the chlorine back up to optimum levels.
 - Upon restarting the well pump after the pipe repair, we found that the pump production being reported at the treatment plant has increased slightly since the beginning of April, suggesting the transmission line leak may have started in April.
 - As a result of the increased pump production at the treatment plant, we had to increase the speed of the dose pump to get the proper chlorine residual.
 - We are going to have to monitor the chlorine residuals again and adjust the chlorine pump a few more times to get stable residuals.
- June 9,
 - we checked the chlorine residual in several places in the distribution system. All good after some minor flushing at Susie's house.
 - We also looked at possibly replacing the water meter for well 2, as the register is hard to read due to scratches. Unfortunately due to the location of the meter sitting behind the filters, it is impossible to reach some of the bolts to remove it from service. The meter will need to be literally cut out and moved to a new location.
- June 10
 - Collected special bacteriological sampling after the transmission main break.
 - We replaced the motor starter contactor.
 - We are still waiting on the SPD to arrive.

I keep bringing up the need and benefits of SCADA. If SCADA had been in place:

- **We would have been alerted* of the issues at well 2, while the storage tanks were still nearly full:**
 - We could have seen that the well pump was running longer to keep up with the leak.
 - Thus the repairs could likely have been scheduled and completed during "normal" working hours and days.

Water Operator's Report

- We could have seen that the well pump did not run, due to the electrical failures.
 - Thus the repairs could have been completed before the tanks were nearly empty and your fire protection was severely compromised.
- We could confirm that the filters are backwashing as required and only when needed.
- Your community members would not need to be relied on to perform daily chlorine residual readings.
- Collecting most of the required information to complete the required quarterly Drought Reports, would be automated. Collecting all of the required information that helps the water system qualify for grants and low interest loans, would be available in a spreadsheet. This same data also helps us predict when well or pump failure is imminent. Currently H&J can not report or prove:
 - What are the static and dynamic water levels in the well(s)?
 - What is the run time for the well pump(s)?
 - How many gallons per day are produced from each well?
 - How many gallons per minute are produced by each well pump?

* With SCADA I calculate things like total pump production and run time on a daily basis. It is much easier to see on a spreadsheet that the pump run hours and daily production are getting out of whack. Just looking at the GPM, does not give the full picture. I would likely have easily seen the effects of the leak 6-weeks ago.

Respectfully,

Tim Guishard

Tim Guishard Enterprises