

Henry County Water Authority Ensures Water Distribution Keeps Up With Increasing Demand from a Growing Population



The Pump People®

Located just south of Atlanta, Henry County has watched its population increase since the early 1990s. This in turn has increased the population that Henry County Water Authority (HCWA) serves; according to Patrick Kelley, HCWA Project Manager, the authority services between 240,000 and 250,000 people, with an average day demand of 16 to 17 million gallons per day. During peak summertime periods, that number can hit 30 million.

To address the growing population and projected water demand over the next 30 Years, HCWA recently completed a master plan update that includes two booster pump stations – the Fairview booster pump station and the Southeastern booster pump station.

Fairview Booster Pump Station

Due to the elevation, part of the area near the Fairview booster pump station was being fed from another county. The water treatment plants are in the southern portion of the county, so it would take 30 to 40 miles of transmission to get to the higher-elevated northern portion.

Instead of installing additional transmission mains and an elevated tank with booster pumps, the



Like all Gorman-Rupp packaged systems, the Southeastern booster station was designed and tested in the Engineered Systems state-of-the-art manufacturing facility prior to shipment.

authority decided to go with a booster pump station with emergency pressure reducing valves at the neighboring county. With the station boosting pressure from the southern part of the county to the north, HCWA is now able to provide its own water to all its customers.

In addition to enhancing the facility, HCWA wanted to keep its neighbors in mind. The Fairview station is located next to a school with commercial properties and residential areas nearby. To make the station fit in with the landscape, HCWA used a faux-brick exterior.

Utilizing an in-house design, a booster station package by Gorman-Rupp was put together that included pumps, controls and enclosures. Due to the packaging, not a lot of multidisciplinares had to get involved.

After 18 months in operation, the station is working 24/7 without any reported issues. If a second or third pump needs to be kicked on, the station automatically handles it. Kelley said being able to supply the area with its own production variable rate instead of having to pay a premium from another municipality will save money and is projected to recoup the cost of the project within 5 years.

Southeastern Booster Pump Station

The primary purpose of the Southeastern booster pump station will be to transfer water between pressure zones. The pump station has 250 horsepower pumps, which gives a lot more flow than the Fairview station, which has 25 horsepower pumps. There are currently two pumps planned, but there is a spot for a third pump when needed. This station boosts pressure from the eastern portion of the county to the central and western portions.

“To be able to get water out of one zone, which is at a lower hydraulic grade line than the other, and be able to pump to our larger zone was critical for redundancy within the distribution system and future planning,” Kelley said.

Compared to the Fairview station, which mostly

operates on its own, the Southeastern station will be more control-based. When planning the Southeastern station, the HCWA looked to its other stations to see what could be improved upon.

“What if we started running into problems, due to a failure? How do we get water out of that zone? What’s our form of redundancy?” Kelley said.

With the projection of water demand doubling in size over the next 30 years, Kelley predicts they will add the third pump as that time gets nearer. At that point, they plan to have one of the pumps running all the time.

The Southeastern station is in a more remote area than the Fairview one with no commercial properties around, and subdivisions a bit farther away. This station was built with a high-ceiling split.

The Equipment

While updating the 30-year master plan, the initial thought was to use tanks, but after reviewing the hydraulic modeling, Kelley thought of the booster pump stations.

HCWA turned to Gorman-Rupp for its pump and equipment needs. In addition to their long-standing relationship, the third-party consultant for the Southeastern station was able to see the booster station concept on the Gorman-Rupp production floor during a factory trip, which Gorman-Rupp offers to potential customers.

With Gorman-Rupp being responsible for the Fairview and Southeastern stations, they offered a 60-month warranty on the booster pumping systems. Additionally, as a duplex/future triplex, the Southeastern station has capacity for continued growth in the county.

Allen Walker, sales engineer for Gorman-Rupp distributor Templeton & Associates, said: “By sourcing pumps from Patterson and then Gorman-Rupp applying their other in-house components, enclosures, engineering expertises, it pretty much made it easy to



put it all together and also make sure that the extended warranties were basically kept under one roof.”

About Gorman-Rupp Pumps

For more than 85 years Gorman-Rupp Pumps USA has manufactured pumps for municipal, sewage, industrial, mining, construction, petroleum, OEM, government, agriculture and fire markets.

The company’s extensive line of pump products include self-priming centrifugal pumps, standard centrifugal pumps, submersible pumps, rotary gear

pumps, diaphragm pumps, engine-driven pumps, and priming assist pumps. In addition, Gorman-Rupp manufactures a complete line of state-of-the-art packaged lift stations and booster stations that include pumps, motors, controls, piping, accessories and enclosures.

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