

## Martin County Water District 5 Year Update

- November 2019 system was treating an average of 1.85 MGD and barely able to maintain service to all customers. As of November 2024, the system is averaging 1.2 MGD while pumping to the industrial park and maintaining a full distribution system. Water loss has dropped into the 58% range from a high of 70+%
- The system has completely rehabbed Treatment Unit #1 and placed it back into service. Treatment unit #3 has been rehabbed and updated. All three treatments units are in operation and the system can take a unit offline for maintenance and cleaning with no worry of service interruptions.
- The water plant has an operational emergency generator to ensure plant operations can continue during power disruptions.
- The water meter flow bench has been repaired and calibrated.
- Water plant online instrumentation (Turbidity and chlorine) has been updated. Meter calibration and maintenance is properly completed and documented.
- New raw water and finish water flow meters have been installed at the plant.
- Plant and distribution operation SOPs are updated.
- Multiple water plant and distribution operators have been trained and obtained certification.
- The River Intake project is nearing completion, but several issues still need to be solved.
- Duplex pump stations in Davella and HW 292 now have 2 working pump installed.
- Tank access road and tank site at the Industrial Park tank has been cleared of all excess vegetation.
- Overflows and screens are in place and maintained on the systems water storage tanks.
- Spicy Ridge water dispenser has been rehabilitated.

## Major Issues and emergencies the district has faced over the last 5 yrs.

- June 2020 New electrical raw water pump installed and failed after 8 days of operation. Waiting on warranty repairs. The second pump was dropped off the truck during delivery and damaged. The system received the repaired small pump on June 24 and resumed pumping to the reservoir at 1200 GPM.
- Feb 2021 Ice Storm caused significant power outages in martin co. The water plant and multiple pump station offline. Power flashing caused VFD failures at HW 40 East pump station. Total of 1000 connection out of service until power was restored. Some customers were without service 5 days before restoration. Telemetry to the distribution system down most of the month.
- March 2021 Power failure from Ice storm caused VFD to fail in the HW 40 East pump station 1270 connections out of water for 3 days. Longer for customers in the poplar fork area due to a line break.
- May 2021 reservoir low. Small river pump not able to supply the reservoir as much as plant is pulling. Large pump VFD is bad. Xylem is bringing a diesel pump until VFD repairs are made.
- July 2021 treating an average of 1.65 MGD Reservoir levels critically low. System is installing the large river pump to restore the reservoir. Unit 3 sludge rake failed causing more frequent

backwash. Unit 2 solids build up but unable to drop the unit for cleaning. System unable to pump water to the prison area and are purchasing water for route 3 Davella section from Prestonsburg.

- September 2021 reservoir levels critically low. Large electric pump is currently in operation. 1900 GPM to reservoir. Due to low reservoir levels raw water gravity flow to the plant is reduced causing low clear well levels. System had to valve off portions of the distribution system to allow clear well tanks to fill. Small number of customer outages for 5 days.
- October 2021 river levels low and the suction head on the electrical pump is at its max. pump flow to the reservoir has reduced to 1400 GPM due to low river levels. Rehab of water plant Treatment Unit #1 has started. The large river pump failed on October 15. Xylem supplied the system with a small loaner pump since they have both of the district's pump for repairs.
- November 2021 Multiple line breaks in the Buck Creek section has resulted in the Buck Creek Tank runny low. Customers in the Warfield area was valved off to allow tank levels to increase. 5 days of intermittent outages in that section.
- December 2021 treating 1.7 MGD. Reservoir remains low. Large electrical pump failed in October 2021 less than 3 months of operation.
- June 2022 River pump issues. Pump is down due to VFD failure
- July 2022 River pump back in operation using a loaner VFD. Pump ran for 3 days and failed. Xylem brought a loaner pump that will only pump 900 GPM. Reservoir levels continue to drop. Pump failure in the Turkey Creek station caused an outage for 100 customers for 3 days.
- January 2023 multiple line breaks resulted in low distribution storage. The system valved off most of the distribution system to fill clearwell tanks. Customer outages lasted 3 days for several small areas.
- April 2023 storm caused power outages to plant and multiple pump stations. Customer outages for multiple sections.
- June 2023 reservoir levels getting low. River pump not properly operating. Renting a diesel pump from Texas. Diesel pump placed into service and reservoir filling.
- January 2024 Treatment unit 1 placed into operation. Diesel river pump not operational due to freezing up in cold temperatures.
- February 2024 rock fall and land slide resulted in Meathouse section out of water until highway department can clean the slip up. Water was restored after 7 days to customers in Meathouse.
- March 2024 reservoir full and discharging from spillway. Treatment Unit #2 sludge drain valve stuck. System can't remove solids from unit. Treatment unit 3 out of service for rehab. Emergency valve insertion conducted to restore operation.
- May 2024 Treatment unit #1 sludge rake failure on the new unit. This is resulting in higher turbidity on top of filters in unit 1.
- June 2024 rental diesel pump in use still.