



Durability for a Dollar

How one town saved forty years' worth of trash pumping trouble for a single dollar.

Hopkins, Minnesota occupies four square miles of space in southcentral Minnesota, and is home to 17,000 residents. Originally a housing location for employees of the Minneapolis Threshing Machine Company, Hopkins is now better known as the raspberry capital of America – a distinction that can be traced back to some of the early families that inhabited the area and grew them.

The area is also home to seven lift stations, which pump water and wastewater in various parts of the city – all of which operate with different manufacturer's equipment. "Generally, most cities don't do that," said Mike Lauseng, former Superintendent of Hopkins' Water and Sewer Division (HWSD). "You try to carry one line of parts – but we came into possession of a lift station that was fully functioning when it was sold to the city by a private owner."

That station - which is referred to by Lauseng and his crew simply as "number three" – is the oldest of the seven lift stations in Hopkins, Minnesota. As Lauseng explains, "Judge Carroll was the original owner of the lift station. When he didn't want to maintain it any longer, he sold it to the city of Hopkins for one dollar to clear off his books". Number three has been operating without incident since it came into the city's possession in 1967.

Lauseng, who retired at the end of 2006 after nearly 30 years of service to HWSD, is a lifelong resident of Hopkins with one objective – to keep the lift stations operating trouble free, so that the citizens of Hopkins can go about their normal lives. "The whole key to everything we do is to keep everything running so we don't inconvenience anybody in town".



Increased Business, Increased Workload

The number three lift station – originally installed to service a new restaurant in Hopkins – was The Gorman-Rupp Company's first ever lift station, bearing the serial number "A-001". The station was constructed of fiberglass reinforced polyester (FRP), a substance that can withstand many of the elements that damage lift stations built from other materials. One major factor in the decision to use FRP for the lift station was its ability to withstand hydrogen sulfide – a highly corrosive gas produced by sewage which causes steel to rust and concrete to deteriorate. The Gorman-Rupp Company chose FRP for the lift station because it provided the longest equipment life.

Years after construction, a second restaurant was built on the land next to the original and it too began being serviced by the number three lift station. The new restaurant – a fast food location – greatly increased the amount of wastewater flowing into the lift station. Even with the increased workload, the Gorman-Rupp T3A3-B pumps installed in the lift station have performed flawlessly for 40 years. "It's a less than ideal situation for a lift station

to have to operate with two restaurants coming into it. But, it has done a great job” said Lauseng. In the 40 years it has been operating, the restaurants that are served by lift station number three have changed numerous times. But the condition of the station itself has remained the same, largely because the FRP is easily maintained and washed, and never needs painting. “Because it is a fiberglass station with a gel coat on the inside, the inside of it looks as nice now as when it was installed,” says Ray Anderson, a Distributor’s Representative from General Repair Service of Vadnais Heights, Minnesota. “There’s no corrosion on it at all”.

Four Decades of Problem-Free Pumping



The lift station incorporates two Gorman-Rupp T-Series pumps – one standby and one on call that automatically alternates at the end of every pump cycle. When waste and wastewater enters the lift station from one of the two restaurants, it is held in a wet well until it reaches a predetermined level. At that point, the pumps activate and send the wastewater out a 4-inch main, out beneath the Minehaha Creek, to its manhole discharge point along Hiawatha Avenue.

With a task as important as moving wastewater, the people of the HWSD cannot afford to have pumps suffer downtime. With the Gorman-Rupp pumps, the lift station has been able to maintain virtually unstopped efficiency for four decades. In those 40 years of operation, the lift station has never had a problem with one of the Gorman-Rupp pumps going down or wearing out. “We have never opened up the pumps” said Ray Anderson, “Nothing has been done to the pumps”. In fact, The Gorman-Rupp T-Series pumps have been slowed only by a random natural occurrence. At one point lightning struck one of the pumps, damaging the pump’s motor. “The top of the motor was fried. But, when we disconnected it, installed the new motor and reset everything, the pump fired right back up again” said Lauseng.

With such a long operational life, the Gorman-Rupp pumps have been advantageous both in terms of the incredibly low Total Cost of Ownership and in the peace of the mind they have afforded Lauseng and his crew. In comparing lift station number three to others he deals with around Hopkins, Lauseng explains, “It’s the oldest one we have and it is the one we’ve had the least amount of trouble with. I wish all of the other lift stations were as trouble-free as number three.”

Maintaining the Lift Station

When the lift station was constructed in 1967, float switches were used to create an electrical connection to activate pumping, and analog gauges registered pressure differentials. However, as time went on, it became necessary to update certain aspects of the operation along to meet ever-changing technological demands. The Gorman-Rupp Company’s ability to adapt has helped HWSD create a lift station that features the same reliable pumps and incorporates more sophisticated control options.

In the early 1990s, the lift station was retrofitted with a new Supervisory Control and Data Acquisition (SCADA) control panel from Gorman-Rupp. Contained in the system is a computer housed in the lift station’s meter room that is programmed to respond to alarms in the station by continually calling a prearranged list of crewmembers until someone acknowledges it. The system also records the number of hours the pumps are in use and allows data such as flow, pressure, and voltage to be monitored via telephone, radio signals and the Internet.



Lauseng spent his entire career dealing with the same Gorman-Rupp pumps in the number three lift station. As he explains, “It’s remarkable. There are four of us crewmembers that started their careers at about the same time, and we’ve been with these pumps throughout all of these years”. The reliability of the Gorman-Rupp pumps over the last 40 years and the peace of mind offered by the SCADA system monitoring all of the lift station’s activity allows Lauseng and the crew at HWSO to focus more on the small day-to-day maintenance tasks that keep the lift station moving seamlessly forward.

“They just check it to make sure it’s dry inside the well, they check the compressor and they’ll blow the bubbler out,” explains Ray Anderson. “That’s about all they do, except for writing down the numbers on the panel and verifying them against the data system”.

A switch to the Gorman-Rupp Super T-Series pumps would offer a variety of features – such as easier adjustment of the pump’s impeller clearance and sight glass to view oil levels. However, with the lift station operating so efficiently, Anderson sees no need for a change or upgrade to the lift station’s mechanical equipment. As Ray Anderson sees it, “There is no reason to update the Gorman-Rupp pumps – not as long as they’re running as well as they are.”

About The Gorman-Rupp Company

The Gorman-Rupp Company is a leading manufacturer of pumps and pumping systems for the municipal, water, wastewater, sewage, industrial, construction, petroleum, fire and OEM markets. Pumps include self-priming centrifugal, centrifugal, submersible, trash, priming assist, rotary gear and air-driven diaphragm pumps. In addition, The Gorman-Rupp Company manufactures a complete line of packaged lift stations and booster stations, which include pumps, motors, controls, piping, accessories and enclosures.

The company prides itself on manufacturing and delivering the right pump for the job.

