

Memo

To: MCCSD Plant Operations Committee
From: District Superintendent
cc: Matt Kennedy
Date: September 22, 2026
Re: Operations Update

-Current operations at the WWTP and collections system are functioning as designed.

-MCCSD had no permit violations during the first or second quarters of 2026.

-MCCSD has not transferred any recycled water since October of 2022

-Recycled water system upgrade project is well underway. Much of the new distribution system and most of the new fire hydrants have been installed. Most of the trench re-paving has been completed. But more paving work is still outstanding/to be completed. Boring under Hwy 1 is happening this week and next. Construction of the new Cl2 contact basin is underway at the WWTP. Re-lining of the equalization basin is scheduled for the week of 9/28. De-watering, cleaning, inspection, and installation of the new baffle in the aeration basin was successfully completed in July 2026. GHD is still working on the design of the distribution line extension down Lansing and Main St. including some additional service connections. Replacement of air distribution piping still needs to happen along with the installation of analytical equipment, circulation pumps, mixers in the treatment unit, and construction of the new recycled water storage tank.

-Operators responded to ten (10) alarm call outs during the first quarter of 2026 and 13 during the second quarter. Of the 23 total alarms, 15 alarms occurred during normal working hours. 14 were for power surges or outages, five (5) were for burner failure on the dryer but this is a routine alarm during dryer operations.

-All three blowers are currently functional. On 8/11/26 the Aerzen blower received both annual service and a replacement cooling fan, placing it back in operation for the first time in a number of months. This blower is best at maintaining a steady dissolved oxygen level, critical for our production of recycled water.

-The 50 Hp blower is our winter season work horse, as it is less sensitive to power surges and will often self-restart after a surge. If funding allows, the rec water project might purchase a replacement for the 40 Hp blower to back of Aerzen when rec water production resumes.

-All three influent pumps are functional, and we have a spare pump and motor on site for emergencies.

-Pump 1 was replaced in 2023, and pumps 2 and 3 were replaced in 2009.

-Pump 3 received a replacement motor in January of 2026.

-A new influent level transducer was installed in June of 2026, and we have a spare in storage. A couple of the second quarter alarms were due to the failure of the old transducer.

-A proposed plant maintenance project to extend the 4" influent discharge piping to connect one or two additional pumps, has not yet been completed but remains on the list. This would reduce the reliance on pump 3 in emergencies and allow for more operational flexibility. We are in the process of gathering information and discussing if this is a project operators might be able to complete in-house.

-The headworks bar screen has worked well in 2026, after a manufacturer visit in March. Due to historical problems with the current unit, we continue to look at adding a second unit for redundancy. A second unit is estimated to be around \$160,000 including installation. The existing unit is a prototype and was installed in 2011 at a cost of \$94,000. The auger motor and gear box tend to fail about once every two years (\$1,500). We keep a spare motor on hand to minimize down time. The lift motor was replaced in 2025. (To my knowledge this was the first time the lift motor has been replaced). The rec water project could not fund a second unit.

The bar screen is the first point of treatment. It is essentially a rake in the influent water channel that removes debris larger than two inches to protect downstream equipment. It also removes a lot of plastics and other items that should not be flushed. It is a critical piece of the treatment plant and currently lacks redundancy.

-The treatment unit air distribution piping remains a relatively high concern/priority for replacement. It is almost all original equipment from 1975. The pipes are iron and exposed to the corrosive environment of both the coast and wastewater. These airlines are almost all planned for replacement as part of the rec water upgrades this winter and spring. I am optimistic that the air distribution piping will hold up until replacement. The 10" transmission airline was replaced in 2024 after the failure in November of 2023. It is stainless steel, accessible and should last another 50 years. The 4" backwash airline from the blower room to the treatment unit is also scheduled for replacement in the coming months as part of the rec water project.

-The coarse air diffusers inside the aeration basin were all removed, cleaned, improved with clean outs and new flaps in July of 2026, then re-installed.

-Effluent filter valves. All four (4) ¼ turn butterfly valves were replaced by RF MacDonald in November of 2025.

-Effluent pumps. Pump #1 was rebuilt and re-installed in September 2025. Pump #2 is currently being rebuilt. It is expected to be back in the next couple of months.

-Effluent pump discharge valves. The check valve and gate valve for Eff Pump #2 were replaced by operators in May of 2026. Once Eff Pump #2 comes back the valves for Pump #1 will also be replaced. The new valves are at the WWTP.

-Operators replaced the digester sludge line check valves in April of 2026.

-Digester sludge pumps burned up during de-watering operations of July 2026. Replacement pumps have been ordered, and install is planned for mid-October.

-Removal of old sludge lines. There are some old 6" iron sludge line pipes that go from the digester to the drying beds. These pipes have not regularly been used since 1991. Operators removed about 10 ft of above ground line to reduce trip hazards and improve access. There is currently no plumbed connection between the digester and drying beds.

-The sludge dewatering belt press. This was purchased in 1990. It is old, but currently a very reliable machine, that operators are comfortable working with and working on. Operators conduct regular maintenance including, greasing the many roller bearings, replacing belts, checking and replacing hydraulic oil, replacing the drive pulley, and regular washing. Operators are still able to locate parts as needed for replacement. Operations would be significantly impacted if this machine went out of service for a prolonged period of time (greater than 2 months). At this time I do not see this machine going out of service for more than two months as a high likelihood. I believe we should be thinking about and planning for replacement in the next 5-10 years, but that schedule could be adjusted as conditions change. Parts are still available and operators are comfortable working on this equipment, that makes it a lower priority for replacement at the moment.

-The sludge conveyor belt. This equipment is currently functioning without issue. The conveyor belt has been in service since 1991. The belt is a little worn and if this piece of equipment went out of service longer than a couple months, it would severely impact operations. Most parts can still be sourced. Operators have a spare drive motor in storage. A replacement belt can also be ordered as needed. Storing additional spare parts on site is recommended, but space for a spare belt is limited. Staff have not been able to locate any in-state companies willing to service this equipment. Figuring out a replacement gear drive has proved challenging since the old spec plates have rusted off, but we are close.

-Fenton Biosolids Dryer. This unit was installed in 2005. It is currently functioning well but is 21 years old. The district is still paying on an Ibank loan for this equipment through 2036. The boiler side of the unit is serviced by RF McDonald. Service is as needed but generally on at least an annual basis. RF McDonald replaced the NY Blower unit and reconstructed the boiler refractory in June of 2026. The next job will likely be routine replacement of the heating oil next year. The current PER in progress by Carollo Engineering includes a replacement dryer.

Over the past few years various parts including 3 different motors, fans, bearings, water jets, and computer modules have been replaced. When the unit was purchased the representative wrote a letter stating that we should expect far more than 30 years of life from this machine considering our limited use and the fact that it is kept inside a building. The manufacturer's intended use was 16 hrs per day 5 days a week. Approximately 4,000 hrs per year. MCCSD's average use over the past 4 years has been 750 hrs per year.

-The equalization pond liner is scheduled for replacement the week of 9/28/26.

-The backup plant generator had a new starter and replacement batteries installed in February of 2026, and the mobile backup generator received an oil change and load test at that time. All generators are in good working order.

-In the collection's system, Ghilotti Construction replaced 950 ft of 8" sewer main on Little Lake Rd. between Hwy 1 and Lansing Steets in May of 2026. MCCSD operators began annual sewer main cleaning in September of 2026 and are expected to finish in early October. No significant issues have been found or reported so far. Roy's sewer service is returning the week of 9/28 to conduct camera work of areas recently cleaned. The only recent concern is higher than normal run hour at the Main St. lift station. PG&E completed electrical repairs in the area a couple months ago, but this lift station runs on very old equipment, that is hard to service, and even harder to find parts. A complete lift station overhaul is under design by Carollo Engineers but with an unexplained issue both last Christmas and this September, I believe something more needs to be done in the short term. Fort Bragg electric is conducting a site visit the week of 9/28 to brainstorm and estimate both short term (5 year) and long-term upgrades.